



This book is provided in digital form with the permission of the rightsholder as part of a Google project to make the world's books discoverable online.

The rightsholder has graciously given you the freedom to download all pages of this book. No additional commercial or other uses have been granted.

Please note that all copyrights remain reserved.

About Google Books

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Books helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

GEOLOGICAL SOCIETY OF AMERICA
SPECIAL PAPERS
NUMBER 45

BIBLIOGRAPHIC AND FAUNAL
INDEX OF PALEOZOIC
PELMATZOAN ECHINODERMS

BY
R. S. BASSLER
AND
MARGARET W. MOODEY
U. S. NATIONAL MUSEUM



PUBLISHED BY THE SOCIETY
March 31, 1943

COUNCIL • 1943

President

E. L. BRUCE, Kingston, Ontario, Canada

Past President

DOUGLAS JOHNSON, New York, N. Y.

Vice-Presidents

ADOLPH KNOPF
New Haven, Conn.

E. H. SELLARDS
Austin, Texas

A. C. TROWBRIDGE
Iowa City, Iowa

A. F. BUDDINGTON
Princeton, N. J.

Secretary

H. R. ALDRICH, 419 West 117 Street, New York, N. Y.

Treasurer

EDWARD B. MATHEWS, Johns Hopkins University, Baltimore, Md.

Councilors

(Term expires 1943)

CHARLES E. WEAVER
Seattle, Wash.

E. L. DE GOLYER
Dallas, Texas

WILLIAM W. RUBEY
Washington, D. C.

(Term expires 1944)

ROLLIN T. CHAMBERLIN
Chicago, Ill.

A. I. LEVORSEN
Tulsa, Okla.

W. O. HOTCHKISS
Troy, N. Y.

(Term expires 1945)

JAMES GILLULY
Los Angeles, Calif.

FREDERICK J. ALCOCK
Ottawa, Canada

K. C. HEALD
Pittsburgh, Pa.

COMMITTEE ON PUBLICATIONS

WILMOT H. BRADLEY, *Chairman*

H. R. ALDRICH
(*ex officio*)

E. B. KNOPF

KIRK BRYAN

BOARD OF EDITORS

H. R. ALDRICH, *Editor-in-Chief*

JOHN S. BROWN
ERNST CLOOS
G. ARTHUR COOPER
A. J. EARDLEY

R. C. EMMONS
M. KING HUBBERT
GLENN L. JEPSEN
G. MARSHALL KAY

E. S. LARSEN
PAUL MACCLINTOCK
O. E. MEINZER
M. E. WILSON

GEOLOGICAL SOCIETY OF AMERICA
SPECIAL PAPERS
NUMBER 45

**BIBLIOGRAPHIC AND FAUNAL
INDEX OF PALEOZOIC
PELMATOZOAN ECHINODERMS**

BY
R. S. BASSLER
AND
MARGARET W. MOODEY
U. S. NATIONAL MUSEUM



PUBLISHED BY THE SOCIETY
March 31, 1943

Made in United States of America

WAVERLY PRESS, INC.
BALTIMORE, MD.

The Special Papers
of
The Geological Society of America
are made possible
through the bequest of
Richard Alexander Fullerton Penrose, Jr.

CONTENTS

	Page
INTRODUCTION.....	1
SYSTEMATIC CLASSIFICATION OF PALEOZOIC PELMATOZOA.....	3
Class Cystoidea von Buch.....	3
Order Amphoridea Haeckel.....	3
Order Rhombifera Zittel.....	5
Order Diploporita Zittel.....	6
Order Edrioasteroidea Billings.....	7
Class Blastoidea Say.....	8
Order Protoblastoidea Bather.....	8
Order Eublastoidea Bather.....	8
Suborder Fissiculata Jaekel.....	8
Suborder Spiraculata Jaekel.....	9
Class Crinoidea Miller.....	10
Order Inadunata Wachsmuth and Springer.....	10
Suborder Larviformia Wachsmuth and Springer.....	10
Suborder Fistulata Wachsmuth and Springer.....	11
Order Flexibilia Zittel.....	18
Order Adunata Bather.....	19
Order Camerata Wachsmuth and Springer.....	20
Unclassified.....	23
FAUNAL LISTS OF SPECIES.....	26
Cambrian faunas.....	26
Lower Cambrian formations.....	26
Middle Cambrian formations.....	26
Upper Cambrian formation.....	26
Canadian faunas.....	27
Ordovician faunas (North America).....	27
Chazyan group.....	27
Mohawkian group.....	28
Black River formations.....	28
Trenton formations.....	28
Cincinnatian group.....	32
Eden formations.....	32
Maysville formations.....	32
Ordovician faunas (Europe and Asia).....	33
Ordovician or Early Silurian faunas.....	40
Richmond group.....	40
Silurian faunas (North America).....	42
Alexandrian group.....	42
Niagaran group.....	42
Cayugan group.....	51
Silurian faunas (Australia, Europe, and South America).....	51
Devonian faunas (North America).....	57
Lower Devonian.....	57
Helderbergian formations.....	57
Oriskanian formations.....	58

Middle Devonian.....	59
Ulsterian formations.....	59
Erian formations.....	60
Upper Devonian.....	65
Devonian faunas (South America and Eastern Hemisphere).....	68
Mississippian faunas (North America).....	75
Kinderhook group.....	75
Osage group.....	77
Meramec group.....	94
Chester group.....	97
Lower Carboniferous faunas (Europe and Asia).....	104
Pennsylvanian faunas (North America).....	111
Carboniferous faunas (South America and Eastern Hemisphere).....	118
Permian faunas (North America).....	119
Permian faunas (Eastern Hemisphere).....	119
BIBLIOGRAPHY OF GENERA AND SPECIES.....	127
Class Cystoidea.....	127
Order Edrioasteroidea.....	195
Class Blastoidea.....	211
Class Crinoidea.....	261
CLASSIFICATION OF FRAGMENTARY CRINOIDAL REMAINS.....	731
“COLLECTIVE GROUP” NAME.....	734

INTRODUCTION

This Index is dedicated to the late Dr. Frank Springer, eminent world authority on Paleozoic crinoids and former honorary Associate in Paleontology in the United States National Museum. It was Doctor Springer's earnest desire that a bibliography of all fossil Pelmatozoa should be made available to students, and it is in recognition of this wish that the present work covering the Paleozoic species was completed.

The Index is based on a working catalogue of genera and species assembled for Doctor Springer by his daughter Ada, now Mrs. Warren B. Davis of Philadelphia. This covered the earlier literature and was supplemented from time to time until about 1915 by the work of Doctor Springer's secretary. Since his collection, library, and other scientific matter came into possession of the Smithsonian Institution upon his death in 1927, the bibliography has been brought up to date by Miss Moodey.

All citations in the above card catalogue have not been recorded here, selection having been made of those considered most essential; others are largely included in the works cited, and the complete set of references is preserved in the department of geology in the United States National Museum, where it may be consulted by those interested.

One object of the work is to place on record, as far as possible, the correct geological and geographical occurrence of the species, a practice sadly overlooked in the early publications, particularly those of foreign countries. The Pelmatozoa, comprising the cystoids, blastoids, and crinoids, have always interested students because of their beauty of form and in early studies were usually considered from the biological standpoint. Further, the comparative rarity of well-preserved complete specimens, compared to many groups of fossils, prevented their effective use in stratigraphic correlation by others than specialists. As a result, the exact horizon and locality of many species were sometimes not ascertained and were left unrecorded. Now, since more emphasis is being placed on the Pelmatozoa as index fossils, their occurrence and range must be known more accurately. The student is directed to the section on faunal lists where this information is brought out, insofar as knowledge is available.

The following items are called to the attention of users of the Index:

The *first* locality cited under a species is the *type locality*, being that given at the time of the first description. In the faunal lists, this is indicated by an asterisk.

For brevity, the names of well known authors are often contracted, particularly where two or more authors are associated. Abbreviations are used for localities and other easily recognized items.

Cross references have been cut to a minimum; in some cases, one generic cross reference applies to all species of the genus.

Species are listed under their latest accepted generic designation. In the faunal lists, where this differs from the earliest reference, the original generic name appears in parentheses following locality and horizon citations. The change from *us* to *ites* is so obvious that it is not so noted. Faunal lists of species from foreign localities are grouped alphabetically following those from North America. Should the original name for genera or species be the same as that recognized today it is not repeated with the references in the bibliography.

A bibliography of the literature is not included since it would add too materially to the length of the work, and, moreover, the publications are already thoroughly listed in such standard works as the Zoological Record and Bibliography of North American Geology.

In 1939, Dr. Raymond C. Moore published papers dealing with fragmentary crinoidal remains, their use in stratigraphic paleontology, and especially their classification and nomenclature.¹ The names adopted in his classification, as recognized by the author himself, can have no standing as genera and species and obviously cannot be included in the body of this Index; it is equally clear that they cannot be ignored by the bibliographer. The authors have, therefore, prepared a condensed form of his classification and included it as an appendix to the section devoted to the Crinoidea. Here also will be found a term designated "Collective Group Name" by A. H. Sutton and Virgil D. Winkler.² Where valid species of crinoids have been assigned to this group name, such references have been rejected and the species referred back to their original classification.

The authors are indebted to Drs. E. O. Ulrich and Charles Butts and the late August F. Foerste for special assistance in stratigraphic problems of the American Paleozoic. Dr. Edwin Kirk, of the U. S. Geological Survey, has rendered authoritative aid in disputed matters of nomenclature and relationships, and in advice on the work in general. Dr. Raymond C. Moore, through his extensive studies of Upper Paleozoic crinoids, has been generous in information on questions relating to the Pennsylvanian and Permian faunas. As noted above, the assembling of these references has been the work of various persons whereby the chances for error are increased. To Miss Helena M. Weiss of the Museum's department of geology we are especially grateful for her critical reading of the manuscript and checking of the faunal lists and the bibliography proper whereby many errors have been discovered and eliminated. That many remain is unquestioned, and we will be obliged if these are brought to our attention.

¹Denison Univ., Jour. Sci. Lab., Bull. 33, p. 165-220, 14 text figs., 4 pls.; Jour. Paleont., 13, no. 2, p. 228-229.

²Jour. Paleont., vol. 14, no. 6, pp. 563-567, pls. 66-68, Nov., 1940.

SYSTEMATIC CLASSIFICATION OF PALEOZOIC PELMATOZOA

The classification here presented is practically the same as that published by the senior author in his *Pelmatozoa Palaeozoica (Generum et Genotyporum Index et Bibliographia)*,³ with the corrections and additions brought about in that and subsequent works. As pointed out in the 1938 work, many unnecessary generic names have been proposed for fossil crinoids, blastoids, and cystoids, due largely to the neglect of certain authors to follow the rules of nomenclature. The return to the original names has caused many changes and revisions as noted in the present work, but it is felt that more stability has now been reached as a result of this action.

Phylum ECHINODERMATA

Subphylum PELMATOZOA

Class CYSTOIDEA Von Buch

Order AMPHORIDEA Haeckel

Family Eocystitidae Bassler (Eocystidae Bather)

(An introductory family including primitive cystids and probably crinoids.)

Acanthocystites Barrande, 1887 (*Acanthocystis* Bather, 1889) (Eocrinidae Jaekel, 1918)

Ascocystites Barrande, 1887 (*Ascocrinus* Barrande, 1887; *Ascocystis* Bather, 1889)
(Ascocystidae Jaekel, 1918)

Bockia Hecker, 1938.

Eocrinus Jaekel, 1918 (Eocrinidae Jaekel, 1918)

Eocystites Billings, 1868 (*Eocystis* Bather, 1900)

Gogia Walcott, 1917.

Lepidocystis Foerste, 1938.

Protocystites Hicks, 1872 (*Protocystis* Bather, 1900) (Eocrinidae Jaekel, 1918)

Trachelocrinus Ulrich, 1929.

Family Aristocystitidae Bassler (Aristocystidae Neumayr)

Aenigmatocystis T. H. Clark, 1924.

Amphoracystis Haeckel, 1896.

Aristocystites Barrande, 1887 (*Aristocystis* Bather, 1889)

Baculocystites Barrande, 1887 (*Baculocystis* Haeckel, 1896)

Calix Rouault, 1851 (*Codiacystis* Jaekel, 1899; *Craterina* Barrande, 1887)

Deutocystites Barrande, 1887 (*Deutocystis* Bather, 1889)

Hippocystis Bather, 1919.

Holocystites Hall, 1884 (*Holocystis* Carpenter, 1891; *Megacystis* Angelin, 1878;
Megacystites Hall, 1867; *Trematocystis* Jaekel, 1899)

Lapillocystites Barrande, 1887 (*Lapillocystis* Bather, 1889)

Pachycalix Chauvel, 1936.

Pilocystites Barrande, 1887 (*Pilocystis* Bather, 1889)

³ Fossilium Catalogus, I, Animalia, Pars 83, pp. 1-194, W. Junk, 1938, 's-Gravenhage.

Family **Anomalocystitidae** Bassler (**Anomalocystidae** Meek)

(Class Carpoidea Jaekel)

- Anomalocystites** Hall, 1858 (*Anomalocystis* Bather, 1889; *Anomocystis* Haeckel, 1896)
- Anomocystis** Jaekel, 1918. (Homonym, but new name probably not necessary.)
- Ateleocystites** Billings, 1858 (*Atelecystis* Bather, 1889) (Mitrocystidae Jaekel, 1918)
- Balanocystites** Barrande, 1887 (*Balanocystis* Haeckel, 1896; Lagynocystidae Jaekel, 1918)
- Belemnocystites** Miller and Gurley, 1894 (*Belemnocystis* Bather, 1900)
- Ceratocystis** Jaekel, 1900 (Ceratocystidae Jaekel, 1918)
- Decacystis** Gislen, 1927 (Trochocystidae Jaekel, 1918)
- Enoploura** Wetherby, 1879.
- Gyrocyctis** Jaekel, 1918 (Gyrocyctidae Jaekel, 1918)
- Lagynocystis** Jaekel, 1918 (Lagynocystidae Jaekel, 1918)
- Lingulocystis** Thoral, 1935.
- Mitrocystella** Jaekel, 1900 (Mitrocystidae Jaekel, 1918)
- Mitrocystites** Barrande, 1887 (*Mitrocystis* Bather, 1889) (Mitrocystidae Jaekel, 1918)
- Peltocystis** Thoral, 1935 (subgenus of *Placocystites* de Koninck, 1869)
- Placocystella** Rennie, 1936.
- Placocystites** de Koninck, 1869 (*Placocystis* Haeckel, 1896)
- Rhenocystis** Dehm, 1932.
- Trochocystites** Barrande, 1859 (*Trochocystis* Haeckel, 1896; *Trigonocystis* Haeckel, 1896) (Trochocystidae Jaekel, 1918)
- Trochocystoides** Jaekel, 1918 (Trochocystidae Jaekel, 1918)

Family **Dendrocystitidae** Bassler (**Dendrocystidae** Bather)

(Class Carpoidea Jaekel)

- Dendrocystites** Barrande, 1887 (*Cigara* Barrande, 1887; *Dendrocystis* Bather, 1889; *Iowacystis* Thomas and Ladd, 1926; *Syringocrinus* Billings, 1859)
- Dendrocystoides** Jaekel, 1918.
- Rhipidocystis** Jaekel, 1918 (Rhipidocystidae Jaekel, 1918)

Family **Cothurnocystidae** Bather

(Class Carpoidea Jaekel)

- Cothurnocystis** Bather, 1915.
- Phyllocystis** Thoral, 1935.

Family **Malocystitidae** Bassler (**Malocystidae** Bather)

- Amygdalocystites** Billings, 1854 (*Amygdalocystis* Carpenter, 1891)
- Canadocystis** Jaekel, 1900 (*Sigmacyctis* Hudson, 1911)
- Malocystites** Billings, 1858 (*Malocystis* Carpenter, 1891)
- Platycystites** S. A. Miller, 1885 (*Platycystis* Bather, 1900)
- Wellerocystis** Foerste, 1920.

Family **Comarocystitidae** Bassler (**Comarocystidae** Bather)

- Achradocystites** Volborth, 1876 (*Achradocystis* Haeckel, 1896)
- Comarocystites** Billings, 1854 (*Comarocystis* Carpenter, 1891)

Order RHOMBIFERA Zittel

Family Echinospaeritidae Neumayr (Echinospaeridae Jaekel)

- Arachnocystites** Neumayr, 1889 (*Arachnocystis* Haeckel, 1895)
Caryocystites von Buch, 1844 (*Amorphocystis* Angelin, 1878; *Amorphocystites* Jaekel, 1890; *Caryocystis* Angelin, 1878) (Caryocystidae Jaekel, 1918)
Echinospaerites Wahlenberg, 1818 (*Citrocystis* Haeckel, 1896; *Crystallocystis* Haeckel, 1896; *Echinospaera* Angelin, 1878; *Leucophthalmus* Koenig, 1825; *Trinemacystis* Haeckel, 1896).
Heliocrinites Eichwald, 1840 (*Heliocrinus* Quenstedt, 1876; *Heliocrinum* Haeckel, 1896; *Heliocrinus* Eichwald, 1852; *Heliocystis* Haeckel, 1896; *Heliopirum* Haeckel, 1896).
Orocystites Barrande, 1887 (*Orocystis* Bather, 1889).
Palaeocystites Billings, 1858 (*Palaeocystis* Haeckel, 1896).
Stichocystis Jaekel, 1899 (Stichocystidae Jaekel, 1918).

Family Caryocrinitidae Bassler (Caryocrinidae Bernard)

- Caryocrinites** Say, 1825 (*Cariocrinus* Austin and Austin, 1845; *Caryocrinus* Agassiz, 1838, and authors; *Enneacystis* Haeckel, 1896; *Stribalocystis* Bather, 1900; *Stribalocystites* S. A. Miller, 1892)
Corylocrinus von Koenen, 1886 (*Juglandocrinus* von Koenen, 1886)
Hemicosmites von Buch, 1840 (*Hexalacystis* Haeckel, 1896) (Hemicosmitidae Jaekel, 1918)
Heterocystites Hall, 1852 (*Heterocystis* Bather, 1900) (Heterocystidae Jaekel, 1918)
Polycosmites Jaekel, 1918 (Polycosmitidae Jaekel, 1918)
Ptychocosmites Jaekel, 1918 (Hemicosmitidae Jaekel, 1918)
Stribalocystites S. A. Miller, 1891 (*Stribalocystis* Bather, 1900)
Tricosmites Jaekel, 1918 (Hemicosmitidae Jaekel, 1918)

Family Callocystitidae Bassler (Callocystidae Bernard)

- Apiocystites** Forbes, 1848 (*Apiocystis* Bather, 1889)
Brockocystis Foerste, 1914.
Callocystites Hall, 1852 (*Anthocystis* Haeckel, 1896; *Callocystis* Carpenter, 1891)
Coelocystis Schuchert, 1903.
Hallicystis Jaekel, 1899.
Jaekelocystis Schuchert, 1903.
Lepadocystis Carpenter, 1891 (*Meekocystis* Jaekel, 1899).
Lepocrinites Conrad, 1840 (*Lepadocrinites* Billings, 1854; *Lepadocrinus* Hall, 1859; *Lepocrinus* Hall, 1859)
Lipsanocystis Ehlers and Leighly, 1922.
Pseudocrinites Pearce, 1842 (*Phacocystis* Haeckel, 1896; *Pseudocrinus* Geinitz, 1846)
Sphaerocystites Hall, 1858 (*Sphaerocystis* Carpenter, 1891)
Staurocystis Haeckel, 1896.
Strobilocystites White, 1876 (*Strobilocystis* Carpenter, 1891)
Tetracystis Schuchert, 1904.
Trimerocystis Schuchert, 1904.

Family Cheiocrinidae Jaekel

- Cheiocrinus** Eichwald, 1856 (*Chirocrinus* Haeckel, 1896; *Glyptocystis* Angelin, 1878; *Glyptocystites* Billings, 1857, and authors (part); *Homocystis* Bather, 1900; *Homocystites* Barrande, 1887)

Cystoblastus Volborth, 1867 (*Cystoblastidae* Jaekel, 1899)
Glyptocystites Billings, 1854.
Leptocystis Jaekel, 1899.

Family **Pleurocystitidae** Bassler (**Pleurocystidae** Jaekel)

Amecystis Ulrich and Kirk, 1921.
Dipleurocystis Jaekel, 1918.
Pleurocystites Billings, 1854 (*Pleurocystis* Carpenter, 1891)
Regulaecystis Dehm, 1932.

Family **Echinoencrinitidae** Phleger

(**Echinoencrinidae** Bather)

Echinoencrinites von Meyer, 1826 (*Echinoencrinus* Volborth, 1842; *Gonocrinites* Eichwald, 1840; *Gonocrinus* Eichwald, 1856; *Sycocystis* Haeckel, 1896; *Sycocystites* von Buch, 1844)
Erinocystis Jaekel, 1899.
Eutretocystis Phleger, 1935.
Glaphyrocystis Jaekel, 1899.
Prunocystites Forbes, 1848 (*Prunocystis* Carpenter, 1891)
Schizocystis Jaekel, 1895.
Scoliocystis Jaekel, 1899 (*Scoliocystidae* Jaekel, 1899)

Family **Cryptocrinitidae** Bassler

(**Cryptocrinidae** Zittel) (**Aporita** Zittel)

Cryptocrinites von Buch, 1840 (*Cryptocrinus* Geinitz, 1846, and authors)
Lysocystites S. A. Miller, 1889 (*Aethocystis* Bather, 1900; *Aethocystites* S. A. Miller, 1892; *Echinocystis* Haeckel, 1896; *Echinocystites* Hall, 1864 not Wyville Thomson; *Lysocystis* Bather, 1897; *Scolocystis* Gregory, 1897)

Family **Macrocystellidae** Bather (**Aporita** Zittel)

Lichenoides Barrande, 1846 (*Lichenocystis* Haeckel, 1896) (*Lichenoidae* Jaekel, 1918)
Macrocystella Callaway, 1877.
Mimocystites Barrande, 1887 (*Mimocystis* Carpenter, 1891)
?Polyptychella Jaekel, 1918.

Order **DIPLOPORITA** Zittel

Family **Sphaeronitidae** Neumayr (**Sphaeronidae** of authors)

Allocystites S. A. Miller, 1889 (*Allocystis* Bather, 1900)
Arhegocystis Jaekel, 1899.
Eucystis Angelin, 1878.
Haplosphaeronis Jaekel, 1926.
Palmacystis Haeckel, 1896.
Proteocystites Barrande, 1887 (*Carpocystis* Bather, 1900; *Carpocystites* Oehlert, 1887; *Proteocystis* Bather, 1889)
Sinocystis Reed, 1913 (*Ovocystis* Reed, 1913)
Sphaeronites Hisinger, 1828 (*Pomocystis* Haeckel, 1896; *Pomonites* Haeckel, 1896, *Pomosphaera* Haeckel, 1896; *Sphaeronis* Angelin, 1878)

Family **Glyptosphaeritidae** Bassler (**Glyptosphaeridae** Jaekel)

Fungocystites Barrande, 1887 (*Fungocystis* Haeckel, 1896)
Glyptosphaerites Müller, 1853 (*Glyptosphaera* Angelin, 1878)

Family **Protocrinitidae** Bassler (**Protocrinidae** Bather)

Proteroblastus Jaekel, 1895 (*Dactylocystis* Jaekel, 1899, *Dactylocystidae* Jaekel, 1899)
(*Estonocystidae* Jaekel, 1918)

Protocrinites Eichwald, 1840 (*Protocrinus* Bronn, 1848)

Revalocystis Jaekel, 1918 (*Estonocystidae* Jaekel, 1918)

Family **Gomphocystitidae** Bassler (**Gomphocystidae** Jaekel, 1899)

Gomphocystites Hall, 1864 (*Gomphocystis* Angelin, 1878)

Pyrocystites Barrande, 1887 (*Pirocystis* Bather, 1889; *Pyrocystis* Carpenter, 1891)

Family **Eumorphocystidae** Branson and Peck

Eumorphocystis Branson and Peck, 1940.

Order **EDRIOASTEROIDEA** Billings⁴

(Thecoidea Jaekel)

Family **Stromatocystitidae** Bassler

Stromatocystites Pompeckj, 1896 (*Stromatocystis* Bather, 1900)

Walcottidiscus Bassler, 1936.

Xenocystites Bassler, 1936.

Family **Hemicystitidae** Bassler

Carnyella Foerste, 1916.

Cinnatidiscus Bassler, 1935.

Cystaster Hall, 1871 (*Thecocystis* Jaekel, 1899) (*Thecocystidae* Jaekel, 1899)

Foerstediscus Bassler, 1935.

Hemicystites Hall, 1852 (*Hemicystis* Carpenter, 1891)

Lebetodiscus Bather, 1908.

Pyrogocystis Bather, 1915.

Streptaster Hall, 1872.

Family **Agelacrinitidae** Bassler (**Agelacrinitidae** of authors)

Agelacrinites Vanuxem, 1842 (*Agelacrinus* of authors (part); *Agelacystis* Haeckel, 1895; *Haplocystis* Bather, 1899; *Haplocystites* Roemer, 1852)

Cooperidiscus Bassler, 1935.

Discocystis Gregory, 1897 (*Ageladiscus* S. A. Miller, 1897; *Echinodiscus* Worthen and Miller, 1883)

Isorophus Foerste, 1916.

Isorophusella Bassler, 1935.

Lepidodiscus Meek and Worthen, 1868.

Thresherodiscus Foerste, 1914.

Ulrichidiscus Bassler, 1935.

Family **Edrioasteridae** Bather

Dinocystis Bather, 1898.

Edrioaster Billings, 1858 (*Aesiocystis* Bather, 1900; *Aesiocystites* Miller and Gurley, 1894; *Cyclaster* Billings, 1857, not Cotteau, 1856; *Edriocystis* Haeckel, 1896)

Family **Cyathocystidae** Bather

Cyathocystis Schmidt, 1880.

Cyathotheca Jaekel, 1927.

⁴Published as a separate section in the accompanying bibliography.

Family **Astrocystitidae** Bassler

Astrocystites Whiteaves, 1897 (*Steganoblastus* Whiteaves, 1897) (*Steganoblastidae* Bather)

Family **Cyclocystoididae** S. A. Miller

Cyclocystoides Billings and Salter, 1858.

Narrawayella Foerste, 1920.

Savagella Foerste, 1920.

Class **BLASTOIDEA** SayOrder **PROTOBLASTOIDEA** BatherFamily **Asteroblastidae** Bather

Asteroblastus Eichwald, 1862.

Asterocystis Haeckel, 1896 (*Asterocystidae* Jaekel, 1918)

Metasterocystis Jaekel, 1918.

Mesocystis Bather, 1898 (*Mesites* Hoffman, 1866, not Schoenherr, 1838) (*Mesocystidae* Jaekel, 1899)

(?) **Paracystis** Sjöberg, 1915.

Family **Blastoidocrinidae** Bather

Blastocystis Jaekel, 1918 (*Blastocystidae* Jaekel, 1918)

Blastoidocrinus Billings, 1859.

Order **EUBLASTOIDEA** BatherSuborder **FISSICULATA** JaekelFamily **Codasteridae** Etheridge and Carpenter

Ceratoblastus Wanner, 1940.

Codaster McCoy, 1849 (*Codonaster* Roemer, 1851; *Heteroschisma* Wachsmuth, 1883)

Cryptoschisma Etheridge and Carpenter, 1886.

Paracodaster Yakovlev, 1940.

Pterotoblastus Wanner, 1924.

Thaumatoblastus Wanner, 1924.

Timoroblastus Wanner, 1924.

Family **Phaenoschismidae** Etheridge and Carpenter

Neoschisma Wanner, 1924.

Orophocrinus von Seebach, 1864 (*Codonites* Meek and Worthen, 1869; *Mitra* Cumberland, 1826) (*Orophocrinidae* Jaekel, 1918)

Phaenoschisma Etheridge and Carpenter, 1882.

Family **Dipteroblastidae** Wanner, 1940

Dipteroblastus Wanner, 1940.

Family **Angioblastidae** Wanner, 1940

Angioblastus Wanner, 1931.

Nannoblastus Wanner, 1924.

Sagittoblastus Yakovlev, 1937.

Family **Nymphaeoblastidae** Wanner, 1940**Nymphaeoblastus** von Peetz, 1907.**Sphaeroschisma** Wanner, 1924.Family **Anthoblastidae** Wanner, 1940**Anthoblastus** Wanner, 1924.**Indoblastus** Wanner, 1924.**Sundablastus** Wanner, 1924.Family **Zygocrinidae** Bather**Zygocrinus** Bronn, 1848 (*Astrocrinites* Austin, 1843; *Astrocrinus* Morris, 1843)Suborder **SPIRACULATA** JaekelFamily **Troosticrinidae** Bassler**(Troostoblastidae** Etheridge and Carpenter)**Belocrinus** Munier-Chalmas, 1881 (*Belemnocrinus* Munier-Chalmas, 1876, not White)**Metablastus** Etheridge and Carpenter, 1886.**Tricoelocrinus** Meek and Worthen, 1868 (*Saccoblastus* Hambach, 1903)**Troosticrinus** Shumard, 1866 (*Clavaeblastus* Hambach, 1903; *Troostocrinus* Meek and Worthen, 1868, and authors).Family **Eleutherocrinidae** Bather**Eleutherocrinus** Yandell and Shumard, 1856 (*Eleutheroblastus* Hambach, 1903)Family **Nucleocrinidae** Etheridge and Carpenter**Monoschizoblastus** Cline, 1936.**Nucleocrinus** Conrad, 1842 (*Elaeocrinus* Roemer, 1851; *Olivanites* Troost, 1849)
(*Nucleoblastidae* Jaekel, 1918)**Schizoblastus** Etheridge and Carpenter, 1882 (*Cribroblastus* Hambach, 1903)Family **Orbitremitidae** Bather**Acentrotremites** Etheridge and Carpenter, 1883.**Carpenteroblastus** Rowley, 1901.**Cryptoblastus** Etheridge and Carpenter, 1886.**Heteroblastus** Etheridge and Carpenter, 1886.**Lophoblastus** Rowley, 1901.**Mesoblastus** Etheridge and Carpenter, 1886.**Orbitremites** Austin and Austin, 1842 (*Cidaroblastus* Hambach, 1903; *Globoblastus* Hambach, 1903; *Granatocrinites* Troost, 1849; *Granatocrinus* Hall, 1862) (*Granatoblastidae* Jaekel, 1918)Family **Pentremitidae** d'Orbigny**Ambolostoma** Peck, 1930.**Calycoblastus** Wanner, 1924.**Devonoblastus** Reimann, 1935.**Pentremites** Say, 1820 (*Pentatrematites* Sowerby, 1828)**Pentremitidea** d'Orbigny, 1849.**Rhopaloblastus** Wanner, 1924.

Family **Pentephyllidae** Bather**Pentephyllum** Haughton, 1859.Class **CRINOIDEA** MillerOrder **INADUNATA** Wachsmuth and SpringerSuborder **LARVIFORMIA** Wachsmuth and SpringerFamily **Stephanocrinidae** Wachsmuth and Springer**Mespilocystites** Barrande, 1887 (*Mespilocystis* Bather, 1900)**Rhombifera** Barrande, 1867.**Stephanoblastus** Jaekel, 1918 (*Stephanoblastidae* Jaekel, 1918)**Stephanocrinus** Conrad, 1842.**Tormoblastus** Jaekel, 1927.Family **Pisocrinidae** Angelin**Calycanthocrinus** Follmann, 1887.**Cicerocrinus** Sollas, 1900 (*Lagarocrinus* Jaekel, 1900) (*Cicerocrinidae* Jaekel, 1918)**Hypsoocrinus** Springer and Slocum, 1906.**Mysticocrinus** Springer, 1918.**Perissoocrinus** Goldring, 1936.**Pisocrinus** de Koninck, 1858 (*Triacrinus* Ringueberg, 1884, not Münster, 1850)
(*Triacrinidae* Jaekel, 1918)**Tiaracrinus** Schultze, 1866 (*Staurosoma* Barrande, 1887) (*Tiaracrinidae* Bather 1900)**Triacrinus** Münster, 1839 (*Trichocrinus* Müller, 1856) (*Triacrinidae* Jaekel, 1918)**Zophocrinus** S. A. Miller, 1891 (*Zophocrinidae* Jaekel, 1918)Family **Anamesocrinidae** Goldring**Anamesocrinus** Goldring, 1923.Family **Haplocrinittidae** Bassler (**Haplocrinidae** Roemer)**Haplocrinites** Steininger, 1834 (*Aplocrinus* d'Orbigny, 1849; *Asterocrinites* Roemer, 1851; *Asterocrinus* Münster, 1831, not Lyon, 1857; *Haplocrinus* Roemer, 1844)Family **Allagecrinidae** Etheridge and Carpenter**Allagecrinus** Etheridge and Carpenter, 1881.**Hybochilocrinus** J. M. Weller, 1930.**Kallimorphocrinus** J. M. Weller, 1930 (*Aidemocrinus* J. M. Weller, 1930; *Callimorphocrinus* of authors)**Trophocrinus** Kirk, 1930.Family **Synbathocrinidae** Springer**Phimocrinus** Schultze, 1866.**Storthingocrinus** Schultze, 1866.**Stylocrinus** Sandberger and Sandberger, 1856.**Synbathocrinus** Phillips, 1836 (*Donaciacrinites* Troost, 1849; *Donaciacrinus* Bather, 1900; *Synbathocrinus* d'Orbigny, 1849, and authors; *Synbathocrinites* Austin and Austin, 1842; *Taidocrinus* Tolmatchoff, 1924)

Family **Cupressocrinitidae** Bassler

(Cupressocrinidae Roemer)

Cupressocrinites Goldfuss, 1831 (*Cupressocrinus* Agassiz, 1836; *Cypellocrinus* Bather, 1900; *Cypellocrinites* Steininger, 1849; *Cypressocrinites* Steininger, 1849; *Cypressocrinus* Steininger, 1849; *Halocrinites* Steininger, 1831; *Halocrinus* d'Orbigny, 1852; *Procupressocrinus* Jaekel, 1918)

Suborder **FISTULATA** Wachsmuth and SpringerFamily **Hybocrinidae** Zittel.

Baerocrinus Volborth, 1864 (Baerocrinidae Jaekel, 1918)
Hoplocrinus Grewingk, 1867.
Hybocrinus Billings, 1857 (*Indianocrinus* Miller and Gurley, 1895)
Hybocystites Wetherby, 1880 (*Hybocystis* Bather, 1900) (Hybocystidae Jaekel, 1918)
Revalocrinus Jaekel, 1918.

Family **Heterocrinidae** Zittel

Ammonocrinus Springer, 1926.
Atyphocrinus Ulrich, 1924.
Caleidocrinus Waagen and Jahn, 1892.
Columbicrinus Ulrich, 1924.
 (?) **Cystoidosaccus** Faber, 1929.
Dystactocrinus Ulrich, 1924.
Heterocrinus Hall, 1847 (*Stenocrinus* Wachsmuth and Springer, 1886)
Iocrinus Hall, 1866.
Isotomocrinus Ulrich, 1924.
Lichenocrinus Hall, 1866.
 (?) **Metabolocrinus** Jaekel, 1902 (Metabolocrinidae Jaekel, 1918)
Myelodactylus Hall, 1852 (*Brachioocrinus* Hall, 1858; *Eomyelodactylus* Foerste, 1919; *Herpetocrinus* Salter, 1873; *Ophiocrinus* Charlesworth, 1865)
Ohiocrinus Wachsmuth and Springer, 1886.
Ristnacrinus Öpik, 1934.
 (?) **Xenobasis** Faber, 1929.

Family **Eustenocrinidae** Ulrich

Eustenocrinus Ulrich, 1924.

Family **Homocrinidae** Jaekel

Ascocrinus Jaekel, 1918.
Daedalocrinus Ulrich, 1924.
Drymocrinus Ulrich, 1924.
Ectenocrinus S. A. Miller, 1889.
Homocrinus Hall, 1852.
Jahnocrinus Jaekel, 1918.
Lasiocrinus Kirk, 1914.
Nassoviocrinus Jaekel, 1918.
Sygcauloocrinus Ulrich, 1924.

Family **Anomalocrinidae** Wachsmuth and Springer

Anomalocrinus Meek and Worthen (*Ataxiacrinus* Lyon, 1865; *Ataxocrinus* Bather, 1900)
Geraocrinus Ulrich, 1924.
Glaucocrinus Parks and Alcock, 1912.

Family **Calceocrinidae** Meek and Worthen

- Calceocrinus** Hall, 1852 (*Cheirocrinus* Salter, 1859; *Chirocrinus* Angelin, 1878; *Pendulocrinus* Salter, 1859; *Synchirocrinus* Jaekel, 1918)
Cremacrinus Ulrich, 1886 (*Castocrinus* Ringueberg, 1889) (Cremacrinidae Ulrich, 1886)
Deltacrinus Ulrich, 1886.
Euchirocrinus Meek and Worthen, 1869 (*Cheirocrinus* Hall, 1860; *Euchirocrinus* Bather, 1895; *Proclivocrinus* Ringueberg, 1889)
Halysiocrinus Ulrich, 1886.
Senariocrinus Schmidt, 1934.

Family **Catilloocrinidae** Wachsmuth and Springer

- Allocatillocrinus** Wanner, 1937.
Catillocrinus Shumard, 1866 (*Catillocrinites* Troost, 1849; *Nematocrinus* Meek and Worthen, 1866)
Eucatillocrinus Springer, 1923.
Isocatillocrinus Wanner, 1937.
Mycocrinus Schultze, 1866.
Neocatillocrinus Wanner, 1937.
Paracatillocrinus Wanner, 1916.
Xenocatillocrinus Wanner, 1937.

Family **Belemnocrinidae** Wachsmuth and Springer

- Belemnocrinus** White, 1852.
Whiteocrinus Jaekel, 1918.

Family **Dendrocrinidae** Bather

- Antihomocrinus** Schmidt, 1934.
Cupulocrinus d'Orbigny, 1849 (*Scyphocrinus* Hall, 1847, not Zenker 1833)
Dendrocrinus Hall, 1852.
Esthonorcrinus Jaekel, 1918 (Esthonorcrinidae Jaekel, 1918)
Follicrinus Schmidt, 1934.
Merocrinus Walcott, 1883 (Merocrinidae Jaekel, 1918)
Ottawacrinus W. R. Billings, 1887.
Pandoracrinus Jaekel, 1918 (Pandoracrinidae Jaekel, 1918)
 (?) **Rhopalocrinus** Wachsmuth and Springer, 1880.
Thenarocrinus Bather, 1890 (Thenarocrinidae Jaekel, 1918)
 (?) **Vosekocrinus** Jaekel, 1918 (Vosekocrinidae Jaekel, 1918)

Family **Crotalocrinitidae** Bassler

(Crotalocrinidae Angelin)

- Crotalocrinites** Austin and Austin, 1842 (*Anthocrinus* Miller, 1853; *Crotalocrinus* Morris, 1843, and authors)
Enallocrinus d'Orbigny, 1849 (*Apiocrinites* Hisinger, 1828, not Miller, 1821) (Enallocrinidae Angelin, 1878)
Petalocrinus Weller and Davidson, 1896 (Petalocrinidae Weller and Davidson, 1896)
Syndetocrinus Kirk, 1933.

Family **Carabocrinidae** Bather

- Ampheristocrinus** Hall, 1879.
Carabocrinus Billings, 1857.

- Closterocrinus** Hall, 1852.
Cradeocrinus Goldring, 1923.
Euspirocrinus Angelin, 1878 (*Euspirocrinidae* Jaekel, 1918)
Iteacrinus Goldring, 1923.
Parisangulocrinus Schmidt, 1934.
 ?**Sphaerocrinus** Roemer, 1851 (*Sphaerocrinites* Steiningger, 1853) (*Sphaerocrinidae* Roemer)
Strophocrinus Sardeson, 1899.

Family **Palaeocrinidae** Bather

- Bactrocrinites** Schnur, 1849 (*Bactrocrinus* Quenstedt, 1875, and authors) (*Bactrocrinidae* Jaekel, 1918).
Palaeocrinus Billings, 1859.
Perittocrinus Jaekel, 1902.
Porocrinus Billings, 1857 (*Porocrinidae* Jaekel, 1918)
Thalamocrinus Miller and Gurley, 1895.

Family **Botryocrinidae** Bather

- Ancyrocrinus** Hall, 1862
Atelestocrinus Wachsmuth and Springer, 1886.
Barycrinus Wachsmuth, 1868 (*Barycrinidae* Jaekel, 1918)
Bathericrinus Jaekel, 1918 (*Rhadinocrinidae* Jaekel, 1918).
Botryocrinus Angelin, 1878 (*Sicyocrinus* Angelin, 1878)
Cosmocrinus Jaekel, 1898.
Costalocrinus Jaekel, 1918 (*Vasocrinidae* Jaekel, 1918)
Cyliocrinus Jaekel, 1918
 (?) **Dicirrocrinus** Schmidt, 1934.
Dictenocrinus Jaekel, 1918 (*Gothocrinidae* Jaekel, 1918)
Eifelocrinus Wanner, 1916 (*Ptilocrinus* Wanner, 1916)
Gastrocrinus Jaekel, 1895.
Goniocrinus Miller and Gurley, 1890.
Gothocrinus Bather, 1893 (*Gothocrinidae* Jaekel, 1918).
Hallocrinus Goldring, 1923.
Imitatorcrinus Schmidt, 1934.
Maragnicrinus Whitfield, 1905.
Mastigocrinus Bather, 1892 (*Mastigocrinidae* Jaekel, 1918)
Methabocrinus Jaekel, 1918 (*Carpocrinidae* Jaekel, 1918).
Pagecrinus Kirk, 1929.
Pellecrinus Kirk, 1929 (*Vasocrinus* of authors, not Lyon, 1857)
Polycrinus Jaekel, 1918.
Rhadinocrinus Jaekel, 1895 (*Rhadinocrinidae* Jaekel, 1918)
Schmidtocrinus Haarmann, 1921.
Streptocrinus Wachsmuth and Springer, 1886 (*Ophiocrinus* Angelin, 1878, pre-occupied)
Vasocrinus Lyon, 1857 (*Vasocrinidae* Jaekel, 1918)

Family **Glossocrinidae** Goldring

- Catactocrinus** Goldring, 1923.
Charientocrinus Goldring, 1923.
Glossocrinus Goldring, 1923.
Liparocrinus Goldring, 1923.

Family **Lecythocrinidae** Kirk

- Cestocrinus** Kirk, 1940.
Corynecrinus Kirk, 1934.
Lecythocrinus Müller, 1858.

Family **Gasterocomidae** Roemer

- Achradocrinus** Schultze, 1867.
Arachnocrinus Meek and Worthen, 1866.
Gasterocoma Goldfuss, 1839 (*Ceramocrinus* Müller, 1855; *Epactocrinus* Müller, 1855)
Mictocrinus Goldring, 1923.
Myrtillocrinus Sandberger and Sandberger, 1856 (*Tripleurocrinus* Wood, 1904).
Nanocrinus Müller, 1856.
Schultzicrinus Springer, 1911 (Schultzicrinidae Jaekel, 1918)
Scoliocrinus Jaekel, 1895.

Family **Cyathocrinitidae** Bassler (**Cyathocrinidae** Roemer)

- Anarchocrinus** Jaekel, 1918.
Codiacrinus Schultze, 1866 (Codiacrinidae Bather)
Cyathocrinites Miller, 1821 (*Atocrinus* McCoy, 1844; *Cyathocrinus* of authors; *Saccosomopsis* Meek and Worthen, 1870)
Dimorphicrinus d'Orbigny, 1840.
Edaphocrinus Wright, 1935.
Gissocrinus Angelin, 1878.
Lophocrinus von Meyer, 1858 (*Carduocrinus* von Koenig, 1895) (Lophocrinidae Bather)
Parisocrinus Wachsmuth and Springer, (1879) 1880 (Parisocrinidae Jaekel, 1918)
Rhenocrinus Jaekel, 1906 (Lophocrinidae Bather) (Rhenocrinidae Jaekel, 1918)
Stellarocrinus Strimple, 1940 (*Whiteocrinus* Strimple, 1939; *Apollocrinus* Moore and Plummer, 1940)

Family **Poteriocrinidae** Bassler (Poteriocrinidae Roemer; Scaphiocrinidae Bather)

- Aatocrinus** Moore and Plummer, 1940.
Adinocrinus Kirk, 1938.
Aesiocrinus Miller and Gurley, 1890. (*Moundocrinus* Strimple, 1939; *Pentadelocrinus* Strimple, 1939; *Phialocrinus* Trautschold, 1870)
Agassizocrinus Owen and Shumard, 1851 (*Agassizocrinites* Troost, 1849; *Astylocrinus* Roemer, 1852-54)
Alsopocrinus Tansey, 1922.
Anartiocrinus Kirk, 1940.
Anemetocrinus Wright, 1938.
Apographiocrinus Moore and Plummer, 1940.
Ascetocrinus Kirk, 1940.
Athlocrinus Moore and Plummer, 1940.
Aulocrinus Wachsmuth and Springer, 1897.
Basleocrinus Wanner, 1916.
Benthocrinus Wanner, 1937 (subgenus of *Prolobocrinus* Wanner, 1937)
Blothocrinus Kirk, 1940.
Bursacrinus Meek and Worthen, 1861.
Cadocrinus Wanner, 1924.
Carcinocrinus Laudon, 1941.
Ceratocrinus Weller, 1909.

- Cercidocrinus** Kirk, 1935.
Coeliocrinus White, 1863.
Corematocrinus Goldring, 1923.
Cosmetocrinus Kirk, 1941.
Cromyocrinus Trautschold, 1867 (*Dicromyocrinus* Jaekel, 1918) (Cromyocrinidae Jaekel, 1918)
Cryphiocrinus Kirk, 1929.
Culmicrinus Jaekel, 1918.
Cydrocrinus Kirk, 1940.
Dasciocrinus Kirk, 1939.
Decadocrinus Wachsmuth and Springer, 1880 (1879).
Delocrinus Miller and Gurley, 1890 (*Ceriocrinus* White, 1880)
Depaocrinus Wanner, 1937.
Dinocrinus Wanner, 1916.
Dinotocrinus Kirk, 1941.
Diphuicrinus Moore and Plummer, 1938.
Elibatocrinus Moore, 1940.
Endelocrinus Moore and Plummer, 1940.
Erisocrinus Meek and Worthen, 1865 (*Philocrinus* Meek and Worthen, 1865)
Ethelocrinus Kirk, 1937.
Eupachyrcrinus Meek and Worthen, 1865 (*Intermediacrinus* Sutton and Winkler, 1940) (Eupachyrcrinidae Jaekel, 1918)
Galateacrinus Moore, 1940.
Gilmocrinus Laudon, 1933.
Graphiocrinus de Koninck and Lehon, 1854 (*Euerisocrinus* Strimple, 1939; *Missouri-crinus* Miller, 1891; *Pentadia* Dana, 1847; *Scaphiocrinus* Hall, 1858) (Graphiocrinidae Jaekel, 1918)
Haeretocrinus Moore and Plummer, 1940.
 (?) **Hemiindocrinus** Yakovlev, 1926.
 (?) **Hemimollocrinus** Yakovlev, 1930.
Histocrinus Kirk, 1940.
Hydreionocrinus de Koninck, 1858 (Hydreionocrinidae Jaekel, 1918)
Hydriocrinus Trautschold, 1867.
Hypselocrinus Kirk, 1940.
Indocrinus Wanner, 1916 (Indocrinidae Wanner, 1916)
Jonkerocrinus Wanner, 1924.
Lasanocrinus Moore and Plummer, 1940.
Laudonocrinus Moore and Plummer, 1940.
Lebetocrinus Kirk, 1939 (1940)
Linobrachiocrinus Goldring, 1939 (*Linocrinus* Goldring, 1938, not Kirk, 1938)
Linoocrinus Kirk, 1938.
Logocrinus Goldring, 1923.
Lopadiocrinus Wanner, 1916 (Encrinidae Jaekel, 1918)
Malaiocrinus Wanner, 1924.
Marathonocrinus Moore and Plummer, 1940.
Melbacrinus Strimple, 1939.
Mollocrinus Wanner, 1916 (Mollocrinidae Wanner, 1916)
Morrowcrinus Moore and Plummer, 1938.
Moscovicrinus Jaekel, 1918.
Nebraskacrinus Moore, 1939.
Notiocrinus Wanner, 1924.
Oklahomacrinus Moore, 1939.

- Ophiurocrinus** Jaekel, 1918.
Paradelocrinus Moore and Plummer, 1938.
Paragassizocrinus Moore and Plummer, 1940.
Paragraphiocrinus Wanner, 1937.
Paraplasocrinus Moore and Plummer, 1938.
Parindocrinus Wanner, 1937.
Parulocrinus Moore and Plummer, 1940.
Pegocrinus Kirk, 1940.
Perimestocrinus Moore and Plummer, 1938.
Petschoracrinus Yakovlev, 1928.
Phacelocrinus Kirk, 1940.
Phanocrinus Kirk, 1937 (*Pentaramicrinus* Sutton and Winkler, 1940)
Pirasocrinus Moore and Plummer, 1940.
Plaxocrinus Moore and Plummer, 1938.
Poteriocrinites Miller, 1821 (*Poteriocrinus* of authors)
Prininocrinus Goldring, 1938.
Proindocrinus Yakovlev, 1939.
Prolobocrinus Wanner, 1937.
Propoteriocrinus Schmidt, 1934.
Protencrinus Jaekel, 1918 (Encrinidae Jaekel, 1918)
Roemeroocrinus Wanner, 1918.
Schistocrinus Moore and Plummer, 1940.
Seiadiocrinus Moore and Plummer, 1938.
Scytalocrinus Wachsmuth and Springer, 1880 (1879) (*Dactylocrinus* Sladen, 1878, not Quenstedt, 1876).
Sellardsicrinus Moore and Plummer, 1940.
Sinocrinus Tien, 1924.
Spaniocrinus Wanner, 1924.
Spheniscocrinus Wanner, 1937.
Springericrinus Jaekel, 1918.
Stachyocrinus Wanner, 1916 (Encrinidae Jaekel, 1918)
Stellarocrinus Strimple, 1940 (*Brychiocrinus* Moore and Plummer, 1940)
Stemmatocrinus Trautschold, 1867 (Encrinidae Jaekel, 1918)
 (?) **Stereobrachiocrinus** Mather, 1915.
Strongylocrinus Wanner, 1916 (Mollocrinidae Wanner, 1916)
Stuartwellerocrinus Moore and Plummer, 1938.
Synphocrinus Trautschold, 1881.
Tetrabrachiocrinus Yakovlev, 1934.
Texacrinus Moore and Plummer, 1940.
Tholocrinus Kirk, 1939.
Thuringocrinus Jaekel, 1918.
Timorechinus Wanner, 1910 (*Timorocrinus* Wanner, 1912; *Timorocystis* Lambert 1911) (Timorechinidae Jaekel, 1918)
Tibrachiocrinus McCoy, 1847.
Trimerocrinus Wanner, 1916.
Tundracrinus Yakovlev, 1928.
Ulocrinus Miller and Gurley, 1890.
Ulrichicrinus Springer, 1926.
Utharocrinus Moore and Plummer, 1938.
Woodocrinus de Koninck, 1854 (*Philocrinus* de Koninck, 1863)

Family **Zeacrinidae** new name

(Zeacrinidae Kirk, 1942)

- Alcimocrinus** Kirk, 1938.
Eratocrinus Kirk, 1938.
Neozeacrinus Wanner, 1937.
Parabursacrinus Wanner, 1924.
Sarocrinus Kirk, 1942.
Zeacrinites Troost, 1858 (*Zeacrinus* Hall, 1858; *Xystocrinus* Moore and Plummer, 1938)

Family **Pachylocrinidae** Kirk

- Hylodecrinus** Kirk, 1941.
Pachylocrinus Wachsmuth and Springer, 1879 (*Scaphiocrinus* of authors, not Hall)
Rhopocrinus Kirk, 1942.

Family **Pelecocrinidae** Kirk

- Abrotocrinus** Miller and Gurley, 1890.
Pelecocrinus Kirk, 1941.
Stinocrinus Kirk, 1941.

Family **Hypocrinidae** Jaekel

- Abrachioocrinus** Wanner, 1920.
Acariaioocrinus Wanner, 1924 (*Streptostomocrinus* Yakovlev, 1927)
Aidemocrinus J. M. Weller, 1930.
Allosycocrinus Wanner, 1924.
Amphipsalidocrinus J. M. Weller, 1930.
Asymmetrocrinus Wanner, 1937.
Atremacrinus Wanner, 1929.
Bolbocrinus Wanner, 1916.
Clithrocrinus Kirk, 1937 (*Clistocrinus* Kirk, 1937)
Coenocystis Girty, 1908.
Cranocrinus Wanner, 1929.
Cydonocrinus Bather, 1913.
Dichostreblocrinus J. M. Weller, 1930.
Embryocrinus Wanner, 1916 (*Embryocrinidae* Wanner, 1916)
Hemistreptacron Yakovlev, 1926.
Hypocrinus Beyrich, 1862.
Lageniocrinus de Koninek and Lehon, 1854.
Lecythiocrinus White, 1870 (*Menocrinus* S. A. Miller, 1889) (*Codiocrinidae* Bather)
Metasycocrinus Wanner, 1920.
Monobrachioocrinus Wanner, 1916.
Nereocrinus Wanner, 1924 (*Oceanocrinus* Wanner, 1924)
Parasycocrinus Marez Oyens, 1940.
Pillidiocrinus Wanner, 1937.
Prochoidocrinus Wanner, 1937.
Sycocrinites Austin and Austin, 1842 (*Sycocrinus* Bather, 1900)
Tenagocrinus Wanner, 1929.
Thetidocrinus Wanner, 1916.
Tyththocrinus J. M. Weller, 1930.

Order FLEXIBILIA Zittel

Family Lecanocrinidae Springer (? Homalocrinidae Angelin)

- Ancistrocrinus** Wanner, 1924.
Anisocrinus Angelin, 1878.
Asaphocrinus Springer, 1920.
Brachypus Wanner, 1929.
Calpiocrinus Angelin, 1878 (Calpiocrinidae Jaekel, 1918)
Calycocrinus Wanner, 1916.
 (?) **Carlopsocrinus** Wright, 1933.
Cholocrinus Springer, 1906.
Cibolocrinus Weller, 1909.
Geroldicrinus Jaekel, 1918 (Mespilocrinidae Jaekel, 1918)
Homalocrinus Angelin, 1878 (*Leiocrinus* Springer, 1902) (Homalocrinidae Angelin, 1878)
Hormocrinus Springer, 1920.
Lecanocrinus Hall, 1852 (*Cyrtidocrinus* Angelin, 1878)
Loxocrinus Wanner, 1916.
Mespilocrinus de Koninck and Lehon, 1853 (Mespilocrinidae Jaekel, 1918)
Nipterocrinus Wachsmuth, 1868 (Nipterocrinidae Jaekel, 1918)
Palaeoholopus Wanner, 1916 (Palaeoholopidae Wanner, 1916)
Petrocrinus Wanner, 1924.
Plagiocrinus Wanner, 1924.
Proapsidocrinus Wanner, 1924.
Prophyllocrinus Wanner, 1916.
Pycnosaccus Angelin, 1878 (*Oncocrinus* Bather, 1900)
Syntomocrinus Wanner, 1916.

Family Sagenocrinitidae Bassler

(Sagenocrinidae Angelin)

- Forbesiocrinus** de Koninck and Lehon, 1854 (*Proguettardicrinus* Steinman, 1908)
 (Forbesiocrinidae Jaekel, 1918)
Lithocrinus Wachsmuth and Springer, 1880.
Meristocrinus Springer, 1906.
Sagenocrinites Austin and Austin, 1842 (*Sagenocrinus* of authors)
Temnocrinus Springer, 1902.

Family Ichthyocrinidae Angelin

- Ainacrinus** Wright, 1939
Amphicrinus Springer, 1906.
Artichthyocrinus Wright, 1923.
Cleistocrinus Springer, 1920.
Clidochirus Angelin, 1878 (*Clidocrinus* Wanner, 1916)
Dactylocrinus Quenstedt, 1876 (*Aristocrinus* Rowley, 1895; *Callawaycrinus* Rowley, 1895; *Dimerocrinites* Pacht, 1852)
Euonychocrinus Strimple, 1940.
Euryocrinus Phillips, 1836 (*Euryocrinites* Austin and Austin, 1842)
Ichthyocrinus Conrad, 1842.
Metichthyocrinus Springer, 1906.
Rumphocrinus Jaekel, 1924.
Synaptocrinus Springer, 1920.

- Synerocrinus** Jaekel, 1897 (*Forbesiocrinus* Trautschold, 1867, not de Koninek and Lehon) (Synerocrinidae Jaekel, 1918)
Talanterocrinus Moore and Plummer, 1940 (*Trautscholdicrinus* Moore and Plummer, 1939; *Synerocrinus* of authors, not Jaekel)
Wachsmuthicrinus Springer, 1902.

Family **Taxocrinidae** Angelin

- Eutaxocrinus** Springer, 1906.
Gnorimocrinus Wachsmuth and Springer, 1880.
Onychocrinus Lyon and Casseday, 1860 (*Oligocrinus* Springer, 1902) (Onychocrinidae Jaekel, 1918)
Parichthyocrinus Springer, 1902.
Protaxocrinus Springer, 1906.
Taxocrinus Phillips, 1843 (*Cladocrinites* Austin and Austin, 1843; *Cladocrinus* Morris, 1843, and authors; *Euryalecrinus* Austin and Austin, 1846; *Isocrinus* Phillips, 1841, not von Meyer; *Taxocrinites* Steininger, 1853)

Order ADUNATA Bather (Camerata fide Springer)

Family **Platycrinidae** Bassler (**Platycrinidae** Roemer)

- Amblacrinus** d'Orbigny, 1849 (*Cocccocrinus* Müller, 1855) (Cocccocrinidae Jaekel, 1918)
Bogotaecrinus Schmidt, 1937.
Brahmacrinus Sollas, 1900.
Cordylocrinus Angelin, 1878.
Culicocrinus Müller, 1854 (*Protoeuryale* Müller, 1854)
Cyttarocrinus Goldring, 1923.
Eucladocrinus Meek, 1871.
Eutelecrinus Wanner, 1916.
Hapalocrinus Jaekel, 1895 (*Agriocrinus* Jaekel, 1895; *Clematocrinus* Jaekel, 1897) (Agriocrinidae Jaekel, 1918)
Helicocrinus Chapman, 1903.
Lyonicrinus Springer, 1926.
Marsupiocrinus Morris, 1843 (*Cupellaecrinites* Troost, 1849; *Cupellaecrinus* Shumard; *Marsipocrinus* Bather, 1900; *Marsupiocrinites* Phillips, 1839) (Marsipocrinidae Jaekel, 1918)
Neodichocrinus Wanner, 1937.
Neoplatycrinus Wanner, 1916.
Nyctocrinus Springer, 1926.
Platycrinites Miller, 1821 (*Centrocrinus* Austin and Austin, 1843; *Edwardsocrinus* d'Orbigny, 1849; *Medusacrinus* Austin, 1875; *Platycrinus* of authors)
Plesiocrinus Wanner, 1937.
Pleurocrinus Austin and Austin, 1843.
Thallocrinus Jaekel, 1895 (Thallocrinidae Jaekel, 1918)

Family **Hexacrinitidae** Bassler

(**Hexacrinitidae** Wachsmuth and Springer)

- Arthroacantha** Williams, 1883 (*Arthracantha* of authors; *Hystriocrinus* Hinde, 1885)
Camptocrinus Wachsmuth and Springer, 1897.
Dichocrinus Münster, 1839 (*Cotyledonocrinus* Lyon and Casseday, 1862; *Dichocrinites* Geinitz, 1846)
Hexacrinites Austin and Austin, 1843 (*Hexacrinus* Austin and Austin, 1844; *Triplari-crinites* Goldfuss Ms.; *Triplariocrinus* Zittel, 1879)

- Neodichocrinus** Wanner, 1937.
Paradichocrinus Springer, 1926.
 (?) **Platyhexacrinus** Schmidt, 1913.
Pterotocrinus Lyon and Casseday, 1859 (*Asterocrinus* Lyon, 1857; *Codonocrinites* Troost, 1849; *Codonocrinus* Shumard, 1866)
Stomiocrinus Wanner, 1937.
Talarocrinus Wachsmuth and Springer, 1881 (*Daemenocrinites* Troost, 1849; *Daemenocrinus* Bather 1900; *Doliolocrinites* Troost; *Doliolocrinus* Wachsmuth and Springer, 1881)

Family **Acrocrinidae** Wachsmuth and Springer

Acrocrinus Yandell, 1855.

Order **CAMERATA** Wachsmuth and Springer

Family **Cleiocrinidae** Springer

Cleiocrinus Billings, 1857 (*Campanulites* Troost, 1849)

Family **Reteocrinidae** Wachsmuth and Springer

(?) **Craspedocrinus** Dahmer, 1921.

Gaurocrinus S. A. Miller, 1883.

Reteocrinus Billings, 1859.

Family **Dimerocrinitidae** Bassler

(**Dimerocrinidae** Zittel)

Cyphocrinus S. A. Miller, 1892 (*Hyptiocrinus* Wachsmuth and Springer, 1892)

Dimerocrinites Phillips, 1839 (*Dimerocrinus* of authors; *Eucrinus* Angelin, 1878) (*Eucrinidae* Angelin, 1878); *Glyptaster* Hall, 1852; *Thysanocrinus* Hall, 1852)

Eudimerocrinus Springer, 1926.

Gazacrinus S. A. Miller, 1892 (*Idiocrinus* Wachsmuth and Springer, 1892) (*Gazacrinidae* Jaekel, 1918)

Lampteroocrinus Roemer, 1860 (*Balanocrinites* Troost, 1849; *Balanocrinus* Hall, 1861)

Orthocrinus Jaekel, 1895 (*Orthocrinidae* Jaekel, 1918)

Pterinocrinus Goldring, 1923.

Ptychocrinus Wachsmuth and Springer, 1885 (*Ptychocrinidae* Jaekel, 1918)

Siphonocrinus S. A. Miller, 1883.

Family **Rhodocrinitidae** Bassler

(**Rhodocrinidae** Roemer)

Acanthocrinus Roemer, 1850.

Anthemocrinus Wachsmuth and Springer, 1881 (*Anthemocrinidae* Jaekel, 1918)

Archaeocrinus Wachsmuth and Springer, 1881.

Atactocrinus Weller, 1916.

Condylocrinus Eichwald, 1860.

Deocrinus Hudson, 1907.

Diabolocrinus Wachsmuth and Springer, 1897.

Diamenocrinus Oehlert, 1891.

Emperocrinus Miller and Gurley, 1895.

Gilbertocrinus Phillips, 1836 (*Gilbertocrinites* Troost, 1849; *Goniasteroidocrinus* Lyon and Casseday, 1859; *Ollacrinites* Blainville, 1834; *Ollacrinus* Cumberland, 1826; *Trematocrinus* Hall, 1860) (*Gilbertocrinidae* Jaekel, 1918)

Hercocrinus Hudson, 1907.
Lahuseniocrinus Tschernyschew, 1892.
Lyriocrinus Hall, 1852.
Maquoketocrinus Slocum, 1924.
Ophiocrinus Sharpe and Salter, 1856.
Paragazacrinus Springer, 1926.
Paulocrinus Springer, 1926.
Rhaphanocrinus Wachsmuth and Springer, 1885 (*Coelocrinus* Salter, 1866)
Rhipidocrinus Zittel, 1879.
Rhodocrinites Miller, 1821 (*Rhodocrinus* Agassiz, 1835, and authors)
Siderocrinus Wood, 1909.
Sphaerocrinus Goldring, 1923.
Thylacocrinus Oehlert, 1878.
Wilsonicrinus Springer, 1926.

Family **Glyptocrinidae** Zittel

Glyptocrinus Hall, 1847 (*Glyptocrinites* Carpenter, 1884; *Icosidactylocrinites* Owen, 1845; *Icosidactylocrinus* Shumard, 1866)
Periglyptocrinus Wachsmuth and Springer, 1897.
Pycnocrinus S. A. Miller, 1883.
Schizocrinus Hall, 1847.

Family **Melocrinitidae** Bassler (**Melocrinidae** Zittel)

Alisocrinus Kirk, 1929.
Ctenocrinus Bronn, 1840 (*Clonocrinites* Steininger, 1849; *Mariacrinus* Hall, 1858; *Xenocrinus* Jahn, 1892; *Zenkericrinus* Waagen and Jahn, 1899).
Cytoocrinus Roemer, 1860.
Melocrinites Goldfuss, 1826 (*Astrocrinites* Conrad, 1841; *Astrocrinus* Bather, 1900; *Castenocrinus* Roemer, 1855; *Clonocrinus* Oehlert, 1879, not Quenstedt, 1876; *Melocrinus* Agassiz, 1838, and authors; *Turbinocrinites* Troost, Ms.; *Turbino-*
crinus Wachsmuth and Springer, 1881)
Promelocrinus Jaekel, 1902 (*Proctenocrinus* Jaekel, 1918)
Scyphocrinites Zenker, 1833 (*Camarocrinus* Hall, 1879; *Lobolithus* Barrande, 1899; *Scyphocrinus* Roemer, 1855, and authors) (*Scyphocrinidae* Jaekel, 1918)
Trichotocrinus Olsson, 1912 (subgenus of *Melocrinites*)

Family **Patelliocrinidae** Angelin

Alloocrinus Wachsmuth and Springer, 1889.
Angelinocrinus Jaekel, 1918 (*Briarocrinidae* Angelin, 1878)
Briarocrinus Angelin, 1878 (*Briarocrinidae* Angelin, 1878)
Centriocrinus Bather, 1899 (*Centrocrinus* Wachsmuth and Springer, 1881)
Chydrocrinus Jaekel, 1918 (*Stelidiocrinidae* Angelin, 1878)
Loveniocrinus Jaekel, 1918.
Macrostylocrinus Hall, 1852.
Patelliocrinus Angelin, 1878.
Stelidiocrinus Angelin, 1878 (*Harmocrinus* Angelin, 1878; *Patinocrinus* Jaekel, 1918)
 (Stelidiocrinidae Angelin)

Family **Clonocrinidae** Bather

Clonocrinus Quenstedt, 1876 (*Corymbocrinus* Angelin, 1878; *Polypeltes* Angelin, 1878)
 (Corymbocrinidae Angelin; Polypeltidae Angelin, 1878)

- Laurelocrinus** Springer, 1926.
Technocrinus Hall, 1857.
Trybliocrinus Geinitz, 1867 (*Spyridiocrinus* Oehlert, 1889) (*Spyridiocrinidae* Jaekel, 1918)

Family **Dolatocrinidae** Bather

- Clarkeocrinus** Goldring, 1923.
Comanthocrinus Springer, 1921.
Craterocrinus Goldring, 1923.
Dolatocrinus Lyon, 1857 (*Cacabocrinites* Troost, 1849; *Cacabocrinus* Hall, 1862)
Hadrocrinus Lyon, 1869.
Himerocrinus Springer, 1921 (? *Coronocrinus* Hall, 1859)
Stereocrinus Barris, 1878.

Family **Eucalyptocrinitidae** Bassler

(**Callyptocrinidae** Angelin, **Eucalyptocrinidae** Roemer)

- Calliocrinus** d'Orbigny, 1849 (*Calliocrinus* Angelin, 1878, and authors; *Calliocrinites* Chapman, 1857; *Cryptodiscus* Hall, 1868)
Chicagocrinus Weller, 1900.
Eucalyptocrinites Goldfuss, 1826 (*Crinocystis* Haeckel, 1896; *Crinocystites* Hall, 1864; *Eucalyptocrinus* Agassiz, 1838, and authors; *Hypanthocrinites* Phillips, 1839; *Hypanthocrinus* Morris, 1843)

Family **Xenocrinidae** Bather

- Canistrocrinus** Wachsmuth and Springer, 1885.
Compsocrinus S. A. Miller, 1883.
Tanaocrinus Wachsmuth and Springer, 1897 (*Tanaocrinidae* Bather, 1900)
Xenocrinus S. A. Miller, 1881.

Family **Actinocrinitidae** Bassler

(**Actinocrinidae** Roemer)

- Actinocrinites** Miller, 1821 (*Actinocrinus* Phillips, 1836, and authors; *Amphora* Cumberland, 1826; *Blairocrinus* S. A. Miller, 1891; *Phillipsocrinus* McCoy, 1844)
Amphoracrinus Austin, 1848 (*Amphoraocrinidae* Bather, 1900)
Cactocrinus Wachsmuth and Springer, 1897.
Laubeocrinus Waagen and Jahn, 1893.
Lenneocrinus (Jaekel) Schmidt, 1909.
Physetocrinus Meek and Worthen, 1869.
Steganocrinus Meek and Worthen, 1866 (*Sampsonocrinus* Miller and Gurley, 1895; *Shumardocrinus* Miller and Gurley, 1895)
Strotocrinus Meek and Worthen, 1866.
Teleiocrinus Wachsmuth and Springer, 1881 (*Calathocrinus* Hall, 1861, not von Meyer)
Wannerocrinus Marez Oyens, 1940.

Family **Batocrinidae** Wachsmuth and Springer (Subfamily of Actinocrinitidae)

- Agaricocrinus** Hall, 1858 (*Agaricocrinites* Troost, 1849) (*Coelocrinidae* Bather, 1900)
Alloprosallocrinus Lyon and Casseday, 1862 (*Conocrinites* Troost, 1849; *Conocrinus* Shumard, 1866)
Aorocrinus Wachsmuth and Springer, 1897.
Batocrinus Casseday, 1854.

- (?) **Bohemiocrinus** Jahn, 1892.
Coelocrinus Meek and Worthen, 1865 (*Sphaerocrinus* Meek and Worthen, 1865, not Roemer) (Coelocrinidae Bather, 1900)
Dizygocrinus Wachsmuth and Springer, 1897.
Dorycrinus Roemer, 1854 (Coelocrinidae Bather, 1900)
Eretmocrinus Lyon and Casseday, 1859
Eutrochocrinus Wachsmuth and Springer, 1897.
Globocrinus Weller, 1920.
Macrocrinus Wachsmuth and Springer, 1897.
Paragaricocrinus Yakovlev, 1934.
Uperocrinus Meek and Worthen, 1865 (*Hyperocrinus* Bather, 1897; *Lobocrinus* Wachsmuth and Springer, 1897)
Vletavicrinus Waagen and Jahn, 1899.

Family **Carpocrinidae** Bather

- Acacocrinus** Wachsmuth and Springer, 1897.
Barrandeocrinus Angelin, 1878 (Barrandeocrinidae Angelin, 1878)
Carpocrinus Miller, 1840 (*Abracrinus* d'Orbigny, 1849; *Carpocrinites* Geinitz, 1846; *Habrocrinus* Angelin, 1878; *Leptocrinus* Angelin, 1878; *Phoenicocrinites* Austin and Austin, 1843; *Pionocrinus* Angelin, 1878) (Habrocrinidae Angelin, 1878)
Cylicocrinus S. A. Miller, 1892.
Desmidocrinus Angelin, 1878 (Desmidocrinidae Angelin, 1878)
Macarocrinus Jaekel, 1895.

Family **Periechocrinitidae** Bassler (**Periechocrinidae** Bather)

- Abacocrinus** Angelin, 1878 (*Carolicrinus* Waagen and Jahn, 1899) (Abacocrinidae Jaekel, 1918)
Beyrichocrinus Waagen and Jahn, 1899 (not Jaekel, 1918)
Corocrinus Goldring, 1923.
Gennaeocrinus Wachsmuth and Springer, 1881.
Lindstroemiocrinus Jaekel, 1918 (Scyphocrinidae Jaekel, 1918)
Megistocrinus Owen and Shumard, 1852 (*Tylocrinus* Wood, 1904)
Periechocrinites Austin and Austin, 1842 (*Crumenaecrinites* Troost; 1849; *Crumenaecrinus* Bather, 1900; *Geocrinus* d'Orbigny, 1849; *Periechocrinus* of authors; *Pradocrinus* Verneuil, 1850; *Pyxidocrinus* Müller, 1855; *Trochocrinites* Portlock, 1843.
Saccocrinus Hall, 1852.
Thamnocrinus Goldring, 1923.

Family **Edriocrinidae** S. A. Miller

- Edriocrinus** Hall, 1858.
Lodanella Kayser, 1885.

UNCLASSIFIED

- Adelocrinus** Phillips, 1841. (Possibly *Hexacrinites*, columnals only)
Amphoraea Haeckel, 1896 (Hypothetical genus)
Anthocystites Bernard, 1893 (Nom. nud.)
Aporocrinites Austin and Austin, 1842 (Nom. nud.) (*Aporocrinus* Bather, 1900)
Archaeocystites Barrande, 1887 (*Archaeocystis* Haeckel, 1896) (Undetermined cystid)
Ascarum Gregorio, 1930 (Based on stems)
Aspidocrinus Hall, 1858 (Incrusting root of crinoid)

- Astroporites** Lambe, 1896 (Basal portion of crinoid root)
Bichirocrinus Jaekel, 1918 (No genotype)
Biciclocrinus Ivanov, 1926 (Nom. nud.)
Bolboporites Pander, 1830 (Position uncertain)
Bornium Gregorio, 1930 (Based on stems)
Calceolispongia Etheridge Jr., 1914. (Probably crinoidal; see *Dinocrinus*)
Calocrinites Steininger, 1849 (*Calocrinus* Bather, 1900) (Dicyclic inadunate, possibly *Cupressocrinites*)
Cardiocystites Barrande, 1887 (*Cardiocystis* Haeckel, 1896) (Indeterminable)
Chilocystis Perner, 1911 (Nom. nud.)
Cladostoma Rafinesque, 1819 (Unrecognizable)
Coenocrinus Valette, 1934 (Columnals only)
Concrétum Gregorio, 1930 (Unrecognizable remains)
Cophinus Murchison, 1839 (Impressions of stems)
Cothocrinites Phillipi, 1876 (*Cothocrinus* Zittel, 1879) (Not recognizable)
Crisantum Gregorio, 1930 (Unrecognizable; based on stems)
Cystidea Barrande, 1887 (General term used for undetermined fragments)
Cystocrinus Roemer, 1860 (Detached columns)
Decadactylocrinites Owen, 1843 (*Decadactylocrinus* Bather, 1900) (Nom. nud.)
Dichirocrinus Jaekel, 1918 (No genotype)
Elaeacrinidarum Peetz, 1916 (Position uncertain)
Embryocrinus Hudson, 1918 (not Wanner, 1916) (? Young *Dendrocrinus*)
Eocrinites Jaekel, 1899 (Hypothetical genus or group)
Eocystis Haeckel, 1896 (Hypothetical genus or group)
Estonocystis Jaekel, 1918 (Estonocystidae Jaekel, 1918) (Uncertain, probably *Bothriocidaris*)
Grammocrinus Eichwald, 1860 (Columnals only)
Heterocrinites Troost, 1849 (Nom. nud.)
Idromecrinus Gregorio, 1930 (Unrecognizable fragment)
Imperatoria Gregorio, 1930 (Unrecognizable)
Lagarocystis Jaekel, 1899 (Nom. nud.)
Larites Gregorio, 1930 (Not recognizable)
Leseus Gregorio, 1930 (Based on columns)
Microcrinus Bolkhowitina and Markoff, 1926 (Not Emmons, 1858)
Microcrinus Ivanov, 1926 (Nom. nud.)
Mirmus Gregorio, 1930 (Unrecognizable fragment)
Mitrocrinus Miller and Gurley, 1894 (Probably abnormal crinoid)
Neocystites Barrande, 1887 (*Neocystis* Bather, 1889) (Probably pelmatozoan root)
Octocrinus Peck, 1936 (Crinoid; position uncertain)
Ontariocrinus Jaekel, 1918 (Ontariocrinidae Jaekel, 1918) (Abnormal inadunate)
Pachyrcrinites Eichwald, 1840 (*Pachyrcrinus* Eichwald, 1860) (Columnal only)
Pachyocrinus Billings, 1859 (Base with no diagnostic features)
Palamphora Haeckel, 1896 (Hypothetical genus or order)
Palermocrinus Jaekel, 1918 (Uncertain; based on stems)
Paractocrinus Jaekel, 1918 (Paractocrinidae Jaekel, 1918) (Uncertain crinoid; possibly abnormal growth)
Paradoxocrinus Wanner, 1937 (Uncertain crinoid)
Parastephanocrinus Springer, 1926 (? Young *Gazacrinus*)
Parorthocrinus Jaekel, 1918 (Paractocrinidae Jaekel, 1918) (Uncertain crinoid; possibly abnormal)
Passalocrinus Peck, 1936 (Possibly young inadunate)
Pegmacrinus Loriol, 1895 (Probably not an echinoderm)

- Pentactaea* Haeckel, 1896 (Hypothetical genus)
Pentagonites Rafinesque, 1819 (Pentagonal columns)
Pentamerocrinus Jaekel, 1918 (Pentamerocrinidae Jaekel, 1918) (Undetermined Flexibilia)
Peripterocrinus Wanner, 1916 (*Thalassocrinus* Wanner, 1916) (Uncertain crinoid)
Phialocrinus Eichwald, 1856 (Incrusting roots)
Platysphaerites Trenkner, 1868 (Doubtfully crinoidal)
Podolithus Sardeson, 1908 (Bases of various crinoids)
Polycerus Fischer de Waldheim, 1811 (Based on pentagonal plates)
Polytrema Rafinesque, 1819 (Not recognizable)
Prodromocrinus Jaekel, 1902 (Not recognizable)
Protamphora Haeckel, 1896 (Hypothetical genus)
Psolocystis Haeckel, 1896 (Hypothetical genus)
Rimpia Gregorio, 1930 (Unrecognizable)
Rossocrinus Ivanov, 1926 (Nom. nud.)
Rubocrinus Ivanov, 1926 (Nom. nud.)
Scillus Gregorio, 1930 (Unrecognizable; columns only)
Sphenocrinus Eichwald, 1856 (Quinquepartite columnals only)
Stephanamphora Haeckel, 1896 (Hypothetical)
Stephanocystis Haeckel, 1896 (Nom. nud.)
Teratocrinus Wanner, 1924 (Uncertain position)
Tetracrinites Austin and Austin, 1842 (*Tetracrinus* Bather, 1900) (Nom. nud.)
Tetractocrinus Jaekel, 1918 (Paractocrinidae Jaekel, 1918) (Possibly abnormal growth)
Tetramerocrinites Austin and Austin, 1842 (*Tetramerocrinus* Bather, 1900) (Indeterminable)
Thuriocystis Haeckel, 1896 (Hypothetical genus)
Timorocidaris Wanner, 1920 (Possibly crinoidal)
Trautscholdicrinus Ivanov, 1926 (Nom. nud.)
Trimerocrinus Ivanov, 1920 (Nom. nud.)
Urnocrinus Ivanov, 1926 (Nom. nud.)

FAUNAL LISTS OF SPECIES

CAMBRIAN FAUNAS

LOWER CAMBRIAN FORMATIONS

OLENELLUS BEDS: East arm Bonne Bay, Newfoundland.

Stromatocystites walcotti Schuchert*,
walcotti minor Schuchert*

KINZER FM.: 2 miles west York, Pennsylvania.

Lepidocystis wanneri Foerste*

MIDDLE CAMBRIAN FORMATIONS

CHISHOLM SH.: Near Pioche, Nevada.

Eocrinus longidactylus (Walcott)* (*Eocystites*)

MT. WHYTE FM.: 19 miles southwest Banff, Alberta, Canada.

Gogia prolifica Walcott*

BURGESS SH.: Burgess Pass, above Field, British Columbia.

Walcottidiscus magister Bassler*,
typicalis Bassler*

ST. JOHN SH.: Near St. John, New Brunswick.

Eocystites primaevus Billings*

MENEVIAN: St. Davids, Wales.

Protocystites meneviensis Hicks*

PARADOXIDES BEDS: Bohemia. Ginetz (G); Skrej (Skrey) (S); Tegrovic (T).

Acanthocystites briareus Barrande (G)*,
Ceratocystis perneri Jaekel (T)* (S),
Cystidea concomitans Barrande (S)*,
Dendrocystites dusli (Barrande) (G)* (*Cigara*),
Lapillocystites fragilis Barrande (G)*,
Lichenoides priscus Barrande (G)* (S),
Pilocystites primitius Barrande (G)*,
Stromatocystites pentangularis Pompeckj (T)* (G),
Trochocystites bohemicus Barrande (S)* (G),
longifossatus Jaekel (G)*,
ovalis (Haeckel) (S)* (*Trigonocystis*),
trigona (Haeckel) (S)* (*Trigonocystis*),
Trochocystoides parvus Jaekel (G)*

PARADOXIDES MEDITERRANEAN BED: Coulouma (Herault), southern France (C); Spain (S)

Decacystis hispanicus Gislen. Andrados (Leon), Spain*,
Eocystites primaevus? Billings (C), (Montagne Noire, Brittany),
Gyrocystis platessa Jaekel (C)*,
Stromatocystites cannati (Miguel) (C)* (*Trochocystis*),
Trochocystites barrandei Munier Chalmas & Bergeron (C)* (S),
bohemicus? Barrande (C),
occidentalis Jaekel (C)* (S)*

DRIFT: Rostock, Germany.

Stromatocystites balticus Jaekel*

UPPER CAMBRIAN FORMATION

SNOWY RANGE FM.: One mile south Cooke City, Montana.

Trachelocrinus resseri Ulrich*

CANADIAN FAUNAS

LEVIS FM. (*Clonograptus zone*): Levis, Quebec.

Aenigmatocystis brisa Clark*

TREMADOC (SHINETON SH.): Shineton, Shropshire, England.

Macrocystella mariae Callaway*

ORDOVICIAN FAUNAS (NORTH AMERICA)

CHAZYAN GROUP

DAY POINT LS.: Lake Champlain, New York.

Blastoidocrinus carchariaedens Billings

Bolboporites americanus Billings.

CROWN POINT LS.: Valcour Island, Lake Champlain (V) and Chazy, N. Y. (C).

Canadocystis emmonsii (Hudson) (V)* (*Malocystites*),

Cheirocrinus forbesi (Billings) (V) (*Glyptocystites*),

Malocystites murchisoni Billings (V),

Palaeocystites tenuiradiatus (Hall) (C)* (*Actinocrinus*)

VALCOUR LS.: Valcour Island, Lake Champlain, N. Y. .

Archaeocrinus? delicatulus Hudson*,

Blastoidocrinus carchariaedens Billings,

Canadocystis emmonsii (Hudson)* (*Malocystites*),

Carabocrinus geometricus Hudson*,

Carneyella? valcourensis T. H. Clark*,

Cleioocrinus perforatus Hudson*,

Hercocrinus beecheri (Hudson)* (*Lyriocrinus*),

elegans Hudson*,

ornatus Hudson*,

Malocystites murchisoni Billings,

Palaeocystites tenuiradiatus (Hall) (*Actinocrinus*),

Rhaphanocrinus gemmeus Hudson*

AYLMER FM.: Montreal (Island of Montreal) (M); Caughnawaga (C), etc., Quebec, Canada.

Blastoidocrinus carchariaedens Billings (M)*,

Bolboporites americanus Billings (M)*,

Canadocystis barrandei (Billings) (M)* (*Malocystites*),

emmonsii (Hudson) (M) (*Malocystites*),

Cheirocrinus forbesi (Billings) (C)* (*Glyptocystites*),

Deocrinus asperatus (Billings) (M)* (*Rhodocrinus*),

Hybocrinus pristinus Billings (M)*,

Malocystites murchisoni Billings (C)* (M),

Palaeocrinus chapmani (Billings) (Lot 26, Front Concession, Clarence, Canada)*,

striatus Billings (C)* (M)

Palaeocystites dawsoni Billings (M)*,

tenuiradiatus (Hall) (M) (C)

MINGAN FM.: Mingan Island, Quebec, Canada.

Bolboporites americanus Billings,

Palaeocystites pulcher Billings*

HEISKELL FM.: Knoxville and vicinity, (Knox Co.) (K), Washburn (W) Tennessee; Scott Co., Virginia (V).

Archaeocrinus knoxensis M. & G. (K)*,

parvus M. & G. (K)*,

peculiaris (K)* (W),

Cheirocrinus angulatus Wood (K)*,

Cyathocystis americanus Bassler (K)*,

Diaboloocrinus asperatus (M. & G.) (K)* (*Archeocrinus*),

perplexus W. & Sp. (K)*,

vesperalis (White) (K)* (*Rhodocrinus*),

Echinospaerites aurantium Gyllenhahl (var.) (Tenn., Va. etc.) (*Echinus*),

Mitroocrinus wetherbyi M. & G. (K)*,

Platycystites faberi S. A. Miller (V)*

OTTOSEE SH.: Knoxville, Tennessee.

Geraocrinus sculptus Ulrich*

MURFREESBORO LS.: 3.5 mi. s.e. Rose Hill, Lee Co., Virginia.

Hemicystites eckeli Cullison and Prouty*

BROMIDE FM.: State Highway 90, just west of center of Sec. 12, T.1 N. R.6 E., Oklahoma.

Eumorphocystis multiporata Branson and Peck*

MOHAWKIAN GROUP

Black River formations

LEBANON LS.: Columbia (C), Shelbyville (S), Lebanon (L), 2.5 mi. e. Cumberland Gap (G), Tennessee.

Cleioocrinus tessellatus (Troost) (C)* (S) (L) (*Campanulites*),

Columbicrinus crassus Ulrich (C)*,

Reteocrinus elongatus Raymond (G)*

BLACK RIVER: Central Tennessee.

Hybocrinus punctatus (M. & G.)* (not Laurel ls., St. Paul, Ind.) (*Indianocrinus*)

PLATTEVILLE LS.: Minneapolis, Minn. (M); Rockton (R) and Dixon (D), Illinois; near Monroe (Mo), and Beloit (B), Wisconsin.

Cremaocrinus arctus Sardeson (M)*,

Hemicystites curtus Bassler (R)*,

Porocrinus pentagonius M. & W. (D)* (Mo),

Schizocrinus nodosus? Hall (B)

DECORAH SH. [Ion member (= *Fucoid* and *Phylloporina* beds), *In*; Guttenberg member (*Rhinidictya* and *Ctenodonia* beds), *G*; Spechts Ferry member (= *Stictoporella* bed), *Sp.*]: St. Paul (S), Minneapolis (M), Cannon Falls (C), Minnesota.

Carabocrinus conoideus Sardeson (S)* (*Sp.*),

dicyclicus Sardeson (S)* (*Sp.*),

magnificus Sardeson (C)* (*In.*),

Cremaocrinus punctatus Ulrich (M)* (S) (*Sp.*),

Foerstediscus splendens Bassler (S)* (*Sp.*),

Hemicystites paulianus Bassler (S)* (*In.*),

Lichenocrinus austini Fenton (S)* (*Sp.*),

nodosus minnesotensis Fenton (S)* (*Sp.*),

Podolithus eucheroocrinus Sardeson (S)* (*In.*) (*G.*),

schizocrinus Sardeson (S)* (*In.*) (*G.*),

Pyrogocystis sardesoni Bather (S)* (*Sp.*),

Strophocrinus dicyclicus Sardeson (S)* (C) (*In.*)

KIMMSWICK LS.: Cape Girardeau (C); Kimmswick (K); Glen Park (G), Missouri; Aspen Hill (A), Tennessee.

Comarocystites obconicus M. & W. (C)*,

shumardi M. & W. (C)* (K),

Echinospaerites aurantium Gyllenhahl (var.) (A) (*Echinus*),

Wellerocystis kimmswickensis Foerste (G)*

CHAMBERSBURG LS.: 3½ miles north Greencastle, Pennsylvania.

Echinospaerites aurantium americanum Bassler*

Trenton formations

RYSEDORPH CONGLOMERATE: Rysedorph Hill, Rensselaer Co., New York.

Bolboporites americanus Billings

TRENTON LS.: Trenton Falls (T), Middleville (M), Russia (R), near Martinsburg (Ma), near Watertown (W), New York.

Carneyella raymondi T. H. Clark (Ma)*,

Cheiroocrinus logani Billings (R),

walcotti Jaekel (T)*,

Cupulocrinus heterocostalis (Hall) (M)* (W) (*Cyphocrinus*),

Dendroocrinus gracilis (Hall) (M)* (*Poteroocrinus*),

retractilis Walcott (T)*,

- Ectenocrinus simplex* (Hall) (T) (*Heterocrinus*),
Embryocrinus problematicus Hudson (T)*,
Eucheirocrinus barrandei (Walcott) (T)* (*Calceocrinus*),
Heterocrinus tenuis Billings (T),
Iocrinus trentonensis Walcott (T)*,
Isorophus trentonensis Bassler (T)* (Pictou fm.),
Merocrinus corroboratus Walcott (T)*,
 typhus Walcott (T)*
Rhaphanocrinus subnodosus (Walcott) (T)* (*Glyptocrinus*),
Schizocrinus nodosus Hall (M)* etc.,
 striatus Hall (M)*,
Stelidiocrinus argutus (Walcott) (T)* (*Glyptocrinus*)
- HULL LS.: Belleville (B), Kirkfield (K), Ottawa (O), Peterboro (P), Eldon township, Victoria Co. (E), Ontario; Hull (H), Montreal (M), Quebec.
- Amecystis laevis* (Raymond) (K)* (*Pleurocystites*),
Amygdalocystites florealis Billings (O)* (K),
 florealis laevis W. R. Billings (H)* (K),
 radiatus Billings (O)* (K),
 tenuistriatus Billings (O)*,
Archaeocrinus lacunosus (Billings) (O)* (K) (*Glyptocrinus*),
 marginatus (Billings) (O)* (*Glyptocrinus*),
 microbasalis (Billings) (O)* (K) (H) (*Thysanocrinus*),
 pyriformis (Billings) (M)* (K) (*Thysanocrinus*),
Astrocystites ottawaensis Whiteaves (K),
Astroporites ottawaensis Lambe (H)* (O) (K),
Ateleocystites hualeyi Billings (H)* (O),
Carabocrinus radiatus Billings (O)* (K),
 vancorlandti Billings (McNab Twp; Ontario)* (K),
Carneyella platys (Raymond) (O)* (*Lebetodiscus*),
Cheirocrinus logani (Billings) (M)* (K) (*Glyptocystites*),
 logani gracilis (Billings) (M)* (*Glyptocystites*),
Cleioocrinus grandis Billings (O)*,
 magnificus Billings (O)*,
 regius Billings (O)* (K),
Comarocystites punctatus Billings (O)*,
Cremacrinus articulosus (Billings) (O)* (K) (*Heterocrinus*),
 billingsianus (Ringueberg) (O)* (*Castocrinus*),
 inaequalis (Billings) (K) (O)* (*Heterocrinus*),
 rugosus (W. R. Billings) (B)* (K) (*Calceocrinus*),
Cupulocrinus conjugans (Billings) (O)* (K) (M) (*Dendrocrinus*),
 cylindricus (Billings) (M)* (K) (B) (*Dendrocrinus*),
Cupulocrinus humilis (Billings) (O)* (K) (B) (*Dendrocrinus*),
 jewetti (Billings) (Bay of Quinte, Ontario)* (K) (B) (*Dendrocrinus*),
 latibrachiatus? (Billings) (K) (*Dendrocrinus*),
Cyclocystoides halli Billings (O)* (Lake St. John) (K),
Daedalocrinus bellevillensis (W. R. Billings) (B)* (K) (O) (*Heterocrinus*),
 kirki Ulrich (K)*,
Dendrocrinus acutidactylus Billings (M)* (H) (O),
 proboscidiatus Billings (M)* (K),
 rusticus Billings (O)*,
 similis Billings (O)*,
Dendrocystites paradoxicus (Billings) (Beauport near Quebec)* (?Hull) (*Syringocrinus*),
Ectenocrinus canadensis (Billings) (O)* (M) (*Heterocrinus*),
Edrioaster bigsbyi (Billings) (O)* (K) (H) (*Cyclaster*),
 laevis Bather (B)*,
Eustenocrinus milleri (Wetherby) (K) (*Heterocrinus*),
 springeri Ulrich (K)*,
Foerstediscus parvus Bassler (K)*,
Glaucocrinus falconeri Parks & Alcock (K)*,
Glyptocrinus circumcarinatus Parks (K)*,
 quinquepartitus Billings (O)*,
 ? *ramulosus* Billings (O)* (K) (H),

- Glyptocystites multiporus* Billings (Bytown)* (O) (K) (M),
Hemicystites billingsi (Chapman) (P)* (*Agelacrinites*),
chapmani (Raymond) (P)* (H) (O) (*Lebetodiscus*),
multibrachiatus (Raymond) (K)* (*Lebetodiscus*),
youngi (Raymond) (E)* (O) (*Lebetodiscus*),
Heterocrinus tenuis Billings (O)* (M) (K),
Hybocrinus conicus Billings (O)*,
tumidus Billings (O)*,
Hybocystites eldonensis Parks (E)* (K),
problematicus Wetherby (K),
Isorophusella incondita (Raymond) (H)* (O)* (P) (K) (*Lebetodiscus*),
Isotomocrinus typus Ulrich (K)*,
Lebetodiscus dicksoni (Billings) (O)* (P) (K) (*Agelacrinites*),
loriformis Raymond (O)*,
Lichenocrinus ornatus Fenton (K)*,
Narrawayella raymondi Foerste (H)*,
Ontariocrinus deviatus Jaekel (K)*,
Ottawacrinus billingsi Springer (K)*,
typus W. R. Billings (H)* (K),
Palaeocrinus angulatus (Billings) (O)* (K) (*Dendrocrinus*),
pulchellus Billings (O)*,
rhombiferus Billings (O)*,
Periglyptocrinus billingsi W. & Sp. (O)* (H) (K),
priscus (Billings) (O)* (Renfrew Co.)* (K) (H) (*Glyptocrinus*),
Pleurocystites elegans Billings (O)* (H),
exornatus Billings (M)*,
filitextus Billings (M)* (O),
mercerensis M. & G. (K),
squamosus Billings (O)* (K),
squamosus robustus Billings (O)* (K),
Porocrinus conicus Billings (O)* (K),
smithi Grant (B)*,
Protazocrinus elegans (Billings) (O)* (*Lecanocrinus*),
laevis (Billings) (O)* (K) (H) (*Lecanocrinus*),
Pycnocrinus ornatus (Billings) (O)* (K) (*Glyptocrinus*),
Reteocrinus alveolatus M. & G. (K),
stellaris Billings (O)*

CURDSVILLE LS.: Borrowing Pit, Curdsville, 2 mi. s. High Bridge, Mercer Co. (M), near Troy, Woodford Co. (W), Kentucky.

- Amygdalocystites florealis* Billings (M),
huntingtoni Wetherby (M)*,
radiatus Billings (M),
Archaeocrinus microbasalis (Billings) (W) (*Thysanocrinus*),
Astrocystites ottawaensis Whiteaves (M),
Astroporites ottawaensis Lambe (M),
Belemnocystites wetherbyi M. & G. (M)*,
Carabocrinus ovalis M. & G. (M)*,
radiatus Billings (M),
vancortlandti Billings (M),
Carneyella nicklesi Bassler (W)*,
Cleioocrinus sculptus Springer (M)*,
Cremacrinus articulatus (Billings) (W) (*Heterocrinus*),
kentuckiensis (M. & G.) (M)* (*Calceocrinus*),
Cupulocrinus humilis (Billings) (M) (*Dendrocrinus*),
jewetti (Billings) (M) (*Dendrocrinus*),
jewetti kentuckiensis Springer (W)* (M),
Dendrocrinus acutidactylus Billings (M),
Edrioaster bigsbyi Billings (M) (W),
priscus (M. & G.) (M)* (*Aesiocystites*),
Eustenocrinus milleri (Wetherby) (M)* (*Heterocrinus*),
Foerstediscus grandis Bassler (W)*,
Hybocrinus conicus Billings (M),
tumidus Billings (W) (M),

Hybocystites eldonensis Parks (M),
problematicus Wetherby (M)* (W),
Periglyptocrinus priscus (Billings) (M) (*Glyptocrinus*),
Pleurocystites mercerensis M. & G. (M)*,
Porocrinus kentuckiensis M. & G. (M)*,
smithi Grant (W),
Reteocrinus alveolatus M. & G. (M)*,

CURDSVILLE ZONE: Goat Island, Lake Huron, Ontario.

Carabocrinus huronensis Foerste*,
vancortlandti Billings,
Reteocrinus alveolatus M. & G.,
Thresherodiscus ramosus Foerste*

COBOURG LS.: East of Collingwood, Ontario.

Cheirocrinus granulatus Parks*

GLENS FALLS LS. Glens Falls, New York.

Pleurocystites squamosus matutinus Ruedemann*

SNAKE HILL FM.: Near Saratoga (4 miles west), New York.

Carabocrinus radiatus Billings,
Cupulocrinus humilis (Billings) (*Dendrocrinus*),
Cyclocystoides salteri Hall*,
Edrioaster saratogensis Ruedemann*,
Glyptocrinus? *ramulosus* Billings,
Heterocrinus? *gracilis* Hall*

TRENTON LS. (Hull ls. zone): Escanaba River, Michigan.

Amecystis laevis (Raymond) (West Neebish, Mich.) (*Pleurocystites*),
Comarocystites punctatus Billings,
Cremacrinus furcillatus (W. R. Billings) (*Calceocrinus*),
punctatus Ulrich (?Decorah sh.),
Cyclocystoides anteceptus Hall* (?Decorah sh.),
Ectenocrinus canadensis (Billings) (*Heterocrinus*),
Edrioaster bigsbyi (Billings) (*Cyclaster*),
Pleurocystites squamosus Billings

PROSSER LS.: One mile west Fountain (F), near Wykoff (Wy), below Mantorville, Dodge Co. (D), St. Paul (P), Minnesota; Three miles west Green Bay (W), Wisconsin.

Cheirocrinus logani Billings (W)
Cremacrinus inaequalis (Billings) (W) (*Heterocrinus*),
Dendrocrinus gracilis (Hall) (W) (*Poteroocrinus*),
Edrioaster bigsbyi (Billings) (F) (*Cyclaster*),
Palaeocrinus rhombiferus? Billings (Wy),
Pleurocystites elegans Billings (W)
Podolithus anomalocrinus Sardeson (D)*,
dendrocrinus Sardeson (P)*

CANNON LS.: 1½ mi. n.w. Pulaski (P), Fayetteville (F), Tennessee.

Enoploura punctata Bassler (P)*,
Isorophus tennesseensis Bassler (F)*

CATHEYS LS.: Love Branch, Maury Co., Tennessee.

Hemicystites germanus Bassler*

CYNTHIANA FM.: [Greendale ls. div. (G); Rogers Gap div. (RG)] West Covington (Co), Rogers Gap (R), Kentucky, other localities as stated.

Carneyella vetusta (Foerste) (14 mi. s.e. Lexington)* (G) (*Agelacrinus*),
Dendrocrinus dyeri (Meek) (Co)* (RG) (*Poteroocriniles*),
Ectenocrinus canadensis (Billings) (RG) (*Heterocrinus*),
grandis (Meek) (Co) (R) (RG) (*Heterocrinus*),
simplex (Hall) (Co) (Frankfort) (RG) (*Heterocrinus*),
Heterocrinus heterodactylus? Hall (Co) (RG),
Isorophus kentuckiensis Bassler (Lair Station)* (G),

- Lichenocrinus dyeri* Hall (Co) (RG),
pattersoni S. A. Miller (Co)* (RG),
subaequalis Foerste (R)* (RG),
Ohiocrinus exilis Foerste (R)* (RG),
Pycnocrinus pattersoni (S. A. Miller) (Co)* (RG) (*Glyptocrinus*)
- UPPER BENSON LS. (*Strophomena vicina* zone): Carntown, Pendleton Co., Kentucky.
Cincinnatiidiscus carnensis (Foerste)* (*Hemicystites*)
- TRENTON (UPPER): Turin, New York (T); Division Street, Rochesterville (Ottawa), Ontario (D).
Archeocrinus desideratus W. R. Billings (D)*
Astrocystites ottawaensis Whiteaves (D)*,
Cheirocrinus anatifomis (Hall) (T)* (*Echinoencrinites*),
Cremacrinus furcillatus (W. R. Billings) (D)* (*Calceocrinus*),
Dendrocrinus alternatus (Hall) (T)* (*Poteroocrinus*),
gregarius Billings (Ottawa)*,
proboscidiatus Billings (D),
Euspirocrinus obconicus W. R. Billings (D)*
- TRENTON (?RICHMOND): Head of Frobisher Bay, Baffin Land.
Porocrinus shawi Schuchert*

CINCINNATIAN GROUP

Eden formations

- SHEGUINDAH BEDS: Manitoulin Island, Lake Huron, Ontario.
Drymocrinus manitoulinensis Foerste (E. of Tamarack Point)*,
Iocrinus subcrassus Meek and Worthen (3 m. s. Little Current),
Lichenocrinus obliquus Foerste ($\frac{1}{2}$ mi. s. Clay Cliffs)*
- FULTON SH. (F), and LATONIA SH.—Economy mem. (E, lower third); Southgate mem. (S, middle third); McMicken mem. (McM., upper third). Cincinnati, Ohio (C); Covington (Co), and Fort Thomas (Th), Kentucky.
Cincinnatiidiscus edenensis Bassler (C)* (McM),
Cystaster ulrichi Bassler (Co)* (E),
Dendrocrinus navigiolium S. A. Miller (C)* (F),
Drymocrinus geniculatus (Ulrich) (C)* (Th) (F) (*Heterocrinus*),
Ectenocrinus grandis (Meek) (C)* (S; E; McM) (*Heterocrinus*),
simplex (Hall) (C)* (Co) (E) (S) (McM) (*Heterocrinus*),
Heterocrinus exiguus Meek (C)* (Co) (E),
exilis Hall (C) (Co) (E) (McM),
heterodactylus Hall (C) (E; S),
propinquus Meek (C)* (Co) (E; M),
Lichenocrinus dubius S. A. Miller (C)* (E; F; S),
fentonae Faber (C)* (S),
schlemmeri Faber (C)* (S),
stetteri Faber (C)* (S),
twitchelli Faber (C)* (S),
vaupeli Faber (C)* (S),
Merocrinus curtus (Ulrich) (C)* (Th) (F) (*Dendrocrinus*),
Streptaster reversatus Foerste (2 mi. w. Million, Ky.)* (S)

Maysville formation

- FAIRVIEW FM.: Mt. Hope sh. (Mt); Fairmount ls. (F).
 McMILLAN FM.: Bellevue ls. (B); Corryville sh. (Cy); Mount Auburn sh. (MA).
 Cincinnati (C), Morrow (M), Lebanon (L), Warren Co. (W), Ohio; Covington (Co), Maysville (May), Kentucky; Madison (Mad), Indiana.
Anomalocrinus caponiformis (Lyon) (C)* (Cy) (*Ataxiacrinus*),
incurvus (M. & W.) (C)* (M) (L) (F) (*Heterocrinus*),
Atyphocrinus corryvillensis Ulrich (C)* (Cy),
Carnegella cincinnatiensis Bassler (W)* (C) (F; C; B),
pileus (Hall) (C)* (F; B) (Cy) (*Agelacrinus*),
ulrichi B. & S. (May)* (B),

Cincinnatiidiscus stellatus (Hall) (C)* (F; B) (*Hemicystites*),
Cyclocystoides bellulus M. & D. (C)* (F),
Cystaster granulatus (Hall) (C)* (F) (*Hemicystites*),
Dendrocrinus cincinnatiensis (Meek) (C)* (F) (*Poteroicrinus*),
Dystactocrinus constrictus (Hall) (C)* (F; Cy) (*Homocrinus*),
 compactus (Meek) (C)* (Cy) (*Heterocrinus*),
Ectenocrinus grandis (Meek) (C) (F) (*Heterocrinus*),
 simplex (Hall) (C) (F) (*Heterocrinus*),
Enoploura balanoides (Meek) (C)* (Cy) (*Anomalocystites*),
Glyptocrinus decadactylus Hall (C)* (M) (F),
Heterocrinus juvenis Hall (L)* (C) (F; Cy),
 pentagonus Ulrich (C)* (L) (Cy; F),
Iocrinus subcrassus (M. & W.) (C)* (M) (Mad) (B; Cy; Mt) (*Heterocrinus*),
Isorophus cincinnatiensis (Roemer) (C)* (M) (L) (B; Cy) (*Agelacrinus*),
Lichenocrinus ashmanni Faber (C)* (Mt),
 dyeri Hall (C)* (Mad) (Cy),
Narrawayella cincinnatiensis (M. & F.) (C)* (Cy) (*Cyclocystoides*),
Ohioicrinus brauni Ulrich (Mad)* (F),
 laxus (Hall) (C)* (L) (F) (*Homocrinus*),
Pycnocrinus dyeri (Meek) (C)* (M) (Cy) (*Glyptocrinus*),
 dyeri sublaevis (S. A. Miller) (C)* (Cy) (*Glyptocrinus*),
 germanus (S. A. Miller) (C)* (Cy) (*Glyptocrinus*),
 shafferi (S. A. Miller) (C)* (Co) (F; Cy) (*Glyptocrinus*),
 subglobosus (Meek) (C)* (Cy) (*Glyptocrinus*),
Ptychocrinus parvus (Hall) (C)* (Co) (F) (*Glyptocrinus*),
Streptaster vorticellatus (Hall) (C)* (F; Cy; B) (*Agelacrinus*)

LEIPERS LS.: Columbia (C), Goodlettsville (G), Nashville (N), Tennessee.

Isorophus cincinnatiensis (Roemer) (C) (G) (*Agelacrinus*),
Streptaster vorticellatus (Hall) (C) (N) (*Agelacrinus*)

DUNDAS FM.: Toronto, Ontario.

Iocrinus subcrassus torontoensis Fritz*

LORRAINE (Lower shaly part): Booneville (B), Pulaski (P), Lorraine (L), Rome (R), New York.

Glyptocrinus decadactylus? Hall (V),
Heterocrinus heterodactylus Hall (B)* (L)* (P),
Iocrinus subcrassus (M. & W.) (R) (*Heterocrinus*)

ORDOVICIAN FAUNAS (EUROPE AND ASIA)

ASIA: Karakorum Region.

Sphaeronites shihtiensis (Reed) (*Sphaeronis*)

BELGIUM: Gembloux.

Echinospaerites belgicus Jaekel*

BOHEMIA: Divisions D₁-D₆: Mt. Drabov (Drabow) (D); Hajek, near Beraun (H); Holoubka (Ho); Lodenitz (L); Lieben (Li); Crustenitz (C); Sterbohol (St); Straschnitz (S); Trubin (T); Trubsko (Tr); Wesela (We); Wosek, near Rokitzan (Vosek) (W); Zahorzan (Z); Zahorny (Za); Wraz (Wr).

Amphoracystis irregularis (Barrande) (Z)* (L) (D₄) (*Deutocystites*)

Anomalocystites bohemicus Barrande (Choudan)* (D₆),

ensifer Barrande (T)* (D₃),

Arachnocystites infaustus (Barrande) (W*, D₁) (T*, D₃) (Z*, D₄) (*Echinospaerites*),

Archaeocystites medusa Barrande (W)* (D₁),

Archeogocystis desiderata (Barrande) (W)* (D₁) (*Pyrocystites*),

Aristocystites bohemicus Barrande (L)* (Z)* (S)* (W) (D₄),

desideratus Barrande (Z)* (D₄),

rudis Barrande (S)* (D₄),

Ascocystites barrandei Jaekel (D)* (D₂),

drabowensis Barrande (D)* (Z) (C) (We),

micraster Barrande (D)* (We) (C) (D₂),

- Baculocystites simplex* Barrande (Z)* (D₄),
Balanocystites lagenula Barrande (W)* (D₁),
Caleidocrinus barrandei W. & J. (Haj near Z)* (D₄),
 multiramus W. & J. (Haj near Z)* (D₄),
Calix absens (Barrande) (Z)* (Vrschovitz) (D₄) (*Craterina*),
applanatus (Barrande) (Z)* (D₄) (*Craterina*),
barrandei Rouault (Z)*,
bohemicus (Barrande) (Z)* (S) (D₄) (*Craterina*),
consobrinus (Barrande) (Z)* (D₄) (*Craterina*),
docens (Barrande) (Z)* (St.) (D₄) (*Craterina*),
?embryo (Barrande), (L)* (D₄) (*Craterina*),
excavatus (Barrande) (Z)* (L) (St.) (S) (D₄) (*Craterina*),
excavatus intermedius (Barrande) (Z)* (D₄) (*Craterina*),
idealis (Barrande) (Z)* (D₄) (St.) (*Aristocystites*),
infundibulum (Barrande) (Z)* (D₄) (*Craterina*),
modicus (Barrande) (Z)* (D₄) (*Craterina*),
moneta (Barrande) (Z)* (D₄) (*Craterina*),
potens (Barrande) (C)* (D₄) (*Aristocystites*),
sculptus (Barrande) (C)* (D₄) (*Aristocystites*),
simulans (Barrande) (Z)* (L) (D₄) (*Craterina*),
surgens (Barrande) (Z)* (D₄) (*Craterina*),
tectus (Barrande) (Z)* (D₄) (*Craterina*),
Cardiocystites bohemicus Barrande (Z)* (D₄),
Cheirocrinus alter (Barrande) (Z)* (D₄) (*Homocystites*),
Cystidea abscondita Barrande (Z)* (D₄),
 dubia Haeckel (Z)* (D₄),
 incepta Barrande (D)* (D₄),
 nugatula Barrande (Z)* (D₄),
 porosa Barrande (Bracz)* (D₄),
 seminulum Barrande (Königshof)* (D₅),
Dendrocystites barrandei (Bather) (Tr)* (H) (D₂) (*Dendrocystis*),
 sedgwicki (Barrande) (Tr)* (H)* (D₂); (T)* (D₃); (Z) (D₄)
 (*Cystidea*),
Deutocystites modestissimus Barrande (S)* (Lahowska)* (D₄),
 modestus Barrande (Mt. Pleschivitz)* (D₂), (T) (D₃); (Z and C)
 (D₄),
Echinosphaerites barrandei Jaekel (Z)* (D₄),
 ?concomitans Barrande (Ho)* (D₁),
 quaerendus Barrande (S)* (D₄),
 vexatus Barrande (S)* (D₄),
Fungocystites rarissimus Barrande (C)* (D₄),
 solitarius Barrande (C)* (D₄),
Glyptosphaerites ferrigena (Barrande) (H)* (D₁) (*Echinosphaerites*),
Heliocrinites confortatus (Barrande) (S)* (D₄) (*Echinosphaerites*),
Hemicystites bellulus (Barrande) (Z)* (D₄) (*Agelacrinites*),
 bohemicus (Barrande) (D)* (D₂) (*Agelacrinites*),
 confertus (Barrande) (H)* (D₂) (*Agelacrinites*),
 latusculus (Barrande) (Z)* (D₄) (*Agelacrinites*),
 simplex (Barrande) (Z)* (D₄) (*Agelacrinites*),
Hippocystis subcylindrica (Barrande) (L)* (S)* (Z)* (L*) (C)* (D₄) (*Aris-*
 tocystites)
Lagyncystis pyramidalis (Barrande) (W)* (D₁) (*Anomalocystites*),
Mespilocystites bohemicus Barrande (Z)* (D₄), (Tr)* (D₂)
Mimocystites bohemicus Barrande (Tr)* (D₂),
Mitrocystella barrandei Jaekel (W)*,
 incipiens (Barrande) (Sta. Benigna)* (D₁) (*Anomalocystites*),
Mitrocystites latus Jaekel (W)* (D₁),
 mitra Barrande (W)* (Sta. Benigna)* (D₁); (H) (Tr) (D₂),
Neocystites bohemicus Barrande (Z)* (D₄),
Orocystites helmhackeri Barrande (C)* (Z) (D₄),
Palmacystis palmata Haeckel (Czernin near Beraun)* (D₄),
Pandoracrinus pinnulatus Jaekel (W)* (D₁),
Polycosmites bohemicus Jaekel (W)* (D₁),
Polycrinus kosoviensis Jaekel (Kosov)* (D₅),
 ramulatus Jaekel (Haj near Z)* (D₄).

- Pyrocystites? incertus* Barrande (W)* (D₁),
Pyrocystites patulus Barrande (W)* (D₁),
 pirum Barrande (W)* (D₁); (St) (D₄),
Vosekocrinus granulatus Jaekel (W)* (D₁)
- CHINA: Shih-tien, West Yunnan (S); Kweichou (K).
- Aristocystites sinicus* Sun (K)*,
Caryocystites bicompressa (Reed) (S)* (*Caryocystis*),
Echinosphaerites asiatica (Reed) (S)* (*Echinosphaera*),
 sinensis (Reed) (S)* (*Echinosphaera*),
Eucystis raripunctata? Angelin (S),
Heliocrinites fiscella (Bather) (S) (*Heliocrinus*),
 kweichouensis Sun (K)*,
 qualus (Bather) (S) (*Heliocrinus*),
 subovalis (Reed) (S)* (*Heliocrinus*),
Hemicosmites jaekeli Sun (K)*,
Pyrocystites? orientalis (Reed) (S)* (*Pyrocystis*),
Scyphocrinites asiaticus (Reed) (S) (*Camarocrinus*) (?Ord.),
Sinocystis loczyi Reed (S)* (K),
 mansuyi (Reed) (S)* (*Ovocystis*),
 yunnanensis Reed (S)*,
Sphaeronites lobiferus (Reed) (S)* (*Sphaeronis*),
 shiktiensis Reed (S)* (*Sphaeronis*)
- ENGLAND: West Shropshire.
- Merocrinus salopiae* Bather*
- ESTONIA AND RUSSIA: *Wierland gr.*, (C1-E): Duboviki fm. (lower part of Echinospaerites ls.) (C1a); Reval fm. (upper part of Echinospaerites ls.) (C1b); Kuckers sh. (C2); Itfer bed (C3); Jewe fm. (D1), Kegel fm. (D2); Wassalem beds (upper part of Kegel) (D3); Wesenberg fm. (E). Estonia (E); Jewe (J); Katlino (Ka); Kuckers (K); Leningrad province or St. Petersburg (L); Pulkowa (P); Reval (R); Spitham (S); Tallinn (Reval) (T); Uxnorm (U); Wassalem (Wa); Wesenberg (W); Zarskoje Selo (Z); Russia (Ru); other localities as indicated.
- Achradocystites grewingkii* Volborth (Kersel)* (E),
Anarchocrinus rossicus Jaekel (U)* (D3),
Baerocrinus ungeri Volborth (Erras)* (C2),
Bockia cucumis Hecker (E)* (C3),
 laevis Hecker (E)* (C2 and C3) (L),
Carabocrinus esthonus Jaekel (U)* (D3),
Caryocrinites buchiana (Haeckel) (Ru)*,
Caryocystites esthoniae (Jaekel) (Pajus)* (C2) (*Amorphocystis*),
 laevis Hecker (C) (L)*,
Cheirocrinus aranea Schlotheim* (C2),
 granulatus Jaekel (K)* (C2),
 penninger (Eichwald) (E)* (W) (*Cyathocrinus*),
Cryptocrinites laevis Pander (P)* (C1b),
Cyathocystis plautinae Schmidt (R)* (C1),
 rhizopora Schmidt (Wa)* (D3),
Cystoblastus kokeni Jaekel (K)* (C2),
 leuchtenbergi Volborth (Ka)* (C1),
Dendrocystites kuckersiana Hecker (C2) (K)* (E),
Echinosphaerites aurantium Gyllenhahl (U) (C1-3) (D1, 3) (Ka) etc.,
 difformis Jaekel (J)* (C3),
 globosus Jaekel (E)* (dark gray ls.),
 grandis Jaekel (R)* (Rügen, drift),
 pirum Jaekel (I)* (C3),
Esthonocrinus compactus Jaekel (Kawast)* (D1),
 laevior Jaekel (S)* (D1),
Estonocystis antropoffi Jaekel (U)* (D1),
Heliocrinites aranus (Schlotheim) (R)* (C1) (*Echinosphaerites*),
 balticus (Eichwald) (Pajus)* (R) (C2) (*Caryocystites*),
 ovum (Schlotheim) (R)* (*Echinosphaerites*),
Hemicosmites altus Jaekel (R)* (D1),
 extraneus Eichwald (S)* (D1),

- laevior* Jaekel (Z)* (C1),
matum Pander (L)* (C1) (D3),
oblongus (Pander) (L) (C1) (*Echinospaerites*),
pocillum Jaekel (E)* (D1, D3),
porosus Eichwald (S)*,
pulcherrimus Jaekel (Sack near Reval)*,
rudis Jaekel (Wa)* (D3),
Hoplocrinus dipentus (Leuchtenberg) (Z) (P)* (C1),
estonus Öpik (T)* (D1),
grewingi Öpik (T)* (C2, C3),
pseudodicyclicus Öpik (T)* (Sojamazi near Tallinn) (C2),
tallinnensis Öpik (T)* (C2),
Metablocrinus rossicus Jaekel (near R)* (D3),
Polyptychella esthona Jaekel (K)* (C2),
Proteroblastus schmidti (Jaekel) (U)* (R) (D1) (*Dactylocystis*),
Protocrinites fragum Eichwald (Z)* (P) (C1) (S) (D3),
oviformis Eichwald (S)* (D3),
Revalocrinus costatus Jaekel (R)* (C1),
Revalocystis mickwitzi (Jaekel) (Sack near Reval)* (E1) (*Dactylocystis*),
Rhipidocystis batheri Hecker (L)* (C1),
esthona Hecker (E)* (C2),
öpiki Hecker (E)* (D1),
robusta Hecker (L)* (E)*,
Ristnacrinus marinus Öpik (Ristna)* (D1),
Sphaeronites pomum (Gyllenhahl) (L) (E) (*Echinus*)
- BORKHOLM LS. (F2) and LYCKHOLM LS. (F1) (Ordovician or Early Silurian):
Glaphrocystis compressa Haeckel (Oddalem)* (F1),
wohrmanni Jaekel (Hohenholm)* (F1),
Hemicosmites grandis Jaekel (Taibel near Hapsal)* (F2),
Tricosmites tricornis Jaekel (Nömmküll)* (F2)
- FRANCE: Upper Tremadoc (T); Lower Arenig (A); Caradocian (Ca); St. Chinian (Herault) and vicinity (C); Montpelier (M); other localities as indicated.
Cheirocrinus ? languedocianus Thoral (C)* (A),
Corylocrinus crassus (von Koenen) (M)* (Ca) (*Juglandocrinus*),
elongatus Jaekel (Grand Glancy near M)* (Ca),
pyriformis von Koenen (M)* (near Cabrieres)* (Ca),
Cothurnocystis primaeva Thoral (C)* (A),
Dendrocystites vidali Thoral (C)* (T),
Heliocrinites rowillei (von Koenen) (M)* (Ca) (*Caryocystites*),
Hemicystites boehmi (Thoral) (C)* (T, A) (*Hemicystis*),
Lingulocystis elongata Thoral (C)* (T, A),
elongata lata Thoral (Assignan)* (C) (T, A),
Mimocystites azaisi Thoral (C)* (T),
azaisi multicristatus Thoral (C)* (T),
azaisi paucicristatus Thoral (C)* (T),
Peltocystis cornuta Thoral (C)* (T, A),
Phyllocystis blayaci Thoral (C)* (T, A),
blayaci crassimarginata Thoral (C)* (T),
blayaci major Thoral (C)* (T)
- FRANCE: Brittany (Armorican).
Calix lebesconiei Chauvel (Vitre, Crozon)*,
rouaulti Chauvel (Andouille*, etc.),
rouaulti buchoti Chauvel (Monterrein)*,
sedgwicki Rouault (near Rennes)*,
Lagynocystis pyramidalis minuta Chauvel (Guichen)*,
Mitrocystella incipiens miloni Chauvel (Guichen)*,
Mitrocystites riadanensis Chauvel (Andouille)*,
Pachycalix halli (Rouault) (Guichen, etc.)* (*Calix*)
- GERMANY: Thuringia (T) and drift of north Germany (D).
Echinospaerites grandis Jaekel (Rügen) (D),
kloedeni Jaekel (Bachsteinkalk) (D)*,

Glyptosphaerites mariae Jaekel (D)*,
Heliocrinites confortatus (Barrande) (T) (*Echinosphaerites*),
Orocystites helmhackeri thuringiae Jaekel (Döshnitz)* (T),
Protocrinites fragum Eichwald (T),
Stichocystis geometricus (Angelin) (Island Rügen* and Erkelsdorf on Oder).
 (D) (*Caryocystis*)

INDIA: Naungkangyi beds: Sedaw, Burmah.

Aristocystites dagon (Bather)*,
Caryocrinites aurora (Bather)*,
 avellana (Bather)*,
 turbo (Bather)*,
Echinosphaerites kingi Noetling (near Mandalay)*,
Heliocrinites fiscella (Bather)*,
 qualus (Bather)*,
 rugatus (Bather)*,
Protocrinites sparsiporus Bather*

IRELAND: Caradocian, etc.

Actinocrinus? wynei Baily (Reaffada, Knocknagoogh, Tipperary)* (Up. Llandello).
Dipleurocystis anglicus (Jaekel) (2½ miles north Pomeroy, Co. Tyrone)* (Low. Ashgillian) (*Pleurocystis*),
Echinosphaerites globosus anglicus Jaekel* (Mid. Ord.),
 granulatus McCoy (New Ross, Co. Wexford)* (Caradocian),
Periechocrinites laevis (Portlock) (Caradocian, Desertcreat schist) (Tyrone)*
 (*Trochocrinites*)

NORWAY: Environs of Oslo (Christiania), etc.

Cheirocrinus nodosus Jaekel (Hovindsholm) (Ogygia bed),
Echinoencrinites senckenbergii Meyer,
Echinosphaerites aurantium (Gyllenhahl) (*Echinus*),
Haplosphaeronis kjaeri Jaekel (near Randsafjord, Hadeland)*,
 kjaeri norvegicus Jaekel (near Randsafjord, Hadeland)*,
Heliocrinites balticus (Eichwald) (*Echinosphaerites*).
Sphaeronites pomum (Gyllenhahl) (Kinnekule)* (Asaphus ls.) (*Sphaeronis*)

PORTUGAL AND SPAIN: Bussaco, near Coimbra (B); Tagus River Basin (T) Portugal; Romerol (R) Spain.

Calix barrandei Rouault (B),
 murchisoni (Vern. & Bar.) (B)* (R) (*Echinosphaerites*).
 sculptus (Barrande) (B) (*Aristocystites*),
 sedgwicki Rouault (B),
Cheirocrinus alter (Barrande) (T) (*Homocystites*),
Corylocrinus occidentalis Jaekel (B)*,
Heliocrinites burdigalensis (Jaekel) (B)* (*Caryocystis*),
Mimocystites bohemicus Barrande (B),
Orocystites helmhackeri Barrande (T)

ROUMANIA: Gresiile de Molodova.

Palaeocystites bessarabianus Vascautanu*

RUSSIA, ESTONIA, etc.: Walchow fm.: Glauconite sandstone (B1); Glauconite limestone (B2). Kunda fm.: Orthoceras (Vaginaten) limestone (B3). Russia: St. Petersburg and vicinity (P); Pavlovsk (Pawlowsk) (Pa); Popovka (Po); Pulkova (Pulkowa) (Pu); Zarskoje-Selo (Z); Iswos on the Walchow (Wolchow) (I); Estonia, etc., as indicated.

Asteroblastus foveolatus (Eichwald) (Pu)* (B3) (*Protocrinus*),
 regularis Jaekel (P)* (B3),
 stellatus Eichwald (Pu)* (B3 or B2),
 sublaevis Jaekel (Obuchowo)* (B2),
 volborthi Schmidt (Pa)* (B2),
Asterocrinus münsteri Eichwald (Pa)* (B2a),
 priscus Eichwald (Pu)*,
Asterocystis globulus Jaekel (Estonia)* (B3),
 tuberculatus (Schmidt) (Pa)* (B3) (*Asteroblastus*),

- Baerocrinus parvus* Jaekel (P)* (B3),
Blastocystis rossicus Jaekel (P)* (B3),
Bockia neglecta Hecker (P)* (B3),
 sculpta Hecker (P)* (B3),
Bolboporites *mitralis* Eichwald (P)* (Po) (B2),
 semiglobosus Pander (P)* (I) (Z) (B2),
 stellifer Eichwald (Z)* (B2),
 triangularis Pander (Z)* (B2),
 uncinatus Pander (Z)* (B2),
Cheirocrinus *atavus* Jaekel (Pu)* (B3),
 degener Jaekel (P)* (B3),
 giganteus (Leuchtenberg) (Pu)* (B2) (*Gonocrinites*),
 insignis Jaekel (Walchow)* (B3),
 interruptus Jaekel (P) (Probably Lyckholm),
Cheirocrinus *ornatus* Eichwald (Pu)* (B3),
 penniger (Eichwald) (P) (B3) (*Cyathocrinus*),
 radiatus Jaekel (Walchow)* (Po) (B2),
 sculptus (Schmidt) (Pa)* (B3) (*Glyptocystites*),
 striatus Jaekel (Pu)* (B3),
 volborthi (Schmidt) (Pa)* (Pu) (B3) (*Glyptocystites*),
Corylocrinus ollii Yakovlev (River Ousva, Ural)*,
Cryptocrinites cerasus von Buch (Pu)* (Pa) (Z),
 regularis von Buch (Pa)* (B2 or B3),
Cyathocrinus exilis Eichwald (Ficht, Oesel)*, (B2); (Pu), (B3),
Cyathotheca corallum (Jaekel) (P)* (B3) (*Cyathocystis*),
Dendrocystites rossica Jaekel (B2) (P)*,
Echinoencrinites angulosus (Pander) (P)* (Pu) (*Echinospaerites*),
 angulosus comptus Jaekel (P)* (B3),
 angulosus quadratus Jaekel (P)* (B3),
 fenestratus (Leuchtenberg) (P)* (B2 or B3) (*Gonocrinites*),
 interlaevigatus Jaekel (B3) (I)*,
 intermedius (Eichwald) (Pa)* (*Gonocrinus*),
 laevigatus Jaekel (P)* (B3),
 lahusenii Jaekel (Pu)* (B2),
 reticulatus Jaekel (P)* (B3),
 senkenbergi Meyer (P)* (B3),
 simplicatus Phleger (I)* (B2 or B3),
 sphaeroidalis Phleger (I)* (B2 or B3),
 striatus (Pander) (P)* (B3) (*Echinospaerites*),
Echinospaerites aurantium (Gyllenhal) (Katlino, etc.) (*Echinus*),
 aurantium infra Hecker (P)* (B2 or B3),
 aurantium supra Hecker (P)* (B2 or B3),
 ellipticus Eichwald (Reval)* (B3),
 pogrebowi Hecker (Russia)*,
Erinocystis angulata Jaekel (P)* (B3),
 ficus Jaekel (P)* (B3),
 flava Jaekel (P)* (B3),
 sculpta Jaekel (P)* (B3),
 volborthi Jaekel (P)* (B3),
Eutretocystis acutirostris Phleger (I)* (B2 or B3),
 similis Phleger (I)* (B2 or B3),
Glyptosphaerites leuchtenbergi (Volborth) (Pu)* (B3) (*Protocrinus*),
Heliocrinites echinoides (Leuchtenberg) (Pu)* (B2 or B3),
 radiatus (Eichwald) (Reval, Estonia)* (B3),
Hemicomites elongatus Pander (Pu)* (Po),
 pyriformis von Buch (P)* (B2 or B3),
 verrucosus Eichwald (Soutlep, Nouck peninsula, Estonia)* (B3),
Mesocystis jaekeli Yakovlev (Belaia River, Urals)*,
 pusirefskii (Hoffman) (P)* (I) (B2 or B3),
Metasterocystis micropelta Jaekel (I)* (B3),
Paractocrinus laevis Jaekel (P)*,
 tuberculatus Jaekel (P)*,
Parorthocrinus liber Jaekel (P)*,
Pentamerocrinus praematurus Jaekel (P)*,

- Perittocrinus radiatus* Jaekel (P)* (B β),
transitor Jaekel (P)* (B β),
Protocrinites fragum Eichwald (Z)*,
Rhipidocystis gigas Jaekel (P)* (B β),
Scoliocystis pumila (Eichwald) (Pu)* (B β) (*Caryocystites*),
thersites Jaekel (P)* (B β),
Tetractocrinus compactus Jaekel (P)* (B β or B β)

SARDINIA: Fiumini Maggiore.

- Ptychosmites sardinicus* Jaekel*

SCOTLAND: Craighead ls. (Caradocian-Drummuck gr., Starfish bed): Thraive Glen, Girvan District.

- Archaeocrinus globularis* N. & E.*,
Cheirocrinus constrictus Bather*,
interruptus Jaekel,
Cothurnocystis curvata Bather*,
elizae Bather*,
Cyclocystoides decussatum Bagg*,
Dendrocystoides scoticus (Bather)* (*Dendrocystis*),
Echinospaerites granulatus McCoy,
Pleurocystites foriolus (Bather)*,
gibbus (Bather)*,
procerus (Bather)*,
quadratus (Bather)*,
Pyrgocystis grayae Bather*

SWEDEN: Dalecarlia (Dalarne) (D); Bödahamn, Oeland (B); Ostrogothia (Os); Vestrogothia (V).

- Caryocystites angelini* Haeckel (B)* (Chasmops ls.),
dubius Angelin (B)*,
Cheirocrinus leuchtenbergi Angelin (Husbyfjöl, Os)* (Ogygia beds),
nodosus Jaekel (Hadenstadt)* (Ogygia beds),
ornatus Eichwald (Alles Klinta, Oeland),
Cyathotheca suecica Jaekel (Boda*, D) (Leptaena ls.),
Echinospaerites aurantium (Gyllenbahl) (D) (Os) (B) (V)* (*Echinus*),
auranticum suecicus Jaekel* (Orthoceras ls.),
aurantium triactis (Haeckel) (Scandinavia)*,
citrus (Hisinger) (B)* (D) (*Sphaeronites*),
gyllenhahli Quenstedt*,
Eucystis raripunctata Angelin (Osmundsberget, D)* (Leptaena ls.),
Glyptosphaerites suecica (Angelin) (D)*,
Heliocrinites alutaceus (Angelin) (Jonstorp, V)* (*Caryocystis*),
araneus (Schlothheim) (D),
granatum (Wahlenberg) (D)* (Orthoceras ls.); (B) (Cystid beds) (*Echinus*),
ovalis (Angelin) (Jonstorp) (V)* (*Caryocystis*),
tenuistriatus (Angelin) (Jonstorp, V)* (*Caryocystis*),
Holocystites ovalis (Angelin) (D)* (*Megacystis*),
Paracystis ostragothica Sjöberg (Os)* (Chasmops ls.),
Protocrinites fragum (Eichwald) (Scandinavia),
Sphaeronites dalecarlicus (Angelin) (D)* (*Sphaeronis*),
globulus (Angelin) (B)* (D) (*Sphaeronis*),
minutus (Angelin) (Fjecka, D)* (*Sphaeronis*),
oblongus (Angelin) (Östbjörka, D)* (*Sphaeronis*),
ovalis (Angelin) (D)* (Asaphus ls.),
pentactaea (Haeckel) (Scandinavia)* (*Pomonites*),
pomum (Gyllenbahl)* (Kinnekulle, V) (Asaphus ls.) (*Echinus*),
sulcifera (Angelin) (D)* (Arfret, Boda, Dalecarlia), (*Sphaeronis*),
wa (Angelin) (D)* (*Sphaeronis*),
Stichocystis geometrica (Angelin) (Scandinavia) (*Caryocystis*),
Tormoblastus bodae Jaekel (Boda, D)* (Leptaena ls.)

WALES: Caradocian: Sholes Hook, Pembrokeshire, South Wales (SH); Rhiwlas (Reulas) (Rh) and Yspatty Evan, North Wales (YE).

- Caryocystites davisii* McCoy (YE)* (Llandeilo),
munitus Forbes (Bala) (Sh) (Rh)*,

- Cyclocystoides davisii* Salter (Presteign, Radnorshire)* (Up. Llandoverly),
Dendrocrinus cambriensis Hicks (Ramsey Island* and St. Davids, S. Wales)*,
 (Tremadoc slate),
Dipleurocystis rugeri (Salter) (Near Llandoverly)* (*Pleurocystites*),
Echinospaerites arachnoideus (Forbes) (SH)* (Bala) (*Sphaeronites*),
aurantium (Gyllenahl) (Sh) (*Echinus*),
Edrioaster buchianus (Forbes) (2 mi. w. YE)* (*Agelacrinites*),
Eucystis litchi (Forbes) (SH)* (*Caryocystites*),
Heliocrinites balticus (Eichwald) (SH) (Bala),
granatum (Wahlenberg) (Rh),
Hemicosmites oblongus Pander (SH)*,
rugatus Forbes (Blaen-y-Cwm-Rh)*,
squamosus Forbes (North of Bala) (Montgomeryshire),
Rhaphanocrinus basalis (McCoy) (Alt-y-Anker, Meiford Dist.)* (Soudleyan)
 (*Glyptocrinus*),
Sphaeronites punctatus Forbes (SH, Rh)*,
pyriformis (Forbes) (SH, Rh)* (*Caryocystites*),
stelluliferus Salter (SH)*

ORDOVICIAN OR EARLY SILURIAN FAUNAS

RICHMOND GROUP

ARNHEIM SH.: Morrow (M), Waynesville (W), Oregonia (O), Ohio.

- Carneyella foerstei* Bassler & Shideler (Russellville, O.)*,
Cyclocystoides magnus M. & D. (M)*,
Dendrocrinus caduceus (Hall) (W) (*Poteriocrinus*),
Iocrinus subcrassus (M. & W.) (M)* (*Heterocrinus*),
Isorophus holbrooki (James) (M)* (O) (*Agelacrinus*),
warrenensis (James) (M)* (O) (*Agelacrinus*),
Narrawayella minor (M. & D.) (M)* (*Cyclocystoides*),
mundula (M. & D.) (M)* (*Cyclocystoides*),
nitida (Faber) (near Transit, O.)* (*Cyclocystoides*),
parva (M. & D.) (M)* (*Cyclocystoides*)

WAYNESVILLE LS. (Blanchester division, B): Clarksville (C), Cowan Creek, Clinton Co. (CC), Lebanon (L), Morrow (M), Oxford (O), Warren Co. (WCo), Waynesville (W), Ohio, Madison (Ma), Versailles (V), Indiana.

- Canistrocrinus richardsoni* (Wetherby) (CC)* (Harveysburg, O.) (*Glyptocrinus*),
Compsocrinus harrisi (S. A. Miller) (W)* (WCo) (top of B) (*Glyptocrinus*),
miamiensis (S. A. Miller) (W)* (top of B) (*Glyptocrinus*),
Cupulocrinus minimus Springer (W)*,
polydactylus (Shumard) (W) (Ma) (L) (*Homocrinus*),
Dendrocrinus caduceus (Hall) (near L)* (WCo) (B) (*Poteriocrinus*),
casei Meek (W) (V) (WCo) (Harveysburg, O.) (B),
erraticus S. A. Miller (drift at Cincinnati, O.)*,
posticus (Hall) (near Cincinnati, O.)* (?Liberty) (*Poteriocrinus*),
Gaurocrinus nealli (Hall) (near L)* (W) (WCo) (O) (M) (C) (Blanchester, O.);
 (B) (*Glyptocrinus*),
Glyptocrinus forshellii S. A. Miller (East of M)*; (3 mi. below C) (B),
Hemicystites richmondensis Bassler (WCo)* (O) (V),
Heterocrinus juvenis Hall (W) (Ma),
Iocrinus subcrassus (M. & W.) (C) (L) (CC) (O) (*Heterocrinus*),
Isorophus germanus Bassler (O)* (M) (C),
warrenensis (James) (C) (*Agelacrinus*),
Lichenocrinus crateriformis Hall (O)* etc.,
nodosus Faber (Near Weisburg, Ind.)*,
Reteocrinus magnificus (S. A. Miller) (WCo)* (W) (B) (*Gaurocrinus*),
Rhaphanocrinus sculptus (S. A. Miller) (W)* (WCo) (B) (*Glyptocrinus*),
Tanaocrinus typus W. & S. (WCo)*

LIBERTY LS.: Oxford (O), Warren Co. (WCo), Ohio, Richmond (R), Indiana.

- Cupulocrinus polydactylus* (Shumard) (Clinton Co. etc., O.) (R) (*Homocrinus*),
Dendrocrinus casei Meek (R)* (Flat Fork, Warren Co., O.),
Hemicystites richmondensis Bassler (O),
Iocrinus subcrassus M. & W. (R, etc.),

- Streptaster septembrachiatus* M. & D. (Waynesville, O.)*,
Xenobasis williamsi Faber (O)*,
Xenocrinus penicillus S. A. Miller (WCo)*
- WHITEWATER AND SALUDA FM.: Oxford (O), Near Wilmington (W), Warren Co., near Waynesville (Wa), South of Harshaville (H), Ohio; Richmond (R), Versailles (V), Indiana.
- Carneyella faberi* (S. A. Miller) (V)* (*Agelacrinus*),
Cincinnatiidiscus turgidus Bassler (O)*,
Cupulocrinus polydactylus (Shumard) (R)* (O) (*Homocrinus*),
Dendrocrinus casei Meek (R)* (?Liberty),
Hemicystites rectiradiatus Shideler (Elk Run, east of Winchester, O.)* (H),
richmondensis Bassler (H) (Adams Co. Ohio),
Isorophus austini (Foerste) (W)* (O) (Wa) (V) (*Agelacrinus*),
Lichenocrinus crateriformis Hall (O) (R),
irregularis Faber (O)*,
shideleri Faber (near Mixerville, Ind.)*,
tuberculatus S. A. Miller (R)* (Wa) (Clinton Co. and Eaton, near Dayton, O.),
Streptaster septembrachiatus M. & D. (near Wa),
Xenocrinus baeri (Meek) (R)* (Wa) (H) (Clarksville and 4 mi. east Oregonia, Flat Fork, O.) (*Glyptocrinus*)
- ELKHORN FM.: Dayton (D), Oxford (O), Ohio; Elkhorn Creek near Richmond (R), Versailles (V), Near Osgood (Os), Indiana.
- Cystoidosaccus fulltoni* Faber (R)*,
Isorophus shideleri Bassler (west of Hamburg, Ind.)*,
Lepadocystis moorei (Meek) (R)* (O) (*Lepocrinites*),
Lichenocrinus crateriformis Hall (R),
kemperi Faber (2½ mi. s. Eaton, O.)*,
milleri Faber (V)* (Os) (R),
nodosus Faber (Os),
shideleri regularis Faber (R)* (Os),
tuberculatus S. A. Miller (R) (V) (Oakland) (D),
Streptaster septembrachiatus (M. & D.) (D) (*Agelacrinus*)
- MAQUOKETA FM. (*Fernvale zone*): Kankakee River, near Wilmington, Illinois.
Atactocrinus wilmingtontensis Weller*
- MAQUOKETA FM.: Oswego, Kendall Co., Illinois.
Dendrocrinus angustatus (M. & W.) (Mt. Carroll, Ill.)* (*Homocrinus*),
oswegoensis M. & W.*,
Iocrinus crassus (M. & W.)* (*Heterocrinus*),
Porocrinus crassus M. & W.*
- MAQUOKETA FM. (Elgin sh., *E*; Ft. Atkinson ls., *FtA*; Brainard sh., *B*): Clermont (and 2 m. N.E. of) (C); Ft. Atkinson (Ft.At); Patterson Springs near Brainard (P), Iowa.
- Archaeocrinus obconicus* Slocum (C)* (*E*),
Carabocrinus slocomi Foerste (C)* (*E*),
slocomi costatus Foerste (C)* (*E*),
Dendrocrinus kayi Slocum (P)* (*B*),
Dendrocystites sagittarius (Thomas & Ladd) (Ft.At.)* (*FtA*) (*Iowacystis*),
Ectenocrinus elongatus T. & L. (Ft.At.) (*FtA*),
raymondi Slocum (C)* (*E*),
Lichenocrinus crateriformis Hall (16 m. W. Dubuque, Ia.),
minutus Foerste (C)* (*E*),
Maquoketocrinus ornatus Slocum (C)* (*E*),
Pleurocystites beckeri Foerste (C)* (*E*),
clermontensis Foerste (C)* (*E*),
multistriatus Ulrich & Kirk (C)* (*E*),
slocomi Foerste (C)* (*E*),
Porocrinus fayettensis Slocum (C)* (*E*); (Ft.At.) (*FtA*),
Sygcaulocrinus typus Ulrich (Ft.At.) (*FtA*)
- WYKOFF BEDS: Spring Valley, Minn.
Ectenocrinus raymondi Slocum

CHERTY BEDS: Stonington, Mich.

Lichenocrinus tuberculatus S. A. Miller

MEAFORD MEMBER: Clay Cliffs, Manitoulin Island, Lake Huron, Ontario.

Compsocrinus harrisi (S. A. Miller) (*Glyptocrinus*)

ANTICOSTIAN (Lower) English Head fm. (EH); Vaurial fm. (V); Ellis Bay fm. (EB); Charleton Point (CP) Anticosti Island, Gulf of St. Lawrence, Quebec.

Carabocrinus tuberculatus Billings (CP)* (EH),*Cupulocrinus latibrachiatus* (Billings) (CP)* (EH); (V); Cape James (EB) (*Dendrocrinus*),*Dendrocrinus minutus* Springer (CP)* (EH),*Pleurocystites anticostiensis* Billings (CP)* (EH),*Reteocrinus fimbriatus* Billings (CP)* (EH); (Vaurial River) (V); (EB).

SILURIAN FAUNAS (NORTH AMERICA)

ALEXANDRIAN GROUP

GIRARDEAU LS.: Orchard Creek, Alexander Co., (A) and Thebes (T) Illinois; Cape Girardeau, Missouri (C).

Cyclocystoides illinoisensis M. & G. (A)* (C),*Glyptocrinus fimbriatus* Shumard (C)*,*Protaxocrinus girardeau* Springer (T) (C),*Ptychocrinus splendens* (S. A. Miller) (C)* (A) (*Gaurocrinus*)

ORCHARD CREEK SH.: Near Thebes, Illinois.

Savagella ornata Savage* (*Cyclocystoides*)

BRASSFIELD LS.: Dayton (D); Centerville (C), Ohio.

Brockocystis nodosaria Foerste (2 mi. w. Peebles)*,*Calceocrinus centervilleensis* Foerste (C)*,*Calceocrinus? incertus* Foerste (C)*,*Clidochirus americanus* Springer (D)* (C),*ulrichi* Foerste (D)* (Dayton ls.),*Dimerocrinites vagans* Foerste (7 mi. n. w. Xenia)* (D) (C),*Myelodactylus rotundatus* Foerste (4½ mi s.e. Xenia)*

EDGEWOOD LS.: Edgewood (E); Watson Station (W); Near Louisiana (L), Missouri.

Calceocrinus alleni Rowley (W)*,*Gissoocrinus? problematicus* Rowley (L)*,*Glyptocrinus insperatus* Rowley (E)*,*insperatus carinatus* Rowley (E)*,*insperatus pentagonus* Rowley (E)*,*Lampterocrinus? comptus* Rowley (L)*.

CATARACT FM.: Ontario, Canada.

Brockocystis clintonensis (Parks) (Forks of Credit River)* (*Lepadocystis*)*huroneensis* (Billings) (Near Cabots Head, shore of Lake Huron)*(*Apiocystites*),*tecumseh* (Billings) (Near South Bay, Manitoulin Id.)* (*Apiocystites*),*Cyclocystoides huroneensis* Foerste. (Rabbit Island, Lake Huron)*,*Eucheirocrinus ontario* Springer (Stoney Creek)* (Manitoulin bed)

NIAGARAN GROUP

ANTICOSTIAN (Upper) Chicotte fm. (C); Jupiter fm. (J). Anticosti Island, Gulf of St. Lawrence, Quebec.

Dimerocrinites elegans (Springer) (Iron River)* (J),*Periechocrinites latus* (Springer) (Southwest Point)* (C)

LOWER CLINTON FM.: One mi. w. Reynales Basin, New York.

Glyptocrinus plumosus (Hall)* (*Actinocrinus*),*Ichthyocrinus? clintonensis* Hall*

CLINTON (IRONDEQUOIT LS.): Lockport, New York.

Caryocrinites ornatus? Say,*Closterocrinus elongatus* Hall*,

Pisocrinus globosus (Ringueberg)* (*Triacrinus*),
pyriformis (Ringueberg)* (*Triacrinus*),
Stephanocrinus gemmiformis Hall

CLINTON (ROCHESTER SH.): Rochester (R); Lockport (L); Middleport (M), New York; Grimsby (G), Ontario.

Alisocrinus warreni (Ringueberg) (L)* (*Mariacrinus*),
Apiocystites elegans Hall (L)* (G),
Asaphocrinus excavatus (Ringueberg) (L)* (*Lecanocrinus*),
incisus (Ringueberg) (L)* (*Lecanocrinus*),
ornatus (Hall) (L)* (*Lecanocrinus*),
Calceocrinus bidentatus Ringueberg (L)*,
halli Ringueberg (M)*,
typus Ringueberg (L)*,
Callocystites canadensis (Billings) (G)* (L) (*Apiocystites*),
jewetti Hall (L)* (G),
Caryocrinites ornatus Say (L)* (M) (G) (R),
Dendrocrinus celsus Ringueberg (L)*,
longidactylus Hall (L)*,
Dimerochrinites aculeatus (Hall) (L)* (*Thysanocrinus*),
brachiatus (Hall) (L)* (*Glyptaster*),
canaliculatus (Hall) (L)* (*Thysanocrinus*),
lilliformis (Hall) (L)* (*Thysanocrinus*),
Eucalyptocrinites caelatus (Hall) (L)* (R) (G),
caelatus levis (Grabau & Shimer) (L)* (R)*,
tuberculatus (M. & D.) (L),
Eucheirocrinus chrysalis (Hall) (L)* (*Cheirocrinus*),
Gazacrinus immaturus (Hall) (L)* (*Thysanocrinus*),
Hemicystites parasiticus Hall (L)*,
Homocrinus cylindricus Hall (L)* (G),
parvus Hall (L)*,
Ichthyocrinus laevis Conrad (L)* (G),
subangularis Hall (L),
Lecanocrinus macropetalus Hall (L)* (G) (M),
pisiformis (Roemer) (L) (*Poteriocrinus*),
solidus Ringueberg (L)*,
Lyriocrinus dactylus (Hall) (L)* (G) (*Marsupiocrinites?*),
Macrostylocrinus fusibrachiatus Ringueberg (L)* (R),
ornatus Hall (L)*,
Melocrinites sculptus Hall (L)*,
Myelodactylus brachiatus Hall (L)* (M),
convolutus Hall (L)*,
Platycrinites corporiculus (Ringueberg) (L)*,
Pycnosaccus caliculus (Hall) (L)* (*Lecanocrinus*),
Saccocrinus speciosus Hall (L)* (G),
Stephanocrinus angulatus Conrad (L)* etc.,
gemmiformis Hall (L)* (R) etc.

CLINTON (OSGOOD SH.): Jefferson Co. (Big Creek, near Big Creek P.O., 4.5 mi. n.e. Madison, etc.) (JC), Ripley Co. (Osgood, etc.) (RC), Waldron (W); Indiana; New-som (N), Tennessee.

Allocystites hammeli S. A. Miller (JC)*,
Caryocrinites ellipticus (M. & G.) (RC)*,
hammelli (M. & G.) (JC)*,
indianensis (S. A. Miller) (JC)*,
ornatus Say (JC),
Gomphocystites indianensis, S. A. Miller (JC)*,
Holocystites adipatus S. A. Miller (JC)*,
affinis M. & F. (JC)*,
amplus S. A. Miller (JC)*,
asper M. & G. (JC)*,
baculus S. A. Miller (RC)*,
benedicti S. A. Miller (JC)*,
brauni S. A. Miller (JC)*,
canneus S. A. Miller (JC)*,
colletti S. A. Miller (JC)*,

- commodus* S. A. Miller (JC)*,
dyeri S. A. Miller (RC)*,
elegans S. A. Miller (JC)*,
faberi S. A. Miller (JC)*,
globosus S. A. Miller (JC)*,
gorbyi S. A. Miller (JC)*,
gyrinus M. & G. (JC)*,
hammelli (S. A. Miller) (JC)* (*Trematocystis*),
indianensis S. A. Miller (JC)*,
madisonensis S. A. Miller (JC)*,
ornatissimus S. A. Miller (JC)*,
ornatus S. A. Miller (JC)* (N),
papulosus S. A. Miller (JC)*,
parvulus S. A. Miller (JC)*,
parvus S. A. Miller (JC)*,
perlongus S. A. Miller (RC)* (N),
plenus S. A. Miller (JC)*,
pustulosus, S. A. Miller (W)* (RC),
rotundus S. A. Miller (RC)*,
scitulus S. A. Miller (JC)*,
spangleri S. A. Miller (JC)*,
sphaeroidalis M. & G. (JC)*,
splendens M. & G. (JC)*,
subglobosus S. A. Miller (JC)*,
subovatus S. A. Miller (JC)*,
subrotundus S. A. Miller (RC)*,
tumidus S. A. Miller (RC)* (JC),
turbinatus S. A. Miller (RC)*,
ventricosus S. A. Miller (RC)* (JC),
wetherbyi S. A. Miller (RC)*,
wykoffi S. A. Miller (JC)*,
Pisocrinus gemmiformis S. A. Miller (RC)* (JC),
Stephanocrinus cornetti S. A. Miller (JC)*,
deformis Rowley (JC)*,
elongatus S. A. Miller (JC)*,
gemmiformis Hall (RC),
hammelli S. A. Miller (JC)*,
obpyramidalis S. A. Miller (JC)*,
osgoodensis S. A. Miller (RC)* (JC),
quinquepartitus Rowley (JC)*

LAUREL LS.: St. Paul, Indiana.

- Acacocrinus americanus* W. & Sp.*,
Alisocrinus aureatus (S. A. Miller)* (*Mariacrinus*),
carleyi (Hall) (*Glyptocrinus*),
laevis Kirk*,
Alloocrinus benedicti S. A. Miller*,
Asaphocrinus minor Springer*,
Brahmacrinus elongatus Springer*,
Calliocrinus beachleri W. & Sp.*,
Carpocrinus sculpus Springer*,
Caryocrinites gorbyi (S. A. Miller)* (*Stribalocystites*),
sphaeroidalis (M. & G.)* (*Stribalocystites*),
tumidus (S. A. Miller)* (*Stribalocystites*),
Ctenocrinus granulatus (S. A. Miller)* (*Mariacrinus*),
Cyathocrinites striolatus? (Angelin),
wilsoni (Springer)*,
Cylicocrinus canaliculatus S. A. Miller*,
indianensis M. & G.*,
spinus Springer*,
Cyphocrinus gorbyi S. A. Miller*,
Desmidocrinus dubius Springer*,
laurelianus Springer*,
Emperocrinus indianensis M. & G.*

- Euchirocrinus indianensis* (S. A. Miller)* (*Calceocrinus*),
Gazacrinus depressus Springer*,
 inornatus S. A. Miller*,
 magnus Springer*,
 ventricosus W. & Sp.*,
Gissocrinus approximatus Springer*,
 quadratus Springer*,
Laurelocrinus gibbosus Springer*,
 paulensis Springer*,
 spinoradialis Springer*,
 wilsoni Springer*,
Lecanocrinus elongatus Springer*,
 pisiformis (Roemer) (*Poteriocrinus*),
Lecythiocrinus? problematicus Springer*,
Lysocystites sculptus (S. A. Miller)* (*Aethocystites*),
Marsupiocrinus turbinatus Springer*,
Melocrinites aequalis (S. A. Miller)*,
 oblongus (W. & Sp.),
Myelodactylus ammonis Bather,
 convolutus Hall,
Mystiocrinus wilsoni Springer*,
Paragazacrinus rotundus Springer*,
Parisocrinus siluricus Springer*,
Patelliocrinus indianensis (M. & G.)* (*Macrostylocrinus*),
 laevis Springer*,
 ornatus Springer*,
 rugosus Springer*,
Paulocrinus biturbinatus Springer*,
Periechocrinites howardi (S. A. Miller)* (*Saccocrinus*),
 ornatus (Hall),
 umbrosus (M. & G.)* (*Saccocrinus*),
Petalocrinus inferior Bather,
 longus Bather*,
Pisocrinus bacula M. & G.*,
 benedicti S. A. Miller,
 campana S. A. Miller,
 gemmaformis S. A. Miller,
Pycnosaccus laurelianus Springer*,
Saccocrinus benedicti S. A. Miller*,
Troosticrinus sanctipaulensis Foerste*,
Wilsonicrinus discoideus Springer*,
Zophocrinus howardi S. A. Miller*
- WALDRON SH.: Hartsville (H), Madison (M), 2½ mi. e. St. Paul (StP), Utica (U),
 Vernon (V), Waldron (W), Indiana. Waldron (Newsom clay member of Wayne
 fm.): Clifton (C), Iron City (IC), Newsom (N), Wayne Co. (WaCo), Whites
 Creek (WC), Tennessee.
- Acacocrinus elrodi* W. & Sp. (H)*,
Alisocrinus carleyi (Hall) (W)* (H) (V) (N) (*Glyptocrinus*),
Ampheristocrinus? calyx Hall (W)*,
Ampheristocrinus typus Hall (W)* (H),
Botryocrinus nucleus (Hall) (W)* (H) (*Dendrocrinus*),
 polyxo (Hall) (W)* (H) (St.P) (*Cyathocrinus*),
Calceocrinus stigmatus (Hall) (W)* (*Cheirocrinus*),
Caryocrinites persulcatus (Springer) (N)*,
Codaster pentalobus Hall (W)*,
 pulchellus M. & D. (W)*,
Dimerochrinites inornatus (Hall) (W)* (H) (N) (*Glyptaster*),
 occidentalis (Hall) (W)* (H) (*Glyptaster*),
 waldronensis (M. & D.) (W)* (*Cyathocrinus*),
Eucalyptocrinites crassus (Hall) (W)* (V) (H) (StP) (N),
 ellipticus (S. A. Miller) (H)*,
 elrodi (S. A. Miller) (H)* (W) (StP) (C) (N),
 lindahli? (W. & Sp.) (N),

- magnus* (Worthen) (WaCo)* (N) (WC),
ovalis (Hall) (W) (H) (U) (N) (WC),
springeri (Foerste) (N)*,
tuberculatus (M. & D.) (W)* (WC),
Homocrinus aemulus (Hall) (W)* (*Cyathocrinus*),
ancilla (Hall) (W)* (*Dendrocrinus*),
Ichthyocrinus subangularis Hall (W)* (H),
Lampterocrinus parvus Hall (W)*,
Lecanocrinus pisiformis (Roemer) (N) (*Poteriocrinus*),
pusillus (Hall) (W)* (V) (N) (IC) (*Cyathocrinus*),
Lyriocrinus melissa (Hall) (W)* (H) (N) (WC) (*Rhodocrinus*),
Macrostylocrinus fasciatus (Hall) (W)* (H) (N) (*Cyathocrinus*),
granulosus (Hall) (W)* (M) (N),
striatus Hall (W)* (H) (IC),
Melocrinites obconicus (Hall) (W)* (H) (N),
Myelodactylus ammonis Bather (N),
ammonis alternicirrus Bather (N),
ammonis bijugicirrus Bather (N),
convolutus Hall (N),
gorbyi S. A. Miller (N)*,
Periechocrinites marcouanus? (Worthen & Meek) (W) (*Megistocrinus*),
whitfieldi (Hall) (W)* (H) (M) (N) (U) (*Actinocrinus*),
Platycrinites siluricus (Hall) (W)*,
Sagenocrinites americanus (Springer) (W)*,
Stephanocrinus gemmiformis Hall (W) (N) (IC) (Wa),
hammelli S. A. Miller (N),
obpyramidalis S. A. Miller (N),
tennesseensis Foerste (IC)* (C)
- DIXON LS. (member Wayne fm.):** Decatur Co., Tenn.
Pisocrinus granulosus Rowley,
tennesseensis Roemer
- BOB LS. (member Brownsport fm.):** Western Tenn.
Melocrinites oblongus (W. & Sp.) (Decatur Co.),
Technocrinus niagarensis Springer (Hardin Co.)*
- LOBELVILLE SH. (member Brownsport fm.):** Western Tennessee.
Lecanocrinus pisiformis (Roemer) (1½ mi. e. Linden, Perry Co.) (*Poteriocrinus*),
Parastephanocrinus typus Springer (near Bob)*,
Pisocrinus gorbyi S. A. Miller (Rise Mill, Perry Co.),
ollula Angelin (Rise Mill, Perry Co.),
quinquelobus Bather (Perry Co.),
sphaericus Rowley
- DECATUR LS.:** Below Grand View (G), Perryville (P), Rise Mill (R), Perry Co., Tennessee.
Aoocrinus nodosus Springer (G)* (10 mi. above Clifton),
Clonocrinus occidentalis Springer (P)*,
Cremacrinus decatur Springer (R)*,
Eucalyptocrinites pernodosus (Springer) (P)*,
sculptilis (Springer) (P)*,
Gazacrinus stellatus Springer (1 mi. e. Hardin P. O., Hardin Co.)*,
Mariacrinus?? rotundatus Springer (G)*
- BAINBRIDGE LS.:** Near St. Marys, Ste. Genevieve Co., Missouri.
Caryocrinites missouriensis (Rowley)* (*Stribalocystis*),
Cordylocrinus? dubius Rowley*,
Cyathocrinites? ovalis (Rowley)*,
Lecanocrinus pisiformis Roemer,
Pisocrinus benedicti S. A. Miller,
glabellus Rowley*,
gorbyi S. A. Miller,
granulosus Rowley*

- quinelobus* Bather,
sphaericus Rowley*,
tennesseensis (Roemer) (*Synbathocrinus*),
Troosticrinus reinwardti minimus Foerste*
- BEECH RIVER SHALY LS. (member *Brownspout fm.*): Decatur Co. (D), Perry Co. (P), Wayne Co. (W), Tucks Mill, 2 mi. n. Decaturville, Decatur Co. (T), Tennessee.
- Allocrinus longidactylus* Springer (T)*,
longidactylus magniradialis Springer (T)*,
ponderosus Springer (¾ mi. w. Dixon Sulphur Springs, Decatur Co.)*,
typus W. & Sp. (D)* (W) (T),
Ampheristocrinus typus? Hall (D),
Anisocrinus greeni (M. & G.) (D) (*Lecanocrinus*),
Asaphocrinus bassleri Springer (T)*,
Botryocrinus tenuidactylus Springer (T)*,
Calceocrinus bassleri Springer (T)*,
bifurcatus Springer (T)*,
foerstei Springer (T)*,
Caryocrinites bulbulus (M. & G.) (W)* (D),
globosus Troost (D)*,
roemeri Jaekel (D)*,
Coccoocrinus conicus (Troost) Wood (D)*,
Cremacrinus simplex Springer (T)*,
tubuliferus Springer (T)*,
ulrichi Springer (T)*,
Culicocrinus? *spinosus* Springer (D)*,
Cyathocrinites brittsi (M. & G.) (D)*,
decaturn (Springer) (T)*,
Cystocrinus tennesseensis Roemer (D)*,
Cylocrinus laevis Roemer (D)*,
Dimerocrinites milliganae (M. & G.) (D)* (*Glyptaster*),
nodobasis (Springer) (T)*,
planus (Springer) (T)*,
roemeri (Troost) (D)* (P) (*Gilbertsocrinites*),
Eucalyptocrinites extensus Troost (D)*,
gibbosus Troost (D)*,
goldfussi Troost (D)*,
lindahli (W. & Sp.) (W)* (D) (P),
milliganae (M. & G.) (D)*,
nashvillae Troost (D)*,
ovalis (Hall) (D)* (P),
phillipsi Troost (D)*,
ventricosus (W. & Sp.) (D)* (P) (W),
Eucheirocrinus minor Springer (one mi. n. Decaturville)*,
Eudimerocrinus multibrachiatus Springer (T)*,
Gazacrinus milliganae (M. & G.) (D)* (*Thysanocrinus*),
ramifer (Roemer) (D)* (W) (*Eucalyptocrinus*),
Gissocrinus delicatus Springer (T)*,
magnibrachiatus Springer (T)* (D),
Gnorimocrinus cirrifer Springer (T)*,
varians Springer (T)*,
Hapalocrinus cirrifer Springer (T)*,
gracilis Springer (T)*,
pinnulatus Springer (¾ mi. n. Decaturville)*,
tennesseensis Springer (T)*,
tuberculatus Springer (T)*,
Haplocrinites granulatus Troost (D)*,
maximus Troost (D)*,
ovalis Troost (D)*,
Hormocrinus tennesseensis (Worthen) (near Clifton)* (D) (*Centrocrinus*),
Lampteroocrinus roemeri Springer (T)*,
sculptus Springer (D)*,
tennesseensis Roemer (D)* (P) (W),
Lecanocrinus meniscus Springer (D)*,
pisiformis (Roemer) (D)* (P) (W) (*Poteroocrinus*),

- Lyonocrinus bacca* (Roemer) (P)* (D) (*Cococrinus*),
Macrostylocrinus fasciatus? Hall (D),
 laevis Springer (T)* (P),
 meeki (Lyon) (P) (D) (*Actinocrinus*),
 pustulosus Springer (T)*,
Marsupiocrinus concavus Springer (T)*,
 corrugatus (Troost) (D)* (P) (*Cupellaecrinites*),
 excavatus Springer (T)*,
 inflatus Troost (D)* (T),
Marsupiocrinus magnificus (Troost) (D)* (*Cupellaecrinites*),
 pentagonalis (Troost) (D)* (P) (*Cupellaecrinites*),
 rosaeformis (Troost) (P)* (T) (*Cupellaecrinites*),
 stellatus (Troost) (D)* (T) (*Cupellaecrinites*),
 striatissimus Springer (T)*,
 striatus W. & Sp. (T)*,
 tennesseensis (Roemer) (D)* (W) (*Platyocrinus*),
 verneuili (Troost) (D)* (*Cupellaecrinites*),
Melocrinites tennesseensis (Springer) (T)*,
 verneuili (Troost) Hall (D)* (*Actinocrinites*),
Myelodactylus ammonis Bather (D) (T),
 ammonis alternicirrus Bather (D),
 ammonis bijugicirrus Bather (D),
 brevis Springer (one mi. w. Brownsport Landing)*,
 extensus Springer (T)*,
 extensus alternicirrus Springer (T)*,
 extensus bijugicirrus Springer (T)*,
Nyctocrinus magnitubus Springer (T)*,
Periechocrinites dubius (Troost) Wood (D)*,
 gorbyi (S. A. Miller) (D)* (*Saccocrinus*),
 tennesseensis (Hall) (D)* (P) (W) (*Saccocrinus*),
Pisocrinus benedicti S. A. Miller (D) (P),
 campana S. A. Miller (D) (P) (W),
 quinquelobus Bather (D)* (P) (W),
 sphaericus Rowley (D) (P) (W),
 tennesseensis (Roemer) (D)* (W) (*Synbathocrinus*),
Protaxocrinus robustus Springer (T)*,
Pycnosaccus dubius Springer (T)*,
 patei Springer (T)*,
 welleri Springer (T)*,
Sagenocrinites clarki (Springer) (T)*,
Siderocrinus ornatus (Troost) Wood (D)*,
Tetracystis fenestratus (Troost) (D)*,
Thalamocrinus cylindricus M. & G. (D)*,
 elongatus Springer (D)*,
 globosus Springer (D)*,
 ovatus M. & G. (D)* (T),
Troosticrinus reinwardti (Troost) (P)* (D) (W) (*Pentremites*),
Zophocrinus howardi? Miller (Flatwoods, Perry Co.)
- LOUISVILLE LS.: Utica, Clark Co. (U), Indiana; Louisville (Bear Grass Creek, etc.) (L), Jefferson Co. (J), Kentucky.
- Anisocrinus greenei* M. & G. (L)*,
Botryocrinus nucleus (Hall) (L) (*Dendrocrinus*),
Caryocrinites kentuckiensis (M. & G.) (L)*,
Cytocrinus laevis Roemer (L),
Eucalyptocrinites bordeni (Roy) (L)*,
 caelatus? (Hall) (L) (J) (*Hypanthocrinites*),
 ovalis Troost (L),
Gissocrinus lyoni Springer (J)*,
Gomphocystites tenax? Hall (1 mi. e. Harrods Sta., Ky.),
Lecanocrinus macropetalus? Hall (L),
 pisiformis (Roemer) (L) (*Poteriocrinus*),
Macrostylocrinus meeki Lyon (L)*,
Melocrinites obconicus Hall (L) (J) (U),
 oblongus W. & Sp. (L)* (J),

Periechocrinites tennesseensis (H. & W.) (J) (*Saccocrinus*),
Saccocrinus cuspidatus Springer (J)*,
Stephanocrinus angulatus? Conrad (U),
Troosticrinus reinwardti (Troost) (L) (*Pentremites*)

LOCKPORT-GASPORT LS.: Lockport, New York.

Calliocrinus acanthinus Ringueberg*,
Deltacrinus contractus (Ringueberg)* (*Calceocrinus*),
Dendrocrinus nodobrachiatus Ringueberg*,
Dimerocrinites lockportensis Ringueberg*,
Eucalyptocrinites inconspicua (Ringueberg)*,
Ichthyocrinus conoideus Ringueberg*

LOCKPORT-SHELBY DOL.: Lockport, New York.

Gomphocystites tenax Hall*,
Heterocystites armatus Hall*

CEDARVILLE LS.: Cedarville (C), Springfield (S), Greenville, 4½ mi. east (G), Yellow Springs (Y), Pontiac, 6 mi. n. e. Piqua (P), near Wilmington (W), Ohio.

Calliocrinus cornutus (Hall) (G) (*Eucalyptocrinus*),
Callocystites jewetti elongatus Foerste (C)* (S),
Coelocystis subglobosa (Hall) (S)* (C) (*Hemicosmites*),
Eucalyptocrinites proboscidiialis (S. A. Miller) (P)*,
splendidus (M. & W.) (S)*,
Gomphocystites bownockeri Foerste (C)*,
Haliocystis imago Hall (C),
Holocystites alternatus Hall (C) (W),
greenwillensis Foerste (G)*,
Marsupiocrinus praematurus (H. & W.) (G)* (C) (*Platycrinus*),
Periechocrinites cylindricus (Foerste) (S)*,
ornatus (H. & W.) (Y)* (*Saccocrinus*),
tennesseensis (H. & W.) (C) (Y) (*Saccocrinus*),
Petalocrinus inferior? Bather (C),
Troosticrinus subcylindricus H. & W. (Y)* (C)

DURBIN FM. (*Euphemia dol.*): 2 mi. s. Covington, Ohio.

Lampteroocrinus inflatus minor Foerste*

WEST POINT FM.: Near Port Daniel, Quebec.

Syndetocrinus dartae Kirk*,
northropi Kirk*

HOPKINTON (H) AND GOWER DOL. (G) Monticello, Jones Co. (M), Iowa.

Caryocrinites ornatus? Say (G),
Crotalocrinus cora (Hall) (G) (*Cyathocrinus*),
Eucalyptocrinites crassus? (Hall) (G),
Petalocrinus inferior Bather (M)* (H),
mirabilis Weller & Davidson (M)* (H)

RACINE DOL.: Bridgeport (B), Chicago (C), Cicero (Ci), Hawthorne (H), Joliet (J), Lemont (L), Romeo (Ro), Illinois; Anderson (A), Delphi (D), Marion (M), Muncie (Mu), Wabash (Wa), Indiana; Racine (R), Waukesha (W), Wisconsin.

Achradocrinus patulus Slocum (Ro)*,
Ampheristocrinus dubius Weller (Ro)*,
Archeocrinus depressus Weller (B)* (Ci) (H),
Calliocrinus bifurcatus (Weller) (J)* (*Callicrinus*),
bilobus (Weller) (C)* (*Cryptodiscus*),
cornutus (Hall) (W)* (C) (R) (D) (*Eucalyptocrinus*),
cornutus excavatus (Hall) (W)* (R) (D) (*Eucalyptocrinus*),
corrugatus (Weller) (J)* (C) (L) (*Cryptodiscus*),
desideratus (Weller) (R)* (*Callicrinus*),
digitatus (Weller) (C)* (J)* (*Cryptodiscus*),
hydei (Weller) (J)* (C) (R) (*Cryptodiscus*),
longispinus (Weller) (J)* (*Callicrinus*),
pentagonalis (Weller) (B)* (*Callicrinus*),
Carpocrinus farringtoni (Slocum) (L)* (*Habrocrinus*),
lemontensis (Slocum) (L)* (*Habrocrinus*),

- Caryocrinites ornatus?* Say (C),
Chicagocrinus inornatus Weller (J)*,
 ornatus Weller (B)*,
Clonocrinus chicagoensis (Weller) (C)* (R) (Ci) (*Corymbocrinus*),
 niagarensis (Weller) (C)* (*Corymbocrinus*),
Coelocystis subglobosa (Hall) (R)* (C) (*Hemicosmites*),
Crotalocrinites cora (Hall) (R)* (B) (C) (Ci) (*Cyathocrinus*),
 vanhornei (S. A. Miller) (B)* (*Cyathocrinites*),
Cyathocrinites nanus (Grubb) (C)*,
 turbinatus (Weller) (C)*,
Cyphocrinus chicagoensis Weller (B)*,
Dimerocrinites campanulatus (Slocum) (L)*,
 egani, (S. A. Miller) (B)* (C) (*Glyptaster*),
 occidentalis (Hall) (R) (L) (C) (*Glyptaster*),
 pentangularis (Hall) (R)* (B) (*Glyptaster*),
Eucalyptocrinites asper (Weller) (B)* (H),
 chicagoensis (W. & M.) (C)*,
 chrysalis (Hall) (R)* (*Crinocystites*),
 depressus (S. A. Miller) (B)* (C) (R) (Ci),
 egani (S. A. Miller) (C)* (B),
 elrodi (S. A. Miller) (W),
 inornatus (Weller) (B)* (H),
 nodulosus (Weller) (B)* (Ro),
 obconicus (Hall) (R)* (C),
 ornatus (Hall) (R)* (B) (Ro),
Eucalyptocrinites rectus (Hall) (R)* (*Crinocystites*),
 rotundus (S. A. Miller) (C)*,
 tuberculatus? (M. & D.) (R),
 turbinatus (S. A. Miller) (C)*,
Gazacrinus major Weller (H)*,
 minor Weller (B)* (H),
Gomphocystites clavus Hall (R)*,
 glans Hall (R)* (C),
Hallicystis imago (Hall) (R)* (C) (*Apioecystites*),
Holocystites abnormis Hall (R)*,
 alternatus (Hall) (R)* (*Caryocystites*),
 cylindricus (Hall) (R)* (*Caryocystites*),
 jolietensis S. A. Miller (J)*,
 ovatus Hall (W)*,
 scutellatus Hall (W)*,
 sphaericus W. & M. (C)*,
 winchelli Hall (W)* (R),
Homocrinus ancilla? (Hall) (L) (*Dendrocrinus*),
 cylindricus Hall (L),
Ichthyocrinus corbis W. & M. (C)*,
 subangularis Hall (C),
Lampterocrinus dubius Weller (L)* (J),
 inflatus (Hall) (R)* (*Balanocrinus*),
 robustus Weller (Ro)* (J) (L) (TR),
 subglobosus Weller (B)* (H),
Lecanocrinus pisiformis (Roemer) (R) (*Poteriocrinus*),
 pusillus (Hall) (R) (*Cyathocrinus*),
 waukoma (Hall) (R)* (C) (W) (*Cyathocrinus*),
Lyriocrinus melissa? (Hall) (R) (*Rhodocrinus*),
 sculptilis (Hall) (W)* (*Rhodocrinus*),
Lysocystites nodosus (Hall) (R)* (*Echinocystis*),
Macrostylocrinus obconicus Weller (B)*,
 semiradiatus (Hall) (R)* (*Actinocrinus*),
 striatus Hall (R) (B),
 subglobosus Weller (B)* (C) (R),
Marsupiocrinus chicagoensis Weller (C)*,
Melocrinites obconicus (Hall) (B),
 obpyramidalis (W. & M.) (C)* (*Actinocrinus*),
 verneuili? (Troost) (C) (R),

- Myelodactylus bridgeportensis* S. A. Miller (B)* (C),
Periechocrinites chicagoensis (Weller) (B)* (J),
egani (S. A. Miller) (Ci)* (*Saccocrinus*),
infelix (W. & M.) (C)* (B) (R) (*Megistocrinus*),
marcouanus (W. & M.) (C)* (B) (*Megistocrinus*),
necis (W. & M.) (C)* (B) (H) (*Megistocrinus*),
speciosus (Hall) (R) (*Saccocrinus*),
urniformis (S. A. Miller) (B)* (C) (Ci) (*Saccocrinus*),
whitfieldi (Hall) (Wa)* (R) (W) (*Actinocrinus*),
Pisocrinus benedicti S. A. Miller (Wa)* (M) (A) (L),
campana S. A. Miller (W)* (A),
gemmiformis? S. A. Miller (L),
gorbyi S. A. Miller (Wa)* (M) (A),
quinquelobus Bather (A) (Ro),
Platycrinites augusta (Slocum) (L)*,
Platycrinus? dubius Weller (B)*,
Pycnosaccus americanus Weller (H)*,
Saccocrinus benedicti (S. A. Miller) (Mu) (*Habrocrinus*),
Siphonocrinus armosus (McChesney) (R)* (C) (W) (*Eucalyptocrinus*).
nobilis (Hall) (R)* (C) (W) (*Glyptocrinus*),
pentagonus W. & Sp. (R)* (C) (W),
Stephanocrinus gemmiformis? (Hall) (R),
obconicus Slocum (Ro)*,
osgoodensis? S. A. Miller (Ro),
skiffi Slocum (L)*,
Troosticrinus subcylindricus H. & W. (C),
Zophocrinus globosus Slocum (L)*,
howardi? S. A. Miller (L),
pyriformis Slocum (Ro)*

NIAGARAN, Oswego, Illinois.

- Anisocrinus oswegoensis* (M. & G.)* (*Lecanocrinus*)

CAYUGAN GROUP

SALINA FM. (BERTIE LS.): North Buffalo, New York.

- Pyrgocystis batheri* Ruedemann*

SILURIAN FAUNAS (AUSTRALIA, EUROPE, AND SOUTH AMERICA)

AUSTRALIA: Near Yass, New South Wales (Y); Brunswick (B), and Melbourne (M), Victoria.

- Botryocrinus longibrachiatus* Chapman (B)*,
Hapalocrinus victoriae Bather (M)*,
Helicocrinus plumosus Chapman (B)*,
Lecanocrinus breviararticulatus Chapman (Y)*,
Pisocrinus? yassensis Etheridge (Hume) (Y)*,
yassensis lobatus Etheridge (Y)*

BOHEMIA: Divisions E₁, E₂: Borek (B); Dvorce (D); St. Ivan (I); Karlstein (K); Klein Kuchel (KK); Lodenitz (L); Mnisek near Prague (M).

- Abacocrinus barrandei* (Waagen & Jahn) (K)* (E₁, E₂) (*Carolicrinus*),
Bohemiocrinus pulverens (Barrande) (D)* (E₁, E₂) (*Encrinites*),
Calpiocrinus bohemicus W. & J. (KK)* (E₁, E₂),
Ctenocrinus melocrinoides (W. & J.) (D)* (E₁, E₂) (*Zenkericrinus*),
Cystidea granulum Barrande (B)* (E₁),
Cystidea? subregularis Barrande (I)* (E₂),
Laubeocrinus barrandei W. & J. (Lochkov)* (E₂),
Leptocystis tertius (Barrande) (B)* (L) (E₁, E₂) (Sedlitz) (*Homocystites*),
Rhombifera bohémica Barrande (Wraz)* (D₄),
Scyphocrinites decoratus (W. & J.) (D)* (E₁, E₂),
elegans Zenker (K)* (D)* (E₁, E₂),
excavatus (Schlotheim) (M)* (K) (E₁, E₂),
excavatus schlotheimi (W. & J.) (KK)* (K) (E₁, E₂),
excavatus schröteri (W. & J.) (D)* (M)* (K) (E₁, E₂),

- quarcitarum* (Fritsch) (Bohemia)* (E₂) (*Camarocrinus*),
subornatus (Barrande) (K)* (KK)* (Klukovic)* (E₁, E₂),
zenonis (W. & J.) (D)* (K) (E₁, E₂)
Stephanoblastus mira (Barrande) (L)* (E₂) (*Rhombifera*),
Vletavicrinus haueri W. & J. (near D)* (E₁, E₂)

ENGLAND: WENLOCK LS.: Dudley, unless otherwise stated.

- Apiocystites pentrematoides* Forbes*,
Ateleocystites fletcheri Salter*,
Bathericrinus ramosus (Bather)* (*Botryocrinus*),
Botryocrinites quinquelobus (Bather)*,
Calceocrinus fletcheri (Salter)* (*Cheirocrinus*),
nitidus Bather,
Calpiocrinus intermedius Springer*,
Carpocrinus simplex (Phillips)* (*Actinocrinus*),
Ciceroocrinus elegans Sollas*,
Clonocrinus polydactylus (McCoy)* (*Eucalyptocrinus*),
Crotalocrinites pulcher (Hisinger),
rugosus (Miller)*,
Cyathocrinites acinotubus (Angelin),
longimanus (Angelin),
vallatus (Bather)*,
Desmidocrinus heterodactylus Angelin,
Dictenocrinus decadactylus (Bather)* (*Botryocrinus*),
pinnulatus (Bather)* (*Botryocrinus*),
Dimerocrinites decadactylus (Phillips)*,
icosidactylus (Phillips)*,
medius? (Angelin),
ornatus (Angelin) (*Eucrinus*),
speciosus (Angelin) (*Eucrinus*),
Enallocrinus scriptus Hisinger,
Eucalyptocrinites decorus (Phillips)*,
granulatus (Lewis)*,
Eucheirocrinus anglicus Springer*,
Gissocrinus arthriticus (Phillips)* (*Actinocrinites*),
capillaris (Phillips)* (*Cyathocrinites*),
goniodactylus (Phillips)* (*Cyathocrinites*),
scoparius (Salter)* (*Cyathocrinus*),
squamiferus (Salter)* (*Cyathocrinus*),
typus Bather,
Hapalocrinus retiarius (Phillips)* (*Actinocrinites*),
Homalocrinus parabasalis Angelin,
Hormocrinus anglicus Springer*,
Ichthyocrinus intermedius Angelin,
phillipsianus Springer*,
pyriformis (Phillips)* (*Cyathocrinites*),
Lecanocrinus bacchus (Salter)* (*Ichthyocrinus*),
Lepocrinites oblongus (Forbes)* (*Pseudocrinites*),
Macrostylocrinus anglicus Jaekel*,
Marsupioocrinus coelatus Phillips*,
Mastigocrinus loreus Bather*,
Melocrinites spectabilis (Angelin),
Meristocrinus minor Springer*,
Myelodactylus ammonis Bather,
ammonis alternicirrus Bather,
ammonis bijugicirrus Bather,
extensus Springer*,
fletcheri (Salter)* (*Herpetocrinus*),
Patelliocrinus duplicatus Angelin,
Periechocrinites articulatus (Austin)*,
interradiatus (Angelin)*,
moniliformis (Miller)* (*Actinocrinites*),
Pisocrinus pilula de Koninck*,
Placcocystites forbesianus de Koninck*,
gegenbauri (Haeckel) (*Ateleocystis*),

Poteriocrinites dudleyensis Austin*,
Promelocrinus anglicus Jaekel*,
Protaxocrinus ovalis (Angelin) (*Taxocrinus*),
Prunocystites baccatus (Forbes)* (*Echinoencrinus*),
fletcheri Forbes*,
Pseudocrinites bifasciatus Pearce*,
magnificus Forbes*,
Pycnosaccus bucephalus Bather*,
Pyrgocystis ansticei Bather (Shropshire)*,
Sagenocrinites expansus (Phillips)* (*Actinocrinites*),
Schizocystis armata (Forbes)* (*Echinoencrinus*),
Staurocystis quadrifasciata (Pearce)* (*Pseudocrinites*),
Stelidiocrinus laevis Angelin,
Temnocrinus tuberculatus (Miller)* (*Cyathocrinites*),
Thenarocrinus callipygus Bather*,
gracilis Bather*

LUDLOW LS. (Upper = *Up*; Lower = *Lo*).

Cicerocrinus tenuis (Jaekel) (Ludlow)* (*Up*) (*Lagarocrinus*),
Meristocrinus orbigny (McCoy) (High Thorne* and Kendal, Westmoreland)
(*Lo*) (*Taxocrinus*),
Periechocrinites pulcher (Salter) (Kendal, Westmoreland) (Ludlow) (*Actino-*
crinus),
Scyphocrinites excavatus? (Schlotheim) (Porthluney, Cornwall)

FRANCE: *Caryocrinites ornatus europaeus* Quenstedt (Nefiez, Herault)*.

GERMANY: *Abacocrinus erraticus* Jaekel (drift, North Germany)*,

Cystidea bavarica Barrande (near Hof, Bavaria)*,
Methabocrinus erraticus Jaekel (Norenberg, near Stargard, Pomerania)*

GOTLANDIAN: Island of Gotland: Bursvik (B), Farö (Fa), Follingbo (F), Klintaberg
(K), Lickershamm (Li), Petesvik (P), Wisby (W), no definite locality (G).

Abacocrinus capelleri Angelin (F)*,
medius Angelin (F)*,
tessellatus Angelin (F)*,
tesseracontadactylus (Goldfuss) (G)* (W) (F) (*Actinocrinites*),

Actinocrinites major (Angelin) (Li)*,
quinquangularis (Angelin) (Li)*,
Angelinocrinus angustus (Angelin) (F)* (*Briarocrinus*),
Anisocrinus angelini W. & Sp. (G)*,

interradiatus Angelin (K)* (W),
irregularis Springer (G)*,
Anthemocrinus minor (Angelin) (F)* (*Eucrinus*),
venustus (Angelin) (G)* (*Eucrinus*),
Antihomocrinus tenuis (Bather) (B)* (*Homocrinus*),

Apiocystites angelini Haeckel (Lau)*,
Barrandeocrinus sceptrum Angelin (F)*,
Botryocrinus cucurbitaceus Angelin (B)* (*Sicyocrinus*),
ramosissimus Angelin (F)*,

Briarocrinus inflatus Angelin (F)*,
Calceocrinus gollandicus (Angelin) (F)* (*Chirocrinus*),
interpres Bather (K)*,
nitidus Bather (K)* (F) etc.,
pinnulatus Bather (K)* (Fa),
pugil Bather (F)*,
tenax Bather (F)*,
tucanus Bather (F)*,

Calliocrinus beyrichianus Angelin (Li)*,
costatus (Hisinger) (K)* (Li) (*Eugeniocrinites*),
diadema Angelin (Li)*,
koninckianus Angelin (W)*,
minor Angelin (W)*,
murchisonianus Angelin (W)*,
roemerianus Angelin (Fa)*,
sedgwickianus Angelin (W)*,

- Calpiocrinus fimbriatus* Angelin (W)*,
heterodactylus Angelin (G)*,
intermedius Springer (W)*,
ovatus Angelin (G)*,
rotundatus Springer (W)* (Bara)*,
- Carpocrinus affinis* Angelin (G)*,
annulatus (Angelin) (W)* (*Habrocrinus*),
cariosulus (Angelin) (F)* (*Habrocrinus*),
comtus (Angelin) (G)* (*Habrocrinus*),
decadactylus (Angelin) (F)* (*Habrocrinus*),
elegantulus (Angelin) (G)* (*Pionocrinus*),
fartus (Angelin) (F)* (*Pionocrinus*),
grandis (Angelin) (G)* (*Habrocrinus*),
granulatus (Angelin) (K)* (*Habrocrinus*),
laevis (Angelin) (K)* (*Habrocrinus*),
longimanus (Angelin) (F)* (*Habrocrinus*),
ornatissimus (Angelin) (F)* (*Habrocrinus*),
ornatus (Angelin) (F)* (*Habrocrinus*),
pinnulatus (Angelin) (F)* (*Habrocrinus*),
pulchellus (Angelin) (F)* (*Pionocrinus*),
raridigitatus (Angelin) (Eksta)*, (*Leptocrinus*),
robustus (Angelin) (F)* (*Habrocrinus*),
simplex (Phillips) (G) (*Actinocrinus*),
tenuis (Angelin) (F)* (*Habrocrinus*),
umbonatus (Angelin) (G)* (*Habrocrinus*),
- Cholocrinus obesus* (Angelin) (F)* (*Forbesiocrinus*),
Chytocrinus laevis (Angelin) (G)* (*Stelidiocrinus*),
Cleistocrinus humilis (Angelin) (G)* (*Calpiocrinus*),
Clidochirus pyrum Angelin (W)*,
- Clonocrinus corolliferus* (Hisinger) (K)* (*Cyathocrinus*),
gothlandicus Quenstedt (G)*,
grandis (Angelin) (K)* (*Corymbocrinus*),
grandistellatus (Angelin) (F)* (*Corymbocrinus*),
granulatus (Angelin) (W)* (*Polypeltes*),
klintbergi Jaekel (W)*,
laevis (Angelin) (G)* (*Corymbocrinus*),
panderi (Angelin) (F)* (*Corymbocrinus*),
polydactylus (Angelin) (F)* (W) (*Eucalyptocrinus*)
- Cordylocrinus comtus* Angelin (G)*,
- Crotalocrinites pulcher* (Hisinger) (K)* (Fa) (*Cyathocrinus*),
rugosus (Miller) (K) (*Cyathocrinites*),
superbus (Angelin) (K)*,
- Cyathocrinites acinotubus* (Angelin) (F)* (K) (W),
dianae (Bather) (Slite)*,
distensus (Angelin) (Fa)*,
glaber (Angelin) (F)*,
longimanus (Angelin) (F)*,
monilifer (Angelin) (W)* (Li),
muticus (Angelin) (F)*,
ramosus (Angelin) (F)* (W)*,
striolatus (Angelin) (W)*,
visbyensis (Bather) (W)* (Li),
- Cyliocrinus rigidus* (Angelin) (F)* (*Melocrinus*),
scolopendra (Bather) (F)* (*Herpetocrinus*),
- Desmidocrinus heterodactylus* Angelin (F)*,
macrodactylus Angelin (F)*,
pentadactylus Angelin (F)*,
tridactylus Angelin (F)*,
- Dimerocrinites interradians* (Angelin) (W)* (*Eucrinus*),
laevis (Angelin) (W)* (*Eucrinus*),
medius (Angelin) (W)* (*Actinocrinus*),
ornatus (Angelin) (W)* (*Eucrinus*),
quinquangularis (Angelin) (Li)* (*Eucrinus*),
speciosus (Angelin) (F)* (*Eucrinus*),

- Enallocrinus assulosus* Angelin (K)*,
scriptus (Hisinger) (K)* (W) (*Apiocrinites*),
Eucalyptocrinites decoratus (Angelin) (W)*,
elegantissimus (Angelin) (W)*,
excellentissimus (Angelin) (W)*,
granulatus (Lewis) (W) (*Hypanthocrinus*),
minor (Angelin) (W)* (*Hypanthocrinus*),
ovatus (Angelin) (F)*,
plebejus (Angelin) (W)*,
regularis (Hisinger) (Li)*,
rigens (Angelin) (F)*,
speciosus (Angelin) (Fa)*,
Euspirocrinus spiralis Angelin (F)* (W),
Eutaxocrinus oblongatus (Angelin) (Fa)* (*Taxocrinus*),
Gissocrinus campanula Bather (F)*,
elegans Angelin (F)*,
goniodactylus Phillips (K) (F),
incurvatus (Angelin) (F)* (*Cyathocrinus*),
macroductylus Angelin (F)*,
squamiferus (Salter) (G) (*Cyathocrinus*),
typus Bather (F)*,
umbilicatus Angelin (F)*,
verrucosus Bather (W)*,
Gnorimocrinus expansus (Angelin) (F)* (*Taxocrinus*),
punctatus (Angelin) (G)* (*Taxocrinus*),
Gomphocystites gotlandicus Angelin (Fa)*,
Gothocrinus gracilis Bather (Kättlevik and Wamlingbo)*,
Homalocrinus liljevalli Springer (W)*,
parabasalis Angelin (W)*,
peculiaris Springer (W)*,
Hormocrinus gotlandicus Springer (Alskag)*,
Ichthyocrinus gotlandicus W. & Sp. (Fa)* (Li),
intermedius Angelin (Fa)*,
pyriformis (Phillips) (W) (*Cyathocrinites*),
Lecanocrinus angulatus Springer (Dalheim)*,
billingsi Angelin (W)*,
facielatus (Angelin) (G)* (*Cyrtidocrinus*),
lindströmi Springer (Hoberg)*,
Lindstroemiocrinus gotlandicus (Pander) (G)* (B) (*Trochocrinites*),
Lithocrinus divaricatus (Angelin) (W)* (*Forbesiocrinus*),
milleri (Angelin) (G)* (*Forbesiocrinus*),
Loveniocrinus gotlandicus Jaekel (G)*,
Marsupioocrinus depressus Angelin (G)* (K?),
dubius Angelin (G)*,
pulcher Angelin (F)*,
radiatus Angelin (K)*,
rugulosus Angelin (F)*,
Melocrinites angustatus (Angelin) (G)*,
 (?) *granulatus* (Angelin) (W)*,
rigidus (Angelin) (F)*,
spectabilis (Angelin) (G)*,
volborthi (Angelin) (G)*,
Meristocrinus anceps Springer (W)*,
interbrachiatus (Angelin) (Fa)* (*Cyathocrinus*),
tuberosus Springer (W)*,
Myelodactylus ammonis (Bather) (Fa)* (*Herpetocrinus*),
ammonis alternicirrus Bather (F)*,
ammonis bijugicirrus Bather (F)*,
convolutus? Hall (Tofta),
flabellicirrus (Bather) (F)* (W)* (*Herpetocrinus*),
fletcheri Salter (F),
gracilis Angelin (W)*,
interradialis Angelin (P)*,
Patelliocrinus chiastodactylus Angelin (F)*,
duplicatus Angelin (G)*,
fulminatus Angelin (F)*,

- interradius* Angelin (G)*,
leptodactylus Angelin (G)*,
pachydactylus Angelin (F)*,
pinnulatus Angelin (Slite)*,
plumulosus Angelin (F)*,
punctuosus Angelin (G)*,
Periechocrinites annulatus (Angelin) (Li)*,
brevimanus (Angelin) (G)* (*Actinocrinus*),
geometricus (Angelin) (K)*,
grandiscutatus (Angelin) (G)*,
laevis (Angelin) (G)*,
lindströmi (W. & Sp.) (G)*,
longidigitatus (Angelin) (Näs)*,
longimanus (Angelin) (Fa)*,
multicostatus (Angelin) (B)*,
nubilus (Angelin) (G)*,
radiatus (Angelin) (G)*,
scanicus (Angelin) (K)*,
schultzeanus (Angelin) (G)* (*Actinocrinus*),
undulatus (Angelin) (G)*,
Petalocrinus angustus Bather (W)*,
expansus Bather (W)*,
visbyensis Bather (W)*,
Pisocrinus flagellifer Angelin (G)*,
gemmiformis? Miller (G),
ollula Angelin (K)*,
pilula de Koninck (P),
pocillum Angelin (G)* (Djupvik, etc.),
Protaxocrinus interbrachiatus Angelin (F)*,
ovalis Angelin (F)*,
salteri Angelin (F)*,
Pycnosaccus nodulosus Angelin (F)*,
scrobiculatus Hisinger (K)*,
Pyrgocystis cylindrica (Aurivilleus) (W)* (*Scalpellum*),
procera (Aurivilleus) (G)* (*Scalpellum*),
sulcata (Aurivilleus) (G)* (*Scalpellum*),
Sagenocrinus expansus Phillips (F),
Stelidiocrinus capitulum Angelin (Li)*,
laevis Angelin (F)*,
longimanus Angelin (F)*,
ovalis Angelin (F)*,
Streptocrinus crotalurus (Angelin) (F)* (*Ophiocrinus*),
Triacrinus gothlandicus Quenstedt (G)*

INDIA:

- Scyphocrinites asiaticus* (Reed) (Yemeye, Burma) (Nyaungbaw beds) (*Camarocrinus*)

RUSSIA:

- Cicerocrinus osiliensis* (Jaekel) (Ohesaar Pank., Oesel)* (*Lagarocrinus*),
Condylocrinus verrucosus Eichwald (Bogolovsk)* (Urals),
Eucalyptocrinites minor (Angelin) (Island of Oesel) (*Hypanthocrinus*)

SOUTH AMERICA:

- Bogotacrinus scheibei* Schmidt (North of Villavicencio, Colombia)*

SPAIN:

- Periechocrinites san-migueli* Astre (Prov. Burgos)* (Sil. or Dev.),
Scyphocrinites elegans Zenker (Eastern Pyrenees)

SWEDEN:

- Cicerocrinus scanicus* (Jaekel) (Klinta, Schonon)* (*Beyrichia* ls.) (*Lagarocrinus*)

WALES:

- Cicerocrinus anglicus* (Jaekel) (Ludlow ls., Priestleigh, Radnorshire) (*Lagarocrinus*),
Periechocrinites pulcher (Salter) (Wenlock ls., Llangollen)* (*Actinocrinus*),
radiatus Angelin (Wenlock ls., Llangollen)

DEVONIAN FAUNAS (NORTH AMERICA)

LOWER DEVONIAN

Helderbergian formations

KEYSER LS.: Keyser (K), West Virginia; Cumberland and vicinity (C), Maryland; Clarks Mills, near New Bloomfield (B), Pleasant Valley, west of Martin Mt., Bedford Co. (M), Frankstown (F), Pennsylvania.

- Clidochirus keyserensis* Springer (K)* (C),
Halysiocrinus keyserensis Springer (K)*,
Hapalocrinus devonicus Springer (K)*,
Jaekelocystis avellana Schuchert (K)*,
 hartleyi Schuchert (K)*,
 papillata Schuchert (K)*,
Lepocrinites manlius Schuchert (K)* (C),
Myelodactylus keyserensis Springer (K)*,
Protazocrinus virginianensis Springer (K)*,
Pseudocrinites abnormalis Schuchert (K)*,
 clarki Schuchert (K)*,
 claypolei Schuchert (B)* (K),
 gordoni Schuchert (K)*,
 elongatus Schuchert (M)*,
 perdewi Schuchert (K)*,
 stellatus Schuchert (K)*,
 subquadratus Schuchert (C)*,
Pycnosaccus tenuibrachiatus Springer (K)*,
Scyphocrinites stellatus (Hall) (K) (C) (*Camarocrinus*),
Sphaerocystites bloomfieldensis Schuchert (B)*,
 globularis Schuchert (K)* (C),
 globularis ovalis Schuchert (C)* (K),
 multifasciatus Hall (C)* (K),
Sphaerotoocrinus ornatus Goldring (F)*,
Tetracystis chrysalis Schuchert (K)*,
Trimerocystis peculiaris Schuchert (K)*

HARAGAN SH.: 1½ mi. s. Franks (F); 3 mi. n.e. Daugherty (D), Oklahoma.

- Scyphocrinites gibbosus* (Springer) (F)* (*Camarocrinus*),
 ulrichi (Schuchert) (D)* (F)* (*Camarocrinus*),
 ulrichi stellifer (Schuchert) (D)* (F) (*Camarocrinus*)

BE CRAFT LS.? ("Giles"): Hollybrook, Virginia.

- Aspidocrinus caroli* F. M. Swartz

BE CRAFT LS.: New York.

- Aspidocrinus scutelliformis* Hall (Becraft Mt., near Hudson),
Clonocrinus macropetalis (Hall) (Schoharie)* (Helderberg Mts.) (*Mariacrinus*)

COEYMAN'S LS.: Litchfield (Wheelocks Hill, Jerusalem Hill, and North Litchfield), Herkimer Co. (L); Schoharie (S), New York.

- Anomalocystites cornutus* Hall (L)*,
Cordylocrinus plumosus (Hall) (L)* (S) (*Platycrinus*),
 ramulosus (Hall) (L)* (*Platycrinus*),
Ctenocrinus mobilissimus (Hall) (L)* (*Mariacrinus*),
 pachydactylus (Conrad) (S)* (L) (*Astrocrinites*),
 paucidactylus (Hall) (L)* (*Mariacrinus*),
Dimerocrinites arborescens (Talbot) (L)* (*Thysanocrinus*),
Lasiocrinus scoparius (Hall) (L)* (S) (*Homocrinus*),
Lepocrinites gebhardi (Conrad) (L)* (S) (Massanutten Mt., Va.; Cumberland, Md.?) (*Lepadocrinus*),
Myelodactylus nodosarius (Hall) (S) (*Brachiocrinus*),
Scyphocrinites stellatus (Hall) (Manlius-Tentaculites ls.-Keyser ls.) (S)* (*Camarocrinus*)

NEW SCOTLAND LS.: Helderberg Mts. (H); Schoharie (S); Clarksville (C), New York. Nearpass quarry, Delaware Valley, N. J. (2 m. s. Tristates, N. Y.) (N).

- Aspidocrinus callosus* Hall (H)* (S),
 digitatus Hall (S)*,
 scutelliformis Hall (H)* (S),

- Clidochirus schucherti* (Talbot) (C)* (S) (*Ichthyocrinus*),
Coronocrinus polydactylus Hall (S)*,
Ctenocrinus stoloniferus (Hall) (S)* (H) (C),
Edriocrinus occidentalis Springer (Covington, Va.)*,
 pocilliformis Hall (H)* (Gala, Va.) (C) (S) (Cumberland, Md.);
 (Cherry Run, W. Va.),
Lecanocrinus magnaradialis (Weller) (N)* (*Ichthyocrinus*),
Marsupiocrinus tentaculatus (Hall) (S)* (*Platyocrinus*),
Myelodactylus nodosarius (Hall) (H)* (S)* (C) (*Brachiocrinus*)
- LINDEN GR.:** (Rockhouse sh.-R; Ross ls.-Ro; Birdsong sh.-B). Swaynes Mill, Benton Co. (B); Hardin Co. (H); Perry Co. (P), Tennessee.
Apiocystites anna Safford (Bath Springs)* (B) (Ro),
Codaster lorae Dunbar (Birdsong Cr.)* (B) (1½ mi. s. Aikens Mill, and 2½ mi. n.e. Parsons),
Edriocrinus adnascens Dunbar (Perryville)* (B); (Rockhouse)* (Ro),
 dispansus Kirk (B)*,
 explicatus Springer (P)* (B),
 occidentalis Springer (Stewart Co., Wells Creek Basin)*,
 pocilliformis Hall (Decatur Co.) (P) (B) (Ro) (R),
Ichthyocrinus devonicus Springer (B)* (Holladays) (B),
Myelodactylus schucherti Springer (N.E. of Holladays)* (B),
Phimocrinus americanus Springer (B)* (B),
Scyphocrinites clarkii (Hall) (H)* (*Camarocrinus*),
 mutabilis Springer (B)* (H)* (P)* (B) (Ro),
 pratteni (McChesney) (H)* (Calybeate Spring) (Ro), (*Forbesiocrinus*)
 pyburnensis Springer (Pyburn, H)* (B) (Ro),
 saffordi (Hall) (H)* (Ro) (*Camarocrinus*),
 spinifer (Springer) (Calybeate Spring) (H)* (Perryville) (Ro)
 (*Camarocrinus*),
Stereocrinus helderbergensis Springer (One mi. s.e. Holladays, (B))*
- BAILEY LS.:** Southeastern Missouri.
Alsopocrinus anna Tansey (Little Saline Creek area, Ste. Genevieve Co.)*,
Caryocrinites elongatus (Rowley) (Red Rock Landing, Perry Co.)* (*Stribalocystites*),
Edriocrinus pocilliformis Hall (Baileys Landing, Perry Co.)*,
 sacculus? Hall (Little Saline ls., Ste. Genevieve Co.),
Melocrinites wittenbergensis (Rowley) (Near Wittenberg, Perry Co.)*,
Scyphocrinites elegans (Zenker) (3 mi. n. Bainbridge)*,
Troosticrinus dubius Rowley (Near Wittenberg, Perry Co.)*
- Oriskanian formations
- RIDGELEY SS.:** Cumberland (C), Opposite Keyser, W. Va. (K), Maryland; Berkeley Springs (B), Cacapon Bridge (Ca), Near Franklin, etc. (F), West Virginia.
Anomalocystites disparilis Hall (C)*
Dimerocrinites eugenius (Ohern) (C)* (*Thysanocrinus*)
Edriocrinus holopoides Springer (C)*,
 sacculus Hall (C)* (F),
Halysiocrinus marylandicus (Ohern) (K)* (*Calceocrinus*),
Homocrinus harileyi Ohern (C)*,
 proboscidalis Hall (C)*
Macrostylocrinus recumbens Springer (C)*
Technocrinus andrewsi (Hall) (C)* (B) (*Mariacrinus*)
 ? *lepidus* Ohern (B)* (Ca)
 sculptus (Hall) (C)* (*Mariacrinus*)
 spinulosus (Hall) (C)* (*Mariacrinus*)
 striatus (Hall) (C)* (*Mariacrinus*)
- GLENERIE LS.:** Glenerie (H); Becraft Mtn. near Hudson (B), New York.
Ancyrocrinus quinquepartitus Goldring (G)*,
Edriocrinus becraftensis Clarke (B)*,
 sacculus Hall (G)

MOOSE RIVER SS.: (Glacial boulder), Caratunk, Maine.

Rhodocrinites nortoni Goldring*

MIDDLE DEVONIAN

Ulsterian formations

ONONDAGA LIMESTONE: New York and Ontario, Canada. Lime Rock (Li) and LeRoy (L), Genesee Co., Cherry Valley, Otsego Co. (C), Lima, Livingston Co. (La), Stafford (S), Williamsville, Erie Co. (W), New York; Ontario: as indicated.

- Acanthocrinus onondaga* Goldring (Li)*,
Arachnocrinus bulbosus (Hall) (L)* (Li) (S) (Ontario) (*Cyathocrinus*),
extensus W. & Sp. (Li) (L),
ignotus Stauffer (L) (S) (3½ mi. e. Port Dover, Ont.)*,
knappi ? W. & Sp. (S),
Aspidocrinus onondagensis Goldring (Li)*,
Codaster corrugatus Reimann (W)*,
pyramidatus Shumard (S.W. Ont.),
Comanthocrinus priscus Springer (L),
Craterocrinus ruedemanni Goldring (C)*,
schohariae Goldring (W)*,
Dolatocrinus lobatus Springer (C)*,
marshi glaber Goldring (C)*,
ornatus Meek (C) (L),
speciosus (Hall) (Schoharie Co.)* (C) (*Cacabocrinus*),
Edriocrinus pyriformis Hall (south of Utica, N. Y.)* (W),
Halysiocrinus secundus (Hall) (La)* (*Calceocrinus*),
Hexacrinites leai (Lyon) (L) (*Platycrinites*),
Mictocrinus robustus Goldring (Clarence, near Buffalo)*,
Myrtillocrinus americanus Hall (Caledonia)* (L),
?levis (Wood) (L)* (*Tripleurocrinus*),
Nucleocrinus verneuili (Troost) (Li) (L) (*Pentremites*),
Schultzicrinus (?) *elongatus* Springer (L)* (La),
typus Springer (L)* (La) (Li),
Symbathocrinus sulcatus Goldring (Li)*

JEFFERSONVILLE LS.: (Onondaga) Falls of the Ohio and vicinity (Jeffersonville, Ind., Louisville and Jefferson Co., Ky.) (F), Clark Co. (CC), Indiana.

- Arachnocrinus extensus* W. & Sp. (F)*,
knappi W. & Sp. (F)*,
Centriocrinus pentaspinus (Lyon) (F)* (*Actinocrinus*),
Codaster alternatus elongatus Wachsmuth (F)*,
americanus Shumard (F)*,
pyramidatus Shumard (F)*,
Comanthocrinus priscus Springer (F)*,
Corynecrinus romingeri Kirk (CC)*,
Cyathocrinites rarus (Lyon) (F)* (CC),
Dolatocrinus exstans Springer (F)*,
grandis M. & G. (F)* (CC),
insuetus Rowley (F)*,
lacus Lyon (F)* (CC),
lamellosus (Hall) (F)* (*Cacabocrinus*),
major W. & Sp. (F)*,
marshi Lyon (F)* (CC) (Marion Co., Ky.),
multibrachiatus Rowley (F)*,
ornatus Meek (F),
pyramidatus Springer (F)*
rotundus Springer (F)*,
spinus M. & G. (F)*,
Hadrocrinus discus Lyon (F)*,
pentagonus Lyon (F)*,
Hexacrinites leai (Lyon) (F)* (*Platycrinus*),
Himerocrinus plenissimus (Lyon) (F)* (CC) (*Hadrocrinus*),
Megistocrinus knappi Lyon (CC)* (F),
oppelli Rowley (F)*,
spinosulus Lyon (F)* (CC),

- Nucleocrinus conradi* Hall (F)*,
cucullatus Rowley (F)*,
globosus (Troost) (F)* (?Bedford Co., Tenn.) (*Olivanites*),
verneuili (Troost) (F)* (CC) (*Pentremites*),
verneuili inflatus Rowley (F)*,
verneuili pomum (E. & C.) (F)* (CC) (*Elaeocrinus*),
verneuili sulcatus Rowley (F)*
Pageocrinus gracilis Kirk (Near St. Paul, Ind.)*,
Platycrinites devonicus (Rowley) (F)*,
Poteroocrinities cylindricus (Lyon) (F)*,
davisanus (S. A. Miller) (Deputy, Ind.)* (?Sellersburg ls.),
nettelrothanus (S. A. Miller) (Deputy, Ind.)* (?Sellersburg ls.),
simplex (Lyon) (F)*,
Stereocrinus? dilatatus Rowley (F)*,
Synbathocrinus onondaga Springer (F)*,
Vasocrinus turbinatus Kirk (F)*,
valens Lyon (F)*

COLUMBUS LS. (*Onondaga*): Columbus (C) and Dublin (D), Ohio.

- Codaster alternatus?* Lyon (C),
pyramidatus Shumard (C),
Dolatocrinus glyptus? Hall (D),
lacus Lyon (C) (D),
major W. & Sp. (C),
ornatus Meek (C)*,
Megistocrinus depressus? Hall (C)*,
rugosus? L. & C. (C),
spinosulus Lyon (C),
Nucleocrinus venustus? M. & G. (C),
verneuili (Troost) (C) (*Pentremites*)
verneuili pomum (E. & C.) (C) (*Elaeocrinus*)

GRAND TOWER LS. (*Onondaga*): Southeastern Missouri.

- Nucleocrinus verneuili* (Troost) (*Pentremites*)

SCHOHARIE GRIT: Pine Hill, near Highland Hills, New York.

- Lasiocrinus? schohariensis* Goldring*

Erian formations

HAMILTON (*Sellersburg ls.—Beechwood member*): Falls of the Ohio at Jeffersonville, Ind., and Louisville, Ky. (F), Clark County, (CC), Charlestown, (Ch) and Speeds, Ind. (S), Lebanon, Ky. (L).

- Ancyrocrinus bulbosus* Hall (CC) (Ch),
spinosus Hall (F)*,
Aorocrinus casedayi (Lyon) (F)* (CC) (*Actinocrinus*),
casedayi charlestownensis Rowley (Ch)*,
clarkensis Springer (CC)*,
depressus Rowley (Ch)*,
puteatus Rowley (S)* (CC),
Botryocrinus americanus Rowley (Ch)*,
Codaster alternatus Lyon (F)*,
alternatus robustus Rowley (CC)*,
Comanthocrinus indianensis (M. & G.) (Ch)* (CC) (*Stereocrinus*),
Devonoblastus leda magna Rowley (Ch)*,
Dimerocrinities halli (Lyon) (F)* (*Rhodocrinus*),
nodulosus (Hall) (F) (*Rhodocrinus*),
spiniferus (Springer) (Ch)*,
Dolatocrinus amplus M. & G. (Ch)* (S) (CC) (F),
argutus M. & G. (Ch)* (CC),
asperatus M. & G. (Ch)* (CC) (F),
bellarugosus M. & G. (Ch)* (CC),
bellulus M. & G. (Ch)* (CC) (S) (F),
bulbaceus M. & G. (Ch)* (CC) (S) (F),
corporosus M. & G. (Ch)* (CC) (S) (F),
depressus S. A. Miller (Ch)*,

- exornatus* M. & G. (Ch)*,
fungiferus Rowley (F)* (CC),
glyptus Hall (F),
grandis? M. & G. (F) (CC),
greenei M. & G. (CC) (Ch)* (F)*,
indianensis M. & G. (Ch)*,
lineolatus M. & G. (Ch)* (CC) (F),
liratus Hall (L),
magnificus M. & G. (F)*,
nodosus M. & G. (Ch)* (CC) (S),
spinosus? M. & G. (Ch) (F),
stellifer M. & G. (CC)* (F) (Ch) (L),
triadactylus? Barris (F),
venustus M. & G. (Ch)*,
Eleutherocrinus casedayi Y. & S. (F)* (CC),
Gennaeocrinus carinatus Wood (Ch)* (F),
comptus Rowley (Ch)*,
comptus spiniferus Rowley (Ch)*,
eucharis (Hall) (F) (*Actinocrinus*),
facetus Rowley (Ch)*,
kentuckiensis (Shumard) (F)* (Ch) (CC) (L) (S) (*Actinocrinus*),
nyssa (Hall) (CC) (*Actinocrinus*),
sculptus Rowley (Ch)*,
simulans Rowley (Ch)*,
Gilbertsocrinus greenei M. & G. (Ch)*,
spinigerus (Hall) (CC) (S) (*Trematocrinus*)
Halysiocrinus carinatus Springer (CC)*,
Megistocrinus abnormis (Lyon) (F)* (CC) (Ch) (S) (Marion Co., Ky.) (*Actino-*
crinus),
circulus Rowley (Ch)* (CC),
corniger Rowley (Ch)*,
depressus Hall (L) (F) (CC),
expansus M. & G. (F)* (CC) (S),
expansus inflatus Rowley (Ch)*,
expansus magniventris Rowley (Ch)*,
hemisphericus M. & G. (CC)*,
indianensis M. & G. (Ch)* (CC) (S) (L),
ornatus M. & G. (CC)* (S),
rugosus L. & C. (F)* (CC) (S),
rugosus spinuliferus Rowley (Ch)*,
unicornis Rowley (Ch)*,
Nucleocrinus angularis (Lyon) (F)* (CC) (Ch) (*Olivanites*),
elegans Conrad (CC) (F),
greenei M. & G. (F)* (Ch) (CC),
imitator Rowley (Ch)*,
lucina Hall (CC),
stichteri Rowley (Ch)*,
venustus M. & G. (F)* (L) (S),
Pentremitidea ? approximata Rowley (Ch)*,
Pentremitidea cummingsi kentuckiensis Reimann (F)*,
Pentremitidea? dubia Rowley (Ch)*,
Poteriocriniles leviculus (Lyon) (F)* (*Cyathocrinus*),
wortheni (Lyon) (F)* (*Cyathocrinus*),
Thamnocrinus devonicus (Springer) (Ch)* (*Dorycrinus*),
Vasocrinus sculptus Lyon (Jefferson Co., Ky.)*
- HAMILTON (*Marcellus shale*): Near Manlius, Onondaga Co., New York.
Haplocrinites clio (Hall)* (Cherry Valley ls.)
- HAMILTON (*Skaneateles shale*: Berwyn member—B; Chenango member—C): West Edmeston, Unadilla Valley (W); Hamilton (H); East side Owasco Lake, Cayuga Co. (E), New York.
Agelacrinites hamiltonensis Vanuxem (H)* (C),
Botryocrinus concinnus Goldring (E)*,
Charientocrinus cooperi Goldring (H)* (C),

- Gilbertocrinus intersculptus* Goldring (W)* (B),
Melocrinites ornatus (Goldring) (W)* (B),
Poteroicrinites? dignatus (Goldring) (E)*,
?colgatensis Goldring (H)* (C)
- HAMILTON: (Ludlowville sh.—L; Wanakah sh.—W; Tichenor ls.—T; Centerfield ls.—C; Levanna sh.—Le; Deep Run member—D): Alden, Erie Co. (A), Athol Spring (At), Bay View, Erie Co. (B), Canandaigua Lake (Can), Cazenovia (Caz), Eighteen Mile Creek (18), Hamburg (Ham), Hamilton (H), Ontario Co. (Ont.), Ludlowville (Lud), Western New York (NY), all in New York.
- Acanthocrinus spinosus* (Hall) (B) (W) (*Rhodocrinus*),
Ancyrocrinus bulbosus Hall (18) (L); (B) (W) (Elma),
Arthroacantha eboracea Hall (Can) (C),
punctobrachiata Hall (NY) (L),
Botryocrinus crassus (Whiteaves) (Highland Acres, Erie Co. (W) (*Homocrinus*)
reimanni Goldring (B)* (W),
Codaster canadensis Billings (NY) (D),
curtus Reimann (18)* (T),
Corocrinus ornatus Goldring (Fall Brook, near Geneseo)* (L),
Cyttarocrinus eriensis (Hall) (Ham) (T) (*Platyocrinus*),
Deltaocrinus clarus? (Hall) (Ont.)* (Caz) (T, W) (*Cheirocrinus*),
Devonoblastus calyce (Hall) (NY)* (T) (*Pentremites*),
leda (Hall) (NY)* (T, C) (*Pentremites*),
maia (Hall) (Moscow)* (*Pentremites*)
Dolatocrinus glyptus Hall (Caz) (Can) (T),
liratus Hall (Can) (D),
springeri Goldring (Near East Bethany)* (C),
Eleutherocrinus whitfieldi Hall (NY)* (C?),
Eutaxocrinus whiteaves? Springer (Spring Brook) (W),
Genmaecocrinus carinatus Wood (At) (W),
decorus Goldring (Worcester, Otsego Co.)*,
eucharis (Hall) (A) (18) (Spring Brook) (T) (*Actinocrinus*),
nyssa (Hall) (18) (W) (*Actinocrinus*),
similis Goldring (Near Spring Brook, Erie Co.) (W),
Gilbertocrinus alpenensis? Ehlers (Lebanon, N. Y.) (L),
greenei M. & G. (B) (W),
spinigerus (Hall) (Erie Co.) (At) (B) (W) (*Trematocrinus*),
spinodosus Goldring (18)* (T),
Hypsoocrinus fieldi Springer and Slocum (Near East Bethany)* (C),
Megistocrinus depressus Hall (Ham) (A) (18) (W); (Caz) (T),
ontario Hall (Bullis Bridge) (Can) (T),
Melocrinites breviradiatus Hall (18)* (W),
nodosus Hall (NY),
Nucleocrinus elegans Conrad (Belfast) (W),
lucina Hall (3 mi. e. East Alexander) (C),
powelli Reimann (Cazenovia Creek, Springbook, Erie Co.)* (T),
priebei Reimann (3 mi. e. East Alexander)* (C) (Cazenovia Creek)
(W),
verneuili eriensis Reimann (Spring Brook, Erie Co.)* (T),
Pentremitidea goldringae Reimann (B)* (T) (W),
goldringae juvenis Reimann (B)* (Caz. Cr.) (W),
goldringae lata Reimann (B)* (Caz. Cr.)* (At)* (W),
goldringae obesa Reimann (Smokes Creek, Windom)* (W),
lycorias (Hall) (NY)* (?T) (Darlen, ?Moscow) (*Pentremites*),
Perissocrinus papillatus Goldring (Aurora)* (C)
Rhodocrinites insculptus (Goldring) (2 mi. e. Alden, Genesee Co.)* (T),
Synaptocrinus nuntius (Hall) (18) (W) (*Forbestocrinus*),
Taxocrinus lobatus Hall (Bristol)* (D); (At) (B) (W)
- HAMILTON (Moscow shale in general—M; Kashong member—K; Windom sh. member—W): West shore Canandaigua Lake (Menteth's Point), and near Canandaigua, Ontario Co. (CL), Kashong (Cashong) Creek, near Bellona (KC), Bellona, Yates Co. (B), Eighteen Mile Creek (18), East Bethany (EB), York (Y), Livingston Co. (L), Moscow (Mo), Bristol (Br) and Vincent (V), Ontario Co., Alden, Genesee Co. (A), Alden (West Alden), Erie Co. (Al), Darlen (11 Mile Creek, etc.) (D), Geneseo (Jay Cox Run) (G), Bowen Creek, Genesee Co. (Bo), New York.

- Acacocrinus pentadactylus* (Grabau) (18)* (M) (*Habrocrinus*),
Acanthocrinus spinosus Hall (V)* (CL) (M),
Ancyrocrinus bulbosus Hall (Lake Erie)* (CL) (18) (KC) (B) (M),
Aorocrinus armatus Goldring (KC)* (M),
 cauliculus Hall (V)* (CL) (M),
 formosus Goldring (KC)* (M),
 longidactylus Goldring (3 mi. w. Dundee)* (M),
 praecursor Hall (CL)* (M),
Arthroacantha eboracea (Hall) (Y)* (Mo) (CL) (M) (*Platycrinus*),
 ihacensis? Williams (Georgetown) (M),
Botryocrinus nycteus (Hall) (V)* (KC) (M) (*Poteriocrinus*),
 obconicus Goldring (CL)* (M),
 sentosus Goldring (KC)* (M),
Clarkeocrinus troosti (Hall) (V)* (CL) (Br) (M) (*Cacabocrinus*),
Comanthocrinus indianensis (M. & G.) (CL) (KC) (M) (*Stereocrinus*),
Corocrinus? calypso Hall (G)* (M),
Cyathocrinites jewetti (Hall) (Mo) (Al) (M),
Cyttarocrinus jewetti Goldring (Bloomfield)* (2 mi. s. West Alden)* (M),
Decadocrinus multinodosus Goldring (KC)* (M),
 multinodosus serratobrachiatus Goldring (KC)* (M),
 neruus (Hall) (V)* (Br) (M) (*Poteriocrinus*),
Deltacrinus clarus Hall (CL)* (M),
Devonoblastus calyce (Hall) (EB) (K) (W) (*Pentremites*),
 leda (Hall) (EB) (K) (*Pentremites*),
Dimerocrinites whitfieldi (Goldring) (G)* (M),
Dolatocrinus glyptus (Hall) (Pavilion)* (CL) (Y) (M) (*Cacabocrinus*),
 glyptus intermedius Hall (Y)* (M),
 insignis Goldring (B)* (CL) (Al) (M),
 liratus Hall (KC)* (CL) (L) (B) (D) (G) (M),
 liratus parvulus Goldring (CL)* (M),
Eleutheroocrinus whitfieldi Hall (Muttonville)* (KC) (V) (L) (K),
Gennaeocrinus carinatus Wood (CL) (M),
 carinatus crassicosatus Goldring (KC)* (M),
 eucharis (Hall) (V)* (CL) (KC) (B) etc. (M) (*Actinocrinus*),
 kentuckiensis (Shumard) (CL) (M) (*Actinocrinus*),
 nyssa (Hall) (Fall Brook)* (KC) (B) (V)* (M) (*Actinocrinus*),
 peculiaris Goldring (Mo)* (M),
 similis Goldring (2 mi. s.e. Al)* (M),
Gilbertsocrinus multicalcaratus Goldring (EB)* (Mo) (K),
 rarispinus Goldring (Georgetown)* (M),
 spinigerus (Hall) (V)* (M) (*Trematocrinus*),
Logocrinus geniculatus Goldring (KC)* (CL) (M); (Georgetown) (W),
Megistocrinus depressus Hall (CL)* (18) (KC) (L) (V) (B) (M) (K) (W),
 ontario (Hall) (Dresden)* (KC) (CL) (M) (*Actinocrinus*),
Melocrinites breviradiatus (Hall) (18)* (M),
 gracilis (W. & Sp.) (CL)* (EB) (M),
 powelli (Goldring) (KC)* (Bo) (M),
Nucleocrinus elegans Conrad (M)* (KC) (M),
 lucina Hall (L)* (D) (B) (Y) (18) (K),
 powelli Reimann (Y) (Al) (KC) (K),
 powelli glaber Reimann (18)* (D) (K) (W),
Pentremitidea whitei (Hall) (V)* (M) (*Pentremites*),
Poteriocrinites diffusus (Hall) (V)* (M),
 ?dignatus (Goldring) (New Berlin) (M),
 kopi (Goldring) (D)* (EB)* (M) (K),
 nassa (Hall) (CL)* (M),
Rhodocrinites nodulosus (Hall) (CL)* (KC) (B) (Br) (M),
 nodulosus pernodosus Goldring (CL)* (M),
Saccocrinus? hamiltonensis Goldring (B)* (M),
Stylocrinus? canandaigua Goldring (CL)* (M),
Synaptocrinus nummius (Hall) (Hamburg, Erie Co.)* (B) (Al) (M) (*Forbesio-*
 crinus),
Synbathocrinus hamiltonensis Springer (KC)* (M),
Taxocrinus lobatus (Hall) (Br)* (CL) (M),

Thamnocrinus springeri Goldring (KC)* (M),
Thylacocrinus clarkei W. & Sp. (CL)* (V) (Bethany) (M),
gracilis (Hall) (Br)* (M) (*Rhodocrinus*)

HAMILTON (*Traverse group*): Thunder Bay ls. (TB); Norway Point fm. (NP); Alpena ls. (Alp); Ferron Point fm. (FP). Alpena (A), Portland Cement Co. Quarry, Alpena Co. (C), Partridge Point, on Thunder Bay, 4 mi. s. Alpena (P), 4-Mile Dam, 4 mi. w. Alpena (4), 7-Mile Dam, 7 mi. w. Alpena, Thunder Bay River (now under water) (7), Stony Point on Thunder Bay, just s. of Alpena (S), Petoskey (Pe), Michigan.

Aorocrinus casedayi (Lyon) (P) (TB) (*Actinocrinus*),
Codaster alatus Reimann (S)* (A) (NP),
gracile (Wachsmuth) (P) (TB) (*Heteroschisma*),
Dactylocrinus alpena Springer (P)* (TB),
Dolaticrinus amplus? M. & G. (4) (Alp),
asterias Wood (A)* (P) (TB) (Alp),
costatus Wood (A)* (4) (Alp) (NP),
incisus Springer (A)* (Alp),
triadactylus Barris (P)* (TB),
venustus M. & G. (A) (4) (Alp),
Euryocrinus barrisi Springer (P)* (TB),
Gemmaocrinus goldringae Ehlers (4)* (Alp),
Gilbertocrinus alpenensis Ehlers (4)* (Alp),
Halysiocrinus barrisi? (Worthen) (4) (Alp) (*Calceocrinus*),
carinatus Springer (4)* (Alp),
Hemicystites devonicus Bassler (C)* (FP),
Lepidodiscus alpenensis Bassler (C)* (FP),
Lipsanocystis traversensis Ehlers & Leighly (P)* (TB),
Megistocrinus concavus Wachsmuth (P)* (TB),
expansus M. & G. (A) (Alp)
latus Hall (Pe) (Alp)
multidecoratus Barris (P)* (TB)
nodosus Barris (P) (TB)
novus Wood (P)* (TB),
regularis Wood (A)* (Alp),
rugosus L. & C. (4) (Alp),
sphaeratis Wood (A)* (Alp),
tuberatus Wood (P)* (TB),
Nucleocrinus elegans? Conrad (P) (TB),
meloniformis (Barris) (P) (TB) (*Elaeocrinus*),
obovatus (Barris) (P) (TB) (*Elaeocrinus*),
Pentremitidea americana Barris (P)* (TB),
clavatiformis Reimann (7)* (NP),
filosa Whiteaves (7) (NP),
milwaukensensis Weller (P) (TB),
Stereocrinus barrisi W. & Sp. (P)* (TB),
triangulatus Barris (P) (TB),
triangulatus liratus Barris (P) (TB),
Synbathocrinus matutinus Hall (P) (TB)

SILICA SHALE: 2½ miles southwest of Sylvania, Ohio.

Arthroacantha carpenteri (Hinde) (*Hystricrinus*),
Euryocrinus laddii Stewart*,
Gilbertocrinus ohioensis Stewart*,
Hexacrinites leai (Lyon) (*Platycrinus*),
Melocrinites onodaga (Springer)*,

HAMILTON: Arkona beds (A); Widder beds (W); Ipperwash ls. (I): Arkona (Ar), Bartletts Mill (B), Marsh's Mill, 2½ mi. e. of Arkona (M), Thedford (T), Widder (W), Ontario, Canada.

Agelacrinites southworthi Bassler (M)* (A),
Ancyrocrinus bulbosus Hall (T) (I),
Arthroacantha carpenteri (Hinde) (Ar)* (M) (T) (B) (A) (*Hystricrinus*),
punctobrachiatus (Williams) (B) (T) (A) (*Platycrinus?*),
Botryocrinus crassus (Whiteaves) (T) (*Homocrinus*),
reimanni Goldring (Ar) (A),

- Codaster canadensis* Billings (T) (W),
hindei E. & C. (Ar)*,
Corocrinus calypso (Hall) (T) (M) (A) (*Actinocrinus*),
Devonoblastus whiteavesi Reimann (T)* (W),
Dolatocrinus bulbaceus M. & G. (M) (W),
canadensis Whiteaves (T)* (M) (W),
lineolatus M. & G. (T) (W),
triadactylus Barris (Ar) (W),
Eutaxocrinus whiteavesi Springer (T)* (W),
Eleutheroocrinus casedayi? Y. & S. (T) (W),
Gennaeocrinus arkonensis Whiteaves (B)* (A),
mourantiae Goldring (Ar)* (A),
Gilbertocrinus spinigerus Hall (T) (W),
Megistocrinus depressus? Hall (M) (W),
rugosus L. & C. (T) (W),
Nucleocrinus canadensis Montgomery (Wi)* (W),
elegans Conrad (M) (W),
Pentremitidea cummingsi Reimann (T)* (?W),
filosa Whiteaves (T)* (Ar) (W),
southworthi Reimann (T)* (A),
Poteriocriniles? arkonensis (Goldring) (M)* (A)
- ST. LAURENT LS.: Jackson Co., Illinois.
Eutaxocrinus gracilis (M. & W.) (*Taxocrinus*)
- MINEOLA LS.: Ralls Co., etc. (R); 4 mi. s. Montgomery City (M), Missouri.
Megistocrinus broadheadi Branson and Wilson (M)*,
mineolaensis B. & W. (R)*,
missouriensis B. & W. (M)*,
Nucleocrinus verneuili (Troost) (Central Mo.) (*Pentremites*),
Stereocrinus moori B. & W. (R)*,
springeri B. & W. (Near Spalding, Ralls Co.)*,
vandiveri B. & W. (R)*,
- SNYDER CREEK SH.: Snyder Creek, Callaway Co., Missouri.
Dactylocrinus concavus Rowley*,
Melocrinites gregeri Rowley*,
lylii Rowley*,
tersus Rowley*
- KENNETT FM.: Kearsarge, California.
Gomphocystites? californicus Stauffer*,
Strobilocystites?? kearsargensis Stauffer*
- MILWAUKEE FM.—*Lindwurm* member: Milwaukee, Wisconsin.
Melocrinites milwaukensis (Weller)*,
milwaukensis rotundus (Weller)*,
nodosus (Hall)*,
nodosus spinosus (Weller)*,
pentangularis (Cleland)*,
subglobosus (Weller)*,
Pentremitidea filosa Whiteaves,
milwaukensis Weller*,
Taxocrinus telleri Springer*

UPPER DEVONIAN

- TULLY LIMESTONE (*West Brook* member): 3 mi. s. Sherburne, New York.
Aorocrinus formosus Goldring,
Arthroacantha cooperi Goldring*,
similis Goldring*,
Cyttarocrinus eriensis? (Hall) (*Platycrinus*),
Dolatocrinus liratus Hall,
Gennaeocrinus kentuckiensis (Shumard) (*Actinocrinus*),
percarinatus Goldring*,
Halysiocrinus secundus (Hall) (*Calceocrinus*),
Megistocrinus depressus Hall,

- Nucleocrinus elegans* Conrad,
Parisocrinus? pociliformis Goldring*,
Synbathocrinus expansus Goldring*
- GENESEE GROUP: West River shale, New York (W), Huron shale, Ohio (H).
Decadocrinus insolens Goldring (Bristol, N. Y.)* (W),
Melocrinites bainbridgensis (H. & W.) (Bainbridge, Ross Co. Ohio)* (H),
clarkei (Williams) (Bells Gully, Canandaigua Lake, N. Y.)* (W)
- PORTAGE GROUP: Grimes ss. (G); Gardeau flags (F); Laona ss. (L) Deyo Basin, 2 miles south of Naples, New York.
Anamesocrinus lutheri Goldring (Laona)* (L),
Arthroacantha granosa Goldring* (G),
Corematocrinus plumosus Goldring (F),
Decadocrinus killawogensis Goldring* (G),
Glossocrinus naplesensis Goldring (G),
Hallocrinus ornatissimus (Hall) (Portland* and Mt. Morris, N. Y.) (*Cyathocrinus*),
Maragnicrinus portlandensis Whitfield (Portland, N. Y.)*,
Melocrinites clarkei (Williams) (Cashaqua shale, North Evans, 19 Mile Creek and Naples; Angola shale, near Angola, N. Y.)
- PORTAGE GROUP: Sherburne flagstone (S); Ithaca beds (I); West Hill flags (W). Italy Hollow, near Naples (Na), Ithaca (It), etc., New York.
Arthroacantha ithacensis Williams (It)* (I),
Charientocrinus ithacensis Goldring (It)* (I),
Cradeocrinus pergracilis Goldring (East of S. Otselic)* (I),
Decadocrinus decemnodus Goldring (3 mi. w. Morris)* (I),
killawogensis Goldring (1 mi. w. Killawog)* (I),
rugistriatus Goldring (Na) (W),
Eutaxocrinus curtus (Williams) (It)* (I) (?Chemung) (*Taxocrinus*),
dumosus Goldring (DeRuyters)* (It) (I),
ithacensis (Williams) (It)* (I); (East of Otselic and Montour Falls) (S) (*Taxocrinus*),
ithacensis alpha (Williams) (It)* (Avoca) (I) (*Taxocrinus*),
Glossocrinus cornellianus (Williams) (It)* (I) (*Poteriocrinus*),
naplesensis Goldring (Naples)* (W),
Melocrinites naplesensis (Goldring) (Na)* (W),
reticularis (Olsson) (IT)* (I),
willetensis perstriatus? (Goldring) (Greene, Chenango Co.) (I),
williamsi (Olsson) (Near Cortland)* (I),
Poteriocrinites zethus (Williams) (It)* (I),
Trichotocrinus harrisi Olsson (It)* (I),
lutheri Goldring (Na)* (W)
- CHEMUNG FM.: Lower (L); Upper (U). Alfred Station, Allegany Co. (Alfred shale) (A), Ithaca (I) Chemung Narrows, Chemung Co. (C), Avoca and 1 mi. north (Av), Steuben Co. (S), New York; Between Center City and Kinzua (CC), Warren Co. (Wa), Tioga Co. (Ti), Erie (E), Pennsylvania.
Anamesocrinus lutheri Goldring (A) (Genesee Co.) (L),
Aorocrinus multicostatus Goldring (CC) (Wa),
Arthroacantha depressa W. & Sp. (S)* (Prattsburg ss) (L),
granosa Goldring (S) (L),
splendens Goldring (4 mi. n. Bath)* (L),
Catactocrinus leptodactylus Goldring (Av)* (L),
Cooperidiscus alleganius (Clarke) (T)* (A) (Belvidere, N. Y.) (*Lepidodiscus*),
Corematocrinus plumosus Goldring (C)* (L),
Cradeocrinus elongatus Goldring (Av)* (L),
Decadocrinus gregarius (Williams) (I)* (L),
Eutaxocrinus alfredi Goldring (A)*,
amplus Springer (Binghampton, N. Y.)* (U),
curtus (Williams) (I)* (Av) (L) (*Taxocrinus*),
elleri Goldring (A)*,
pulcher Springer (Belmont, N. Y.)* (A) (L)
tenuiramosus Goldring (A)*,
Glossocrinus cornellianus (Williams) (I)* (L) (*Poteriocrinus*),
naplesensis Goldring (C) (L),

- Iteacrinus flagellum* Goldring (Av)* (L),
robustus Goldring (S)* (L),
Liparocrinus batheri Goldring (Brown Hill, Cohocton, N. Y.)*,
halli Goldring (Near Tracy Creek, Broome Co., N. Y.)*,
Logocrinus infundibuliformis Goldring (C)* (L).
Melocrinities splendens (Goldring) (Binghampton, N. Y.)* (U),
willettensis (Goldring) (Near Willet, N. Y.)* (L),
willettensis perstriatus (Goldring) (Willet, N. Y.)* (L),
Poteriocrinities clarkii (Williams) (Haskinsville, N. Y.)* (E) (U),
clarkii alpha (Williams) (I)* (L); (E) (U),
Pterinocrinus quinquenodus Goldring (C)* (L),
Xenocystites carteri Bassler (Cattaraugus Creek, Versailles, N. Y.)* (Hanover sh.)

INDEPENDENCE SH.: Near Brandon, Iowa.

- Arthroacantha mamelonifera* (Thomas)* (*Arthracantha*),
Cladochirus? maximus Thomas*

CEDAR VALLEY LS. (Littleton member—L; Upper Davenport beds at base—UD): Near Brandon (Br), Buffalo (New Buffalo) (B), Davenport (D), Iowa City and 2 mi. n. (I), Linwood (Li), Palo and 2 mi. w. (P), Solon and 1½ m. w. (S), Waterloo (W), Iowa.

- Agelacrinites fentonae* Stainbrook (Br)* (L),
Botryocrinus thomasi Laudon (Li)* (I) (L),
Codaster subtruncatus Hall (B)*,
Decadocrinus crassidactylus Laudon (Rapid Creek, Johnson Co.)* (L),
pachydactylus Laudon (Br)* (L),
spinulifer Laudon (Li)* (L),
vintonensis Thomas (near Vinton)* (exact horizon doubtful),
Euryocrinus barrisi Springer (B),
Eutaxocrinus gracilis (M. & W.) (B)* (L) (*Taxocrinus*),
Halysiocrinus barrisi (Worthen) (D)* (UD) (*Calceocrinus*),
carinatus Springer (B)*,
elephantinus Laudon (Johnson Co.)* (L),
Hexacrinites occidentalis (W. & Sp.) (D)* (UD),
Megistocrinus clarkei Thomas (W)*,
farnsworthi White (I)* (S) (L),
fitzpatricki Thomas (I)*,
latus Hall (B)* (I) (W) (L),
merrilli Thomas (Br)*,
nodosus Barris (D)* (L),
pernodosus Thomas (Lime Creek, Buchanan Co.)* (Br) (L),
robustus Thomas (S)* (I) (Li),
Melocrinities linderi (Thomas) (Indian Hollow, Johnson Co.)*,
nodosus irregularis (Thomas) (Br)*,
tiffanyi (W. & Sp.) (B)*,
Nucleocrinus bondi Thomas (I)*,
elegans Conrad (D) (L),
meloniformis (Barris) (B)* (*Elaeacrinus*),
obovatus Barris (B)* (I)*,
Poteriocrinities buffaloensis (Worthen) (B)*,
Stereocrinus bentonensis Stainbrook (P)* (L),
harberti Stainbrook (P)* (L),
littletonensis Thomas (Dry Run, near Littleton)* (L),
triangulatus Barris (D)* (UD) (S),
triangulatus liratus Barris (D)* (UD),
Strobilocystites calvini White (I)* (L) (Br) (Vinton),
polleyi Calvin (just n. Atalissa, Cedar Co.)* (Shellsburg),
schucherti Thomas (S)*,
Synbathocrinus matutinus Hall (B)*,
Taxocrinus interscapularis Hall (B)*

SHELL ROCK LS.: Nora Springs, Floyd Co. (N), Shell Rock River, Floyd Co. (S), Iowa.

- Agelacrinites hanoveri* Thomas (Near Mason City)* (N),
Bactrocrinities westoni Belanski (Rockford)* (N),

Hexacrinites iowensis (Thomas) (S)*,
springeri (Thomas) (S)*,
Nassoviocrinus goldringae Belanski (N)*,
Strobilocystites schucherti Thomas (N)*,

LIME CREEK SH. (*Cerro Gordo member*): Iowa. Rockford (R); Bird Hill (B) etc.

Clidochirus iowensis Thomas (R)* (B),
Cyathocrinites rockfordensis (Thomas) (R)* (B),
Dactylocrinus stellatimbasalis Thomas (Cerro Gordo Co.)*,
Melocrinites belanski (Thomas) (B)*,
calvini (W. & Sp.) (Solon, Johnston Co.)*

THREE FORKS SH. Logan, Montana.

Mariacrinus? (?*Alisocrinus*) *insuetus* Raymond*

NORTHWEST TERRITORY, CANADA: Root River (R), Red Knife River (K).

Decadocrinus spinobrachiatus Goldring (K)*,
Hexacrinites humei (Springer) (R)*,
Linobrachiocrinus kindlei (Goldring) (Bouvier River, 8 mi. above mouth)* (*Lino-*
crinus),
Melocrinites borealis (Springer) (Hay River, 9 mi. below Alexandria Falls)*,
canadensis (Springer) (Hay River, 7½ mi. above Alexandria Falls)*,
humei (Goldring) (K)*,
kindlei (Springer) (R)*,
mackenzie (Springer) (R)*,
subtilistriatus (Goldring) (K)*,
sulcosutura (Goldring) (K)*,
whittakeri (Springer) (Trout River)*,
Prininocrinus? *robustus* Goldring (K)*,
Pycnosaccus canadensis (Whiteaves) (Hay River, 40 mi. above mouth)* (*Arach-*
noocrinus),
Synaptocrinus? *rotundus* Goldring (Jean Marie River)*,

DEVONIAN FAUNAS (SOUTH AMERICA AND EASTERN HEMISPHERE)

AFRICA: Lower Devonian (Bokkeveld series): Warm Bokkeveld and Kokmans Kloff, Cape Province.

Ophiocrinus stangeri Sharpe & Salter*,
Placocystella capensis Rennie,
Placocystis africana Reed*

ARGENTINA: *Cyathocrinites elongatus* (Knod)*.

BELGIUM: Lower Devonian (*Coblentzian-schistes de Bure*); Champlon.

Pentremitidea fraiponti (Dewalque)* (*Pentremites*),
 Middle Devonian (*Givetian-Stringocephalus ls.*):
Eutaxocrinus perplexus Springer (Verviers)*,
 Upper Devonian (*Famennian-Condroz ss.*): Condroz,
Dinocystis barroisi Bather*,
 Upper Devonian (*Frasnian*): Senzeille near Valcourt (S); Boussu-en-Faue (B),
Cupressocrinites gibber (Bather) (B)*,
Dactylocrinus beyrichi (Dewalque) (S)* (*Zeacrinus*),
Hexacrinites minor (Dewalque) (S)*,
verrucosus (Dewalque) (S)*,
Melocrinites benedeni (Fraipont) (S)*,
chapuisi (Fraipont) (S)*,
dewalquei (von Koenen) (S) (Chimay),
dordoloti (Maillieux) (B)*,
globosus (Dewalque) (S)*,
hieroglyphicus Goldfuss (S)*,
inornatus (Fraipont) (S)* (B),
konincki (Fraipont) (S)* (B),
mespiliformis (Fraipont) (S)*,
obscurus (Fraipont) (Chaudfontaine)*,
pyramidalis Goldfuss (Chimay)

BOHEMIA: (Lower Dev-F2; middle-H): Koniepruss (K); Hlubocep (H); Mnienian (M).

Ascocrinus bohemicus Jaekel (H)* (H),
Beyrichiocrinus humilis (Barrande) (K)* (F2) (*Encrinites*),
Ichthyocrinus bohemicus Waagen & Jahn (K)* (F2),
Jahnocrinus minutus Jaekel (H)* (H),
Proteocystites barrandena (Haeckel)*,
flavus Barrande (K)* (M) (F2),
Tiaracrinus quadrifrons Schultze (K) (F2),

CHINA: Northern Shan States.

Batocrinus birmanicus Reed*

CZECHOSLOVAKIA:

Ambacrinus moravicus (Remes)* (*Cococrinus*),
Symbathocrinus celchovicensis Remes*

SOUTH ENGLAND (Devon): Plymouth (P); Wolborough (W); Newton (Bushel) (N); Lummaton (L); South Devon (S).

Cupressocrinites crassus? Goldfuss (W) (N),
schloheimii (Steininger) (L) (*Halocrinites*),
Cyathocrinites distans (Phillips) (Coddon Hills, North Devon)*,
Haplocrinites decipiens (Whidborne) (L)* (*Platycrinus*),
Hexacrinites aberrans (Whidborne) (L)* (*Platycrinus*),
depressus (Austin and Austin) (N)* (P)*,
interscapularis (Phillips) (P)* (N) (S) (*Platycrinus*),
macrotatus (Austin and Austin) (N)* (W),
microglyphicus (Whidborne) (W)*,
pentangularis (Austin and Austin) (N)*,
perarmatus (Whidborne) (W)* (N)* (L),
vicarii (Whidborne) (W)* (N)*,
Melocrinites stellaris? (Roemer) (Torquay) (*Ctenocrinus*),
hieroglyphicus Goldfuss (L),
Pentremitidea whidbornei E. & C. (S)*,
Platycrinites phillipsii (d'Orbigny) (N)*,
Rhipidocrinus crenatus (Goldfuss) (L) (*Rhodocrinites*),
Sphaerocrinus geometricus (Goldfuss) (L) (W) (N) (*Cyathocrinus*),
Sphaeronites tessellatus Phillips (P)* (S),
Storthingocrinus fritillus (Müller) (W) (*Platycrinus*),
Tricoelocrinus? leei Whidborne (S)* (Torquay ls., Barton),
 Upper Devonian (*Delabole sl.*): Delabole, North Cornwall, England.
Taxocrinus delabolei Wright*

FALKLAND ISLANDS (Pebble Island):

Botryocrinus doubleti Kirk*

FRANCE: Lower Devonian: Sarthe, Manche, Mayenne Provinces. Sablé (Sarthe) (S); Near Nehou (Manche) (N).

Belocrinus cottaldi (Munier Chalmas) (Bois-Roux)* (S) (*Belemnocrinus*),
Ctenocrinus oehlerti Jaekel (N)*,
Diamenocrinus jouani Oehlert (N)*,
Hexacrinites wachsmuthi (Oehlert) (S)*,
Lecanocrinus soyei Oehlert (S)*,
Melocrinites bigsbyi (Oehlert) (St. Germain)* (*Clonocrinus*),
occidentalis (Oehlert) (S)*,
oehlerti (W. & S.) (N)*,
Phimocrinus jouberti Oehlert (S)*,
Poteriocrinites verneuili (Cailliaud) (Loire Inf),
Proteocystites soyei (Oehlert) (S)* (*Carpocystites*),
Rhaphanocrinus? wachsmuthi Oehlert (S)*,
Thylacocrinus vannioti Oehlert (St. Germain)* (Mayenne),
Tiaracrinus soyei Oehlert (S)*,
Trybliocrinus cheuzi (Oehlert) (Forneaux, near Angers)* (*Spyridiocrinus*)

GERMANY: Lower Devonian (*Hunsrück sl.*): Bundenbach (B); Gemunden (G); Lorch am Rhein, near Caub (C); near Zorn (Z).

- Acanthocrinus heroldi* Schmidt (B)*,
rex Jaekel (C)*,
Antihomocrinus armatus Schmidt (B)*,
Arthroacantha? claviger Schmidt (G)*,
Bactrocriniles jaekeli (Schmidt) (B)*,
trabicus (Schmidt) (G)* (B),
Bathericrinus ericius (Schmidt) (B)* (*Botryocrinus*),
hystrix (Schmidt) (B)* (*Botryocrinus*),
semipinnulatus (Schmidt) (B)* (*Botryocrinus*),
speciosus (Schmidt) (B)* (*Botryocrinus*),
Calycanthocrinus decadactylus Follmann (B)* (G)* (C),
decadactylus latus Schmidt (B)* (G),
Codiocrinus schultzei Follmann (B)* (G),
Ctenocrinus gracilis Jaekel (C)* (G),
malcontractus Schmidt (Z)*,
Culicocrinus spinatus Jaekel (C)* (G),
Cyttarocrinus rauffi Schmidt (G)*,
Dendrocystites globulus Dehm (B)*,
Diamenocrinus opitzi Schmidt (B)*,
Dicirrocrinus comtus Schmidt (B)*,
Eutaxocrinus prognathus Schmidt (B)*,
sincerus Schmidt (B)*,
spinifer (Schmidt) (B)* (*Taxocrinus*),
sturtzii (Follmann) (B)* (*Taxocrinus*),
Follicrinus grebei (Follmann) (B)* (*Taxocrinus*),
kayseri (Jaekel) (L)* (C) (*Homocrinus*),
Gastrocrinus eupelmatus (Schmidt) (B)* (*Arthroacantha*),
giganteus Schmidt (B)*,
Gissocrinus vertebrachialis Schmidt (B)*,
Hapalocrinus elegans Jaekel (B)*,
frechi (Jaekel) (B)* (*Agriocrinus*),
frechi imbellis Schmidt (B)*,
frechi nimisfurcatus Schmidt (B)*,
frechi rarefurcatus Schmidt (B)*,
inermis (Jaekel) (B)* (*Agriocrinus*),
inoxius Schmidt (B)*,
Hexacrinites inhospitalis Schmidt (G)*,
Imitatorcrinus gracilior (Roemer) (B)* (*Cyathocrinus*),
Lasiocrinus subramulosus Schmidt (B)*,
Macarocrinus semelfurcatus Schmidt (B)*,
springeri Jaekel (B)*,
terfurcatus Schmidt (B)*,
Mitrocystites? styloideus Dehm (B)*,
Parisangulocrinus furcaxialis Schmidt (B)*,
minax Schmidt (B)*,
zeaeformis (Schultze) (C)* (B) (G) (*Poteriocrinus*),
Pentremiteida medusa Jaekel (C)*,
Propoteriocrinus scopae Schmidt (G)*,
Pterinocrinus diensti Schmidt (B)*,
Regulaecystis pleurocystoides Dehm (B)*,
Rhadinocrinus dactylus Schmidt (B)* (C)*,
nanus (Roemer) (B)* (C) (Birkenfeld) (*Poteriocrinus*),
Rhenocrinus ramosissimus Schmidt (G)* (Schneppenbach).
Rhenocystis latipedunculata Dehm (B)*,
Senariocrinus maucheri Schmidt (B)*,
Thallocrinus hauchecornei Jaekel (B)*,
procerus Schmidt (B)*,
rugosus Schmidt (B)*,
Triacrinus elongatus Follmann (G)*,
koenigswaldi Schmidt (B)*,
kutscheri Schmidt (B)*,
 Lower Devonian (Kahlenberg ss.—K; Siegen beds—S) Rammelsberg near Goslar (R):
Botryocrinus patellaris Haarmann (Trupbach, Rhine Valley)* (S),
Craspedocrinus schmidti Dahmer (Oberharzer)* (K),
Ctenocrinus decadactylus hercynicus Jaekel (R) (K),
typus (Bronn) (Hauslingsberg near Siegen)* (S) (*Actinocrinus*)

- Cupressocrinites teres* (Roemer) (near Rubeland)* (K),
Cyathocrinites decaphyllus Roemer (Thuringia)* (K),
Diamenocrinites stellatus Jaekel (Siegburg)*,
Eucystis hercynica Jaekel (Sprækelsbach, Zorge, Harz)*,
Gastrocrinus? drevermani Schmidt (Seifen, Westerwald)* (Seifen beds),
Rhodocrinites tortuosus Roemer (R)* (K),
 Lower Devonian (Coblenzian: Upper—U, Lower—Lo) Rheinland: Niederlahnstein
 (N); Lahnstein (L); Coblenz (C); Bornich, near Weisel (B); Olkenbach in
 Alfthal, South Eifel (O); Güls am Moselle (Gu); Miellen, Lahntal (M). Harz:
 Spirifer ss., Schalke (S); Herdorf beds, Herdorf (H).
Acanthocrinites gracilior Jaekel (C)*,
 gregarius Z. & W. (C)*,
 longispina Roemer (Clausthal, Harz)* (O) (N) (L) (Nassau) (U)
Agelacrinites rhenanus (Roemer) (near Unkel, Rhine area)* (U),
Arthroacanthia schwerdtii (Follmann) (C)* (U) (*Hystriocrinites*),
 tenuispinata Schmidt (Liesertales am Moselle)* (U),
Bactrocrinites zeileri (Jaekel) (N)*,
Botryocrinites cyathiformis Haarmann (C)* (U),
 irregularis Haarmann (H)* (Lo),
 procerus Haarmann (Oberstadtfeld)* (Lo),
 schultzei Haarmann (near Neiderstadtfeld)* (Lo),
Ctenocrinites acicularis Follmann (Manderscheid, near C)*,
 decadactylus (Tannenbergl) (Prüm, near C)* (Gemunden) (N) (*Ac-*
 tinocrinites),
 decadactylus elegans Jaekel (N)*,
 nodiferus Follmann (O)*,
 rhenanus Follmann (N)* (near Manderscheid),
 stellifer Follmann (Gu)* (C) (N),
 typus (Bronn) (N) (C) (*Actinocrinites*),
Culicocrinites confluentinus (Müller) (C)* (Pelm) (*Protoeurayle*),
 inermis Beyrich (N)* (Hohenrhein, near C),
 nodosus (W. & Z.) (Pelm)* (N) (O) (C) (*Platycrinus*),
Cupressocrinites dubius (Roemer) (S)*,
Cyathocrinites catenatus (Trenkner) (S)*,
 loganensis (Müller) (N)*,
 obliquiseptatus (Trenkner) (S)*,
 radiatus (Trenkner) (S)*,
Diamenocrinites gonatodes (Müller) (N)* (C) (*Rhodocrinites*),
 grandis Jaekel (Silberschmelz)*,
 pachydactylus Jaekel (C)*,
Eifelocrinites bifurcatus Haarmann (Dorrbachtals, near C)* (U),
 dohmi (Wanner) (Humerich near Oberstadtfeld)* (Lo) (*Ptilo-*
 crinites)
Eutaxocrinites rhenanus (Roemer) (C)* (O) (U) (*Cyathocrinites*),
Gastrocrinites brancoi Schmidt (C)* (U),
 patulus (Müller) (C)* (Gu) (U) (*Poteriocrinites*),
 patulus follmanni Schmidt (Lahntal)* (Gu) (Miellen) (U),
 rugosus Schmidt (C)* (U),
Homocrinites rhenanus Jaekel (B)*,
Lenneocrinites cirratus Jaekel (Elberfeld)* (Lo),
Lodanella mira Kayser (Hunzel, near Singhofen)* (Lo),
Nassoviocrinites pachydactylus Jaekel (*Spirifer* ss. near Hachenberg)*,
Orthocrinites simplex Jaekel (N)* (Mesenich)*,
Poteriocrinites rhenanus (Müller) (N)* (C)* (Pelm) (O) (*Taxocrinites*)
Propoteriocrinites follmanni Schmidt (C)*,
Pyrgocystis octogona Richter (B)* (Lo),
Rhadinocrinites rhenanus Jaekel (C)* (U),
Vasocrinites canaliculatus (Jaekel) (N)* (*Parisocrinites*),
 Middle Devonian (Eifelian: *Crinoid and Calceola beds*): Eifel, Gerolstein (G);
 Kerpen (K); Pelm (P); Prüm (Pr).
Achradocrinites ventrosus Schultze (K)* (Nollenbach),
Ambliocrinites rosaceus (Roemer) (G)* (Pr) (K) (*Platycrinus*),
Ammonicrinus wanneri Springer (Pr)*,
Bactrocrinites fusiformis (Roemer) (G)* (K) (P) (*Poteriocrinites*),
 mülleri Jaekel (G)*,
 tenuis Jaekel (G)*,
Codiocrinites granulatus Schultze (Pr)*,

- Costalocrinus dilatatus* (Schultze) (K)* (*Poteriocrinus*),
Ctenocrinus sculptus Jaekel (near Pr.)*,
Cupressocrinites abbreviatus (Goldfuss) (P)* (G),
 abbreviatus altus (Schultze) (K)* (Pr),
 abbreviatus concentricus (Quenstedt) (G)*,
 abbreviatus granulatus (Schultze) (P)*,
 abbreviatus hybridus (Schultze) (K)*,
 abbreviatus minor (Schultze) (K)*,
 abbreviatus spinosus (Sieverts) (Eifel)*,
 crassus Goldfuss* (P) (G) (K),
 elongatus Goldfuss* (P) (G),
 gracilis Goldfuss* (P) (G) (Pr) (K),
 hieroglyphicus (Schultze) (P)* (K) (G),
 inflatus (Schultze) (P) (G)* (K) (Pr),
 pentamerus (Quenstedt) (G)*,
 pyramidalis (Steininger) (Schoenicken)*,
 scaber (Schultze) (P)* (K),
 tesseratus Goldfuss*,
 trimerus (Quenstedt) (G)*,
Cyathocrinites sphaericus Steininger (G)*,
Dactylocrinus excavatus (Schultze) (K)* (Steinfeld) (*Zeacrinus*),
Eucalyptocrinites rosaceus Goldfuss* (G) (P) (K),
Eutaxocrinus affinis (Müller) (K)* (G) (*Taxocrinus*),
 eifelensis Springer (P)*,
 juglandiformis (Schultze) (G)* (*Taxocrinus*),
Gasterocoma antiqua Goldfuss (G)* (Pr) (K),
 eifelensis Müller (G)*,
 gibbosus Schultze (P)* (G),
 irregularis Müller (G)*,
 mülleri Schultze (P)* (G),
 reticularis Schultze (P)*,
 stellaris Schultze (Pr)*,
Geroldicrinus roemeri (Schultze) (K)* (*Lecanocrinus*),
Haplocrinites mespiliformis (Goldfuss) (G)* (Pr) (K) (*Eugeniocrinites*),
Hexacrinites anaglyptus (Goldfuss) (Eifel)* (G) (*Platycrinites*),
 anaglyptus frondosus (Schultze) (G)*,
 anaglyptus granulatus (Schultze) (K)*,
 anaglyptus stellaris (Schultze) (G)*,
 bacca (Schultze) (P)*,
 callosus (Schultze) (P)*,
 costatus (Müller) (G)*,
 crispus (Quenstedt) (Eifel)*,
 echinatus (Sandberger) (G)* (K),
 elongatus (Goldfuss) (G) (P) (K) (*Platycrinites*),
 excelsus (Goldfuss) (G)* (K) (P),
 hieroglyphicus (Quenstedt) (Eifel)*,
 interscapularis (Phillips) (K),
 limbatus (Müller) (K)*,
 lobatus (Müller) (Pr)*,
 magnificus (Quenstedt) (G)*,
 nodifer (Schultze) (K)*,
 ornatus (Goldfuss) (G)* (P) (K) (*Platycrinites*),
 ornatus marginatus (Schultze) (G)* (P) (K),
 pateraeformis (Schultze) (G)* (K),
 pyriformis (Schultze) (G)*,
 spinosus (Müller) (Pr)* (K),
 stellaris (Roemer) (G)* (K) (*Platycrinus*),
 symmetricus (Quenstedt) (Eifel)*,
 triradiatus (Schultze) (K)*,
 ventricosus (Goldfuss) (Pr)* (P) (*Platycrinites*),
Lecythocrinus briareus (Schultze) (G)* (*Taxocrinus*),
 eifelianus Müller*,
Melocrinites fornicatus Goldfuss (Eifel)*,
 gerolsteinensis (Steininger) (G)*,
 gibbosus Goldfuss (G)* (K),

- gibbosus aculeatus* (Schultze) (G)*,
gibbosus gracilis (Schultze) (G)*,
gibbosus granosus (Schultze) (G)*,
hieroglyphicus Goldfuss (near Aachen)*,
pyramidalis Goldfuss (Mühlenberg, near Gerolstein)*,
rotundatus (Schultze) (K)*,
stellaris (Roemer) (Ludenscheid)* (K) (G) (*Ctenocrinus*),
verrucosus Goldfuss (G)* (P),
Mycocrinus boletus (Schultze) (K)* (Pr),
conicus Springer (K)*,
granulatus Jaekel (Pr)*,
Myelodactylus dicirrocrinus Ehrenberg (Daun)*,
Nanocrinus paradoxus Müller (Pr)* (G) (K),
Parisocrinus curtus (Müller) (P)* (Pr) (*Poteriocrinus*),
Pentremitidea acutangula (Schultze) (P)* (*Pentremites*),
clavata Schultze (K)* etc.,
eifelensis (Roemer) (Pr)* (G)* (P) (*Pentatrematites*),
?gracilis (Steininger)* (*Pentatrematites*),
roemeri E. & C. (Eifel)*,
similis E. & C. (Pr)*,
Periechocrinites prümtiensis (Z. & W.) (Pr.)* (K) (*Actinocrinus*),
prümtiensis geometricus (Schultze) (Pr)* (G) (*Actinocrinus*),
Phimocrinus laevis Schultze (P)* (K),
quinguangularis Schultze (G)* (P),
Platycrinites gerolsteinensis (Steininger) (G)*,
goldfussi (Münster) (Eifel)*,
hieroglyphicus (Goldfuss) (Eifel)*,
minutus (Schnur) (G)*,
Poteriocrinites angulosus (Schultze) (K)*,
hemisphericus (Müller) (Pr)*,
Rhipidocrinus crenatus (Goldfuss)* (K) (G) (*Rhodocrinites*),
crenatus aculeatus (Schultze) (G)* (*Rhodocrinus*),
crenatus bursiformis (Quenstedt) (G)* (*Rhodocrinites*),
crenatus reticularis (Schultze) (G)* (*Rhodocrinus*),
crenatus reticulatus (Quenstedt) (G)* (*Rhodocrinus*),
Rhodocrinites quinquelobus (Schultze) (K)*,
tesselatus (Steininger) (G)*,
Rhopalocrinus gracilis (Schultze) (Pr)* (*Taxocrinus*),
Scoliocrinus eremita Jaekel (P)*,
Sphaerocrinus geometricus (Goldfuss) (Klankenheim)* (P) (G) (*Cyathocrinites*),
geometricus concentricus (Schultze) (G)* (P) (*Poteriocrinus*),
geometricus ornatus (Schultze) (G)* (P) etc. (*Poteriocrinus*),
geometricus ornatus tuberculatus (Schultze) (G)* (*Poteriocrinus*),
geometricus reticularis (Schultze) (P)* (*Poteriocrinus*),
laevigatus Jaekel (K)*,
stellatus Schnur (G)*,
trabeculatus Quenstedt (Eifel)*,
Storthingocrinus decagonus (Goldfuss) (G)* (*Platycrinites*),
fritillus (Müller) (G)* (P) (Pr) (*Platycrinus*),
trifidus (Schultze) (P)* (*Platycrinites*),
Stylocrinus scaber (Goldfuss) (G)* (*Platycrinites*),
tabulatus (Goldfuss) (Eifel)* (*Platycrinites*),
tabulatus altus (Müller) (G)* (K) (*Synbathocrinus*),
tabulatus depressus (Müller) (G)* (*Synbathocrinus*),
Taxocrinus priscus Schnur (Pr)*,
Tiarocrinus quadrifrons Schultze (K)*,
tetraedra Jaekel (Kellerwald)*,
Triacrinus altus (Müller) (K)* (Pr) (*Trichocrinus*),
depressus (Müller) (K)* (Pr) (*Trichocrinus*),
Vasocrinus stellaris (Schultze) (K)* (G) (*Poteriocrinus*),
Middle Devonian (Eifelian—Orthocrinus beds, just above Cultrijugatus zone): near
Olpe, South Sauerland, Germany.
Arthroacantha? ornatus (Schmidt) (Ziegelei)* (*Platyhexacrinus*),
Myrtillocrinus? curtus Schmidt (near Bilstein)*,
Orthocrinus tuberculatus Schmidt (Ober-Weischeide*, Ziegelei, etc.)
Platyhexacrinus inornatus Schmidt (Waukemicke)*

- Middle Devonian (Eifelian—Calceola beds):* Auerhahn.
Ctenocrinus sulcatus Trenkner*,
Cupressocrinites urogali Roemer*,
Cyathocrinites? gosae (Roemer) (Rammelsberg)*,
Platysphaerites columnis fultus Trenkner*,
Middle Devonian (Eifelian; Orthoceras—Wissenbach beds):
Calycanthocrinus inaequidactylus Schmidt (Hamburg near Halberbracht*, Elspen),
Haplocrinites murchisoni (Münster) (Near Elbersreuth*, Franconia),
Triacrinus polydonta Roemer (Lerbach, Harz)*,
Middle Devonian (Lenneschiefer):
Hexacrinites? granifer (Roemer) (Gummersbach, Westphalia)*,
Rhadinocrinus minae (Jaekel) (Trochites beds, near Letmathe)* (*Rhenocrinus*),
Rhipidocrinus perloricatus Jaekel (near Letmathe)*,
Schmidocrinus winterfeldi (Jaekel) (Berstig near Gummersbach)* (*Rhenocrinus*),
Scyphocrinus elegans Zenker (Elbersreuth, Franconia)
Middle Devonian (Givetien—Stringocephalus ls.): Vilmar, Nassau (V); Kehrzu, Harz (K); Weilburg am Lahn (W).
Actinocrinites cyathiformis S. & S. (V)*,
Cupressocrinites nodosus S. & S. (Lahnstein near W)*,
Cyathocrinites subtuberculatus (Roemer) (Clausthal, Harz)*,
tuberculatus (Roemer) (K)*,
Haplocrinites stellaris (Roemer) (W)* (Pelm, etc.),
Hexacrinites brevis (Goldfuss) (V) (Gerolstein, etc.),
buchii (Roemer) (Hartenberg, Eifel)* (*Platycrinus*),
echinatus S. & S. (V)*,
granulifer (Roemer) (W) (V),
Myrtillocrinus elongatus S. & S. (V)*,
Pentremitea plana (S. & S.) (V)*, (*Pentremites*),
Platycrinites decoratus Roemer (Tonnichener Manor, Elbingerode)*,
subgranulosus Roemer (K)*,
Sphaerocrinus geometricus (Goldfuss) (V) (*Cyathocrinites*),
Stylocrinus scaber Goldfuss (V)
Middle Devonian:
Ammonicrinus doliiformis Walburg (Selscheider bed, Ohle, Sauerland)*,
Melocrinites pulcher (Spreistersbach) (near Meinerzhagen, Prussia)*,
pulcher annuliferus (Spreistersbach) (near Meinerzhagen, Prussia)*
Upper Devonian (Famennian—Clymenia beds): Schübelhammer (Fichtelgebirge, Franconia) unless otherwise stated.
Cyathocrinites dubius (Münster)* (drift),
teres (Münster)*,
Melocrinites striatus (Münster) (near Hof, Thuringia)* (Up. Franconia) (*Actinocrinus*),
Storthingocrinus sphaericus von Koenen (North Germany)* (Goniatite ls. Martenberg near Adorf),
Thuringocrinus saalfeldensis Jaekel (Saalfeld, Thuringia)*,
Triacrinus granulatus Münster*,
pyriformis Münster*
Upper Devonian (Famennian—Cypridina beds):
Cosmocrinus holzapfeli Jaekel (Nehden beds, Nehden)*,
Melocrinites fraiponti (von Koenen) (North Germany)*,
Poteriocrinites impressus (Richter & Unger) (Thüringerwald)*,
mespiliformis (Richter & Unger) (Thüringerwald)*
Upper Devonian (Frasnian—Iberg ls., R. cuboides zone): Winterberg (W); near Stolberg (near Aachen) (S).
Cyathocrinites ignotus (Trenkner) (W)*,
irregularis (Trenkner) (W)*,
tricarinatus Roemer (Grund, Harz)*,
Hexacrinites angulosus von Koenen (S)*,
infundibulum von Koenen (S)*,
tuberculatus von Koenen (S)*,
verrucosus Dewalque (S)*,
Melocrinites dewalquei von Koenen (S)*,
hieroglyphicus Goldfuss (S)*,
minutus Trenkner (Ohnenannsbrink)*

INDIA:

Bactrocrinites birmanicus (Reed) (Padaukpin)*

ISLAND OF OESSEL:

Ctenocrinus lamellosus (Eichwald) (Ficht)* (*Melocrinus*),

Cyathocrinites exilis (Eichwald) (Ficht)*,

Dichocrinus insularis (Eichwald) (Ilpen)* (*Platycrinus*)

RUSSIA:

Agelacrinites ephraemovianus Bogolubov (Toula)*,

Calliocrinus uralicus (Tschernyschew) (Eastern slope Urals)* (Low. Dev.),

Codaster poussirewskii Stuckenburger*,

Dactylocrinus oligoptilus Pacht (Gouv. Novgorod)* (Pleskau Iborsk),

Eucalyptocrinites praerosaceus (Yakolev) (Nijnil Serginsky, Ural)* (Low. Dev.),

Gissocrinus? borealis Tschernyschew (Eastern slope Urals)* (Low. Dev.),

Lahuseniocrinus tirlensis Tschernyschew (Eastern slope Urals)* (Low. Dev.),

Poteriocrinites pygmaeus Wenjukoff (Pelino, Don River)*

SPAIN: *Middle Devonian (Eifelian)*: Calcaire d'Arnao—(Cad); Calcaire des Ferrones—(CaF); Colle, near Sabero (Leon) (S); Concha de Arnao, El Mugaron (CA); Santa Lucia, north of Leon (SL); Province of Leon (L); Asturias (A); Ferrones (Asturias) (F).

Codiocrinus granulatus Schultze (SL) (L) (Cad),

Cryptoschisma schultzei (deVern. & d'Arch.) (F)* (S)* (CaF) (Cad) (*Pentremites*),

Cupressocrinites townsendi (Koenig) (A)* (Cad),

Hadrocrinus hispaniae Schmidt (CA)* (Kap la Vela) (Cad),

Megistocrinus? bifrons Schmidt (CA)* (Cad),

Megistocrinus waliszewskii Oehlert (SL)* (Cad),

Metablastus hispanicus (E. & C.) (S) (Cad)

Orthocrinus planus Schmidt (CA)* (Cad),

Pentremitidea angulata E. & C. (F)* (CaF),

clavata Schultze (S) (Cad),

clavata schultzei E. & C. (S)* (Cad),

erecta Schmidt (CA)* (Cad),

gilbertsoni E. & C. (S)* (SL) (Cad),

lusitanica E. & C. (F)* (CaF),

malladai E. & C. (S)* (Cad),

pailletti (Verneuil) (S)* (Cad); (F) (CaF),

wachsmuthi E. & C. (S)* (Cad),

Periechocrinites baylii (Verneuil) (S)* (Cad) (*Pradocrinus*),

Phaenoschisma archiaci E. & C. (F)* (CaF) (S) (Cad),

nobile E. & C. (S)* (Cad),

verneuili E. & C. (F)* (CaF); (S) (Cad),

Platyhexacrinus kegeli Schmidt (CA)* (Cad),

Saccocrinus? intrastigmatus Schmidt (CA)* (Cad),

Storthingocrinus haug: Oehlert (SL)* (CA) (Cad),

labiatus Schmidt (CA)* (Cad),

Trybliocrinus flatheanus Geinitz (Arnao)* (A) (?Carboniferous)

MISSISSIPPIAN FAUNAS (NORTH AMERICA)

KINDERHOOK GROUP

ROCKFORD LS: Rockford, Indiana.

Synbathocrinus oweni Hall*

HAMPTON FM.: Legrand and vicinity (cited also as Marshalltown and Marshall County), Iowa.

Acrocrinus primitivus L. & B.*,

Agelacrinites legrandensis M. & G.*,

Aorocrinus immaturus (W. & Sp.)* (*Dorycrinus*),

parvibasis (W. & Sp.)* (*Dorycrinus*),

radiatus (W. & Sp.)* (*Dorycrinus*),

Batocrinus macbridei W. & Sp.*,

poculum M. & G.*,

- Blothocrinus spartarius* (M. & G.)* (*Poteriocrinus*),
Cactocrinus arnoldi (W. & Sp.)* (*Actinocrinus*),
nodobrachiatus (W. & Sp.)* (*Actinocrinus*),
ornatissimus (W. & Sp.)* (*Actinocrinus*),
Cercidocrinus infrequens (L. & B.)* (*Zeacrinus*),
Cosmetocrinus elegantulus (W. & Sp.)* (*Scaphiocrinus*),
Cyathocrinites marshallensis (Worthen)*,
Decadocrinus baumgardneri L. & B.*,
Dichocrinus cinctus M. & G.*,
delicatus W. & Sp.*,
hammondi L. & B.*,
inornatus W. & Sp.*,
Eratocrinus raymondi (L. & B.)* (*Pachylocrinus*),
Eutazocrinus fletcheri Worthen*,
Gilmocrinus o'neali L. & B.*,
Goniocrinus sculptilis M. & G.*,
Graphiocrinus longicirrifera W. & S.*,
notatus (M. & G.)* (*Scaphiocrinus*),
Hypselocrinus maccabei (M. & G.)* (*Poteriocrinus*),
Megistocrinus nobilis W. & Sp.*,
parvus W. & Sp.*,
Orophocrinus conicus W. & Sp.*,
fusiformis (W. & Sp.)* (*Codonites*),
Pachylocrinus globosus (W. & Sp.)* (*Scaphiocrinus*),
Pelecocrinus parviglyptus (L. & B.)* (*Abrotocrinus*),
Periechocrinites whitei (Hall) (*Actinocrinus*)
Platycrinites pendens (Springer)*,
planus (O. & S.),
symmetricus (W. & Sp.)*,
Rhodocrinites caelatus (M. & G.)*,
douglassi haploformis (L. & B.)*,
kirbyi (W. & Sp.)*,
nanus glyptoformis (L. & B.)*,
octadactylus (L. & B.)*,
sculptus (M. & G.)*,
watersianus (W. & Sp.)*,
wortheni (Hall),
Taxocrinus hollandi L. & B.*,
intermedius W. & Sp.*

GILMORE CITY LS: 1 mi. nw. Gilmore City, Iowa.

- Aorocrinus iola* Laudon*,
Cactocrinus imperator Laudon*,
Cercidocrinus cirrifera (Laudon)* (*Pachylocrinus*),
fimbria (Laudon)* (*Pachylocrinus*),
Culmicrinus thomasi Laudon*,
Dichocrinus camplo Laudon*,
douglassi (M. & G.) (*Platycrinus*),
multiplex Laudon*,
Discocystis laudoni Bassler*,
Eretmocrinus tentor Laudon*,
Eutazocrinus dero Laudon*,
Gilmocrinus iowensis Laudon*,
Goniocrinus maximus Laudon*,
Hypselocrinus douglassi (M. & G.) (*Poteriocrinus*),
Lasiocrinus expressus Laudon*,
Linocrinus compactus (Laudon)* (*Zeacrinus*),
Platycrinites bozemanensis (M. & G.),
Rhodocrinites cavanaughi (Laudon)*,
douglassi constrictus (Laudon)*,
douglassi excavatus (Laudon)*,
douglassi multidactylus (Laudon)*,
douglassi serpens (Laudon)*,
watersianus (W. & Sp.)

UPPER KINDERHOOK: Burlington. Iowa.

Rhodocrinites kirbyi (W. and Sp.) (Flint Creek),
Stegocrinus globosus W. & Sp.*

LOUISIANA LS.: Louisiana, Missouri.

Hybocheilocrinus americanus (Rowley)* (*Allagecrinus*),
Platycrinites dodgeri (Rowley)*,
Poteriocrinites jeffriesi (Rowley)*

SYCAMORE LS.: South of Ada, Oklahoma.

Trophocrinus tumidus Kirk*

POCONO FM.: 1½ mi. s. e. Saxton, Pa.

Pachylocrinus kirkianus Girty*

MISS. (BELOW OLEAN CONGL.): Warren, Pa.

Lepidodiscus becheri (Clarke)* (*Agelacrinites*)

MISS. (BETWEEN WOLF CREEK CONGL. AND MT. HERMAN SS.): Cattaraugus Co., N. Y.

Lepidodiscus buttsi (Clarke)* (*Agelacrinites*)

OSAGE GROUP

FERN GLEN LS.: Jersey Co., Illinois.

Agaricocrinites jerseyensis (Worthen)* (*Amphorocrinus*),
Poteriocrinites elsahensis (Worthen) (near Elshah)*

FERN GLEN LS.: Fern Glen (F. G.); Ste. Genevieve Co., ¾ mi. s. Kimmswick (St. G.); Reeds Spring (R), Missouri.

Actinocrinites rubra (Weller) (F. G.)*,
Agaricocrinites praecursor Rowley (F. G.)*,
Coenocystis moreyi Peck (St. G.)*,
Dichostreblocrinus minutus Peck (St. G.)*,
Graphiocrinus sampsoni Weller (F. G.)*,
Kallimorphocrinus pristinus Peck (St. G.)*,
putatus Peck (St. G.)*,
Octocrinus inconsuetus Peck (St. G.)*,
Passalocrinus triangularis Peck (St. G.)*,
Physetocrinus smalleyi Weller (F. G.)*,
Platycrinites springeri (Weller) (F. G.)*,
stellatus (Weller) (F. G.)*,
Rhodocrinites punctatus (Weller)*,
Schizoblastus moorei Cline (R)*, (Reeds Spring ls.),
Trophocrinus corpulentus Peck (St. G.)*,
Wachsmuthicrinus spinifer (Hall) (F. G.) (*Forbesiocrinus*)

NEW PROVIDENCE SH.: Clark Co. (Cl. Co.), New Providence (NP), Indiana. Lebanon (L); Kings Mtn. (K); Kenwood Hill, 7 mi. s. Louisville, and Button Mold Knob, 12 mi. s. Louisville (B); Lincoln Co. (Li), Kentucky. Whites Creek Springs, 12 mi. n. Nashville (WC); Shelbyville (S); 5 mi. w. Edgemoor Sta. (E), Tennessee.

Baryocrinus asperrimus Springer (WC)*,
cornutus (O. & S.) (WC) (Cl. Co.) (B) (*Cyathocrinus*),
rhombiferus (O. & S.) (B) (*Poteriocrinus*),
wachsmuthi (M. & W.) (B) (*Cyathocrinus*),
Batocrinus prodigialis M. & G. (B)*,
Calceocrinus? granuliferus Rowley (B)*,
Catillocrinus tennesseae (Troost) Shumard (WC)* (B) (*Catillocrinites*),
turbinatus Springer (WC) (B)*,
Doryocrinus greenei M. & G. (B)*,
Eretmocrinus yandelli (Shumard) (WC) (B)* (*Actinocrinites*),
Euryocrinus tennesseensis Springer (WC)* (B) (Cl. Co.),
Halysiocrinus perplexus (Shumard) (WC) (Cl. Co.) (B)* (*Cheirocrinus*),
Mespilocrinus bordeni Springer (Cl. Co.)*,
romingeri Springer (B)*,
Metichthyocrinus clarkensis (M. & G.) (WC), (Cl. Co.)* (L) (B) (*Ichthyocrinus*),
tiaraeformis (Troost) (WC)* (B) (*Cyathocrinites*),

- Orbitremites granulatus* (Roemer) (B) (S) (Allen Co., Ky.)* (*Pentatrematites*),
oppelti Rowley (2 mi. n. New Albany, Cl. Co.)*,
Phaenoscisma kentuckyense (Shumard) (B)* (*Pentremites*),
Platycrinites planus (O. & S.) (B),
Poteriocrinites macropleurus (Hall)? (B),
spissus (de Kon. & Lehon)? (B),
Schizoblastus decussatus (Shumard) (B)* (*Pentremites*),
Stemmatocrinus trautscholdi W. & Sp. (WC)* (B) (Harpeth Ridge, Davidson Co., Tenn.),
Stinocrinus granulatus Kirk (B)*,
Synbathocrinus angularis M. & G. (B)*,
granuliferus Wetherby (K)*,
robustus Shumard (WC)* (NP) (B)*,
Taxocrinus pustulosus Springer (Cl. Co.)* (B)*,
Wachsmuthicrinus spinosulus (M. & G.) (Li) (Cl. Co.)* (B) (*Ichthyocrinus*)
- CUYAHOGA FM.: Richfield, Summit Co. (Ri), Royalton (Ro), Cuyahoga Co. (C), Ohio.
- Actinocrinites daphne* (Hall) (Ri)* (Ro),
Amphorocrinus viminalis (Hall) (Ri)* (*Actinocrinus*),
Aorocrinus helice (Hall) (Ri)* (Ro) (*Actinocrinus*),
Cosmetocrinus crineus (Hall) (Ri)* (*Poteriocrinus*),
richfieldensis (Worthen) (Ri)* (*Poteriocrinus*),
Dactylocrinus tardus (Hall) (Fi)* (*Forbesiocrinus*),
Decadocrinus aegina (Hall) (Ri)* (C) (*Poteriocrinus*),
lyriope (Hall) (Ri)* (C) (*Poteriocrinus*),
subtortuosus (Hall) (Ri)* (C) (*Scaphiocrinus*),
Forbesiocrinus communis Hall (Ri)*,
Hypselocrinus pleias (Hall) (Ri)* (*Poteriocrinus*),
Pachylocrinus corycia (Hall) (Ri)* (*Poteriocrinus*),
subcarinatus (Hall) (Ri)* (*Scaphiocrinus*),
Platycrinites bedfordensis (Hall) (Bedford Co.)*,
contritus (H. & W.) (Ri)*,
graphicus (Hall) (Ri)*,
lodensis (H. & W.) (Ro) (Lodi, Medina Co.)*,
Taxocrinus communis (Hall) (Ri)* (*Forbesiocrinus*),
kellogi (Hall) (Ri)* (*Forbesiocrinus*),
Zeacrinites merope (Hall) (Ri) (C),
paternus (Hall) (Ri)* (C)
- LAKE VALLEY LS.: Lake Valley, New Mexico.
- Actinocrinites tenuisculptus* (McChesney),
Amphorocrinus divergens (Hall) (*Actinocrinus*),
Cactocrinus proboscidiialis (Hall) (*Actinocrinus*),
Coeliocrinus dilatatus (Hall) (*Poteriocrinus*),
ventricosus (Hall) (*Poteriocrinus*),
Cryptoblastus pisum (M. & W.) (*Granatocrinus*),
Cyathocrinites iowensis (O. & S.),
Dichocrinus pisum M. & W.,
Dorycrinus unicornis (O. & S.) (*Actinocrinus*),
Eretmocrinus corbulis (Hall) (*Actinocrinus*),
Megistocrinus evansi O. & S.,
Physetocrinus copei (S. A. Miller)* (*Actinocrinus*),
lobatus W. & Spr.*,
Platycrinites peculiaris (W. & Spr.)*,
poculum (S. A. Miller)*,
sculptus (Hall),
verrucosus (White),
Poteriocrinites macropleurus (Hall),
Rhodocrinites tuberculatus (W. & Spr.)*,
wortheni urceolatus (W. & Spr.)*,
Steganocrinus araneolus M. & W.,
pentagonus (Hall) (*Actinocrinus*),
Wachsmuthicrinus spinifer (Hall) (*Forbesiocrinus*)

CHOUTEAU LS.⁵: Sedalia (S); Chouteau Springs (CS); 3 mi. n. e. Brown Sta., Boone Co. (B), 5 mi. e. Curryville (C), Pettis Co. (P), Easley (E), Providence, Boone Co. (Pr.), Missouri.

- Actinocrinites albersi* (M. & G.) (S)*,
arrosus (S. A. Miller) (S)* (P) (Cooper Co.) (*Blairocrinus*)
 (not 1894),
bonoensis (Peck and Keyte) (E)*,
chouteauensis (S. A. Miller) (S)* etc.,
foveatus (M. & G.) (S)*,
hemisphericus (M. & W.) (S)* (*Sampsonocrinus*),
jessieae (M. & G.) (S)* (*Amphorocrinus*),
milleri (Peck and Keyte) (S)*,
pellubrum (M. & G.) (S)*,
pettisensis (M. & G.) (S)*,
sampsoni (M. & G.) (S)*,
sedaliensis (S. A. Miller) (S)* (*Amphorocrinus*),
senectus (M. & G.) (S)*,
spinulosus (M. & G.) (S)* (*Blairocrinus*),
tenuisculptus (McChesney) (S),
trijugis (S. A. Miller) (S)* (*Blairocrinus*),
- Agaricocrinites blairi* (M. & G.) (S)*,
montgomeryensis (Peck and Keyte) (Montgomery Co.)* (B),
planoconvexus (Hall) (S),
sampsoni S. A. Miller (S) (CS)*,
- Amphorocrinus blairi* M. & G. (S)*,
Aorocrinus elegans (S. A. Miller) (S)* (*Dorycrinus*),
parvus (Shumard) (C) (S) (*Actinocrinus*),
- Barycrinus sampsoni* M. & G. (S)*,
Batocrinus argutus M. & G. (S)*,
asper M. & G. (S)*,
basilicus M. & G. (S)*,
brittsi S. A. Miller (S)*,
clypeatus (Hall) (S) (*Actinocrinus*),
folliculus M. & G. (S)*,
formaceus M. & G. (S)*,
germanus M. & G. (S)*,
imparilis S. A. Miller (S)*,
incultus S. A. Miller (S)*,
insperatus M. & G. (S)*,
jessieae M. & G. (S)*,
laura (Hall) (S) (*Actinocrinus*),
nanus M. & G. (S)*,
pettisensis M. & G. (S)*,
planus M. & G. (S)*,
proximus M. & G. (S)*,
regalis M. & G. (S)*,
repertus M. & G. (S)*,
sedaliensis S. A. Miller (S)*,
subaequalis (McChesney) (S) (*Actinocrinus*),
subaequatus M. & G. (S)*,
subscitulus M. & G. (S)*,
turbinatus (Hall) (S) (*Actinocrinus*),
- Belemnocrinus sampsoni* S. A. Miller (S)*,
Cactocrinus fossatus (S. A. Miller) (S)* (*Actinocrinus*),
glans (Hall) (S) (*Actinocrinus*),
proboscidualis (Hall) (S) (*Actinocrinus*),
ithalia (Hall) (S) (*Actinocrinus*),
- Cercidocrinus blairi* (M. & G.) (S)* (*Poteroocrinus*),
sampsoni (M. & G.) (S)* (Pr.) (*Poteroocrinus*),

*Although the term Chouteau is retained here the name is limited (Moore, 1918) to lower member of Kinderhook age, while upper member is called Sedalia limestone. Crinoids mainly from upper member of Early Burlington age.

- Codaster blairi* M. & G. (S)* (Pr.),
jessieae M. & G. (S)* (Pr.),
Corocrinus sampsoni (M. & G.) (S)* (*Amphocrinus*),
Cryptoblastus bellatulus Peck (9 mi. n.e. Osceola, Henry Co.)*,
conoideus (Rowley) (C)* (Pr.) (*Lophoblastus*),
missouriensis (Shumard) (Pr.)* (C) (*Granatocrinus*),
pentagonus (Rowley) (Bowling Green)* (C) (*Lophoblastus*),
roemeri (Shumard) (B)* (Cooper Co., etc.) (E) (*Pentremites*),
tenuis (Hambach) (P)* etc. (*Cribroblastus*),
Cyathocrinites chouteauensis (M. & G.) (S)*,
sampsoni (S. A. Miller) (S)*,
Dorycrinus sampsoni M. & G. (S)*,
unicornis (O. & S.) (S) (*Actinocrinus*),
Eretmocrinus leucosia (Hall) (S) (*Actinocrinus*),
minor W. & Sp. (S),
Eutrochocrinus christyi (Shumard) (S) (*Actinocrinus*),
Graphiocrinus admonitus (S. A. Miller) (S)* (*Missouricrinus*),
Hybochilocrinus rowleyi (Peck) (B)* (*Allagecrinus*),
Macrocrinus carica (Hall) (S) (*Actinocrinus*),
Melocrinites sampsoni (M. & G.) (S)*,
Mespilocrinus blairi (M. & G.) (S)* (*Cyathocrinus*),
konincki Hall (S),
Orbitremites chouteauensis Peck (Pr)*,
Orophocrinus stelliformis campanulatus (Hambach) (S)* (*Codonites*),
Pachylocrinus sampsoni (S. A. Miller) (P)* (*Scaphiocrinus*),
Physetocrinus ornatus (Hall) (S) (*Actinocrinus*)
sampsoni M. & G. (S)*,
Platycrinites absentivus (S. A. Miller) (S)* (P),
acclivus (S. A. Miller) (S)*,
aequitermus (S. A. Miller) (S)*,
allophyllus (S. A. Miller) (S)* (Pr) (E),
amabilis (S. A. Miller) (S)*,
annosus (S. A. Miller) (S)* (Pr.),
blairi (S. A. Miller) (S)*,
brittsi (S. A. Miller) (Pin Hook Bridge, near Sedalia)* (P) (Pr),
casula (M. & G.) (S)*,
chouteauensis (S. A. Miller) (S)* (Pr.),
clinatus (M. & G.) (S)*,
colletti (S. A. Miller) (S)*,
concinulus (M. & G.) (S)*,
concinus (S. A. Miller) (S)*,
cortina (M. & G.) (S)*,
curryvillensis (Rowley and Hare) (C)*,
discoideus (O. & S.) (S),
excavatus (Hall) (S),
formosus (M. & G.) (S)*,
formosus approximatus (M. & G.) (S)*,
germanus (M. & G.) (S)*,
gorbyi (S. A. Miller) (S)*,
insolens (Rowley and Hare) (C)* (Ralls Co.),
modestus (M. & G.) (S)*,
occidentalis (S. A. Miller) (S)*,
ollicula (S. A. Miller) (S)*,
pileiformis (Hall) (S),
sampsoni (S. A. Miller) (S),
sculptus (Hall) (S),
semifusus (M. & G.) (S)*,
subscitulus (M. & G.) (S)*,
sulciferus (M. & G.) (S)*,
turgurium (M. & G.) (S)*,
Poteriocrinites ? broadheadi (M. & G.) (S)* (Pr.),
meekianus (Shumard) (Mt. Vernon)* (S) (Pr.) (E),
Rhodocrinites blairi (M. & G.) (S)*,
whitei (Hall) (S) (Pr),

Schizoblastus sayi (Shumard) (S) (*Pentremites*),
Strotocrinus blairi M. & G. (S)*,
Trophocrinus exsertus Peck (B)*,
Uperocrinus pyriformis (Shumard) (S) (*Actinocrinus*)

BURLINGTON L.S.: Lower (LO); Upper (UP); Zone not known (Z). Adams Co. (A),
 Sagetown (S), Honey Creek (H), Quincy (Q), Illinois; Burlington (B), Pleasant
 Grove (PG), Iowa; Louisiana (L), Hannibal (H), Sharon (Sh.), Marion Co. (M),
 Clarksville (C), Missouri; other localities as indicated.

Acrocrinus praecursor Springer (B)* (UP),
Actinocrinities albersi (M. & G.) (B)* (UP) (*Steganocrinus*),
asperrimus (M. & W.) (B) (Q)* (LO),
bischoffi (M. & G.) (B)* (Drift, Danville, Ill.) (Z),
blairi (M. & G.) (Sh.)* (Z) (*Steganocrinus*),
erraticus (M. & G.) (Drift, Danville, Ill.)* (LO),
gracilis (W. & Sp.) (B)* (LO),
griffithi (W. & Sp.) (B)* Mo. and Ill. (UP),
lobatus (Hall)? (B) (UP),
multiradiatus (Shumard) (B) (Q)* (UP),
penicillus (M. & W.) (B)* (LO),
plagosus (M. & G.) (B)* (Z),
scitulum (M. & W.) (Warren Co., Ill.)* (Z); (L) (LO & UP);
 (Monmouth, Ill.) (B) (UP),
sharonensis (M. & G.) (Sh.)* (Z) (*Steganocrinus*),
sobrinus (M. & G.) (B)* (Z),
spectabilis (M. & G.) (B)* (Z),
subpulchellus (M. & G.) (B)* (Z),
subscitulum (M. & G.) (B)* (Z) (Curryville, Mo.),
tenuisculptus (McChesney) (B) (Columbia, Mo.)* (LO),
tuberculosis (W. & Spr.) (B)* (UP),
verrucosus (Hall) (B)* (UP) (Monmouth, Ill.),
Actinocrinus arrosus M. & G. (B)* (Z),
Agaricocrinus adamsensis M. & G. (A)* (Z),
americanus (Roemer) (L) (UP) (*Amphorocrinus*),
bellatrema Hall (B)* (L) (PG) (UP),
bellatrema major W. & S. (B)* (L) (UP),
brevis (Hall) (B)* (L) (H) (Kinderhook, Ill.) (LO) (*Actino-*
crinus),
bullatus Hall (Q)* (B) (Eureka Springs, Ark.) (UP),
convexus Hall (B)* (UP),
excavatus Hall (B) (S) (Brush Creek and Flint River, Ia.)* (UP),
fiscellus (Hall) (B)* (LO) (*Actinocrinus*),
gracilis M. & W. (B)* (UP),
hodgsoni M. & G. (A)*,
illinoisensis M. & G. (A)* (B) (UP),
inflatus Hall (B)* (S) (M) (UP),
louisianensis Rowley (L) (LO),
nodosus M. & W. (B)* (PG) (UP),
planoconvexus Hall (B)* (L) (LO and UP),
pyramidatus (Hall) (B)* (LO) (*Actinocrinus*),
stellatus Hall (Q)* (B) (UP),
Amphorocrinus divergens (Hall) (B)* (LO) (*Actinocrinus*),
spinobrachiatus (Hall) (B)* (LO) (*Actinocrinus*),
Aorocrinus canaliculatus (M. & W.) (B)* (LO) (*Dorycrinus*),
parvus (Shumard) (L) (B) (St. Louis Co., Mo.)* (H) (LO and UP)
 (*Actinocrinus*),
spinosulus (Hall) (B) (UP) (*Actinocrinus*),
subaculeatus (Hall) (B)* (LO) (*Actinocrinus*),
wachsmuthi Rowley (L)* (LO),
Ascetocrinus rusticellus (White) (B)* (LO) (*Poteriocrinus*),
whitei (Hall) (B)* (LO) (*Scaphiocrinus*),
Atelestocrinus delicatus W. & Sp. (B)* (LO),
Barycrinus asperrimus Springer (B)* (LO),
cornutus (O. & S.) (B)* (LO) (*Cyathocrinus*),
kelloggi (White) (B)* (H) (UP) (*Cyathocrinus*),

- latus* (Hall) (A)* (Z) (*Cyathocrinus*)
rhombiferus (O. & S.) (B)* (LO, UP) (*Poteriocrinus*)
sculptilis (Hall) (B)* (UP) (*Cyathocrinus*),
solidus (Hall) (B)* (UP) (*Cyathocrinus*),
wachsmuthi (M. & W.) (B)* (LO) (*Cyathocrinus*),
Batocrinus adamsensis M. & G. (A)* (Z),
aequalis (Hall) (B)* (LO) (*Actinocrinus*),
affinis M. & G. (S)* (Z),
albersi M. & G. (B)* (UP),
approximatus M. & G. (B)* (UP),
argutus M. & G. (B) (LO),
asperatus M. & G. (A)* (Z),
calvini Rowley (L)* (LO),
clypeatus (Hall) (B)* (L) (LO) (*Actinocrinus*),
cognatus M. & G. (B)* (Z),
complanatus M. & G. (B)* (UP),
consanguineus M. & G. (B)* (UP),
curiosus Rowley (not M. & G. 1895) (L)* (LO),
enodatus M. & G. (S)* (Z),
enodis M. & G. (B)* (Z),
faberi M. & G. (A)* (Z),
glaber M. & G. (B)* (UP),
hodgsoni M. & G. (A)* (Z),
insolens M. & G. (B)* (Z),
laura (Hall) (B)* (UP) (*Actinocrinus*),
laura sinuosus (Hall) (B)* (UP) (*Actinocrinus*),
lepidus (Hall) (B)* (LO) (*Actinocrinus*),
levigatus M. & G. (B)* (UP),
levis M. & G. (B)* (UP),
modulus M. & G. (A)* (Z),
nitens M. & G. (B)* (Z),
nodosarius M. & G. (A)* (Z),
nodosus M. & G. (A)* (Z),
nodulosus M. & G. (A)* (Z),
pistillus (M. & W.) (B)* (UP) (*Actinocrinus*),
politus M. & G. (B)* (S)* (Z),
quasillus M. & W. (B)* (LO),
reliquus M. & G. (Sh)* (Z),
remotus M. & G. (B)* (Z),
repositus M. & G. (B)* (UP),
reservatus M. & G. (Sh)* (Z),
rotadentatus R. & H. (L)* (LO),
rotuliformis M. & G. (Sh)* (Z),
rusticellus M. & G. (Sh)* (Z),
?rusticus M. & G. (Sh.) (Z),
sacculus M. & G. (B)* (Z),
sagetownensis M. & G. (S)* (Z),
scitulus M. & G. (Sh)* (Z),
selectus M. & G. (S)* (Z),
senex M. & G. (Sh)* (Z),
sharonensis M. & G. (Sh)* (Z),
shepardi Rowley (Springfield, Mo.)* (Z),
solitarius M. & G. (A)* (Z),
speciosus M. & G. (B)* (UP),
spurius M. & G. (B)* (LO),
subaequalis (McChesney) (B)* (L) (LO) (*Actinocrinus*),
sublevis M. & G. (S)* (Z),
subovatus M. & G. (B)* (UP),
subrotundus M. & G. (B)* (UP),
tuberculatus W. & Sp. (B)* (LO),
turbinatus (Hall) (B)* (Grundy Co., Ill.) (LO) (*Actinocrinus*)
turbinatus elegans (Hall) (B)* (L) (LO) (*Actinocrinus*),
variabilis M. & G. (B)* (UP),
Belemnocrinus pourtalesi W. & Sp. (B)* (LO),
typus White (B)* (UP),
whitei M. & W. (B)* (LO),

- Blothrocrinus cultidactylus* (Hall) (Near Hamburg, Ill.)* (B) (LO, UP) (*Poteriocrinus*),
jesupi (Whitfield) (B)* (Z) (*Poteriocrinus*),
swallovi (M. & W.) (B)* (UP) (*Poteriocrinus*),
Bursacrinus confirmatus White (B)* (LO),
wachsmuthi M. & W. (B)* (UP),
Cactocrinus baccatus Wood (B)* (Z),
clarus (Hall) (B)* (LO) (*Actinocrinus*),
coelatus (Hall) (B)* (LO) (*Actinocrinus*),
coelatus spinoteniaculus (Hall) (B)* (LO) (*Actinocrinus*),
denticulatus W. & Sp. (B)* (LO),
ectypus (M. & W.) (B)* (LO) (*Strotocrinus*),
excerptus (Hall) (B)* (LO) (*Actinocrinus*),
extensus W. & Sp. (B)* (LO),
fosteri (McChesney) (B)* (LO) (*Actinocrinus*),
glans (Hall) (B)* (L) (H) (Ashgrove and Fulton, Mo.) (UP) (*Actinocrinus*),
hurdianus (McChesney) (B)* (LO) (*Actinocrinus*),
limbrachiatatus (Hall) (B)* (LO) (*Actinocrinus*),
longus (M. & W.) (B)* (LO) (*Actinocrinites*),
lucina (Hall) (B)* (L) (LO) (*Actinocrinus*),
multibrachiatatus (Hall) (B)* (LO) (*Actinocrinus*),
obesus (Keyes) (H)* (L) (Q) (M) (UP) (*Actinocrinus*),
opusculus (Hall) (B)* (LO) (*Actinocrinus*),
platybrachiatatus Wood (B)* (Z),
proboscidualis (Hall) (B)* (LO) (*Actinocrinus*),
reticulatus (Hall) (B)* (LO) (*Actinocrinus*),
reticulatus ovatus (Hall) (B)* (LO) (*Actinocrinus*),
sexarmatus (Hall) (B)* (LO) (*Actinocrinus*),
springeri Rowley (L)* (LO),
thalia (Hall) (B)* (LO) (*Actinocrinus*),
thetis (Hall) (B)* (H) (LO) (*Actinocrinus*),
Calceocrinus lamellosus (Hall) (B)* (Z) (*Cheirocrinus*),
Campiocrinus praeunivius Springer (B)* (UP),
Carpenteroblastus magnibasis (Rowley) (L)* (UP) (*Granatocrinus*),
pentagonus Rowley (L)* (LO),
pyriformis (R. & H.) (M)* (UP) (*Granatocrinus*),
stella (Rowley) (L)* (UP) (*Granatocrinus*),
Catillocrinus wachsmuthi (M. & W.) (B)* (UP) (*Symbathocrinus*),
Cercidocrinus bursaeformis (White) (B)* (LO) (*Poteriocrinus*),
Codaster gracillimus R. & H. (L)* (LO),
grandis R. & H. (L)* (UP),
laeviusculus Rowley (L)* (UP),
superbus Rowley (L)* (UP),
Coeliocrinus dilatatus (Hall) (B)* (LO) (*Poteriocrinus*),
lyra (M. & W.) (B)* (UP, LO) (*Poteriocrinites*),
subspinosus White (B)* (UP),
ventricosus (Hall) (B)* (LO) (*Poteriocrinus*),
Coelocrinus concavus (M. & W.) (B)* (Z) (*Actinocrinus*),
Cosmetocrinus delicatus (M. & W.) (B)* (UP, LO) (*Poteriocrinus*),
nanus (M. & W.) (B)* (LO) (*Poteriocrinites*),
Cryptoblastus granulatus (M. & W.) (L) (B) (UP) (*Pentremites*),
melo (O. & S.) (B)* (L) (H) (LO) (*Pentremites*),
melo calcaratus Cline (B)* (H) (L) (LO),
melo cancellatus Cline (B)* (L) (Newark, Mo.) (LO),
melo projectus (M. & W.) (B)* (H) (L) (LO) (*Pentremites*),
melo stellatus Cline (H)* (UP),
pisum (M. & W.) (B)* (L) (UP) (*Granatocrinus*),
rowleyi Cline (L)* (LO),
shumardi (M. & W.) (B)* (LO) (*Granatocrinus*),
Cyathocrinites barrisi (Hall) (B)* (LO) (*Poteriocrinus*),
barydactylus (W. & Sp.) (B)* (UP),
divaricatus (Hall) (B)* (Z),
enormis (M. & W.) (B)* (LO) (*Poteriocrinus*),
faberi (M. & G.) (B)* (Z),
formosus (Rowley) (L)* (LO),

- fragilis* M. & W. (B)* (LO),
gilesi (W. & Sp.) (B)* (UP),
incipiens (Hall) (B)* (UP),
iowensis (O. & S.) (B)* (LO, UP),
lamellosus (White) (B)* (UP),
malvaceus (Hall) (B)* (Z),
rigidus (White) (B)* (LO),
rotundatus (Hall) (B)* (UP, LO),
scitulus (M. & W.) (B)* (Z),
tenuidactylus (M. & W.) (B)* (LO),
viminalis (Hall) (B)* (Z),
Decadocrinus halli (Hall) (B)* (UP) (*Scaphiocrinus*),
scalaris (M. & W.) (B)* (UP) (*Poteriocrinus*),
Dichocrinus angustus White (B)* (UP),
conus M. & W. (Cedar Creek, Warren Co., Ill.)* (B) (LO),
crassitestus White (B)* (UP),
delicatus W. & Sp. (B) (LO),
lachrymosus Hall (B)* (UP),
laevis Hall (B)* (LO),
lineatus M. & W. (B)* (LO),
liratus Hall (B)* (UP),
ovatus O. & S. (B)* (LO),
pendens W. & Sp. (B)* (UP),
pisum M. & W. (B)* (LO),
plicatus Hall (B)* (UP),
pocillum Hall (B)* (Z),
scitulus Hall (B)* (LO) (C) (UP),
striatus O. & S. (B)* (H) (UP),
Dizygocrinus andrewsianus (McChesney) (B)* (UP) (*Actinocrinus*),
dodecadactylus (M. & W.) (B)* (Monmouth, Ill.) (UP) (*Actino-*
crinus),
rotundus (Y. & S.) (Boone Co., Mo.)* (M) (S) (UP) (*Actino-*
crinites),
Dorycrinus cornigerus (Hall) (B)* (S) (UP) (*Actinocrinus*),
faberi M. & G. (B)* (Z),
inflatus R. & H. (L)* (LO),
intermedius M. & W. (B)* (UP),
missouriensis (Shumard) (Palmyra, Mo.)* (H) (B) (UP) (*Actino-*
crinus),
pentalobus Rowley (L)* (White Ledge, Mo.) (UP),
quinquelobus (Hall) (B)* (UP) (*Actinocrinus*),
roemeri M. & W. (B)* (UP),
suboviformis M. & G. (SH.)* (Z),
subturbيناتus M. & W. (B)* (Ash Grove, Mo.) (UP),
unicornis (O. & S.) (B)* (L) (M) (LO) (*Actinocrinus*),
unispinus (Hall) (B)* (LO) (*Actinocrinus*),
Eratocrinus elegans (Hall) (B)* (UP, LO) (*Zeacrinus*),
faggi (R. & H.) Spencer Creek, 2 mi. n. Curryville, Mo.)* (UP)
(*Zeacrinus*),
pikensis (Worthen) (Montezuma, Pike Co., Ill.)* (LO) (*Zeacrinus*),
ramosus (Hall) (B)* (UP) (*Zeacrinus*),
sacculus (White) (B)* (UP) (*Zeacrinus*),
scoparius (Hall) (B)* (LO) (*Zeacrinus*),
serratus (M. & W.) (B)* (UP) (*Poteriocrinus*),
troostanus (M. & W.) (Cedar Creek, Warren Co., Ill.)* (Z) (*Zea-*
crinus),
Eretmocrinus attenuatus (Hall) (B)* (Z) (*Actinocrinus*),
brevis Rowley (White Ledge, Mo.)* (UP),
calyculoides (Hall) (B)* (LO, UP) (*Actinocrinus*),
calyculoides nodosus W. & Sp. (B)* (PG) (UP),
clio (Hall) (B)* (LO) (*Actinocrinus*),
cloelia (Hall) (B)* (H) (PG) (UP) (*Actinocrinus*),
corbulis (Hall) (B)* (L) (LO) (*Actinocrinus*),
coronatus (Hall) (B)* (L) (LO) (*Actinocrinus*),

- depressus* Keyes (H)* (B) (UP, LO),
expansus Keyes (Kinderhook, Ill.)* (LO),
leucosia (Hall) (B)* (L) (LO) (*Actinocrinus*),
matuta (Hall) (B)* (UP) (*Actinocrinus*),
minor W. & Sp. (B)* (UP),
neglectus M. & W. (B)* (LO),
nodosus Rowley (L)* (UP),
?parvus Rowley (L)* (LO),
remibrachiatus (Hall) (B)* (UP, LO) (*Actinocrinus*),
rugosus W. & Sp. (B)* (LO),
Eucladocrinus pleuroviminus (White) (B)* (UP) (*Platycrinus*),
praenuntius (W. & Sp.) (B)* (UP) (*Platycrinus*),
tuberosus (Hall) (B)* (UP) (*Platycrinus*),
Eutrochocrinus christyi (Shumard) (Palmyra, Mo.)* (L) (B) (Rocheport, Mo.)
(S) (Ogawwka, Ill.) (UP) (*Actinocrinus*),
lovei (W. & Sp.) (B)* (UP) (*Batocrinus*),
trochiscus (M. & W.) (B)* (UP) (*Batocrinus*),
Forbesiocrinus agassizi Hall (B)* (UP),
burlingtonensis Springer (B)* (UP),
Gilbertsocrinus fuscillus (M. & W.) (B)* (LO) (*Trematocrinus*),
obovatus M. & W. (B)* (Monmouth, Ill.) (UP),
reticulatus (Hall) (B)* (LO) (*Trematocrinus*),
lenusradiatus M. & W. (B)* (LO),
tuberculosus (Hall) (B)* (Pike Co., Mo.) (UP) (*Trematocrinus*),
typus (Hall) (B)* (M) (UP) (*Trematocrinus*),
Graphiocrinus antiquus (M. & W.) (B)* (*Erisocrinus*) (LO)
rudis (M. & W.) (B)* (UP) (*Poteriocrinites*),
simplex (Hall) (B)* (UP) (*Poteriocrinus*),
spinobrachiatus Hall (B)* (Weaver, Lee Co., Ia.) (UP),
striatus (M. & W.) (B)* (LO) (*Poteriocrinites*),
subimpressus (M. & W.) (B)* (LO) (*Poteriocrinus*),
tortuosus (Hall) (B)* (Z) (*Scaphiocrinus*),
wachsmuthi (M. & W.) (B)* (LO) (*Poteriocrinus*),
whitei (M. & W.) (B)* (UP) (*Erisocrinus*),
Halysiocrinus dactylus (Hall) (B)* (UP) (*Cheirocrinus*),
wachsmuthi M. & W. (B)* (UP, LO),
Histocrinus juvenis (M. & W.) (B)* (LO) (*Poteriocrinus*),
Hypselocrinus calyculus (Hall) (B)* (UP) (*Poteriocrinus*),
fusiformis (Hall) (B)* (Z) (*Poteriocrinus*),
macrodactylus (M. & W.) (B)* (LO UP) (*Poteriocrinites*),
tethys (M. & W.) (B)* (UP LO) (*Poteriocrinites*),
Linocrinus asper (M. & W.) (B)* (LO) (*Poteriocrinites*),
penicillus (M. & W.) (B)* (LO UP) (*Poteriocrinites*),
perangulatus (White) (B)* (UP) (*Zacrinus*),
scobina (M. & W.) (B)* (UP) (*Poteriocrinites*),
Lophoblastus inopinatus (R. & H.) (L)* (LO) (*Codonites*),
marginulus Rowley (L)* (LO),
Macrocrinus carica (Hall) (B)* (LO) (*Actinocrinus*),
gemmiformis (Hall) (B)* (LO) (*Actinocrinus*),
konincki (Shumard) (Rocheport, Boone Co., or Palmyra, Marion Co.,
Mo.)* (H) (B) (UP) (*Actinocrinus*),
verneuillianus (Shumard) (Rocheport, etc., Mo.)* (L) (B) (Hen-
derson Co., Ill.) (UP) (*Actinocrinus*),
Megistocrinus evansii (O. & S.) (B)* (LO) (*Actinocrinus*),
evansii crassus White (B)* (LO),
Mespilocrinus chapmani Springer (B)* (UP),
konincki Hall (B)* (LO),
thiemei Springer (B)* (LO),
Metablastus lineatus (Shumard) (Monmouth, Ill.)* (S) (UP); (B) (LO); (*Pen-
tremites*),
Metichthyocrinus burlingtonensis (Hall) (B)* (LO) (*Ichthyocrinus*),
Nipterocrinus arboreus M. & W. (B)* (LO),
wachsmuthi M. & W. (B)* (LO),
Onychocrinus asteriaeformis (Hall) (B)* (UP) (*Forbesiocrinus*),
diversus M. & W. (B)* (UP),

- Orbitremites aplatatus* (R. & H.) (L)* (North of Curryville, Mo.) (LO, UP) (*Granatocrinus*),
calycinus Rowley (L)* (UP),
concinulus (R. & H.) (L)* (LO) (*Granatocrinus*),
excavatus (R. & H.) (L)* (LO) (*Granatocrinus*),
exiguus (R. & H.) (L)* (LO) (*Granatocrinus*),
fimbriatus (M. & W.) (B)* (UP) (*Granatocrinus*),
magnificus (Hambach) (Southwestern Mo.)* (LO) (*Globoblastus*),
norwoodi (O. & S.) (B)* (Augusta, Ia) (Oquawka, etc., Ill.) (Hannibal and near Curryville, Mo.) (L) (UP) (*Pentremites*),
ornatus (Hambach) (Mo)* (Z) (*Globoblastus*),
parvus (Hambach) (Boone chert) (Joplin, Mo.)* (*Cidaroblastus*),
spathatus (Hambach) (Allentown, St. Louis Co., Mo.)* (Z) (*Globoblastus*),
winslowi (M. & G.) (Drift at Danville, Ill.)* (Z) (*Granatocrinus*),
- Orophocrinus gracilis* (M. & W.) (B)* (LO) (*Codonites*),
sirius (White) (B)* (LO UP) (*Pentremites*),
stelliformis (O. & S.) (B)* (L) (Hannibal and Fulton, Mo.) (LO) (*Pentremites*),
stelliformis catactus (Rowley) (L)* (LO) (*Codonites*),
whitei (Hall) (B)* (Z) (*Codaster*),
- Pachylocrinus carinatus* (Hall) (B)* (UP LO) (*Scaphiocrinus*),
clio (M. & W.) (B)* (UP) (*Poteroicrinus*),
cuneatus (Quenstedt) (Iowa)* (B) (Z) (*Poteroicrinites*),
dichotomus (Hall) (Q)* (Z) (*Poteroicrinus*),
liliformis (M. & W.) (B)* (UP) (*Poteroicrinites*),
ramulosus (Hall) (B)* (Z) (*Scaphiocrinus*),
- Parichthyocrinus nobilis* (W. & Sp.) (B)* (UP) (*Ichthyocrinus*),
Parisocrinus perplexus (M. & W.) (B)* (LO) (*Poteroicrinus*),
saliginoides (White) (B)* (UP) (*Poteroicrinus*),
tenuibrachiatus (M. & W.) (B)* (UP) (*Poteroicrinus*),
- Pelecocrinus aqualis* (Hall) (B)* (LO) (*Poteroicrinus*),
fiscellus (M. & W.) (B)* (LO) (*Poteroicrinus*),
lepidus (Hall) (B)* (Z) (*Poteroicrinus*),
solidus (M. & W.) (B)* (Z) (*Poteroicrinus*),
tenuidactylus (M. & W.) (B)* (UP) (*Poteroicrinus*),
- Pentremites burlingtonensis* M. & W. (B)* (UP),
elongatus Shumard (C) (Near Columbia, Mo.)* (S) (B) (UP),
kirki Hambach (B)* (LO),
- Periechocrinites ? tenuidiscus* (Hall) (B)* (LO) (*Actinocrinus?*),
whitei (Hall) (B)* (H) (LO UP) (*Actinocrinus*),
- Physetocrinus asper* (M. & W.) (B)* (UP) (*Strotocrinus*),
dilatatus (M. & W.) (B)* (UP) (*Strotocrinus*),
ornatus (Hall) (B)* (LO) (*Actinocrinus*),
ventricosus (Hall) (B)* (S) (H) (LO UP) (*Actinocrinus*),
- Platycrinites altidorsatus* (R. & H.) (L)* (UP),
americanus (O. & S.) (B)* (LO),
aqualis (Hall) (B)* (UP),
asper (Hall) (B)* (UP),
brevinodus (M. & W.) (B)* (UP),
burlingtonensis (O. & S.) (B)* (H) (LO),
caliculus (Hall) (B)* (Z),
canaliculatus (Hall) (B)* (UP LO),
cavus (Hall) (B)* (UP),
corbuliformis (R. & H.) (L)* (LO),
davisi (W. & Sp.) (H)* (LO),
discoideus (O. & S.) (B)* (M) (LO),
elegans (Hall) (B)* (UP),
eminulus (Hall) (B)* (LO),
excavatus (Hall) (B)* (UP),
geometricus (W. & Sp.) (B)* (UP),
glyptus (Hall) (B)* (UP),
gorbyi (S. A. Miller) (B) (LO),
halli (Shumard) (B)* (L) (UP),

- hodgsoni* (M. & G.) (A)* (Z),
illinoisensis (M. & G.) (A)* (Z),
incomptus (White) (B)* (UP),
marginatus (R. & H.) (2 mi. n. Curryville, Mo.)* (UP),
nodostriatus (W. & Sp.) (B)* (UP),
ornigranulus (McChesney) (B)* (LO),
parviodus (Hall) (B)* (LO),
pileiformis (Hall) (B)* (LO),
pisum (R. & H.) (L)* (LO),
planus (O. & S.) (B)* (L) (LO UP),
pocilliformis (Hall) (B)* (LO),
pratteni (Worthen) (B)* (LO),
quinquenodus (White) (B)* (UP),
regalis (Hall) (B)* (LO),
sampsoni (S. A. Miller) (B)* (UP),
scobina (M. & W.) (B)* (LO),
sculptus (Hall) (B)* (LO),
sharonensis (M. & G.) (Sh)* (Z),
spinifer (W. & Sp.) (B)* (LO),
spinifer elongatus (W. & Sp.) (B)* (LO),
subspinus (Hall) (B)* (LO),
subspinulosus (Hall) (B)* (UP),
tenuibrachiatus (M. & W.) (B)* (Edwardsville, Ind.) (UP),
truncatulus (Hall) (B)* (LO),
verrucosus (White) (B)* (LO),
wortheni (Hall) (B)* (LO),
yandelli (O. & S.) (B)* (LO),
yandelli perasper (M. & W.) (B)* (LO),
- Poteriocrinites* *doris* (Hall) (B)* (UP),
macropleurus (Hall) (B)* (LO) (*Cyathocrinus*),
notabilis (M. & W.) (B)* (LO),
obuncus (White) (B)* (LO),
robbsi (Roy) (B)* (Z),
waltersi (R. & H.) (L)* (LO),
- Rhodocrinites* *barrisi* (Hall) (B)* (UP),
barrisi divergens (Hall) (B)* (H) (PG) (UP),
barrisi striatus (W. & Sp.) (B)* (UP),
nanus (M. & W.) (B)* (LO),
truncatus (W. & Sp.) (B)* (UP),
wachsmuthi (Hall) (B)* (LO),
whitei (Hall) (B)* (LO),
wortheni (Hall) (B)* (H) (L) (LO),
- Schizoblastus* *burlingtonensis* Cline (B)* (UP),
etheridgei Cline (B)* (UP),
incisus (Hambach) (B)* (L) (LO) (*Crioblastus*),
laudoni Cline (Dolbe Creek, southeastern Iowa)* (LO),
melonoides (M. & W.) (B)* (UP) (*Granatocrinus*),
neglectus (M. & W.) (B)* (LO) (*Granatocrinus*),
sayi (Shumard) (M)* (South of Springfield, Mo.) (H) (B) (L)
 (Curryville, Mo.) (Elsah, Ill.) (UP) (*Pentremites*),
sayi bellulus Cline (H)* (Springfield, Mo.) (UP) (s.e. Iowa) (LO),
sayi obesus Cline (H)* (Sedalia, Mo.)* (LO),
sayi potteri (Hambach) (B)* (U) (Springfield, Mo.) (*Pentremites*),
sayi verrucosus (Hambach) (Allentown, Mo.)* (Z) (B) (*Crioblastus*),
tenuistriatus (Hambach) (Cooper Co., Mo.)* (Z) (*Crioblastus*),
- Steganocrinus* *araneolus* (M. & W.) (B)* (LO) (*Actinocrinus*),
concinus (Shumard) (North River, Marion Co., Mo.)* (Jersey Co., Ill.) (B) (H) (UP) (*Actinocrinus*),
griffithi M. & G. (B)* (UP),
pentagonus (Hall) (B)* (L) (LO) (*Actinocrinus*),
sculptus (Hall) (B)* (LO) (*Actinocrinus*),
- Strotocrinus* *glyptus* (Hall) (B)* (H) (UP) (*Actinocrinus*),
ornatus M. & G. (B)* (Z),

- perumbrosus* (Hall) (B)* (Z) (*Actinocrinus*),
regalis (Hall) (B)* (L) (Pike Co., Mo.) (UP) (*Actinocrinus*),
venustus M. & G. (B)* (Z),
Synbathocrinus brevis M. & W. (B)* (LO),
 dentatus O. & S. (B)* (M) (UP),
 illinoisensis M. & G. (A)* (Z),
 papillatus Hall (B)* (L) (Z),
 wachsmuthi M. & W. (B)* (LO),
 wortheni Hall (Jersey Landing, Ill.)* (B) (UP),
Taxocrinus juvenis (Hall) (B)* (LO) (*Forbesiocrinus*),
 ornatus Springer (B)* (LO),
 ramulosus (Hall) (B)* (UP) (*Forbesiocrinus*),
Teleiocrinus adolescens W. & Sp. (B)* (LO UP),
 althea (Hall) (B)* (PG) (UP) (*Actinocrinus*),
 liratus (Hall) (B)* (UP) (*Actinocrinus*),
 rudis (Hall) (B)* (UP) (*Actinocrinus*),
 tenuiradiatus (Hall) (B)* (UP) (*Actinocrinus*),
 umbrosus (Hall) (B)* (UP) (*Actinocrinus*),
Uperocrinus aequibrachiatus (McChesney) (Monmouth, Ill.)* (B) (L) (H) (UP) (*Actinocrinus*),
 aequibrachiatus asteriscus (M. & W.) (Cedar Creek, Warren Co., Ill.)* (Monmouth, Ill.) (B) (H) (UP) (*Actinocrinus*),
 dubius (Rowley) (L)* (LO) (*Lobocrinus*),
 dubius pustulosus (Rowley) (L)* (LO) (*Lobocrinus*),
 hageri (McChesney) (B)* (UP) (*Actinocrinus*),
 inflatus (R. & H.) (L)* (LO) (*Batocrinus*),
 insolitus (Rowley) (White Ledge, Mo.)* (LO) (*Lobocrinus*),
 longirostris (Hall) (B)* (L) (LO) (*Actinocrinus*),
 nashvillae subtractus (White) (B)* (Nauvoo, Ill.) (S) (UP) (*Actinocrinus*),
 pyriformis (Shumard) (Palmyra, Mo.)* (B) (S) (UP) (*Actinocrinus*),
Wachsmuthicrinus bernhardinae Springer (B)* (LO),
 iowensis Springer (B)* (UP),
 spinifer (Hall) (B)* (LO) (*Forbesiocrinus*),
 thiemei (Hall) (B)* (H) (LO) (*Forbesiocrinus*),
Whiteocrinus florifer (W. & Sp.) (B)* (UP) (*Belemnocrinus*)
- BURLINGTON-KEOKUK TRANSITION BEDS:** Nauvoo (N), Sagetown (S), Illinois; Canton (C), Indiana; Burlington (B), Pleasant Grove (PG), Des Moines Co. (DM. Co.), Iowa.
- Actinocrinites lobatus* (Hall) (PG) (C),
Agaricocrinus excavatus Hall (N),
Atelestocrinus robustus W. & Sp. (B)*,
Baryocrinus angulatus (M. & W.) (S) (*Cyathocrinus*),
 sculptilis Hall (B),
Eretmocrinus ramulosus (Hall) (B)* (N) (*Actinocrinus*),
 remibrachiatus expansus W. & Sp. (B)* (S),
Eucladocrinus millebrachiatus W. & Sp. (B)*,
 millebrachiatus immaturus W. & Sp. (B)*,
Eutrochocrinus trochiscus (M. & W.) (B) (PG) (DM. Co.) (*Batocrinus*),
Gilbertsocrinus typus (Hall) (B) (*Trematocrinus*),
Onychocrinus diversus M. & G.? (B),
Parichthyocrinus nobilis W. & Sp. (Nashville, Lee Co., Iowa),
Periechocrinites whitei (Hall) (B) (*Actinocrinus*),
Platycrinites saffordi (Hall) (B),
Sarocrinus carinatus Kirk (B)*,
Scytalocrinus robustus (Hall) (B) (*Scaphiocrinus*)
- KEOKUK LS. (FT. PAYNE CH.):** Allen Co. (A), Barren Co. (B), Hardin Co. (H), Metcalf Co. (M), Kentucky; Whites Creek Springs, 12 mi. n. Nashville (WC) and Eagle Hill, 7 mi. n.e. Livingstone (E), Tennessee; other localities as indicated.
- Actinocrinites botruosus* (M. & G.) (Tenn.)*,
 jugosus (Hall) (B) (E),
 lowei (Hall) (B),

- magnificus* (W. & Sp.) (WC),
monticuliferus (M. & G.) (Tenn.)*,
pernodosus (Hall) (B) (WC) (E),
Adinocrinus nodosus (W. & Sp.) (WC)* (*Zeacrinus*),
Agaricocrinus americanus (Roemer) (WC)* (M) (B) (A) (E) (Newmarket, Ky.)
 (*Amphoracrinus*),
americanus tuberosus (Troost) (WC)*,
arcula M. & G. (WC)* (B),
attenuatus Wood (WC)*,
coreyi (L. & C.) (H)* (A) (WC) (*Actinocrinus*),
crassus Wetherby (WC)* (M) (A) (B),
depressus (C. & L.) (H)* (*Alloprosallocrinus*),
elegans Wetherby (WC)* (M) (B) (A) (E),
nodulosus Worthen (WC) (E),
ponderosus Wood (WC)*,
profundus M. & G. (Tenn.)* (M) (A) (B),
turgurium M. & G. (Brown Co., Ky.)*,
whitfieldi Hall (H),
wortheni Hall (Blount Co., Ala.),
Alloprosallocrinus celsus M. & G. (Tenn.)* (Knobs s. Louisville, Ky.),
conicus C. & L. (H)* (M) (B) (WC) (E) (Glasgow, Ky.),
tuberculosis (Troost) (WC)* (*Conocrinites*)
Atelestocrinus robustus W. & Sp. (WC)* (?New Providence),
Barycrinus bullatus (Hall) (WC) (*Cyathocrinus*),
expansus M. & G. (WC)*,
hoveyi (Hall) (WC) (Harpeth Ridge, Tenn.) (*Cyathocrinus*),
pentasphaericus (Troost) (Cannon Co., Tenn.)* (*Cyathocrinites*),
stellatus (Hall) (Stewart Co., Tenn.)* (H) (WC) (Newmarket, Tay-
 lor Co., Ky.) (*Cyathocrinites*),
subtumidus (M. & W.) (WC) (Larue Co., Ky.) (*Cyathocrinus*),
Batocrinus casualis M. & G. (Tenn.)*,
casula M. & G. (Little Barren River, Ky.)*,
curiosus M. & G. (A)*,
honorabilis M. & G. (B) (Tenn.)*,
icosidactylus ? Caseday (7 mi. n.e. Hodgenville, Ky.),
gibbosus (Troost) (WC)* (*Actinocrinites*),
grandis (Lyon) (WC) (*Actinocrinus*),
lacinosus M. & G. (Tenn.)*,
laterna M. & G. (WC)*,
rudis M. & G. (Little Barren River, Ky.)*,
sayi (Troost) (WC)* (*Actinocrinites*),
springeranus Bassler (E)*,
wetherbyi M. & G. (WC)*,
Carpenteroblastus veryi Rowley (7 mi. n. Burksville, Ky.)*,
Clidochirus greenei (S. A. Miller) (Muldrough Hill, Ky.)* (*Ichthyocrinus*) (?Nia-
 garan, Jefferson Co., Ky.),
Cyathocrinites saffordi (M. & W.) (WC)*,
Dichocrinus ficus C. & L. (H)*,
ornatus W. & Sp. (H)*,
Dizygocrinus decoris (S. A. Miller) (B) (*Batocrinus*),
sacculus (S. A. Miller) (WC) (Stewart Co., Tenn.) (*Batocrinus*),
whitei (W. & S.) (B) (*Batocrinus*),
Dorycrinus alabamensis M. & G. (Chert Hill, Ala.)*,
gouldi (Hall) (A) (B) (WC) (E) (*Actinocrinus*),
Eretmocrinus magnificus L. & C. (Clear Creek, Hardin Co., Ky.)* (¼ mi. s.w.
 Goodlettsville, Tenn.) (WC) (E),
praegravis S. A. Miller (B) (WC)
ramulosus (Hall) (H) (WC) (6 mi. w. Edgemoad Sta., Tenn.)
 (*Actinocrinus*),
spinus (M. & G.) (Little Barren River, Ky.)* (Cannon Co.,
 Tenn.) (*Batocrinus*),
Forbesiocrinus multibrachiatus L. & C. (H),
pyriformis M. & G. (Muldrough Hill, Hardin Co., Ky.)* (WC),
saffordi Hall (WC)*,
Halysiocrinus tunicatus (Hall) (5 mi. s. Louisville, Ky.) (*Cheirocrinus*),

- Onychocrinus exsculptus* L. & C. (H)*,
ramulosus (L. & C.) (B) (H) (*Forbesiocrinus*),
Orbitremites grandis Rowley (Green Co., Ky.)*,
Paradichocrinus polydactylus (L. & C.) (H) (*Dichocrinus*),
Pellecrinus hexadactylus (L. & C.) (H)* (*Cyathocrinus*),
Platycrinites saffordi (Hall) (Scottsville, Ky.)*,
vascellum (M. & G.) (Tenn.)*,
Stemmatocrinus ? veryi Rowley (Cumberland Co., Ky.)*,
Synbathocrinus granulatus Troost (WC)*,
troosti Wood (WC)*,
Uperocrinus nashvillae (Troost) (WC)* (A) (B) (E) (Glasgow, Ky.) (*Actino-*
crinites),
robustus W. & Sp. (WC)* (E) (L)
- KEOKUK LS.:** Warsaw (W), Nauvoo (N), Niota (Ni), Hamilton (H), Greene Co. (Gr.Co.), Monroe Co. (Mo.Co.), Otter Creek, Jersey Co. (J.Co.), Alton (Al), Biggsville (B), Hancock Co. (Ha.Co.), Sagetown (S), Otterville (O), Illinois; Keokuk (K), Augusta (A), Mt. Pleasant (Mt.P.), Bonaparte (Bo), Montrose (M), Nashville, near Keokuk (Na), Iowa; Clark Co. (Fox River, near Wayland) (Cl.Co.), St. Louis Co. (St.L.Co.), New Bloomfield (N.B.), Joplin (J), Curryville (Cu), Missouri.
- Abrotocrinus occidentalis* (Worthen) (H)* (*Poteriocrinus*),
orestes (Worthen) (K)*, (*Poteriocrinus*),
Actinocrinites augustatus (M. & G.) (Gr.Co.)*,
gibsoni (M. & G.) (K),
jugosus (Hall) (W)* (St.L.Co.) (K),
lobatus (Hall) (W)* (K),
lowei (Hall) (K)* (H) (W) (Cl.Co.) (N)*,
magnificus (W. & Sp.) (W),
pernodosus (Hall) (W)* (Ha.Co.) (Cl.Co.) (K),
unicarinatus (Hall) (N)* (K),
Agaricocrinus americanus (Roemer) (A) (H) (N) (Ni) (J.Co.) (W) (Cl.Co.) (K) (*Amphocrinus*)
americanus tuberosus (Troost) (K) (N),
conicus ? W. & Sp. (K),
crassus Wetherby (K),
elegans Wetherby (H) (Ha.Co.) (Ni) (K),
iowensis M. & G. (K)* (W) (Cl.Co.) (A),
keokukensis M. & G. (K)*,
nodulosus Worthen (K)* (H) (Ha.Co.) (Cl.Co.),
nodulosus macadamsi Worthen (J.Co.)* (H) (W) (Cl.Co.) (K),
whitfieldi Hall (Gr.Co.)* (J.Co.) (Cl.Co.) (K),
wortheni Hall (W)* (H) (J.Co.) (Cl.Co.) (K),
Aorocrinus spinosulus (Hall) (N)* (H) (W) (K) (*Actinocrinus*),
Barycrinus angulatus (M. & W.) (N)* (S) (W) (*Cyathocrinus*),
bullatus (Hall) (Gr.Co.)* (W) (K) (*Cyathocrinus*),
crassibrachiatus (Hall) (W)* (*Cyathocrinus*),
geometricus M. & W. (W)*,
herculeus M. & W. (K),
magister (Hall) (K)* (Ha.Co.) (Cl.Co.) (*Cyathocrinus*),
magnificus M. & W. (B)* (K),
mammatus M. & W. (J.Co.)* (K),
pentagonus M. & W. (J.Co.)* (W),
spectabilis M. & W. (J.Co.)*,
spurius (Hall) (W)* (H) (Ni) (K) (*Cyathocrinus*),
stellatus (Troost) (W) (H) (Cl.Co.) (K) (*Cyathocrinites*),
striatus Worthen (J.Co.)*,
subtumidus (M. & W.) (Gr.Co.)* (*Cyathocrinus*),
tumidus (Hall) (W)* (H) (Ni) (K) (*Cyathocrinus*),
Batocrinus burketi M. & G. (H)*,
mundulus (Hall) (W)* (N) (K) (*Actinocrinus*),
signatus M. & G. (K)*,
steropes (Hall) (H)* (Ha.Co.) (*Actinocrinus*),
Codaster graciosus S. A. Miller (N.B.)*,
Cryptoblastus granulatus (M. & W.) (W)* (O) (J.Co.) (*Pentremites*),

- Cyathocrinites andersoni* (M. & G.) (K)*,
farleyi (M. & W.) (W)*,
granulosus (Rowley) (Cl.Co.)*,
nodosus (W. & Sp.) (H),
parvibrachiatus (Hall) (K)* (Bo.) (H),
snivelyi (Rowley) (Cl.Co.)*,
Cydrocrinus coxanus (Worthen) (H) (*Poteroicrinus*),
subramulosus (Worthen) (K)* (*Poteroicrinus*),
Decadocrinus penicilliformis (Worthen) (H)* (Bo) (*Poteroicrinus*),
Dichocrinus coxanus Worthen (H)*,
ficus Casseday & Lyon (K),
hamiltonensis Worthen (H)*,
ornatus W. & Sp. (Mt.P.),
Dizygocrinus biturbinatus (Hall) (N)* (W) (K) (H) (Cl.Co.) (*Actinocrinus*),
euconus? (M. & W.) (Cl.Co.) (*Actinocrinus*),
euconus abscissus (R. & H.) (Cu)* (Cl.Co.) (K) (*Batocrinus*),
montgomeryensis (Worthen) (H) (K) (*Batocrinus*),
montgomeryensis unibrachiatus W. & Sp. (K)* (H),
originarius adultus (W. & Sp.) (H) (*Eretmocrinus*),
whitei (W. & Sp.) (H) (K) (*Batocrinus*),
whitei didactylus W. & Sp. (K)*,
Dorycrinus gouldi (Hall) (W)* (H) (K) (*Actinocrinus*),
mississippiensis Roemer (W)* (H) (N) (Ni) Cl.Co. (K),
Eratocrinus coxanus (Worthen) (H)* (B) (*Zeacrinus*),
orbicularis (Hall) (K)* (*Scaphiocrinus*),
Eretmocrinus ramulosus (Hall) (A) (*Actinocrinus*),
Eucladocrinus millebrachiatus W. & Sp. (N) (Ni) (K),
Eutrochocrinus planodiscus (Hall) (N)* (M) (*Batocrinus*),
Forbesiocrinus wortheni Hall (K)* (Ni) (Ha.Co.) (N) (J) (H) (Cl.Co.),
Gilbertsocrinus faberi (M. & G.) (J)* (*Goniasteroidocrinus*),
tuberosus (L. & C.) (K) (*Goniasteroidocrinus*).
Graphiocrinus mcadamsi (M. & W.) (J.Co.)* (*Poteroicrinus*),
Halysiocrinus nodosus (Hall) (K) (*Cheirocrinus*),
robustus (Worthen) (H)* (*Calceocrinus*),
tunicatus (Hall) (K)* (W) (Ni) (*Cheirocrinus*),
Macrocrinus lagunculus (Hall) (W)* (K) (*Actinocrinus*),
Metablastus wortheni (Hall) (N)* (O) (H) (K) (*Pentremites*),
Onychocrinus exsculptus L. & C. (N) (Na) (Mo.Co.) (K),
Pachylocrinus asperatus (Worthen) (K)* (B) (*Poteroicrinus*),
briareus (Worthen) (K)* (*Poteroicrinus*),
burkeli (Worthen) (H)* (*Poteroicrinus*),
extensus (W. & Sp.) (K)* (*Poteroicrinus*),
latidactylus (Worthen) (H)* (*Poteroicrinus*),
nawooensis (Worthen) (N)* (*Poteroicrinus*),
obscurus (W. & Sp.) (K)* (*Scaphiocrinus*),
Parichthyocrinus meeki (Hall) (W)* (Na) (*Forbesiocrinus*),
nobilis (W. & Sp.) (Na) (*Ichthyocrinus*),
Parisocrinus intermedius (Hall) (W)* (K) (*Cyathocrinus*),
Platycrinites niotensis (M. & W.) (Ni)* (N) (H) (K),
planus (O. & S.) (N.B.),
saffordi (Hall) (W)* (N),
sarae (Hall) (W),
Poteroicrinites arachnaeformis (Worthen) (W)*,
illinoisensis (Worthen) (W)*,
mammaeformis (Worthen) (W)*,
otterensis (Worthen) (J.Co.)*,
ulrichi (Worthen) (K)*,
validus (Worthen) (W)*,
Rhodocrinites coxanus (Worthen) (K)*,
Sarocrinus? keokuk (Worthen) (K)* (*Zeacrinus*),
tentaculatus (Worthen) (K)* (*Poteroicrinus*),
Scytalocrinus decadactylus (M. & W.) (Appanoose, Ha.Co.)* (K) (*Poteroicrinus*),
hamiltonensis (Worthen) (H)* (*Poteroicrinus*),
robustus (Hall) (H) (K) (*Scaphiocrinus*),
Strotocrinus regalis (Hall) (N.B.)* (*Actinocrinus*),

- Synbathocrinus swallowi* Hall (K),
Tricoelocrinus woodmani (M. & W.) (K) (*Pentremites*),
Uperocrinus nashvillae (Troost) (H) (W) (K) (*Actinocrinites*),
Woodocrinus tentaculatus (Worthen) (K)* (*Poteriocrinus*),
Zeacrinites planobrachiatus (M. & W.) (Mo.Co.)*
- KEOKUK LS. (UPPER BORDEN):** Crawfordsville (C) and Indian Creek, Montgomery Co. (IC), Bono, Lawrence Co. (B), Montgomery Co. (M), Washington Co. (W) near Canton, Washington Co. (Ca), Edwardsville (E), Harrison Co. (H), Indiana.
- Abrotocrinus cymosus* M. & G. (W)* (IC) (Ca),
unicus (Hall) (C)* (IC) (*Scaphiocrinus*),
Actinocrinites benedicti (S. A. Miller) (Ca)* (H) (*Steganocrinus*),
gibsoni (M. & G.) (IC)*,
lobatus (Hall) (C) (Ca),
lowei (Hall) (Ca),
magnificus (W. & Sp.) (IC)*,
multiramosus (W. & Sp.) (IC)*,
multiramosus altidorsatus (Rowley) (W)*,
pernodosus (Hall) (Ca),
semimultiramosus Whitfield (Salem)*,
Agaricocrinus americanus (Roemer) (IC) (*Amphorocrinus*),
conicus W. & Sp. (IC)*,
coreyi (L. & C.) (W) (*Actinocrinus*),
nodulosus Worthen (Ca) (Vermillion Co.),
nodulosus macadamsi Worthen (C) (IC),
splendens M. & G. (C)* (IC) (W) (Ca),
Alloprosallocrinus conicus L. & C. (M),
Aulocrinus agassizi W. & Sp. (IC)*,
Barycrinus angulatus M. & W. (C),
bullatus Hall (C),
expansus M. & G. (W) (M),
formosus M. & G. (W)* (IC),
herculeus M. & W. (C)* (IC),
hoveyi (Hall) (C)* (IC) (*Cyathocrinus*)
neglectus M. & G. (C)*
pentagonus M. & W. (C),
princeps M. & G. (C)* (IC),
stellatus (Hall) (C) (IC) (*Cyathocrinus*),
stellifer S. A. Miller (W)* (C),
striatus Worthen (IC),
tumidus (Hall) (C) (IC) (Ca) (*Cyathocrinus*),
washingtonensis M. & G. (W)*,
Balocrinus cantonensis M. & G. (Ca)*
commendabilis (M. & G.) (C)* (*Eretmocrinus*),
decrepitus S. A. Miller (C)*,
grandis (Lyon) (C)* (*Actinocrinus*),
labellum M. & G. (W)*,
marinus M. & G. (C)*,
mundulus (Hall) (C) (Ca) (H) (*Actinocrinus*),
Campptocrinus crawfordsvillensis Springer (C)*,
myelodactylus W. & Sp. (IC)*,
pleniccirrus Springer (C)*,
Catillocrinus shumardi Springer (IC)*,
Cestocrinus striatus Kirk (IC),
Cosmetocrinus crawfordsvillensis (M. & G.) (C)* (*Poteriocrinus*),
gracilis Kirk (IC)*,
indianensis (M. & W.) (C)* (*Poteriocrinus*),
Cryptoblastus granulatus M. & W. (C),
Cyathocrinites arboreus (M. & W.) (C)*,
benedicti (S. A. Miller) (C)*,
brevisacculus (W. & Sp.) (IC)*,
gorbyi (S. A. Miller) (Gosport, Ind.)*,
gurleyi (S. A. Miller) (W)*,
harrodi (W. & Sp.) (Ca)* (IC),

- insperatus* (Lyon) (C)* (IC)
multibrachiatus L. & C. (C)* (IC) (W) (M),
nodosus (W. & Sp.) (IC)*,
opimus (M. & G.) (C)*,
parvibrachiatus (Hall) (IC) (M),
poterium (M. & W.) (C)*,
signatus (M. & G.) (W)*,
Cydropocrinus concinnus (M. & W.) (C)* (IC) (*Poteriocriniles*),
coxanus (Worthen) (C)* (*Poteriocrinus*),
Decadocrinus depressus (M. & W.) (C)* (IC) (*Scaphiocrinus*)
maniformis (S. A. Miller) (W)* (Ca) (*Scaphiocrinus*),
penicilliformis (Worthen) (IC) (*Poteriocrinus*)
tumidulus (M. & G.) (IC)* (C) (*Cyathocrinus*)
Dichocrinus expansus M. & W. (C)*,
ficus C. & L. (C) (M),
stelliformis M. & W. (C)*,
ulrichi M. & G. (B)*,
Dizygocrinus cantonensis W. & Sp. (Ca)* (E),
crawfordsvillensis (S. A. Miller) (C)* (*Batocrinus*)
euconus M. & W. (M),
facetus (M. & G.) (Ca)* (*Batocrinus*)
indianensis (L. & C.) (M)* (C) (*Actinocrinus*),
indianensis simplex W. & Sp. (C)*,
montgomeryensis (Worthen) (M)* (C) (*Batocrinus*),
mutabilis W. & Sp. (IC)*,
originarius (W. & Sp.) (B)* (Ca) (*Eretmocrinus*),
originarius adultus (W. & Sp.) (Ca)* (E) (B) (*Eretmocrinus*),
sacculus (M. & G.) (W)* (*Batocrinus*),
unionensis? (Worthen) (B) (*Batocrinus*),
whitei (W. & S.) (B)* (C) (Ca) (E),
Dorycrinus gouldi (Hall) (IC) (Ca) (*Actinocrinus*)
roemeri? M. & W. (Ca),
Eratocrinus salemensis (M. & G.) (Salem)* (Ca) (*Pachylocrinus*),
Eretmocrinus depressus Keyes (New Ross)*,
granuliferus W. & Sp. (IC)* (C) (Ca),
intermedius W. & Sp. (B)*,
praegravis W. & Sp. (W)*,
Eucatillocrinus bradleyi M. & W. (C)*,
Forbesiocrinus greenei M. & G. (E)*,
multibrachiatus L. & C. (IC)* (C),
washingtonensis M. & G. (W)* (Ca),
wortheni Hall (C),
Gilbertsocrinus dispansus W. & Sp. (IC)* (C),
lyonanus (M. & G.) (IC)* (*Goniasteroidocrinus*),
tuberosus (L. & C.) (C)* (W) (M) (Ca) (*Goniasteroidocrinus*),
Goniocrinus harrisi (S. A. Miller) (C) (*Cyathocrinus*),
Graphiocrinus mcadamsi M. & W. (C),
Halysiocrinus bradleyi M. & W. (C)*,
nodosus (Hall) (IC)* (M) (*Cheirocrinus*),
tunicatus (Hall) (C) (*Cheirocrinus*),
Histocrinus coreyi (Worthen) (C)* (IC) (*Poteriocrinus*),
graphicus (M. & G.) (C)* (*Scaphiocrinus*),
Hylodecrinus asper Kirk (IC)*,
sculptus Kirk (IC)*,
Hypselocrinus arcanus (M. & G.) (W)* (*Poteriocrinus*),
hoveyi (Worthen) (C)* (IC) (Ca) (*Poteriocrinus*),
Lebetocrinus grandis Kirk (IC)*,
Lepidodiscus squamosus (M. & W.) (C)* (*Agelacrinites*),
Linocrinus praemorsus (M. & G.) (W)* (*Scaphiocrinus*),
Macrocrinus jucundus (M. & G.) (IC)* (C) (*Batocrinus*),
Metablastus wortheni (Hall) (C) (Ca) (*Pentremites*),
Onychocrinus exculptus L. & C. (C),
ramulosus (L. & C.) (C)* (*Forbesiocrinus*),
ulrichi M. & G. (C)* (IC), (Ca),

- Pachylocrinus aequalis* (Hall) (C)* (*Scaphiocrinus*),
arrosus (M. & G.) (W)* (*Scaphiocrinus*),
bellus (M. & G.) (B)* (*Scaphiocrinus*),
bonoensis (M. & G.) (B)* (IC) (Ca) (*Scaphiocrinus*),
boonwillensis (S. A. Miller) (C) (IC) (*Scaphiocrinus*),
briareus (Worthen) (B) (*Poteriocrinus*),
coreyi (M. & W.) (C)* (*Poteriocrinites*),
disparilis (M. & G.) (C)* (*Scaphiocrinus*),
gibsoni (White) (C)* (B) (*Scaphiocrinus*),
granuliferus (M. & G.) (C)* (*Scaphiocrinus*),
gurleyi (White) (C)* (*Scaphiocrinus*),
lacunosus (M. & G.) (B)* (*Scaphiocrinus*),
manus (M. & G.) (C)* (*Scaphiocrinus*),
porrectus (S. A. Miller) (C)* (*Scaphiocrinus*),
reperus (M. & G.) (B)* (*Scaphiocrinus*),
Paradichocrinus planus Springer (IC)*,
polydactylus (L. & C.) (C)* (*Dichocrinus*),
Parichthyocrinus crawfordsvillensis (M. & G.) (C)* (*Taxocrinus*),
meekei (Hall) (C) (*Forbesiocrinus*),
subovatus (M. & G.) (Ca)* (IC) (*Taxocrinus*),
Parisocrinus crawfordsvillensis (S. A. Miller) (C)* (*Cyathocrinus*),
subramosus (M. & G.) (C)* (IC) (*Poteriocrinus*),
Pellecrinus hexadactylus (L. & C.) (C)* (IC) (*Cyathocrinus*),
Platycrinites bonoensis (White) (B)*,
brevinodus (Hall) (IC),
hemisphericus (M. & W.) (C)* (M),
lodensis (H. & W.) (B?),
niotensis (M. & W.) (Ca),
saffordi (Hall) (IC),
Poteriocrinites amoenus (S. A. Miller) (IC)*,
cantonensis (M. & G.) (Ca)*,
circumtextus (M. & G.) (C)*,
decadactylus (L. & C.) (M)*,
nodobrachiatus (Hall) (C)*,
verus (M. & G.) (C)*,
Rhodocrinites benedicti (S. A. Miller) (H)*,
Sarocrinus granilineus (Miller and Gurley) (IC) (C)* (*Poteriocrinus*),
nitidus Kirk (IC)*,
plenus Kirk (C)*,
Scytalocrinus decadactylus (M. & W.) (C) (*Poteriocrinus*),
hamiltonensis (Worthen) (IC) (*Poteriocrinus*),
robustus (Hall) (C)* (IC) (Ca) (*Scaphiocrinus*),
validus W. & Sp. (IC)*,
Springericrinus magniventrus (Springer) (C)* (*Poteriocrinus*),
Synbathocrinus swallovi Hall (Ca),
Taxocrinus colletti White (C)* (IC),
giddingsi (Hall) (Ca) (*Forbesiocrinus*),
praestans Springer (IC)* (Ca)*,
ungula M. & G. (C) (IC)*,
Ulrichicrinus coryphaeus (S. A. Miller) (IC)* (*Poteriocrinus*),
Uperocrinus spiniferus (W. & Sp.) (IC)* (*Lobocrinus*),
Woodocrinus tentaculatus (Worthen) (IC) (Ca) (*Poteriocrinus*),
Zeacrinites dubius (M. & G.) (B)*

MERAMEC GROUP

WARSAW LS.: Florence (F), Huntsville (H), Sheffield (S), and Tuscumbia (Tu), Alabama; Warsaw (W), Illinois; Two miles south of Colesburg, etc., Hardin Co. (C), Glasgow, Barren Co. (G), Taylor Co. (T), Kentucky; other localities as indicated.

- Barycrinus bullatus* (Hall) (C) (*Cyathocrinus*),
granulatus Rowley (T)* (C),
thomae (Hall) (W)* (*Cyathocrinus*),
Batocrinus arcula M. & G. (G) (Tioga Springs, Ky.),
icosidactylus Casseday (G) (T),
irregularis Casseday (S) (C),

- Cryptoblastus melo* ? (O. & S.) (F) (*Pentremites*),
Dichocrinus dichotomus Hall (W)*,
Dizygocrinus decoris (S. A. Miller) (C) (T) (*Batocrinus*),
 euconus M. & G. (T),
 originarius (W. & Sp.) (W) (*Eretmocrinus*),
 unionensis (Worthen) (W) (H) (*Batocrinus*),
 unionensis divalis (S. A. Miller) (H) (*Batocrinus*),
Forbesiocrinus saffordi Hall? (G),
Metablastus varsowiensis (Hall) (W)* (Near Columbus, Ill.) (*Pentremites*),
 wortheni (Hall) (C) (*Pentremites*),
Pachylocrinus divaricatus (Hall) (W)* (*Poteriocrinus*),
 varsowiensis (Worthen) (W)* (*Poteriocrinus*),
Pentremites cavus Ulrich (4 mi. n.w. Princeton, Ky.)*,
 conoideus Hall (Monroe Co., Ill.) (S) (H),
 koninckanus Hall (Alton, Ill.)* (Tu) (Barren Co., Ky.),
Platycrinites pumilis (Hall) (W)*,
 sarae (Hall) (W) (Bowling Green, Ky.),
Poteriocrinites claytonensis (Worthen) (Near Clayton, Adams Co., Ill.)*,
Synbathocrinus swallowi Hall (C),
Talarocrinus simplex (Shumard) (Somerset, Ky.) (C) (Near Gallatin, Tenn.)
 (*Dichocrinus*),
Tricoelocrinus bipyramidalis (Hall) (C) (*Pentremites*),
 obliquatus (Roemer) (Clarksville, Tenn.) (Monroe Co., Ill.)
 (*Pentatrematites*),
 woodmani (M. & W.) (G, etc.) (Putnam Co., Tenn.) (*Pentremites*)

WARSAW LS.: Boonville, Cooper Co., Missouri.

- Agelacrinites blairi* (S. A. Miller)*,
Barycrinus blairi S. A. Miller*,
 boonvillensis S. A. Miller*,
 stellatus? Hall,
 stellifer? S. A. Miller,
Batocrinus broadheadi S. A. Miller*,
 delicatulus M. & G.*,
 heteroclitus M. & G.*,
 ignotus M. & G.*,
 inconsuetus S. A. Miller*,
 inopinatus S. A. Miller*,
 insuetus M. & G.*,
 modestus M. & G.*,
 nitidulus M. & G.*,
 parilis M. & G.*,
 peculiaris M. & G.*,
 polydactylus M. & G.*,
 procerus M. & G.*,
 sampsoni S. A. Miller*,
 serratus M. & G.*,
 stelliformis M. & G.*,
 strenuus M. & G.*,
 venustulus M. & G.*,
 veterator M. & G.*,
 vetustus M. & G.*,
 vicinus M. & G.*,
Cyathocrinites boonvillensis (S. A. Miller)*,
 harrodi (W. & Sp.),
 insperatus (Lyon),
Dichocrinus blairi S. A. Miller*,
 humbergi S. A. Miller*,
 parvulus S. A. Miller*,
Discocystis sampsoni (S. A. Miller)* (*Echinodiscus*),
Dizygocrinus biturbinalis (Hall) (*Actinocrinus*),
 euconus (M. & W.) (*Actinocrinus*),
 euconus abscissus (R. & H.) (*Batocrinus*),
 gorbyi (S. A. Miller)* (*Batocrinus*),
 gurleyi (S. A. Miller)* (*Batocrinus*),
 originarius (W. & Sp.) (*Eretmocrinus*),

- originarius adultus* (W. & Sp.) (*Eretmocrinus*),
unionensis? (Worthen) (*Batocrinus*),
unionensis divalis (S. A. Miller)* (*Batocrinus*),
Eratocrinus blairi (M. & G.)* (*Zeacrinus*),
commaticus (S. A. Miller)* (*Zeacrinus*),
Hypselocrinus arcanus (M. & G.) (*Poteroicrinus*),
boonvillensis (S. A. Miller)* (*Poteroicrinus*),
neglectus (M. & G.)* (*Poteroicrinus*),
Linocrinus lautus (M. & G.)* (*Poteroicrinus*),
Metablastus varsowiensis (Worthen) (*Pentremites*),
Pachylocrinus boonvillensis (S. A. Miller)* (*Scaphiocrinus*),
briareus (Worthen) (*Poteroicrinus*),
constrictus (S. A. Miller)* (*Scaphiocrinus*),
gorbyi (S. A. Miller)* (*Scaphiocrinus*),
Pentremites conoideus Hall,
obtusus Hambach*,
Platycrinites boonvillensis (S. A. Miller)*,
pentagonus (S. A. Miller)*,
Poteroicrinites agnatus (S. A. Miller)*,
brittsi (S. A. Miller)*,
labyrinthicus (S. A. Miller)*,
Rhodocrinites parvus (S. A. Miller)*,
Sarocrinus pocillum (Miller)* (*Zeacrinus*),
Synbathocrinus blairi S. A. Miller*,
swalovi Hall,
Taxocrinus giddingsi (Hall)* (*Forbesiocrinus*),
Tricoelocrinus bipyramidalis (Hall)* (*Pentremites*),
obliquatus (Roemer) (*Pentatrematites*),
ventricosus (Hambach)* (*Saccoblastus*)
- SPERGEN (SALEM) LS.: Bloomington (B), Georgetown (G), Lanesville (L), Near Salem (Paynters Hill, 2 miles south of Salem, etc.) (S), Spergen Hill (SH), and Washington Co. (W), Indiana.
- Agaricocrinus wortheni?* Hall (SH),
Barycrinus elrodi M. & G. (SH)*,
thomae (Hall) (L) (*Cyathocrinus*),
Batocrinus arcuata M. & G. (W)*,
calyculus (Hall) (SH)* (*Actinocrinus*),
cistula M. & G. (L)*,
crassitestus Rowley (L)*,
icosidactylus Casseday (SH)* (W) (G),
irregularis Casseday (SH)* (G),
magnirostris Rowley (L)*,
pileus M. & G. (W)*,
salemensis M. & G. (S)*,
Dichocrinus blatchleyi Beede (S)*,
ficus? C. & L. (SH),
oblongus W. & Sp. (B)* (SH),
Dizygocrinus biturbinatus (Hall) (S) (*Actinocrinus*),
decoris (S. A. Miller) (SH)* (*Batocrinus*),
euonus (M. & W.) (SH) (*Actinocrinus*),
parvus Rowley (G)*,
sacculus (M. & G.) (W)* (*Batocrinus*),
unionensis lanesvillensis (Rowley) (L)* (*Batocrinus*),
unionensis sculptus (Rowley) (L)* (*Batocrinus*),
whitei (W. & Sp.) (SH) (*Batocrinus*),
Eratocrinus salemensis (M. & G.) (S)* (*Zeacrinus*),
Forbesiocrinus saffordi Hall (SH) (S),
Metablastus nitidulus (M. & G.) (L)* (*Troosticrinus*),
varsowiensis (Hall) (W) (*Pentremites*),
wachsmuthi (Gurley) (Ellettsville)* (SH) (*Troosticrinus*),
wortheni (Hall) (*Pentremites*),
Pentremites conoideus Hall (SH)* (W),
conoideus amplus Rowley (L)*,
conoideus perlongus Rowley (L)*,
koninckanus Hall (SH)* (L) (G),

- Platycrinites boonwillensis* (S. A. Miller) (SH) (S),
pumilis (Hall) (Harrison Co.),
Synbathocrinus dentatus O. & S. (Harrison Co.),
swallovi? Hall (L) (SH) (Bald Knob, Floyd Co., and Smithville,
 Monroe Co.),
wachsmuthi M. & W. (SH) (S),
Talarocrinus constrictus (M. & W.) (B)* (*Dichocrinus*),
simplex (Shumard) (SH)* (S) (G) (Bald Knob, Floyd Co.) (*Dicho-*
crinus),
Tricoelocrinus meekianus E. & C. (SH)*,
obliquatus (Roemer) (W)* (S) (Floyd Co.) (*Pentatremites*),
woodmani (M. & W.) (S)* (SH) (Floyd Co.) (*Pentremites*),
Troosticrinus grosvenori (Shumard) (SH)* (*Pentremites*)
- ST. LOUIS LS.: Alton (A), Grand Tower (GT), Hardin Co. (H), Monroe Co. (M),
 Union Co. (U), Illinois; Colesburg (C), Kentucky; St. Louis (St. L.), St. Louis
 Co. (St. L. Co.), Ste. Genevieve Co. (Ste. G. Co.), Wittenberg (Wi), Missouri;
 other localities as indicated.
- Actinocrinites spergenensis* (M. & G.) (Spergen Hill, Ind.) (Probably Burlington
 ls.) (*Steganocrinus*),
Culmicrinus missouriensis (Shumard) (St. L. Co.)* (A) (*Poteriocrinus*),
Cyathocrinites macadamsi (M. & G.) (A)* (Ste. Genevieve or Chester ls.?),
Mesoblastus kirkwoodensis (Shumard) (Near Kirkwood, Mo.)* (*Elaeocrinus*),
Onychocrinus magnus Worthen (M)* (St. L.),
Orbitremites spinuliferus (Rowley) (GT)* (Wi) (*Granatocrinus*),
Pachylocrinus norwoodi (M. & W.) (Hancock Co., Ill.)* (*Poteriocrinus*),
Pentremites benedicti Rowley (GT)* (WI) (?Warsaw ls.),
Phacelocrinus dactyliformis (Hall) (St. L.)* (*Poteriocrinus*),
Platycrinites faberi (S. A. Miller) (Scott Co., W. Va.)* (?Chester ls.),
sarae (Hall) (St. L.)* (A),
Plazocrinus?? sancitiludovici (Worthen) (St. L.)* (*Eupachyocrinus*),
Scytalocrinus dactylus (Hall) (M)* (St. L.) (C) (*Graphiocrinus*),
Synbathocrinus swallovi Hall (St. L.)* (Ste. G. Co.) (C) (Eddyville, Ky.),
Taxocrinus shumardianus (Hall) (St. L.)* (*Forbesiocrinus*)

CHESTER GROUP

- STE. GENEVIEVE LS.: Ohara ls. (OH), Fredonia oolite (FR), Shetlerville fm. (= Up.
 Ohara) (S). Florence (Fl), Huntsville and vicinity (3, 7, 8, and 10 mi. s.) (H),
 Tusculmbia (Tu), Alabama; Alton (A), Hardin Co. (Ha), Monroe Co. (M), Rosi-
 clare (R), Shetlerville (Sh), Union Co. (U), Waterloo (W), Illinois; Caldwell Co.
 (Ca), Crittenden Co. (C), near Tateville (T), near Princeton (P), Kentucky;
 Ste. Genevieve Co. (St.), Fenton (F), Missouri.
- Batocrinus calyculus* (Hall) (P) (OH) (*Actinocrinus*),
Camptocrinus multicirrus Springer (H)* (OH),
Dichocrinus girtyi Weller (Ha)* (S),
huntsvillae W. & Sp. (H)* (Whitesburg, Ala.) (Pope Co., Ill.),
Dinotocrinus compactus Kirk (H)*,
salteri (Worthen) (H) (*Poteriocrinus*),
Discocystis kaskaskiensis (Hall) (H) (*Agelacrinus*),
Dizygocrinus euconus? (M. & W.) (6 mi. s. Anna, Ill.)* (near Marion, Ky.)
 (*Batocrinus*),
persculptus Ulrich (2½ mi. n. Smithland, Ky.)* (R) (OH); (P)
 (FR),
superstes Ulrich (P)* (OH); (R) (FR),
unionensis W. & Sp. (U)* (H) (T) (FR); (R) (OH),
unionensis divalis (S. A. Miller) (H) (*Batocrinus*),
Eupachyocrinus asperatus Worthen (M)* (Chester ls.),
monroensis Worthen (M)*,
quatuor decembrachialis (Lyon) (C)* (OH) (*Graphiocrinus*),
Globocrinus unionensis (Worthen) (Near Anna, Ill.)*; (Ha) (S) (*Batocrinus*),
Linocrinus arboreus (Worthen) (H)* (*Pachylocrinus*),
cariniferus (Worthen) (H)* (*Poteriocrinus*),
wachsmuthi Kirk (H)*,
Mesoblastus glaber (M. & W.) (HA)* (P) (C) (Ca) (H) (Breckinridge Co., etc.
 Ky.) (OH) (FR); (Ha) (S) (*Granatocrinus*),

- Onychocrinus distensus* Worthen (H)*,
magnus Worthen (M)*,
semiovatus (M. & W.) (Ha)* (FR) (*Forbesiocrinus*),
Pachylocrinus nodobasalis (Worthen) (M)* (*Poteriocrinites*),
proboscidualis (Worthen) (H) (*Poteriocrinus*),
propinquus (Worthen) (M)* (*Poteriocrinus*),
spinobrachiatus (Worthen) (M)* (*Poteriocrinus*),
spinifer (Wetherby) (H) (*Scaphiocrinus*),
venustus (Worthen) (H) (*Poteriocrinus*),
Pentremites buttsi Ulrich (R)* (Ca) (C) (OH); (Sh.) (S),
conoideus Hall (Fl.),
downeyensis Ulrich (Ca)* (C) (OH),
ovoides Ulrich (Bet. Carrsville and Deer Creek, Livingston Co., Ky.)* (C) (Ca) (H) (OH),
pinguis Ulrich (2 mi. e. Carrsville, Ky.)* (Ca) (C) (OH); (View, Ky.) (FR); (Ha) (S),
praematurus Ulrich (Sh)* (S); (Ca) (C) (OH),
princetonensis Ulrich (P)* (OH); (Ha) (S); (H) (FR),
pulchellus Ulrich (Bakers Sta. Ky.)* (R) (FR); (Ha) (S); (Ca) (C) (OH); (H)*,
tuscumbiae Ulrich (2 mi. e. Carrsville, Ky.)* (Ca) (C) (Sh) (S) (Tu)* (OH),
Phacelocrinus decabrachiatus (Hall) (Kaskaskia, Ill.)* (H) (*Poteriocrinus*),
gracilis (Troost) (H)* (*Agassizocrinites*),
intermedius (Hall) (Chester, Ill.)* (A) (*Poteriocrinus*),
vanhornei (Worthen) (A)* (*Poteriocrinus*),
Platycrinites huntsvillae Troost (H)* (Ha) (2 mi. n. Hillsboro, Ala.) (P) (M) (Vase, Rockcastle Co., 1½ mi. n.w. Cerulean Springs, Trigg Co., and Breckinridge Co., Ky.) (OH) (FR),
Poteriocrinites altonensis (M. & G.) (A)*,
arrectarius (M. & G.) (A)*,
clytis (Worthen) (Fountain Creek, Monroe Co., Ill.)*,
hardinensis (Worthen) (R)* (H) (Ha),
peculiaris (Worthen) (M)*,
rowleyi (Worthen) (M)*,
similis (Worthen) (M)*,
Rhopocrinus proboscidualis (Worthen) (Carondolet, Mo.)* (H) (*Poteriocrinus*),
Scaphiocrinus huntsvillae Worthen (H)*,
Schizoblastus cornutus (M. & W.) (Dry Fork, Brown Co., Ill.)* (F) (*Pentremites*),
curtus (Shumard) (F)* (H) (*Pentremites*),
Scytalocrinus abnormis (Worthen) (M)* (*Scaphiocrinus*),
talboti (Worthen) (M)* (*Poteriocrinus*),
Talarocrinus buttsi Ulrich (P)* (Cerulean Springs, Ky.) (OH); (Ha) (S),
cornigerus (Shumard) (Franklin Co., Ala.)* (T) (*Dichocrinus*),
deWolfi Ulrich (2 mi. n. Cerulean Springs, Ky.)* (P) (OH),
trijugis M. & G. (R)* (Ha) (Pope Co., Ill.) (S); (Ridenhower, Ill.) (FR) (P) (OH),
Taxocrinus shumardianus (Hall) (W) (*Forbesiocrinus*),
Zeacrinites intermedius (Hall) (Chester, Ill.)* (Western Ky.) (H) (OH)
- GASPER FM.: Huntsville (H), Franklin Co. (F. Co.), Alabama; Breckinridge Co. (B), Caldwell Co. (C. Co.), Caldwell and Christian Cos. (C. & C.), Logan Co. (Lo), Mammoth Cave (M), Todd Co. (T), Meade Co. (Me. Co.), Pulaski Co. (P), Bowling Green (BG), Hardinsburg (Ha), Kentucky; Cowan (C), Lawrence Co. (L), Tennessee; Flagpond (F), Virginia.
- Abrotocrinus sculptus* (Worthen) (H) (*Poteriocrinus*),
Acrocrinus amphora W. & Sp. (H)*,
Agassizocrinus conicus O. & S. (H),
gibbosus Hall (H) (B),
globosus Hall (Ha) (B) (BG),
laevis (Roemer) (H) (*Astylocrinus*),
lobatus Springer (H)*,
ovalis M. & G. (B)* (Ha) (C. & C.),
pentagonus M. & W. (H),
Allocatillocrinus carpenteri (Wachsmuth) (H) (*Allagecrinus*),

- Cryphiocrinus rotundus* Kirk (B)*
Decadocrinus albersi (M. & G.) (H) (*Poteriocrinus*),
 fountainensis (Worthen) (H) (*Poteriocrinus*),
Dinotocrinus roemeri (Troost) (H)* (*Cyathocrinites*),
Eupachyocrinus nitidus (M. & G.) (Ha) (*Zeacrinus*),
Linocrinus arboreus (Worthen) (H) (*Zeacrinus*),
 cariniferus (Worthen) (H)* (*Poteriocrinites*),
Mesoblastus glaber (M. & W.) (Me. Co.)* (C. & C.) (*Granatocrinus*),
 glaber sphaeroidalis (M. & G.) (Me. Co.)* (*Granatocrinus*),
Onychocrinus distensus Worthen (H),
Pachylocrinus scoparius (Hall) (H) (*Poteriocrinus*),
 venustus (Worthen) (H) (*Poteriocrinus*),
Pentremites abruptus Ulrich (C)* (H) (C. Co.) (C. & C.),
 altus Rowley (BG)*,
 arcibrachiatus Ulrich (C. & C.) (H)*,
 arcibrachiatus huntsvillensis Ulrich (H)* (C. & C.),
 biconvexus Ulrich (BG)* (C. & C.) (Me. Co.),
 cervinus Hall (H),
 decipiens Ulrich (C)* (H) (C. & C.),
 decipiens decurtatus Ulrich (B)* (C)*,
 gemmaformis Hambach (C. & C.),
 girtyi Ulrich (Near New Bethel, Ky.)* (C. & C.),
 godoni (Defrance) (Alabama)* (C. & C.) (H) (Me. Co.), etc. (*En-*
 crina),
 godoni major E. & C. (Franklin Co., Tenn.)*,
 patei Ulrich (B)* (C. & C.) (H),
 pediculatus Ulrich (BG)* (H),
 planus Ulrich (C)* (BG) (C. & C.) (H),
 pulchellus Ulrich (H),
 pyriformis Say (Ky)* (C. & C.) (BG) (H), etc.,
 springeri Ulrich (New Bethel, Ky.)* (C. & C.),
 symmetricus Hall (Ky.)* (H),
 turbinatus Hambach (H),
 welleri Ulrich (H)* (C. & C.) (BG),
Phacelocrinus decabrachiatus (Hall) (H) (*Poteriocrinus*),
Phanocrinus formosus (Worthen) (H) (*Zeacrinus*),
Rhopocrinus municipalis (Troost) (L) (*Poteriocrinites*),
Talarocrinus cornigerus (Shumard) (F. Co.)* (P) (*Dichocrinus*),
 depressus Ulrich (3 mi. e. Scottsburg, Ky.)*,
 elegans (L. & C.) (Edmonson Co., Ky.)* (*Dichocrinus*),
 elegans spinigerus Ulrich (B)*,
 ovatus Worthen (B) (C. & C.),
 patei M. & G. (B)* (One mi. e. Sample, Ky.),
 sczlobatus (Shumard) (Russellville, Ky.)* (Lo) (F) (*Dichocrinus*),
 similis Ulrich (3 mi. e. Scottsburg, Ky.)* (C. & C.),
 subglobosus W. & Sp. (P)*,
 symmetricus (L. & C.) (B)* (C. Co.) (Lo) (P) (C. & C.) (*Dicho-*
 crinus),
Tazocrinus huntsvillae Springer (H)*,
Zeacrinites depressus (Troost) (H)* (*Cyathocrinites*),
 grandiculus (M. & G.) (BG)*,
 magnoliaeformis Troost (H)*,
 obesus (M. & G.) (F)*
- PAINT CREEK FM. (PC) AND RENAULT FM. (R): Burkesville and vicinity (B), Colum-
 bia (Co), Chester (C), Monroe Co. (M), Floraville and vicinity, St. Clair Co. (F),
 Pope Co. (P), Johnson Co. (J), 6 mi. s. Vienna (V), Randolph Co., (Ra), Hardin
 Co. (Ha), Waterloo (W), Illinois.
- Abrotocrinus sculptus* (Worthen) (B)* (R) (*Poteriocrinus*),
Aerocrinus intermedius Springer (B)* (R),
 shumardi Yandell (P) (B) (PC),
Agassizocrinus dissimilis Weller (F)* (PC),
 ovatis M. & G. (Ra)* (PC),
 pentagonus M. & W. (C) (PC),
Allocatillocrinus carpenteri (Wachsmuth) (B)* (M) (R) (*Allagecrinus*),

- Camplocrinus cirrifer* W. & Sp. (P) (B) (R),
multicirrus Springer (B)* (R),
Dasciocrinus cachensis (Weller) (Cache River Bluffs*) (V) (Co) (J) (PC)
 (*Pachylocrinus*),
Decadocrinus albersi (M. & G.) (M)* (Ra) (R) (*Poteriocrinus*),
fountainensis (Worthen) (M)* (Ra) (R) (*Poteriocrinus*),
Dichocrinus girtyi Weller (F)* (PC),
Dinotocrinus salteri (Worthen) (C)* (M) (Ra) (R) (*Poteriocrinus*),
Linocrinus spinuliferus (Worthen) (Co)* (P) (J) (R or PC) (*Poteriocrinus*),
Mesoblastus glaber (M. & W.) (F) (Ra) (M) (R) (*Granatocrinus*),
Onychocrinus distensus Worthen (M)* (Ra) (R),
magnus Worthen (M)*,
Pachylocrinus scoparius (Hall) (C)* (M) (Ra) (*Poteriocrinus*),
venustus Worthen (M)* (R),
Pentremites abruptus Ulrich (F) (R),
arcibrachiatus Ulrich (F) (PC),
biconvexus Ulrich (F) (PC),
buttsi Ulrich (M) (Ha) (R),
decipiens Ulrich (F) (PC),
gemmiformis Hambach (Ra)* (PC); (F) (R),
girtyi Ulrich (F) (PC),
godoni (Defrance) (F) (J) (P) etc. (PC) (R) (*Encrina*),
lyoni Ulrich (W) (PC),
nodosus Hambach (W) (PC) (?R),
patei Ulrich (F) (PC) (?R),
pinguis Ulrich (Ha) (R),
planus Ulrich (F) (Ra) (PC),
princetonensis Ulrich (J) (R),
pyramidatus Ulrich (J) (PC),
pyriformis Say (F) (PC and R),
springeri Ulrich (M) (R),
symmetricus Hall (F) (Ra) (W) (M) (P) (PC) (R),
welleri Ulrich (F) (PC or R),
Phacelocrinus columbiensis (Worthen) (Co)* (J) (PC) (*Poteriocrinus*),
decabrachiatus (Hall) (M) (Ra) (R) (*Poteriocrinus*),
Phanocrinus fragosus Sutton and Winkler (W, 2 mi. e.)* (R),
petalloformis Sutton and Winkler (F)* (PC),
Pterotocrinus arcuatus Sutton (V)* (PC),
convexus Sutton (V)* (PC),
elongatus Sutton (F)* (C, 2 mi. s.) (PC),
primus Sutton (Ha)* (Fairview Bluff) (R),
serratus Weller (Co)* (Ra) (J) (St. Clair Co.) (PC),
Talarocrinus cornigerus? (Shumard) (Ra) (R) (*Dichocrinus*),
inflatus Ulrich (F)* (Ra, etc.) (M) (S) (R),
ovatus Worthen (M)* (Ra) (PC or R),
planus Weller (Ra)* (PC),
symmetricus (C. & L.) (M) (Ra) (R) (*Dichocrinus*),
trijugis? (M. & G.) (Ha) (P) (Union Co.) (R),
Taxocrinus shumardianus (Hall) (M) (Ra) (R) (*Forbesiocrinus*),
Tricoelocrinus laterniformis (O. & S.) (Ra) (7 mi. from Chester)* (PC) (*Pentremites*),
Zeacrinites chesterensis (Sutton & Wagner) (Ha)* (PC),
fusiformis (Sutton & Hagan) (5½ mi. s.e. W)* (R),
lanceolatus (Sutton & Hagan) (F)* (PC)
- GOLCONDA FM.: Golconda (G), Pope Co. (P), Hardin Co. (H), Johnson Co. (J),
 Illinois; Crittenden Co. (C), near (4 mi. n.) Marion (M), Kentucky.
- Mesoblastus incurvatus* Weller (P)*,
Pentremites lyoni Ulrich (M)* (H),
lyoni gracilens Ulrich (G)*,
obesus Lyon (C)* (P),
okawensis Weller (P) (H),
maccalliei Schuchert (Grayson Co., Ky.),
platybasis Weller (P) (H),
Phanocrinus compactus Sutton and Winkler (G)*,
gracilis (Wetherby) (1 mi. n. Ruma, Ill.) (*Cromyocrinus*),

- Pterotocrinus abruptus* Sutton (Near Claxton, Ky.)*,
armatus Sutton (M)*,
capitalis (Lyon) (C)* (P) (H) (J) (*Asterocrinus*),
coronarius (Lyon) (C)* (*Asterocrinus*),
Zeacrinites acuminatus (Sutton and Hagan) (2½ mi. n.e. Gowansville, Ill.)*
- OKAW FM.: Kaskaskia (K), Chester (C), Evansville (E), ¾ mi. n. Marigold (M),
 Randolph Co. (R), Pope Co. (P), Illinois.
- Agassizocrinus conicus* O. & S. (C)* (Union Co.),
constrictus Hall (C)*,
gibbosus Hall (C)*,
globosus M. & W. (C)*,
laevis (Roemer) (South of Belleville)* (R) (*Astylocrinus*),
Pachylocrinus okawensis (Worthen) (Bluffs Okaw River above Chester)*
 (*Poteriocrinus*),
Pentremites basilaris Hambach (E)* (C),
bifurcatus Wetherby (R),
brevis Ulrich (R),
broadheadi Hambach (E)*,
calycinus Lyon (C),
cervinus Hall (C)*,
chesterensis Hambach (R)* (C),
clavatus Hambach (E)*,
decipiens Ulrich (E),
elegans Lyon (E),
fohsi Ulrich (C),
godoni abbreviatus Hambach (E)*,
lyoni Ulrich (C),
nodosus Hambach (R)*,
okawensis Weller (R)*,
platybasis Weller (R)* (St. Clair Co.) (M)*,
pyramidatus Ulrich (C),
robustus Lyon (C),
robustus hemisphericus Hambach (C)* (E),
spicatus Ulrich (C),
sulcatus Roemer (C)* (R),
tulipaeformis Hambach (K)*,
turbinatus Hambach (E)*,
welleri Ulrich (E),
Pterotocrinus lingulaformis Sutton (M)*,
scapulatus Sutton (M)*,
Tholocrinus armiger (M. & W.) (P)* (*Zeacrinus*),
Zeacrinites wortheni (Hall) (E)
- GLEN DEAN LS.: Near Huntsville (Hu), Alabama; Hardin Co. (HaCo), Pope Co.
 (Po), Menard (Md), Randolph Co. (R), Illinois; Breckenridge Co. (Falls of the
 Rough) (B), Caldwell Co. (C), Crittenden Co. (Cr), Edmonson Co. (E), Grayson
 Co. (Grayson Springs) (G), Hardin Co. (H), Livingston Co. (L), Marion Co. (M),
 Meade Co. (Me), Pulaski Co. (Sloans Valley) (P), Todd Co. (T), Kentucky.
- Acrocrinus shumardi* Yandell (G)* (P)* (Hu),
Agassizocrinus conicus O. & S. (P) (B),
inequidactylus (Whitfield) (P) (B) (G) (*Cyathocrinus*),
laevis (Roemer) (P) (H) (M) (*Astylocrinus*),
Anartiocrinus lyoni Kirk (G)* (P)* (Stephensport, Breckenridge Co.)* Ky.,
Camptocrinus cirrifer W. & Sp. (P)*,
Culmicrinus elegans W. & Sp. (P)*,
Dasciocrinus florealis (Y. & S.) (G)* (*Cyathocrinus*),
spinifer (Wetherby) (P)* (*Scaphiocrinus*),
spinosus (O. & S.) (G) (*Poteriocrinus*),
Decadocrinus bayensis (M. & W.) (Bay City, Ill.)* (P) (*Poteriocrinus*),
milleri (Wetherby) (P)* (H) (*Poteriocrinus*),
Dichocrinus pentalobus (L. & C.) (G)* (P) (*Cotyledonocrinus*),
superstes W. & Sp. (P)* (Hu),
Discocystis kaskaskiensis Hall (Kaskaskia, Ill.)* (Po)* (P) (Hu),
Eupachycrinus boydi M. & W. (Chester, Ill.)* (P) (G),
durabilis (M. & G.) (P)* (*Zeacrinus*),

- germanus* S. A. Miller (P)*,
quatuordecembrachialis (Lyon) (P) (*Graphiocrinus*),
spartarius S. A. Miller (P)*,
tumulosus S. A. Miller (P)*, (Breckinridge Co.?) (?Gasper),
Onychocrinus pulaskiensis M. & G. (P)* (B) (G),
Pachyocrinus propinquus (Worthen) (P) (*Poteriocrinus*),
randolphensis (Worthen) (P) (*Poteriocrinus*),
scoparius (Hall) (G) (*Poteriocrinus*),
venustus (Worthen) (P) (*Poteriocrinus*)
Pentremites angularis Lyon (B)* (G) (P),
brevis Ulrich (B)* (G) (P) (HaCo),
calycinus Lyon (G)*,
canalis Ulrich (P)* (G) (HaCo),
cervinus Hall (G) (L),
cherokeus Troost (G) (Base Lookout Mtn., Tenn.)*,
clavatus Hambach (G),
elegans Lyon (G)* (L),
fohsi Ulrich (8 mi. n. w. Princeton, Ky.)* (G) (M) (P) (L) (Hu),
fohsi marionensis Ulrich (M)*,
godoni abbreviatus Hambach (P),
hambachi Butts (Frankfort, Ala.)* (Ky.),
lyoni Ulrich (G) (P) (L),
lyoni gracilens Ulrich (Me),
okawensis Weller (Hu) (HaCo),
pyramidatus Ulrich (C)* (P) (L) (Marshall Co., Ala.),
robustus Lyon (G)* (P),
robustus hemisphericus Hambach (P) (G),
serratus Hambach (G),
speciosus Rowley (Cr)*,
spicatus Ulrich (G)* (P) (B) (Po),
tulipaeformis Hambach (P),
Phacelocrinus decabrachiatus (Hall) (K)* (P) (M) (*Poteriocrinus*),
wachsmuthi (Wetherby) (P)* (*Scytalocrinus*),
wetherbyi (S. A. Miller) (P)* (*Poteriocrinus*),
Phanocrinus cylindricus (M. & G.) (P)* (B) (*Zeacrinus*),
formosus (Worthen) (Chester, Ill.)* (P) (G) (*Poteriocrinites*),
gracilis (Wetherby) (P)* (*Cromyocrinus*),
inflatoramus Sutton & Winkler (P)*,
magniradianalis (S. & W.) (P)* (*Pentaramicrinus*),
maniformis (Y. & S.) (G)* (M) (P) (*Cyathocrinus*),
nitidus (M. & G.) (R)* (P) (*Zeacrinus*),
parviramus S. & W. (P)*,
supratumulosus S. & W. (R)*,
Poteriocrinites anomalis (Wetherby) (P)*,
pulaskiensis (M. & G.) (P)*,
vagus (M. & G.) (P)*,
Poteriocrinus ?? *kaskaskiensis* Worthen (Bluffs Kaskaskia River, above Chester, Ill.)*,
Pterotocrinus acutus Wetherby (P)* (G) (B),
bifurcatus Wetherby (P)*,
capitalis (Lyon) (L) (near Salem, Ky.) (*Asterocrinus*),
crassus (M. & W.) (HaCo)* (G) (*Dichocrinus*),
cuneatus Sutton (Md)* (Po),
depressus L. & C. (G)* (P),
pyramidalis L. & C. (G-Grayson Springs)* (E) (B),
rugosus L. & C. (Falls of Rough Creek)*,
scapulatus Sutton (Po) (Md),
spatulatus Wetherby (P)*,
vannus Sutton (Md)*,
wetherbyi M. & G. (P)*,
Rhopocrinus spinosus Kirk (P)*,
Talarocrinus decornis W. & Sp. (P)*,
Taxocrinus whitfieldi (Hall) (R)* (P) (G) (*Forbesiocrinus*),
Tholocrinus armiger (M. & W.) (P) (G) (*Zeacrinus*),
spinosus (Wood) (P)* (*Hydreionocrinus*),
wetherbyi (W. & Sp.) (P)* (G) (*Hydreionocrinus*),

Ulrichidiscus pulaskiensis (M. & G.) (P)* (*Agelacrinus*),
Zeacrinites brevilatus (Sutton and Hagan) (P)*,
depressus (Troost) (Hu)* (P) (G) (*Cyathocrinites*),
kentuckiensis (M. & G.) (P)*,
lineatus (Sutton & Hagan) (P)*,
ovalis (L. & C.) (G)*,
peculiaris (M. & G.) (P)*,
wortheni (Hall) (Chester, Ill.)* (G) (P) (B) (T)

GLEN DEAN LS. (?): Dover Hill (D), Martin Co. (M), Indiana.

Onychocrinus parvus M. & G. (M)*,
Pachylocrinus longitentaculatus (Rowley) (White River)* (*Scaphiocrinus*),
martinensis (M. & G.) (M)* (*Scaphiocrinus*),
Pentremites spicatus Ulrich (D),
sulcatus Roemer (D),
Phanocrinus bellulus (M. & G.) (Near Shoals)* (*Zeacrinus*),
Zeacrinites doverensis (M. & G.) (D)*

MENARD LS.: Illinois and Kentucky.

Pentremites cherokeeus Troost ($\frac{1}{2}$ mi. w. Claxton, Caldwell Co., Ky.),
johni Ulrich (Near Grand Tower and near Golconda, Ill.),
sulcatus Roemer (Chester, Ill.)* (Near Tribune, Ky.),
Pterotocrinus menardensis Weller (East of Cobden, Union Co., Ill.)* (Near Golconda, Ill.),
subspatulatus Sutton (2 $\frac{1}{2}$ mi. n. Princeton, Ky.)*

CLORE LS.: Illinois, Kentucky, and Missouri.

Pentremites cherokeeus Troost (Chester, Ill.),
serratus Hambach (Ste. Genevieve, Mo.)* (Claxton, Ky.) (Baldwin, Ill.),
spinosus Hambach (Chester, Ill.)*,
Pterotocrinus clorensis Sutton (1 $\frac{1}{2}$ mi. s. Smithland, Ky.)*

PITKIN LS.: 1 $\frac{1}{2}$ m. s. e. Garfield (G), $\frac{1}{2}$ m. s. e. Hulbert (H), Oklahoma.

Carcinocrinus stevensi Laudon (H)*,
Linocrinus floweri Laudon (4 $\frac{1}{2}$ m. n. e. Ft. Gibson)*,
Pelecocrinus stereosoma Laudon (H)*,
Phanocrinus cooksoni Laudon (1 $\frac{1}{2}$ m. n. e. Hulbert)* (G),
Scytalocrinus braggisi Laudon (G)*,
dunlopi Laudon (G)*,
garfieldi Laudon (G)*

CHESTER LS. (Miscellaneous)

ARKANSAS:

Agassizocrinus dactyliformis Shumard, 1854 (not Troost) (Washington Co.)

GEORGIA:

Pentremites maccallei Schuchert (Bangor ls., near Coal City)*

ILLINOIS: Chester (C), Pope Co. (P), Monroe Co. (M), Randolph Co. (R).

Agassizocrinus papillatus Worthen (M)* (C) (R),
tumidus (O. & S.) (C)* (*Poteriocrinus*),
Dasciocrinus spinosus (O. & S.) (Kaskaskia)* (*Poteriocrinus*),
Eupachyocrinus pentalobus (Hall) (P)* (*Cyathocrinus*),
subtumidus (M. & W.) (Bay City)* (P) (*Poteriocrinus*),
Pachylocrinus popensis (Worthen) (P)* (*Poteriocrinus*),
Phacelocrinus bisselli (M. & W.) (C)* (*Poteriocrinus*),
internodius (Hall) (C)* (*Poteriocrinus*),
longidactylus (McChesney) (Kaskaskia)* (*Scaphiocrinus*),
Pterotocrinus chesterensis (M. & W.) (C)* (*Dichocrinus*),
pentalobus Sutton (R)*,
protuberans (Hall) (C)* (*Dichocrinus*),
Zeacrinites bifurcatus (McChesney) (Kaskaskia)*

KENTUCKY:

Adinocrinus compactilis (M. & W.) (Cumberland Co.)* (?Keokuk ls.) (*Zeacrinus*),
Batocrinus copiosus M. & G. (Little Barren River)*

OHIO (*Maxville ls.*): Newtonville (= White Cottage, Newton twp.), Muskingum Co.

Anartioocrinus maxvillensis (Whitfield)* (*Cyathocrinus*),
Pentremites girtyi Ulrich,
springeri Ulrich

TENNESSEE:

Delocrinus priscus (Rowley) (Newmans Ridge)* (*Ceriocrinus*),
Erisocrinus? bipartitus (Troost) ("Decatur Co.")* (*Donacriocrinites*),
Pentremites altus Rowley (Newmans Ridge)*,
Platycrinites insculptus Troost (Cumberland Mts.)*

Miscellaneous Mississippian

MADISON LS.: Bridger Mt. near Bozeman (Br Mt), Spring Canyon, Alden (SC), Old Baldy, Virginia City (OB) (Quadrant fm.), Divide between Ross Fork and Lincoln Valley (R), Montana.

Batocrinus douglassi M. & G. (Br Mt)*,
Cactocrinus ornatissimus? (W. & Sp.) (SC) (*Actinocrinus*),
Dichocrinus bozemanensis M. & G. (Br Mt)*,
douglassi (M. & G.) (Br Mt)* (SC) (*Platycrinus*),
Eucladocrinus montanensis (Meek) (Twin Springs, Dry Creek Valley)* (*Platycrinites*),
Eutaxocrinus montanensis Springer (SC)*,
Gilmocrinus bozemanensis (M. & G.) (Br Mt)* (*Poteriocrinus*),
Hypselocrinus douglassi (M. & G.) (Br Mt)* (*Poteriocrinus*),
Mesoblastus haynesi (T. H. Clark) (OB)* (Squaw Creek) (Mt. Coleman, Alberta); (*Schizoblastus*),
Pentremites altimarginatus T. H. Clark (OB)*,
bradleyi Meek (R)*,
divergens T. H. Clark (OB)*,
saxiomontanus T. H. Clark (OB) (Squaw Cr.)*,
subconoides Meek (R)*,
symmetricus Hall (OB),
Pachylocrinus montanensis (Meek) (OB)* (*Poteriocrinus*),
Platycrinites bridgerensis (M. & G.) (Br Mt)*,
?bozemanensis (M. & G.) (Br Mt)* (SC),
haydeni Meek (OB)*,
Rhodocrinites bozemanensis (M. & G.) (Br Mt)*,
bridgerensis (M. & G.) (Br Mt)* (SC),
douglassi (M. & G.) (Br Mt)*,
Schizoblastus schucherti (Hambach) (R)* (*Crioblastus*)

UTAH, NEVADA, ETC.:

Actinocrinites marcoui (Collignon) (Williams Canon, Manitou, Colo.)*,
viaticus (White) (Mountain Spring, Old Mormon Road, Nev.)*,
Amblostoma baileyi Peck (6 mi. w. Mendon, Utah)* (Brazer ls.),
Eupachyocrinus platybasis White (Confluence bet. Green and Grand Rivers, Utah)* (Low. Aubrey gr.),
Platycrinites vezabilis White (Mountain Spring, Old Mormon Road, Nev.)*,
Schizoblastus lotoblastus (White) (Ewells Spring, Ariz.)* (*Granatocrinus*)

WEST VIRGINIA:

Cryphiocrinus girtyi Kirk (1½ mi. s. se. Crellin)* (Greenbrier ls.),
Hemicystites? carbonarius Bassler (¾ mi. e. Adds Valley)* (Bluefield shale),
Platycrinites faberi (M. & G.) (Scott Co.)* (St. Louis or Chester ls.)

LOWER CARBONIFEROUS FAUNAS (EUROPE AND ASIA)

LOWER TOURNAISIAN: Tournai, Belgium.

Actinocrinites armatus (deK. & L.)*,
deornatus (deK. & L.)*,
dorsatus (deK. & L.)*,
icosidactylus Portlock,
laevis Miller,
polydactylus Miller,
stellaris (deK. & L.)*,
tenuis (deK. & L.)*,
triacontadactylus Miller,

- Cyathocrinites conicus* (Phillips),
granulatus (Münster)*,
Dichocrinites elegans deK. & L.*,
expansus deK. & L.,
fusiformis Austin and Austin,
granulosus deK. & L.*,
intermedius deK. & L.*,
irregularis deK. & L.*,
radiatus Münster*,
sculptus deK. & L.*,
septosus de Koninck*,
Forbesiocrinites nobilis deK. & L.*,
Gilbertsocrinites stellaris deK. & L.,
Graphiocrinites encrinoides deK. & L.*,
Hydreionocrinites phillipsianus deK. & L.,
Mesoblastus crenulatus (Roemer)* (*Pentremites*),
Mespilocrinites forbesiocrinites deK. & L.,
granifer deK. & L.*,
Orophocrinites orbignyianus (de Koninck)* (*Pentremites*),
pentangularis (Miller) (*Platycrinites*),
puzos (Münster)* (*Pentremites*),
Parisocrinites radiatus (Austin and Austin) (*Poteriocrinites*),
Phaenoschisma caryophyllatus (deK. & L.)* (*Pentremites*),
Physetocrinites costus (McCoy) (*Actinocrinites*),
Platycrinites arenosus (deK. & L.)*,
armatus (Münster)*,
austinianus (deK. & L.)*,
cruciatus (Quenstedt)*,
gigas (Gilbertson),
granosus (deK. & L.)*,
granulatus Miller,
laevis Miller,
müllerianus (deK. & L.)*,
olla (deK. & L.)*,
ornatus (McCoy),
pileatus (Goldfuss),
spinosus Austin and Austin,
trigintidactylus Austin and Austin,
Pleurocrinites tuberculatus (Miller) (*Platycrinites*),
Poteriocrinites crassus? Miller,
plicatus Austin and Austin,
spissus (deK. & L.),
Scytalocrinites tenuis (Miller) (*Poteriocrinites*),
Taxocrinites belgicus Springer*

VISÉAN: VISÉ, BELGIUM:

- Actinocrinites tricuspидatus* (deK. & L.)*,
Cyathocrinites mammillaris Phillips,
Dichocrinites expansus deK. & L.*,
Eupachycrinus? impressus (McCoy) (*Cupressocrinites*),
Hydreionocrinites phillipsianus (deK. & L.)*,
Lageniocrinites seminulum deK. & L.*,
Mespilocrinites granifer deK. & L.*,
Poteriocrinites conoideus (deK. & L.)*,
longicaudatus (Fraipont)*,
Rhodocrinites quinquangularis Miller,
uniarticulatus (deK. & L.)*

MOUNTAIN LS.: England (Including Wales, Isle of Man, etc.). Bolland (Lancashire) (B); Bristol, Avon Gorge (Br.); Derbyshire (D); Mendip Hills (Co. Somerset) (MH); Yorkshire (Y); Clitheroe, Coplow Knoll, (Lancashire) (C); Settle (Yorkshire) (S) and Richmond (R); Somersetshire (So); England. Balladoola (Ba) and Cass-ny-hawn, (CA); Isle of Man.

- Abrahiocrinites clausus* (Austin and Austin) (S)* (*Sycocrinites*),
Acentrotremites ellipticus (Cumberland) (B)* (So) (*Mitra*),

- Actinocrinites aculeatus* Austin and Austin (Br)*,
cataphractus Austin and Austin (Br)*,
costus (McCoy) (C),
crassus Austin and Austin,
laevis Miller (Mitcheldean limestone Basin)*,
laevisimus Austin and Austin (Br)*,
longispinosus Austin and Austin (Clevedon, Somersetshire)*,
olla (McCoy) (D)*,
polydactylus Miller (Mendip Hills)* (C) (Y) (Clendon Bay, So);
 (B) (Caldy Id., Wales),
stellaris (deK. & L.) (C) (B),
tessellatus (Phillips) (Near Frome, Somerset)* (Y) (B) (?C),
triacontadactylus Miller (Broughton and Stokes)* (Y) (C) (Br),
Amphocrinus atlas (McCoy) (B)* (Y) (C) (*Actinocrinus*),
brevicalyx Rofe (C)*,
gilbertsoni (Phillips) (B)* (Y) (C) (*Actinocrinus*),
Brahmacrinus ponderosus Sollas (Y)* (C),
Codaster acutus McCoy (B)* (Y),
trilobatus McCoy (D)* (S) (B),
Cromyocrinus nuciformis (McCoy) (D)* (*Poteriocrinus*),
Cyathocrinites abbreviatus Miller (MH)*,
bursa (Phillips) (C)* (B) (Y),
calcaratus (Phillips) (B)*,
conicus (Phillips) (B)* (C),
distortus (Gilbertson) (B)*,
mammillaris (Phillips) (B)* (Y) (C),
ornatus (Phillips) (B)*,
patulosus (Wright) (C)*,
planus Miller (Br)*, (Clevedon),
Cydonocrinus parvulus Bather (Above Manchester Pot, Y)* (Up. Yoredale),
Decadocrinus fifensis? Wright (Ca),
Dichocrinus elongatus (Gilbertson) (B)* (*Platycrinus*),
expansus deK. & L. (England),
fusiformis Austin & Austin (MH)*,
radiatus Münster (B) (Br),
Dimorphocrinus pentangularis (Miller) (MH)* (*Platycrinites*),
Edaphocrinus rugosus Wright (C)*,
Euryocrinus concavus Phillips (B)*,
granulosus (Phillips) (B)* (Y) (*Poteriocrinus*),
rofei Bather & Gregory (C)*,
Forbesiocrinus nobilis de K. & L. (B),
Gilbertsocrinus bursa Phillips (B)* (Y) (C),
calcaratus Phillips (B)* (Y) (C),
konincki Grenfell (C)*,
mammillaris Phillips (B)* (Y),
simplex Portlock (B),
stellaris (deK. & L.) (Br)* (*Encrinus*),
Gilmocrinus beggi (Wright) (Ca)* (*Scytalocrinus*),
Graphiocrinus encrinoides deK. & L. (Br),
Haplocrinites granatum (de Koninck) (B)*,
Heteroblastus cumberlandi E. & C. (Near Hexham, Northumberland)* (Yoredale sh.),
Hydreionocrinus phillipsianus (deK. & L.) (B)* (C) (*Poteriocrinus*),
verrucosus Bather (Poolvash Bay, Isle of Man)* (Poolvash ls.),
woodianus de Koninck (R)*,
Lepidodiscus fistulosus Anderson (Hetton House Borehole, Northumberland)* (Scremerton ser.),
lebouri Sladen (East Woodburn, Northumberland)* (Bernician beds),
milleri Sharman and Newton (River Irthing, Cumberland)*,
Megistocrinus globosus (Phillips) (B)* (*Actinocrinus*),
Mesoblastus angulatus (Sowerby) (B)* (*Pentatremitites*),
elongatus (Cumberland) (B)* (Border of Lancashire) (S),
rofei (E. & C.) (C)* (Y) (*Acentrotrematites*),
sowerbyi (E. & C.) (B)*,

- Mespilocrinus forbesianus* deK. & L. (Y)* (C),
Orbitremites campanulatus (McCoy) (D)* (B) (C) (*Pentremites*),
derbiensis (Sowerby) (D)* (C) (B) (*Pentremites*),
ellipticus (Sowerby) (B)* (C) (D) (Y) (*Pentremites*),
mccoyi (E. & C.) (C)* (*Granatocrinus*),
orbicularis (Sowerby) (B)* (C) (*Pentatrematites*),
Orophocrinus depressus (Cumberland) (Border Yorkshire and Lancashire)*
(Mitra),
humero-stellatus (Cumberland) (Hotwells, Br)* (Mitra),
pentangularis (Miller) (B)* (C), etc. (*Platycrinites*),
verus (Cumberland) (B)* (Mitra),
Pachylocrinus isacobus (Austin and Austin) (Br)* (*Poteriocrinites*),
latifrons (Austin and Austin) (So)* (MH) (*Poteriocrinites*),
longidactylus (Austin and Austin) (Clevedon Bay near Walton
Castle, So)* (*Poteriocrinus*),
monensis Wright (Ca)*,
Parisocrinus quinquangularis (Miller) (Clevedon and Black Rock, near Avon
River)* (*Cyathocrinites*),
radiatus (Austin and Austin) (Y) (*Poteriocrinites*),
Pentremites globosus Say (?Vicinity of Bath)*,
Phaenoschisma acutum (Sowerby) (B)*,
Platycrinites antheliontes Austin and Austin (MH)* (Y),
balladoolensis (Wright) (Bal)*,
bollandensis (Wright) (B)*,
contractus (Gilbertson) (B)*,
diadema (McCoy) (C),
directus (Wright) (Ba)*,
gigas (Gilbertson) (B)* (Y) (C) (MH) (Isle of Man),
granulatus Miller (MH)* (Y) (B),
humilis (Wright) (B)* (Newton),
laciniatus (Gilbertson) (B)*,
laevis Miller (MH)* (B) (Br),
megastylus (McCoy) (B)*,
pileatus (Goldfuss) (Br)* (C),
rugosus Miller (MH) (Whitewell in B) (Caldy Id., Wales)*,
spinus Austin and Austin (MH)* (Br),
striatus Miller (Br)*,
triacontadactylus (McCoy) (Br),
trigintidactylus Austin and Austin (Br)*,
vesiculosus (McCoy) (Near Bakewell, D)*,
Pleurocrinus coplowensis Wright (C)*,
coronatus (Goldfuss) (Br)* (C) (*Platycrinites*),
ellipticus (Phillips) (Alport, D)* (Y) (C) (B) (*Platycrinus*),
grandis Wright (Ba)*,
inurbanus Wright (C)*,
mucronatus (Austin and Austin) (B)* (Y) (*Platycrinites*),
tuberculatus (Miller) (MH)* (Y) (B) (C) (*Platycrinites*),
wanneri Wright (B)* (C),
Poteriocrinites conicus (Phillips) (B)* (Br) (Clifton),
crassus Miller (Y)* (Br) (C) (Clevedon Bay),
impressus (Phillips) (Whitewell)* (Br) etc.,
plicatus Austin and Austin (Br)* (C),
quinquangularis Austin and Austin (Br)*,
rugosus (Grenfell) (Br)*,
spissus (deK. & L.) (Br)*,
Rhodocrinites costatus Austin and Austin (Br)*,
granulatus Austin and Austin (Br)*,
quinquangularis Miller (Mitchell Dean)* (B),
verisimilis (Grenfell) (Br)*,
verus Miller (Br)* (MH) (Mitchell Dean),
Scytalocrinus rostratus (Austin and Austin) (Br) (*Poteriocrinites*),
tenus (Miller) (MH)* (Br) (*Poteriocrinites*),
Scycocrinites anapeptamenus Austin and Austin (S)*,
jacksoni Austin and Austin (S)*,
Synbathocrinus conicus Phillips (B)* (C),

- Taxocrinus?* *longidactylus* (Austin and Austin) (MH)* (Clevedon) (*Icosicrinites*),
Taxocrinus nobilis (Phillips) (B)* (Y) (C) (*Poteriocrinus*),
pentagonus (Austin and Austin) (So)* (Clevedon Bay) (*Cladocrinites*),
Woodocrinus expansus de Koninek and Wood (R),
macroductylus de Koninek (R)*,
Zeacrinites konincki (Bather) (D),
Zygocrinus tetragonus (Austin and Austin) (S)* (*Astrocrinites*)

MARWOOD AND PILTON BEDS: Devonshire, England. Braunton (Marwood beds) (B); Barnstaple (Ba), Pilton (P), Fremington (F) and Brushford (Br) (Pilton beds).

- Actinocrinites?* *batheri* (Whidborne) (Br. and Sloy)*,
porteri (Whidborne) (Ba)*,
tenuistriatus (Phillips) (P)* (Linton),
Adelocrinus hystrix (Phillips) (Br)* (B) (P) (Ba) (*Arthroacantha*),
Codaster conicus (Whidborne) (P)* (*Codonaster*),
Cyathocrinites variabilis (Phillips) (P)*,
Hydriocrinus barumensis (Whidborne) (Ba)* (P) (*Cyathocrinus*),
mundus (Whidborne) (B)* (*Mariocrinus*),
plumifer (Whidborne) (B)* (Ba) (P)* (*Scaphiocrinus*),
salebrosus (Whidborne) (Ba)* (P) (*Scaphiocrinus*),
tensus (Whidborne) (Ba)* (F),
transicus (Whidborne) (P)* (Ba) (*Scaphiocrinus*),
Pentremites ovalis Goldfuss (Br),
Platycrinites? *anguliferus* (Whidborne) (P)*,
Scaphiocrinus? *inordinatus* Whidborne (B)*,
Scytlocrinus arachnoideus Whidborne (Ba)*,
stadiodactylus (Whidborne) (P)* (Ba) (B) (*Poteriocrinus*),
Taxocrinus macroductylus (Phillips) (Br)* (P) (*Cyathocrinus*),
stultus Whidborne (P)* (Roborough)

FRANCE:

- Poteriocrinites sigillatus* (Quenstedt) Nefiez (Herault)*

GERMANY:

Viséan: Altwasser, Silesia (A); Herborn, Nassau (H); Ratingen, near Düsseldorf (R); Regnitzlosau, Bavaria (Re); Lautenthal, Oberharz (Lau). *Tour-nasian*: Wasserfall, near Velbert (W). *Euroeungtian*: Cromford, near Ratingen (C); Isenbügel (I).

- Actinocrinites goldfussi* Schmidt (R)*,
granulatus Goldfuss (R),
Adelocrinus hystrix Phillips (R),
Culmicrinus regularis (von Meyer) (H)* (*Poteriocrinus*),
?singulocirrus Schmidt (C)*,
Cyathocrinites fischeri (Spandel) (?Germany)*,
mammillaris (Phillips) (A),
Euryocrinus granulatus (Phillips) (Silesia) (*Poteriocrinus*),
Hallocrinus? *inagilis* Schmidt (H)*,
Hydriocrinus ratingensis Schmidt (R)*,
Lophocrinus minutus (Roemer) (Lau)* (*Poteriocrinus*),
Melocrinites laevis Goldfuss (Re)*,
Mesoblastus melonianus Schmidt (W)*,
Onychocrinus polydactylus (McCoy) (*Taxocrinus*),
Pentremites boletus Schmidt (I)*,
ovalis Goldfuss (R)*,
Platycrinites depressus Goldfuss (R)*,
guttifer (Schmidt) (C)*,
wunstörffi Schmidt (I)*,
Poteriocrinites crassus Miller (Upper Silesia),
Rhodocrinites uniaarticulatus (deK. & L.) (W),
Taxocrinus macroductylus (Phillips) (C) (*Cyathocrinus*),
Ulocrinus bockschii (Geinitz) (A)* (*Poteriocrinus*)

MOUNTAIN LS.: Ireland. Co. Donegal: Ballintrillick (Bal); Bundoran (B); Finner (F). Co. Dublin: Poulscadden (P); Malahide (M). Co. Fermanagh (Fe); Florence Court (Fl); Enniskillen (E); Clenish (Cl). Co. Kildare: Millicent (Mi)

(Clane). Co. Leitrim: Manor Hamilton (Ma). Co. Limerick: Adare (A). Co. Tyrone: Stewartstown (St). Co. Waterford: Ballinacourty (Dungarvan) (Ba); Cionea (C). Co. Wexford: Hook Head (Point) (Fethard) (HH).

- Actinocrinites caryocrinoides* (McCoy) (Ireland)* (*Phillipsocrinus*),
cataphractus Austin (Ireland)*,
constrictus McCoy (Ma)*,
decadactylus Portlock (St)*,
deornatus de Koninck and Lehon (HH),
elephantinus Austin (HH)*,
icosidactylus Portlock (HH)*,
polydactylus Miller (HH),
pusillus McCoy (Ma)*,
tenuistriatus (Phillips) (C) (Ardre) etc.
tessellatus Phillips (C),
triacontadactylus Miller (M) (Ba) (Kildare),
Amblacrinus inaequidactylus (McCoy) (HH)* (M) (*Cyathocrinus*),
Amphoracrinus gilbertsoni Phillips (Fl) (HH) (M) (Cleenish) (Waterford, Townland),
Cyathocrinites conicus (Phillips) (Famignoul),
milleri (McCoy) (HH)* (*Atocrinus*),
ornatus (Phillips) (M),
planus Miller (E),
variabilis (Phillips) (Bal) (B) (M) (C),
Gilbertsocrinus simplex Portlock (Fe)*,
Graphiocrinus encrinoides de Koninck and Lehon (HH),
smeythi Wright (HH)*,
Monoschizoblastus bailii (E. & C.) (Fl)* (*Schizoblastus*),
rofi (E. & C.) (Fl)* (*Granatocrinus*),
Onychocrinus hibernicus Wright (HH)*,
polydactylus (McCoy) (Bal)* (HH) (Co. Sligo) (*Taxocrinus*),
Orbitremites derbiensis (Sowerby) (Fe) (Ma) (*Pentremites*),
ellipticus (Sowerby) (Ma) (Co. Dublin) (*Pentremites*),
Orophocrinus hibernicus (Cumberland) (Co. Mayo)* (HH) (*Mitra*),
pentangularis (Miller) (Co. Dublin)* (*Platycrinites*),
Pachylocrinus brevidactylus (Austin & Austin) (HH)* (*Cladocrinites*),
isacobus (Austin & Austin) (HH)* (*Poteriocrinites*),
latifrons (Austin & Austin) (HH) (*Poteriocrinites*),
macrocheirus (McCoy) (Rahans Bay, Dunkineely)* (*Cyathocrinus*),
Parisocrinus radiatus (Austin and Austin) (HH)* (*Poteriocrinites*),
Pentephyllum adarensis Haughton (A)*,
Pentremites pentagonalis Forbes (Fl)*,
Physetocrinus costus (McCoy) (Monaster, Clavance)* (HH) (Ma) (*Actinocrinus*),
Platycrinites anulus (Quenstedt) (Ireland)*,
austinianus de Koninck and Lehon (HH),
contractus Gilbertson (Creggenore),
diadema (McCoy) (Cl)*,
expansus (McCoy) (Ireland)* (B) (F) (Armough),
gigas (Gilbertson) (HH) (M) (Armough),
granulatus Miller (HH) (Ba),
laciniatus Gilbertson (HH),
laevis Miller (HH) (M) (Cork and Dublin),
microbasalis (Quenstedt) (Ireland)*,
ornatus (McCoy) (HH)*,
punctatus (McCoy) (St. Johns Point, Dunkineely)*,
rugosus Miller (Ardelogh, Howth, etc.),
similis McCoy (Ba)*,
spinus Austin and Austin (HH),
triacontadactylus (McCoy) (HH)*,
trigintidactylus Austin and Austin (HH) (Waterford),
Pleurocrinus tuberculatus (Miller) (Ba) (*Platycrinites*),
Poteriocrinites conicus Phillips (Fe),
crassimanus (McCoy) (HH)*,
crassus Miller (HH),
gracilis (McCoy) (HH)*,

- impressus* (Phillips) (M),
plicatus Austin and Austin (HH),
quinquangularis Austin and Austin (HH)*,
Rhodocrinites abnormis (McCoy) (Mi)*,
costatus Austin and Austin (P),
granulatus Austin and Austin (HH)*,
verus Miller (P),
Scytalocrinus dactyloides (Austin and Austin) (HH)* (*Poteriocrinites*),
elongatus (Sladen) (HH) (*Dactylocrinus*),
loreus (Sladen) (HH) (*Dactylocrinus*),
rostratus (Austin and Austin) (HH)* (*Poteriocrinites*),
Symbathocrinus conicus Phillips (HH),
Tazocrinus macrodactylus (Phillips) (C) (Ba) (HH) (*Cyathocrinus*?)
- RUSSIA: (Sloboda, Gov. Toula) (S); Kirghis Steppes (K).
Allagecrinus donetzensis Yakovlev (Lissitchansk, Donetz Basin)*,
Cyathocrinites radiatus (Eichwald) (Staritz)* (*Apiocrinus*),
Elaeocrinadurum miljukovi Peetz (K)*,
Nymphaeoblastus anossofi Yakovlev (Prov. Akmolinsk)*,
miljukovi Peetz (K)*,
Poteriocrinites impressus (Eichwald) (S)*,
nuciformis (Fischer de Waldheim) (River Nara, Gov. Moscow)*,
tenuissimus (Eichwald) (S)*,
varians (Eichwald) (S)*,
- SCOTLAND: Lower Limestone group (*Seafield Tower ls. and equivalents, D₂*) (S).
Calciferous ss. gr. *Ardross ls. etc. (D₁) (Ca)*. Upper Limestone group (U).
 Ardross (A), between Elie and St. Monance (E), Inveriel (I), Kirkaldy (K),
 and Roscobie (R), Fife; Auchenkeith (Au), Garpel Water, Muirkirk (G), and
 Beith (B), Ayrshire; Carlops, Peebleshire (C); Oxwell Mains, East Lothian (O);
 Penton Linns, Roxburghshire (P); Bankend, Lanarkshire (Ba).
Ainacrinus smithi (Wright) (Au)* (S) (*Synerocrinus*),
Abrotocrinus angustatus Wright (E)* (Ca),
Allagecrinus austinii C. & E. (I)* (C) (S),
garpelensis Wright (G)* (U),
Allocatillocrinus scoticus (Wright) (I)* (C) (S) (*Catillocrinus*),
Amphicrinus scoticus Springer (Ba)* (R)* (C) (I) (Lesmahagon)* etc. (S),
Anemetocrinus ardrrossensis Wright (A)* (Ca),
biserialis Wright (K)* (I) (R) (C) etc. (S),
covensis Wright (Cove Harbor, Cockburnspath, Berwickshire)*
 (Ca),
penionensis Wright (P)* (S) (*Scytalocrinus*),
Artichthyocrinus springeri Wright (I)* (R) (S),
Carlopsocrinus bullatus Wright (C)* (S),
Campocrinus compressus Wright (I, C)* (S),
Cromyocrinus geminatus? Trautschold (St. Andrews) (Ca),
Decadocrinus fifeensis Wright (R)* (I) (S),
Erisocrinus carlopsensis Wright (C)* (S),
Gilmocrinus arbiglandensis (Wright) (Arbigland shore, Solway Firth, Kirkcud-
 brightshire)* (Ca) (*Scytalocrinus*),
Hydreionocrinus formosus Wright (Shore St. Monance, Fife)* (S),
woodianus de Koninck (R) (I) (S),
Kallimorphocrinus elongatus (Wright) (I)* etc. (S) (*Allagecrinus*),
Kallimorphocrinus scoticus (Wright) (I)* (C) etc. (S) (*Allagecrinus*),
scoticus contractus (Wright) (I)* (S) (*Allagecrinus*),
Mespilocrinus depressus Wright (K)* etc. (S),
konincki? Hall (I) (C) etc. (S),
Onychocrinus pulaskiensis? M. & G. (P) (S),
wrighti Springer (I)* (R) (K) (S),
Pachylocrinus dunlopi Wright (P)* (S),
clavatus Wright (R)* (S),
tielensis Wright (I)* (R) etc. (S),
tyriensis Wright (I)* (R) (S),
Phaenoschisma benniei E. & C. (Near Gifford, Haddingtonshire)*,

- Phanocrinus ardressensis* (Wright) (E)* (A)* (Peters Crook, near P) (Ca)
 (*Eupachyrcrinus*),
calyx (McCoy) (S) (I) (P) (*Cupressocrinus*),
gordoni Wright (O)* (I) (C) etc. (S),
stellaris Wright (I)* etc. (S),
Platycrinites conglobatus Wright (I)* (R) etc. (S),
crassiconus Wright (I)* (C) (S),
spiniger Wright (R)* (I) etc. (S),
Poteriocrinites magnus (Wright) (R)* (I) etc. (S),
pentonensis Wright (P)* (S),
scotocarbonarius (Wright) (R)* (I)* etc. (S),
Rhodocrinites baccatus (Wright) (I)* (R) (B) etc. (Ca) (S),
Synerocrinus incurvus (Trautschold) (R) (A) (Ca) (S) (*Forbesiocrinus*),
Tribrachiocrinus caledonicus Wright (K)* (S),
Ulocrinus bockschii (Geinitz) (I) (P) (C) etc. (S) (*Poteriocrinus*),
doliolus Wright (St. Andrews)* (Ca),
Wachsmuthicrinus ponderosus Springer (Tweed River bet. Roxburgh and Kelso)*
 (S),
Woodocrinus gravis Wright (I)* (R) (S),
liddesdalensis Wright (P)* (S),
whytei Wright (G)* (S),
Wrightocrinus biplex (Wright) (I, C)* (S) (*Allagecrinus*),
Zeacrinites konincki (Bather) (I)* (R) (C) etc. (S),
Zygocrinus benniei (Etheridge) (East Slaton, Haddingtonshire, Midlothian)*
 (C) (*Astrocrinites*)

PENNSYLVANIAN FAUNAS (NORTH AMERICA)

ALASKA: Lower Penn.: Saginaw Bay, Kuiu Island.

Clitrocrinus pyriformis (Kirk)* (*Clistocrinus*)ARKANSAS: Morrow gr. (*Brentwood ls.*): Highway 71, near Woolsey (2 mi. n.w. Brentwood) (W), Fayetteville (F).

- Acrocrinus brentwoodensis* M. & P. (W)*,
Agassizocrinus caliculus M. & P. (W)*,
Cibolocrinus tumidus M. & P. (W),
Cromyocrinus grandis Mather (W)*,
Delocrinus? pendens M. & P. (W),
Diphuicrinus croneisi M. & P. (W),
Ethelocrinus costalis M. & P. (W),
oklahomensis M. & P. (W),
Paradelocrinus aequabilis M. & P. (W)*,
dubius (Mather) (F)* (W) (*Delocrinus*),
?sinus M. & P. (F)* (W)*,
Pentremites angustus Hambach (F) (W)*,
rusticus Hambach (W)*,
Perimestocrinus teneris M. & P. (W)*,
Plaxocrinus strigosus M. & P. (W),
Sciadiocrinus? crassicanthus M. & P. (W),
Stereobrachiocrinus pustulosus Mather (W)

KESLER LS.: Hale Mt., near Morrow.

Agassizocrinus magnus M. & P.*

CANADA: Rundle ls.: Banff, Alberta.

Pentremites grandis Warren (Cascade Mtn.)*,
perelongatus Warren (Stoney Squaw Mtn.)*

ILLINOIS: N.E. $\frac{1}{4}$ Sec. 25, T. 8 N., R. 10 W., Jersey Co. (J), LaSalle (L), Sangamon Co. (SaCo), Springfield (S), Vandalia (V).

- Aatocrinus mucrospinus* (McChesney) (Carlinville)* (L) (*Zeacrinus*),
Acrocrinus wortheni Wachsmuth (Peoria Co.)*,
Apographiocrinus carbonarius (M. & W.) (Near S)* (*Poteriocrinus*),
Delocrinus craigii (Worthen) (V)* (*Eupachyrcrinus*),
hemisphericus (Shumard) (S) (L) (*Poteriocrinus*),

- Endelocrinus fayettensis* (Worthen) (Hickory Cr., Fayette Co.)* (Mo. ser.)
 (*Eupachyrcrinus*),
Erisocrinus conoideus M. & W. (S)*,
typus M. & W. (S)*,
Ethelocrinus bassetti (Worthen) (V)* (*Eupachyrcrinus*),
crassus (M. & W.) (Ovan, Fulton Co.)* (L) (*Cyathocrinus?*),
tuberculatus (M. & W.) (SaCo)* Seville, (L) (*Erisocrinus*),
Kallimorphocrinus expansus J. M. Weller (J)*,
illinoisensis J. M. Weller (J)*,
piasaensis J. M. Weller (J)* (Just under Piasa ls.),
vanpelti J. M. Weller (J)*,
Lecythiocrinus adamsi Worthen (Elmore)*,
Paragassizocrinus carbonarius (Worthen) (Shelby)* (*Agassizocrinus*),
Plaxocrinus discus (M. & W.) (SaCo)* (*Zeacrinus*),
Poteriocrinites lasallensis (Worthen) (L)*,
macoupinensis (M. & W.) (Macoupin Co.)*,
Sciadiocrinus acanthophorus (M. & W.) (Fulton Co.)* (L) (*Hydreionocrinus*),
Ulocrinus sangamonensis (M. & W.) (SaCo)* (*Cyathocrinus*)
- INDIANA: N. $\frac{1}{2}$ Sec. 35, T. 21 N., R. 9 W., Warren County (unless otherwise stated).
 (Minshall ls.).
- Amphipsalidocrinus scissurus* J. M. Weller*,
Delocrinus craigii (Worthen) (Brazil) (*Eupachyrcrinus*),
Dichostreblocrinus scrobiculus J. M. Weller*,
Kallimorphocrinus astrus J. M. Weller*,
astrus intermedius J. M. Weller*,
astrus pyramidalis J. M. Weller*,
indianensis J. M. Weller*,
infacetus J. M. Weller*,
odiosus (J. M. Weller)* (*Aidemocrinus*),
pacillus J. M. Weller*,
Lageniocrinus cassidus J. M. Weller*,
Tythocrinus comptus J. M. Weller*
- IOWA: Mills County (M), etc.
- Delocrinus craigii* (Worthen) (M) (*Eupachyrcrinus*),
hemisphericus (Shumard) (M) (*Poteriocrinus*),
Paradelocrinus inflexus (Geinitz) (M) (*Cyathocrinus*),
Parulocrinus verrucosus (W. & St. J) (Western Iowa)* (M) (*Hydreionocrinus*),
Sciadiocrinus acanthophorus (M. & W.) (Mid. Nodaway) (*Hydreionocrinus*)
- KANSAS: Topeka (T); 30 miles west of Humboldt (H); others as indicated.
- Aatocrinus mucrospinus* (McChesney) (Elk Creek) (*Zeacrinus*),
Amphicrinus carbonarius Springer (Girard)*,
Delocrinus harshbargerii (Beede) (T)* (Osage City sh.) (*Ceriocrinus*),
hemisphericus (Shumard) (Near Council Grove) (*Poteriocrinus*),
megalobrachiis (Beede) (T)* (Howard ls.) (*Erisocrinus*),
Elibatocrinus catactus Moore (3.5 mi. east Lecompton)* (Oread ls.),
concinulus Moore (4 mi. n.e. Baldwin)* (Stranger fm. Vinland sh.),
Erisocrinus typus M. & W. (Howard) (H),
Ethelocrinus monticulatus (Beede) (T)* (Osage coal and sh. above) (*Ceriocrinus*),
Lecythiocrinus olliculaeformis White (H)* (Garnett),
Neozeacrinus kansasensis (Weller) (Neal, Greenwood Co.)* (*Hydreionocrinus*),
Pachylocrinus bellirugosus Moore (Near Emporia)* (Wabaunsee gr.),
washburni (Beede) (T)* (Osage coal zone) (*Scaphiocrinus?*),
Paradelocrinus planus (White) (H)* (*Erisocrinus*),
toddanus (White) (Kansas)* (*Erisocrinus*),
Plaxocrinus parilis M. & P. (Lake of the Forest, Wyandotte Co.)* (Wyandotte ls.),
Stellarocrinus stillativus (White) (H)* (*Cyathocrinus*),
Utharocrinus oreadensis Moore (Lecompton)* (Plattsmouth ls., Oread fm.),
topekensis Moore (8 mi. n. Oskaloosa)* (Topeka fm. Cold Cr. ls.)
 Dennis ls. (Winterset member) (D), Iola ls. (I), Plattsburg ls. (P), Stanton ls. (S): Iola (Io), Near Coffeyville (C), Wayside (W).

- Amphicrinus poundi* Strimple (W)* (S),
Apographiocrinus typicalis Moore and Plummer (5 mi. s.e. Fredonia)* (P),
Athlocrinus placidus M. & P. (3.4 mi. w. Altoona)* (P),
Delocrinus verus M. & P. (C) (D),
Elibatocrinus leptocalyx Moore (Fredonia)* (Ottawa) (Io) (2.5 mi. w. Neodesha)
 (S) (I) (P, Hickory Cr. sh.),
 notabilis Moore (2.5 mi. w. Neodesha)* (P, Hickory Cr. sh.),
Endelocrinus grafordensis M. & P. (W) (S),
 parvus M. & P. (W) (S) (C) (D),
Euonyhocrinus dubius Strimple (W)* (S),
Galateacrinus allisoni Moore (Io) (I),
 ornatus Moore (C)* (Checkerboard ls.?, D) (*Henanobasis*),
Graphiocrinus stantonensis Strimple (W)* (S),
 waysidensis (Strimple) (W)* (S) (*Euerisocrinus*),
Lecythiocrinus urnaeformis Strimple (W)* (S),
?Paragassizocrinus coffeywillensis (Moore) (C)* (D, Checkerboard ls.),
 tarrii (Strimple) (W) (S, Eudora sh.) (*Agassizocrinus*),
Parulocrinus compactus M. & P. (C) (D),
Scytalocrinus larvalis Strimple (W) (S),
Stellarocrinus geometricus M. & P. (Io)* (I)

MISSOURI: *Missouri series*: Kansas City, unless otherwise stated.

- Aatocrinus mucrospinus* (McChesney) (Henrietta-Shawnee fm., Holt and Sullivan Cos.) (*Zeacrinus*),
 robustus (Beede)* (*Zeacrinus*),
Adinocrinus pentagonus (M. & G.)* (*Hydreionocrinus*),
Aesiocrinus barydactylus (Keyes)* (*Phialocrinus*) (Lane sh.),
 basilicus M. & G.* (Lane sh.),
 harii M. & G.* (Lane sh.),
 lykinsi Butts* (Lane sh.),
 magnificus M. & G.* (Lane sh.),
Allagecrinus pecki Moore (Boone Co.)* (Cherokee sh.),
Delocrinus hemisphericus (Shumard) (Boone and Lafayette Cos.)* (*Poteriocrinus*),
 missouriensis M. & G.* (Argentine ls.),
 rugosus (Shumard) (Putnam Co.)* (*Poteriocrinus*),
 subhemisphericus M. & P.* (Lane sh.),
Erisocrinus typus M. & W. (Nodaway Co. and Pleasant Hill),
Ethelocrinus harii (S. A. Miller)* (Lane sh.) (*Eupachyrcrinus*),
 magister (M. & G.)* (Lane sh.) (*Eupachyrcrinus*),
 sphaeralis (M. & G.)* (Lane sh.) (*Eupachyrcrinus*),
 tuberculatus? (M. & W.)* (Washington, Franklin Co.),
Haeretocrinus missouriensis M. & P.* (Lane sh.),
Kallimorphocrinus illinoisensis J. M. Weller ($\frac{3}{4}$ mi. n. Stratman, St. Louis Co.)*,
 knighti J. M. Weller (Cheltenham Dist., St. Louis)* (above Belleville coal),
 lilii J. M. Weller ($\frac{3}{4}$ mi. n. Stratman, St. Louis Co.)*,
Laudonocrinus subsinuatus (M. & G.)* (Argentine ls.) (*Hydreionocrinus*),
Paradelocrinus toddanus (Butts)* (Lane sh.) (*Erisocrinus*),
Parulocrinus blairi (M. & G.) (Weston, southwest of Sedalia)* (Argentine ls.) (*Ulocrinus*),
Perimestocrinus granuliferus (M. & G.)* (Argentine ls.) (*Hydreionocrinus*),
 noduliferus (M. & G.)* (Argentine ls.) (*Hydreionocrinus*),
 parvus (M. & G.)* (Argentine ls.) (*Eupachyrcrinus*),
Plaxocrinus crassidiscus (M. & G.)* (Argentine ls.) (*Hydreionocrinus*),
Sciadiocrinus acanthophorus? (M. & W.) (Henrietta-Shawnee fm., Kansas City and Holt Co.) (*Hydreionocrinus*),
Schistocrinus torquatus M. & P. (U. S. Highway 40, east of Kansas City)* (Dennis ls.-Winterset member),
Stellarocrinus angulatus (M. & G.)* (?Argentine ls.) (*Aesiocrinus*),
Ulocrinus buttsi M. & G.* (?Argentine ls.),
 kansasensis M. & G.* (?Argentine ls.),
 occidentalis M. & G. (Gilpin)*,

NEBRASKA:

- Aatocrinus mucrospinus* (McChesney) (South Fork Nemaha River, Pawnee Co.) (*Zeacrinus*),
Delocrinus craigii (Worthen) (Bennett) (*Eupachycrinus*),
hemisphericus? (Shumard) (Bennetts Mill and Plattsmouth) (*Poteriocrinus*),
Erisocrinus typus M. & W. (Bellevue),
Paradelocrinus inflexus (Geinitz) (Nebraska City)* (*Cyathocrinus*),
Parulocrinus verrucosus (W. & St. John) (Plattsmouth) (*Hydreionocrinus*),
Sciadiocrinus acanthophorus (M. & W.) (Cedar Bluff, Cass Co.) (*Hydreionocrinus*)

NEW MEXICO:

- Delocrinus craigii* (Worthen) (Santa Fe) (*Eupachycrinus*),
Erisocrinus typus M. & W. (Near Taos)

OHIO: Pottsville (Boggs ls.): Carbon Hill, Hocking Co.

- Delocrinus somersi* (Whitfield)* (*Cyathocrinus*),
Plaxocrinus mooresi (Whitfield)* (*Zeacrinus*)

OKLAHOMA: Atoka fm. (Coody ss.): Sec. 33, T. 15N, R20, E, Northeastern Oklahoma.

- Delocrinus granulatus* M. & P
Wewoka fm.: Near Holdenville (H); 6 miles south Okmulgee (O), Oklahoma.
Aatocrinus patulus (Girty) (Wewoka Quadrangle)* (*Hydreionocrinus*)
Allagecrinus bassleri? Strimple (O),
Amphicrinus simplex Strimple (H)*,
Delocrinus granulatus M. & P. (O)*,
perindosarius Strimple (H)*,
wewokaensis Strimple (H)*,
Scytalocrinus pentacolumnus Strimple (H)*
Oologah ls.: 7 miles northeast of Tulsa.
Allagecrinus constellatus Moore*,
dignatus Moore*,
Amphicrinus carbonarius Springer,
Galateacrinus stevensi Moore*,
Laudonocrinus catillus M. & P.*,
Malaioocrinus parviusculus M. & P.*,
Paradelocrinus subplanus M. & P.*,
Sciadiocrinus harrisae M. & P.*

Bendian series, Bostwick Congl.: Ardmore Basin, Oklahoma.

- Talantocrinus farishi* (Laudon)* (*Synerocrinus*)
Stanton ls.: Mound just west of Bartlesville (B); 3 miles west of Ramona (R); others as indicated.
Aesiocrinus osagensis (Strimple) (B)* (*Moundocrinus*),
twinensis (Strimple) (Twin Mounds, 5 mi. SE Ochelata)* (*Pentadelocrinus*),
typus (Strimple) (R)* (*Pentadelocrinus*),
Amphicrinus oklahomaensis Strimple (B)*,
Cibolocrinus robustus Strimple (B)*,
Decadocrinus regularis Strimple (B)*,
Delocrinus nodosarius Strimple (B)*,
Endelocrinus grafordensis M. & P. (B)*,
Endelocrinus parvus M. & P. (B) (R),
tumidus (Strimple) (B)* (*Delocrinus*),
Melbacrinus americanus Strimple (B)*,
Oklahomacrinus bowsheri Moore (15 mi. w. Skiatook)* (Nelagoney fm.),
loebichi Moore (One mi. s. Ada)* (Mo. ser., Francis sh.),
stevensi Moore (15 mi. w. Skiatook)* (Nelagoney fm.),
Paragassizocrinus mcguirei (Strimple) (R)* (Nellie Bly fm.) (*Agassizocrinus*),
tarri (Strimple) (4 mi. s. Bartlesville)* (Ochelata sh.) (*Agassizocrinus*),
Plaxocrinus politus Moore (15 mi. w. Skiatook)* (Nelagoney fm.),
Poteriocrinites ramonaensis Strimple (R),
Scytalocrinus deminutivus Strimple (B)*,
larvalis Strimple (5 mi. s.w. Bartlesville)*,

- Stellarocrinus distinctus* Strimple (B)*,
exsculptus (Strimple) (B)* (*Whiteocrinus*),
stillatus (White) (B) (*Cyathocrinus*),
Ulocrinus convexus (Strimple) (B)* (*Ethelocrinus*),
Utharocrinus granulatus Strimple (B)*,
 Dennis ls. (*Winterset ls. mem.*): East of Bartlesville, Oklahoma.
Delocrinus verus M. & P.*
 Plattsburg-Lansing fm.: Bartlesville, Oklahoma.
Allagecrinus bassleri Strimple*,
Apographocrinus typicalis M. & P.
Ethelocrinus expansus Strimple*,
Parulocrinus plattsburgensis (Strimple)* (*Ethelocrinus*),
Synbathocrinus melba Strimple*
 Wabaunsee gr. (*Brownville ls.*): 5 mi. west (S) and 7 mi. west (St) of Strohm,
 Osage Co., Oklahoma.
Aesiocrinus dilatus Moore (S)*,
Cibolocrinus banioni Moore (St)*,
Delocrinus vulgatus M. & P. (St)*,
Graphiocrinus delicatulus Moore (St)*,
Oklahomacrinus supinus Moore (S)*,
Pachylocrinus mcguirei Moore (S)*,
Perimestocrinus subtilis Moore (S)*,
Plazocrinus modestus Moore (6 mi. w. Strohm)*,
orthodoxus Moore (S)*,
praevalens Moore (S)*,
virginarius Moore (S)*,
Talanterocrinus mcguirei (Moore) (S)* (*Trautscholdicrinus*),
Utharocrinus quinquacutus Moore (S)*,
 Dewey ls.: Dewey, Oklahoma.
Allagecrinus strimplei Kirk*,
Hydreionocrinus deweyensis Strimple*,
Lecythiocrinus adamsi Worthen
olliculaeformis White,
Scytalocrinus deminutivus Strimple
 Morrow fm.: 6 miles southeast Fittstown, Oklahoma.
Allocatillocrinus morrowensis (Strimple)* (*Catillocrinus*),
Amphicrinus divergens Strimple*,
Delocrinus convexus Strimple*,
Ethelocrinus oklahomensis M. & P.
Lasanocrinus daileyi (Strimple)* (Ft. G.) (*Hydreionocrinus*)
 Morrow fm. (*Brentwood ls.*): 2 miles north of Ft. Gibson (Ft. G.), Braggs Mt., 3
 miles southeast of Ft. Gibson (BM), Crittenden (C), Oklahoma.
Acrocrinus pirum M. & P. (Ft. G.)* (BM),
Agassizocrinus caliculus M. & P. (Ft. G.),
Alcimocrinus girtyi (Springer) (C)* (*Zeacrinus*),
Allocatillocrinus rotundus Moore (Greenleaf Lake, s.e. Braggs)* (Ft. G.),
rotundus multibrachiatus Moore (Ft. G.)* (Greenleaf Lake),
Cibolocrinus regularis M. & P. (Ft. G.)*,
tumidus M. & P. (Ft. G.)* (BM),
Delocrinus matheri M. & P. (Ft. G.)*,
pendens M. & P. (Ft. G.)*,
Diphuicrinus croneisi M. & P. (Ft. G.)*,
Ethelocrinus costalis M. & P. (Ft. G.)* (BM),
hispidus M. & P. (Ft. G.)*,
oklahomensis M. & P. (Ft. G.)* (BM),
papulosus M. & P. (Ft. G.)*,
subsiniatus M. & P. (Ft. G.)*,
Hydriocrinus? rosei M. & P. (Ft. G.)*,
Morrowcrinus fosteri M. & P. (Ft. G.)*,
Paradelocrinus dubius (Mather) (Ft. G.) (*Delocrinus*),
?simus M. & P. (Ft. G.)*,
Pentremites angustus Hambach (Ft. G.),
rusticus Hambach (Ft. G.),
Perimestocrinus pumilus M. & P. (BM),

Plaxocrinus strigosus M. & P. (Ft. G.)*,
Sciadiocrinus? crassicanthus M. & P. (Ft. G.)*,
Stereobrachiocrinus pustulosus Mather (Ft. G.)*,
Ulrichocrinus oklahoma Springer (C)*,
Utharocrinus pentanodus (Mather) (Ft. G.)* (*Delocrinus*),
Zeacrinites acicularis (M. & P.) (Ft. G.)* (*Xystocrinus*)

PENNSYLVANIA: Ames ls.

Endelocrinus allegheniensis (Burke) Pittsburgh, (*Delocrinus*)

TEXAS: Harpersville fm. (Saddle Creek ls.).

Delocrinus vulgatus M. & P. (Young Co., and 2 mi. n. Breckenridge, Stephens Co.)*

Graham fm.: Graham, Young Co. unless otherwise indicated.

Aatocrinus mucrospinus (McChesney) (*Zeacrinus*),
Delocrinus hemisphericus (Shumard) (Harpersville and 9 mi. above Graham)
 (*Poteriocrinus*),

wolforum M. & P. (¼ mi. s. New Byrds store, Brown Co.)*,

Ethelocrinus tuberculatus (M. & W.) (*Erisocrinus*),
Laudonocrinus subsinuatus (M. & G.) (*Hydreionocrinus*),
Sciadiocrinus acanthophorus (M. & W.) (Graham and Thrifty) (*Hydreionocrinus*)

Brad fm.:

Aatocrinus patulus (Girty) (Brad) (*Hydreionocrinus*),
Parulocrinus compactus M. & P. (1.3 mi. east of Pickwick, Palo Pinto Co.)

Graford fm.: Northwest side Kyle Mtn., Palo Pinto Co. (K); 2½ mi. n.w. Graford (G),

Aesiocrinus barydactylus (Keyes) (K) (*Phialocrinus*),

Apographiocrinus calycinus M. & P. (K)*,

Aihlocrinus clypeiformis M. & P. (G)* (Merriman ls.),

Delocrinus graphicus M. & P. (K)*,

papulosus M. & P. (K)*,

pictus M. & P. (East end McKenzie Mt., Palo Pinto Co.)* (Wolf

Mt. sh.),

Endelocrinus bifidus M. & P. (K)*,

grafordensis M. & P. (West slope Wolf Mtn., Palo Pinto Co.)*,

Erisocrinus typus M. & W. (K),

Galateacrinus eversi Moore (¼ mi. west Joplin, Jack Co.)*,

Pachylocrinus ogarai M. & P. (K, west slope)*,

Paradelocrinus obovatus M. & P. (K)*,

protensus M. & P. (5 mi. west northwest Lone Camp, Palo Pinto Co.)*,

subplanus M. & P. (¼ mi. e. Mercury, McCulloch Co.),

Paragassizocrinus? carbonarius (Worthen) (Graford) (*Agassizocrinus*),

Paragassizocrinus tarri (Strimple) (K) (Bridgeport, Wise Co.) (*Agassizocrinus*),

Plaxocrinus parilis M. & P. (¼ mi. w. Joplin, Jack Co.),

Sciadiocrinus disculus M. & P. (G)* (Merriman ls.),

Zeacrinites? sellardsi (M. & P.) (K, west slope)*

Palo Pinto ls.: Vicinity of Bridgeport, Wise Co. (B), 3 mi. n.w. Salesville (S).

Apographiocrinus typicalis M. & P. (B),

Delocrinus paucinodus M. & P. (B)*,

verus M. & P. (S)*,

Erisocrinus elevatus M. & P. (3 mi. s.e. Oran)*,

erectus M. & P. (B)*,

typus M. & W. (3½ mi. n. Strawn),

Parulocrinus beedei M. & P. (3½ mi. w. Strawn)*,

Perimestocrinus formosus M. & P. (West of Mineral Wells)*,

Plaxocrinus obesus M. & P. (S)

Canyon group:

Parulocrinus marquisi M. & P.* (Llano River, above Mason)*

Mineral Wells fm. (Missouri ser.): 2½ miles west of Brownwood, Brown Co. (B), 5½ mi. north-northwest Mineral Wells (MW), 2½ mi. north of Rochelle, McCulloch Co. (R).

Aatocrinus mucrospinus (McChesney) (Strawn) (*Hydreionocrinus*),

Aesiocrinus barydactylus (Keyes) (MW) (*Phialocrinus*),

- Apographiocrinus decoratus* M. & P. (MW)*,
exculptus M. & P. (B)*,
facetus M. & P. (B)*,
Athlocrinus nitidus M. & P. (R)*,
Delocrinus bispinosus M. & P. (MW)*,
subcoronatus M. & P. ($\frac{1}{4}$ mi. n.w. Union Hill School, Palo Pinto Co.)*,
Endelocrinus parvus M. & P. (B)* ($\frac{3}{4}$ mi. w. Joplin, Jack Co.),
Erisocrinus typus M. & W. ($\frac{3}{4}$ mi. n.e. Union Hill School, Palo Pinto Co.),
Graphiocrinus kingi M. & P. (MW, 6 mi. n.w.)*,
Pachylocrinus uddeni M. & P. (MW)*,
Paradelocrinus subplanus M. & P. (Llano River, 1 mi. w. Camp Walton, Kimble Co.),
Parulocrinus pustulosus M. & P. (Brownwood, Brown Co.)*,
Perimestocrinus impressus M. & P. (MW)*,
Plaxocrinus lobatus M. & P. (R)*,
omphaloides M. & P. (R)* (West end Lake Pinto),
Ulocrinus occidentalis M. & G. (Strawn)
Mineral Wells fm. (part) (Des Moines ser.): East end Barber Mountain, southwest of Mineral Wells, Palo Pinto Co.
Aatocrinus caviumbilicatus M. & P.*
Delocrinus benthobatus M. & P.*,
granulosus M. & P.*,
granulosus moniliformis M. & P.*,
granulosus zonatus M. & P.*,
Laudonocrinus arrectus M. & P.*,
cucullus M. & P.*,
Perimestocrinus calyculus M. & P.*,
impressus M. & P.*,
Plaxocrinus aplatul M. & P.*
Millsap Lake fm.: (Brannon Bridge ls. member, Strawn gr.): 3 mi. s.w. Brock, Barber Co. (B), Below Kickapoo Falls, s.w. Dennis, Hood Co. (D), $4\frac{1}{2}$ mi. east-northeast Lipan, Hood Co. (L), 3 mi. s.e. Santo, Palo Pinto Co. (S).
Delocrinus bullatus M. & P. (S)*,
Endelocrinus mitis M. & P. (S)*,
rectus M. & P. (B)*,
Ethelocrinus millsapensis M. & P. (B)*,
Haeretocrinus magnus M. & P. (B)*,
Laudonocrinus catillus M. & P. (Potato Knob, Palo Pinto Co.)*,
Malaioocrinus parviusculus M. & P. (D)*,
Neozeocrinus praecursor M. & P. (B)*,
Paradelocrinus brachiatus M. & P. (D)*,
subplanus M. & P. (B)* (L)*,
Pirasocrinus scotti M. & P. (D)*,
Plaxocrinus obesus M. & P. (B) (D)*,
perundatus M. & P. (B) (D)*,
Schistocrinus confertus M. & P. (B)*,
parvus M. & P. (B)*,
planulatus M. & P. (B)*,
Sciadiocrinus harrisae M. & P. (B) (D) (L)*,
Sellardsicrinus marrisae M. & P. (B)*,
Stellarocrinus florealis (M. & P.) (B)* (*Apolloocrinus*),
texanus (M. & P.) (B)* (*Brychiocrinus*),
Synerocrinus formosus M. & P. (B)*,
Texacrinus gracilis M. & P. (B)*
Bend gr. (Marble Falls fm.):
Cibolocrinus punctatus M. & P. (11.5 mi. s.w. San Saba)*,
Ethelocrinus texasensis M. & P. (11.5 mi. s.w. San Saba)*,
Lasanocrinus cornutus M. & P. (11 mi. s.e. San Saba)*,
Scytalocrinus sansabensis M. & P. (15 mi. s.e. San Saba)*
Haymond fm.: Marathon, Brewster Co.
Marathonocrinus bakeri M. & P.*
Gaptank fm.: Wolf Camp, near Marathon, Brewster Co.
Delocrinus? perezcauatus M. & P.

UTAH: *Aubrey gr.*: Junction Grand and Green Rivers.

Erisocrinus typus M. & W.,
Paradelocrinus inflexus (Geinitz) (*Cyathocrinus*),
Sciadiocrinus platybasis (White)* (*Eupachyrcrinus*)

WEST VIRGINIA:

Aatocrinus mucrospinus (McChesney) (28 mi. above Wheeling) (*Zeacrinus*),
Endelocrinus allegheniensis (Burke) (Ames ls., near Wellsburg) (*Delocrinus*),
Plaxocrinus discus (M. & W.) (?Monongalia Co.) (*Zeacrinus*),
Sciadiocrinus acanthophorus (M. & W.) (28 mi. above Wheeling) (*Hydreionocrinus*)

CARBONIFEROUS FAUNAS (SOUTH AMERICA AND EASTERN HEMISPHERE)

AUSTRALIA: New South Wales.

Cactocrinus? brownei Dun and Benson (4 mi. e. Currabubula)*,
Periechocrinites indicator (Etheridge) (Chalky Gulley, Wallumba River, Co. Gloucester)*,
Synbathocrinus ogivalis de Koninck (Burrage, Paterson River)*,
Tribrachyocrinus clarkii McCoy (Darlington)*

BRAZIL:

Erisocrinus loczyi Katzer* (Lower Amazon)

CHINA: Taiyuan series: South Chihli, North China.

Delocrinus houkouensis (Tien)* (*Ceriocrinus*)
Eupachyrcrinus linchengensis Tien*,
pustulosus Tien*,
pustulosus contractus Tien*,
pustulosus transversus Tien*,
Sinocrinus houkouensis Tien*,
linchengensis Tien*,
microgranulosus Tien*,
microgranulosus pentalobus Tien*,
nodosus Tien*,
nodosus spinosus Tien*

INDIA: 2½ miles north of Baroghil Ailak, right bank of Yarkhun River, Chitral.

Graphiocrinus yarkhunensis Reed*

RUSSIA:

Hydriocrinus mjassoedowae Yakovlev (Mt. Jagouli)*,
Poteriocrinites nikitini (Stuckenberg) (Samara)*,
Synbathocrinites poljenowi (Tolmatchoff) (Taidon river, Kousnetsk Basin)*
 (*Taidocrinus*)

Moscovian: Mjatschkowa, near Moscow.

Acrocrinus mjatschkowensis Yakovlev*,
Aesiocrinus patens (Trautschold)* (*Phyalocrinus*),
Cromyocrinus geminatus Trautschold*,
ornatus Trautschold*,
simplex Trautschold*,
Cyathocrinites foveolatus (Eichwald)*,
Hydriocrinus pusillus Trautschold*,
Moscovicrinus multiplex (Trautschold)* (*Poteriocrinus*),
Ophiurocrinus originarius (Trautschold)* (*Poteriocrinus*),
Pegocrinus bijugis (Trautschold)* (*Poteriocrinus*),
Platyrcrinus paradoxus (Eichwald)* (*Palaeochinus*),
Protencrinus moscoviensis Jaekel*,
Scytalocrinus urna (Trautschold)* (*Phyalocrinus*),
Stemmatocrinus cernuus Trautschold*,
Syneroocrinus incurvus (Trautschold)* (*Forbesiocrinus*),
Synphocrinus cornutus Trautschold*,
Talanterocrinus jaekeli Moore and Plummer*

SPAIN: Lower Carboniferous:

Cyathocrinites mammillaris (Phillips),
Lophocrinus minutus (Roemer) (*Poteriocrinus*)

SPITZBERGEN: ?Lower Carboniferous:

Platycrinites spitzbergensis (Holtedah) *

PERMIAN FAUNAS (NORTH AMERICA)

KANSAS: *Foraker ls. (Hughes Creek sh.)*: 4 m. n.e. Eskridge, Wabaunsee Co.

Delocrinus waughi Moore and Strimple *

Luta ls.: Near Winfield.

Delocrinus conicus Boos *,

Pachylocrinus lutanus (Boos) * (*Erisocrinus*)

Fort Riley ls. (Barneston fm.):

Pachylocrinus colubrosus Moore (Near Augusta) *,

twenhofeli Moore (Near Walsburg, Riley Co.) *

Beattie fm. (Florena sh.): Near Grand Summit, Cowley Co.

Delocrinus abruptus Moore and Plummer *

NEBRASKA (*Winfield ls. (Grant sh.)*): N.W. corner s.w. $\frac{1}{4}$ Sec. 20, T, 1 N., R. 6 E.

Nebraskacrinus tourteloti Moore *

TEXAS: *Guadalupe gr. (Delaware Mtn. fm.)*: Southern Delaware Mountains.

Coenocystis richardsoni Girty *

Cibolo ls. (Wolfcamp fm.): Sierra Alta Creek, Cibolo Ranch, 3 miles north of Shafter, Presidio Co.

Apographiocrinus wolfcampensis Moore and Plummer *,

Cibolocrinus regalis Moore and Plummer *,

typus Weller *,

Delocrinus major Weller *,

quadratus Moore and Plummer *,

Endelocrinus texanus (Weller) * (*Delocrinus*),

Erisocrinus propinquus Weller *,

Neozacrinus uddeni (Weller) * (*Hydreionocrinus*),

Perimestocrinus excavatus (Weller) * (*Delocrinus*),

Spaniocrinus? trinodus (Weller) * (*Erisocrinus*),

Stuartwellerocrinus symmetricus (Weller) * (*Cibolocrinus*),

texanus (Weller) * (*Cibolocrinus*),

turbinatus (Weller) * (*Cibolocrinus*),

Ulocrinus americanus (Weller) * (*Phialocrinus*)

Putnam fm.: 3 miles north Putnam, Callahan Co.

Delocrinus puebloensis Moore and Plummer *

Moran fm.: One mile northwest Pueblo, Callahan Co.

Delocrinus abruptus Moore and Plummer *

PERMIAN FAUNAS (EASTERN HEMISPHERE)

AUSTRALIA: Upper Marine Series, New South Wales. Nowra grit, Nowra, Co. St. Vincent (N).

Phialocrinus konincki (Clarke) (Osterley, Hunter River) * (N) (*Cyathocrinus*)

nodosus Etheridge (Copper Point, Co. St. Vincent) *,

princeps Etheridge (Bow-Wow Creek, Co. St. Vincent) *,

?stephensi Etheridge (N) *,

Tribrachiocrinus clarkii McCoy (Darlington, near Sydney) *,

corrugatus Ratte (Wollongon) *,

granulatus Etheridge (Banks of Minumurra River, near Jam-

beroo, Co. Camden) *,

ornatus Etheridge (N) *,

Tricoelocrinus? belfordi Crockford and Brown (Near Belford) * (*Fenestella sh.*)

Bowen River series (Gympie beds): Queensland.

Mesoblastus? australis Etheridge *

Orbitremites wachsmuthi (Etheridge) (Stanwell near Rockhampton) * (*Granato-*

crinus?),

Poteriocrinites smiithi Jack and Etheridge (Stanwell, near Rockhampton) *,

Tricoelocrinus? carpenteri Etheridge (Rockhampton dist.) *

Middle or Marine series: Southwest Mt. Britton Township, Queensland.

Platycrinites nux Jack and Etheridge *

Mount Marmion, West Australia.

Calceolispongia hindei (Etheridge, Jr.) *

ENGLAND AND GERMANY:

Cyathocrinites ramosus Schlotheim. (Glücksbrunn, Pösneck, etc. Germany; Tunstall Hill, etc. Eng.)

INDIA: Middle Productus ls.: Salt Range.

Cyathocrinites goliathus (Waagen) (Virgal)*,
indicus (Waagen) (Nursingpohar)*,
kattaensis (Waagen) (Katta)*,
virgalensis (Waagen) (Virgal)*,
Graphiocrinus yarkhunensis Reed (2½ mi. north of Baroghil Ailak, Chitral)*,
Woodocrinus cometa (De Koninck) (Punjab)* (*Philocrinus*)

RUSSIA: Krasnooufmsk, Urals, unless stated otherwise.

Acariaocrinus caryophylloides (Yakovlev)* (*Streptostomocrinus*),
Basleocrinus krasnooufmskensis Yakovlev*,
Bolbocrinus eudoxiae Yakovlev*,
Calycoocrinus rossicus Yakovlev*,
Camptocrinus permianensis Yakovlev*,
Cibolocrinus treuteri Yakovlev*,
Cyathocrinites ramosus (Schlotheim) (Kirolof, Novgorod),
Delocrinus serratomarginatus (Yakovlev)* (*Ceriocrinus*),
Erisocrinus araxensis Yakovlev (Transcaucasia)*,
Graphiocrinus elenae (Yakovlev)* (*Phialocrinus*),
Halysiocrinus? tuberculatus Yakovlev*,
Hemiindocrinus fredericksi Yakovlev*,
Hemimollocrinus uralensis Yakovlev*,
Hemistreptacron abrachiatus Yakovlev*,
Kallimorphocrinus multibrachiatus (Yakovlev)* (*Allagecrinus*),
uralensis (Yakovlev)* (*Allagecrinus*),
uralensis nodocarinatus (Yakovlev)* (*Allagecrinus*),
Monobrachiocrinus oviformis Yakovlev*,
Nereocrinus jemeljantzevi Yakovlev*,
Paracadaster miloradovitschi Yakovlev (Petschora Basin)*,
Petschorocrinus variabilis Yakovlev (Riviere Kojim)*,
Poteriocrinus quenstedti (Waagen) (Russia)*,
Proindocrinus pizsowi (Yakovlev)* (*Indocrinus*),
Sagittoblastus elongatus Yakovlev*,
wanneri (Yakovlev)* (*Timoroblastus*),
Spaniocrinus transcaucasicus Yakovlev* (Transcaucasia),
Strongylocrinus uralicus Yakovlev*,
Sundacrinus septentrionalis Yakovlev*,
Trimerocrinus platypleura Yakovlev*,
Tundracrinus polaris Yakovlev (Bolchezemelskaya, Toundra)*,
Ulocrinus uralensis Yakovlev*

SICILY:

Agassizocrinus (?) striatiferus Yakovlev*,
Basleocrinus cryptobasalis Yakovlev (Palazzo Adriano)*,
Cibolocrinus nodosus Yakovlev*,
Erisocrinus stefaninii Yakovlev*,
Graphiocrinus fossatotuberculatus Yakovlev*,
Monobrachiocrinus siciliensis Yakovlev*,
Palermocrinus jaekeli Gislén (Palazzo Adriano)*,
Paragaricocrinus mediterraneus Yakovlev*,
Tetrabrachiocrinus fabianii Yakovlev*,

TASMANIA: *Pachydomus* beds: Shot Tower, Browns River Road, Darlington, Moira Id.

Tribrachiocrinus tasmanicus Johnson*

ISLAND OF TIMOR, EAST INDIES: Basleo (Besleo) (B); Fatu Tonini (F); Koea Feeo (KF); Koeka (K); between Niki Niki and Noil Fatoe (NF); Noil Tonini (N); Somohole (S).

Abrachiocrinus conicus Wanner (B)*,
timoricus Wanner (B)*,
Acariaocrinus angulosus Wanner (Noko)* (B),
clavulus Wanner (B)*,

- Actinocrinites brevispinus* (Wanner) (B)*,
brouweri (Wanner) (B)*,
carinatus (Wanner) (B)*,
dilatatus (Wanner) (B)*,
exornatus (Wanner) (B)*,
permicus (Wanner) (B)*,
spinaectus (Wanner) (B)*,
timoricus (Wanner) (B)*,
Allagecrinus dux Wanner (B)*,
Allosycocrinus ?grandis Wanner (B)*,
 ?medius Wanner (B)*,
 pusillus Wanner (B)*,
Ancistrocrinus depressus Wanner (B)*,
 vermistriatus Wanner (B)*,
Angioblastus depressus Wanner (Nifu Muti)*,
 variabilis Wanner (B)*,
Anthoblastus brouweri Wanner (S)*,
 stelliformis Wanner (B)*,
Atremacrinus calyculus Wanner (B)*,
Asymmetrocrinus poteriocrinoides Wanner (B)*,
Basleocrinus conicus Wanner (B)* (Netoe Pantorkak),
 ?kukaensis Wanner (K)*,
 obliquus Wanner (B)*,
 pocillum Wanner (B)*,
 pusillus Wanner (B)*,
 striategranulatus Wanner (B)* (Safneo, Noko, etc.),
 turbinatus Wanner (B)*,
Benthocrinus cryptobasalis Wanner (Pantukat)*,
Bolbocrinus curvatus Marez Oyens (Noko)* (B),
 hieroglyphicus Wanner (B)*,
 hieroglyphicus exornatus Wanner (B)*,
 hieroglyphicus tenuisculptus Wanner (B)*,
 hieroglyphicus tuberculatus Wanner (B)*,
 irregularis Wanner (B)*,
 pusillus Wanner (B)*,
 rex Wanner (N)*,
 turbinatus Wanner (B)*,
 waldthauseniae Wanner (KF)*,
 waldthauseniae basleensis Wanner (B)*,
Brachypus adhaerens Wanner (B)*,
Cadocrinus amarassicus (Wanner) (KF)* (*Hydreionocrinus*),
 variabilis (Wanner) (B)* (*Hydreionocrinus*),
 variabilis canaliculatus Wanner (B)*,
Calycoblastus tricavatus Wanner (S)*,
Calycocrinus amarassicus Wanner (KF)*,
 crassus Wanner (Mandeo)*,
 curvatus Wanner (F)* (B),
 curvatus conicus Wanner (B)*,
 curvatus coronatus Wanner (B)* (Snob Nenoe),
 curvatus depressus Wanner (B)*,
 curvatus elongatus Wanner (B)*,
 curvatus informis Wanner (B)*,
 curvatus labrosus Wanner (B)* (Soempeh),
 curvatus subcoronatus Wanner (B)* (Toenioen Eno),
 curvatus subturbinatus Wanner (B)*,
 curvatus turbinatus Wanner (KF)* (B),
 erectus Wanner (B)*,
 granulatus Wanner (B)*,
 granulatus altior Wanner (B)*,
 kupangensis Wanner (Near Koepang)*,
 labiatus Marez Oyens (Tae Wei)* (B),
 major Wanner (B)*,
 malaianus Wanner (B)*,
 millericrinoides Wanner (B)*,
 nuciformis Wanner (B)*,
 patella Wanner (B)*,

- perplexus* Wanner (B)*,
piriformis Wanner (B)*,
poculus Wanner (B)*,
similis Wanner (B)*,
spinosus Wanner (B)*,
tuberculatus Wanner (B)*,
venemai Wanner (B)*,
venemai angulatus Wanner (B)*,
venemai planus Marez Oyens (B)*,
Camptocrinus indoaustralicus Wanner (B)*,
Ceratoblastus nanus Wanner (B*, Noko),
Ceratocrinus exornatus Wanner (B)*,
gracilis Wanner (B)*,
Cibolocrinus pusillus Wanner (B)*,
spinosus Wanner (B)*,
timorensis Wanner (B)*,
Coenocystis angulosa Wanner (B)*,
perforata Wanner (B)*,
somoholensis Wanner (S)*,
Cranocrinus timoricus Wanner (B)*,
Cydonocrinus turbinatus (Wanner) (B)* (*Cranocrinus*),
turbinatus minor (Wanner) (B)* (*Cranocrinus*),
Delocrinus beyrichi (Wanner) (Baung)* (*Ceriocrinus*),
beyrichi nustoensis (Wanner) (Si near Nustoi)* (B) (*Ceriocrinus*),
crassus Wanner (B)* (*Ceriocrinus*),
depressus (Wanner) (B)*,
excavatissimus Wanner (B)*,
expansus Wanner (B)*,
malaianus Wanner (NF)*,
rotundatus Wanner (B)*,
rugosus Wanner (B)*,
verbeeki Wanner (B)*,
verbeeki levis Wanner (B)*,
verbeeki pumilus Wanner (B)*,
verbeeki vermistriatus Wanner (B)*,
Depaocrinus ottowi Wanner (B)*,
Dichostreblocrinus timorensis Marez Oyens (Noko)*,
Dinocrinus aculeatus Wanner (B)*,
bifurcatus Wanner (Nipol Sumpek)*,
cornutus Wanner (Noil Nalien)*,
elegans Marez Oyens (B)*,
mammeatus Wanner (Toó)*,
Dipteroblastus permicus Wanner (B*, Tunium Eno),
Embryocrinus hanieli Wanner (B)*,
Erisocrinus granulatus Wanner (B)*,
malaianus Wanner (B)*,
obliquus Wanner (B)*,
Euteleocrinus elongatus Wanner (B)*,
erectus Wanner (B)*,
tritillus Wanner (B)*, (Noko),
piriformis Wanner (B)*,
poculiformis Wanner (B)*,
subwelteri Wanner (B)*,
welteri Wanner (B)*,
Graphiocrinus amplior Wanner (B)*,
declivis Wanner (B)*,
punctatus Wanner (B)*,
quinquelobus Wanner (B)*,
scrobiculatus (Wanner) (B)* (*Bastleocrinus*),
timoricus Wanner (B)*,
timoricus spinosus Wanner (B)*,
Hemistreptacron carinatum Wanner (B)*,
carinatum ornatum Wanner (B)* (Noko),
Hypocrinus schneideri Beyrich (B)* (South of Kupang)*,

- Indoblastus granulatus* Wanner (NF)*,
nuciformis Wanner (B)*, Maun-Mollo),
Indocrinus angulosus Wanner (B)*,
brevijugatus Wanner (B)*,
contignatus Wanner (B)*,
crassus Wanner (B)*,
elegans Wanner (B)*,
nodosus Wanner (B)*,
pumillus Wanner (B)*,
rimosus Wanner (B)*,
rimosus pachycephalus Wanner (B)*,
turgidus Wanner (B)*,
Isocatillocrinus indicus Wanner (B)* (Nifoe Moeti),
 ?*Jonkerocrinus conicus* Marez Oyens (Oi Faoeh)*,
Jonkerocrinus spinosus Wanner (B)*,
Kallimorphocrinus acutus (Wanner) (B)* (*Allagecrinus*),
excavatus (Wanner) (B)* (*Allagecrinus*),
indoaustriaticus (Wanner) (B)* (*Allagecrinus*),
inflatus (Wanner) (B)* (*Allagecrinus*),
ornatus (Wanner) (B)* (*Allagecrinus*),
procerus (Wanner) (B)*,
quinquebrachiatus (Wanner) (B)* (Toboe, Lopo),
quinquelobus (Wanner) (B)*,
Lageniocrinus timorensis Wanner (S)*,
Lopadiocrinus angustecavatus Wanner (B)*,
brouweri Wanner (B)*,
brouweri vermistriatus Wanner (B)*,
granulatus Wanner (B)*,
granulatus labiosus Wanner (B)*,
tuberculatus Wanner (B)*,
Loxocrinus booni Marez Oyens (Kioemoko)*,
dilatatus Wanner (B)*,
globulus Wanner (B)*,
Malaioocrinus crassilesta Wanner (B)*,
pusillus Wanner (B)*,
sundaicus (Wanner) (B)* (*Zeacrinus*),
Metasyocrinus pyriformis (Rothpletz) (B)* (South of Kupang)* (*Hypocrinus*),
Mollocrinus ornatisimus Wanner (B)*,
paucituberculatus Wanner (B)*,
poculum Wanner (B)* (Noko),
Monobrachiocrinus ficiformis Wanner (N)* (B),
ficiformis carinatus Wanner (B)*,
ficiformis elongatus Wanner (B)*,
ficiformis granulatus Wanner (B)*,
waitzi Marez Oyens (Noko)*,
Nannoblastus cuspidatus Wanner (S)*,
pyramidatus Wanner (N)*,
Neocatillocrinus incisus Wanner (B)* (Toeboe Lopo),
Neodichocrinus nanus Wanner (B)*,
Neoplatycrinus dilatatus Wanner (B)*,
somoholensis Wanner (S)*,
transitorius Wanner (F)*,
Neoschisma timorense Wanner (B)*,
verrucosa Wanner (Near Kapan)*,
Neozeacrinus peramplus Wanner (Soempek)* (B),
springeri Wanner (Soempek Safneo)* (Toenioen),
Nereocrinus antiquus Wanner (B)*,
granulatus (Wanner) (B)* (*Oceanocrinus*),
Notiocrinus ekadensis Wanner (Noil Ekad)*,
timoricus Wanner (B)*,
Orbitremites malaianus Wanner (B)*,
malaianus constricta Wanner (B)*,
Palaeoholopus pretiosa Wanner (Near Baung)*,

- Parabursacrinus compressus* Wanner (B)*,
conus Wanner (B)*,
magnificus (Wanner) (B)* (*Bursacrinus*),
nefotassensis Wanner (Nefotassi)*,
procerus (Wanner) (B)* (*Bursacrinus*),
pyramidatus (Wanner) (B)* (*Bursacrinus*),
pyramidatus granulatus Wanner (B)*,
Paracatillocrinus granulatus Wanner (B)*,
spinus Wanner (Dorf Apana)*,
Paradoxocrinus patella Wanner (Toe Lina)*,
Paragraphiocrinus exornatus (Wanner) (B)* (Niki Niki) (*Graphiocrinus*),
Paraplasocrinus transitorius (Wanner) (B)* (*Cibolocrinus*),
Parasyocrinus fastigate-pileatus Marez Oyens (Tae Wei)*,
Parindocrinus oyensi Wanner (B)*,
Peripterocrinus gracilis Wanner (B)*,
Petrocrinus beyrichi Wanner (B)*,
boschi Marez Oyens (B)*,
Pilidiocrinus permicus Wanner (B)*,
Plagiocrinus infratextus Wanner (B)*,
jaekeli Wanner (B)*,
torynocrinoides Wanner (B)*,
Platyrcrinites typicus Wanner (B)*,
wachsmuthi Wanner (B),
wachsmuthi apnaensis Wanner (Dorf Apna)*,
wachsmuthi frequentior Wanner (NF)* (B),
wrighti Marez Oyens (B)*,
Pleurocrinus depressus Wanner (B)*,
globosus Wanner (NF)*,
goldfussi Wanner (B)*,
piriformis Wanner (B)*,
spectabilis Wanner (B)*,
Poteriocrinites malaiianus Wanner (B)* (Noil Fatoe),
Proapsidocrinus cuspidatus Wanner (B)* (Niki Niki) (*Prophyllocrinus*),
permicus Wanner (B)*,
Prochoidiocrinus nodosus Wanner (B)*,
Prolobocrinus gracilis (Wanner) (B)* (*Protencrinus*),
permicus Wanner (B)*,
striatus Wanner (Nipol Sumpek, near Basleo)*,
Prophyllocrinus dentatus Wanner (B)*,
Pterotoblastus breviaulatus Wanner (B)*,
brevialatus depressus Wanner (B)*,
decemcostis Wanner (B)*,
ferrugineus Wanner (Tae Wei)*,
gracilis Wanner (B)*,
oyensi Wanner (B)*,
Rhopaloblastus timoricus Wanner (B)* (Noko, Tunium Eno, Sumpek),
Roemerocrinus gracilis Wanner (B)*,
gracilis granulatus Wanner (B)*,
scrobiculatus Wanner (B)*,
Rumphiocrinus singularis Wanner (B)*,
Schizoblastus batheri Wanner (B)*,
crassus Jensen (B)*,
delta Bather (Baung, * etc.),
delta elongatus Wanner (Docasnian)*,
delta subglobosus Wanner (Toeporo)*,
jonkeri Wanner (N)*,
magnificus Wanner (Koanele)*,
molengraffi Wanner (B)*,
molengraffi sebotensis Wanner (Sebot, near Kapan)*,
permicus Wanner (B)*,
permicus ellipticus Wanner (B)*,
pseudodelta Wanner (B)*,
somoholensis Wanner (S)*,
timorensis Bather (Baung, etc.)*,

- timorensis globosus* Wanner (B)*,
verbeeki Wanner (B)*,
verbeeki elongatus Jensen (B)*,
Spaniocrinus validus Wanner (B)*,
Sphaeroschisma somoholense Wanner (S)*,
Spheniscocrinus spinosus Wanner (B)*,
Stachyocrinus zea Wanner (NF)*,
Stomiocrinus minimus Wanner (B)*,
piriformis Wanner (B)*,
subglobosus Wanner (B)*,
Strongylocrinus molengraffi Wanner (B)* (NF)*,
Stuartwellerocrinus jonkeri (Wanner) (B)* (*Cibolocrinus*),
minimus (Wanner) (B)* (*Cibolocrinus*),
propinquus (Wanner) (B)* (*Cibolocrinus*),
Sundablastus weberi Wanner (Hatu Dame)*,
Sundacrinus elongatus Wanner (B)*,
granulatus Wanner (B)*,
triangulus Wanner (B)*,
vastus Wanner (B)*,
Synbathocrinus campanulatus Wanner (B)*,
campanulatus elongatus Wanner (B)*,
campanulatus inflatus Wanner (B)* (N)*,
constrictus Wanner (B)*,
constrictus sinuosus Wanner (B)*,
Syntomocrinus sundaicus Wanner (B)* (NF) (Snob Nenol),
Synphocrinus indicus (Wanner) (B)* (*Graphiocrinus*),
trautscholdi Wanner (B)*,
weidneri Wanner (B)*,
Tenagocrinus sulcatus (Wanner) (*Embryocrinus*) (Koefoea)*,
Teratocrinus spatulifer Wanner (B)*,
Thaumatoblastus longiramus Wanner (B)*,
longispinus Wanner (B)*,
Thetidicrinus piriformis Wanner (B)*,
Timorechinus decurtatus (Wanner) (B)* (*Timorocrinus*),
lacetosus (Wanner) (B)* (*Timorocrinus*),
maximus (Wanner) (Nefotassi)*,
mirabilis Wanner (B)*,
mirabilis major (Wanner) (KF)* (*Timorocrinus*),
mirabilis vermistriatus (Wanner) (B)* (*Timorocrinus*),
multicostatus Wanner (B)*,
nefolassiensis (Wanner) (Nefotassi)*,
pentagonalis (Wanner) (B)* (*Timorocrinus*),
pentagonalis nodosus (Wanner) (*Timorocrinus*) (B)*,
proboscideus (Wanner) (B)* (*Timorocrinus*),
spinosus (Wanner) (NF)* (*Timorocrinus*),
spinosus amarassicus (Wanner) (Koeafeoe)* (*Timorocrinus*),
spinosus incisus (Wanner) (B)* (*Timorocrinus*),
Timoroblastus coronatus Wanner (B)*,
coronatus alatus Wanner (Sebot near Kapan)*,
coronatus basiplanus Wanner (N)*,
coronatus carinatus Wanner (Kioemoko near Basleo)*,
coronatus constrictus Wanner (NF)*,
coronatus depressus Wanner (B)*,
coronatus elongatus Wanner (B)*,
coronatus erectus Wanner (B)*,
coronatus expansus Wanner (B)*,
coronatus informis Wanner (B)*,
coronatus ingens Wanner (B*, Tunium Eno),
coronatus levis Wanner (B)*,
coronatus longipedatus Wanner (B)*,
coronatus pentagonalis Wanner (B)*,
coronatus semiconstrictus Wanner (B)*,
coronatus tessellatus Wanner (NF)*,
coronatus ungulatus Wanner (B)*,
weiensis Wanner (Tae Wei)*,

- Timorocidaris sphaeracantha* Wanner (B)*,
Trimerocrinus minimus Wanner (Toeboe Lopo)*,
 pumilus Wanner (B)*,
 pumilus pentagonus Wanner (B)*,
Ulocrinus conoideus Wanner (B)*,
 ? *indicus* Wanner (B)*,
Wannerocrinus glans Marez Oyens (B)*,
Wrightocrinus jakovlevi (Wanner) (B)* (Noko, Toeboe Lopo, etc.), (*Allage-*
 crinus),
Xenocatillocrinus wrighti Wanner (B)*,

BIBLIOGRAPHY OF GENERA AND SPECIES

Class CYSTOIDEA

Acanthocystis Bather = *Acanthocystites*.

Acanthocystites Barrande. Genotype: *A. briareus* Barrande.

Eocystitidae (Amphoridae). Cambrian.

Barrande, Syst. Sil. Centre Boheme, 7, pt. 1, pp. 180, 277, 1887.—Jaekel, Pal. Zeits., 3, pp. 14, 15, 18, 24, 1918.

Acanthocystis Bather, Nature, 40, p. 269, 1889.—Haeckel, Zeits. Naturwiss. Jena, 30, p. 402, 1896; Amphor. Cystoid., pp. 64, 70, 1896.

Acanthocystites briareus Barrande.

Barrande, Syst. Sil. Centre Boheme, 7, pt. 1, p. 181, pl. 2, figs. 13-15 (?31, 32), 1887.—Jaekel, Pal. Zeits., 3, p. 14, fig. 7, 1918.

Acanthocystis briareus Haeckel, Amphor. Cystoid., p. 71, pl. 1, figs. 6-6b, 1896.

Mid-Cambrian (Div. Cb): Ginetz, Bohemia.

Achradocystis Haeckel = *Achradocystites*.

Achradocystites Volborth. Genotype: *A. grewingkii* Volborth.

Comarocystitidae (Amphoridae). Ord.

Volborth, Mém. Acad. Imp. Sci. St. Petersburg, (7) 16, p. 9, 1870.—Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 676, 1900.

Achradocystis Haeckel, Amphor. Cyst., p. 56, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 55, 1900.

Achradocystites grewingkii Volborth.

Volborth, Mem. Acad. Imp. Sci. St. Petersburg, (7) 16, p. 9, pl. figs. 3-10, 1870.—Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 664, text fig. 2, p. 677, 1900.

Ord. (Wesenberg fm., E): Kersel, Estonia.

Aenigmatocystis T. H. Clark. Genotype: *A. brisa* T. H. Clark.

Aristocystitidae (Amphoridae). Canadian.

T. H. Clark, Bull. Amer. Pal., 10, no. 41, p. 73, 1924.

Aenigmatocystis brisa T. H. Clark.

T. H. Clark, Bull. Amer. Pal., 10, no. 41, p. 73, pl. 7, figs. 1, 2, 1924.

Canadian (Levis sh., Clonograptus zone): Levis, Quebec.

Aethocystis Bather = *Lysocystites*.

Aethocystites S. A. Miller = *Lysocystites*.

Allocystis Bather = *Allocystites*.

Allocystites S. A. Miller. Genotype: *A. hammelli* S. A. Miller.

Sphaeronitidae (Diploporita). Sil.

S. A. Miller, N. Amer. Geol. Pal., p. 222, 1889.—Jaekel, Stammes. Pelmat., 1, p. 398, 1899.—Foerste, Ohio Jour. Sci., 21, p. 54, 1920.

Allocystis Bather, Treatise Zool. (Lankester), pt. 3, p. 72, 1900.

Allocystites hammelli S. A. Miller.

S. A. Miller, N. Amer. Geol. Pal., p. 222, fig. 242, 1889.—Foerste, Ohio Jour. Sci., 21, no. 2, p. 54, pl. 1, figs. 13 A, B, 1920.

Sil. (Niagaran-Osgood sh.): 4.5 miles northeast of Madison, Ind.

Amecystis Ulrich and Kirk. Genotype: *Pleurocystites laevis* Raymond.

Pleurocystitidae (Rhombifera). Ord.

Ulrich and Kirk, Proc. Biol. Soc. Washington, 34, p. 147, 1921.—Dehm, Sitz. Beyer. Akad. Wiss., p. 37, 1934.

Amecystis laevis (Raymond).

Pleurocystites laevis Raymond, Canada Dep. Mines, Mus. Bull. 31, Geol. Ser., 38, p. 2, pl. 2, figs. 1-3, 1921.

Amecystis laevis Ulrich and Kirk, Proc. Biol. Soc. Washington, 34, p. 147, 1921.

Ord. (Trenton): Kirkfield, Ontario (Hull ls.); West Neebish, Mich.

Amorphocystis Jaekel = Caryocystites.

Amorphocystis buchi Jaekel = Caryocystites angelini.

Amorphocystis esthoniae Jaekel = Caryocystites esthoniae.

Amorphocystites Jaekel = Caryocystites.

Amphoracystis Haeckel. Genotype: *Deutocystites irregularis* Barrande.

Aristocystitidae (Amphoridae). Ord.

Haeckel, Amphor. Cyst., p. 52, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 47, 1900.

Amphoracystis irregularis (Barrande).

Deutocystites irregularis Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 147, pl. 15, case 1, figs. 1-11, 1887.

Amphoracystis irregularis Haeckel, Amphor. Cyst., p. 52, text fig. 3, 1896.

Echinosphaerites Jaekel, Stammes. de Pelmat., 1, pl. 8, fig. 7, 1899.

Ord. (Div. D₄): Zahorzan and Lodenitz, Bohemia.

Amphoraea Haeckel.

Haeckel, Amphor. Cyst., pp. 12, 31, 1896.

Type species: *A. dinema* Haeckel, Op. cit., p. 31, pl. 5, fig. 10, 1896. (Hypothetical division and species.)

Amygdalocystis Carpenter = Amygdalocystites.

Amygdalocystites Billings. Genotype: *A. florealis* Billings.

Malocystitidae (Amphoridae). Ord.

Billings, Canadian Jour., 2, p. 270, 1854; Can. Org. Rem., dec. 3, p. 63, 1858.—Zittel, Handb. Pal., 1, p. 413, 1879.—Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 657, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 151, 1913.

Amygdalocystis Carpenter, Jour. Linn. Soc. Zool., 24, p. 27, 1891.—Haeckel, Amphor. Cyst., p. 106, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 58, 1900.—Jaekel, Pal. Zeits., 3, p. 27, 1918.

Amygdalocystites florealis Billings.

Billings, Canadian Jour., 2, p. 270, text figs. 4-6, 1854; Can. Org. Rem., dec. 3, pp. 17, 63, pl. 6, figs. 1 a-e, 1858.—Chamberlain, Geol. Wis., 1, p. 154, 1883.—Springer, Zittel-Eastman Textb. Pal., 1, p. 151, fig. 237, 1913.

Amygdalocystis florealis Haeckel, Amphor. Cyst., p. 106, text fig. 15, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 57, text fig. 19, 1900.

Ord. (Trenton): Ottawa and Kirkfield, Ontario (Hull ls.); Mercer Co., Ky. (Curds-ville ls.).

Amygdalocystites florealis laevis W. R. Billings.

W. R. Billings, Trans. Ottawa Nat. Field Club, 4, p. 52, 1883.

Ord. (Trenton-Hull ls.): Hull, Quebec.

Amygdalocystites huntingtoni Wetherby.

Wetherby, Jour. Cincinnati Soc. Nat. Hist., 4, p. 177, pl. 5, fig. 3, 1881.—S. A. Miller, N. Amer. Geol. Pal., p. 223, fig. 245, 1889.

Ord. (Trenton-Curds-ville ls.): Mercer Co., Ky.

Amygdalocystites radiatus Billings.

Billings, Canadian Jour., 2, p. 271, figs. 7, 8, 1854; Can. Org. Rem., dec. 3, p. 65, pl. 6, figs. 3a, b, 1858.—W. R. Billings, Trans. Ottawa Field Nat. Club, 1, no. 4, p. 51, pl. fig., 1883.—Raymond, Bull. 31, Can. Dep. Mines, Geol. Ser. 38, p. 3, pl. 2, figs. 5-7, 1921.

Ord. (Trenton): Ottawa and Kirkfield, Ontario (Hull ls.); Mercer Co., Ky. (Curds-ville ls.).

Amygdalocystites tenuistriatus Billings.

Billings, Canadian Jour., 2, p. 271, text fig. 9, 1854; Can. Org. Rem., dec. 3, p. 64, pl. 16, figs. 2 a-f, 1858.

Ord. (Trenton-Hull ls.): Ottawa, Ontario.

Anomalocystis Bather = Anomalocystites.

Anomalocystites Hall. Genotype: *A. cornutus* Hall.

Anomalocystitidae (Amphoridea). Dev.

Hall, Amer. Jour. Sci. and Arts, (2) 25, p. 279, 1858; Nat. Hist. N. Y., Pal., 3, p. 132, 1859 (1861).—Woodward, Geol. Mag., (2) 7, pp. 193, 199, 1880.—Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 89, 1887.—Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 668, 1900.—Schuchert, Smiths. Misc. Coll., 47, p. 204, 1904.—Springer, Zittel-Eastman Textb. Pal., 1, p. 150, 1913.

Anomalocystis Bather, Nature, 40, p. 266, 1889; Treatise Zool. (Lankester), pt. 3, p. 51, 1900.—Haeckel, Amphor. Cyst., p. 40, 1896.

Anomocystis Haeckel, Zeits. Naturwiss. Jena, 30, p. 398, 1896; Amphor. Cyst., p. 40, 1896. (Substituted for *Anomalocystites*.)

Anomalocystites (Ateleocystites?) *balanoides* Meek = *Enoploura balanoides*.

Anomalocystites bohemicus Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 92, pl. 5, case 2, figs. 1-15, case 3, figs. 1-8, fig. 9, 1887.

Ord. (Div. D₅): Near Chodaun, Bohemia.

Anomalocystites cornutus Hall.

Hall, Nat. Hist. N. Y., Pal., 3, p. 133, pl. 7-A, figs. 5-7, 1859.

Ateleocystites (*Anomalocystites*) *cornutus* Woodward, Geol. Mag., n.s., 7, p. 193, pl. 6, figs. 4, 5, 1880.

Anomocystis cornuta Haeckel, Amphor. Cyst., p. 41, 1896.

Anomalocystis cornutus Kirk, U. S. Nat. Mus., Proc., 41, p. 22, 1911.

Dev. (Helderbergian-Coeymans ls.): Jerusalem Hill, Litchfield, N. Y.

Anomalocystites disparilis Hall.

Hall, Nat. Hist. N. Y., Pal., 3, p. 145, pl. 88, figs. 1-4, 1859.

Ateleocystites (*Anomalocystites*) *disparilis* Woodward, Geol. Mag., n.s., 7, p. 193, pl. 6, figs. 2, 3, 1880.

Anomocystis disparilis Haeckel, Amphor. Cyst., p. 41, 1896.

Anomalocystites (?) *disparilis* Schuchert, Smiths. Misc. Coll., 47, pt. 2, p. 207, fig. 22, 1904; Maryland Geol. Surv., Low. Dev., p. 228, pl. 32, figs. 1-3, 1913.

Anomalocystis disparilis Kirk, U. S. Nat. Mus., Proc., 41, p. 22, pl. 3, figs. 9-11, 1911.

Dev. (Oriskany-Ridgeley ss.): Cumberland, Md.

Anomalocystites *ensifer* Barrande = *Anomocystis ensifer*.

Anomalocystites *incipiens* Barrande = *Mitrocystella incipiens*.

Anomalocystites *pyramidalis* Barrande = *Lagynocystis pyramidalis*.

Anomocystis Haeckel = *Anomalocystites*.

Anomocystis Jaekel. Genotype: *Anomalocystites ensifer* Barrande.

Anomalocystitidae (Amphoridea). Ord.

Jaekel, Pal. Zeits., 3, p. 122, 1918 (not Haeckel, 1896).

Anomocystis ensifer (Barrande).

Anomalocystites ensifer Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 93, pl. 5, case 4, figs. 1-4, 1887.

Placocystis ensifer Haeckel, Amphor. Cyst., p. 40, 1896.

Anomocystis ensifer Jaekel, Pal. Zeits., 3, p. 122, 1918.

Ord (Div. D₅): Trubin, Bohemia.

Anthocystis Haeckel = *Callocystites*.

Anthocystis *halliana* Haeckel = *Callocystites jewetti*.

Anthocystites Bernard.

Bernard, Elem. Paleont., p. 208, 1893 (nom. nud.).

Apiocystis Bather = *Apiocystites*.**Apiocystites** Forbes. Genotype: *A. pentrematoides* Forbes.

Callocystitidae (Rhombifera). Sil.

Forbes, Mem. Geol. Surv. Great Britain and Mus. Prac. Geol. London, 2, pt. 2, pp. 501, 503, 1848.—Hall, Nat. Hist. N. Y., Pal., 2, p. 242, 1852.—Jaekel, Stammes. Pelmat., 1, pp. 272, 279, 1899.—Schuchert, Smiths. Misc. Coll., 47, p. 210, 1904.—Springer, Zittel-Eastman Textb. Pal., 1, p. 154, 1913.

Apiocystis Bather, Nature, 40, p. 268, 1889.—Carpenter, Jour. Linn. Soc. Zool., 24, 1891.—Haeckel, Amphor. Cyst., p. 132, 1896.—Bather, Treatise Zool., pt. 3, p. 61, 1900.

Apiocystites angelini (Haeckel).

Lepadocrinus angelini Haeckel, Amphor. Cyst., p. 135, 1896.

Apiocystites angelini Jaekel, Stammes. Pelmat., 1, p. 282, pl. 14, figs. 5-7, 1899.

Lepadocrinus gebhardi Angelin, Icon. Crin. Suec., p. 32, pl. 11, figs. 29-35, pl. 19, figs. 18 a-c, 1878.

Sil. (Götlandian): Lau, Island of Gotland.

Apiocystites anna Safford.

Safford, Geol. Tenn., pp. 320, 328.

Dev. (Helderbergian-Linden, Birdsong sh.): Bath Springs, Tenn.

Apiocystites canadensis Billings = *Callocystites canadensis*.**Apiocystites elegans** Hall.

Hall, Nat. Hist. N. Y., Pal., 2, p. 243, pl. 51, figs. 1-17, 1852.—Jaekel, Stammes. Pelmat., 1, p. 282, 1899.

Apiocystis elegans Haeckel, Amphor. Cyst., pl. 3, figs. 4-9, 1896.

Sil. (Niagaran-Rochester sh.): Lockport, N. Y., and Grimsby, Ont.

Apiocystites huronensis Billings = *Brockocystis huronensis*.**Apiocystites imago** Hall = *Halicystis imago*.**Apiocystites oblongus** Jaekel = *Lepocrinites oblongus*.**Apiocystites pentrematoides** Forbes.

Forbes, Mem. Geol. Surv. Gt. Britain and Mus. Prac. Geol. London, 2, pt. 2, p. 503, pl. 15, figs. 1-9, 1848.—Jaekel, Stammes. Pelmat., 1, p. 282, pl. 15, fig. 2, 1899.

Sil. (Wenlock ls.): Dudley, England.

Apiocystites ? tecumseth Billings = *Brockocystis tecumseth*.**Arachnocystis** Bather = *Arachnocystites*.**Arachnocystites** Neumayer. Genotype: *Echinosphaerites infaustus* Barrande.

Echinosphaeritidae (Rhombifera). Ord.

Neumayer, Stammes. Thierr., p. 403, 1889.—Springer, Zittel-Eastman Textb. Pal., 1, p. 152, 1913.

Arachnocystis Bather, Nature, 40, p. 263, 1889.—Haeckel, Zeits. Naturwiss. Jena, 30, p. 397, 1896; Amphor. Cyst., p. 64, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 54, 1900; in Reed, Pal. Indica, n.s., 2, Mem. 3, p. 15, 1906.

Arachnocystites infaustus (Barrande).

Echinosphaerites infaustus Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 155, pl. 23, figs. 1-26, pl. 24, figs. 1-23, pl. 25, figs. 1-21, pl. 39, figs. 1-30, 1887 (not pl. 22, figs. 1-12 = *E. barrandei*).—Jaekel, Stammes. Pelmat., 1, p. 337, pl. 8, figs. 3, 4, 18, pl. 10, figs. 6, 7, 1899.

Arachnocystites infaustus Neumayer, Stammes. Thierr., p. 408, 1889.

Ord.: Vosek (D1), Trubin (D3), Zahorzan and Straschnitz (D4), Bohemia.

Archaeocystis Haeckel = *Archaeocystites*.

- Archaeocystites** Barrande. Genotype: *A. medusa* Barrande.
 Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 94, 1887.
Archaeocystis Haeckel, Amphor. Cyst., p. 71, 1896.
- Archaeocystites medusa** Barrande.
 Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 95, pl. 2, figs. 4-8, 1887.
Archaeocystis medusa Haeckel, Amphor. Cyst., p. 71, 1896.
 Ord. (Div. D1): Wosek near Rokitzan, Bohemia.
- Archeogocystis** Jaekel. Genotype: *Pyrocystites? desideratus* Barrande.
 Sphaerontidae (Diploporita). Ord.
 Jaekel, Stammes. Pelmat., 1, p. 395, 1899.—Bather, Treatise Zool. (Lankester), pt. 1, p. 73, 1900.
- Archeogocystis desiderata** (Barrande).
Pyrocystites? desideratus Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 172, pl. 29, figs. 29-34, 1887.
Pirocystis desiderata Haeckel, Amphor. Cyst., p. 93, 1896.
Archeogocystis desideratus Jaekel, Stammes. Pelmat., 1, p. 395, pl. 3, figs. 4, 5, 1899.
 Ord. (Div. D1): Wosek, Bohemia.
- Aristocystis** Bather = **Aristocystites**.
- Aristocystites** Barrande. Genotype: *A. bohemicus* Barrande.
 Aristocystitidae (Amphoridae). Ord.
 Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 95, 1887.—Springer, Zittel-Eastman Textb. Pal., 1, p. 150, 1913.
Aristocystis Bather, Nature, 40, p. 259, 1889.—Treatise Zool. (Lankester), pt. 3, p. 44, 1900; in Reed, Pal. Indica, n.s., Mem. 3, p. 8, 1906.—Haeckel, Amphor. Cyst., p. 50, 1896.
- Aristocystites bohemicus** Barrande.
 Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 108, pls. 9-12, pl. 13, figs. 27-29, pl. 14, figs. 7-19, pl. 36, figs. 5-27, pl. 38, figs. 18-29, 1887.—Jaekel, Stammes. Pelmat., 1, p. 115, fig. 25, p. 361, fig. 82, p. 409, fig. 86, p. 412, pl. 3, figs. 10, 11, 1899.
Aristocystis bohemicus Bather, Treatise Zool. (Lankester), pt. 3, pp. 42, 44, figs. 1, 2, 1900.—Kirk, U. S. Nat. Mus., Proc., 41, p. 6, pl. 1, figs. 1-10, 1911.—Springer, Zittel-Eastman Textb. Pal., 1, p. 150, text fig. 234, 1913.
Aristocystites? grandiscutum Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 109, pl. 14, fig. 20, pl. 38, fig. 30, 1887.
 Ord. (Div. D4): Lodenitz, Zahorzan, Wraz and Strasnitz, Bohemia.
- Aristocystites bohemicus subcylindricus** Barrande = **Hippocystis subcylindrica**.
- Aristocystites dagon** (Bather).
Aristocystis dagon Bather, in Reed, Pal. Indica, n.s., 2, Mem. 3, p. 8, pl. 1, figs. 1-5, p. 9, text figs. 1a, b, p. 11, figs. 2 a-m, 1906.
 Ord. (Naungkangyi beds): Sedaw, Burmah, India.
- Aristocystites? desideratus** Barrande.
 Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 65, pl. 20, figs. 1, 2, 1887.
 Ord. (Div. D4): Zahorzan, Bohemia.
- Aristocystites? grandiscutum** Barrande = *A. bohemicus* (part); **Hippocystis subcylindricus** (part).
- Aristocystites? idealis** Barrande = **Calix idealis**.
- Aristocystites? potens** Barrande = **Calix potens**.
- Aristocystites? rudis** Barrande.
 Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 113, pl. 17, case 4, figs. 1-4, 1887.
 Ord. (Div. D4): Strasnitz, Bohemia.
- Aristocystites? sculptus** Barrande = **Calix sculptus**.

Aristocystites sinicus (Sun).

Aristocystis sinica Sun, Bull. Geol. Soc. China, 15, no. 4, p. 478, pl. 1, figs. 1 a-c, pl. 2, figs. 2 a, b, 1936.

Ord. (Llandeilian): Kweichou, China.

Aristocystites undet. Barrande (*A. indeterminatus* Haeckel) = *Palmacystis palmatus*.

Ascocrinus Barrande = *Ascocystites*.

Ascocystis Bather = *Ascocystites*.

Ascocystites Barrande. Genotype: *A. drabowensis* Barrande.

Eocystitidae (Amphoridae). Ord.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 115, 1887.

Ascocrinus Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 115, 1887.

Ascocystis Bather, Nature, 40, p. 269, 1889; Treatise Zool. (Lankester), pt. 3, p. 77, 1900.—Carpenter, Jour. Linn. Soc., Zool., 24, p. 24, 1891.

Ascocystites barrandei Jaekel.

Jaekel, Pal. Zeits., 3, p. 17, figs. 9 A-F, 1918.—Ehrenberg, Bull. Amer. Mus. Nat. Hist., 59, p. 67, fig. 42, 1929.

Ord. (Div. D2): Drabow, Bohemia.

Ascocystites drabowensis Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 118, pl. 32, figs. 1-32, pl. 33, figs. 1-30, 1887.

Ord. (Div. D2): Mt. Drabow, Chrutenitz and Wesela, Bohemia.

Ascocystites micraster Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 118, pl. 36, figs. 3, 4, 1887.

Ord. (Div. D2): Mt. Drabow and Chrutenitz, Bohemia.

Atelecystis Bather = *Ateleocystites*.

Ateleocystites Billings. Genotype: *A. huxleyi* Billings.

Anomalocystitidae (Amphoridae). Ord.

Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 3, p. 72, 1858.—Zittel, Handb. Pal., 1, p. 413, 1879.—Woodward, Geol. Mag., dec. 2, 7, p. 194, 1880 (part).

Atelecystis Bather, Nature, 40, p. 268, 1889; Treatise Zool. (Lankester), pt. 3, p. 51, 1900.—Haeckel, Amphor. Cyst., p. 41, 1896 (as *Atelecystis*).

Ateleocystites (*Anomalocystites*) *cornutus* Woodward = *Anomalocystites cornutus*.

Ateleocystites (*Anomalocystites*) *disparilis* Woodward = *Anomalocystites disparilis*.

Ateleocystites fletcheri Salter.

Salter, Cat. Camb. Sil. Foss., p. 128, text fig. (Addenda, XLVII), 1873.

Sil. (Wenlock ls.): Dudley, England.

Ateleocystites (*Placocystites*) *forbesianus* Woodward = *Placocystites forbesianus*.

Ateleocystites huxleyi Billings.

Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 3, p. 72, text fig. 4, 1858.—Woodward, Geol. Mag., 7, p. 193, pl. 6, 1880.

Ord. (Trenton-Hull ls.): Hull, Quebec, and Ottawa, Ontario.

Atelecystis Haeckel. See *Atelecystis*.

Atelecystis gegenbauri Haeckel = *Placocystites gegenbauri*.

Baculocystis Bather = *Baculocystites*.

Baculocystites Barrande. Genotype: *B. simplex* Barrande.

Aristocystitidae (Amphoridae). Ord.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 118, 1887.

Baculocystis Bather, Treatise Zool. (Lankester), pt. 3, p. 46, 1900.

Baculocystites simplex Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 119, pl. 36, figs. 1-3, 1887.
Ord. (Div. D4): Zahorzan, Bohemia.

Balanocystites Barrande. Genotype: *B. lagenula* Barrande.

Anomalocystitidae (Amphoridae). Ord.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 119, 1887.

Balanocystis Bather, Treatise Zool. (Lankester), pt. 3, p. 77, 1900.

Balanocystites lagenula Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 120, pl. 5, figs. 10-13, 1887.

Ord. (Div. D1): Wosek near Rokitzan, Bohemia.

Belemnocystis Bather = Belemnocystites.

Belemnocystites Miller and Gurley. Genotype: *B. wetherbyi* Miller and Gurley.

Anomalocystitidae (Amphoridae). Ord.

Miller and Gurley, Ill. St. Mus., Bull. 5, p. 8, 1894.

Belemnocystis Bather, Treatise Zool. (Lankester), pt. 3, p. 51, 1900.

Belemnocystites wetherbyi Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 5, p. 9, pl. 1, figs. 4-6, 1894.—S. A. Miller
N. Amer. Geol. Pal., 2d App., p. 740, fig. 1321, 1897.

Ord. (Trenton-Curdsville ls.): Mercer Co., Ky.

Bockia Hecker. Genotype: *B. neglecta* Hecker.

Eocystitidae (Eocrinoidea). Ord.

Hecker, Compt. Rend. (Doklady) Acad. Sci. URSS, 19, no. 5, pp. 421, 423, fig. 2,
1938; Acad. Sci. URSS, Inst. Pal. 9, lv. 4, pp. 30, 68, 1940.

Bockia cucumis Hecker.

Hecker, Compt. Rend. (Doklady) Acad. Sci. URSS, 19, no. 5, p. 424, 1938; Acad.
Sci. URSS, Inst. Pal., 9, lv. 4, pp. 41, 71, pl. 8, fig. 6, 1940.

Ord. (Itfer, C3): Estonia.

Bockia laevis Hecker.

Hecker, Compt. Rend. (Doklady) Acad. Sci. URSS, 19, no. 5, p. 424, 1938; Acad.
Sci. URSS, Inst. Pal., 9, lv. 4, pp. 40, 71, pl. 7, figs. 1-3, 1940.

Ord. (Kuckers, C2, Itfer, C3): Estonia and Leningrad Province, URSS.

Bockia neglecta Hecker.

Hecker, Compt. Rend. (Doklady) Acad. Sci. URSS, 19, no. 5, p. 423, 1938; Acad.
Sci., URSS, Inst. Pal., 9, lv. 4, pp. 39, 71, figs. 18-22, 26-30, pl. 5-7, 1940.

Ord. (Glauconite ls., B2; Orthoceras ls., B3; Echinospaerites ls., C1): Leningrad
Province and Estonia.

Bockia sculpta Hecker.

Hecker, Compt. Rend. (Doklady) Acad. Sci. URSS, 19, no. 5, p. 424, 1938; Acad.
Sci. URSS, Inst. Pal., 9, lv. 4, pp. 40, 71, fig. 33, pl. 8, figs. 4, 5, 1940.

Ord. (Echinospaerites ls., C1, and Orthoceras ls., B3): Leningrad Province and
Estonia.

Brockocystis Foerste. Genotype: *Apiocystites tecumseth* Billings.

Callocystitidae (Rhombifera). Sil.

Foerste, Bull. Sci. Lab. Denison Univ., 17, p. 469, 1914.

Brockocystis clintonensis (Parks).

Lepadocystis clintonensis Parks, Amer. Jour. Sci., 29, p. 404, text figs. 1, 2, 1910.

Brockocystis clintonensis Foerste, Bull. Sci. Lab. Denison Univ., 17, p. 473, 1914.

Sil. (Up. Medinan-Cataract fm.): Forks of Credit River, Ontario.

Brockocystis huronensis (Billings).

Apiocystites huronensis Billings, Cat. Sil. Foss. Anticosti, p. 91, text fig. 28, 1866.

Apiocystites? huronensis Schuchert, Smiths. Misc. Coll., 47, pt. 2, p. 4, 1904.

Brockocystis huronensis Foerste, Bull. Sci. Lab. Denison Univ., 17, p. 473, 1914.

Sil. (Up. Medinan-Cataract fm.): Near Cabots Head, shore of Lake Huron, Canada.

Brockocystis nodosaria Foerste.

Foerste, Bull. Sci. Lab. Denison Univ., 19, p. 5, pl. 1, figs. 1-5, 1919.

Sil. (Up. Medinan-Brassfield fm.): 2 mi. w. Peebles, Ohio.

Brockocystis tecumseth (Billings).

Apiocystites? tecumseth Billings, Cat. Sil. Foss. Anticosti, p. 91, 1866.

Brockocystis tecumsethi Foerste, Bull. Sci. Lab. Denison Univ., 17, p. 469, text fig. 8, pl. 5, fig. 2; 1914; 19, pl. 1, fig. 7, pl. 3, fig. 1, 1919.

Sil. (Up. Medinan-Cataract fm.): Near South Bay and east of Ice Lake, Manitoulin Island, Lake Huron.

Calix Rouault. Genotype: *C. sedgwicki* Rouault.

Aristocystitidae (Amphoridea). Ord.; Sil.

Rouault, Bull. Soc. Géol. France, (2) 8, p. 358, 1851.—Barrande, Syst. Sil. Centre

Bohême, 7, pt. 1, p. 105, 1887.—Jaekel, Stammes. Pelmat., 1, p. 402, 1899.—

Bather, Treatise Zool. (Lankester), pt. 3, p. 46, 1900.—Chauvel, Soc. Geol.

Min. Bretagne, C. R., an. 2, no. 2, p. 2, 1936.

Craterina Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 121, 1887.—Haeckel, Amphor. Cystoid., p. 54, 1896. (Genotype: *C. bohémica* Barrande.)

Codiacystis Jaekel, Stammes. Pelmat., 1, p. 398, 1899.—Bather, Treatise Zool. (Lankester), pt. 3, p. 73, 1900. (New name for *Craterina* Barrande, not Bory.)

Calix absens (Barrande).

Craterina absens Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 128, pl. 20, figs. 28-32, 1887.

Ord. (Div. D4): Zahorzan and Vrschovitz, Bohemia.

Calix applanatus (Barrande).

Craterina applanata Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 128, pl. 20, figs. 15-17, 1887.

Ord. (Div. D4): Zahorzan, Bohemia.

Calix barrandei Rouault.

Rouault, Oeuvres posthumes (pub. by P. Lebesconte), II, pl. 9, fig. 1, 1883.—Jaekel, Stammes. Pelmat., 1, p. 404, 1899.

Ord.: Zaharny, Bohemia (Div. D4); Bussaco, Portugal.

Calix bohemicus (Barrande).

Craterina bohémica Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 129, pl. 17, case 2, figs. 1-16, pl. 18, figs. 23-36, pl. 34, figs. 1-23, pl. 35, figs. 1-35, 1887.

Codiacystis bohémica Jaekel, Stammes. Pelmat., 1, p. 114, fig. 24-C, p. 401, pl. 4, figs. 8, 8a, 1899.

Calix bohémica Bather, Treatise Zool. (Lankester), pt. 3, p. 46, fig. 44, 1900.

Ord. (Div. D4): Zahorzan, Straschnitz, etc., Bohemia.

Calix consobrinus (Barrande).

Craterina consobrina Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 132, pl. 20, figs. 18-25, 1887.

Ord. (Div. D4): Zahorzan, Bohemia.

Calix davidsoni Rouault.

Rouault, Oeuvres posthumes (publ. by P. Lebesconte), II, 1883.—Jaekel, Stammes. Pelmat., 1, p. 404, 1899 (plates only).

Ord.: Bussaco, Portugal.

Calix docens (Barrande).

Craterina docens Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 132, pl. 20, figs. 37-42, 1887.

Ord. (Div. D4): Zahorzan, Sterbohol, etc., Bohemia.

Calix embryo (Barrande).

Craterina? embryo Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 133, pl. 31, case 4, figs. 1-3, 1887.

Ord. (Div. D4): Lodenitz, Bohemia.

Calix excavatus (Barrande).

Craterina excavata Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 133, pl. 19, figs. 6-24, pl. 20, figs. 5-7, pl. 21, figs. 27-29, pl. 31, case 4, figs. 4, 5, case 5, figs. 1, 2, pl. 34, figs. 29-34, 1887.

Calix excavata Bather, Treatise Zool. (Lankester), pt. 3, p. 46, 1900.

Ord. (Div. D4): Zahorzan, Lodenitz, etc., Bohemia.

Calix excavatus intermedius (Barrande).

Craterina excavata var. *intermedia* Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 136, pl. 19, figs. 25-27, 1887.

Ord. (Div. D4): Zahorzan, Bohemia.

Calix halli Rouault = *Pachycalix halli*.

Calix idealis (Barrande).

Aristocystites? idealis Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 110, pl. 19, fig. 4, pl. 21, figs. 32-34, 1887.

Codiacystis? idealis Jaekel, Stammes. Pelmat., 1, p. 412, 1899.

Ord. (Div. D4): Zahorzan, etc., Bohemia.

Calix infundibulum (Barrande)

Craterina infundibulum Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 135, pl. 19, figs. 1-3, 1887.

Ord. (Div. D4): Zahorzan, Bohemia.

Calix lebescontii Chauvel.

Chauvel, Soc. Géol. Min. Bretagne, C.R., an. 2, no. 2, p. 3, 1936.

Ord.: Vitre, Crozon, Brittany.

Calix modicus (Barrande).

Craterina modica Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 137, pl. 20, fig. 8, 1887.

Ord. (Div. D4): Zahorzan, Bohemia.

Calix moneta (Barrande).

Craterina moneta Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 137, pl. 20, figs. 26-36, pl. 21, case 2, figs. 3-26, 30, 31, 1887.

Ord. (Div. D4): Zahorzan, Bohemia.

Calix murchisoni (Verneuil and Barrande).

Echinospaerites murchisoni Verneuil and Barrande, in Prado, Bull. Soc. Géol. France, (2) 12, p. 995, pl. 26, fig. 7, 1855.—Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, pp. 21, 70, 1887.

Calix murchisoni Bather, Treatise Zool. (Lankester), pt. 3, p. 45, fig. 5, 1900.

Ord.: Bussaco, Portugal; Romeral, Spain.

Calix potens (Barrande).

Aristocystites? potens Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 111, pl. 6, figs. 22-25, 1887.

Codiacystis? potens Jaekel, Stammes. Pelmat., 1, p. 412, 1899.

Ord. (Div. D4): Chrustenitz, Bohemia.

Calix rouaulti Chauvel.

Chauvel, Soc. Geol. Min. Bretagne, C.R., an. 2, no. 2, p. 3, 1936.

Ord.: Andouille, Plechatel, Brittany, France.

Calix rouaulti buchoti Chauvel.

Chauvel, Soc. Geol. Min. Bretagne, C.R., an. 2, no. 2, p. 3, 1936.

Ord.: Monterrien (Morbihan), France.

Calix sculptus (Barrande).

Aristocystites? sculptus Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 113, pl. 6, figs. 28, 29, 1887.

Codiacystis? sculptus Jaekel, Stammes. Pelmat., 1, p. 412, 1899.

Aristocystites cf. *sculptus* Delgado, Comm. Serv. Géol. Portugal, p. 62, 1908.

Ord.: Chrustenitz, Bohemia (Div. D4); Bussaco, Portugal.

Calix sedgwicki Rouault.

Rouault, Bull. Soc. Géol. France, (2) 8, p. 358, 1851.—Jaekel, Stammes. Pelmat., 1, p. 404, pl. 4, fig. 11, 1899.—Chauvel, Soc. Géol. Min. Bretagne, C.R., an. 2, no. 2, p. 2, 1936.

Ord.: Near Rennes, France; Bussaco, Portugal; Almadenojoz, Spain.

Calix simulans (Barrande).

Craterina simulans Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 138, pl. 20, figs. 13-14, 1887.

Ord. (Div. D4): Lodenitz, Zahorzan, Bohemia.

Calix surgens (Barrande).

Craterina surgens Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 139, pl. 20, figs. 9-23, 1887.

Ord. (Div. D4): Zahorzan, Bohemia.

Calix tectus (Barrande).

Craterina tecta Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 142, pl. 20, figs. 3, 4, 1887.

Ord. (Div. D4): Zahorzan, Bohemia.

Callocystis Carpenter = *Callocystites*.

Callocystis multipora Haeckel = *Glyptocystites* multipora.

Callocystites Hall. Genotype: *C. jewetti* Hall.

Callocystitidae (Rhombifera). Sil.

Hall, Nat. Hist. N. Y. Pal., 2, pp. 238, 248, 1852; 3, p. 151, 1861 (1859).—Zittel, Handb. Pal., 1, p. 421, 1879.—Jaekel, Stammes. Pelmat., 1, p. 289, 1899.—Grabau, Bull. Buffalo Soc. Nat. Sci., 7, p. 151; Bull. N. Y. St. Mus., 9, p. 151, 1901.—Schuchert, Smiths. Misc. Coll., 47, p. 242, 1904.—Springer, Zittel-Eastman Textb. Pal., 1, p. 153, 1913.

Anthocystis Haeckel, Amphor. Cyst., p. 132, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 62, 1900. (Genotype: *A. halliana* Haeckel).

Callocystis Carpenter, Jour. Linn. Soc. Zool., 24, p. 5, 1891.—Haeckel, Amphor. Cyst., p. 131, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 62, 1900.

Callocystites canadensis (Billings).

Apiocystites canadensis Billings, Cat. Sil. Foss. Anticosti, p. 90, 1866.

Callocystites canadensis Schuchert, Smiths. Misc. Coll., 47, p. 245, 1904.

Callocystites tripectinatus Ringueberg, Bull. Buffalo Soc. Nat. Hist., 5, p. 12, pl. 1, fig. 10, 1886.

Sil. (Niagaran-Rochester sh.): Grimsby, Ont.; Lockport, N. Y.

Callocystites jewetti Hall.

Hall, Nat. Hist. N. Y. Pal., 2, p. 239, pl. 50, figs. 1-11 (12-16, var.), 1852.—Grabau, Bull. Buffalo Soc. Nat. Sci., 7, p. 151, text fig. 47, 1901.

Callocystis jewetti Jaekel, Stammes. Pelmat., 1, p. 290, text fig. 64, pl. 15, figs. 1, 1 a-c, 1890.—Haeckel, Amphor. Cyst., p. 131, pl. 3, figs. 21, 22, 1896.

- Anthocystis halliana* Haeckel, Amphor. Cyst., p. 132, pl. 3, figs. 23, 24, 1896.
Sil. (Niagaran-Rochester sh.): Lockport, N. Y.; Grimsby, Ont.
- Callocystites jewetti elongatus** Foerste.
Foerste, Ohio Jour. Sci., 17, no. 7, p. 236, pl. 11, figs. 3, 6a, 6b, 1917; 21, no. 2, p. 40, pl. 2, fig. 6, 1920.
Sil. (Niagaran-Cedarville dol.): Cedarville and Springfield, Ohio.
- Callocystites sphaeroidalis* Foerste = *Coelocystis subglobosus*.
Callocystites tripectinatus Ringueberg = *C. canadensis*.
- Canadocystis** Jaekel. Genotype: *Malocystites barrandi* Billings.
Malocystitidae (Amphoridae). Ord.
Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 675, 1900.—Foerste, Ottawa Nat., 30, pp. 71, 88, 100, 1916.
Sigmacystis Hudson, N. Y. St. Mus., Bull. 149, p. 254, 1911. (Genotype: *Malocystites emmonsi* Hudson.)
- Canadocystis barrandi** (Billings).
Malocystites barrandi Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 3, p. 67, pl. 7, figs. 2a-c, 1858.
Canadocystis barrandi Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 675, 676, text fig. 11, 1900.
Ord. (Chazyan-Aylmer fm.): Montreal, Quebec.
- Canadocystis emmonsi** (Hudson).
Malocystites emmonsi Hudson, N. Y. St. Mus., Bull. 80, p. 270, pl. 1, figs. 3-7, 1905.
Sigmacystis emmonsi Hudson, N. Y. St. Mus., Bull. 149, p. 254, 1911.
Canadocystis emmonsi Foerste, Ottawa Nat., 30, p. 76, 1916.
Ord. (Chazyan): Valcour Island, Lake Champlain, N. Y. (Crown Point and Valcour ls.); Montreal, Quebec (Aylmer fm.).
- Cardiocystis* Bather = *Cardiocystites*.
- Cardiocystites** Barrande. Genotype: *C. bohemicus* Barrande. (Indeterminable.)
Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 120, 1887.
Cardiocystis Bather, Treatise Zool. (Lankester), pt. 3, p. 77, 1900.
- Cardiocystites bohemicus** Barrande.
Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 121, pl. 31, case 5, figs. 11, 12, 1887.
Ord. (Div. D4): Zahorzan, Bohemia.
- Carioerinites* Bronn. See *Caryocerinites*.
- Carioerinus* Austin and Austin = *Caryocerinites*.
- Carpocystis* Bather = *Proteocystites*.
- Carpocystites* Oehlert = *Proteocystites*.
- Caryocerinites** Say. Genotype: *C. ornatus* Say.
Caryocerinitidae (Rhombifera). Sil.; Dev.
Say, Jour. Acad. Nat. Sci. Phila., 4, p. 289, 1825; Bull. Amer. Pal., 1, p. 347, 1896.—Bronn, Lethea, p. 64, 1834 (as *Carioerinites*).—Jaekel, Stammes. Pemat., 1, p. 313, 1899.—Foerste, Ottawa Nat., 30, p. 110, 1916.
- Carioerinus* Austin and Austin, Mon. Rec. and Foss. Crin., p. 53, 1845.
- Caryocerinus* Agassiz, Mem. Soc. Neuchatel, 1, p. 198, 1836; Ann. Nat. Hist., 1, p. 448, 1838.—Hall, Nat. Hist. N. Y., Pal., 2, pp. 216, 248, 1852.—Zittel, Handb. Pal., 1, p. 418, 1879.—Haeckel, Amphor. Cyst., p. 143, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 67, 1900.—Grabau, N. Y. St. Mus. Bull. 45, p. 149, 1901.—Bather, in Reed, Pal. Indica, n.s., 2, Mem. 3, p. 23, 1906.—Springer, Zittel-Eastman Textb. Pal., 1, p. 153, 1913.
- Enneacystis* Haeckel, Amphor. Cyst., p. 143, 1896. (Genotype: *E. buchiana* Haeckel.)
Stribalocystis Bather, Treatise Zool. (Lankester), pt. 3, p. 67, 1900.

- Stribalocystites* S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 630, 1892 (adv. pub. 1891, p. 20).—Jaekel, Stammes. Pelmat., 1, p. 312, 1899. (Genotype: *S. tumidus* S. A. Miller.)
- Caryocrinites aurora** (Bather).
Caryocrinus aurora Bather, in Reed, Pal. Indica, n.s., 2, Mem. 3, p. 29, pl. 2, fig. 7, 1906.
Caryocrinus cf. *aurora* Reed, Pal. Indica, 6, Mem. 1, p. 3, pl. 1, fig. 1, 1915.
 Ord. (Naungkangyi beds): Sedaw, Burmah, India.
- Caryocrinites avellana** (Bather).
Caryocrinus avellana Bather, in Reed, Pal. Indica, n.s., 2, Mem. 3, p. 32, pl. 2, figs. 3-6, 1906.
 Ord (Naungkangyi beds): Sedaw, Burmah, India.
- Caryocrinites buchianus** (Haeckel).
Enneacystis buchiana Haeckel, Amphor. Cystoid., p. 143, pl. 4, figs. 18, 19, 1896.
Caryocrinus ornatus von Buch, Ueber Cystideen, p. 1, pl. 1, figs. 1-7, pl. 2, figs. 1-3, 1845.
 Ord.: Russia (vicinity St. Petersburg?).
- Caryocrinites bulbulus** (Miller and Gurley).
Caryocrinus bulbulus Miller and Gurley, Ill. St. Mus., Bull. 5, p. 11, pl. 2, figs. 15-18, 1894.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 740, fig. 1324, 1897.
 —Wood, U. S. Nat. Mus., Bull. 64, p. 11, pl. 2, fig. 2, 1909.—Springer, Amer. Sil. Crin., p. 143, pl. 33, figs. 23-27, 1926.
Caryocrinites hexagonus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.
Caryocrinus hexagonus Wood, U. S. Nat. Mus., Bull. 64, p. 11, 1909.
 Sil. (Niagaran-Beech River fm.): Wayne and Decatur Cos., Tenn.
- Caryocrinites ellipticus** (Miller and Gurley).
Caryocrinus ellipticus Miller and Gurley, Ill. St. Mus., Bull. 5, p. 10, pl. 2, figs. 13, 14, 1894.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 740, fig. 1325, 1897.
 Sil. (Niagaran-Osgood ls.): Osgood, Ind.
- Caryocrinites elongatus** (Rowley).
Stribalocystis elongatus Rowley, Amer. Geol., 25, p. 71, pl. 2, fig. 39; 34, p. 273 pl. 16, figs. 25, 26, 1904.
 Dev. (Helderbergian-Bailey ls.): Red Rock Landing, Perry Co., Mo.
- Caryocrinites globosus** Troost.
 Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.
Caryocrinus globosus Wood, U. S. Nat. Mus., Bull. 64, p. 11, pl. 2, fig. 1, 1909.
 Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.
- Caryocrinites gorbyi** (S. A. Miller).
Stribalocystites gorbyi S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 265, pl. 2, figs. 3-8, 1894 (adv. pub. 1892, p. 11).
Caryocrinus gorbyi Bather, in Reed, Pal. Indica, 2, Mem. 3, p. 28, 1906.—Springer, Amer. Sil. Crin., p. 142, pl. 33, figs. 15-18, 1926.
 Sil. (Niagaran-Laurel ls.): St. Paul, Ind.
- Caryocrinites granulatus* Troost = *C. roemeri*.
- Caryocrinites hammelli** (Miller and Gurley).
Caryocrinus hammelli Miller and Gurley, Ill. St. Mus., Bull. 9, p. 65, pl. 5, figs. 5, 6, 1896.
 Sil. (Niagaran-Osgood ls.): Madison, Ind.
- Caryocrinites hexagonus* Troost = *C. bulbulus*.
- Caryocrinites indianensis** (S. A. Miller).
Caryocrinus indianensis S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 629, pl. 5, figs. 9, 10, 1892 (adv. pub. 1891).
 Sil. (Niagaran-Osgood ls.): Jefferson Co., Ind.

Caryocrinites insculptus Troost = *C. roemeri*.

***Caryocrinites kentuckiensis* (Miller and Gurley).**

Caryocrinus kentuckiensis Miller and Gurley, Ill. St. Mus., Bull. 6, p. 59, pl. 5, figs. 22-24, 1895.—S. A. Miller, N. Amer. Geol. Pal., 2d. App., p. 740, fig. 1326, 1897.

Sil. (Niagaran-Louisville ls.): Louisville, Ky.

Cyathocrinites loricatus Say = *C. ornatus*.

Cyathocrinites meconideus Troost = *C. roemeri*.

***Caryocrinites missouriensis* (Rowley).**

Strybalocystis missouriensis Rowley, Amer. Geol., 25, p. 71, pl. 2, figs. 40, 41, 1900; 34, p. 273, pl. 16, figs. 23, 24, 1904.

Sil. (Niagaran-Bainbridge ls.): Near St. Marys, Ste. Genevieve Co., Mo.

***Caryocrinites ornatus* Say.**

Say, Jour. Acad. Nat. Sci. Phila., 4, p. 290; London Zool. Jour., p. 291, 1825.—Blainville, Mem. Actinologie, p. 263, pl. 29, fig. 5, 1834.—Castlenau, Essai Syst. Sil. Amer. Septen., p. 51, pl. 25, fig. 2, 1843.

Caryocrinus ornatus Hall, 4th Geol. Dist. N. Y., p. 111, text figs. 1, 2, Tab. Org. Rem., p. 16, fig. 17 (1, 1a), p. 18, figs. 19, 20, 1843.—Austin and Austin, Mon. Rec. and Foss. Crin., p. 53, pl. 7, figs. 3 a-m, 1845 (as *Caryocrinus*).—Hall, Nat. Hist. N. Y., Pal., 2, p. 216, pl. 49, figs. 1 a-z, pl. 49A, figs. 1 a-d, 1852.—Lincklaen, 14th Rep. N. Y. St. Cab. Nat. Hist., pl. 7, figs. 4, 5, 1861.—Hall, 20th Rep. N. Y. St. Cab. Nat. Hist., p. 11, 1868 (Rev. ed. 1870).—Billings, Canadian Nat., n.s., 4, pp. 280, 285, 427, text figs. 1869; Amer. Jour. Sci. and Arts, 48 pp. 71, 72, text figs. 4-7, 1869; 49, p. 52, fig. 1, 1870; Ann. Mag. Nat. Hist., (4) 5, p. 254, text fig. 3, pp. 258, 410, text figs., 1874; Geol. Canada, Pal. Foss., 2, pt. 1, p. 92, fig. 52, pp. 93-105, text figs., 1874.—Wachsmuth and Springer, Rev. Pal., pt. 1, pl. 17 (3), figs. 6-8, 1880 (1879).—Whitfield, Geol. Wis., 4, p. 200, pl. 16, figs. 1, 2, 1882.—Wachsmuth and Springer, Proc. Acad. Nat. Sci. Phila., p. 113, pl. 4, fig. 6, 1887.—Lesley, Geol. Penn., Rep. P-4, p. 119, text fig., 1889. S. A. Miller, N. Amer. Geol. Pal., p. 231, text fig., 1889.—Haeckel, Amphor. Cyst., p. 144, text fig. 23, pl. 4, figs. 20, 21, 1896.—Jaekel, Stammes. Pelmat., 1, p. 136, fig. 3a, p. 314, text figs. 76, 77, pl. 17, figs. 1, 2, 1899.—Grabau, Bull. Buffalo Soc. Nat. Sci. 45, p. 150, fig. 46; Bull. N. Y. St. Mus. Nat. Hist., 9, p. 150, text fig. 46, 1901.—Rowley, Amer. Geol., 5, p. 34, p. 280, pl. 16, figs. 47, 50, 52, 1904.—Grabau and Shimer, N. A. Index Foss., 2, p. 465, figs. 1771, 1773, 1910.—Springer, Amer. Sil. Crin., p. 143, pl. 33, fig. 37, 1926.

Caryocrinites loricatus Say, Jour. Acad. Nat. Sci. Phila., 4, p. 290, 1825; London Zool. Jour., p. 291, 1825.

Sil. (Niagaran): Rochester, Lockport, etc., N. Y., Grimsby, Ont. (Rochester sh.); Wisconsin (Waukesha ls. and Racine dol.); Iowa (Gower dol.).

***Caryocrinites ornatus europaeus* (Quenstedt).**

Caryocrinus ornatus europaeus Quenstedt, Petref. Deutsch., 4, p. 665, pl. 113, fig. 45, 1876.

Sil.: Nefiez (Herault), France.

***Caryocrinites persculptus* (Springer).**

Caryocrinus persculptus Springer, Amer. Sil. Crin., p. 143, pl. 33, fig. 28, 1926.

Sil. (Niagaran-Waldron sh.): Newsom, Tenn.

***Caryocrinites roemeri* Jaekel.**

Jaekel, Sitz. Ber. Ges. Naturf. Freunde, Berlin, p. 105, 1894; Stammes. Pelmat., 1, p. 302, fig. 70 B, p. 314, pl. 17, fig. 3, 1899.

Caryocrinites granulatus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Caryocrinites insculptus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Caryocrinites meconideus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Caryocrinus milliganae Miller and Gurley, Ill. St. Mus., Bull. 9, p. 63, pl. 5, figs. 3, 4, 1896.—Springer, Amer. Sil. Crin., p. 143, pl. 33, figs. 29-36, 1926.

- Caryocrinus ornatus* Roemer (not Say), Sil. Fauna West Tenn., p. 33, pl. 3, fig. 1, 1860.—Wood, U. S. Nat. Mus., Bull. 64, p. 10, 1909.
Sil. (Niagaran-Beech River fm.): Decatur, Wayne, and Perry Cos., Tenn.
- Caryocrinites sphaeroidalis** (Miller and Gurley).
Stribalocystites sphaeroidalis Miller and Gurley, Ill. St. Mus., Bull. 6, p. 58, pl. 5, figs. 19–21, 1895.
Caryocrinus sphaeroidalis Bather in Reed, Pal. Indica, n.s. 2, Mem. 3, p. 28, 1906.
Sil. (Niagaran-Laurel ls.): St. Paul, Ind.
- Caryocrinites tumidus** (S. A. Miller).
Stribalocystites tumidus S. A. Miller, 17th Rep. Ind. Geol. Surv., p. 630, pl. 6, figs. 33, 34, 1892 (adv. pub. 1891, p. 20).
Caryocrinus tumidus Bather in Reed, Pal. Indica, n.s. 2, Mem. 3, p. 28, 1906.
Sil. (Niagaran-Laurel ls.): St. Paul, Ind.
- Caryocrinites turbo** (Bather).
Caryocrinus turbo Bather, in Reed, Pal. Indica, n.s., 2, Mem. 3, p. 30, pl. 2, figs. 8–12, 1906.
Ord. (Naungkangyi beds): Sedaw, Burmah, India.
- Caryocrinus of authors = Caryocrinites.
Caryocrinus hexagonus Wood = Caryocrinites bulbulus.
Caryocrinus milliganae Miller and Gurley = Caryocrinites roemeri.
Caryocrinus ornatus Roemer (not Say) = Caryocrinites roemeri.
Caryocrinus ornatus von Buch = Caryocrinites buchianus.
Caryocystis Angelin = Caryocystites.
Caryocystis alutaceus Angelin = Heliocrinites alutaceus.
Caryocystis bicompressa Reed.
Reed in Brown, Rec. Geol. Surv. India, 43, pt. 4, p. 332, 1913 (nom. nud.).
Ord.: Chih-tien, China.
- Caryocystis burdigalensis Jaekel = Heliocrinites burdigalensis.
Caryocystis geometricus Angelin = Stichoecystis geometricus.
Caryocystis ovalis Angelin = Heliocrinites ovalis.
Caryocystis prominens Angelin = Heliocrinites aranea.
Caryocystis tenuistriata Angelin = Heliocrinites tenuistriatus.
- Caryocystites** von Buch. Genotype: *C. testudinarius* von Buch (= *Caryocystis angelini* Haeckel).
Echinospaeritidae (Rhombifera). Ord. Sil.
Von Buch, Monatsber. Berlin Akad., p. 128, 1844.—Zittel, Handb. Pal., 1, p. 418, 1879.—Jaekel, Stammes. Pelmat., 1, p. 327, 1899.—Springer, Zittel-Eastman Textb. Pal., 1, p. 152, 1913.
Amorphocystis Jaekel, Stammes. Pelmat., 1, p. 337, 1899.
Amorphocystites Jaekel, in Koken, "Leitfossilien," p. 411, 1896. (Genotype: *A. buchi* Jaekel = *C. testudinarius* von Buch.)
Caryocystis Angelin, Icon. Crin. Suec., p. 28, 1878.—Haeckel, Amphor. Cyst., p. 59, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 55, 1900.
- Caryocystites angelini** (Haeckel).
Caryocystis angelini Haeckel, Amphor. Cyst., p. 59, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 55, fig. 17, 1900.
Caryocystites testudinarius von Buch (not Hisinger), Abhandl. Akad. Wiss., Berlin, Phys. Kl., p. 19, pl. 1, fig. 20, 1844.
Amorphocystis buchi Jaekel, Stammes. Pelmat., 1, p. 339, pl. 9, fig. 8, 1899.
Ord. (Cystid beds, Chasmops ls.): Bödahamn, Oeland, Sweden.

- Caryocystites aranea* Jaekel = *Heliocrinites aranea*.
Caryocystites balticus Jaekel = *Heliocrinites balticus*.
Caryocystites bicompressa (Reed).
Caryocystis bicompressa Reed, Pal. Indica, n.s., 6, Mem. 3, p. 18, pl. 4, figs. 6a, b, 1917.
 Ord.: Shih-tien, West Yunnan, China.
Caryocystites confortatus Jaekel = *Heliocrinites confortatus*.
Caryocystites cylindricus Hall = *Holocystites cylindricus*.
Caryocystites davisi McCoy.
 McCoy, Mem. Geol. Surv. Gt. Britain, 2, pt. 2, p. 513, pl. 21, figs. 5a, b, 1848;
 British Pal. Foss., p. 61, pl. 1-D, fig. 5, 1854.
Echinosphaerites davisi Murchison, Siluria, ed. 3, p. 535, 1859.—Salter, Mem. Geol. Surv. Gt. Britain, 3, p. 287, pl. 20, 1866.
Echinosphaerites (Caryocystites) davisi Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 10, 1887.
 Ord. (Llandeilo): Yspatty Evan, North Wales; Coniston, Lancashire, England.
Caryocystitis dubius (Angelin).
Caryocystis dubia Angelin, Icon. Crin. Suec., p. 29, pl. 19, fig. 17, 1878.
 Ord.: Bôdahamn, Oeland, Sweden.
Caryocystites esthoniae (Jaekel).
Amorphocystis esthoniae Jaekel, Stammes. Pelmat., 1, p. 339, 1899.
 Ord. (Kuckers, Drift): Pajus, Estonia.
Caryocystites granatum Forbes and authors = *Heliocrinites granatum*.
Caryocystites helmhackeri Jaekel = *Orocystites helmhackeri*.
Caryocystites helmhackeri thuringae Jaekel = *Orocystites helmhackeri thuringae*.
Caryocystites laevis Hecker.
 Hecker, Trav. Mus. Géol. Min. Acad. Sci. Russia, 4, p. 52, pl. 2, fig. 8, 1923.
 Ord. (C): Vicinity of St. Petersburg, Russia.
Caryocystites litchi Forbes = *Eucystis litchi*.
Caryocystites ? munitus Forbes.
 Forbes, Mem. Geol. Surv. Gt. Britain, and Mus. Prac. Geol. London, 2, pt. 2, p. 515, pl. 21, figs. 3a-c, 1848.
Sphaeronites munitus Forbes, in Murchison, Siluria, ed. 3, App., p. 536, 1859.
 Ord. (Bala ls.): Rhiwlas, Bala, Sholehook, Wales.
Caryocystites ovum Jaekel = *Heliocrinites ovum*.
Caryocystites pumilus Eichwald = *Scoliocystis pumila*.
Caryocystites pyriformis Forbes = *Sphaeronites pyriformis*.
Caryocystites rouvillei von Koenen = *Heliocrinites rouvillei*.
Caryocystites testudinarius von Buch (not Hisinger) = *C. angelini*.
Ceratocystis Jaekel. Genotype: *C. perneri* Jaekel.
 Anomalocystitidae (Amphoridae). Mid. Cambrian.
 Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 667, 1900.—Bather, Trans. Roy. Soc. Edinburgh, 49, pt. 2, p. 423, 1913.
Ceratocystis perneri Jaekel.
 Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 567, text figs. 4a, b, 1900.—Bather, Trans. Roy. Soc. Edinburgh, 49, p. 423, text figs. 33-35, 1913; Pal. Zeits., 7, heft 1, p. 10, figs. 9, 10, p. 425, fig. 25, 1925.—Gislen, Zool. Bidrag Uppsala, 12, p. 206, text fig. 6, 7, p. 278, 1930.
 Cambrian (Div. Cb3): Tejrovic, Bohemia.

Cheirocrinus Eichwald. Genotype: *Cyathocrinus penniger* Eichwald.

Cheirocrinidae (Rhombifera). Ord.

Eichwald, Bull. Soc. Nat. Moscou, 29, pt. 1, p. 123, 1856; Leth. Ross., Pal. Russ., 1, p. 645, 1860.—Bather, Treatise Zool. (Lankester), pt. 3, p. 63, 1900; Trans. Roy. Soc. Edinburg, 40, pt. 2, p. 434, 1913. (Not Hall; not Salter. See Crinoidea.)

Chirocrinus Haeckel, Zeits. Naturwiss., Jena, 30, p. 402, 1896.—Jaekel, Stammes. Pelmat., p. 196, figs. 36-B, pp. 212, 215, 1899.*Homocystites* Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, pp. 77, 160, 1887. (Genotype: *H. alter* Barrande.)*Homocystis* Bather, Nature, 40, p. 269, 1889.—Haeckel, Amphor. Cyst., p. 149, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 64, 1900.**Cheirocrinus alter** (Barrande).*Homocystites alter* Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 160, pl. 28, case 2, figs. 1-21, 1887.*Homocystis alter* Haeckel, Amorph. Cyst., p. 150, pl. 4, figs. 26, 27, 1896.*Chirocrinus alter* Jaekel, Stammes. Pelmat., 1, p. 221, pl. 10, fig. 14, 1899.*Homocystites* cf. *alter* Delgado, Comm. Serv. Géol. Portugal, p. 83, 1908.

Ord.: Zahorzan, Bohemia (D4); Tagus River Basin, Portugal.

Cheirocrinus anatiformis (Hall).*Echinoencrinites anatiformis* Hall, Nat. Hist. N. Y., 1, p. 89, pl. 29, figs. 4a-f, 1847.*Glyptocystites anatiformis* S. A. Miller, N. Amer. Geol. Pal., p. 269, 1889.*Chirocrinus anatiformis* Jaekel, Stammes. Pelmat., 1, p. 221, 1899.*Cheirocrinus anatiformis* T. H. Clark, Bull. Mus. Comp. Zool., 63, no. 1, p. 10, pl. 1, fig. 17, 1919.

Ord. (Trenton ls.): Turin and Martinsburg, N. Y.

Cheirocrinus angulatus (Wood).*Chirocrinus angulatus* Wood, U. S. Nat. Mus., Bull. 64, p. 7, pl. 8, figs. 9, 10, 1909.*Cyathocrinites sculptus* Troost, Amer. Jour. Sci., (2) 8, p. 419, 1849.

Ord. (Chazyan-Heiskell sh.): Near Knoxville, Tenn.

Cheirocrinus atavus (Jaekel).*Chirocrinus atavus* Jaekel, Stammes. Pelmat., 1, p. 219, pl. 11, figs. 5-7, 1899.*Glyptocystites giganteus* Schmidt Mem. Acad. Imp. Sci. St. Petersburg, (7) 21, no. 11, p. 23, pl. 2, figs. 11, 12, 1874.

Ord. (Kunda fm., B3): Pulkova, St. Petersburg, Russia.

Cheirocrinus constrictus Bather.

Bather, Trans. Roy. Soc. Edinburg, 49, pt. 2, p. 437, figs. 43, 44, p. 442, figs. 48-58, pl. 4, figs. 49-56, 1913.

Ord. (Caradocian-Craighead ls.): Thraive Glen, Girvan, Scotland.

Cheirocrinus degener (Jaekel).*Chirocrinus degener* Jaekel, Stammes. Pelmat., 1, p. 221, 1899.

Ord. (Kunda fm., B3): St. Petersburg, Russia.

Cheirocrinus forbesi (Billings).*Glyptocystites forbesi* Billings, Geol. Surv. Canada, Rep. Prog. for 1853-54, p. 283, 1857; Can. Org. Rem., dec. 3, pp. 18, 59, pl. 4, fig. 3, 1858.*Chirocrinus forbesi* Jaekel, Stammes. Pelmat., 1, p. 221, 1899.

Ord. (Chazyan): Caughnawaga, Quebec (Aylmer fm.); Lake Champlain, N. Y. (Crown Point ls.).

Cheirocrinus giganteus (Leuchtenberg).*Gonocrinites giganteus* Leuchtenberg, Theirr. Zarskoje Selo, p. 19, pl. 2, fig. 13, 1843.*Cheirocrinus giganteus* Eichwald, Leth. Ross., p. 647, pl. 32, figs. 2a, b, 1860.*Glyptocystites giganteus* Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 17, 1887.

Ord. (Walchow fm., B2): Pulkowa, Russia.

Cheirocrinus granulatus (Jaekel).

Chirocrinus granulatus Jaekel, Stammes. Pelmat., 1, p. 220, pl. 11, fig. 4, 1899.—
Öpik, Pub. Geol. Inst. Univ. Tartu, Acta Comm. Univ. Dorpat, A VIII, 5,
p. 18, pl. 2, fig. 19, 1920.

Glyptocystites penniger Schmidt, Mém. Acad. Imp. Sci. St. Petersburg, ser. 7, 21,
pl. 2, fig. 2, 1874.

Ord. (Kuckers sh., C2): Kuckers, Estonia.

Cheirocrinus granulatus Parks.

Parks, Trans. Roy. Soc. Canada, (3) 22, sec. 4, p. 73, pl. 1, figs. 11–16, 1923.

Ord. (Trenton-Low. Cobourg ls.): Shore east of Collingwood, Ont.

Cheirocrinus insignis (Jaekel).

Chirocrinus insignis Jaekel, Stammes. Pelmat., 1, p. 221, pl. 18, fig. 2, 1899.

Ord. (Kunda fm., B3): Walchow, Russia.

Cheirocrinus interruptus (Jaekel).

Chirocrinus interruptus Jaekel, Stammes. Pelmat., 1, pp. 204, 217, 220, pl. 10, fig. 9,
1899.

Chirocrinus interruptus Bather, Trans. Roy. Soc. Edinburgh, 49, pt. 2, p. 448,
pl. 4, fig. 48, text fig. 59, 1913.

Ord.: Near St. Petersburg, Russia (Walchow or Kunda fm.); Thraive Glen, Girvan,
Scotland (Craighead ls.).

Cheirocrinus? languedocianus Thoral.

Thoral, Cont. Étude Pal. Ord. Inférieur Montagne Noire, p. 115, pl. 7, figs. 5–7,
1935.

Ord. (Low Arenig): St. Chinian, France.

Cheirocrinus leuchtenbergi (Angelin).

Glyptocystis leuchtenbergi Angelin, Icon. Crin. Suec., p. 32, pl. 12, figs. 13–15 (not
16, 17 = *C. nodosus*), 1878.

Chirocrinus leuchtenbergi Jaekel, Stammes. Pelmat., 1, p. 220, 1899.

Ord. (Ogygia beds): Husbyfjöl, Ostrogothia, Sweden.

Cheirocrinus logani (Billings).

Glyptocystites logani Billings, Geol. Surv. Canada, Rep. Prog. for 1853–54, p. 282,
1857; Can. Org. Rem., dec. 3, pp. 17, 57, pl. 4, figs. 1a, b, 1858.—Chapman,
Can. Jour., n.s., 6, p. 514, fig. 85, 1861; 8, p. 198, fig. 179, 1863; Expos. Min.
Geol. Canada, p. 170, fig. 179, 1864.

Chirocrinus logani Jaekel, Stammes. Pelmat., 1, p. 220, 1899.

Ord. (Trenton): Montreal, Quebec, and Kirkfield, Ontario (Hull ls.); 3 miles west
Green Bay, Wis. (Prosser ls.).

Cheirocrinus logani gracilis (Billings).

Glyptocystites logani var. *gracilis* Billings, Geol. Surv. Canada, Can. Org. Rem.,
dec. 3, p. 59, pl. 4, fig. 2, 1858.

Chirocrinus logani var. *gracilis* Bather, Trans. Roy. Soc. Edinburgh, 49, p. 442,
1913.

Ord. (Trenton-Hull ls.): Montreal, Quebec.

Cheirocrinus nodosus (Jaekel).

Chirocrinus nodosus Jaekel, Stammes. Pelmat., 1, p. 221, pl. 10, fig. 12, 1899.

Glyptocystis leuchtenbergi Angelin, Icon. Crin. Suec., p. 32, pl. 12, figs. 16, 17 (not
13–15), 1878.

Ord. (Ogygia beds): Hadenstadt, near Hillestadt, Sweden; Hovindsholm, Norway.

Cheirocrinus ornatus Eichwald.

Eichwald, Leth. Ross., 1, p. 647, pl. 32, fig. 2c, 1860.

Ord.: Pulkowa, Russia (Kunda fm., B3); Alles Klinta, Oeland.

Cheirocrinus penniger (Eichwald).

Cyathocrinus penniger Eichwald, *Urwelt Russland*, heft 2, p. 78, pl. 1, figs. 10a, b, 1842.

Cheirocrinus penniger Eichwald, *Leth. Ross.*, 1, p. 646, pl. 32, figs. 1a, b, 1860.—Kirk, *U. S. Nat. Mus., Proc.*, 41, p. 20, pl. 2, figs. 1, 2, 1911.

Glyptocystites penniger Schmidt, *Mem. Acad. Imp. Sci. St. Petersburg*, (7) 21, p. 15, pl. 1, figs. 7–12, pl. 2, figs. 1, 3 (not fig. 2 = *C. granulatus* Jaekel), 1874.—Haeckel, *Amphor. Cyst.*, p. 150, pl. 4, figs. 31–38, 1896.

Cyathocrinites penniger Barrande, *Syst. Sil. Centre Bohême*, 7, pt. 1, p. 13, 1887.

Chirocrinus penniger Jaekel, *Stammes. Pelmat.*, 1, p. 220, pl. 11, figs. 1–3, 1899.—Bather, *Treatise Zool. (Lankester)*, pt. 3, p. 63, text fig. 32, 1900.

Ord.: Wesenberg, Estonia (Wesenberg fm., E); near St. Petersburg, Russia (Kunda fm.).

Cheirocrinus radiatus (Jaekel).

Chirocrinus radiatus Jaekel, *Stammes. Pelmat.*, 1, p. 213, fig. 40, p. 220, pl. 18, fig. 1, 1899.

Ord. (Kunda fm., B3): Walchow River, Russia.

Cheirocrinus sculptus (Schmidt).

Glyptocystites sculptus Schmidt, *Mém. Acad. Imp. Sci. St. Petersburg*, (7) 21, p. 22, pl. 2, figs. 9, 10, 1874.

Chirocrinus sculptus Jaekel, *Stammes. Pelmat.*, 1, p. 221, pl. 10, fig. 10, 1899.

Ord. (Kunda fm., B3): Pavlovsk, Russia.

Cheirocrinus striatus (Jaekel).

Chirocrinus striatus Jaekel, *Stammes. Pelmat.*, 1, p. 221, pl. 10, fig. 13, 1899.

Ord. (Kunda fm., B3): Pulkowa, Russia.

Cheirocrinus volborthi (Schmidt).

Glyptocystites volborthi Schmidt, *Mém. Acad. Imp. Sci. St. Petersburg*, (7) 21, p. 20, pl. 2, figs. 4–8, 1874.

Chirocrinus volborthi Jaekel, *Stammes. Pelmat.*, 1, p. 220, 1899.

Ord. (Kunda fm., B3): Pavlovsk and Pulkowa, Russia.

Cheirocrinus walcotti (Jaekel).

Chirocrinus walcotti Jaekel, *Stammes. Pelmat.*, 1, p. 221, pl. 11, fig. 9, 1899.

Chirocrinus canadensis Jaekel, *Stammes. Pelmat.*, 1, pp. 108, 112, 1899 (not pl. 11, fig. 8, as cited).

Ord. (Trenton ls.): Trenton Falls, N. Y.

Chilocystis Perner. Genotype: *C. bohémica* Perner (nom. nud.).

Perner, in Zelizko, *Prag. Rozpr. Ceski. Ak. Frant. Jos.*, 20, no. 10, p. 6, 1911.

Chirocrinus Haeckel and authors = *Cheirocrinus*.

Chirocrinus canadensis Jaekel = *Cheirocrinus walcotti*.

Cigara Barrande = *Dendrocystites*.

Citrocystis Haeckel = *Echinosphaerites*.

Codiacystis Jaekel = *Calix*.

Codiacystis? *subcylindricus* Jaekel = *Hippocystis subcylindrica*.

Coelocystis Schuchert. Genotype: *Hemicosmites subglobosus* Hall.

Callocystitidae (Rhombifera). Sil.

Schuchert, *Amer. Geol.*, 32, p. 234, 1903; *Smiths. Misc. Coll.*, 47, p. 246, 1904.

Coelocystis subglobosa (Hall).

Hemicosmites subglobosus Hall, 20th Rep. N. Y. St. Cab. Nat. Hist., Doc. ed., p. 316, pl. 12, fig. 13, 1867; *Rev. ed.*, p. 359, pl. 12, fig. 13, 1870 (adv. pub. 1864).

Coelocystis subglobosus Schuchert, *Amer. Geol.*, 32, p. 234; 1903; *Smiths. Misc. Coll.*, 47, p. 248, 1904.—Foerste, *Ohio Jour. Sci.*, 21, p. 40, pl. 1, figs. 1a, b, pl. 2, figs. 1–5, 8, 1920.

- Callocystites sphaeroidalis* Foerste, Ohio Jour. Sci., 17, no. 7, p. 7, p. 239, pl. 12, fig. 5, 1917.
- Sphaerocystites dolomiticus* Jaekel, Stammes. Pelmat., 1, p. 289, text fig. 63, 1899. Sil. (Niagaran): Racine, Wis., Chicago, Ill. (Racine dol.); Cedarville, Springfield, and Wilmington, Ohio (Cedarville ls.).
- Comarocystis Carpenter and authors = Comarocystites.
- Comarocystites Billings.** Genotype: *C. punctatus* Billings.
- Comarocystitidae (Amphoridea). Ord.
- Billings, Canadian Jour., (1) 2, p. 268, 1854; Can. Org. Rem., dec. 3, p. 61, 1858.—Meek and Worthen, Geol. Surv. Ill., 3, p. 291, 1868.—Zittel, Handb. Pal., 1, p. 418, 1879.—Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 676, 1900.—Foerste, Ottawa Nat., 30, pp. 71, 85, 101, 1916.—Jaekel, Pal. Zeits., 3, p. 27, 1918.
- Comarocystis* Carpenter, Jour. Linn. Soc. Zool., 24, p. 27, 1891.—Haeckel, Amphor. Cyst., p. 70, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 55, 1900.
- Comarocystites obconicus** (Meek and Worthen).
- Comarocystites shumardi* var. *obconicus* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 144, 1865; Geol. Surv. Ill., 3, p. 294, pl. 1, figs. 2a, b, 1868.
- Comarocystites obconicus* Keyes, Geol. Surv. Mo., 4, p. 132, pl. 18, fig. 1, 1894.—Foerste, Ottawa Nat., 30, no. 9, p. 105, 1916.
- Ord. (Black River-Kimmswick ls.): Cape Girardeau, Mo.
- Comarocystites punctatus** Billings.
- Billings, Canadian Jour., (1) 2, p. 270, text figs. 1-3, 1854 (as *C. punctuatus*); Geol. Surv. Canada, Can. Org. Rem., dec. 3, pp. 17, 61, pl. 5, 1858.—Grant, Trans. Ottawa Field Nat. Club, 1, p. 29, pl. 1, figs. 1-5, 1880.—Foerste, Ottawa Nat., 30, no. 7, pp. 73-79, text figs. 1-3, pl. 2, figs. 1-3; no. 8, pp. 85-91, pl. 3, 1916.
- Ord. (Trenton-Hull ls.): Ottawa, Ont.
- Comarocystites shumardi** Meek and Worthen.
- Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 143, 1865; Geol. Surv. Ill., 3, p. 292, pl. 1, figs. 1a, b, text fig., 1868.—Keyes, Geol. Surv. Mo., 4, p. 132, pl. 18, fig. 2, 1894.—Foerste, Ottawa Nat., 30, no. 9, p. 101, pl. 4, figs. 1-3, text figs. 4-6, 1916; Bull. Sci. Lab. Denison Univ., 19, p. 195, pl. 22, figs. 24a, b, 1920.
- Ord. (Black River-Kimmswick ls.): Cape Girardeau, Kimmswick, and Jefferson Co., Mo.
- Comarocystites shumardi obconicus* Meek and Worthen = *C. obconicus*.
- Corylocrinus** von Koenen. Genotype: *C. pyriformis* von Koenen.
- Caryocrinitidae (Rhombifera). Ord.
- Von Koenen, Neues Jahrb. Min., Geol., Pal., 2, p. 249, 1886.—Carpenter, Geol. Mag., (3) 8, p. 135, 1891 (as *Corylocrinus*).—Jaekel, Stammes. Pelmat., pp. 294, 311, fig. 65-B, 1899.—Bather, Treatise Zool. (Lankester), pt. 3, p. 67, 1900; Catania Riv. Ital. Pal., 16, p. 4, 1910.
- Juglandocrinus* von Koenen, Neues Jahrb. Min., Geol., Pal., 2, p. 251, 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 67, 1900; Catania Riv. Ital. Pal., 16, p. 4, 1910. (Genotype: *J. crassus* von Koenen.)
- Corylocrinus carnicus** Bather.
- Bather, Catania Riv. Ital., Pal., 16, pp. 39-53, pl. 2, 1910.—Vinassa Regny, Catania Acad. Gioenia, (5) 3, Mem. 12, p. 18, pl. 3, figs. 1, 2, 1910.—Heritsch, Abh. Bundesanstl. Wien, 22, pt. 2, p. 116, pl. 2, figs. 63, 64, 1929.
- Ord. (Caradocian): Casera Meledie, Carnic Alps.
- Corylocrinus crassus** (von Koenen).
- Juglandocrinus crassus* von Koenen, Neues Jahrb. Min., Geol., Pal., 2, p. 251, pl. 8, figs. 2a, b, pl. 9, figs. 2, 3, 1886.
- Corylocrinus crassus* Jaekel, Stammes. Pelmat., 1, p. 312, 1899.
- Ord. (Caradocian): Near Montpellier and near Cabrieres, France.
- Corylocrinus elongatus** Jaekel.
- Jaekel, Stammes. Pelmat., 1, p. 312, pl. 17, fig. 4, 1899.
- Ord. (Caradocian): Grand Glancy, Montpellier, France.

Corylocrinus occidentalis Jaekel.Jaekel, Stammes. *Pelmat.*, 1, p. 312, 1899.

Ord.: Bussaco, Portugal.

Corylocrinus ollii Yakovlev.Yakovlev, *Compt. Rend. (Doklady) Acad. Sci. URSS*, 28, no. 8, pp. 764, 765, text figs. 1940.

Ord.: River Ousva, Ural, Russia.

Corylocrinus pyriformis Von Koenen.Von Koenen, *Neues Jahrb. Min., Geol., Pal.*, 2, p. 249, pl. 8, figs. 1a, b, pl. 9, fig. 1, 1886.

Ord. (Caradocian): Near Montpellier, and near Cabrieres (Herault), France.

Cothurnocystis Bather. Genotype: *C. elizae* Bather.

Cothurnocystidae (Amphoridea). Ord

Bather, *Trans. Roy. Soc. Edinburgh*, 49, pt. 2, p. 308, 1913; *Pal. Zeits.*, 7, heft 1, p. 1, 1925.—Gislen, *Zool. Bidrag. fran Uppsala*, 12, pp. 206-278, 1930.**Cothurnocystis curvata** Bather.Bather, *Trans. Roy. Soc. Edinburgh*, 49, pt. 2, p. 408, pl. 4, figs. 39-45, text figs. 24-28, 1913; *Pal. Zeits.*, 7, heft 1, p. 3, figs. 4, 5, 1925.—Gislen, *Zool. Bidrag fran Uppsala*, 12, p. 209, 1930.

Ord. (Caradocian-Craighead ls.): Thraive Glen, Girvan, Scotland.

Cothurnocystis elizae Bather.Bather, *Trans. Roy. Soc. Edinburgh*, 49, pt. 2, p. 400, pl. 3, figs. 26-38, text figs. 14-23, 1913.—Jaekel, *Pal. Zeits.*, 3, p. 123, fig. 113, 1918.—Bather, *Pal. Zeits.* 7, heft 1, p. 2, figs. 1-3, 1925.—Gislen, *Zool. Bidrag fran Uppsala*, 12, p. 207, text figs. 8, 9, pp. 209, 221, fig. 11, 1930.

Ord. (Caradocian-Craighead ls.): Thraive Glen, Girvan, Scotland.

Cothurnocystis primaeva Thoral.Thoral, *Cont. Étude Paléont. Ord. Inférieur Montagne Noir.*, p. 99, pl. 6, figs. 1a, b, 1935.

Ord. (Low. Arenig): St. Chinian, (Herault), France.

Craterina Barrande (not Bory) = Calix.**Crinocystis** Haeckel = Eucalyptocrinites (crinoid).**Crinocystites** Hall = Eucalyptocrinites.**Cryptocrinites** von Buch. Genotype: *C. cerasus* von Buch.

Cryptocrinitidae (Rhombifera). Ord.

Von Buch, *Monatsber. Preuss. Akad. Wiss.*, p. 60, 1840; *Abhandl.*, p. 25, 1845.*Cryptocrinus* Geinitz, *Grund. Verstein Kunde*, p. 557, 1846.—Zittel, *Handb. Pal.*, 1, p. 413, 1879.—Haeckel, *Amphor. Cyst.*, p. 146, 1896.—Bather, *Treatise Zool. (Lankester)*, pt. 3, p. 60, 1900.—Springer, *Zittel-Eastman Textb. Pal.*, 1, p. 157, 1913.—Yakovlev, *Ann. Soc. Pal. Russia*, 2, pp. 7-26, 1918; *Palaeobiologica*, 1, p. 373, 1928.**Cryptocrinites cerasus** von Buch.Von Buch, *Monatsber. Preuss. Akad. Wiss.*, p. 36, pl. 1, 1840; *Archiv. Min.*, p. 36, pl. 1, figs. 4, 5, 9, 10, 12, 1841; *Ann. Mag. Nat. Hist.*, 6, p. 15, 1841.—Springer, *Zittel-Eastman Textb. Pal.*, 1, p. 157, fig. 248, 1913.

Ord. (Walchow or Kunda fm.): Pulkowa, etc., Russia.

Cryptocrinites laevis (Pander).*Echinosphaerites laevis* Pander, *Beit. Geol. Russ. Reich.*, p. 147, pl. 2, figs. 24-26, 1830.—Barrande, *Syst. Sil. Centre Bohême*, 7, pt. 1, p. 13, 1887.*Cryptocrinus laevis* Jaekel, *Pal. Zeits.*, 3, p. 21, fig. 14, 1918.

Ord. (Echinosphaerites ls., C1): Pulkowa, near St. Petersburg, Russia.

Cryptocrinites regularis von Buch.

Von Buch, Monatsber. Preuss. Akad. Wiss., p. 37, 1840; Archiv. Min. etc., p. 37, 1841; Ann. Mag. Nat. Hist., 6, p. 15, 1841.

Ord. (B2 or B3): Pavlovsk, Russia.

Cryptocrinus Geinitz and authors = Cryptocrinites.

Cryptocrinus angulosus Bronn = Echinoencrinites angulosus.

Crystallocystis Haeckel = Echinospaerites.

Cyathocrinites sculptus Troost = Cheirocrinus angulatus.

Cyathocrinus penniger Eichwald = Cheirocrinus penniger.

Cyclocystoides Billings and Salter. Genotype: *C. halli* Billings.

Cyclocystoididae (Cystoidea, uncertain). Ord., Early Sil.

Billings and Salter, Geol. Surv. Canada, Can. Org. Rem., dec. 3, p. 86, 1858.—Hall, 24th Rep. N. Y. St. Cab. Nat. Hist., p. 217, 1872.—Miller and Dyer, Jour. Cincinnati Soc. Nat. Hist., 1, p. 34, 1878.—Bather, Treatise Zool. (Lanckester), pt. 3, p. 210, 1900.—Raymond, Victoria Mem. Mus., Bull. 1, p. 23, 1913.

Cyclocystoides anteceptus Hall.

Hall, 24th Rep. N. Y. St. Cab. Nat. Hist., p. 219, 1872 (adv. pub., 1866, p. 12).

Ord. (Trenton ls. or Decorah sh.): Escanaba River, Michigan.

Cyclocystoides bellulus Miller and Dyer.

Miller and Dyer, Jour. Cincinnati Soc. Nat. Hist., 1, p. 34, pl. 2, figs. 10, 10a, 1878.

Ord. (Maysville-Fairmount ls.): Cincinnati, Ohio.

Cyclocystoides cincinnatiensis Miller and Faber = Narrawayella cincinnatiensis.

Cyclocystoides davisii Salter.

Salter, Geol. Surv. Canada, Can. Org. Rem., dec. 3, p. 89, pl. 10, figs. 8-13, 1858.

Ord. (Up. Llandovery): Presteign, Radnorshire, South Wales.

Cyclocystoides decussatum Begg.

Begg, Geol. Mag., 71, p. 220, pl. 11, figs. 1-5, 1934.

Ord. (Caradocian-Craighead ls.): Girvan District, Scotland.

Cyclocystoides halli Billings.

Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 3, p. 86, pl. 10, figs. 1-7, 1858.

—Raymond, Victoria Mem. Mus., Bull. 1, p. 25, pl. 3, figs. 1, 3 (not fig. 4), 1913.

—Begg, Geol. Mag., 71, p. 226, pl. 11, fig. 6, 1934.

Ord. (Trenton-Hull ls.): Ottawa, Ont.

Cyclocystoides halli Raymond (part) = Narrawayella raymondi.

Cyclocystoides huronensis Billings.

Billings, Geol. Surv. Canada, Pal. Foss., p. 393, text fig. 369, 1865.—Raymond, Victoria Mem. Mus., Bull. 1, p. 29, pl. 3, fig. 2, 1913.—Foerste, Geol. Surv. Canada, Mem. 138, p. 80, pl. 6, fig. 3, 1924.—Begg, Geol. Mag., 71, p. 226, pl. 11, fig. 7, 1934.

Sil. (Cataract fm.-Kagawong mem.): Rabbit Island, Lake Huron, Ontario.

Cyclocystoides illinoisensis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 6, p. 61, pl. 5, fig. 27 (not fig. 28 = *Savagella ornatus*), 1895.—Savage, Ill. St. Geol. Surv., Bull. 23, p. 40, pl. 3, fig. 2, 1917 (adv. pub. 1913, p. 40, pl. 1, fig. 2).—Foerste, Ohio Jour. Sci., 21, no. 2, p. 96, pl. 1, figs. 17a, b, 1920.

Sil. (Alexandrian-Girardeau ls.): Orchard Creek, Alexander Co., Ill.

Cyclocystoides illinoisensis Miller and Gurley (part) = *Savagella ornata*.

Cyclocystoides magnus Miller and Dyer.

Miller and Dyer, Jour. Cincinnati Soc. Nat. Hist., 1, p. 32, pl. 2, figs. 8, 8a, 1878.

—S. A. Miller, *ibid.* 4, p. 70, pl. 1, figs. 2, 2a, 1881.

Early Sil. (Richmond-Arnheim sh.): Warren Co., Ohio.

Cyclocystoides marstoni Salter.

Salter in Bigsby, Thesaur. Sil., p. 25, 1868 (nom. nud.).

Ord.: Acton Scott, Wales.

Cyclocystoides minus Miller and Dyer = *Narrawayella minor*.

Cyclocystoides mundulus Miller and Dyer = *Narrawayella mundula*.

Cyclocystoides nitidus Faber = *Narrawayella nitida*.

Cyclocystoides salteri Hall.

Hall, 24th Rep. N. Y. St. Cab. Nat. Hist., p. 218, pl. 6, fig. 16, 1872 (adv. pub., 1866, p. 11; 1871, pl. 2, fig. 16).—Bather, Treatise Zool. (Lankester), pt. 3, p. 211, fig. 8, 1900.

Ord. (Trenton ls.): Near Saratoga, N. Y.

Cystidea Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 66, 1887. (General term used for undetermined fragments.)

Cystidea abscondita Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 179, pl. 38, figs. 13–15, 1887.

Ord. (Div. D4): Zahorzan, Bohemia.

Cystidea bavarica Barrande.

Barrande, Faune Sil. environs Hof, Baviere, p. 106, pl. figs. 60, 61, 1868.

Sil.: Near Hof, Bavaria.

Cystidea concomitans Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 188, pl. 2, figs. 22–25, 1887.

Mid. Cambrian: Skrej, Bohemia.

Cystidea dubia Haeckel.

Haeckel, Amphor. Cyst., p. 152, 1896.

— Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, pl. 14, figs. 24–33, 1887.

Ord. (Div. D4): Zahorzan, Bohemia.

Cystidea granulum Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 82, pl. 38, figs. 12, 12a, 1887.

Sil. (Div. E1): Borek, Bohemia.

Cystidea incepta Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 179, pl. 38, figs. 17, 17a, 1887.

Ord. (Div. D4): Mt. Drabov, Bohemia.

Cystidea nugatula Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 180, pl. 31, case 5, 1887.

Ord. (Div. D4): Zahorzan, Bohemia.

Cystidea porosa Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 179, pl. 14, figs. 21–23, 1887.

Ord. (Div. D4): Bracz, Bohemia.

Cystidea sedgwicki Barrande = *Dendrocystites sedgwicki*.

Cystidea seminulum Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 180, pl. 38, figs. 11, 11a, 1887.

Ord. (Div. D5): Königshof, Bohemia.

Cystidea? subregularis Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 82, pl. 2, figs. 1–3, 1887.

Sil. (Div. E2): St. Ivan, Bohemia.

Cystoblastus Volborth. Genotype: *C. leuchtenbergi* Volborth.

Cheirocrinidae (Rhombifera). Ord.

Volborth, Kais. Min. Ges. St. Petersburg, p. 666, 1867; Mem. Acad. Imp. Sci. St. Petersburg., (7) 16, p. 11, 1870.—Zittel, Handb. Pal., 1, p. 423, 1879.—Haeckel,

Amphor. Cyst., p. 130, 1896.—Jaekel, Stammes. *Pelmat.*, 1, pp. 196, 223, 1899.—Bather, *Treatise Zool.* (Lankester), pt. 3, p. 64, 1900.—Yakovlev, *Ann. Soc. Pal. Russie*, 9, pp. 43–45, 1930; *C. R. Akad. Sci., URSS*, pp. 30–32, 1930.

Cystoblastus kokeni Jaekel.

Jaekel, Stammes. *Pelmat.*, 1, p. 223, fig. 42, p. 226, fig. 43, pp. 228, 230, pl. 16, fig. 2, 1899.—Õpik, *Pub. Geol. Inst. Univ. Tartu, Acta Comm. Univ. Dorpat*, A VIII, 5, p. 18, pl. 2, fig. 18, 1925.—Yakovlev, *Bull. Comité Géol.*, 45, no. 2, p. 44, text figs. 1, 2, pl. 1, fig. 1, 1926; *Ann. Soc. Pal. Russie*, 4, p. 25, text fig. 1, 1926; *Compt. Rend. Acad. Sci. URSS*, p. 30, text fig. 1, 1930.—Wanner, *Handwort. Naturwiss.*, p. 490, fig. 16, 1933.

Ord. (Kuckers sh., C2): Kuckers, Estonia.

Cystoblastus leuchtenbergi Volborth.

Volborth, *Kais. Min. Ges. St. Petersburg*, p. 666, pl. figs. 1–6, 1867; *Mem. Acad. Imp. Sci. St. Petersb.*, (7) 16, p. 11, pl. figs. 11–16, 1870.—Jaekel, Stammes. *Pelmat.*, 1, p. 228, pl. 16, fig. 1, 1899.

Ord. (Echinospaerites ls., C1): Katlino, near Pavlovsk, Russia.

Dactylocystis Jaekel = *Proteroblastus*.

Dactylocystis mickwitzi Jaekel = *Revalocystis mickwitzi*.

Decacystis Gislen. Genotype: *D. hispanica* Gislen.

Anomalocystitidae (Amphoridae). Cambrian.

Gislen, *Arkiv. Zool.*, 19-B, no. 2, p. 1 (sep.), 1927.

Decacystis hispanica Gislen.

Gislen, *Arkiv. Zool.*, 19-B, no. 2, pp. 1–3, text figs. 1–4, 1927; *Zool. Bidrag fran Uppsala*, no. 12, pp. 204, 210, 211, text figs. 4, 5, 1930.

Mid. Cambrian: Andradós, (Leon), Spain.

Dendrocystis Bather = *Dendrocystites*.

Dendrocystis scotica Bather = *Dendrocystoidea scotica*.

Dendrocystites Barrande. Genotype: *D. sedgwicki* Barrande.

Dendrocystitidae (Amphoridae). Cambrian, Dev.

Barrande, *Syst. Sil. Centre Bohême*, 7, pt. 1, p. 142, 1887.—Jaekel, *Zeits. Deutsch. Geol. Gesell.*, 52, p. 673, 1900.—Hecker, *Acad. Sci., URSS, Inst. Pal.*, 9, lv. 4, pp. 22, 64, 1940.

Cigara Barrande, *Syst. Sil. Centre Bohême*, 7, pt. 1, p. 181, 1887. (Genotype: *C. dusli* Barrande.)

Dendrocystis Bather, *Nature*, 40, p. 268, 1889.—Haeckel, *Amphor. Cyst.*, p. 54, 1896.—Bather, *Treatise Zool.* (Lankester), pt. 3, p. 47, 1900; *Trans. Roy. Soc. Edinburgh*, 49, pt. 2, p. 371, 1913.

Iowacystis Thomas and Ladd, *Univ. Iowa Studies*, n.s., no. 104, 11, no. 8, p. 6, 1926. (Genotype: *I. sagittaria* Thomas and Ladd.)

Syringocrinus Billings, *Geol. Surv. Canada, Can. Org. Rem.*, dec. 4, p. 65, 1859.—Bather, *Treatise Zool.* (Lankester), pt. 3, p. 203, 1900. (Genotype: *S. paradoxicus* Billings.)

Dendrocystites barrandei (Bather).

Dendrocystis barrandei Bather, *Trans. Roy. Soc. Edinburgh*, 49, pt. 2, p. 332, pl. 1, fig. 144, p. 374, text figs. 6, 7, 1913; *Pal. Zeits.*, 7, heft 1, p. 5, fig. 6, 1925.

Dendrocystites sedgwicki Barrande, *Syst. Sil. Centre Bohême*, 7, p. 145, pl. 27, figs. 1, 5, 19–23, pl. 38, fig. 16 (not pl. 26, figs. 1–22, pl. 27, figs. 2, 4, 6–18 = *D. sedgwicki*), 1887.

Ord. (Div. D2): Trubin, Trubsko and Hajek, Bohemia.

Dendrocystites dusli (Barrande).

Cigara dusli Barrande, *Syst. Sil. Centre Bohême*, 7, pt. 1, p. 182, pl. 2, fig. 34, 1887.—Jaekel, *Pal. Zeits.*, 3, p. 15, fig. 8, 1918.

Mid. Cambrian (C): Ginetz, Bohemia.

Dendrocystites globulus Dehm.

Dendrocystites (*Dendrocystoides*?) *globulus* Dehm, Sitz. Bayer. Akad. Wiss., p. 20 pl. 1, fig. 1, 1934.

Low. Dev. (Hunsrück sl.): Bundenbach, Germany.

Dendrocystites kuckersiana Hecker.

Hecker, Acad. Sci. URSS, Inst. Pal., 9, lv. 4, pp. 23, 65, figs. 14-16, pl. 4, figs. 1-4.

Ord. (Kuckers sh., C2): Kuckers and Erras, Esthonia.

Dendrocystites paradoxicus (Billings).

Syringocrinus paradoxicus Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 4, p. 65, pl. 10, fig. 14, 1859.

Dendrocystis (?) *paradoxica* Bather, Trans. Roy. Soc. Edinburgh, 49, p. 397, text fig. 13, 1913; Geol. Surv. Canada, Bull. 49, pp. 7, 8, fig. 2, 1928.

Ord. (Trenton ls.): Beauport, near Quebec, Quebec.

Dendrocystites rossicus (Jaekel).

Dendrocystis rossicus Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 673, 1902.—Bather, Trans. Roy. Soc. Edinburgh, 49, pt. 2, p. 396, text figs. 10-12, 1913.—Hecker, Acad. Sci. URSS Inst. Pal., 9, lv. 4, pp. 25, 67, fig. 17, pl. 4, figs. 5-9, 1940.

Ord. (Kunda fm., B2): Pavlovsk, Russia.

Dendrocystites sagittarius (Thomas and Ladd).

Iowacystis sagittaria Thomas and Ladd, Univ. Iowa Studies, n.s., no. 104, 11, no. 8, p. 6, pl. 1, figs. 1-5, pl. 2, fig. 1, pl. 4, figs. 1-6, pl. 5, figs. 1, 2, 1926.

Dendrocystis sagittaria Bather, Canada Geol. Surv., Bull. 49, p. 5, 1928.

Early Sil. (Richmond-Mid. Maquoketa, Ft. Atkinson ls.): Old Fort Atkinson Quarry, Winneshiek Co., Iowa.

Dendrocystites sedgwicki (Barrande).

Cystidea sedgwicki Barrande, Syst. Sil. Centre Bohême, 3, p. 179, 1867.

Dendrocystites sedgwicki Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 145, pl. 26, figs. 1-22, pl. 27, figs. 2, 4, 6-18 (not pl. 27, figs. 1, 5, 19-23, pl. 38, fig. 16 = *D. barrandei*), 1887.—Dehm, Sitz. Bayer. Akad. Wiss., p. 39, text fig. 6b, 1934.

Dendrocystis sedgwicki Bather, Treatise Zool. (Lankester), pt. 3, p. 48, fig. 9, 1900; Trans. Roy. Soc. Edinburgh, 49, pt. 2, pp. 372, 374, fig. 8, p. 387, pl. 1, figs. 5-9, 1913; Pal. Zeits., 7, heft 1, p. 5, fig. 7, 1925.

Ord.: Trubsko and Hajek, near Beraun (D2), Trubin (D3), and Zahorzan (D4), Bohemia.

Dendrocystites sedgwicki Barrande (part) = *D. barrandei*.

Dendrocystites vidali Thoral.

Thoral, Cont. Étude Pal. Prd. Inférieur Montagne Noire, p. 107, pl. 6, fig. 5, pl. 7, fig. 10, pl. 11, fig. 2, 1935.

Ord. (Up. Tremadoc): St. Chinian etc. (Herault), France.

Dendrocystoides Jaekel. Genotype: *Dendrocystis scotica* Bather.

Dendrocystitidae (Amphoridae). Ord.

Jaekel, Pal. Zeits., 3, p. 123, 1918.—Dehm, Sitz. Bayer. Akad. Wiss., p. 37, 1934.

Dendrocystoides scoticus (Bather).

Dendrocystis scotica, Bather, Trans. Roy. Soc. Edinburgh, 49, pt. 2, p. 391, pl. 2, figs. 10-25, text fig. 9, 1913; Pal. Zeits., 7, heft 1, p. 5, fig. 8, 1925.

Dendrocystoides scotica Jaekel, Pal. Zeits., 3, pp. 123, 124, fig. 114, 1918.—Dehm, Sitz. Bayer. Akad. Wiss., p. 39, text fig. 6a, 1934.

Ord. (Caradocian Craighead ls.): Thraive Glen, Girvan, Scotland.

Deutocystis Bather = Deutocystites.

Deutocystites Barrande. Genotype: *D. modestus* Barrande.

Aristocystitidae (Amphoridae). Ord.

- Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 145, 1887.—Springer, Zittel-Eastman Textb. Pal., 1, p. 150, 1913.
- Deutocystis* Bather, Nature, 40, p. 269, 1889; Treatise Zool. (Lankester), pt 3, p. 46, 1900.—Haeckel, Amphor. Cyst., p. 51, 1896.
- Deutocystites irregularis* Barrande = *Amphoracystis irregularis*.
- Deutocystites modestissimus* Barrande.**
Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 148, pl. 16, figs. 6–18, 1887.
Ord. (Div. D4): Straschnitz and Lohowska, Bohemia.
- Deutocystites modestus* Barrande.**
Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 149, pl. 15, case 2, figs. 1–26, pl. 16, figs. 1–5, 1887.
Deutocystites modestus Bather, Treatise Zool. (Lankester), pt. 3, p. 46, fig. 7, 1900.
Echinospaerites Jaekel, Stammes. Pemat., 1, pp. 334, 337, pl. 8, figs. 16, 19, 1899.
Ord.: Mt. Pleschivetz (D2), Trubin (D3), Zahorzan and Chrustenitz (D4), Bohemia.
- Dipleurocystis* Jaekel.** Genotype: *Pleurocystites anglicus* Jaekel.
Pleurocystitidae (Rhombifera).
Jaekel, Pal. Zeits., 3, p. 95, 1918.
- Dipleurocystis anglica* (Jaekel).**
Pleurocystites anglicus Jaekel, Stammes. Pemat., 1, pp. 130, 235, pl. 12, figs. 6, 6a, 1899.
Pleurocystis anglica Bather, Trans. Roy. Soc. Edinburgh, 49, pt. 2, p. 474, pl. 5, figs. 60–62, text fig. 70, p. 476, text figs. 76–78, 1913.
Dipleurocystis anglicus Jaekel, Pal. Zeits., 3, p. 95, 1918.
Ord. (Low. Ashgillian): Bardahessiagh, 2½ m. n. Pomeroy, Co. Tyrone, Ireland.
- Dipleurocystis rugeri* (Salter).**
Pleurocystites rugeri Salter, in Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 3, p. 48, 1858; Mem. Geol. Surv. Great Britain, 3, p. 288, pl. 23, fig. 5, 1866.—Bather, Trans. Roy. Soc. Edinburgh, 49, pt. 2, p. 469, pl. 5, figs. 57, 59, text fig. 69, 1913.
Glyptocystites rugeri Salter, in Murchison, Silurian, ed. 3, p. 229, App., p. 536 [as *Pleurocystites (Glyptocystites) rugeri*], 1859.
Dipleurocystis rugeri Jaekel, Pal. Zeits., 3, p. 95, 1918.
Ord. (Caradocian): Near Llandovery, Wales.
- Echinocystis* Haeckel = *Lysocystites*.
- Echinocystis armata* Haeckel = *Schizocystis armata*.
- Echinocystis striata* Haeckel = *Echinoencrinites striatus*.
- Echinocystites* Hall = *Lysocystites*.
- Echinoencrinites* von Meyer.** Genotype: *E. senckenbergii* von Meyer.
Echinoencrinitidae (Rhombifera). Ord.
Von Meyer, Karsten's Arkiv. Naturl., 7, p. 185, 1826.—Jaekel, Stammes. Pemat., 1, p. 242, 1899.—Phleger, Bull. Mus. Comp. Zool., Harvard, 76, no. 5, p. 194, 1935.
Echinoencrinus Volborth, Bull. Sci. Akad. Imp. Sci. St. Petersburg., 10, p. 294, 1842.—Forbes, Mem. Geol. Surv. Gt. Britain, 2, pt. 2, pp. 504, 509, 1848.—Zittel, Handb. Pal., 1, p. 422, 1879.—Bather, Treatise Zool. (Lankester), pt. 3, p. 60, 1900; in Reed, Pal. Indica, n.s., 2, Mem. 3, p. 25, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 154, 1913.
Gonocrinites Eichwald, Über Silurische Schicht Estland, p. 178 (German ed.), p. 190 (French ed.), 1840. (Genotype: *Echinospaerites angulosa* Pander.)
Gonocrinus Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, pt. 1, p. 69 (123), 1856; Leth. Ross., 1, pt. 1, p. 641, 1860.

- Sycocystites* von Buch, Monatsber. Akad. Wiss. Berlin, 1844; Abhandl., p. 21, 1845.
(Genotype: *Echinospaerites angulosa* Pander.)
- Sycocystis* Haeckel, Amphor. Cyst., p. 145, 1896.—Bather, Treatise Zool. (Lan-
kester), pt. 3, p. 60, 1900.
- Echinoencrinites anatiformis* Hall = *Cheirocrinus anatiformis*.
- Echinoencrinites angulosus* (Pander).**
- Echinospaerites angulosa* Pander, Beit. Geog. Russischen Reichs., p. 146, pl. 2,
figs. 27–29, pl. 28, fig. 12, 1830.—Jaekel, Stammes. Pelmat., 1, p. 248, pl. 13,
figs. 17, 18, 25, 26, 1899.
- Echinoencrinus angulosus* Volborth, Bull. Sci. Acad. Imp. Sci. St. Petersburg, 10,
no. 19, p. 297, pl. 1, figs. 7–9, 1842.—Murchison, Verneuil, and Keyserling, Geol.
Europe et Oural, p. 30, pl. 1, 1845.—Bronn, Klasse Ord. Thierr., 2, pl. 24, figs.
5c–g, 1860.—Kirk, U. S. Nat. Mus., Proc., 41, p. 19, pl. 2, fig. 8, 1911.
- ?*Sycocystites angulosus* von Buch, Abhandl. Kais. Akad. Wiss. Berlin, p. 21, pl. 1,
figs. 15–19, pl. 2, figs. 6, 7, 1845.
- Echinoencrinites angulosus* Volborth, Bull. Cl. Phys.-Math. Acad. Imp. Sci. St.
Petersb., 3, p. 96, pl. 3, fig. 3, 1845.—Billings, Canadian Jour., 2, pp. 216, 217,
text fig. 6, 1854; Geol. Surv. Canada, Can. Org. Rem., dec. 3, pp. 15, 34, 36,
pl. 3, fig. 1b, 1858.
- Gonocrinus angulosus* Eichwald, Leth. Ross., 1, p. 642, pl. 32, fig. 13, 1860.
Ord. (Walchow fm., B2): Near St. Petersburg, Russia.
- Echinoencrinites angulosus comptus* Jaekel.**
- Jaekel, Stammes. Pelmat., 1, p. 248, 1899.
Ord. (Kunda fm., B3): St. Petersburg, Russia.
- Echinoencrinites angulosus quadratus* Jaekel.**
- Jaekel, Stammes. Pelmat., 1, p. 248, pl. 13, fig. 19, 1899.
Ord. (Kunda fm., B3): Nikalskeje and Petrowskina, near St. Petersburg, Russia.
- Echinoencrinites fenestratus* (Leuchtenberg).**
- Gonocrinites fenestratus* Leuchtenberg, Thierr. Zarskoje, p. 20, pl. 2, figs. 14–16,
1843.
- Echinoencrinus fenestratus* Bronn, Index Paleont., p. 445, 1848.
- Echinoencrinites fenestratus* Eichwald, Beitr. Geog. Verbreit. Foss. Thierr. Russ-
land, p. 122, 1857.
- Ord. (Walchow or Kunda fm.): Near St. Petersburg, Russia.
- Echinoencrinites interlaevigatus* (Jaekel).**
- Echinoencrinites senckenbergii* var. *interlaevigatus* Jaekel, Stammes. Pelmat., 1,
p. 249, 1899.—Phleger, Bull. Mus. Comp. Zool. Harvard, 76, no. 5, p. 196, 1935.
Ord. (Walchow fm., B2): Iswos, Walchow, near St. Petersburg, Russia.
- Echinoencrinites intermedius* (Eichwald).**
- Gonocrinus intermedius* Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, ser. 1, p. 123,
1856; Leth. Ross., 1, p. 644, pl. 32, figs. 11a–c, 1860.
Ord. (Walchow or Kunda fm.): Ontolowa near Pavlovsk, Russia.
- Echinoencrinites laevigatus* Jaekel.**
- Jaekel, Stammes. Pelmat., 1, p. 248, pl. 13, fig. 14, 1899.
Ord. (Kunda fm., B3): Near St. Petersburg, Russia.
- Echinoencrinites lahuseni* Jaekel.**
- Jaekel, Stammes. Pelmat., 1, p. 243, text fig. 47, p. 247, pl. 13, figs. 20, 21, 25, 1899.—
Phleger, Bull. Mus. Comp. Zool. Harvard, 76, no. 5, p. 198, 1935.
Ord. (Kunda fm., B3): Pulkowa, near St. Petersburg, Russia.
- Echinoencrinites reticulatus* Jaekel.**
- Jaekel, Stammes. Pelmat., 1, p. 248, pl. 10, fig. 15, 1899.
Ord. (Kunda fm., B3): Near St. Petersburg, Russia.

Echinoencrinites senkenbergii von Meyer.

Von Meyer, Kastner Archiv. Naturl., 7, p. 185, pl. 2, figs. 1-5, 1826.—Phleger, Bull. Mus. Comp. Zool., Harvard, 76, no. 5, p. 195, 1935.

Sycocystites senkenbergii von Buch, Monatsber. Preuss. Akad. Wiss., 1844; Abhandl., p. 21, 1845 (Transl. Quart. Jour. Geol. Soc. London, 2, 1846).

Echinoencrinus senkenbergii Roemer, in Bronn, Leth. Geog., 1, pt. 2, p. 273, pl. 4, figs. 5a, b, 1852-54.—Jaekel, Stammes. Pemat., 1, p. 248, pl. 13, figs. 1-3, 23, 24, 1899.—Bather, Treatise Zool. (Lankester), pt. 3, p. 60, fig. 22, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 155, fig. 244, 1913.

Ord.: Walchow River, near St. Petersburg, Russia (Kunda fm., B3); near Oslo, Norway.

Echinoencrinites senkenbergii interlaevigatus Jaekel = *E. interlaevigatus*.

Echinoencrinites simplicatus Phleger.

Phleger, Bull. Mus. Comp. Zool., Harvard, 76, no. 5, p. 199, pl. 1, fig. 3, 1935.

Ord. (Walchow fm., B2 or Kunda fm., B3): Iswos, Russia.

Echinoencrinites sphaeroidalis Phleger.

Phleger, Bull. Mus. Comp. Zool., Harvard, 76, no. 5, p. 198, pl. 1, fig. 2, 1935.

Ord. (Walchow fm., B2,, or Kunda fm., B3): Iswos, Russia.

Echinoencrinites striatus (Pander).

Echinosphaerites striata Pander, Beit. Geog. Russ. Reichs., p. 147, pl. 2, figs. 30-32, pl. 28, fig. 12, 1830.

Echinoencrinus striatus Volborth, Bull. Sci. Acad. Imp. Soc. St. Petersburg., 10, no. 10, p. 298, pl. 1, figs. 11, 12, 1842.—Quenstedt, Petref. Deutsch., 4, p. 673, pl. 113, figs. 63-65, 1876.—Bronn, Klass. Ord. Thierr., 2, pl. 24, fig. 5-B, 1860.

Gonocrinus striatus Eichwald, Urwelt Russlands, p. 14, 1840; Leth. Ross., 1, p. 643, pl. 32, figs. 12a, b, 1860.

Cryptocrinus striatus Bronn, Index Pal., p. 353, 1848.

Echinocystis striata Haeckel, Amphor. Cyst., p. 146, 1896.

Ord. (Kunda fm., B3): Near St. Petersburg, Russia.

Echinoencrinus Volborth = *Echinoencrinites*.

Echinoencrinus armatus Forbes = *Schizocystis armata*.

Echinoencrinus baccatus Forbes = *Prunocystites baccatus*.

Echinoencrinus columna Bronn.

Bronn, Index Pal., Nomenclator, p. 444, 1848 (nom. nud.).

Echinoencrinus giganteus Bronn = *Cheirocrinus giganteus*.

Echinoencrinus granatum Volborth = *Heliocrinites granatum*.

Echinosphaera Angelin = *Echinosphaerites*.

Echinosphaerites Wahlenberg. Genotype: *Echinus aurantium* Gyllenhahl.

Echinosphaeritidae (Rhombifera). Ord.; Early Sil.

Wahlenberg, Om. Sven. Jordens Bild. Svea, p. 44, 1818; Acta Soc. Sci. Upsala, 8, p. 52, 1821.—Eichwald, Zool. Specialis, pt. 1, Vilnae, p. 231, 1829.—Hall, Nat. Hist. N. Y., Pal., 3, p. 150, 1859 (1861).—Zittel, Handb. Pal., p. 413, 1879.—Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 150, 1887.—Jaekel, Stammes. Pemat., p. 331, 1899.—Springer, Zittel-Eastman Textb. Pal., 1, p. 152, 1913.

Citrocystis Haeckel, Amphor. Cyst., p. 68, 1896. (Genotype: *Sphaeronites citrus* Hisinger.)

Crystallocystis Haeckel, Amphor. Cyst., p. 66, 1896. (Genotype: *Echinus aurantium* Gyllenhahl.)

Echinosphaera Angelin, Icon. Crin. Suec., p. 28, 1878.—Scudder, Nom. Zool. Suppl. List, p. 118, 1882 (as *Echinosphora*).—Haeckel, Amphor. Cyst., p. 66, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 53, 1900.

- Leucophthalmus* Koenig, Icones. Foss. sect. Centuria prima, pl. 1, fig. 1, 1825.—
Bather, Treatise Zool. (Lankester), pt. 3, p. 53, 1900. (Genotype: *L. strangwaysi* Koenig = *Echinospaerites aurantium*.)
- Trinemacystis* Haeckel, Amphor. Cyst., p. 65, 1896. (Genotype: *Echinospaera aurantium triactis* Müller.)
- Echinospaerites alcyonium* Schlotheim = *E. aurantium*.
- Echinospaerites angulosa* Pander = *Echinoencrinites angulosus*.
- Echinospaerites arachnoideus* (Forbes).**
Sphaeronites arachnoideus Forbes, Mem. Geol. Surv. Gt. Britain, and Mus. Pract. Geol. London, 2, pt. 2, p. 518, pl. 22, figs. 4a, b, 1848.
Echinospaerites arachnoideus Pictet, Element. Pal. Geol., ed. 2, p. 303, 1853.
Ord. (Caradocian-Llandeilo): Sholeshook and Bala, Wales.
- Echinospaerites aranea* Schlotheim = *Heliocrinites aranea*.
- Echinospaerites asiaticus* (Reed).**
Echinospaera asiatica Reed, Pal. Indica, n.s., 6, Mem. 3, p. 13, pl. 3, figs. 12, 13, 1917.
Ord.: Shih-tien, West Yunnan, China.
- Echinospaerites aurantium* (Gyllenhahl).**
Echinus aurantium Gyllenhahl, Kongl. Sv. Vet. Akad. Handl., 33, p. 245, pl. 8, figs. 4, 5, pl. 9, figs. 6-9, 1772.
Sphaeronites aurantium von Buch, Monatsber. Preuss. Akad. Wiss., 1844 (Translation, Quart. Jour. Geol. Soc. London, 2, 1845); Cystideen, p. 14, pl. 1, figs. 21, 22, 1845; Archiv. Min., 15, p. 27, pl. 1, fig. 14, 1849.—Forbes, Mem. Geol. Surv. Gt. Britain, 2, pt. 2, pl. 22, fig. 1, 1848.
Echinospaerites aurantium Bronn, Klass. Ord., Thierr. II, pl. 24, figs. 3a-g, 1860.—Salter, Mem. Geol. Surv. Gt. Britain, III, p. 287, pl. 20, 1866.—Angelin, Icon. Crin. Suec., p. 28, pl. 14, figs. 1-21, 1878.—Jaekel, Stammes. Pelmat., 1, p. 331, fig. 79, 1899.—Bassler, Bull. 2-A, Virginia Geol. Surv., pl. 21, figs. 6-8, 1909.—Kirk, U. S. Nat. Mus., Proc., 41, p. 5, pl. 1, fig. 3, 1911.—Springer, Zittel-Eastman Textb. Pal., 1, p. 152, fig. 258, 1913.—Hecker, Trav. Mus. Geol. Min., Acad. Sci. Russ., 4, p. 14, 1923.—Orviku, Pub. Geol. Inst. Univ. Tartu, no. 8, pp. 2-16, figs. 1, 2, 1927.
Echinospaera aurantium Haeckel, Amphor. Cyst., p. 69, pl. 1, figs. 3-3e (as *Crystallocystis*), 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 53, figs. 14, 15, 1900.
—*Echinospaerites alcyonium* Schlotheim, Isis, p. 312, pl. 1, fig. 2, 1826.
Leucophthalmus strangwaysi Koenig, Icons Foss. sect. Centuria prima, pl. 1, fig. 1, 1825.
Ord.: Vestergothia, Dalecarlia, Oeland (Bödahamm), Sweden; near Oslo, Norway; Estonia (Duboviki, Reval, Kuckers and Itfer, fm.); Leningrad Prov., Russia; South Wales (Caradocian); Tennessee (Black River-Kimmswick ls.); Virginia, Tenn. etc. (Heiskell sh.).
- Echinospaerites aurantium* Pander and authors = *E. aurantium* infra.
- Echinospaerites aurantium americanum* Bassler.**
Bassler, Maryland Geol. Surv., Cambrian and Ord., p. 207, pl. 45, figs. 15-20, 1919.
Ord. (Chambersburg ls.): 3½ miles north Greencastle, Pa.
- Echinospaerites aurantium* infra Hecker.**
Hecker, Trav. Mus. Geol. Min., Acad. Sci. Russ., 4, p. 16, pl. 2, fig. 1, 1923.
Echinospaerites aurantium Pander, Beitr. Geogn. Russ. Reichs., p. 144, pl. 2, figs. 17, 27, pl. 29, figs. 2a, 2b, 3a, 3b, 1830.—Volborth, Russ. Sphaeroniten, pl. 9, figs. 1, 4-9, 11-16, 1846.
Sphaeronites aurantium von Buch, Beitr. Best. Gebirg. Russland., 1, figs. 14, 17; Über Sphaeroniten, 1, figs. 14, 17, 1840.—Leuchtenberg, Beschr. ein. neuen Tierr., 2, fig. 18, 1843.
Ord.: Vicinity of St. Petersburg, Russia.

- Echinospaerites aurantium suecicus** Jaekel.
Jaekel, Stammes. *Pelmat.*, 1, p. 336, 1899.
Ord. (Orthoceras ls.): Sweden.
- Echinospaerites aurantium supra** Hecker.
Hecker, *Trav. Mus. Geol. Min. pres. Acad. Sci. Russ.*, 4, p. 25, pl. 2, fig. 2, 1923.
Echinospaerites aurantium Verneuil, *Palaeontologie*, pl. 37, figs. 6a, b, 1845.—
Jaekel, Stammes. *Pelmat.*, 1, pl. 8, figs. 5-11, pp. 73, 331, 1899.
Ord. Vicinity of St. Petersburg, Russia.
- Echinospaerites aurantium triactis** (Haeckel).
Trimerocystis triactis Haeckel, *Amphor. Cyst.*, p. 65, text fig. 15, 1896.
Echinospaerites aurantium var. Müller, *Abhandl. Berlin Akad.*, p. 181, 1854.
Ord.: Scandinavia.
- Echinospaerites balticus* Eichwald = *Heliocrinites balticus*.
- Echinospaerites barrandei** Jaekel.
Jaekel, Stammes. *Pelmat.*, 1, p. 337, 1899.
Echinospaerites infaustus Barrande (part), *Syst. Sil. Centre Bohême*, 7, pt. 1,
pl. 22, figs. 1-12, 1887.
Ord.: Zahorzan, Bohemia (Div. D4); near Oslo, Norway.
- Echinospaerites belgicus** Jaekel.
Jaekel, Stammes. *Pelmat.*, 1, p. 337, 1899.
Ord.: Gambloux, Belgium.
- Echinospaerites citrus** (Hisinger).
Sphaeronites citrus Hisinger, *Leth. Suec. Petrifact. Sueciae, etc.*, p. 91, pl. 25, fig. 8,
1837; *Suppl.*, p. 10, 1840.
Citrocystis citrus Haeckel, *Amphor. Cyst.*, p. 68, pl. 1, figs. 2, 2a, 1896.
Ord.: Bödahamm, Oeland; Osmundsberg, Dalecarlia; Mosseberg, Vestrogothia,
Sweden.
- Echinospaerites?* *citrus* Kloeden = *E. kloedeni*.
- Echinospaerites?** *concomitans* Barrande.
Barrande, *Syst. Sil. Centre Bohême*, 7, pt. 1, p. 153, pl. 21, case 1, figs. 5-8, 1887.
Ord. (Div. D1): Holoubka, Bohemia.
- Echinospaerites confortatus* Barrande = *Heliocrinites confortatus*.
- Echinospaerites difformis** Jaekel.
Jaekel, Stammes. *Pelmat.*, 1, p. 336, pl. 8, fig. 2, 1899.
Ord. (Itfer fm., C3): Near Jewe, Estonia.
- Echinospaerites ellipticus** Eichwald.
Eichwald, *Leth. Ross.*, 1, p. 627, pl. 33, figs. 15a, b, 1860.
Ord. (Kunda fm., B3): Reval, Estonia.
- Echinospaerites ferrigena* Barrande = *Glyptosphaerites ferrigena*.
- Echinospaerites* (Larites) *gemmellaroi* Gregorio = *Larites gemmellaroi*.
- Echinospaerites globosus** Jaekel.
Jaekel, Stammes. *Pelmat.*, 1, p. 336, pl. 8, figs. 20, 20a, b, 1899.—Hecker, *Trav. Mus. Geol. Min. Acad. Sci. Russ.*, 4, p. 29, 1923.
Ord. (Dark gray ls.): Estonia.
- Echinospaerites globosus anglicus** Jaekel.
Jaekel, Stammes. *Pelmat.*, 1, p. 337, 1899.
Mid. Ord.: Ireland.
- Echinospaerites grandis** Jaekel.
Jaekel, Stammes. *Pelmat.*, 1, p. 336, 1899.
Ord. (Drift): Near Reval, Estonia; Rügen, Germany.

Echinospaerites granulatus McCoy.

McCoy, Syn. Sil. Foss. Ireland, p. 59, pl. 4, fig. 16, 1846.

Ord.: Carrickdaggan, New Ross, Co. Wexford, Ireland (Caradocian); Girvan Dist., Scotland (Craighead ls.).

Echinospaerites gyllenhahli Quenstedt.

Quenstedt, Petref. Deutsch., 4, p. 700, pl. 114, figs. 26-39, 1876.

Ord.: Sweden and Russia.

Echinospaerites inaequabilis Sandberger.

Sandberger, Jahrb. Min., Geol., Pal., p. 396, 1842 (nom. nud.).

Echinospaerites infaustus Barrande (part) = *Arachnocystites infaustus*; (part) = *E. barrandei*.

Echinospaerites kingi Noetling.

Noetling, Rec. Geol. Surv. India, 23, p. 78, 1890.—La Touche, Rep. Geol. Surv. India for 1889-90, pp. 33, 82, 90, 1900.

Ord.: Near Mandalay, Burma.

Echinospaerites kloedeni Jaekel.

Jaekel, Stammes. Pelmat., 1, p. 336, 1899.

Echinospaerites? citrus Kloeden (not Hisinger), Verst. Mark Brandenburg, etc., p. 243, pl. 5, fig. 2, 1834.

Mid. Ord. (Drift): North Germany.

Echinospaerites laevis Pander = *Cryptocrinus laevis*.

Echinospaerites malum Pander = *Hemicosmites malum*.

Echinospaerites murchisoni Verneuil and Barrande = *Calix murchisoni*.

Echinospaerites oblonga Pander = *Hemicosmites oblongus*.

Echinospaerites ovum Schlotheim = *Heliocrinites ovum*.

Echinospaerites pirum Jaekel.

Jaekel, Stammes. Pelmat., 1, p. 336, pl. 8, fig. 1, 1899.

Ord. (Itfer fm., C3): Itfer, Estonia.

Echinospaerites pogrebowi Hecker.

Hecker, Trav. Mus. Geol. Min. Acad. Sci. Russ., 4, p. 35, pl. 2, figs. 4, 5, 1923.

Ord.: Vicinity of St. Petersburg, Russia.

Echinospaerites quaerendus Barrande = *Heliocrinites confortatus*.

Echinospaerites sinensis (Reed).

Echinospaera sinensis Reed, Pal. Indica, n.s., 6, Mem. 3, p. 14, pl. 3, fig. 14, pl. 4, fig. 1, 1917.

Ord.: Shih-tien, West Yunnan, China.

Echinospaerites striata Pander = *Echinoenocrinites striatus*.

Echinospaerites tessellatus Murchison, Verneuil and Keyserling = *Sphaeronites tessellatus*.

Echinospaerites vexatus Barrande = *Heliocrinites confortatus*.

Echinospaerites granatum Quenstedt = *Heliocrinites granatum*.

Echinophoro Scudder. See *Echinospaera*.

Echinus aurantium Gyllenhahl = *Echinospaerites aurantium*.

Echinus granatum Wahlenberg = *Heliocrinites granatum*.

Echinus novus Hisinger and authors = *Heliocrinites granatum*.

Echinus pomum Gyllenhahl = *Sphaeronites pomum*.

Enneacystis Haeckel = *Caryocrinites*.

Enopleura Springer. See *Enoploura*.

- Enoploura** Wetherby. Genotype: *Anomalocystites* (*Ateleocystites*) *balanoides* Meek.
Anomalocystitidae (Amphoridae). Ord.
Wetherby, Jour. Cincinnati Soc. Nat. Hist., 2, p. 162, 1879.—Haeckel, Amphor. Cyst., p. 40, 1896 (as *Enoploura*).—Bather, Treatise Zool. (Lankester), pt. 3, p. 51, 1900.—Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 668, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 150, 1913 (as *Enopleura*).
- Enoploura balanoides** (Meek).
Anomalocystites (*Ateleocystites*?) *balanoides* Meek, Amer. Jour. Sci. and Arts, 3, ser. 3, p. 423, 1872; Geol. Surv. Ohio, 1, pt. 2, p. 41, pl. 3 bis, fig. 6a-c, 1873.
Enoploura balanoides Wetherby, Jour. Cincinnati Soc. Nat. Hist., 2, p. 162, pl. 7, figs. 1a-g, 1879.
Ateleocystites balanoides Woodward, Geol. Mag., dec. 2, 7, p. 198, pl. 6, figs. 6-8 (figs. 9-15 as *Enoploura balanoides*), 1880.
Anomalocystites balanoides S. A. Miller, N. Amer. Geol. Pal., p. 224, fig. 247, 1889.
Placocystis crustacea Haeckel, Die Amphor. Cyst., p. 39, pl. 2, figs. 5-7, 1896.
Ord. (Maysville-Corryville sh.): Cincinnati, Ohio.
- Enoploura punctata** (Bassler).
Enopleura punctata Bassler, Dept. Education, Div. Geol. Tenn., Bull. 38, p. 218, pl. 18, fig. 9; Jour. Washington Acad. Sci., 25, no. 9, p. 406, 1935.
Ord. (Trenton-Cannon ls.): $\frac{1}{2}$ mi. n.w. Pulaski, Tenn.
- Enoploura* Haeckel. See *Enoploura*.
- Eocrinites* Jaekel, 1899 (Hypothetical genus or group name).
- Eocrinus** Jaekel. Genotype: *Eocystites*? *longidactylus* Walcott.
Eocystitidae (Amphoridae). Mid. Cambrian.
Jaekel, Pal. Zeits., 3, p. 24, 1918.
- Eocrinus longidactylus** (Walcott).
Eocystites? *longidactylus* Walcott, U. S. Geol. Surv., Bull. 30, p. 94, pl. 5, fig. 3, pl. 6, figs. 1, 1a-c, 1886.—Peck, Jour. Geol., 14, p. 292, pl. 1, figs. 1, 1a, b, 1906.
Eocystis longidactylus Bather, Treatise Zool. (Lankester), pt. 3, p. 49, text fig. 10, 1900.
Eocrinus longidactylus Jaekel, Pal. Zeits., 3, p. 24, 1918.
Cambrian (Chisholm sh.): Near Pioche and Bennet's Spring, Nev.
- Eocystis* Haeckel.
Haeckel, Amphor. Cyst., pp. 12, 31, 1896.
Type species: *Eocystis trinema* Haeckel, Op. Cit., p. 31, pl. 5, fig. 11, 1896. (Hypothetical division and species.)
- Eocystis* Bather = *Eocystites*.
- Eocystites** Billings. Genotype: *E. primaevus* Billings.
Eocystitidae (Amphoridae). Mid. Cambrian.
Billings, in Dawson, Acadian Geol., ed. 2, p. 643, 1868; Amer. Jour. Sci. and Arts, ser. 2, 49, p. 53, 1870.
Eocystis Bather, Treatise Zool. (Lankester), pt. 3, p. 48, 1900; Geol. Mag., dec. 6, 5, p. 49, 1918.
- Eocystites*? *longidactylus* Walcott = *Eocrinus longidactylus*.
- Eocystites primaevus** Billings.
Billings in Dawson, Acadian Geol., ed. 2, p. 643, text fig. 220, 1868.—Walcott, U. S. Geol. Surv., Bull. 10, p. 14, pl. 1, fig. 2, 1884.—Thoral, Cont. Étude Pal. Ord. Inférieur Montagne Noire, p. 36, 1935.
Eocystis primaevus Bather, Geol. Mag., dec. 6, 5, pp. 49-56, pl. 5, text fig., 1918.
Mid. Cambrian: Near St. John, New Brunswick (St. John gr.); Coulouma (Hérault), and Montagne Noire (Brittany), France.
- Erinocystis** Jaekel. Genotype: *E. sculpta* Jaekel.
Echinoencrinitidae (Rhombifera). Ord.

- Jaekel, Stammes. *Pelmat.*, 1, p. 196, fig. 36-J, pp. 234, 240, 1899.—Bather, *Treatise Zool.* (Lankester), pt. 3, p. 60, 1900.
- Erinocystis angulata** Jaekel.
Jaekel, Stammes. *Pelmat.*, 1, p. 253, pl. 13, figs. 16, 16a, 1899.—Kirk, *U. S. Nat. Mus., Proc.*, 41, p. 19, pl. 2, fig. 9, 1911.
Ord. (Kunda fm., B3): Estonia and near St. Petersburg, Russia.
- Erinocystis ficus* Jaekel = *E. volborthi*.
- Erinocystis flava** Jaekel.
Jaekel, Stammes. *Pelmat.*, 1, pp. 249, 252, 1899 (nom. nud.).
Ord. (Kunda fm., B3): St. Petersburg, Russia.
- Erinocystis sculpta** Jaekel.
Jaekel, Stammes. *Pelmat.*, 1, p. 252, pl. 13, figs. 4, 5, 8, 9, 1899.
Ord. (Kunda fm., B3): Near St. Petersburg, Russia.
- Erinocystis volborthi** Jaekel.
Jaekel, Stammes. *Pelmat.*, 1, p. 253, pl. 13, figs. 6, 6a, 7, 1899.—Kirk, *U. S. Nat. Mus., Proc.*, 41, p. 19, pl. 2, fig. 3, 1911.
Erinocystis ficus Jaekel, Stammes. *Pelmat.*, 1, p. 89, 1899.
Ord. (Kunda fm., B3): Near St. Petersburg, Russia.
- Estonocystis** Jaekel. Genotype: *E. antropoffi* Jaekel.
Jaekel, *Pal. Zeits.*, 3, pp. 101, 102, 1918. (Possibly a *Bothriocidaris*.)
- Estonocystis antropoffi** Jaekel.
Jaekel, *Pal. Zeits.*, 3, pp. 101, 102, text fig. 94, 1918.
Ord. (Jewe fm.—Hemicosmites beds): Uxnorm, near Reval, Estonia.
- Eucystis** Angelin. Genotype *E. raripunctata* Angelin.
Sphaeronitidae (Diploporita). Ord., Low. Dev.
Angelin, *Icon Crin. Suec.*, p. 31, 1878.—Zittel, *Handb. Pal.*, 1, p. 416, 1870.—Haeckel, *Amphor. Cyst.*, p. 99, 1896.—Jaekel, Stammes. *Pelmat.*, 1, p. 405, 1899.—Bather, *Treatise Zool.* (Lankester), pt. 3, p. 72, 1900.
- Eucystis flava* Jaekel = *Proteocystites flavus*.
- Eucystis hercynica** Jaekel.
Jaekel, Stammes. *Pelmat.*, 1, p. 407, 1899.
Low. Dev.: Sprakelsbach, Zorge, Harz, Germany.
- Eucystis litchi** (Forbes).
Caryocystites litchi Forbes, *Mem. Geol. Surv. Gt. Britain and Mus. Proct. Geol.* London, 2, pt. 2, p. 514, pl. 21, figs. 9a-f, 1848.
Sphaeronites litchii Baily, *Figs. Char. Brit. Foss.*, p. 29, pl. 10, figs. 4a-c, 1875.
Sphaeronites (Caryocystites) litchii Salter, *Mem. Geol. Surv. Gt. Britain*, III, p. 286, pl. 20, 1866.
? *Eucystis litchi* Jaekel, Stammes. *Pelmat.*, 1, p. 406, 1899.
Ord. (Caradocian): Bala and Sholeshook, Wales.
- Eucystis raripunctata** Angelin.
Angelin, *Icon Crin. Suec.*, p. 31, pl. 11, figs. 25-28, 1878.—Haeckel, *Amphor. Cyst.*, pp. 97, 100, fig. 10, 1896.—Jaekel, Stammes. *Pelmat.*, 1, p. 407, pl. 4, fig. 10, 1899.—Bather, *Treatise Zool.* (Lankester), pt. 3, p. 73, text fig. 40, 1900.
Ord.: Osmundsberget, Dalecarlia, Sweden, Shih-tien, China.
- Eumorphocystis** Branson and Peck. Genotype: *E. multiporata* Branson and Peck.
Eumorphocystitidae (Diploporita). Ord.
Branson and Peck, *Jour. Pal.*, 14, no. 2, p. 89, 1940.
- Eumorphocystis multiporata** Branson and Peck.
Branson and Peck, *Jour. Pal.*, 14, no. 2, p. 89, pl. 13, figs. 1-7, 1940.
Ord. (Bromide fm.): State Highway 90, west of center of Sec. 12, T 1 N, R 6 E, Oklahoma.

- Eutretocystis** Phleger. Genotype: *E. similis* Phleger.
Echinoencrinitidae (Rhombifera). Ord.
Phleger, Bull. Mus. Comp. Zool., Harvard, 76, no. 5, p. 200, 1935.
- Eutretocystis acutirostris** Phleger.
Phleger, Bull. Mus. Comp. Zool., Harvard, 76, no. 5, p. 201, pl. 1, fig. 10, 1935.
Ord. (Walchow or Kunda fm.): Iswos, Russia.
- Eutretocystis similis** Phleger.
Phleger, Bull. Mus. Comp. Zool., Harvard, 76, no. 5, p. 200, pl. 1, fig. 1, 1935.
Ord. (Walchow or Kunda fm.): Iswos, Russia.
- Fungocystis** Haeckel = **Fungocystites**.
- Fungocystites** Barrande. Genotype: *F. rarissimus* Barrande.
Glyptosphaeritidae (Diploporita). Ord.
Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 157, 1887.—Jaekel, Pal. Zeits., 3, p. 102, 1918.
Fungocystis Haeckel, Amphor. Cyst., p. 104, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 74, 1900; Pal. Indica n.s., 2, Mem. 3, p. 37, 1906 (= *Protocrinites*).
- Fungocystites rarissimus** Barrande.
Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 158, pl. 17, figs. 1-8, 1887.
Fungocystis rarissimus Haeckel, Amphor. Cyst., p. 105, fig. 14, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 74, fig. 44, 1900.
Protocrinites rarissimus Jaekel, Stammes. Pelmat., 1, pl. 3, figs. 9, 9a, pl. 4, fig. 1, 1899.
Ord. (Div. D4): Chrusteritz, Bohemia.
- Fungocystites solitarius** Barrande.
Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 158, pl. 17, figs. 9, 10, 1887.
Ord. (Div. D4): Chrusteritz, Bohemia.
- Glaphyrocystis** Jaekel. Genotype: *G. wohrmani* Jaekel.
Echinoencrinitidae (Rhombifera). Ord.
Jaekel, Stammes. Pelmat., 1, p. 196, 1899.—Bather, Treatise Zool. (Lankester), pt. 3, p. 60, 1900.
- Glaphyrocystis compressa** Jaekel.
Jaekel, Stammes. Pelmat., 1, p. 257, 1899.
Early Sil. (Lyckholm ls., F1): Oddalem, Estonia.
- Glaphyrocystis wohrmani** Jaekel.
Jaekel, Stammes. Pelmat., 1, p. 254, fig. 49, p. 256, pl. 10, fig. 16, 1899.
Early Sil. (Lyckholm ls., F1): Hohenholm, Estonia.
- Glyptocystis** Bather = **Glyptocystites**.
- Glyptocystis leuchtenbergi** Angelin = (part) **Cheirocrinus leuchtenbergi**; (part) **C. nodosus**.
- Glyptocystites** Billings. Genotype: *G. multiporus* Billings.
Cheirocrinidae (Rhombifera). Ord.
Billings, Canadian Jour., (1) 2, p. 215, 1854; Can. Org. Rem., dec. 3, pp. 18, 37, 53, 1858.—Hall, Nat. Hist. N. Y., Pal., 3, p. 151, 1861 (1859).—Zittel, Handb. Pal., 1, p. 423, 1879.—Jaekel, Stammes. Pelmat., 1, p. 275, 1899.
Glyptocystis Bather, Treatise Zool. (Lankester), pt. 3, p. 64, 1900.
- Glyptocystites anatiformis** S. A. Miller = **Cheirocrinus anatiformis**.
- Glyptocystites forbesi** Billings = **Cheirocrinus forbesi**.
- Glyptocystites giganteus** Barrande = **Cheirocrinus giganteus**.
- Glyptocystites giganteus** Schmidt = **Cheirocrinus atavus**.
- Glyptocystites logani** Billings = **Cheirocrinus logani**.

Glyptocystites logani gracilis = *Cheirocrinus logani gracilis*.

***Glyptocystites multiporus* Billings.**

Billings, Canadian Jour., ser. 1, 2, p. 215, text figs. 1-5, 1854; Geol. Surv. Canada, Can. Org. Rem., dec. 3, p. 54, pl. 3, 1858.—Jaekel, Stammes. Pemat., 1, p. 268, text fig. 54, p. 275, fig. 57, p. 277, pl. 15, figs. 4, 4a, b, 1899.

Callocystis multipora Haeckel, Amphor. Cyst., p. 131, 1896.

Glyptocystis multiporus Bather, Treatise Zool. (Lankester), pt. 3, p. 64, fig. 33, 1900; Trans. Roy. Soc. Edinburgh, 49, pt. 2, p. 430, text fig. 38, 1913.

Ord. (Trenton-Hull ls.): Bytown, Ottawa, and Kirkfield, Ontario; Montreal, Quebec.

Glyptocystites murchisoni Barrande = *Malocystites murchisoni*.

Glyptocystites penniger Schmidt = *Cheirocrinus granulatus* (part); *Cheirocrinus penniger* (part).

Glyptocystites rugeri Salter = *Dipleurocystis rugeri*.

Glyptocystites sculptus Schmidt = *Cheirocrinus sculptus*.

Glyptocystites volborthi Schmidt = *Cheirocrinus volborthi*.

Glyptosphaera Angelin = *Glyptosphaerites*.

***Glyptosphaerites* Müller. Genotype: *Sphaeronites leuchtenbergi* Volborth.**

Glyptosphaeritidae (Diploporita). Ord.

Müller, Abhandl. Akad. Wiss. Berlin, p. 186, 1853.—Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 3, p. 16, 1858.—Zittel, Handb. Pal., 1, p. 416, 1879.—Jaekel, Stammes. Pemat., 1, p. 423, 1899.—Springer, Zittel-Eastman Textb. Pal., 1, p. 156, 1913.

Glyptosphaera Angelin, Icon. Crin. Suec., p. 31, 1878.—Haeckel, Amphor. Cyst., p. 103, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 73, 1900.

***Glyptosphaerites ferrigena* (Barrande).**

Echinospaerites? ferrigena Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 154, pl. 21, case 1, figs. 1-4, 1887.

Glyptosphaerites ferrigena Jaekel, Stammes. Pemat., 1, p. 355, text fig. 80, p. 425, 1899.

Ord. (Div. D1): Holoubka, Bohemia.

***Glyptosphaerites leuchtenbergi* (Volborth).**

Sphaeronites leuchtenbergi Volborth, Verh. Russ. Min. Gesell., p. 187, pl. 10, figs. 1-7, 1846.

Glyptosphaerites leuchtenbergi Müller, Abhandl. Akad. Wiss. Berlin, p. 186, 1853.—Bronn, Klass. Ord. Thierr., 2, p. 229, pl. 24, figs. 2a-e, 1860.—Jaekel, Stammes. Pemat., 1, p. 364, text fig. 83, p. 423, fig. 88, p. 425, pl. 4, figs. 3-6, 1899.

Protocrinites leuchtenbergi Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, no. 1, p. 122, 1856; Leth. Ross., p. 619, 1860.

Glyptosphaera leuchtenbergi Haeckel, Amphor. Cyst., p. 103, text fig. 12, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 73, fig. 43, 1900.

Ord. (Walchow or Kunda fm.): Pulkowa, Popovka, etc., Russia.

***Glyptosphaerites mariae* Jaekel.**

Jaekel, Stammes. Pemat., 1, pp. 118, fig. 26, 358, figs. 81, 425, 1899.

Ord. (Drift): North Germany.

***Glyptosphaerites suecica* (Angelin).**

Glyptosphaera suecica Angelin, Icon. Crin. Suec., p. 31, pl. 11, figs. 5, 6, 1878.

Ord.: Dalecarlia, Sweden.

***Gogia* Walcott. Genotype: *G. prolifica* Walcott.**

Eocystitidae (Amphoridae). Low. Cambrian.

Walcott, Smiths. Misc. Coll., 67, no. 1, p. 68, 1917.

Gogia prolifica Walcott.

Walcott, *Smiths. Misc. Coll.*, 67, no. 1, p. 68, pl. 8, figs. 1, 1a, b, 1917.

Cambrian (Mt. Whyte fm.): Ridge above Cog Lake, below Wonder Pass, Continental Divide, 19 miles southwest Banff, Alberta, B. C.

Gomphocystis Angelin = *Gomphocystites*.

Gomphocystites Hall. Genotype: *G. glans* Hall.

Gomphocystitidae (Diploporita). Sil.; Dev.?

Hall, 20th Rep. N. Y. St. Cab. Nat. Hist., p. 309, 1867 (adv. pub. p. 5, 1864); Rev. ed., p. 351, 1870.—Zittel, *Handb. Pal.*, 1, p. 415, 1879.—Jaekel, *Stammes. Pelmat.*, p. 415, 1899.—Springer, *Zittel-Eastman Textb. Pal.*, 1, p. 156, 1913.

Gomphocystis Angelin, *Icon. Crin. Suec.*, p. 31, 1878.—Haeckel, *Amphor. Cyst.*, p. 115, 1896.—Bather, *Treatise Zool. (Lankester)*, pt. 3, p. 77, 1900.

Gomphocystites bownockeri Foerste.

Foerste, *Ohio Jour. Sci.*, 21, no. 2, p. 57, pl. 3, figs. 1A, B, pl. 1, figs. 6A, B, pl. 2, figs. 9A, B, 1920.

Sil. (Niagaran-Cedarville dol.): Cedarville, Ohio.

Gomphocystites (?) californicus Stauffer.

Stauffer, *Univ. Calif. Pubs. Geol. Sci.*, 19, p. 108, pl. 14, fig. 3, 1930.

Mid. Dev. (Kennett fm.): Kearsarge, Calif.

Gomphocystites clavus Hall.

Hall, *Adv. Pub. 18th Rep. N. Y. St. Cab. Nat. Hist.*, p. 6, pl. 1, fig. 3, 1864; 20th Rep., *Doc. ed.*, p. 310, pl. 12a, fig. 3, 1867; Rev. ed., p. 353, pl. 11a, fig. 3, 1870.

Sil. (Niagaran-Racine dol.): Racine, Wis.

Gomphocystites glans Hall.

Hall, *Adv. Pub. 18th Rep. N. Y. St. Cab. Nat. Hist.*, p. 6, pl. 1, figs. 4, 5, pl. 3, fig. 14, 1864; 20th Rep., *Doc. ed.*, p. 310, pl. 12, fig. 14, pl. 12a, figs. 4, 5, 1867; Rev. ed., p. 352, 1870.—Roemer, *Leth. Geog.*, 1, *Leth. Pal.*, *Atlas*, pl. 11, fig. 2a, 1876.—Chamberlain, *Geol. Wis.*, 1, p. 191, 1883.—Jaekel, *Stammes. Pelmat.*, 1, p. 421, pl. 2, figs. 8, 9, 1899.

Sil. (Niagaran-Racine dol.): Racine, Wis.; Chicago, Ill.

Gomphocystites gotlandicus (Angelin).

Gomphocystis gotlandica Angelin, *Icon. Crin. Suec.*, p. 31, pl. 9, fig. 20, 1878.

Gomphocystites gotlandicus Jaekel, *Stammes. Pelmat.*, 1, p. 421, pl. 2, fig. 10, 1899.

Sil. (Gotlandian): Farö, Island of Gotland.

Gomphocystites indianensis S. A. Miller.

S. A. Miller, *N. Amer. Geol. Pal.*, p. 249, fig. 319, 1889.—Foerste, *Ohio Jour. Sci.*, 21, no. 2, p. 55, pl. 1, figs. 5 A, B, 1920.

Sil. (Niagaran-Osgood fm.): Big Creek, Jefferson Co., Ind.

Gomphocystites tenax Hall.

Hall, *Adv. Pub. 18th Rep. N. Y. St. Cab. Nat. Hist.*, p. 6, pl. 1, figs. 1, 2, pl. 3, fig. 15, 1864; 20th Rep., *Doc. ed.*, p. 310, pl. 12, fig. 15, pl. 12a, figs. 1, 2, 1868; Rev. ed., p. 352, 1870.—Roemer, *Leth. Geol.*, 1, *Leth. Pal.*, *Atlas*, pl. 11, fig. 3, 1876.

Gomphocystis tenax Haeckel, *Amphor. Cyst.*, p. 115, pl. 3, fig. 37, 1896.—Bather, *Treatise Zool. (Lankester)*, pt. 3, p. 77, text fig. 48, 1900.

Sil. (Niagaran): Lockport, N. Y. (Lockport-Shelby dol.); one mile east Harrods Station, Ky. (Louisville ls.).

Gonocrinites Eichwald = Echinoencrinites.

Gonocrinites giganteus Leuchtenberg = Cheirocrinus giganteus.

Gonocrinus Eichwald = Echinoencrinites.

Gyrocystis Jaekel. Genotype: *G. platessa* Jaekel.

Anomalocystitidae (Amphoridae). Mid. Cambrian.

Jaekel, *Pal. Zeits.*, 3, pp. 114, 120, 1918.

Gyrocystis platessa Jaekel.

Jaekel, Pal. Zeits., 3, p. 114, figs. 105 A-C, 1918.—Gislen, Bidrag fran Uppsala, 12, pp. 203, 204, 210, text fig. 31, 1930.—Thoral, Cont. Etude Pal. Ord. Inferieur Montagne Noire, p. 31, 1935.

Mid. Cambrian: Coulouma (Herault), France.

Hallicystis Jaekel. Genotype: *Apiocystites imago* Hall.

Callocystitidae (Rhombifera). Sil.

Jaekel, Stammes. Pemat., 1, p. 269, 286, 1899.—Bather, Treatise Zool. (Lankester), pt. 3, p. 61, 1900.—Schuchert, Smiths. Misc. Coll., 47, p. 216, 1904.—Springer, Zittel-Eastman Textb. Pal., 1, p. 154, 1913.

Hallicystis elongata Jaekel = *H. imago*.

Hallicystis imago (Hall).

Apiocystites imago Hall, Adv. Pub. 18th Rep. N. Y. St. Cab. Nat. Hist., p. 10, pl. 1, fig. 9, 1864; 20th Rep., Doc. ed., p. 314, pl. 12, fig. 12, pl. 12a, fig. 9, 1867; Rev. ed., p. 358, 1870.—Chamberlain, Geol. Wis., 1, p. 191, 1882.

Hallicystis imago Jaekel, Stammes. Pemat., 1, pp. 287, 288, text fig. 62, pl. 15, fig. 3, 1899.—Foerste, Ohio Jour. Sci., 17, p. 235, text fig. 1, pl. 11, fig. 2, 1917; 21, no. 2, p. 39, pl. 1, figs. 7, 8, pl. 2, figs. 7 A-C, 1920.

Hallicystis elongata Jaekel, Stammes. Pemat., 1, p. 288, 1899.

Sil. (Niagaran): Racine, Wis., and Chicago, Ill. (Racine dol.); Cedarville, Ohio (Cedarville dol.).

Haplosphaeronis Jaekel. Genotype: *H. kiaeri* Jaekel.

Sphaeronitidae (Diploporita). Ord.

Jaekel, Norsk. Tideskrift, 19, pt. 1, p. 19, 1926.

Haplosphaeronis kiaeri Jaekel.

Jaekel, Norsk. Geol. Tideskrift, 19, pt. 1, p. 20, pl. 1, figs. 1-7, 1926.

Mid. Ord.: Near Randsfjord, Hadeland, Oslo area, Norway.

Haplosphaeronis kiaeri norvegica Jaekel.

Jaekel, Norsk. Geol. Tideskrift, 19, pt. 1, p. 21, 1926.

Mid. Ord.: Near Randsfjord, Hadeland, Oslo area, Norway.

Helicocrinus Quenstedt. See *Heliocrinites*.

Heliocrinites Eichwald. Genotype: *Echinosphaerites balticus* Eichwald.

Echinosphaeritidae (Rhombifera). Ord.

Eichwald, Silur. Schichtensyst. Estland, p. 189, 1840; Urvwelt Russlands, pt. 1, p. 14, 1842.—Quenstedt, Petref. Deutschl. 4, p. 701, 1876 (as *Helicocrinus*).

Heliocrinum Haeckel, Amphor. Cyst., p. 58, 1896. (Genotype: *Caryocystites granatum* von Buch.)

Heliocrinus Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, no. 1, p. 124, 1852; Leth. Ross., 1, p. 629, 1860.—Bather, Treatise Zool. (Lankester), pt. 3, p. 55, 1900; Pal. Indica, n.s., 2, Mem. 3, p. 16, 1906.

Heliocystis Haeckel, Amphor. Cyst., p. 58, 1896. (Genotype: *Heliocrinus radiatus* Eichwald.)

Heliopirum Haeckel, Amphor. Cyst., p. 59, 1896. (Genotype: *Heliocrinus radiatus* Eichwald.)

Heliocrinites alutaceus (Angelin).

Caryocystis alutacea Angelin, Icon. Crin. Suec., p. 29, pl. 13, figs. 10-13, 1878.

Heliocystis (*Heliopirum*) *alutacea* Haeckel, Amphor. Cyst., p. 59, 1896.

Caryocystites alutacea Jaekel, Stammes. Pemat., 1, p. 339, pl. 8, fig. 21, 1899.

Ord.: Jonstorp, Vestergothia, Sweden.

Heliocrinites araneus (Schlotheim).

Echinosphaerites aranea Schlotheim, Isis Oken, 1, pt. 3, p. 312, 1826.—Volborth, Bull. Acad. Imp. Sci. St. Petersb., 10, pp. 10, 19, 34, pl. 9, 1846.

- Heliocrinus aranea* Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, no. 1, p. 124, 1856.
Heliocystis (Heliocrinus) aranea Haeckel, Amphor. Cyst., p. 58, 1896.
Caryocystites aranea Jaekel, Stammes. Pelmat., 1, p. 330, pl. 9, fig. 1, 1899.—Hecker, Trav. Mus. Geol. Min. Acad. Sci. Russie, 4, p. 53, pl. 2, fig. 6, 1923; Ann. Soc. Pal. Russ., 7, p. 74, pl. 3, fig. 3, 1923.
Caryocystis prominens Angelin, Icon. Crin. Suec., p. 29, pl. 12, figs. 18–21, pl. 27, fig. 12, pl. 28, fig. 11, 1878.
Heliocystis (Heliocrinum) prominens Haeckel, Amphor. Cyst., p. 58, 1896.
 Ord. (Echinosphaerites ls., C1): Reval, Estonia; Dalecarlia, Sweden.
- Heliocrinites balticus** (Eichwald).
Echinosphaerites balticus Eichwald, Zool. Specialis, 1, p. 231, pl. 3, fig. 12, 1829.
Heliocrinites balticus Eichwald, Ueber Sil. Schichtensyst. Estland, p. 189 (German ed.), p. 202 (French ed.), 1840.
Sphaeronites balticus Forbes, Mem. Geol. Surv. Gt. Britain, and Mus. Pract. Geol. London, 2, pt. 2, p. 518, pl. 22, fig. 3, 1848.
Caryocystites balticus Jaekel, Stammes. Pelmat., 1, p. 329, pl. 9, figs. 3–5, 1899.—Hecker, Trav. Mus. Geol. Min. Acad. Sci. Russ., 4, p. 54, pl. 2, fig. 7, 1923; Ann. Soc. Pal. Russie, 7, pp. 58, 74, pl. 3, figs. 5, 6, 1923.
 Ord.: Pajus, Reval (Kuckers sh., C2); Norway; North Wales (Caradoc).
- Heliocrinites burdigalensis** (Jaekel).
Caryocystites burdigalensis Jaekel, Stammes. Pelmat., 1, p. 330, 1899.
Heliocrinus burdigalensis Bather, in Reed, Pal. Indica, n.s., 2, Mem. 3, p. 18, 1906.
 Ord.: Bussaco near Coimbra, Portugal.
- Heliocrinites confortatus** (Barrande).
Echinosphaerites confortatus Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 153, pl. 16, figs. 21–23, 1887.
Caryocystites confortatus Jaekel, Stammes. Pelmat., 1, p. 330, 1899.
Heliocrinus confortatus Bather, in Reed, Pal. Indica, n.s., 2, Mem. 3, p. 18, 1906.
Echinosphaerites quaerendus Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 156, pl. 16, figs. 24–28, 1887.—Freyburg, Zeits. Deutsch. Geol. Gesell., Abh., 74, pt. 4, pp. 248, 263, pl. 5, fig. 2, 1922.
Echinosphaerites vexatus Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 156, pl. 16, figs. 19–20, 1887.
 Ord. (Div. D4): Strasnitz, Bohemia.
- Heliocrinites echinoides** (Leuchtenberg).
Heliocrinus echinoides Leuchtenberg, Thierr. Zarskoje, p. 18, pl. 2, figs. 11–12, 1843.
 Ord. (Kunda, B2, or Walchow, B3): Pulkowa and Zarskoje Selo, Russia.
- Heliocrinites fiscella** (Bather).
Heliocrinus fiscella Bather, in Reed, Pal. Indica, 2, Mem. 3, p. 21, pl. 1, figs. 10–13, 1906.—Reed, Pal. Indica, n.s. 6, Mem. 3, p. 15, pl. 4, figs. 2, 3, 1917.—Yin, Geol. Soc. China, Bull., 16, p. 283, pl. 1, fig. 4, 1937.
 Ord.: Sedaw, Burma, India (Naungkangyi beds); Near Shih-tien, West Yunnan, China.
- Heliocrinites granatum** (Wahlenberg).
Echinus granatum Wahlenberg, Jour. Phys., 91, p. 188, 1820.
Sphaeronites granatum Hisinger, Anteckninger, 4, p. 197, pl. 5, fig. 1, 1828.
Echinoencrinus granatum Volborth, Bull. Sci. Acad. Imp. Soc. St. Petersb., 10, no. 19, p. 299, pl. 1, figs. 6–10, 1842.
Caryocystites granatum Forbes, Mem. Geol. Surv. Gt. Britain, 2, pt. 2, p. 512, pl. 21, fig. 4, 1848.—Jaekel, Stammes. Pelmat., vol. 1, p. 329, pl. 9, fig. 2, 1899.
Echinosphaeronites granatum Quenstedt, Petref. Deutsch., p. 701, pl. 114, figs. 40–44, 1876.
Heliocystis (Heliocrinum) granatum Haeckel, Amphor. Cyst., p. 58, p. 145, text fig. 24 (as *Sycocystis granatum*), 1896.

- Echinus novus* Hisinger, Königl. Vet. Akad. Handl., p. 189, pl. 7, fig. 6, 1802.—Volborth, Bull. Sci. Akad. St. Petersburg., 10, no. 19, p. 295, pl. 1, fig. 2, 1842.—Eichwald, Leth. Ross., 1, pt. 1, p. 631, 1860.
- Sphaerionites testudinarius* Hisinger, Anteck., 4, p. 115, 1826; Leth. suecica Petref. Suec. etc., p. 92, pl. 25, figs. 9a, b, 1831.—Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 11, figs. a, b, c, 1887.
- Ord.: Dalecarlia, Sweden (*Orthoceras* ls.); Bödahamm, Oeland (Cystid beds); Rhiwlas, Bala, Wales; Ireland.
- Heliocrinites kweichouensis** (Sun).
Heliocrinus kweichouensis Sun, Bull. Geol. Soc. China, 15, p. 482, pl. 2, figs. 4a, b, 1936.
Ord. (Llandeilian): Kweichou, China.
- Heliocrinites ovalis** (Angelin).
Caryocystis ovalis Angelin, Icon. Crin. Suec., p. 29, pl. 27, figs. 11a, b, 1878.
Heliocystis (*Heliopirum*) *ovalis* Haeckel, Amphor. Cyst., p. 59, 1896.
Ord.: Jonstorp, Vestergothia, Sweden.
- Heliocrinites ovum** (Schlotheim).
Echinospaerites ovum Schlotheim, Isis Oken, 1, pt. 3, p. 312, pl. 1, fig. 4, 1826.
Caryocystites ovum Jaekel, Stammes. Pelmat., 1, p. 330, 1899.
Heliocrinus ovum Bather, in Reed, Pal. Indica, 2, n.s., Mem. 3, p. 17, 1906.
Ord.: Reval, Estonia.
- Heliocrinites qualus** (Bather).
Heliocrinus qualus Bather, in Reed, Pal. Indica, n.s., 2, Mem. 3, p. 22, pl. 1, figs. 6-9, 1906.—Reed, Pal. Indica, n.s. 6, Mem. 3, p. 16, pl. 4, fig. 4, 1917.
Ord.: Sedaw, Burma, India (Naungkangyi beds); Shih-tien, West Yunnan, China.
- Heliocrinites radiatus** (Eichwald).
Heliocrinus radiatus Eichwald, Silur. Schichtensyst. in Estland, p. 189 (German ed.), p. 202 (French ed.), 1840.—Volborth, Verhandl. Petersburg Gesell., p. 197, pl. 9, fig. 2, 1847. (? Syn. of *H. aranea*.)
Heliocrinites radiatus Eichwald, Leth. Ross., 1, p. 630, pl. 32, figs. 16, 17a, b, 1860.
Heliocystis (*Heliopirum*) *radiata* Haeckel, Amphor. Cyst., p. 58, 1896.
Ord. (Kunda fm., B3): Reval, Estonia.
- Heliocrinites rouvillei** (von Koenen).
Caryocystites rouvillei von Koenen, Neues Jahrb. Min., Geol. Pal., 2, p. 248, pl. 8, figs. 4a, b, 1886.—Jaekel, Stammes. Pelmat., p. 330, pl. 10, fig. 5, 1899.
Heliocrinus rouvillei Bather, in Reed, Pal. Indica, n.s., 2, Mem. 3, pp. 17, 18, 1906.
Ord. (Caradocian): Montpelier and Grand Glanzey, France.
- Heliocrinites rugatus** (Bather).
Heliocrinus rugatus Bather, in Reed, Pal. Indica, n.s., 2, Mem. 3, p. 19, pl. 1, figs. 14-17, 1906.
Ord. (Naungkangyi beds): Sedaw, Burma, India.
- Heliocrinites subovalis** (Reed).
Heliocrinus subovalis Reed, Pal. Indica, n.s., 6, Mem. 3, p. 17, pl. 4, figs. 5, 5a, 1917.
Ord.: Shih-tien, West Yunnan, China.
- Heliocrinites tenuistriatus** (Angelin).
Caryocystis tenuistriata Angelin, Icon. Crin. Suec., p. 29, pl. 12, figs. 25, 26, 1878.
Heliocystis (*Heliopirum*) *tenuistriata* Haeckel, Amphor. Cyst., p. 59, 1896.
Ord.: Jonstorp, Vestergothia, Sweden.
- Heliocrinus* Haeckel = *Heliocrinites*.
Heliocrinus Eichwald = *Heliocrinites*.
Heliocrinus helmhackeri Bather = *Orocystites helmhackeri*.

Heliocrinus subovalis Reed.

Reed in Brown, Rec. Geol. Surv. India, 43, pt. 4, p. 332, 1913 (nom. nud.).

Heliocystis Haeckel = *Heliocrinites*.

Heliocystis (*Heliocrinum*) *geometrica* Haeckel = *Stichocystis geometrica*.

Heliocystis (*Heliocrinum*) *prominens* Haeckel = *Heliocrinites prominens*.

Heliopirum Haeckel = *Heliocrinites*.

Hemicosmites von Buch. Genotype: *H. pyriformis* von Buch.

Caryocrinittidae (Rhombifera). Ord., Sil.

Von Buch, Monatsber. Berlin Acad., p. 149, 1840; Bull. Soc. Geol. France, ser. 2, 1, p. 209, 1844.—Müller, Ann. Mag. Nat. Hist., ser. 2, 12, pp. 246, 248, 1854.—Zittel, Handb. Pal., 1, p. 419, 1879.—Haeckel, Amphor. Cyst., p. 141, 1896.—Jaekel, Stammes. Pelmat., 1, p. 294, 1899.—Bather, Treatise Zool. (Lankester), pt. 3, p. 66, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 152, 1913.

Hexalacystis Haeckel, Amphor. Cyst., p. 142, 1896. (Genotype: *Hemicosmites verrucosus* Eichwald.)

Hemicosmites altus Jaekel.

Jaekel, Pal. Zeits., 3, p. 97, fig. 88, 1918.

Ord. (Jewe fm., D1, *Hemicosmites* bed): Reval, Estonia.

Hemicosmites elongatus Pander.

Pander in Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, no. 1, p. 124, 1867.

Ord. (Kunda or Walchow fm.): Pulkowa and Popofka, Russia.

Hemicosmites extraneus Eichwald.

Eichwald, Urvwelt Russlands, I, p. 14; Ueber Silur. Schichtensyst., Esthland, p. 182 (German ed.), p. 194 (French ed.), 1840; Leth. Ross., 1, p. 634, pl. 32, figs. 5 a-e, 1860.—Jaekel, Stammes. Pelmat., 1, p. 303, text fig. 72, p. 310, pl. 17, fig. 5, 1899.

Ord. (Jewe fm., D1): Spitham, near Reval, Estonia.

Hemicosmites grandis Jaekel.

Jaekel, Stammes. Pelmat., 1, p. 310, fig. 73, 1899.

Sil. (Borkholm ls., F2): Taibel, near Habsal, Estonia.

Hemicosmites jaekeli Sun.

Sun, Bull. Geol. Soc. China, 15, no. 4, p. 481, pl. 2, fig. 3, 1936.

Ord. (Llandeilian): Kweichou, China.

Hemicosmites laevior Jaekel.

Jaekel, Stammes. Pelmat., 1, p. 309, 1899.

Ord. (Echinosphaerites bed, C1): Zarskoje Selo, St. Petersburg, Russia.

Hemicosmites? loczyi Jaekel.

Jaekel, Stammes. Pelmat., 1, p. 315, 1899 (nom. nud.).

Ord.: China.

Hemicosmites malum (Pander).

Echinosphaerites malum Pander, Beitr. Geog. Russ. Reich., p. 145, pl. 29, figs. 1 a-c, 1830.

Hemicosmites malum Eichwald, Leth. Ross., 1, p. 633, pl. 32, fig. 4, 1860.

Ord. (Echinosphaerites ls., C1): Zarskoje Selo, Poulkova and Popovic, St. Petersburg, Russia.

Hemicosmites oblongus (Pander).

Echinosphaerites oblonga Pander, Beitr. Geog. Russ. Reichs., p. 146, pl. 2, figs. 22, 23, 1830.

Hemicosmites? oblongus Forbes, Mem. Geol. Surv. Gt. Britain, and Mus. Pract. Geol. London, 2, pt. 2, p. 511, pl. 20, fig. 6; 3, p. 288, pl. 20, fig. 11, 1848.—Baily, Figs. Char. Brit. Foss., p. 29, pl. 10, fig. 6, 1875.

Ord. Near St. Petersburg, Russia (*Echinospaerites* ls., C1); Sholeshook, etc., Wales (Bala).

Hemicosmites pocillum Jaekel.

Jaekel, Stammes. *Pelmat.*, 1, p. 310, 1899.

Ord. (Jewe fm., D1): Estonia.

Hemicosmites porosus Eichwald.

Eichwald, Ueber Silur. Schichtensyst., Esthland, p. 183 (German ed.), p. 196 (French ed.); Leth. Ross., 1, p. 636, pl. 35, figs. 6-7a, b, 1860.

Ord.: Spitham, near Reval and Wassalem, Estonia; Zarskoje Selo, Russia.

Hemicosmites pulcherrimus Jaekel.

Jaekel, Stammes. *Pelmat.*, 1, p. 310, pl. 18, fig. 3, 1899.

Ord. (Uppermost Jewe fm.): Sack, near Reval, Estonia.

Hemicosmites pyriformis von Buch.

Von Buch, Monatsber. Berlin Akad., p. 89, 1840, p. 20, pl. 1, figs. 11, 12, 1844; (Translation, Quart. Jour. Geol. Soc. London, 2, 1846; "Cystideen", pp. 2, 20, pl. 1, figs. 11, 12, 1845); Archiv. Min., etc., 15, p. 32, pl. 1, figs. 1-3, 6-8, 11, 13, 1841.—Bronn, Klass. Ord. Thierr., 2, pl. 24, figs. 4 a-e, 1860.—Haeckel, Amphor. Cyst., p. 142, pl. 4, figs. 14, 15, 1896.—Jaekel, Stammes. *Pelmat.*, 1, p. 300, fig. 69; p. 309, pl. 17, fig. 6, pl. 18, fig. 4, 1899.

Ord.: Near St. Petersburg, Pulkowa, etc., Russia.

Hemicosmites pyriformis Forbes = *H. rugatus*.

Hemicosmites rudis Jaekel.

Jaekel, Stammes. *Pelmat.*, 1, p. 310, text fig. 74, 1899.

Ord. (Jewe fm., D3): Wassalem, Estonia.

Hemicosmites rugatus Forbes.

Forbes, Mem. Geol. Surv. Gt. Britain, 2, pt. 1, p. 302, 1848.—Salter, Mem. Geol. Surv. Gt. Britain, 3, p. 288, pl. 20, fig. 12, 1866 (as *H. rugosus*).

Hemicosmites pyriformis Forbes, Mem. Geol. Surv. Gt. Britain and Mus. Pract. Geol. London, 2, pt. 2, p. 511, pl. 20, figs. 2-5, 1848.

Ord. (Caradocian): Wales (Blaen-y-Cwm, Sholeshook, Rhiwlas, etc.), and England.

Hemicosmites rugosus Salter. See *H. rugatus*.

Hemicosmites? squamosus Forbes.

Forbes, Mem. Geol. Surv. Gt. Britain and Mus. Pract. Geol. London, 2, pt. 2, p. 510, pl. 20, fig. 1, 1848.

Ord. (Bala): North of Bala, etc., Wales.

Hemicosmites subglobosus Hall = *Coelocystis subglobosus*.

Hemicosmites tricornis Jaekel = *Tricosmites tricornis*.

Hemicosmites verrucosus Eichwald.

Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, no. 1, p. 124, 1856; Leth. Ross., 1, p. 636, pl. 32, figs. 3a, b, 1860.—Jaekel, Stammes. *Pelmat.*, 1, p. 310, pl. 18, fig. 5, 1899.

Hexalacystis verrucosus Haeckel, Amphor. Cyst., p. 142, pl. 4, figs. 16, 17, 1896.

Ord.: Soutlepe, Nouck peninsula Estonia (*Orthoceras* ls.); Estonia (Lyckholm F1).

Heterocystis Bather = *Heterocystites*.

Heterocystites Hall. Genotype: *H. armatus* Hall.

Caryocrinidae (Rhombifera). Sil.

Hall, Nat. Hist. N. Y., Pal., 2, p. 229, 1852; 3, p. 152, 1859 (1861).

Heterocystis Bather, Treatise Zool. (Lankester), pt. 3, p. 67, 1900.

Heterocystites armatus Hall.

Hall, Nat. Hist. N. Y., Pal., 2, p. 229, pl. 49-A, figs. 3 a-c, 1852.

Sil. (Niagaran-Lockport, Shelby dol.): Lockport, N. Y.

Hexalacystis Haeckel = Hemicosmites.

Hippocystis Bather. Genotype: *Aristocystites bohemicus subcylindricus* Barrande.
Aristocystitidae (Amphoridae). Ord.

Bather, Geol. Mag., dec. 6, 6, p. 72, 1919.

Hippocystis subcylindricus (Barrande).

Aristocystites bohemicus var. *subcylindricus* Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 114, pl. 6, figs. 26, 27, pl. 13, figs. 1-21, 1887.

Codiacystis? subcylindricus Jaekel, Stammes. Pelmat., 1, p. 412, 1899.

Hippocystis subcylindrica Bather, Geol. Mag., dec. 6, 6, p. 73, 1919.

Aristocystites? grandiscutum Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 109, pl. 17, case 3, figs. 1-5, 1887.

Ord. (Div. D4): Straschnitz, Zahorzan, Chrustenitz, Wraz, etc., Bohemia.

Holocystis Carpenter and authors (not Lonsdale, 1855) = **Holocystites**.

Holocystites Hall. Genotype: *Caryocystites cylindricus* Hall.

Aristocystitidae (Amphoridae). Sil.

Hall, 20th Rep. N. Y. St. Cab. Nat. Hist., pp. 311, 380, 1868 (adv. pub. 1864, p. 7); Rev. ed., pp. 353, 429, 1870.—S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 1, p. 129, 1878.—Zittel, Handb. Pal., 1, p. 416, 1879.—Foerste, Ohio Jour. Sci., 21, no. 2, p. 48, 1920.

Holocystis Carpenter, Jour. Linn. Soc. London, Zool., 24, p. 47, 1891.—Haeckel, Amphor. Cyst., p. 60, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, pp. 48, 72, 1900.

Megacystites Hall, 20th Rep. N. Y. St. Cab. Nat. Hist., Addenda, p. 380, 1867 (adv. pub. 1865). (New name for *Holocystites*, supposed to be preoccupied by *Holocystis*.) [Springer, Zittel-Eastman Textb. Pal., 1, p. 150, 1913.]

Megacystis Angelin, Icon. Crin. Sued., p. 29, 1878.—Bather, Treatise Zool. (Lankester), pt. 3, p. 47, 1900; Geol. Mag., (6) 6, pp. 73-76, 110, 1919.

Trematocystis Jaekel, Stammes. Pelmat., 1, p. 413, 1899.—Bather, Treatise Zool. (Lankester), pt. 3, p. 72, 1900.—Foerste, Ohio Jour. Sci., 21, p. 52, 1920. (Genotype: *Holocystites subglobosus* S. A. Miller.)

Holocystites abnormis Hall.

Hall, Adv. Pub. 18th Rep. N. Y. St. Cab. Nat. Hist., p. 8, pl. 3, figs. 7, 8, 1864; 20th Rep., Doc. ed., p. 312, pl. 12, figs. 7, 8, 1867; Rev. ed., p. 355, 1870.—Chamberlain, Geol. Wis., 1, p. 191, fig., 1882.—Foerste, Ohio Jour. Sci., 17 no. 6, p. 205, 1917.

Sil. (Niagaran-Racine dol.): Racine, Wis.

Holocystites adipatus S. A. Miller.

S. A. Miller, 17th Rep. Geol. Surv. Indiana, p. 623, pl. 2, figs. 1, 2, 1892 (adv. pub. 1891, p. 13, pl. 2, figs. 1, 2).

Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., and near St. Paul, Ind.

Holocystites affinis Miller and Faber.

Miller and Faber, Jour. Cincinnati Soc. Nat. Hist., 15, p. 87, pl. 1, figs. 16-18, 1892.

Sil. (Niagaran-Osgood ls.): Near Madison, Ind.

Holocystites alternatus (Hall).

Caryocystites alternatum Hall, Geol. Surv. Wis., Rep. Prog., p. 23, 1861.

Holocystites alternatus Hall, Adv. Pub. 18th Rep. N. Y. St. Cab. Nat. Hist., p. 8, pl. 1, fig. 6, pl. 3, fig. 9, 1864; 20th Rep., Doc. ed., p. 312, pl. 12, fig. 9, pl. 12a, fig. 6, 1867; Rev. ed., p. 355, 1870.—Foerste, Ohio Jour. Sci., 21, no. 2, p. 53, pl. 4, figs. 1-6 (?), 1920.

Megacystis alternata Angelin, Icon. Crin. Suec., p. 30, 1878.

Holocystis alternata Haeckel, Amphor. Cyst., pl. 2, fig. 28, 1896.

Sil.: Racine, Wis. (Racine dol.); Cedarville and Wilmington, Ohio (Cedarville dol.); Kinnekulle, Vestergothia.

Holocystites amplus S. A. Miller.

S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 262, pl. 2, fig. 1, 1894 (adv. pub. 1892, p. 8, pl. 2, fig. 1).

Sil. (Niagaran-Osgood ls.): Near Madison, Ind.

Holocystites asper Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 7, p. 84, pl. 5, figs. 1, 2, 1895.

Sil. (Niagaran-Osgood ls.): Near Madison, Ind.

Holocystites baculus S. A. Miller.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 2, p. 105, pl. 10, figs. 5, 5a, 1879.

Sil. (Niagaran-Osgood ls.): Ripley Co., Ind.

Holocystites benedicti S. A. Miller.

S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 627, pl. 5, fig. 3, 1892 (adv. pub. 1891, p. 17).

Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.

Holocystites brauni S. A. Miller.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 1, p. 130, pl. 5, fig. 1, 1878.

Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.

Holocystites canneus S. A. Miller.

S. A. Miller, N. Amer. Geol. Pal., p. 253, figs. 332, 333, 1889.

Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.

Holocystites colletti S. A. Miller.

S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 226, pl. 4, fig. 3, 1892 (adv. pub., 1891, p. 16).

Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.

Holocystites commodus S. A. Miller.

S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 624, pl. 3, figs. 1, 2, 6, 1892 (adv. pub. 1891, p. 14).

Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.

Holocystites cylindricus (Hall).

Caryocystites cylindricum Hall, Geol. Surv. Wis., Rep. Prog., p. 23, 1861.

Holocystites cylindricus Hall, Adv. Pub. 18th Rep. N. Y. St. Cab. Nat. Hist., p. 7, pl. 1, figs. 7, 8, pl. 3, figs. 4-6, 1864; 20th Rep., Doc. ed., p. 311, pl. 12, figs. 4-6, pl. 12a, figs. 7, 8, 1867; Rev. ed., p. 354, 1870.—Chamberlain, Geol. Wis., 1, p. 191, fig., 1883.

Sil. (Niagaran-Racine dol.): Racine, Wis.; Chicago, Ill.

Holocystites dyeri S. A. Miller.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 2, p. 108, pl. 10, fig. 3, 1879.

Sil. (Niagaran-Osgood ls.): Ripley Co., and Big Creek, Jefferson Co., Ind.

Holocystites elegans S. A. Miller.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 1, p. 136, pl. 6, figs. 3, 3a, 1878.

Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.

Holocystites faberi S. A. Miller.

S. A. Miller, N. Amer. Geol. Pal., p. 254, figs. 334, 335, 1889.

Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.

Holocystites globosus S. A. Miller.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 1, p. 133, pl. 5, figs. 5, 5a, 5b, 1878.

Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.

Holocystites gorbyi S. A. Miller.

S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 624, pl. 2, figs. 3, 4, 1892 (adv. pub. 1891, p. 14).

Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.

Holocystites greenvillensis Foerste.

Foerste, Ohio Jour. Sci., 17, no. 6, p. 203, pl. 9, figs. 3 a-c, pl. 10, fig. 8, 1917.

Sil. (Niagaran-Cedarville dol.): 4½ miles east Greenville, Ohio.

Holocystites gyrinus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 5, p. 5, pl. 1, figs. 1-3, 1894.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 747, fig. 1361, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 72, fig. 42, 1900.

Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.

Holocystites hammelli S. A. Miller.

S. A. Miller, N. Amer. Geol. Pal., p. 254, figs. 336, 337, 1889.

Trematocystis hammeli Jaekel, Stammes. Pelmat., 1, p. 409, 1899.

Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.

Holocystites indianensis S. A. Miller.

S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 625, pl. 3, fig. 7, 1892 (adv. pub. 1891, p. 15).

Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.

Holocystites jolietensis S. A. Miller.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 5, p. 223, pl. 9, figs. 1, 1a, 1882.

Sil. (Niagaran-Racine dol.): Joliet, Ill.

Holocystites madisonensis S. A. Miller.

S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 625, pl. 3, figs. 3, 4, 1892 (adv. pub. 1891, p. 15).

Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.

Holocystites ornatissimus S. A. Miller.

S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 627, pl. 5, figs. 1, 2, 1892 (adv. pub. 1891, p. 17).

Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.

Holocystites ornatus S. A. Miller.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 1, p. 132, pl. 5, figs. 3a, b, 1878.

Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.; Newsom, Tenn.

Holocystites ovalis (Angelin).

Megacystis ovalis Angelin, Icon. Crin. Suec., p. 30, pl. 27, fig. 15, 1878.

Ord.: Dalecarlia, Sweden.

Holocystites ovatus Hall.

Hall, Adv. Pub. 18th Rep. N. Y. St. Cab. Nat. Hist., p. 9, pl. 3, fig. 2, 1864; 20th Rep., Doc. ed., p. 313, pl. 12, fig. 2, 1867; (Rev. ed., 1870, p. 357).—Chamberlin, Geol. Wis., 1, p. 191, fig., 1883.

Sil. (Niagaran-Racine dol.): Waukesha, Wis.

Holocystites papulosus S. A. Miller.

S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 628, pl. 5, figs. 7, 8, 1892 (adv. pub. 1891, p. 18).—Rowley in Greene, Cont. Ind. Pal., 1, pt. 10, p. 166, pl. 48, figs. 16-18, 1903.

Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.

Holocystites parvulus S. A. Miller.

S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 629, pl. 5, fig. 6, 1892 (adv. pub. 1891, p. 18).

Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.

Holocystites parvus S. A. Miller.

S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 626, pl. 4, figs. 4, 5, 1892 (adv. pub. 1891, p. 16).

Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.

Holocystites perlongus S. A. Miller.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 1, p. 132, pl. 5, figs. 4, 4a, 1878.
 Sil. (Niagaran-Osgood ls.): Ripley Co. (Osgood), Ind., and Newsom, Tenn.

Holocystites plenus S. A. Miller.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 1, p. 135, pl. 6, figs. 2, 2a, 1878.
 Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.; Newsom, Tenn.

Holocystites pustulosus S. A. Miller.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 1, p. 134, pl. 6, figs. 1, 1a, 1878.
 Sil. (Niagaran-Osgood ls.): Near Waldron, Ind.

Holocystites rotundus S. A. Miller.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 2, p. 107, pl. 9, figs. 3, 3a, 3b, 1879.
 Sil. (Niagaran-Osgood ls.): Ripley Co. and Big Creek, Jefferson Co., Ind.

Holocystites scitulus S. A. Miller.

S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 624, pl. 2, figs. 5, 6, 1892 (adv. pub. 1891, p. 14); N. Amer. Geol. Pal., 2d App., p. 747, fig. 1359, 1897.
 Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.

Holocystites scutellatus Hall.

Hall, Adv. Pub. 18th Rep. N. Y. St. Cab. Nat. Hist., p. 10, pl. 3, fig. 1, 1864; 20th Rep. Doc. ed., p. 314, pl. 12, fig. 1, 1868; Rev. ed., p. 357, 1870.
 Sil. (Niagaran-Racine dol.): Waukesha, Wis.

Holocystites spangleri S. A. Miller.

S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 626, pl. 4, fig. 6, 1892 (adv. pub., 1891, p. 16).
 Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.

Holocystites sphaericus Winchell and Marcy.

Winchell and Marcy, Mem. Boston Soc. Nat. Hist., 1, p. 111, 1865.
 Sil. (Niagaran-Racine dol.): Chicago, Ill.

Holocystites sphaeroidalis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 7, p. 85, pl. 5, figs. 3, 4, 1895.
 Sil. (Niagaran-Osgood ls.): Near Madison, Jefferson Co., Ind.

Holocystites splendens Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 5, p. 7, pl. 1, figs. 7-9, 1894.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 747, fig. 1360, 1897.
 Sil. (Niagaran-Osgood ls.): Near Madison, Jefferson Co., Ind.

Holocystites subglobosus S. A. Miller.

S. A. Miller, N. Amer. Geol. Pal., p. 255, fig. 338, 1889.
Trematocystis subglobosus Jaekel, Stammes. Pemat., 1, p. 414, pl. 4, fig. 2, 1899.
 Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.

Holocystites subovatus S. A. Miller.

S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 627, pl. 5, figs. 4, 5, 1892 (adv. pub. 1891, p. 17).
 Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.

Holocystites subrotundus S. A. Miller.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 2, p. 107, pl. 9, figs. 2, 2a, 1879.
 Sil. (Niagaran-Osgood ls.): Ripley Co., Ind.

Holocystites tumidus S. A. Miller.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 2, p. 104, pl. 9, figs. 1, 1a, 1879.
 Sil. (Niagaran-Osgood ls.): Ripley Co., and Big Creek, Jefferson Co., Ind.

Holocystites turbinatus S. A. Miller.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 2, no. 4, p. 259, pl. 15, figs. 7, 7a, 1880.
—S. A. Miller, N. Amer. Geol. Pal., p. 255, fig. 339, 1889.

Sil. (Niagaran-Osgood ls.): Ripley Co., Ind.

Holocystites ventricosus S. A. Miller.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 2, p. 108, pl. 10, fig. 4, 1879.

Sil. (Niagaran-Osgood ls.): Ripley and Jefferson Cos., Ind.

Holocystites wetherbyi S. A. Miller.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 1, p. 131, pl. 5, figs. 2, 2a, b, 1878.

Sil. (Niagaran-Osgood ls.): Ripley Co., Ind.

Holocystites winchelli Hall.

Hall, Adv. Pub. 18th Rep. N. Y. St. Cab. Nat. Hist., p. 9, pl. 3, fig. 3, 1864; 20th Rep., Doc. ed., p. 313, pl. 12, fig. 3, 1868; Rev. ed., p. 356, pl. 12, fig. 3, 1870.

Sil. (Niagaran-Racine dol.): Waukesha and Racine, Wis.

Holocystites wykoffi S. A. Miller.

S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 625, pl. 4, figs. 1, 2, 1892 (adv. pub. 1891, p. 15).

Sil. (Niagaran-Osgood ls.): Big Creek, Jefferson Co., Ind.

Homocystis Bather = Cheirocrinus.

Homocystites Barrande = Cheirocrinus.

Homocystites alter Barrande = Cheirocrinus alter.

Homocystites tertius Barrande = Leptocystis tertius.

Iowacystis Thomas and Ladd = Dendrocystites.

Jaekelocystis Schuchert. Genotype: *J. hartleyi* Schuchert.

Callocystitidae (Rhombifera). Dev.

Schuchert, Amer. Geol., 22, p. 230, 1903; Smiths. Misc. Coll., vol. 47, p. 222, 1904.

Jaekelocystis avellana Schuchert.

Schuchert, Smiths. Misc. Coll., 47, p. 226, pl. 37, figs. 11, 12, 1904; Md. Geol. Surv., Low. Dev., p. 235, pl. 35, figs. 3, 4, 1913.

Dev. (Helderbergian-Keyser fm.): Keyser, W. Va.

Jaekelocystis hartleyi Schuchert.

Schuchert, Amer. Geol., 32, p. 231, 1903; Smiths. Misc. Coll., 47, p. 224, pl. 37, figs. 4, 5, 1904; Md. Geol. Surv., Low. Dev., p. 233, pl. 32, figs. 12-16, 1913.

Dev. (Helderbergian-Keyser fm.): Keyser, W. Va.

Jaekelocystis papillata Schuchert.

Schuchert, Smiths. Misc. Coll., 47, p. 225, pl. 37, figs. 9, 10, 1904; Md. Geol. Surv., Low. Dev., p. 233, 234, pl. 33, figs. 1, 2, 1913.

Dev. (Helderbergian-Keyser fm.): Keyser, W. Va.

Juglandocrinus von Koenen = Corylocrinus.

Lagarocystis Jaekel, Stammes. Pelmat., 1, p. 153, 1899 (nom. nud.).

Lagynocystis Jaekel. Genotype: *Anomalocystites pyramidalis* Barrande.

Anomalocystitidae (Amphoridea). Ord.

Jaekel, Pal. Zeits., 3, p. 121, 1918.

Lagynocystis pyramidalis (Barrande).

Anomalocystites pyramidalis Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 94, pl. 5, case 3, figs. 1-3, 1887.

Lagynocystis pyramidalis Jaekel, Pal. Zeits., 3, pp. 121, 122, fig. 112, 1918.

Ord. (Div. D1): Wosek, near Rokitzan, Bohemia.

Lagynocystis pyramidalis minuta Chauvel.

Chauvel, Soc. Geol. Min. Bretagne, C. R. Somm. Seances, an. 3, no. 2, p. 3, 1937.
Mid. Ord.: Guichen (Ille-et-Vilaine), Brittany, France.

Lapillocystis Bather = *Lapillocystites*.

Lapillocystites Barrande. Genotype: *L. fragilis* Barrande.

Aristocystitidae (Amphoridea). Cambrian.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 182, 1887.

Lapillocystis Bather, Nature, 40, p. 268, 1889; Treatise Zool., (Lankester), pt. 3, p. 46, 1900.

Lapillocystites fragilis Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 182, pl. 2, figs. 27-30, 1887.

Mid. Cambrian (C): Ginetz, Bohemia.

Larites Gregorio. Genotype: *Echinosphaerites (Larites) gemmellaroi* Gregorio.

Gregorio, Ann. Geol. Pal., 32, Palermo, p. 34, 1930.

Larites gemmellaroi (Gregorio).

Echinosphaerites (Larites) gemmellaroi Gregorio, Ann. Geol. Pal., 52, Palermo, p. 35, pl. 15, figs. 1, 2, 1930. (Doubtful; not recognizable.)

Permian: Valle del Sosio, Sicily.

Lepadocrinites Billings = *Lepocrinites*.

Lepadocrinus Hall = *Lepocrinites*.

Lepadocrinus angelini Haeckel = *Apiocystites angelini*.

Lepadocrinus gebhardi Angelin (not Conrad) = *Apiocystites angelini*.

Lepadocystis Carpenter. Genotype: *Lepocrinites moorei* Meek.

Callocystitidae (Rhombifera). Early Sil.

Carpenter, Jour. Linn. Soc., Zool., 24, p. 10, 1891.—Bather, Treatise Zool. (Lankester), pt. 3, p. 61, 1900.—Foerste, Bull. Sci. Lab. Denison Univ., 17, p. 458, 1914.

Meekocystis Jaekel, Stammes. Pelmat., 1, pp. 272, 277, 1899. (Genotype: *Lepocrinites moorei* Meek.)

Lepadocystis clintonensis Parks = *Brockocystis clintonensis*.

Lepadocystis moorei (Meek).

Lepocrinites moorei Meek, Amer. Jour. Sci. and Arts, 2, p. 296 (p. 297 as *Lepadocrinites moorei*), 1871; Geol. Surv. Ohio, 1, pt. 2, p. 39, pl. 3, figs. 4 a-c, 1873.

Meekocystis moorei Jaekel, Stammes. Pelmat., 1, pp. 278, 279, fig. 58, 1899.

Lepadocrinus moorei Cumings, 32d Rep. Geol. Nat. Res. Ind., for 1907, p. 727, pl. 4, figs. 6-6b, 1908.

Lepadocystis moorei Bather, Trans. Roy. Soc. Edinburgh, 49, pt. 2, p. 431, text fig. 39, 1913.—Foerste, Bull. Sci. Lab. Denison Univ., 17, p. 459, pl. 5, fig. 1, text figs. 3-7, 1914.

Early Sil. (Richmond-Elkhorn fm.): Near Richmond, Ind., and near Eaton, Ohio.

Lepidocystis Foerste. Genotype: *L. wanneri* Foerste.

Eocrinidae. Low. Cambrian.

Foerste, in Resser and Howell, Bull. Geol. Soc. Amer., 49, no. 2, p. 212, 1938.

Lepidocystis wanneri Foerste.

Foerste, in Resser and Howell, Bull. Geol. Soc. Amer., 49, no. 2, p. 212, pl. 2, figs. 5-9, 1938.

Low. Camb. (Kinzers fm.): 2 miles northwest of York, Pa.

Lepocrinites Conrad. Genotype: *L. gebhardii* Conrad.

Callocystitidae (Rhombifera). Sil.; Dev.

Conrad, Third Ann. Rep. N. Y. Geol. Surv., p. 207, 1840.—Vanuxem, Nat. Hist. N. Y., Geol., 3, p. 117, text fig. 4, 1842.—Mather, Nat. Hist. N. Y., Geol., 1, p. 346, text fig. 4, 1843.—Jaekel, Stammes. Pelmat., 1, p. 197, 1899.—Schuchert, Smiths. Misc. Coll., 47, pp. 211, 213, 1904.

Lepadocrinites Billings, Canadian Jour., 2, p. 215, 1854; Geol. Surv. Canada, Can. Org. Rem., dec. 3, p. 19, 1858.

Lepadocrinus Hall, Nat. Hist. N. Y., Pal., 3, p. 125, 1859 (as *Lepadocrinus* or *Lepocrinus*).—Angelin, Icon. Crin. Suec., p. 32, 1878.—Zittel, Handb. Pal., 1, p. 424, 1879.—Haeckel, Amphor. Cyst., p. 134, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 61, 1900.—Cumings, 32d Ann. Rep. Dep. Geol. Nat. Res. Ind., p. 714, 1908.

Lepocrinites gebhardii Conrad.

Conrad, Third Ann. Rep. Geol. N. Y., p. 207, 1840.—Vanuxem, Rep. Third Dist. N. Y., p. 117, fig. 4, 1842.—Mather, Geol. Rep. First Dist. N. Y., p. 346, fig. 4, 1843.—Hall, Rep. 4th Dist. N. Y. tab. ill. 27, fig. 14, 1843.—Owen, Amer. Jour. Sci., 1, p. 49, fig. 4, 1846.—Lincklaen, 14th Rep. N. Y. St. Cab., p. 58, pl. 9, fig. 11, 1861.

Lepadocrinus gebhardi Hall, Nat. Hist. N. Y., Pal., 3, p. 125, pl. 7, figs. 1–23, 1859.—Haeckel, Amphor. Cyst., p. 135, pl. 3, figs. 14–17, 1896.—Kirk, U. S. Nat. Mus., Proc., 41, p. 17, pl. 5, figs. 6, 7, 1911.—Ehrenberg, Bull. Amer. Mus. Nat. Hist., 59, pp. 30, 31, figs. 21–23, 1929.

Apiocystites gebhardii Jaekel, Stammes. Pelmat., 1, pp. 280, 282, fig. 59, 1899.

Lepocrinites gebhardi Schuchert, Smiths. Misc. Coll., 47, pt. 2, p. 215, 1904; Md. Geol. Surv., Low. Dev., p. 229, pl. 32, figs. 4–7, 1913.

Dev. (Helderbergian): Litchfield, Schoharie, etc., N. Y. (Coeymans ls.); Cumberland, Md.; Powell Valley, Massanutten Mt., Va.

Lepocrinites manlius Schuchert.

Schuchert, Smiths. Misc. Coll., 47, pt. 2, pp. 214, 215, text fig. 23, pl. 37, figs. 2, 3, pl. 39, figs. 15, 16, 1904; Md. Geol. Surv., Low. Dev., p. 231, pl. 32, figs. 8, 9, pl. 35, figs. 15, 16, 1913.

Dev. (Helderbergian-Keyser fm.): Keyser, W. Va.; Cumberland, Md.

Lepocrinites moorei Meek = *Lepadocystis moorei*.

Lepocrinites oblongus (Forbes).

Pseudocrinites oblongus Forbes, Mem. Geol. Surv. Gt. Britain and Mus. Pract. Geol. London, 2, pt. 2, pp. 499, 501, pl. 14, figs. 1–14, 1848.

Staurocystis oblonga Haeckel, Amphor. Cyst., p. 134, 1896.

Apiocystites oblongus Jaekel, Stammes. Pelmat., 1, p. 282, 1899.

Lepadocrinus oblongus Bather, Treatise Zool. (Lankester), pt. 3, p. 62, 1900.

Sil. (Wenlock ls.): Dudley, England.

Lepocrinus Hall. See *Lepocrinites*.

Leptocystis Jaekel. Genotype: *Homocystites tertius* Barrande.

Cheirocrinidae (Rhombifera). Sil.

Jaekel, Stammes. Pelmat., 1, p. 222, 1899.

Leptocystis tertius (Barrande).

Homocystites tertius Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 77, pl. 31, case 5, figs. 6–9, 1887.

Leptocystis tertius Jaekel, Stammes. Pelmat., 1, p. 222, 1899.

Sil.: Borek (E1); Lodenitz and Sedlitz (E2), Bohemia.

Leucophthalmus Koenig = *Echinosphaerites*.

Lichenocystis Haeckel = *Lichenoides*.

Lichenoides Barrande. Genotype: *L. priscus* Barrande.

Macrocystellidae (Rhombifera). Cambrian.

Barrande, Syst. Sil. Trilobites Bohême, Not. Prelim., p. 20, 1846; Syst. Sil. Centre Bohême, 7, pt. 1, p. 183, 1887.—Bather, Treatise Zool. (Lankester), pt. 3, p. 56, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 157, 1913.

Lichenocystis Haeckel, Amphor. Cyst., p. 148, 1896. (Genotype: *Lichenoides priscus* Barrande.)

Lichenoides priscus Barrande.

Barrande, Syst. Sil. Trilobites Bohême, Not. Prelim., p. 20, 1846; Syst. Sil. Centre Bohême, 7, pt. 1, p. 185, pl. 1, figs. 1-34, pl. 2, figs. 9-12, 1887.—Kirk, U. S. Nat. Mus., Proc., 41, p. 109, pl. 11, fig. 11, 1911.—Jaekel, Pal. Zeits., 3, p. 25, fig. 17, 1918.

Lichenocystis prisca Haeckel, Amphor. Cyst., p. 148, 1896.

Mid. Cambrian (Cb): Ginetz, Skrej, Bohemia.

Lingulocystis Thoral. Genotype: *L. elongata* Thoral.

Anomalocystitidae (Amphoridae). Ord.

Thoral, Cont. Etude Pal. Ord., p. 94, 1935.

Lingulocystis elongata Thoral.

Thoral, Cont. Etude Pal. Ord. Inferieur Montagne Noire, p. 94, pl. 8, figs. 3, 4, 1935.

Ord. (Up. Tremadoc and Low. Arenig): N. E. of St. Chinian (Herauld), France.

Lingulocystis elongata lata Thoral.

Thoral, Cont. Etude Pal. Ord. Inferieur Montagne Noire, p. 94, pl. 8, fig. 6, 1935.

Ord. (Low. Arenig and Up. Tremadoc): Near St. Chinian (Assignan), France.

Lipsanocystis Ehlers and Leighly. Genotype: *L. traversensis* Ehlers and Leighly.

Callocystitidae (Rhombifera). Dev.

Ehlers and Leighly, Papers Michigan Acad. Sci., Arts, and Letters, 2, p. 155, 1922.

Lipsanocystis traversensis Ehlers and Leighly.

Ehlers and Leighly, Papers Michigan Acad. Sci., Arts, and Letters, 2, p. 157, text figs. 4-6, pl. 10, figs. 1-5, 1922.

Dev. (Traverse fm., Thunder Bay ls.): Partridge Point, 4 miles south Alpena, Mich.

Lysocystis Bather = *Lysocystites*.**Lysocystites** S. A. Miller. Genotype: *Echinocystites nodosus* Hall.

Cryptocrinitidae (Rhombifera). Sil.

S. A. Miller, N. Amer. Geol. Pal., p. 259, 1889. (*Echinocystites* Hall, preoccupied.)

Aethocystites S. A. Miller, 18th Ann. Rep. Geol. Surv. Ind., p. 263, 1894 (adv. pub. 1892, p. 9); N. Amer. Geol. Pal., 1st. App., p. 673, 1892. (Genotype: *A. sculptus* S. A. Miller.)

Aethocystis Bather, Treatise Zool. (Lankester), pt. 3, p. 57, 1900.

Echinocystites Hall, 18th Rep. N. Y. St. Cab. Nat. Hist., p. 12, 1864 (advance pub.); 20th Rep. N. Y. St. Cab. Nat. Hist., Doc. ed., p. 316, 1867; Rev. ed., p. 360, 1870.—Zittel, Handb. Pal., 1, p. 413, 1879. (Genotype: *E. nodosus* Hall.)

Echinocystis Haeckel, Amphor. Cyst., p. 146, 1896.—Gregory, Quart. Jour. Geol. Soc. London, 53, p. 124, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 70, 1900.

Lysocystis Bather, Geol. Mag., dec. 4, 4, p. 381, 1897.

Scolocystis Gregory, Quart. Jour. Geol. Soc. London, 53, p. 133, 1897. (*Echinocystites* Hall, preoccupied.)

Lysocystites nodosus (Hall).

Echinocystites nodosus Hall, Adv. Pub. 18th Rep. N. Y. St. Cab. Nat. Hist., p. 12, pl. 3, figs. 10, 11, 1864; 20th Rep., Doc. ed., p. 316, pl. 12, figs. 10, 11, 1867; Rev. ed., 1870, p. 360.

Echinocystis nodosus Chamberlin, Geol. Wis., 1, p. 191, 1883.

Lysocystites nodosus S. A. Miller, N. Amer. Geol. Pal., p. 259, 1889.—Foerste, Ohio Jour. Sci., 21, no. 2, p. 45, pl. 1, figs. 11 A-D, 1920.

Sil. (Niagaran-Racine dol.): Racine, Wis.

Lysocystites sculptus (S. A. Miller).

Aethocystites sculptus S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 264, pl. 2, fig. 2, 1894 (adv. pub. 1892, p. 10); N. A. Geol. Pal., 2d App., p. 673, fig. 1207, 1892.

Lysocystites sculptus Foerste, Ohio Jour. Sci., 21, p. 44, text fig. 3, 1920.—Springer, Amer. Sil. Crin., p. 142, pl. 33, figs. 19–22, 1926.

Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Macrocystella Callaway. Genotype: *M. mariae* Callaway.

Macrocystellidae (Rhombifera). Canadian.

Callaway, Quart. Jour. Geol. Soc. London, 33, p. 669, 1877.—Zittel, Handb. Pal., 1, p. 420, 1879.—Haeckel, Amphor. Cyst., p. 149, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 56, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 157, 1913.

Macrocystella mariae Callaway.

Callaway, Quart. Jour. Geol. Soc. London, 33, p. 670, pl. 24, fig. 13, 1877.—Bather, Treatise Zool. (Lankester), pt. 3, p. 56, fig. 18, 1900.—Kirk, U. S. Nat. Mus., Proc., 41, p. 16, pl. 2, fig. 7, 1911.

Canadian (Tremadoc-Shinerton sh.): Shinerton, England.

Malocystis Carpenter = Malocystites.

Malocystites Billings. Genotype: *M. murchisoni* Billings.

Malocystitidae (Amphoridea). Ord.

Billings, in Chapman, Canadian Jour., n.s., 2, p. 302, 1857; Geol. Surv. Canada, Can. Org. Rem., dec. 3, pp. 17, 66, 1858.—Hall, Nat. Hist. N. Y., Pal., 3, p. 152, 1859.—Zittel, Handb. Pal., 1, p. 413, 1879.—Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 674, 1900.

Malocystis Carpenter, Jour. Linn. Soc. Zool., 24, p. 27, 1891.—Haeckel, Amphor. Cyst., p. 105, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 58, 1900.

Malocystites barrandi Billings = Canadocystis barrandi.

Malocystites emmonsi Hudson = Canadocystis emmonsi.

Malocystites murchisoni Billings.

Billings, Canadian Jour., n.s., 2, p. 302, 1857; Geol. Surv. Canada, Can. Org. Rem., dec. 3, pp. 34, 68, pl. 7, figs. 1 a–i, 1858; Amer. Jour. Sci., (2) 40, p. 128, fig. 85, 1874.—S. A. Miller, N. Amer. Geol. Pal., p. 259, text fig. 257, 1889.—Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 675, text fig. 10, 1900.

Gyptocystites murchisoni Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 4, 1887.

Malocystis murchisoni Haeckel, Amphor. Cyst., p. 105, 1896.

Ord. (Chazyan): Caughnawaga and Island of Montreal, Quebec (Aylmer fm.); Valcour Island, Lake Champlain (Crown Point-Valcour ls.).

Meekocystis Jaekel = Lepadocystis.

Megacystis Angelin = Holocystites.

Megacystites Hall = Holocystites.

Mimocystis Carpenter and authors = Mimocystites.

Mimocystites Barrande. Genotype: *M. bohemicus* Barrande.

Macrocystellidae (Rhombifera). Ord.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 163, 1887.—Jaekel, Stammes. Pelmat., p. 201, fig. 37, 1899.—Thoral, Cont. Etude Pal. Ord. Inferieur Montagne Noire, p. 110, 1935.

Mimocystis Carpenter, Jour. Linn. Soc. Zool., 24, p. 13, 1891.—Haeckel, Amphor. Cyst., p. 149, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 56, 1900.

Mimocystites azaisi Thoral.

Thoral, Cont. Etude Pal. Ord. Inferieur Montagne Noire, p. 110, pl. 7, figs. 1 a–e, 2–4, 1935.

Ord. (Up. Tremadoc): St. Chinian (Herault), France.

Mimocystites azaisi multicristatus Thoral.

Thoral, Cont. Etude Pal. Ord. Inferieur Montagne Noire, p. 112, pl. 7, fig. 2, 1935.

Ord. (Up. Tremadoc): St. Chinian (Herault), France.

Mimocystites azaisi paucicristatus Thoral.

Thoral, Cont. Etude Ord. Inferieur Montagne Noire, p. 112, pl. 7, figs. 1, 3, 4, 1935.
Ord. (Up. Tremadoc): St. Chinian, etc. (Herault), France.

Mimocystites bohemicus Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 163, pl. 28, figs. 1-20, 1887.—Jaekel, Stammes. Pelmat., p. 172, text fig. 33, 1899.

Mimocystis bohemicus Haeckel, Amphor. Cyst., p. 149, 1896.

Ord.: Trubsko, Bohemia (D2); Bussaco, Portugal.

Mimocystites mazzetti (Lovisato).

Mimocystis mazzetti Lovisato, Rend. Acc. Sinceri, 3, p. 134, 1894. (Nom. nud.)
Devonian: Sardinia.

Mitrocystella Jaekel. Genotype: *Anomalocystites incipiens* Barrande.

Anomalocystitidae (Amphoridea). Ord.

Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 672, 1900.

Mitrocystella barrandei Jaekel.

Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 672, text fig. 8, 1900; Pal. Zeits., 3, p. 121, fig. 110, 1918.—Gislen, Zool. Bidrag fran Uppsala, 12, pp. 210, 242, figs. 19, 20, 1930.

Ord. (Div. D1): Wosek, Bohemia.

Mitrocystella incipiens (Barrande).

Anomalocystites incipiens Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 93, pl. 5, case 1, figs. 3-30, 1887.

Mitrocystella incipiens Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 672, 1900.

Ord. (Div. D1): Sta. Benigna, Bohemia.

Mitrocystella incipiens miloni Chauvel.

Chauvel, Soc. Geol. Min. Bretagne, C. R. Seances, an. 3, no. 2, p. 2, 1937.

Mid. Ord.: Guichen (Ille-et-Vilaine), Brittany, France.

Mitrocystis Bather = **Mitrocystites**.**Mitrocystites** Barrande. (Genotype: *M. mitra* Barrande).

Anomalocystitidae (Amphoridea). Ord.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 164, 1887.—Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 671, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 150, 1913.

Mitrocystis Bather, Nature, 4, p. 268, 1889.—Haeckel, Amphor. Cyst., p. 43, 1896.
—Bather, Treatise Zool. (Lankester), pt. 3, p. 50, 1900.

Mitrocystites latus Jaekel.

Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 671, 1900; Pal. Zeits., 3, p. 121, fig. 111, 1918.

Mitrocystis lata Bather, Pal. Zeits., 7, pt. 1, p. 13, fig. 12, 1925.—Gislen, Zool. Bidrag fran Uppsala, 12, pp. 210, 242, text fig. 18, 1930.

Ord. (D1): Wosek, Bohemia.

Mitrocystites mitra Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 167, pl. 4, case 1, figs. 1-50, pl. 5, case 1, figs. 1-12, pl. 31, case 1, figs. 1-5, 1887.—Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 671, text fig. 7, 1900.

Mitrocystis mitra Bather, Treatise Zool. (Lankester), pt. 3, p. 50, text fig. 12, 1900.
—Wanner, Handwort. Naturwiss., p. 486, figs. 5-1, 2, 3, 1933.

Ord.: Wosek, near Rokitzan, and Sta. Benigna (D1); Hajek, and near Trubsko, (D2) Bohemia.

Mitrocystites riadanensis (Chauvel).

Mitrocystis riadanensis Chauvel, Soc. Geol. Min. Bretagne, C. R. Seances, an. 3, no. 2, p. 2, 1937.

Mid. Ord.: Andouille (Mayenne), Brittany, France.

Mitrocystites? styloideus Dehm.

Dehm, Sitz. Bayer. Akad. Wiss., p. 22, text fig. 1, pl. 1, figs. 2, 3, 1934.

Low. Dev. (Hunsruck sl.): Bundenbach, Germany.

Narrawayella Foerste. Genotype: *Cyclocystoides cincinnatiensis* Miller and Faber.

Cyclocystoididae (Uncertain Cystoidea). Ord.; Early Sil.

Foerste, Ohio Jour. Sci., 21, no. 2, p. 59, 1920.

Narrawayella cincinnatiensis (Miller and Faber).

Cyclocystoides cincinnatiensis Miller and Faber, Jour. Cincinnati Soc. Nat. Hist., 15, p. 84, pl. 1, figs. 7, 8, 1892.

Narrawayella cincinnatiensis Foerste, Ohio Jour. Sci., 21, no. 2, p. 60, 1920.

Ord. (Maysville-Corryville sh.): Cincinnati, Ohio.

Narrawayella minor (Miller and Dyer).

Cyclocystoides minus Miller and Dyer, Jour. Cincinnati Soc. Nat. Hist., 1, p. 33, pl. 2, fig. 5, 1878.

Narrawayella minus Foerste, Ohio Jour. Sci., 21, no. 2, p. 60, 1920.

Early Sil. (Richmond-Arnheim sh.): Near Morrow, Ohio.

Narrawayella mundula (Miller and Dyer).

Cyclocystoides mundulus Miller and Dyer, Jour. Cincinnati Soc. Nat. Hist., 1, p. 34, pl. 2, fig. 7, 1878.

Narrawayella mundulus Foerste, Ohio Jour. Sci., 21, no. 2, p. 60, 1920.

Early Sil. (Richmond-Arnheim sh.): Near Morrow, Ohio.

Narrawayella nitida (Faber).

Cyclocystoides nitidus Faber, Jour. Cincinnati Soc. Nat. Hist., 9, p. 17, pl. 1, fig. 1, 1886.

Narrawayella nitidus Foerste, Ohio Jour. Sci., 21, p. 60, 1920.

Early Sil. (Richmond-Arnheim sh.): Near Transit, Ohio.

Narrawayella parva (Miller and Dyer).

Cyclocystoides parvus Miller and Dyer, Jour. Cincinnati Soc. Nat. Hist., 1, p. 33, pl. 2, fig. 6, 1878.

Narrawayella parvus Foerste, Ohio Jour. Sci., 21, no. 2, p. 60, 1920.

Early Sil. (Richmond-Arnheim sh.): Near Morrow, Ohio.

Narrawayella raymondi Foerste.

Foerste, Ohio Jour. Sci., 21, no. 2, p. 60, 1920.

Cyclocystoides halli Raymond (not Billings), Victoria Mem. Mus., Bull. no. 1, p. 28, pl. 3, fig. 4 (not figs. 2, 3), 1913.

Ord. (Trenton-Hull ls.): Hull, Quebec, Canada.

Neocystis Bather = Neocystites.

Neocystites Barrande. Genotype: *N. bohemicus* Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, pp. 167, 257, 1887. (Probably pelmatozoan root.)

Neocystis Bather, Nature, 40, p. 269, 1889; Treatise Zool. (Lankester), pt. 3, p. 77, 1900.

Neocystites bohemicus Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, pp. 66, 168, pl. 4, figs. 1-6, 1887.

Ord. (Div. D4): Zahorzan, Bohemia.

Orocystis Bather and authors = Orocystites.

Orocystites Barrande. Genotype: *O. helmhackeri* Barrande.

Echinosphaeritidae (Rhombifera). Ord.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 168, 1887.

Orocystis Bather, Nature, 40, p. 209, 1889.—Haeckel, Amphor. Cyst., p. 57, 1896.
—Bather, Treatise Zool. (Lankester), pt. 3, p. 54, 1900.

Orocystites helmhackeri Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 170, pl. 7, figs. 1-16, pl. 8, figs. 1-27, 1837.—Delgado, Comm. Serv. Geol. Portugal, pp. 62, 83, 1908.

Orocystis helmhackeri Haeckel, Amphor. Cyst., p. 57, fig. 4, 1896.

Caryocystites helmhackeri Jaekel, Stammes. Pelmat., 1, p. 330, pl. 9, fig. 7, pl. 10, figs. 1-3, 1899.—Röpke, Zeits. Naturwiss., Halle, 90, pp. 40-46, text figs. 1, 2, 1933.

Heliocrinus helmhackeri Bather, Treatise Zool. (Lankester), pt. 3, p. 54, fig. 16, 1900. Ord.: Near Chrustenitz, and Zahorzan, Bohemia (Div. D1); Tagus River Basin, Portugal.

Orocystites helmhackeri thuringiae (Jaekel).

Caryocystites helmhackeri var. *thuringiae* Jaekel, Stammes. Pelmat., 1, p. 330, pl. 8, fig. 22, 1899.—Freyburg, Zeits. Deutsch. Geol. Gesell., Abh., 74, p. 264, 1922.

Heliocrinus helmhackeri var. *thuringiae* Bather, in Reed, Pal. Indica, n.s., 2, Mem. 3, p. 18, 1906.

Ord.: Döschnitz, Thuringia, Germany.

Ovocystis Reed = Sinocystis.

Pachycalix Chauvel. Genotype: *Calix halli* Rouault.

Aristocystitidae (Amphoridae). Ord.

Chauvel, Soc. Geol. Min. Bretagne, C. R. Seances, an. 2, no. 2, p. 3, 1936.

Pachycalix halli (Rouault).

Calix halli Rouault, Oeuvres posthumes (Pub. by Lebesconte), 1883.—Jaekel, Stammes. Pelmat., 1, p. 404, 1899.

Pachycalix halli Chauvel, Soc. Geol. Min. Bretagne, C. R. Seances, an. 2, no. 2, p. 3, 1936.

Mid. Ord.: Guichen (Monterrein), Brittany, France.

Palaeocystis Haeckel = Palaeocystites.

Palaeocystis pentolena Haeckel.

Haeckel, Amphor. Cyst., p. 69, pl. 1, figs. 5-5b, 1896. (Restoration probably based on *Palaeocystites tenuiradiatus*).

Ord.: Canada.

Palaeocystites Billings. Genotype: *Actinocrinus tenuiradiatus* Hall.

Echinospaeritidae (Rhombifera). Ord.

Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 3, p. 68, 1858.—Zittel, Handb. Pal., 1, p. 418, 1879.—Springer, Zittel-Eastman Textb. Pal., 1, p. 152, 1913.

Palaeocystis Haeckel, Zeits. Naturwiss. Jena, 30 (n.s., vol. 23), p. 397, 1896; Amphor. Cyst., p. 69, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 54, 1900.

Palaeocystites bessarabianus Vascautanu.

Vascautanu, Anuaral Institut. Geol. Roman, 15, p. 564, text fig. 24, pl. 11, figs. 27, 28, 1931.

Ord.: Gresiile de Molodova, Romania.

Palaeocystites dawsoni Billings.

Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 3, p. 70, 1858.

Ord. (Chazyan-Aylmer fm.): Montreal, Quebec.

Palaeocystites pulcher Billings.

Billings, Canadian Nat. Geol., 4, p. 430, 1859.

Ord. (Chazyan-Mingan fm.): Mingan Island, Quebec.

Palaeocystites tenuiradiatus (Hall).

Actinocrinus tenuiradiatus Hall, Nat. Hist. N. Y., Pal., 1, p. 18, pl. 4, figs. 8, 9, 1847.

Palaeocystites tenuiradiatus Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 3, p. 69, text figs. 1-3, 1858.

- Ord.: Chazy, N. Y. (Chazyan-Valcour-Crown Point ls.); Caughnawaga and Island of Montreal, Canada (Aylmer fm.).
- Palamphora** Haeckel.
Haeckel, Zeits. Nat., Jena, 30, p. 306, 1896; Amphor. Cyst., p. 33, 1896.
Type species: *P. pentapalma* Haeckel, Amphor. Cyst., p. 33, pl. 5, fig. 15, 1896. (Hypothetical division and species.)
- Palmacystis** Haeckel. Genotype: *P. palmata* Haeckel.
Sphaeronitidae (Diploporita). Ord.
Haeckel, Amphor. Cyst., p. 131, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 73, 1900.
- Palmacystis palmata** Haeckel.
Haeckel, Amphor. Cyst., p. 152, pl. 4, figs. 39, 40, 1896.
Aristocystites undet., Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, pp. 41, 104, pl. 14, figs. 1-6, 1887.
Ord. (Div. D4): Czernin, near Beraun, Sterbohol, etc., Bohemia.
- Peltocystis** Thoral. Genotype: *P. cornuta* Thoral.
Anomalocystitidae (Amphoridae). Ord.
Thoral, Cont. Etude Pal. Ord. Inferieur Montagne Noire, p. 90, 1935.
- Peltocystis cornuta** Thoral.
Thoral, Cont. Etude Pal. Ord. Inferieur Montagne Noire, p. 101, text fig. 2, p. 104, pl. 6, figs. 3, 3a, 1935.
Ord. (Up. Tremadoc or Low. Arenig): St. Chinian (Herauld), France.
- Pentactaea** Haeckel.
Haeckel, Zeits. Natur. Jena, 30, p. 306, 1896; Amphor. Cyst., p. 32, 1896.
Type species: *P. pentanema* Haeckel, Amphor. Cyst., p. 32, pl. 5, fig. 12, 1896. (Hypothetical division and species.)
- Phacocystis** Haeckel = Pseudocrinites.
- Phyllocystis** Thoral. Genotype: *P. blayaci* Thoral.
Cothurnocystitidae (Amphoridae). Ord.
Thoral, Cont. Etude Pal. Ord. Inférieur Montagne Noire, p. 101, 1935.
- Phyllocystis blayaci** Thoral.
Thoral, Cont. Etude Pal. Ord. Inférieur Montagne Noire, p. 101, text fig. 2, p. 104, pl. 6, figs. 3, 3a, 1935.
Ord. (Up. Tremadoc and Low. Arenig): St. Chinian, etc. (Herauld) France.
- Phyllocystis blayaci crassimarginata** Thoral.
Thoral, Cont. Etude Pal. Ord. Inférieur Montagne Noire, p. 105, pl. 6, figs. 2a, 2b, pl. 7, figs. 8a, 8b, 1935.
Ord. (Up. Tremadoc): St. Chinian, etc. (Herauld) France.
- Phyllocystis blayaci major** Thoral.
Thoral, Cont. Etude Pal. Ord. Inférieur Montagne Noire, p. 106, pl. 7, figs. 9a, b, 1935.
Ord. (Up. Tremadoc): St. Chinian (Herauld), France.
- Pilocystis** Bather = Pilocystites.
- Pilocystites** Barrande. Genotype: *P. primitius* Barrande.
Aristocystitidae (Amphoridae). Mid. Cambrian.
Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 185, 1887.
Pilocystis Bather, Nature, 40, p. 263, 1889; Treatise Zool. (Lankester), pt. 3, p. 46, 1900.
- Pilocystites primitius** Barrande.
Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 185, pl. 2, fig. 26, 1887.
Mid. Cambrian (Cb): Ginetz, Bohemia.

Pirocystis Bather = *Pyrocystites*.

Pirocystis desiderata Haeckel = *Archeogocystis desideratus*.

Placocystella Rennie. Genotype: *P. capensis* Rennie.

Anomalocystitidae (Amphoridea). Low. Dev.

Rennie, Ann. South African Mus., 31, p. 269, 1936.

Placocystella capensis Rennie.

Rennie, Ann. South African Mus., 31, p. 269, pl. 36, figs. 3-9, 1936.

Low. Dev. (Basal shales, Bokkeveld ser.): Gemka Poort, South Africa.

Placocystis Haeckel = *Placocystites*.

Placocystis crustacea Haeckel = *Enoploura balanoides*.

Placocystis ensifer Haeckel = *Anomocystis ensifer*.

Placocystites de Koninck. Genotype: *P. forbesianus* de Koninck.

Anomalocystitidae (Amphoridea). Sil.; Dev.

De Koninck, Bull. Acad. Roy. Sci. Belg., (2) 28, p. 548, 1869.—Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 668, 1900.—Schuchert, Smiths. Misc. Coll., 47, p. 205, 1904.

Placocystis Haeckel, Amphor. Cyst., p. 39, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 51, 1900.

Placocystites africanus (Reed).

Placocystis africanus Reed, Ann. South African Mus., 22, p. 30, pl. 4, fig. 1, 1925.—

Rennie, *ibid.*, 31, p. 273, pl. 34, fig. 1, 1936.

Low. Dev. (Bokkeveld series): Near Buffelskraal, South Africa.

Placocystites forbesianus de Koninck.

De Koninck, Bull. Acad. Roy. Soc. Belg., (2) 28, p. 548, pl. 5, figs. 2-5, 1869.

(Translation by Woodward, Geol. Mag., 7, pp. 258-263, 1870.)—Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 669, text figs. 5a, b, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 151, fig. 236, 1913.

Ateleocystites (*Placocystites*) *forbesianus* Woodward, Geol. Mag., 7, pp. 193-202, pl. 6, fig. 16, 1880; 8, pp. 71-72, 1871. (Woodcut and note by Billings.)

Placocystis forbesianus Bather, Guide to Foss. Invert. in Brit. Mus., pt. 2, p. 102, fig. 158, 1897; Treatise Zool. (Lankester) pt. 3, p. 51, fig. 13, 1900.—Kirk, U. S. Nat. Mus., Proc., 41, pl. 3, figs. 1, 2, 1911.—Wanner, Handwort. Naturwiss., p. 486, figs. 4 a-c, 1933.

Sil. (Wenlock): Dudley, England.

Placocystites gegenbauri (Haeckel).

Ateleocystis gegenbauri Haeckel, Amphor. Cyst., p. 42, pl. 2, fig. 12, 1896.

Sil. (Wenlock): Dudley, England.

Platycystis Bather = *Platycystites*.

Platycystites S. A. Miller. Genotype: *P. faberi* S. A. Miller.

Malocystitidae (Amphoridea). Ord.

S. A. Miller, N. Amer. Geol. Pal., p. 272, 1889.

Platycystis Bather, Treatise Zool. (Lankester), pt. 3, p. 51, 1900.

Platycystites faberi S. A. Miller.

S. A. Miller, N. Amer. Geol. Pal., p. 272, fig. 398, 1889.—Bather, Trans. Roy. Soc. Edinburgh, 49, pt. 2, p. 371, text fig. 5, 1913.

Ord. (Chazyan-Heiskell sh.): Scott Co., Va.

Pleurocystis Carpenter and authors = *Pleurocystites*.

Pleurocystis anglicus Jaekel = *Dipleurocystis anglicus*.

Pleurocystites Billings. Genotype: *P. squamosus* Billings.

Pleurocystitidae (Rhombifera). Ord.; Early Sil.

- Billings, Canadian Jour., (1) 2, pp. 250, 251, 1854; Geol. Surv. Canada, Can. Org. Rem., dec. 3, p. 46, 1858.—Zittel, Handb. Pal., 1, p. 422, 1879.—Jaekel, Stammes. Pelmat., 1, p. 231, 1899; Pal. Zeits., 3, p. 95, 1918.—Springer, Zittel-Eastman Textb. Pal., 1, p. 154, 1913.—Foerste, Iowa Geol. Surv., 29, p. 355, 1924.
- Pleurocystis* Carpenter, Jour. Linn. Soc. Zool., 24, p. 12, 1891; Geol. Mag., 8, p. 136, 1891.—Haeckel, Amphor. Cyst., p. 44, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 64, 1900; Trans. Roy. Soc. Edinburgh, 49, pt. 2, p. 450, 1913.
- Pleurocystites anticostiensis** Billings.
Billings, Geol. Surv. Canada, Rep. Prog. for 1853-56, p. 288, 1857; Geol. Surv. Canada, Can. Org. Rem., dec. 3, p. 52, pl. 1, fig. 3, 1858.
Early Sil. (Richmond—English Head fm.): Charleton Point, Anticosti Island.
- Pleurocystites beckeri** Foerste.
Foerste, Iowa Geol. Surv., 29, p. 359, pl. 31, fig. 12, pl. 32, figs. 1, 6, pl. 34, figs. 1 A-D, 1924.
Early Sil. (Richmond—Maquoketa, Elgin sh.): Clermont, Iowa.
- Pleurocystites clermontensis** Foerste.
Foerste, Iowa Geol. Surv., 29, p. 363, pl. 33, fig. 7, pl. 34, figs. 7 A-D, 1924.—Thomas and Ladd, Univ. Iowa Studies, 11, no. 8, p. 9, pl. 3, fig. 9, 1926.
Early Sil. (Richmond—Maquoketa, Elgin sh.): Clermont, Iowa.
- Pleurocystites elegans** Billings.
Billings, Geol. Surv. Canada, Rep. Prog. for 1853-56, p. 287, 1857; Geol. Surv. Canada, Can. Org. Rem., dec. 3, p. 51, pl. 2, figs. 2 a-c (not 2d = *P. filitextus*), 1858.
Pleurocystis elegans Bather, Trans. Roy. Soc. Edinburgh, 49, pt. 2, p. 466, text fig. 67, 1913.
Ord. (Trenton): Ottawa, Ontario (Hull ls.); 3 miles west Green Bay, Wis. (Prosser ls.).
Pleurocystites elegans Billings (part) = *P. filitextus*.
- Pleurocystites exornatus** Billings.
Billings, Geol. Surv. Canada, Rep. Prog. for 1853-56, p. 287, 1857; Can. Org. Rem., dec. 3, p. 52, 1858.
Ord. (Trenton-Hull ls.): Montreal, Quebec.
- Pleurocystites filitextus** Billings.
Billings, Can. Nat. Geol., 2, p. 252, text figs. 13, 14, 1854; Geol. Surv. Canada, Can. Org. Rem., dec. 3, p. 50, pl. 2, figs. 1a, b, 2d (not 2 a-c = *P. elegans*), 1858.—Jaekel, Stammes. Pelmat., 1, p. 232, fig. 45, p. 234, pl. 12, figs. 3-5, 1899.—Hussey, Cont. Mus. Pal. Univ. Michigan, 3, no. 4, pl. 1, fig. 5, 1928.—A. E. Wilson, Trans. Roy. Soc. Canada, 26, sec. 4, p. 387, pl. 4, fig. 1, 1932.—Dehm, Sitz. Bayer. Akad. Wiss., p. 39, text fig. 6c, 1934.
Pleurocystis filitextus Haeckel, Amphor. Cyst., p. 44, 1896.—Kirk, U. S. Nat. Mus., Proc., 41, p. 14, pl. 2, fig. 4, pl. 3, fig. 3, 1911.—Ehrenberg, Acta Zool., 3, p. 274, fig. 1, 1922.—Wanner, Handwort. Naturwiss., p. 490, fig. 11, 1933.
Ord. (Trenton-Hull ls.): Montreal, Quebec, and Ottawa, Ontario.
- Pleurocystites foriulus** (Bather).
Pleurocystis foriulus Bather, Trans. Roy. Soc. Edinburgh, 49, pt. 2, p. 487, pl. 6, figs. 75-81, text figs. 74, 75, 80, 1913.
Ord. (Caradocian-Craighead ls.): Thraive Glen, Girvan District, Scotland.
- Pleurocystites gibbus** (Bather).
Pleurocystis gibba Bather, Trans. Roy. Soc. Edinburgh, 49, pt. 2, p. 485, pl. 6, figs. 64-68, text fig. 71, 1913.
Ord. (Caradocian-Craighead ls.): Thraive Glen, Girvan District, Scotland.
- Pleurocystites mercerensis** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 6, p. 60, pl. 5, figs. 25, 26, 1895.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 751, fig. 1379, 1897.

- Pleurocystis mercerensis* Bather, Trans. Roy. Soc. Edinburgh, 49, pt. 2, p. 468, 1913.
Ord. (Trenton): Mercer Co., Ky. (Curdsville ls.): Kirkfield, Ont. (Hull ls.).
- Pleurocystites multistriatus** Ulrich and Kirk.
Ulrich and Kirk, in Foerste, Iowa Geol. Surv., 29, p. 366, pl. 33, figs. 2, 3, pl. 34, figs. 2 a-c, 1924.
Early Sil. (Richmond-Maquoketa, Elgin sh.): 2 miles northwest of Clermont, Iowa.
- Pleurocystites procerus** (Bather).
Pleurocystis procera Bather, Trans. Roy. Soc. Edinburgh, 49, pt. 2, p. 480, pl. 5, fig. 63, text fig. 72, 1913.
Ord. (Caradocian-Craighead ls.): Thraive Glen, Girvan District, Scotland.
- Pleurocystites quadratus** (Bather).
Pleurocystis quadrata Bather, Trans. Roy. Soc. Edinburgh, 49, pt. 2, p. 482, pl. 6, figs. 69-74, text figs. 73, 79, 1913.
Ord. (Caradocian-Craighead ls.): Thraive Glen, Girvan District, Scotland.
- Pleurocystites robustus* Billings = *P. squamosus robustus*.
Pleurocystites rugeri Salter = *Dipleurocystis rugeri*.
- Pleurocystites slocomi** Foerste.
Foerste, Iowa Geol. Surv., 29, p. 362, pl. 33, fig. 5, pl. 34, figs. 5 A-D, 1924.
Early Sil. (Richmond-Maquoketa, Elgin sh.): Clermont, Iowa.
- Pleurocystites squamosus** Billings.
Billings, Canadian Jour., 2, p. 251, text figs. 9-12, 1854; Geol. Surv. Canada, Can. Org. Rem., dec. 3, p. 49, pl. 1, figs. 1 a-d, 1858.—Roemer in Bronn, Leth. Geog., 1, Atlas, pl. 11, fig. 6, 1876.—Hussey, Cont. Mus. Pal., Univ. Michigan, 3, no. 4, pp. 77, 78, pl. 1, figs. 1, 2, 3, 6, 1928.
Ord. (Trenton): Ottawa and Kirkfield, Ontario (Hull ls.); Monitorville, Minnesota and 3 miles north Escanaba, Mich. (Prosser ls.).
- Pleurocystites squamosus matutinus** Ruedemann.
Ruedemann, N. Y. St. Mus., Bull. 189, p. 27, pl. 5, figs. 1-4, 1916.
Ord. (Trenton-Glens Falls ls.): Glens Falls, N. Y.
- Pleurocystites squamosus robustus** (Billings).
Pleurocystites robustus Billings, Canadian Jour., 2, p. 252, text figs. 15-17, 1854; Geol. Surv. Canada, Can. Org. Rem., dec. 3, p. 49, pl. 1, fig. 2a, 1858.
Pleurocystis squamosus var. *robustus* Bather, Trans. Roy. Soc. Edinburgh, 49, pt. 2, p. 465, 1913.
Ord. (Trenton-Hull ls.): Ottawa and Kirkfield, Ontario.
- Polycosmites** Jaekel. Genotype: *P. bohemicus* Jaekel.
Caryocrinidae (Rhombifera). Ord.
Jaekel, Pal. Zeits., 3, p. 98, 1918.
- Polycosmites bohemicus** Jaekel.
Jaekel, Pal. Zeits., 3, p. 98, fig. 90, 1918.
Ord. (Div. D1): Vosek, Bohemia.
- Polyptychella** Jaekel. Genotype: *P. esthoniae* Jaekel.
? Macrocystellidae (Rhombifera). Ord.
Jaekel, Pal. Zeits., 3, p. 26, 1918.
- Polyptychella esthoniae** Jaekel.
Jaekel, Pal. Zeits., 3, p. 26, fig. 20, 1918.
Ord. (Kuckers sh., C2): Kuckers, Estonia.
- Pomocystis* Haeckel = *Sphaeronites*.
Pomonites Haeckel = *Sphaeronites*.
Pomosphaera Haeckel = *Sphaeronites*.

Proteocystis Bather = *Proteocystites*.

Proteocystites Barrande. Genotype: *P. flavus* Barrande.

Sphaerontitidae (Diploporita). Dev.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 78, 1887.

Carpocystites Oehlert, Anni. Soc. Geol. France, 19, p. 67, 1887. (Genotype: *C. soyei* Oehlert.)

Carpocystis Bather, Treatise Zool. (Lankester), pt. 3, p. 73, 1900.

Proteocystis Bather, Nature, 40, p. 269, 1889; Treatise Zool. (Lankester), pt. 3, p. 73, 1900.—Haeckel, Amphor. Cyst., p. 100, 1896.

Proteocystites barrandenus (Haeckel).

Proteocystis barrandena Haeckel, Amphor. Cyst., p. 101, 1896.

Proteocystites flavus Barrande (part), Syst. Sil. Centre Bohême, 7, pt. 1, p. 80, pl. 30, figs. 23-26, 1887.

Low. Dev. (F2): Mnienian, Bohemia.

Proteocystites flavus Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 80, pl. 29, figs. 1-3, pl. 30, figs. 1-22, 27-37, pl. 31, case 2, figs. 1-5, 1887. (Not pl. 30, figs. 23-26 = *P. barrandena*.)

Proteocystis flava Haeckel, Amphor. Cyst., pp. 97, 100, fig. 11, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 73, fig. 41, 1900.—Wanner, Handwort. Naturwiss., p. 492, fig. 23, 1933.

Eucystis flava Jaekel, Stammes. Pemat., 1, p. 407, pl. 4, fig. 7, 1933.

Low. Dev. (F2): Koniepruss and Mnienian, Bohemia.

Proteocystites flavus Barrande (part) = *P. barrandenus*.

Proteocystites soyei (Oehlert).

Carpocystites soyei Oehlert, Ann. Soc. Geol. France, 19, art. 1, p. 68, pl. 1, figs. 12, 13, 1887.

Low. Dev.: Sable (Sarthe), France.

Proteroblastus Jaekel. Genotype: *Dactylocystis schmidti* Jaekel.

Protocrinitidae (Diploporita). Ord.

Jaekel, Verh. Deutsch. Geol. Gesell., p. 116, 1895 (nom. nud.).—Bather, Treatise Zool. (Lankester), pt. 3, p. 46, 1900.—Jaekel, Pal. Zeits., 3, p. 101, 1918.

Dactylocystis Jaekel, Stammes. Pemat., 1, p. 434, 1899.

Proteroblastus schmidti (Jaekel).

Dactylocystis schmidti Jaekel, Stammes. Pemat., 1, p. 114, fig. 24-B, p. 436, pl. 5, fig. 7, 1899.

Proteroblastus schmidti Springer, Zittel-Eastman Textb. Pal., 1, p. 156, fig. 247, 1913.—Wanner, Handwort Naturwiss., p. 491, fig. 21, 1933.

Ord. (Kegel-Jewe, D1, *Hemicosmites* beds): Uxnorn, near Reval, Estonia.

Protocrinites Eichwald. Genotype: *P. oviformis* Eichwald.

Protocrinitidae (Diploporita). Ord.

Eichwald, Uber Silur. Schichtensyst. Estland, p. 185 (German ed.), p. 198 (French ed.), 1840.—Zittel, Handb. Pal., 1, p. 416, 1879.—Jaekel, Stammes. Pemat., 1, p. 430, 1899.—Springer, Zittel-Eastman Textb. Pal., 1, p. 156, 1913.—Jaekel, Pal. Zeits., 3, p. 102, 1918.—Yakovlev, Acad. Sci., URSS, C. R. (Dokl), 28, no. 9, p. 857, 1940.

Protoerinus Bronn, Index Pal., 1, fasc. 2, p. 1047, 1848.—Eichwald, Bull. Soc. Nat. Moscou, 29, p. 122, 1856; Leth. Ross., p. 619, 1859.—Haeckel, Amphor. Cyst., p. 104, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 74, 1900; Pal. Indica, n.s., 2, Mem. 3, p. 35, 1906. (With *Fungocystites* as synonym.)

Protocrinites fragum (Eichwald).

Protocrinus fragum Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, p. 122, 1856; Leth. Ross., 1, p. 621, 1860.—Haeckel, Amphor. Cyst., p. 104, fig. 12, 1896.—Jaekel, Stammes. Pemat., 1, p. 433, pl. 5, figs. 1-5, 1899.—Phleger, Bull. Mus. Comp. Zool., 76, no. 5, p. 201, 1935.

- Protocrinites fragum* Freyburg, Zeits. Deutsch. Geol. Gesell., 74, p. 265, 1922. Yakovlev, Acad. Sci., URSS, C. R. (Dokl), 28, no. 9, p. 857, fig., 1940.
- Protocrinus oviformis* Volborth (not Eichwald), Bull. Imp. Sci. St. Petersburg, 10, no. 19, p. 31, pl. 10, 1846; Mem. Acad. Imp. Sci. St. Petersburg, ser. 7, 16, no. 2, pl. fig. 2, 1870.—Bather, Treatise Zool. (Lankester), pt. 3, p. 75, fig. 45, 1900.
- Ord.: Zarskoje Selo and Pulkowa, Russia (Duboviki fm., C1); Spitham, near Reval, Estonia (Wassalem beds, D3); Scandinavia, Thuringia.
- Protocrinites leuchtenbergi* Eichwald = *Glyptosphaerites leuchtenbergi*.
- Protocrinites oviformis** Eichwald.
- Eichwald, Ueber Silur. Schichtensyst. Esthland, p. 186 (German ed.), p. 198 (French ed.), 1840.
- Protocrinus oviformis* Eichwald, Leth. Ross., 1, p. 622, pl. 32, figs. 14 a-c, 1860.—Jaekel, Stammes. Pelmat., 1, p. 434, pl. 5, fig. 6, 1899.
- Protocrinites volborthi* Jaekel, Stammes. Pelmat., 1, p. 432, 1899 (?error).
- Ord. (Wassalem beds, D3): Spitham and Jewe, Estonia.
- Protocrinites rarissimus* Jaekel = *Fungocystites rarissimus*.
- Protocrinites sparsiporus** (Bather).
- Protocrinus sparsiporus* Bather, in Reed, Pal. Indica, n.s., 2, Mem. 3, p. 36, pl. 2, figs. 15-20, 1906.
- Ord. (Naungkangyi beds): Sedaw, Burma, India.
- Protocrinites volborthi* Jaekel = *P. oviformis*.
- Protocrinus* Brown and authors = *Protocrinites*.
- Protocrinus foveolatus* Eichwald, 1860 = *Asteroblastus foveolatus* (blastoid).
- Protocrinus oviformis* Volborth (not Eichwald) = *Protocrinites fragum*.
- Protocystis* Bather = *Protocystites*.
- Protocystites** Hicks. Genotype: *P. meneviensis* Hicks.
- Eocystitidae (Amphoridea). Cambrian.
- Salter, British Assoc. Adv. Sci., p. 285, 1865 (nom. nud.); Cat. Cambrian Sil. Foss., p. 3, 1873.—Hicks, Quart. Jour. Geol. Soc. London, 28, p. 180, 1872.—Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 10, 1887.
- Protocystis* Bather, Treatise Zool. (Lankester), pt. 3, p. 48, 1900.
- Protocystites meneviensis** Hicks.
- Hicks, Quart. Jour. Geol. Soc. London, 28, p. 180, pl. 5, fig. 19, 1872.—Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 10, 1887.
- Mid. Cambrian (Menevien): St. Davids, Wales.
- Prunocystis* Carpenter = *Prunocystites*.
- Prunocystites** Forbes. Genotype: *P. fletcheri* Forbes.
- Echinoencrinitidae (Rhombifera). Sil.
- Forbes, Mem. Geol. Surv. Gt. Britain and Mus. Pract. Geol., London, 2, pt. 2, p. 503, 1848.—Zittel, Handb. Pal., 1, p. 422, 1879.—Jaekel, Stammes. Pelmat., 1, pp. 238, 260, 1899; Pal. Zeits., 3, p. 95, 1918.
- Prunocystis* Carpenter, Geol. Mag., 8, p. 135, 1891; Jour. Linn. Soc. Zool., 24, p. 5, 1891.—Bather, Treatise Zool. (Lankester), pt. 3, p. 60, 1900.
- Prunocystites baccatus** (Forbes).
- Echinoencrinus baccatus* Forbes, Mem. Geol. Surv. Gt. Britain and Mus. Pract. Geol. London, 2, pt. 2, p. 506, pl. 17, figs. 1-10, 1848.
- Echinocystis baccata* Haeckel, Amphor. Cyst., p. 146, 1896.
- Prunocystites baccatus* Jaekel, Stammes. Pelmat., 1, p. 263, 1899.
- Sil.: (Wenlock) Walsall, near Dudley, England.

Prunocystites fletcheri Forbes.

Forbes, Mem. Geol. Surv. Gt. Britain and Mus. Pract. Geol. London, 2, pt. 2, p. 504, pl. 16, figs. 1-4, 1848.—Jaekel, Stammes. Pelmat., 1, pp. 261, 262, 1899.

Prunocystis fletcheri Bather, Treatise Zool. (Lankester), pt. 3, text fig. 24, 1900.
Sil. (Wenlock ls.): Dudley, England.

Pseudocrinites Pearce. Genotype: *P. bifasciatus* Pearce.

Callocystitidae (Rhombifera). Sil.; Dev.

Pearce, Ann. Mag. Nat. Hist., 12, p. 472, 1842; Proc. Geol. Soc. London, 4, p. 160, 1843.—Forbes, Mem. Geol. Surv. Gt. Britain, 2, pt. 2, p. 494, 1848.—Jaekel, Stammes. Pelmat. 1, pp. 272, 283, 1899.—Schuchert, Smiths. Misc. Coll., 47, p. 226, 1904.—Springer, Zittel-Eastman Textb. Pal., 1, p. 153, 1913.

Phacocystis Haeckel, Amphor. Cyst., p. 135, 1896. (Genotype: *Pseudocrinites bifasciatus* Pearce.)

Pseudocrinitus Geinitz, Grund. Verst. Kunde, p. 554, 1846.—Carpenter, Jour. Linn. Soc. Zool., 24, p. 33, 1891.—Haeckel, Amphor. Cyst., p. 135, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 62, 1900.

Pseudocrinites abnormalis Schuchert.

Schuchert, Smiths. Misc. Coll., 47, p. 231, pl. 35, figs. 10-12, 1904; Md. Geol. Surv., Low. Dev., p. 238, pl. 33, figs. 10-12, 1913.

Dev. (Helderbergian-Keyser fm.): Keyser, W. Va.

Pseudocrinites bicopuladigiti Garner = *P. bifasciatus*.

Pseudocrinites bifasciatus Pearce.

Pearce, Proc. Geol. Soc. London, 4, p. 160, 1843.—Forbes, Mem. Geol. Surv. Gt. Britain, 2, pt. 2, p. 496, pl. 4, figs. 1-7, 1846.—Jaekel, Stammes. Pelmat., 1, p. 284, text fig. 60, p. 285, pl. 14, fig. 3, 1899.

Phacocystis bifasciatus Haeckel, Zeits. Naturwiss., 30, p. 9, 1895.

Pseudocrinitus bifasciatus Haeckel, Amphor. Cyst., p. 135, pl. 3, figs. 25, 26, 1896.

Pseudocrinites bicopuladigiti Garner, Nat. Hist. Stafford, p. 160, 1844.

Sil. (Dudley ls.): Dudley, England.

Pseudocrinites clarki Schuchert.

Schuchert, Amer. Geol., 32, p. 237, 1903; Smiths. Misc. Coll., 47, p. 233, pl. 36, figs. 4-7, pl. 39, fig. 14, 1904; Md. Geol. Surv., Low. Dev., p. 240, pl. 33, figs. 15-18, pl. 35, fig. 14, 1913.

Dev. (Helderbergian-Keyser fm.): Keyser, W. Va.

Pseudocrinites claypolei Schuchert.

Schuchert, Smiths. Misc. Coll., 47, p. 232, pl. 37, fig. 1, 1904.

Dev. (Helderbergian-Keyser fm.): Clarks Mills, near New Bloomfield, Pa.

Pseudocrinites elongatus Schuchert.

Schuchert, Smiths. Misc. Coll., 47, p. 235, pl. 35, figs. 6, 7, 1904; Md. Geol. Surv., Low. Dev., p. 241, pl. 34, figs. 3, 4, 1913.

Dev. (Helderbergian-Keyser fm.): Pleasant Valley, west of Martins Mt., Bedford Co., Pa.

Pseudocrinites gordonii Schuchert.

Schuchert, Amer. Geol., 32, p. 235, 1903; Smiths. Misc. Coll., 47, p. 229, pl. 36, figs. 8-12, pl. 39, figs. 11-13, 1904; Md. Geol. Surv., Low. Dev., p. 236, pl. 33, figs. 5-9, pl. 35, figs. 11-13, 1913.

Low. Dev. (Helderbergian-Keyser fm.): Keyser, W. Va.

Pseudocrinites magnificus Forbes.

Forbes, Mem. Geol. Surv. Gt. Britain and Mus. Pract. Geol. London, 2, pt. 2, p. 497, pl. 12, figs. 1-4, 1848.—Jaekel, Stammes. Pelmat., 1, p. 285, pl. 14, fig. 4, 1899.

Sil. (Wenlock ls.): Dudley, England.

Pseudocrinites oblongus Forbes = *Lepocrinites oblongus*.

Pseudocrinites perdewi Schuchert.

Schuchert, Amer. Geol., 32, p. 238, 1903; Smiths. Misc. Coll., 47, p. 236, pl. 36, figs. 1-3, pl. 39, figs. 8-10, 1904; Md. Geol. Surv., Low. Dev., p. 242, pl. 34, figs. 5-7, pl. 35, figs. 8-10, 1913.

Low. Dev. (Helderbergian-Keyser fm.): Keyser, W. Va.

Pseudocrinites quadricopuladigiti Garner = *Staurocystis quadrifasciata*.

Pseudocrinites quadrifasciatus Pearce = *Staurocystis quadrifasciata*.

Pseudocrinites stellatus Schuchert.

Schuchert, Amer. Geol., 32, p. 236, 1903; Smiths. Misc. Coll., 47, p. 231, pl. 35, figs. 8, 9, pl. 39, fig. 7, 1904; Md. Geol. Surv., Low. Dev., p. 239, pl. 33, fig. 13, 14, pl. 35, fig. 7, 1913.

Dev. (Helderbergian-Keyser fm.): Keyser, W. Va.

Pseudocrinites subquadratus Schuchert.

Schuchert, Smiths. Misc. Coll., 47, p. 234, pl. 35, figs. 4, 5, 1904; Md. Geol. Surv., Low. Dev., p. 236, pl. 34, figs. 1, 2, 1913.

Dev. (Helderbergian-Keyser fm.): Corrigansville, near Cumberland, Md.

Pseudocrinus Geinitz and authors = *Pseudocrinites*.

Psolocystis Haeckel. Genotype: *P. decanema* Haeckel.

Haeckel, Amphor. Cyst., p. 124, 1896. (Hypothetical genus and species.)

Ptychocosmites Jaekel. Genotype: *P. sardinicus* Jaekel.

Caryocrinitidae (Rhombifera). Ord.

Jaekel, Pal. Zeits., 3, p. 97, 1918.

Ptychocosmites sardinicus Jaekel.

Jaekel, Pal. Zeits., 3, p. 97, fig. 89, 1918.

Ord.: Fiumini Maggiori, Sardinia.

Pyrocystis Carpenter and authors = *Pyrocystites*.

Pyrocystites Barrande. Genotype: *P. pirum* Barrande.

Gomphocystitidae (Diploporita). Ord.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 170, 1887.—Jaekel, Stammes. Pelmat., 1, p. 417, 1899.

Pyrocystis Bather, Nature, 40, p. 269, 1889; Treatise Zool. (Lankester), pt. 3, p. 47, 1900.—Haeckel, Amphor. Cyst., p. 53, 1896.

Pyrocystis Carpenter, Jour. Linn. Soc. Zool., 24, p. 18, 1891.—Zittel, Grundzuge Pal., p. 189, 1910.—Kirk, U. S. Nat. Mus., Proc., 41, p. 10, 1911.

Pyrocystites desideratus Barrande = *Archeogocystis desideratus*.

Pyrocystites ? incertus Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 173, pl. 29, case 2, figs. 4, 5, 1887.

Ord. (Div. D1): Wosek, Bohemia.

Pyrocystites ? orientalis (Reed).

Pyrocystis ? orientalis Reed, Pal. Indica, n.s., 6, Mem. 3, p. 10, pl. 3, figs. 1, 2, 1917.

Ord.: Shih-tien, West Yunnan, China.

Pyrocystites patulus Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 174, pl. 29, case 2, figs. 1-3, 1887.

Ord. (Div. D1): Wosek, Bohemia.

Pyrocystites pirum Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 174, pl. 29, case 2, figs. 6-28, 1887.

—Jaekel, Stammes. Pelmat., 1, p. 419, pl. 3, figs. 6-8, 1899.

Pyrocystis pirum Haeckel, Amphor. Cyst., p. 53, 1896.

Ord.: Wosek, (Div. D1) and Sterbohol (D4), Bohemia.

- Regulaecystis** Dehm. Genotype: *R. pleurocystoides* Dehm.
Pleurocystitidae (Rhombifera). Dev.
Dehm, Neues Jahrb. Min., Geol. Pal., Beil.-Bd., 69, Abt. B, pt. 1, p. 74, 1932.
- Regulaecystis pleurocystoides** Dehm.
Dehm, Neues Jahrb. Min., Geol. Pal., Beil.-Bd., 69, Abt. B, pt. 1, p. 76, pl. 2, figs. 5-8, text figs. 8-13, 1932; Sitz. Bayer. Akad. Wiss., p. 31, pl. 2, figs. 3-6, 1934.
Low. Dev. (Hunsrück sl.): Lundenburg, Bundenbach, Germany.
- Revalocystis** Jaekel. Genotype: *Dactylocystis mickwitzi* Jaekel.
?Protocrinitidae (Diploporita). Ord.
Jaekel, Pal. Zeits., 3, p. 101, 1918.
- Revalocystis mickwitzi** (Jaekel).
Dactylocystis mickwitzi Jaekel, Stammes. Pelmat., 1, p. 436, pl. 5, fig. 8, 1899.
Revalocystis mickwitzi Jaekel, Pal. Zeits., 3, p. 101, 1918.
Ord. (Wesenberg ls., E): Sack, near Reval, Estonia.
- Rhenocystis** Dehm. Genotype: *R. latipedunculata* Dehm.
Anomalocystitidae (Amphoridae). Dev.
Dehm, Neues Jahrb. Min., Geol. Pal., Beil.-Bd. 69, Abt. B, pt. 1, pp. 64, 65, 1932.
- Rhenocystis latipedunculata** Dehm.
Dehm, Neues Jahrb. Min., Geol., Pal., Beil.-Bd. 69, Abt. B, pt. 1, p. 66, pl. 2, figs. 1-4, text figs. 1-6, 1932; Sitz. Bayer. Akad. Wiss., p. 24, pl. 1, figs. 4-9, pl. 2, figs. 1, 2, p. 26, text figs. 2 a-c, 1934.
Low. Dev. (Hunsrück sl.): Bundenbach, Germany.
- Rhipidocystis** Jaekel. Genotype: *R. gigas* Jaekel.
Dendrocystitidae (Amphoridae). Ord.
Jaekel, Zeits. Deutsch. Geol. Gesell., 52, pp. 665, 672, 1900; Pal. Zeits., 3, p. 124, 1918.—Bather, Trans. Roy. Soc. Edinburgh, 49, pt. 2, p. 369, 1913.—Hecker, Acad. Sci., URSS, Inst. Pal., 9, lv. 4, pp. 7, 56, 1940.
- Rhipidocystis baltica* Jaekel = *R. gigas*.
- Rhipidocystis batheri** Hecker.
Hecker, Compt. Rend. (Doklady) Acad. Sci. URSS, 19, no. 5, p. 422, 1938; Acad. Sci., URSS, Inst. Pal., 9, lv. 4, pp. 17, 61, fig. 12, pl. 2, fig. 3, 1940.
Ord. (Echinospaerites ls. C1): Leningrad Province, Russia.
- Rhipidocystis esthona** Hecker.
Hecker, Compt. Rend. (Doklady) Acad. Sci. URSS, 19, no. 5, p. 422, 1938; Acad. Sci. URSS, Inst. Pal., 9, lv. 4, pp. 18, 61, 1940.
Ord. (Kuckers sh., C2): Estonia.
- Rhipidocystis gigas** Jaekel.
Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 672, 1900.—Bather, Trans. Roy. Soc. Edinburgh, 49, pt. 2, p. 359, text figs. 1, 2, 4, 1913.—Phleger, Bull. Mus. Comp. Zool., Harvard, 76, no. 5, p. 193, pl. 1, fig. 9, 1933.
Rhipidocystis baltica Jaekel, Zeits. Deutsch. Gesell., 52, p. 665, text fig. 1900.—Bather, Trans. Roy. Soc. Edinburgh, 49, pt. 2, p. 369, text fig. 3, 1913.—Hecker, Compt. Rend. (Doklady) Acad. Sci. URSS, 19, no. 2, p. 421, 1938; Acad. Sci. URSS, Inst. Pal., 9, lv. 4, pp. 17, 60, figs. 2, 3, 7, 8, pl. 1-3, 1940.
Ord. (Kunda fm. B3): Near St. Petersburg and Garnaja Scheldiche, Russia.
- Rhipidocystis öpiki** Hecker.
Hecker, Compt. Rend. (Doklady) Acad. Sci. URSS, 19, no. 5, p. 422, 1938; Acad. Sci. URSS Inst. Pal., 9, lv. 4, pp. 18, 61, fig. 6, pl. 3, fig. 1, 1940.
Ord. (Jewe fm., D1): Estonia.

Rhipidocystis robusta Hecker.

Hecker, Compt. Rend. (Doklady) Acad. Sci. URSS, 19, no. 5, p. 442, 1938; Acad. Sci. URSS, Inst. Pal., lv. 4, pp. 19, 61, figs. 11, 13, pl. 3, fig. 6, 1940.

Ord. (Jewe fm., D1): Leningrad Province and Estonia.

Savagella Foerste. Genotype: *Cyclocystoides ornatus* Savage.

Cyclocystoididae (Cystoidea). Sil.

Foerste, Ohio Jour. Sci., 21, no. 2, p. 61, 1920.

Savagella ornata (Savage).

Cyclocystoides ornatus Savage, Trans. Ill. Acad. Sci., 10, p. 265, pl. 2, fig. 1, 1917.

Savagella ornatus Foerste, Ohio Jour. Sci., 21, no. 2, p. 61, pl. 1, fig. 18, 1920.

Cyclocystoides illinoisensis Miller and Gurley (part), Ill. St. Mus., Bull. 6, p. 61, pl. 5, fig. 28 (not fig. 27), 1893.

Sil. (Alexandrian-Orchard Creek sh.): Near Thebes, Ill.

Schizocystis Jaekel. Genotype: *Echinoencrinus armatus* Forbes.

Echinoencrinitidae (Rhombifera). Sil.

Jaekel, Verhandl. Deutsch. Zool. Gesell., p. 113, 1895; Stammes. Pelmat., 1, p. 196, fig. 36-L, pp. 235, 263, 1899.—Bather, Treatise Zool. (Lankester), pt. 3, pp. 60, 61, 1900.

Schizocystis armata (Forbes).

Echinoencrinus armatus Forbes, Mem. Geol. Surv. Gt. Britain and Mus. Prac. Geol. London, 2, pt. 2, p. 507, pl. 18, figs. 1-14, pl. 19, figs. 1-10, 1848.

Echinocystis armata Haeckel, Amphor. Cyst., p. 140, pl. 4, figs. 31-34, 1896.

Schizocystis armata Jaekel, Stammes. Pelmat., 1, p. 264, fig. 53, p. 266, pl. 12, figs. 1, 2, 1899.

Sil. (Wenlock ls.): Walsall and near Dudley, England.

Scoliocystis Jaekel. Genotype: *Caryocystites pumilus* Eichwald.

Echinoencrinitidae (Rhombifera). Ord.

Jaekel, Stammes. Pelmat., 1, p. 196, figs. 36a, 36e, p. 257, 1899.—Bather, Treatise Zool. (Lankester), pt. 3, p. 60, 1900.

Scoliocystis pumila (Eichwald).

Caryocystites pumilus Eichwald, Leth. Ross., 1, p. 629, pl. 37, figs. 19 a-c, 1860.

Scoliocystis pumila Jaekel, Stammes. Pelmat., 1, p. 258, fig. 51, p. 260, pl. 11, figs. 11, 12, text fig. 52, 1899.

Ord. (Kunda fm., B3): Pulkowa, Russia.

Scoliocystis thersites Jaekel.

Jaekel, Stammes. Pelmat., 1, p. 258, fig. 50, p. 260, pl. 11, fig. 10, 1899.

Ord. (Kunda fm., B3): Near St. Petersburg, Russia.

Scolocystis Gregory = Lysocystites.

Sigmacystis Hudson = Canadocystis.

Sinocystis Reed. Genotype: *S. loczyi* Reed.

Sphaeronitidae (Diploporita). Ord.

Reed in Brown, Rec. Geol. Surv. India, 43, pt. 4, p. 332, 1913.—Reed, Pal. Indica, n.s., 6, Mem. 3, p. 3, 1917.—Bather, Geol. Mag., (6) 5, p. 511, 1918; 6, p. 71, 1919.—Reed, Geol. Mag., dec. 6, 6, pp. 92, 93, 191, 1919.

Ovocystis Reed in Brown, Rec. Geol. Surv. India, 43, pt. 4, p. 333, 1913.—Reed, Pal. Indica, n.s., 6, Mem. 3, p. 7, pl. 2, figs. 2-11, 1917. (Genotype: *O. mansuyi* Reed.)

Sinocystis loczyi Reed.

Reed in Brown, Rec. Geol. Surv. India, 43, pt. 4, p. 333, 1913.—Reed, Pal. Indica, n.s., 6, Mem. 3, p. 4, pl. 1, figs. 1-8, 1917.—Bather, Geol. Mag., (6) 5, pp. 511-515, text fig. 5, p. 532, text figs. 5, 8, 9-11, 1918.—Sun, Bull. Geol. Soc. China, 15, no. 4, p. 450, pl. 2, figs. 1a, b, 1936.

Ord.: Shih-tien and Kweichou, China.

Sinocystis mansuyi (Reed).

Ovocystis mensuyi Reed in Brown, Rec. Geol. Surv. India, 43, pt. 4, p. 333, 1913 (nom. nud.).—Reed, Pal. Indica, n.s., 6, Mem. 3, p. 7, pl. 2, figs. 2-11, 1917.

Sinocystis mansuyi Bather, Geol. Mag., (6) 5, p. 512, text fig. 6, pp. 535, 538, text figs. 3, 4, 6, 7, 12, 13, 1918.

Ord.: Shih-tien, China.

Sinocystis piroides Reed.

Reed in Brown, Rec. Geol. Surv. India, 43, pt. 4, p. 332, 1913 (nom. nud.).

Ord.: Shih-tien, China.

Sinocystis yunnanensis Reed.

Reed, in Brown, Rec. Geol. Surv. India, 43, pt. 4, p. 333, 1913 (nom. nud.).—Reed, Pal. Indica, n.s., 6, Mem. 3, p. 6, pl. 1, figs. 9, 10, pl. 2, figs. 1, 16, 1917.—Bather, Geol. Mag., (6) 5, pp. 211, 212, 537, 1918.

Ord.: Shih-tien, China.

Sphaerocystis Carpenter and authors = *Sphaerocystites*.

Sphaerocystites Hall. Genotype: *S. multifasciatus* Hall.

Callocoystitidae (Rhombifera). Dev.

Hall, Amer. Jour. Sci. and Arts, (2) 25, p. 279, 1858; Nat. Hist. N. Y., Pal., 3, pp. 130, 151, 1859 (1861).—Schuchert, Amer. Geol., 32, p. 232, 1903; Smiths. Misc. Coll., 47, p. 248, 1904.

Sphaerocystis Carpenter, Jour. Linn. Soc. Zool., 24, p. 5, 1891.—Haeckel, Amphor. Cyst., p. 133, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 63, 1900.

Sphaerocystites bloomfieldensis Schuchert.

Schuchert, Smiths. Misc. Coll., 47, p. 251, 1904.

Dev. (Helderbergian-Keyser fm.): Clarks Mill, near New Bloomfield, Pa.

Sphaerocystites dolomiticus Jaekel = *Coelocystis subglobosus*.

Sphaerocystites globularis Schuchert.

Schuchert, Amer. Geol., 32, p. 233, 1903; Smiths. Misc. Coll., 47, p. 252, pl. 38, figs. 3-5, pl. 39, figs. 5, 6, 1904; Md. Geol. Surv., Low. Dev., p. 247, pl. 34, figs. 13, 14, pl. 35, figs. 5, 6, pl. 36, fig. 1, 1913.

Dev. (Helderbergian-Keyser fm.): Near Cumberland, Md.

Sphaerocystites globularis ovalis Schuchert.

Schuchert, Smiths. Misc. Coll., 47, p. 253, pl. 38, fig. 6, 1904; Md. Geol. Surv., L. Dev., p. 248, pl. 36, fig. 2, 1913.

Dev. (Helderbergian-Keyser fm.): Near Cumberland, Md.; Keyser, W. Va.

Sphaerocystites multifasciatus Hall.

Hall, Nat. Hist. N. Y., Pal., 3, p. 130, pl. 7-A, figs. 1-4, 1859.—Haeckel, Amphor. Cyst., p. 133, pl. 3, figs. 10-13, 1896 (as *Sphaerocystis multifasciata*).—Schuchert, Smiths. Misc. Coll., 47, pt. 2, pp. 250, 251, pl. 38, figs. 1, 2, pl. 39, figs. 1-4, text figs. 38, 39, 1904; Md. Geol. Surv., Low. Dev., p. 245, pl. 34, figs. 11, 12, pl. 35, figs. 1-4, 1913.

Dev. (Helderbergian-Keyser fm.): Cumberland, Md.; Keyser, W. Va.

Sphaeronis Angelin = *Sphaeronites*.

Sphaeronites Hisinger. Genotype: *Echinus pomum* Gyllenhahl.

Sphaeronitidae (Diploporita). Ord.

Hisinger, Antek. Physik. Geol., 4, p. 185, 1828; Leth. Suec., p. 91, 1838.—Zittel, Handb. Pal., 1, p. 417, 1879.—Haeckel, Amphor. Cyst., p. 97, 1896.—Jaekel Stammes. Pelmat., 1, p. 306, 1899.—Springer, Zittel-Eastman Textb. Pal., 1, p. 155, 1913.

Pomocystis Haeckel, Zeits. Naturwiss. Jena, 30, p. 401, 1896; Amphor. Cyst., p. 98, 1896.—Bather, Treatise Zool. (Lankester) pt. 3, p. 72, 1900. (Genotype: *Sphaeronis wa* Angelin.)

Pomonites Haeckel, Amphor. Cyst., p. 96, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 72, 1900. (Genotype: *P. pentactea* Haeckel.)

- Pomosphaera* Haeckel, Amphor. Cyst., p. 99, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 72, 1900. (Genotype: *Sphaeronis oblonga* Angelin.)
- Sphaeronites arachnoides* Forbes = *Echinosphaerites arachnoides*.
- Sphaeronites aurantium* von Buch = *Echinosphaerites aurantium*.
- Sphaeronites balticus* Forbes = *Heliocrinites balticus*.
- Sphaeronites citrus* Hisinger = *Echinosphaerites citrus*.
- Sphaeronites dalecarlicus* (Angelin).**
Sphaeronis? dalecarlica Angelin, Icon. Crin. Suec., p. 31, pl. 27, figs. 9, 10, 1878.
 Ord.: Dalecarlia, Sweden.
- Sphaeronites globulus* (Angelin).**
Sphaeronis globulus Angelin, Icon. Crin. Suec., p. 30, pl. 11, figs. 7-10, 1878.—Bather, Treatise Zool. (Lankester), pt. 3, p. 72, fig. 38, 1900.—Wanner, Handwort. Naturwiss., p. 492, fig. 24, 1933.
Sphaeronites globulus Jaekel, Stammes. Pelmat., 1, p. 398, pl. 4, fig. 9, 1899.
 Ord. (*Asaphus* ls.): Böhahamn, Oeland, and Dalecarlia, Sweden.
- Sphaeronites granatus* Hisinger = *Heliocrinites granatum*.
- Sphaeronites leuchtenbergi* Volborth = *Glyptosphaerites leuchtenbergi*.
- Sphaeronites litchi* Baily = *Eucystis litchi*.
- Sphaeronites lobiferus* (Reed).**
Sphaeronis lobiferus Reed, Pal. Indica, n.s., 6, Mem. 3, p. 12, pl. 3, figs. 4-6, 1917.
 Ord.: Shih-tien, West Yunnan, China.
- Sphaeronites minutus* (Angelin).**
Sphaeronis minuta Angelin, Icon. Crin. Suec., p. 31, pl. 11, figs. 21, 22, 1878.
Pomocystis minuta Haeckel, Amphor. Cyst., p. 99, 1896.
 Ord.: Fjecka, Dalecarlia, Sweden.
- Sphaeronites? munitus* Forbes = *Caryocystites munitus*.
- Sphaeronites oblongus* (Angelin).**
Sphaeronis oblonga Angelin, Icon. Crin. Suec., p. 30, pl. 11, figs. 17, 18, 1878.
Pomosphaera oblonga Haeckel, Amphor. Cyst., pp. 97, 99, fig. 9, 1896.
 Ord.: Östbjörka, Dalecarlia, Sweden.
- Sphaeronites ovalis* (Angelin).**
Sphaeronis ovalis Angelin, Icon. Crin. Suec., p. 30, pl. 11, figs. 13-16, 1878.
 Ord. (*Asaphus* ls.): Dalecarlia, Sweden.
- Sphaeronites pentactaea* (Haeckel).**
Pomonites pentactaea Haeckel, Amphor. Cyst., p. 97, fig. 6, 1896.
 Ord.: Scandinavia.
- Sphaeronites pomum* (Gyllenhahl).**
Echinus pomum Gyllenhahl, Kongl. Vet. Akad. Handl., p. 242, pl. 8, figs. 1-3, 1772.—Volborth, Mem. Acad. Imp. Sci. St. Petersburg., (7) 16, no. 2, pl. fig. 1, 1870.
Sphaeronites pomum Hisinger, Anteck. IV, p. 196, pl. 5, figs. 2-4, 1828.—Von Buch, Archiv. Min., 15, p. 26, pl. 1, figs. 15, 16, 1841.—Haeckel, Amphor. Cyst., pp. 97, 98, fig. 7, 1896.—Jaekel, Stammes. Pelmat., 1, p. 398, pl. 4, fig. 9, 1899.
Sphaeronis pomum Angelin, Icon. Crin. Suec., p. 30, pl. 11, figs. 11, 12, pl. 27, figs. 14-16, pl. 28, figs. 10a, b, 1878.—Bather, Treatise Zool. (Lankester), pt. 3, p. 72, fig. 39, 1900.
 Ord.: Kinnekule, Vestrogothia, Sweden (*Asaphus* ls.); St. Petersburg area, Russia; Estonia; Near Oslo, Norway.
- Sphaeronites? punctatus* Forbes.**
 Forbes, Mem. Geol. Surv. Gt. Britain and Mus. Pract. Geol. London, 2, pt. 2, p. 518, pl. 22, figs. 2a, b, 1848.

- Sphaeronites (Caryocystites) punctatus* Salter, Mem. Geol. Surv. Gt. Britain, p. 286, pl. 20, 1866.
Ord (Rhiwlas ls.): Rhiwlas, Bala, Wales.
- Sphaeronites pyriformis** (Forbes).
Caryocystites pyriformis Forbes, Mem. Geol. Surv. Gt. Britain and Mus. Pract. Geol. London, 2, pt. 2, p. 515, pl. 21, figs. 1 a-e, 1848.
Sphaeronites pyriformis Forbes, in Murchison, Siluria, ed. 3, App., p. 536, 1859.
Sphaeronites (Caryocystites) pyriformis Salter, Geol. Surv. Gt. Britain, Mem. 3, p. 285, pl. 20, 1866.
Ord (Rhiwlas ls.): Rhiwlas, Bala, Wales.
- Sphaeronites shihtienensis** (Reed).
Sphaeronis shihtienensis Reed in Brown, Rec. Geol. Surv. India, 43, pt. 4, p. 332, 1913.—Gortani, Spedizione Italiana Filippi, etc., (2) 5, p. 26, pl. 1, figs. 11a, b, 1934.
Ord.: Shih-tien, West Yunnan, China; Karakorum Region, Central Asia; Presso il Passo Chisil, Italy.
- Sphaeronites stelluliferus** Salter.
Salter, Mem. Geol. Surv. Gt. Britain, 3, p. 287, pl. 20, fig. 6, 1866.
Ord. (Caradocian-Mid. Bala): Sholeshook, South Wales.
- Sphaeronites sulciferus** (Angelin).
Sphaeronis sulcifera Angelin, Icon. Crin. Suec., p. 31, pl. 11, figs. 19, 20, 1878.
Pomocystis sulcifera Haeckel, Amphor. Cyst., p. 99, 1896.
Ord.: Arfvat, Boda, Dalecarlia, Sweden.
- Sphaeronites tessellatus** Phillips.
Phillips, Pal. Foss. Cornwall, Sup., p. 135, pl. 59, fig. 49, 1841.
Echinospaerites tessellatus Murchison, Verneuil, and Keyserling, Geol. Russia and Ural Mts., p. 381, pl. 27, 1845.
Dev.?: Plymouth, South Devon, England.
- Sphaeronites testudinarius* Hisinger = *Heliocrinites granatum*.
- Sphaeronites uva** (Angelin).
Sphaeronis uva Angelin, Icon. Crin. Suec., p. 31, pl. 11, figs. 23, 24, 1878.
Pomocystis uva Haeckel, Amphor. Cyst., pp. 97, 99, fig. 8, 1896.
Ord.: Dalecarlia, Sweden.
- Sphaeronites wahlenbergii** Esmark.
Esmark, Agassiz Prodrôme, Mem. Soc. Sci. Nat. Neuchatel, 1, p. 198, 1836 (listed only).
- Staurocystis** Haeckel. Genotype: *Pseudocrinites quadrifasciatus* Pearce.
Callocystitidae (Rhombifera). Sil.
Haeckel, Amphor. Cyst., p. 134, 1896.—Jaekel, Stammes. Pelmat., 1, pp. 272, 285, 1899.—Schuchert, Smiths. Misc. Coll., 47, p. 240, 1904.
- Staurocystis cruciata* Haeckel.
Haeckel, Amphor. Cyst., p. 166, 1896 (nom. nud.).
- Staurocystis oblonga* Haeckel = *Lepocrinites oblongus*.
- Staurocystis quadrifasciata** (Pearce).
Pseudocrinites quadrifasciatus Pearce, Proc. Geol. Soc. London, 4, p. 160, 1843.
—Forbes, Mem. Geol. Surv. Gt. Britain, 2, pt. 2, p. 498, pl. 13, figs. 1, 5, 6, 1848.—Baily, Figs. Char. Brit. Foss., p. 42, pl. 18, figs. 6 a-c, 1875.
Pseudocrinus quadrifasciatus Quenstedt, Petref. Deutsch., p. 680, pl. 113, figs. 77, 78, 1876.
Staurocystis quadrifasciatus Haeckel, Amphor. Cyst., p. 134, pl. 3, figs. 1-3, 1896.
—Jaekel, Stammes. Pelmat., 1, p. 286, fig. 61, pl. 14, fig. 1, 1899.

- Lepadocrinus quadrifasciatus* Bather, Guide to Foss. Invert. Brit. Mus., pt. 2, p. 101, fig. 156, 1897; Treatise Zool. (Lankester), pt. 3, p. 62, fig. III, 1900.
- Pseudocrinites quadricopuladigiti* Garner, Nat. Hist. Stafford, p. 160, 1844. Sil. (Wenlock ls.): Dudley, England.
- Stephanamphora* Haeckel.
Haeckel, Zeits. Naturwiss., Jena, 30, p. 397, 1896. (Hypothetical form.)
- Stichocystis** Jaekel. Genotype: *Caryocystites geometrica* Angelin.
Echinospaeritidae (Rhombifera). Ord.
Jaekel, Stammes. Pelmat., 1, p. 325, 1899.—Bather, Treatise Zool. (Lankester), pt. 3, p. 55, 1900.
- Stichocystis geometrica** (Angelin).
Caryocystites geometrica Angelin, Icon. Crin. Suec., pl. 12, figs. 22-24, 1878.
Stichocystis geometrica Jaekel, Stammes. Pelmat., 1, p. 327, pl. 9, fig. 6, 1899.
Ord.: Drift Island Rügen and Erdelsdorf on Oder, Germany; Scandinavia.
- Stribalocystis Bather = Caryocrinites.
- Stribalocystites S. A. Miller = Caryocrinites.
- Strobilocystites** White. Genotype: *S. calvini* White.
Callocystitidae (Rhombifera). Dev.
White, Proc. Acad. Nat. Sci. Phila., 28, p. 28, 1877 (adv. pub. 1876).—Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 414, 1924.—Stainbrook, Pan Amer. Geol., 76, no. 2, p. 83, 1941.
Strobilocystis Carpenter, Jour. Linn. Soc. Zool., 24, p. 5, 1891.—Bather, Treatise Zool. (Lankester), pt. 3, p. 63, 1900.
- Strobilocystites calvini** White.
White, Proc. Acad. Nat. Sci. Phila., 28, p. 28, 1877 (adv. pub. 1876).—Thomas, Ann. Rep. Geol. Surv. Iowa, 29, p. 35, figs. 1-11, 13, 18, 1924.—Stainbrook, Pan Amer. Geol., 76, no. 2, p. 84, pls. 4-7, 1941.
Dev. (Cedar Valley fm.): Iowa City, Brandon and Vinton, Iowa.
- Strobilocystites** (??) *kearsargensis* Stauffer.
Stauffer, Univ. Calif. Pubs. in Geol. Sci., 19, p. 108, pl. 14, figs. 1, 2, 1930.
Dev. (Kennett fm.): Kearsarge, Calif.
- Strobilocystites polleyi** Calvin.
Calvin, History of Calvin Co., Iowa, Notes on the Fossils, pp. 558, 560, 1883.—Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 417, text fig. 63, pl. 35, figs. 14-17, 1924.—Stainbrook, Pan Amer. Geol., 76, no. 2, p. 85, pls. 5-7, 1941.
Dev. (Cedar Valley ls.-?Wapsipincon beds): Just north of Atalissa, Cedar Co., Iowa.
- Strobilocystites schucherti** Thomas.
Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 418, text fig. 64, pl. 35, figs. 12, 19-21, 1924.
Dev.: 1½ miles west of Solon (Cedar Valley ls.), and Nora Springs (Shell Rock ls.), Iowa.
- Strybalocystis elongatus Rowley = Caryocrinites elongatus.
- Strybalocystis missouriensis Rowley = Caryocrinites missouriensis.
- Sycocystis Haeckel = Echinoencrinites.
- Sycocystites von Buch = Echinoencrinites.
- Syringocrinus Billings = Dendrocystites.
- Tetracystis** Schuchert. Genotype: *T. fenestratus* Schuchert.
Callocystitidae (Rhombifera). Sil.
Schuchert, Smiths. Misc. Coll., 47, pt. 2, p. 217, 1904.

Tetracystis chrysalis Schuchert.

Schuchert, Smiths. Misc. Coll., 47, pt. 2, p. 218, pl. 34, figs. 9, 10, pl. 40, figs. 1-3, 1904; Md. Geol. Surv., Low. Dev., p. 232, pl. 32, figs. 10, 11, 1913.

Dev. (Helderbergian-Keyser fm.): Keyser, W. Va.

Tetracystis fenestrata (Troost).

Echinoencrinites fenestratus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849 (nom. nud.).

Tetracystis fenestratus Schuchert, Smiths. Misc. Coll., 47, p. 219, pl. 34, figs. 6-8, 1904.—Wood, U. S. Nat. Mus., Bull. 64, p. 8, 1909.—Springer, Amer. Sil. Crin., p. 141, pl. 33, figs. 10-14, 1926.

Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.

Thuriocystis Haeckel. Type species: *T. pentadecalis* Haeckel.

Haeckel, Zeits. Naturwiss. Jena, 30, pp. 23, 402, 1896; Amphor. Cyst., p. 124, 1896. (Hypothetical genus and species).

Trematocystis Jaekel = *Holocystites*.**Trachelocrinus** Ulrich. Genotype: *T. resseri* Ulrich.

?Eocystitidae (Amphoridae). Up. Cambrian.

Ulrich, Jour. Washington Acad. Sci., 19, p. 63, 1929.

Trachelocrinus resseri Ulrich.

Ulrich, Jour. Washington Acad. Sci., 19, p. 63, figs. 1, 2, 1929.

Up. Cambrian (Snowy Range ls.): Above Hayden Falls, Republic Creek, one mile south Cooke City, Montana.

Tricosmites Jaekel. Genotype: *Hemicosmites tricornis* Jaekel.

Caryocrinitidae (Rhombifera). Early Sil.

Jaekel, Pal. Zeits., 3, p. 97, 1918.

Tricosmites tricornis (Jaekel).

Hemicosmites tricornis Jaekel, Stammes. Pelmat., 1, p. 311, pl. 18, fig. 6, 1899.

Tricosmites tricornis Jaekel, Pal. Zeits., 3, p. 97, 1918.

Early Sil. (Borkholm ls., F2): Nömmküll, Estonia.

Trigonocystis Haeckel = *Trochocystites*.**Trimerocystis** Schuchert. Genotype: *T. peculiaris* Schuchert.

Callocystitidae (Rhombifera). Dev.

Schuchert, Smiths. Misc. Coll., 47, pt. 2, p. 237, 1904.

Trimerocystis peculiaris Schuchert.

Schuchert, Smiths. Misc. Coll., 47, pt. 2, p. 239, pl. 35, figs. 1-3, 1904; Md. Geol. Surv., Low. Dev., p. 244, pl. 34, figs. 8-10, 1913.

Dev. (Helderbergian-Keyser fm.): Keyser, W. Va.

Trinemacystis Haeckel = *Echinosphaerites*.**Trochocystis** Haeckel and authors = *Trochocystites*.**Trochocystites** Barrande. Genotype: *T. bohemicus* Barrande.

Anomalocystitidae (Amphoridae). Mid. Cambrian.

Barrande, Bull. Soc. Geol. France, (2) 16, p. 516, 1859; Syst. Sil. Centre Bohême, 7, pt. 1, p. 185, 1887.—Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 669, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 150, 1913.—Jaekel, Pal. Zeits., 3, p. 120, 1918.

Trigonocystis Haeckel, Amphor. Cyst., p. 38, 1896. (Genotype: *T. trigona* Haeckel.)

Trochocystis Haeckel, Amphor. Cyst., p. 38, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 50, 1900; Trans. Roy. Soc. Edinburgh, 49, pt. 2, p. 419, 1913.

Trochocystites barrandei (Munier-Chalmas and Bergeron).

Trochocystis barrandei Munier-Chalmas and Bergeron, in Bergeron, Ann. Sci. Géol., 22, p. 338, pl. 3, fig. 6, 1889.—Bather, Trans. Roy. Soc. Edinburgh, 49, pt. 2, p. 421, text figs. 31, 32, 1913.

- Trochocystites barrandei* Thoral, Cont. Étude Pal. Ord. Inférieur Montagne Noire, p. 32, 1935.
Mid. Cambrian: Coulouma, (Herauld) and Montagne Noire (Brittany), France.
- Trochocystites bohemicus** Barrande.
Barrande, Bull. Soc. Géol. France, (2) 16, p. 516, 1859; Syst. Sil. Centre Bohême, 7, pt. 1, p. 188, pl. 3, figs. 1-23, 38-43 (not figs. 29-37 = *T. trigona* Haeckel, not figs. 23-28 = *T. ovalis* Haeckel), pl. 4, case 2, figs. 1-7, 1887.—Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 670, text figs. 6a, b, 1900; Pal. Zeits., 3, p. 119, fig. 108, 1918.
Trochocystis bohemicus Kirk, U. S. Nat. Mus., Proc., 41, p. 26, pl. 3, figs. 4, 5, 1911.—Bather, Pal. Zeits., 7, pt. 1, p. 11, fig. 11, 1925.—Gislén, Zool. Bidrag. Uppsala, 12, pp. 203, 204, fig. 2, 1930.—Wanner, Handwort. Naturwiss., p. 486, figs. 3a, b, 1933.
Mid. Cambrian: Skrej and Ginetz, Bohemia (Cb₃); Coulouma (Herauld), France; Spain.
- Trochocystites longifossatus** Jaekel.
Jaekel, Pal. Zeits., 3, p. 114, fig. 105-D, 1918.—Gislén, Zool. Bidrag Uppsala, 12, pp. 203, 204, text fig. 1, 1930.
Mid. Cambrian (Cb₃): Ginetz, Bohemia.
- Trochocystites occidentalis** Jaekel.
Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 670, 1900.
Mid. Cambrian: Coulouma (Herauld), France, and Spain.
- Trochocystites ovalis** (Haeckel).
Trigonocystis ovalis Haeckel, Amphor. Cyst., p. 39, 1896.
Trochocystites bohemicus Barrande, Syst. Sil. Centre Bohême, pl. 3, figs. 23-28, 1887.
Mid. Cambrian (Cb₃): Skrej, Bohemia.
- Trochocystites trigona** (Haeckel).
Trigonocystis trigona Haeckel, Amphor. Cyst., p. 39, pl. 2, figs. 1, 2, 1896.
Trochocystites bohemicus Barrande, Syst. Sil. Centre Bohême, 7, pl. 3, figs. 29-37, 1887.
Mid. Cambrian (Cb₃): Skrej, Bohemia.
- Trochocystoides** Jaekel. Genotype: *T. parvus* Jaekel.
Anomalocystitidae (Amphoridea). Mid. Cambrian.
Jaekel, Pal. Zeits., 3, p. 120, 1918.
- Trochocystoides parvus** Jaekel.
Jaekel, Pal. Zeits., 3, p. 120, fig. 109, 1918.
Mid. Cambrian (Cb₃): Ginetz, Bohemia.
- Wellerocystis** Foerste. Genotype: *W. kimmswickensis* Foerste.
Malocystitidae (Amphoridea). Ord.
Foerste, Ohio Jour. Sci., 21, no. 2, p. 36, 1920.
- Wellerocystis kimmswickensis** Foerste.
Foerste, Ohio Jour. Sci., 21, no. 2, p. 37, text fig. 1, pl. 1, figs. 12 A, B, 1920.
Ord. (Black River-Kimmswick ls.): Glen Park, Jefferson Co., Mo.

Order EDRIOASTEROIDEA

Aesiocystis Bather = *Edrioaster*.

Aesiocystites Miller and Gurley = *Edrioaster*.

Agelacrinites Vanuxem. Genotype: *A. hamiltonensis* Vanuxem.

Agelacrinitidae. Dev.; Miss.

Vanuxem, Geol. Surv. N. Y., 3d Dist., p. 158, 1842.—Jaekel, (part), *Stammes. Pelmat.*, 1, p. 49, 1899.—Bassler, *Smiths. Misc. Coll.*, 95, no. 6, p. 15, 1936.—Hecker, *Acad. Sci. URSS Inst. Pal.*, 9, lv. 4, p. 100, 1940.

Agelacrinus Roemer, in Bronn, *Leth. Geog.*, 1, pt. 2, p. 275, 1854.—Bather, *Treatise Zool. (Lankester)*, pt. 3, p. 207, 1900.—Springer, *Zittel-Eastman Textb. Pal.*, 1, p. 152, 1913.

Agelacystis Haeckel, *Zeits. Naturwiss. Jena*, 30, p. 9, 1896; *Amphor. Cystoid.*, p. 114, 1896.

Haplocystites Roemer, in Bronn, *Leth. Geog.*, 1, pt. 2, p. 277, 1855. (Genotype: *Agelacrinites rhenanus* Roemer.)

Haplocystis Haeckel, *Amphor. Cystoid.*, p. 11, 1896.—Bather, *Treatise Zool. (Lankester)*, pt. 3, p. 208, 1900.

Agelacrinites austini lawshe Williams = *Isorophus austini*.

Agelacrinites beecheri Clarke = *Lepidodiscus beecheri*.

Agelacrinites bellulus Barrande = *Hemicystites bellulus*.

Agelacrinites billingsii Chapman = *Hemicystites billingsii*.

Agelacrinites blairi (S. A. Miller).

Agelacrinus blairi S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 266, pl. 2, fig. 9, 1894 (adv. pub. 1892, p. 12, pl. 2, fig. 9); *N. Amer. Geol. Pal.*, 2d App., p. 733, fig. 1293, 1897.

Agelacrinites blairi Bassler, *Smithsonian Misc. Coll.*, 95, no. 6, p. 16, pl. 7, fig. 9, 1936.

Miss. (Warsaw ls.): Boonville, Mo.

Agelacrinites buchianus Forbes = *Edrioaster buchianus*.

Agelacrinites buttsi Clarke = *Lepidodiscus buttsi*.

Agelacrinites confertus Barrande = *Hemicystites confertus*.

Agelacrinites dicksoni Billings = *Lebetodiscus dicksoni*.

Agelacrinites ephraemovianus (Bogolubov).

Agelacrinus ephraemovianus Bogolubov, *Ann. Soc. Pal. Russie*, 4, p. 33, fig. 1, 1926.—Hecker, *Acad. Sci. URSS Inst. Pal.* 9, lv. 4, pp. 85, 101, figs. 1-3, pls. 1, 2, 1940. Dev.: Toul, Russia.

Agelacrinites fentonae Stainbrook.

Stainbrook, *Amer. Midland Nat.*, 18, no. 5, p. 901, pl. 1, fig. 3, 1937.

Dev. (Cedar Valley ls.): One mile east of Brandon, Iowa.

Agelacrinites hamiltonensis Vanuxem.

Vanuxem, *Geol. Rep. Third Dist. N. Y.*, p. 158, p. 306, woodcut, 1842.—Hall, 24th Rep. N. Y. St. Cab. Nat. Hist., p. 6, figs. 14, 15, 1872.—Foerste, *Bull. Sci. Lab. Denison Univ.*, 17, p. 404, pl. 6, fig. 3, 1914.—Bassler, *Smithsonian Misc. Coll.*, 95, no. 6, p. 16, pl. 1, fig. 18, 1936.

Agelacystis hamiltonensis Haeckel, *Amphor. Cystoid.*, p. 114, pl. 3, fig. 30, 1896.

Agelacrinus hamiltonensis Bather, *Treatise Zool. (Lankester)*, pt. 3, p. 207, fig. 3, 1900.—Clarke, *N. Y. St. Mus.*, *Bull.* 49, p. 184, pl. 10, fig. 6, 1901.

Dev. (*Skaneateles sh.*-Chenango mem.): West Hamilton, N. Y.

Agelacrinites hanoveri Thomas.

Thomas, *Ann. Rep. Iowa Geol. Surv.*, 29, p. 419, pl. 46, figs. 1-5, 1924.—Bassler, *Smiths. Misc. Coll.*, 95, no. 6, p. 16, pl. 7, fig. 10, 1936.

Dev. (Shell Rock ls.): Near Mason City and near Nora Springs, Iowa.

- Agelacrinites latiusculus* Barrande = *Hemicystites latiusculus*.
Agelacrinites lebouri Jaekel = *Lepidodiscus lebouri*.
Agelacrinites legrandensis (Miller and Gurley).
Agelacrinus legrandensis Miller and Gurley, Ill. St. Mus., Bull. 5, p. 15, pl. 3, figs. 13, 14, 1894.
Agelacrinites legrandensis Bassler, Smiths. Misc. Coll., 95, no. 6, p. 16, pl. 4, fig. 13, 1936.
 Miss. (Kinderhook-Hampton fm.): Legrand, Marshall Co., Iowa.
Agelacrinites rectiradiatus Shideler = *Hemicystites rectiradiatus*.
Agelacrinites rhenanus (Roemer).
Agelacrinus rhenanus Roemer, Verhandl. Nat. Hist. Preuss. Rheinland, 8, p. 370, pl. 3, figs. 4a, b, 1851.
Agelacrinites rhenanus Jaekel, Stammes. Pelmat., 1, p. 49, pl. 3, fig. 3, 1899.—
 Bassler, Smithsonian Misc. Coll., 95, no. 6, p. 16, pl. 1, figs. 12, 13, 1936.
Haplocystites rhenanus Roemer, in Bronn, Leth. Geog., 1, pt. 2, p. 277, 1855.—
 Foerste, Bull. Sci. Lab. Denison Univ., 17, p. 416, 1914.
 Dev. (Up. Coblenzian): Near Unkel, Rhine area, Germany.
Agelacrinites simplex Barrande = *Hemicystites simplex*.
Agelacrinites southworthi Bassler.
 Bassler, Smithsonian Misc. Coll., 95, no. 6, p. 16, pl. 4, fig. 12, 1936.
 Dev. (Hamilton-Arkona beds): Marsh's Mill, Arkona, Ontario, Canada.
Agelacrinites (*Lepidodiscus*) *squamosus* Meek and Worthen = *Lepidodiscus squamosus*.
Agelacrinites (*Lepidodiscus*) *squamosus* Lebour = *Lepidodiscus lebouri*.
Agelacrinites tener Barrande = *Hemicystites bohemicus*.
Agelacrinites velatus Barrande = *Hemicystites confertus*.
Agelacrinus of authors = *Agelacrinites*.
Agelacrinus austini Foerste = *Isorophus austini*.
Agelacrinus bohemicus Roemer = *Hemicystites bohemicus*.
Agelacrinus cincinnatiensis Roemer = *Isorophus cincinnatiensis*.
Agelacrinus cincinnatiensis Hall = *Carneyella cincinnatiensis*.
Agelacrinus faberi S. A. Miller = *Carneyella faberi*.
Agelacrinus kaskaskiensis Hall = *Discocystis kaskaskiensis*.
Agelacrinus lindströmi Linnarsson.
 Linnarsson, Kgl. Sv. Vet. Akad. Handl., 9, ser. 7, p. 11, pl. 1, figs. 6-9, pl. 2, fig. 10, 1881. (Probably a jelly-fish.)
 Ord. (Eophyton ss.): Vestergotland, Sweden.
Agelacrinus pileus Hall = *Carneyella pileus*.
Agelacrinus pulaskiensis Miller and Gurley = *Ulrichidiscus pulaskiensis*.
Agelacrinus septembrachiatus Miller and Dyer = *Streptaster septembrachiatus*.
Agelacrinus (*Hemicystites*) *stellatus* Hall = *Cincinnati-discus stellatus*.
Agelacrinus vetustus Foerste = *Carneyella vetusta*.
Agelacrinus vorticellatus Hall = *Streptaster vorticellatus*.
Agelacystis Haeckel = *Agelacrinites*.
Ageladiscus S. A. Miller = *Discocystis*.
Ageladiscus optatus S. A. Miller = *Discocystis kaskaskiensis*.

- Aporocrinites* Austin and Austin. Genotype: *A. gyratus* Austin and Austin.
Austin and Austin, Ann. Mag. Nat. Hist., 10, p. 110, 1842. ("An agelacrinid according to label in Bristol Museum." Bather, 1900).
Aporocrinus Bather, Treatise Zool., (Lankester), pt. 3, p. 201, 1900.
- Aporocrinus* Bather = *Aporocrinites*.
- Astrocystites** Whiteaves. Genotype: *A. ottawaensis* Whiteaves.
Astrocystitidae. Ord.
Whiteaves, Can. Rec. Sci., 7, p. 287, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 209, 1900.—Bassler, Smiths. Misc. Coll., 93, no. 8, p. 10, 1935; 95, no. 6, p. 23, 1936.
Steganoblastus Whiteaves, Can. Rec. Sci., 7, p. 395, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 209, 1900; Geol. Mag., 1, pp. 193-203, 1914. (Substituted for *Astrocystites*.)
- Astrocystites ottawaensis** Whiteaves.
Whiteaves, Can. Rec. Sci., 7, p. 287, figs. 1-3, 1897.—Hudson, 15th Biennial Rep. Vermont St. Geol., pp. 97-110, pls. 6-10, 1926.—Bassler, Smiths. Misc. Coll., 95, no. 6, p. 23, pl. 1, figs. 15, 16, 1936.
Steganoblastus ottawaensis Bather, Geol. Mag., n.s., (1) 1, p. 195, text figs. 1-6, pl. 15, figs. 1-7, 1914.
Ord.: Ottawa, Ontario (Up. Trenton-*Hormotoma trentonensis* beds); Kirkfield, Ont. (Hull ls.); Mercer Co., Ky. (Curdsville ls.).
- Carneyella** Foerste. Genotype: *Agelacrinus pileus* Hall.
Hemicystitidae. Ord.; Early Sil.
Foerste, Bull. Sci. Lab. Denison Univ., 18, p. 340, 1916.—Bassler, Smiths. Misc. Coll., 93, no. 8, p. 4, 1935; 95, no. 6, p. 6, 1936.
- Carneyella billingsi* Raymond = *Hemicystites billingsi*.
Carneyella chapmani Foerste = *Hemicystites chapmani*.
- Carneyella cincinnatiensis** Bassler.
Bassler, Smiths. Misc. Coll., 93, no. 8, p. 4, pl. 1, fig. 10, 1935; 95, no. 6, p. 7, pl. 2, fig. 15, 1936.
Agelacrinus cincinnatiensis Hall (not Roemer), Descr. N. Sp. Crin., p. 6, 1866.
Agelacrinus (Lepidodiscus) cincinnatiensis Hall, 24th Rep. N. Y. St. Cab. Nat. Hist., p. 214, pl. 6, fig. 7, 1872 (adv. pub. 1871, photo pl. 2, fig. 7).
Lepidodiscus cincinnatiensis Bather, Treatise Zool. (Lankester), pt. 3, p. 207, fig. 4, 1900.
Ord. (Maysville, Fairmount-Corryville sh.): Warren Co., Cincinnati, etc., Ohio.
- Carneyella faberi** (S. A. Miller).
Agelacrinus faberi S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 17, p. 156, 1894.—Foerste, Bull. Sci. Lab. Denison Univ., 17, p. 441, pl. 1, fig. 3, pl. 3, fig. 4, 1914.
Lepidodiscus faberi Cumings, 32d Ann. Rep. Geol. Nat. Res. Ind., p. 728, pl. 4, fig. 11, 1908.
Isorophus faberi Bassler, Smiths. Misc. Coll., 93, no. 8, p. 5, 1935.
Carneyella faberi Bassler, Smiths. Misc. Coll., 95, no. 6, p. 9, 1936.
Early Sil. (Richmond-Whitewater fm.): Near Versailles, Ind.
- Carneyella foerstei** Bassler and Shideler.
Bassler and Shideler, in Bassler, Smiths. Misc. Coll., 95, no. 6, p. 8, pl. 6, figs. 7, 8, 1936.
Early Sil. (Richmond-Arnheim sh.): Russellville, Ohio.
- Carneyella multibrachiatus* Foerste = *Hemicystites multibrachiatus*.
- Carneyella nicklesi** Bassler.
Bassler, Smiths. Misc. Coll., 95, no. 6, p. 7, pl. 2, fig. 13, 1936.
Ord. (Trenton-Curdsville ls.): Near Troy, Ky.

Carneyella pileus (Hall).

Agelacrinus pileus Hall, 20th Rep. N. Y. St. Cab. Nat. Hist., Adv. Pub., p. 7, 1866.
—Miller and Faber, Jour. Cincinnati Soc. Nat. Hist., 15, p. 85, pl. 1, fig. 10, 1892.—Rowley in Greene, Cont. Ind. Pal., 2, pt. 2, p. 27, pl. 6, figs. 1, 2, 1906.—Foerste, Bull. Sci. Lab. Denison Univ., 17, p. 401, pl. 1, fig. 5, pl. 2, figs. 1-4, 1915.—Bather, Geol. Mag., n.s., 2, p. 56, p. 260, text figs. 1a, b, 1915.—Williams, Ohio Jour. Sci., 19, no. 1, p. 62, pl. 1, figs. 3, 4, 6, 7, pl. 2, fig. 10, pl. 3, fig. 13, pl. 7, fig. 45, pl. 9, fig. 53, 1918.

Agelacrinus (Lepidodiscus) pileus Hall, 24th Rep. N. Y. St. Cab. Nat. Hist., p. 214, pl. 6, figs. 8-10, 1872.—Spencer, Proc. Roy. Soc. London, 74, p. 39, text figs. 9-12, 1904.

Agelacrinites pileus Meek, Geol. Surv. Ohio, 1, p. 56, pl. 3, fig. 5, 1873.—Jaekel, Stammes. Pelmat., p. 50, pl. 1, fig. 6, text fig. 10, 1899.

Carneyella pileus Foerste, Bull. Sci. Lab. Denison Univ., 18, p. 340, 1916.—Bassler, Smiths. Misc. Coll., 93, no. 8, p. 4, pl. 1, figs. 2, 3, 1935.

Ord. (Maysville-Fairmount and Bellevue ls.): Cincinnati, Ohio, and vicinity.

Carneyella? platys (Raymond).

Lebetodiscus platys Raymond, Ottawa Nat., 29, p. 59, pl. 1, fig. 5, 1915.

Carneyella platys Foerste, Bull. Sci. Lab. Denison Univ., 18, p. 341, 1916.—Raymond, Canada Dep. Mines, Bull. 31, Geol. Ser., 33, p. 10, pl. 3, fig. 7, 1921.

Carneyella? platys Bassler, Smiths. Misc. Coll., 95, no. 6, p. 7, pl. 7, fig. 15, 1936. Ord. (Trenton-Hull ls.): Ottawa, Ontario.

Carneyella raymondi T. H. Clark.

T. H. Clark, Bull. Mus. Comp. Zool., 63, no. 1, p. 11, pl. 1, figs. 18, 19, 1919.—Raymond, Canada Dep. Mines, Bull. 31, Geol. Ser. 38, p. 12, 1920.

Ord. (Middle Trenton ls.): Near Martinsburg, N. Y.

Carneyella ulrichi Bassler and Shideler.

Bassler and Shideler, in Bassler, Smiths. Misc. Coll., 95, no. 6, p. 8, pl. 6, figs. 5, 6, 1936.

Ord. (Maysville-Bellevue ls.): Railroad cut south of Maysville, Ky.

Carneyella valcourensis T. H. Clark.

T. H. Clark, Amer. Jour. Sci., 50, p. 70, text fig. 1, 1920.

Ord. (Chazyan-Valcour ls.): Valcour Island, N. Y.

Carneyella vetusta (Foerste).

Agelacrinus vetustus Foerste, Bull. Sci. Lab. Denison Univ., 17, p. 439, pl. 3, fig. 1, 1914.

Carneyella vetustus Foerste, Bull. Sci. Lab. Denison Univ., 18, p. 341, 1916.

Carneyella vetusta Bassler, Smiths. Misc. Coll., 95, no. 6, p. 7, pl. 2, fig. 14, 1936.

Ord. (Trenton-Cynthiana, Greendale ls.): Clays Ferry, Kentucky River, 14 miles south of Lexington, Ky.

Carneyella youngi Foerste = *Hemicystites youngi*.**Cincinnatiidiscus** Bassler. Genotype: *Agelacrinus (Hemicystites) stellatus* Hall. Hemicystitidae. Ord.; Early Sil.

Bassler, Smiths. Misc. Coll., 93, no. 8, p. 3, 1935; 95, no. 6, p. 5, 1936.

Cincinnatiidiscus carnensis (Foerste).

Hemicystites carnensis Foerste, Bull. Sci. Lab. Denison Univ., 17, p. 455, pl. 3, fig. 2, 1914.

Cincinnatiidiscus carnensis Bassler, Smiths. Misc. Coll., 93, no. 8, p. 4, 1935; 95, no. 6, p. 5, pl. 5, fig. 4, 1936.

Ord. (Trenton-Up. Benson ls.): Carntown, Pendleton Co., Ky.

Cincinnatiidiscus edenensis Bassler.

Bassler, Smiths. Misc. Coll., 95, no. 6, p. 6, pl. 2, fig. 10, pl. 3, fig. 11, 1936.

Ord. (Eden-McMicken fm.): Cincinnati, Ohio.

Cincinnatiidiscus stellatus (Hall).

Agelacrinus (*Hemicystites*) *stellatus* Hall, 20th Rep. N. Y. St. Cab. Nat. Hist., Adv. Pub., p. 8, 1866; 24th Rep. N. Y. St. Cab. Nat. Hist., p. 215, pl. 6, figs. 5, 6, 1872 (adv. pub., 1871, pl. 2, figs. 5, 6-A, as *Hemicystites stellatus*).

Hemicystites stellatus Meek, Geol. Surv. Ohio, Pal., 1, p. 52, pl. 3, figs. 8a, b, 1873.—S. A. Miller, N. Amer. Geol. Pal., p. 252, fig. 328, 1889.—Rowley in Greene, Cont. Ind. Pal., pt. 2, p. 28, pl. 6, figs. 3, 4, 1906.—Foerste, Bull. Sci. Lab. Denison Univ., 17, p. 454, pl. 6, fig. 6, 1914.

Cincinnatiidiscus stellatus Bassler, Smiths. Misc. Coll., 93, no. 8, p. 4, fig. 6, 1935; 95, no. 6, p. 5, pl. 2, figs. 11, 12, 1936.

Ord. (Maysville-Fairmount, Bellevue fm.): Cincinnati, Ohio and vicinity.

Cincinnatiidiscus turgidus Bassler.

Bassler, Smiths. Misc. Coll., 95, no. 6, p. 6, pl. 5, fig. 12, 1936.

Early Sil. (Richmond-Whitewater fm.): Oxford, Ohio.

Cooperidiscus Bassler. Genotype: *Lepidodiscus alleganius* Clarke.

Agelacrinitidae. Dev.

Bassler, Smiths. Misc. Coll., 93, no. 8, p. 8, 1935; 95, no. 6, p. 22, 1936.

Cooperidiscus alleganius (Clarke).

Lepidodiscus alleganius Clarke, N. Y. St. Mus., Bull. 49, p. 194, pl. 10, figs. 1-5, 1901.—Foerste, Bull. Sci. Lab. Denison Univ., 17, p. 406, pl. 6, fig. 2, 1914.

Cooperidiscus alleganius Bassler, Smiths. Misc. Coll., 93, no. 8, p. 8, pl. 1, fig. 9, 1935.

Dev. (Chemung fm.): 2 miles south of Sabinsville, Tioga Co., Pa.; Alfred, Belvidere, and Wellsville, N. Y.

Cyathocystes Zittel. See *Cyathocystis*.**Cyathocystis** Schmidt. Genotype: *C. plautinae* Schmidt.

Cyathocystidae. Ord.

Schmidt, in Zittel, Handb. Pal., 1, p. 414, 1879 (p. 742, *Cyathocystes* by error); Verhandl. Min. Gesell. St. Petersburg for 1879, p. 2, 1880.—Haeckel, Amphor. Cystoid., p. 114, 1896.—Jaekel, Stammes. Pelmat., 1, p. 42, 1899.—Bather, Treatise Zool. (Lankester), pt. 3, p. 208, 1900.—Jaekel, Arkiv. Zool., 19-A, no. 5, p. 1, 1927 (as *Cyathocystis*).—Bassler, Smiths. Misc. Coll., 93, no. 8, p. 9, 1935.

Cyathocystis americana Bassler.

Bassler, Smithsonian Misc. Coll., 95, no. 8, p. 23, pl. 4, figs. 1, 2, 1936.

Ord. (Chazy-Heiskell fm.): Knoxville, Tenn.

Cyathocystis corallum Jaekel = *Cyathotheca corallum*.**Cyathocystis plautinae** Schmidt.

Schmidt, Verhandl. Min. Gesell. St. Petersburg for 1879, p. 2, 1880.—Bather, Treatise Zool. (Lankester), pt. 3, p. 208, text fig. 5, 1900.—Jaekel, Pal. Zeits., 3, p. 112, fig. 104-B, 1918.—Hecker, Ann. Soc. Pal. Russie, 7, pp. 55, 58, text figs. 2, 3, pp. 59, 74, pl. 3, figs. 1-5, pl. 4, fig. 1, 1928.—Bassler, Smiths. Misc. Coll., 95, no. 6, p. 23, pl. 1, figs. 8, 9, 1936.

Ord. (*Echinosphaerites* ls.): Reval, Estonia.

Cyathocystis rhizophora Schmidt.

Schmidt, Verhandl. Min. Gesell. St. Petersburg for 1879, p. 2, 1880.—Hecker, Ann. Soc. Pal. Russie, 7, pp. 60, 75, pl. 4, fig. 3, 1928.

Ord. (Wassalem bed, D3): Wassalem, Estonia.

Cyathotheca Jaekel. Genotype: *C. suecica* Jaekel.

Cyathocystidae. Ord.

Jaekel, Archiv. Zool., Sven. Vet. Akad., 10-A, no. 5, p. 1, 1927.—Bassler, Smiths. Misc. Coll., 93, no. 8, p. 9, 1935.

Cyathotheca corallum (Jaekel).

Cyathocystis corallum Jaekel, Pal. Zeits., 3, p. 112, fig. 104-C, 1918.

Cyathotheca corallum Jaekel, Arkiv. Zool., Sven. Vet. Akad., 19-A, no. 5, p. 2, pl. 1, figs. 4-6, 1927.

Ord. (Kunda fm.): Near St. Petersburg, Russia.

Cyathotheca suecica Jaekel.

Jaekel, Arkiv. Zool., Sven. Vet. Akad., 19-A, no. 5, p. 1, pl. 1, figs. 1-3, 1927.—Bassler, Smiths. Misc. Coll., 95, no. 6, p. 23, pl. 1, fig. 10, 1936.

Ord. (Leptaena ls.): Boda, Delarne, Sweden.

Cyatocystis Jaekel. See *Cyathocystis*.

Cyclaster Billings (not Cotteau) = *Edrioaster*.

Cystaster Hall. Genotype: *Hemicystites* (*Cystaster*) *granulosus* Hall.

Hemicystitidae. Ord.

Hall, 24th Rep. N. Y. St. Cab. Nat. Hist., pl. 6, 1872 (adv. pub. 1871).—Bather, Treatise Zool. (Lankester), pt. 3, p. 207, 1900.—Bassler, Smiths. Misc. Coll., 95, no. 6, p. 4, 1936.

Theocystis Jaekel, Stammes. Pelmat., 1, p. 43, 1899. (Genotype: *T. sacculus* Jaekel = *Cystaster granulatus* Hall.)

Cystaster granulatus (Hall).

Hemicystites (*Cystaster*) *granulatus* Hall, 24th Rep. N. Y. St. Cab. Nat. Hist., pl. 6, figs. 1-4, 1872 (adv. pub. 1871).

Cystaster granulatus Foerste, Bull. Sci. Lab. Denison Univ., 17, pl. 6, fig. 5, 1914.—Bassler, Smiths. Misc. Coll., 93, no. 8, pl. 1, fig. 4, 1935; 95, no. 6, pl. 1, fig. 14, 1936.

Theocystis sacculus Jaekel, Stammes. Pelmat., 1, p. 43, pl. 1, figs. 1a, b, 1899.

Ord. (Maysville-Fairmount fm.): Cincinnati, Ohio, and vicinity.

Cystaster ulrichi Bassler.

Bassler, Smiths. Misc. Coll., 95, no. 6, p. 4, pl. 2, figs. 3-5, 1936.

Ord. (Eden-Economy fm.): West Covington, Ky.

Dinocystis Bather. Genotype: *D. barroisi* Bather.

Edrioasteridae. Dev.

Bather, Geol. Mag., (4) 5, pp. 543-547, 1898.—Jaekel, Stammes. Pelmat., 1, p. 46, 1899.—Bather, Treatise Zool. (Lankester), pt. 3, p. 209, 1900.—Bassler, Smiths. Misc. Coll., 93, no. 8, p. 9, 1935.

Dinocystis barroisi Bather.

Bather, Geol. Mag., (4) 5, p. 547, pl. 21, 1898; 6, pp. 134-136, text fig., 1899.—Jaekel, Stammes. Pelmat., 1, p. 47, pl. 2, figs. 3a, b, 1899.—Bassler, Smiths. Misc. Coll., 95, no. 6, p. 22, pl. 1, figs. 2, 3, 1936.

Up. Dev. (Famennian-Condruz ss.): Condruz, Belgium.

Discocystis Gregory. Genotype: *Echinodiscus optatus* Worthen and Miller. = *D. (Agelacrinus) kaskaskiensis* (Hall).

Agelacrinitidae. Miss.

Gregory, Quart. Jour. Geol. Soc. London, 53, pp. 131, 133, 1897 (to replace *Echinodiscus* Worthen and Miller, preoccupied).—Bather, Treatise Zool. (Lankester), pt. 3, p. 208, 1900.—Bassler, Smiths. Misc. Coll., 93, no. 8, p. 8, 1935; 95, no. 6, p. 21, 1936.

Ageladiscus S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 734, 1897. (To replace *Echinodiscus*, preoccupied.)

Echinodiscus Worthen and Miller, Geol. Surv. Ill., 7, p. 335, 1883. (Genotype: *E. optatus* Worthen and Miller.)

Discocystis kaskaskiensis (Hall).

Agelacrinus kaskaskiensis Hall, Geol. Rep. Iowa, 1, pt. 2, p. 696, pl. 25, fig. 18, 1858.

Echinodiscus kaskaskiensis S. A. Miller, N. Amer. Geol. Pal., p. 241, 1889.—Keyes, Geol. Surv. Mo., 4, p. 133, pl. 18, fig. 3, 1894.

- Ageladiscus kaskaskiensis* S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 734, 1897.
Discocystis kaskaskiensis Jackson, Phylogeny Echini, p. 458, 1912.—Bassler, Smiths. Misc. Coll., 95, no. 6, p. 21, pl. 1, figs. 4, 5, pl. 3, figs. 4-6, pl. 7, fig. 11, 1936.
Echinodiscus optatus Worthen and Miller, Geol. Surv. Ill., 7, p. 336, pl. 18, fig. 3, 1883.
 Miss. (Chester): Kaskaskia, etc., Ill.; Sloans Valley and Grayson Co., Ky. (Glen Dean ls.); Huntsville, Ala. (Ste. Genevieve ls.).

Discocystis laudoni Bassler.

- Bassler, Smiths. Misc. Coll., 95, no. 6, p. 21, pl. 3, figs. 7, 8, 1936.
 Miss. (Kinderhook-Gilmore City fm.): Gilmore City, Iowa.

Discocystis optatus Worthen and Miller = *D. kaskaskiensis*.

Discocystis sampsoni (S. A. Miller).

- Echinodiscus sampsoni* S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 686, pl. 12, fig. 16, 1892 (adv. pub. 1891, p. 76); N. Amer. Geol. Pal., App. 1, p. 678, fig. 1225, 1892.
Ageladiscus sampsoni S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 734, 1897.
Discocystis sampsoni Bassler, Smiths. Misc. Coll., 95, no. 6, p. 21, 1936.
 Miss. (Warsaw ls.): Boone Co. and Boonville, Mo.

Echinodiscus Worthen and Miller = *Discocystis*.

Edriaster Billings. See *Edriaster*.

Edriaster Billings. Genotype: *Cyclaster bigsbyi* Billings.

Edriasteridae. Ord.

- Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 3, pp. 82, 85, 1858.—Marschall, Nomen. Zool., p. 449, 1878 (as *Edriaster*).—Zittel, Handb. Pal., 1, p. 414, 1879.
 —Jaekel, Stammes. Pemat., 1, p. 44, 1899.—Bather, Treatise Zool. (Lankester), pt. 3, p. 209, 1900; Geol. Mag., n.s., 1, pp. 115, 162, 1914; 2, pp. 55, 213, 263, 317, 393, 1915.—Bassler, Smiths. Misc. Coll., 93, no. 8, p. 9, 1935.
Aesiocystites Miller and Gurley, Ill. St. Mus., Bull. 5, p. 13, 1894. (Genotype: *A. priscus* Miller and Gurley.)
Aesiocystis Bather, Treatise Zool. (Lankester), pt. 3, p. 208, 1900. (Substituted for *Aesiocystites* Miller and Gurley.)
Cyclaster Billings, Geol. Surv. Canada, Rep. Prog. for 1853-1856, p. 292, 1857. (Genotype: *C. bigsbyi* Billings.)
Edriocystis Haeckel, Amphor. Cystoid., p. 117, 1896. (Substituted for *Edriaster* Billings.)

Edriaster bigsbyi (Billings).

- Cyclaster bigsbyi* Billings, Geol. Surv. Canada, Rep. Prog. for 1853-56, p. 293, 1857.
Edriaster bigsbyi Billings, Geol. Surv. Canada, Can. Org. Rem., 3, p. 82, pl. 8, figs. 1, 1a, 2, 2a, 1858.—Bather, Treatise Zool. (Lankester), pt. 3, p. 209, text fig. 6, 1900; Geol. Mag., (6) 1, p. 115, pl. 10, figs. 1-11, pl. 11, figs. 1, 2, text fig. 1; p. 162, pls. 13, 14, 1914; 2, p. 259, text fig. 1, p. 398, text fig. 3, 1915.—Hussey, Cont. Mus. Pal., Univ. Mich., 3, no. 4, p. 78, pl. 1, fig. 4, 1928.—Bassler, Smiths. Misc. Coll., 95, no. 6, p. 22, pl. 1, fig. 1, 1936.
 Ord. (Trenton): Ottawa and Kirkfield, Ontario, and Hull, Quebec (Hull ls.); Mercer and Woodford Cos., Ky. (Curdsville ls.), and 3 miles north of Escanaba, Mich.; one mile west Fountain, Minn. (Prosser ls.).

Edriaster buchianus (Forbes).

- Agelacrinites buchianus* Forbes, Mem. Geol. Surv. Gt. Britain, and Mus. Prac. Geol., London, 2, pt. 2, p. 521, pl. 23, figs. 1-14, 1848.
Edriaster buchianus Jaekel, Stammes. Pemat., 1, p. 46, text fig. 9, 1899.—Bather, Geol. Mag., n.s., (4) 7, pp. 193-204, pls. 8-10, 1900; (6) 1, no. 3, pp. 122, 166, etc., 1914.
 Ord. (Bala ls.): 2 miles west Ysppyty-Evan, Wales.

Edrioaster levis Bather.

Bather, Geol. Mag., (6) 1, no. 3, p. 119, pl. 12, figs. 1, 2, p. 166, text fig. 12, 1914.
Ord. (Trenton-Hull ls.): Belleville, Ontario.

Edrioaster priscus (Miller and Gurley).

Aesiocystites priscus Miller and Gurley, Ill. St. Mus., Bull. 5, p. 14, pl. 2, figs. 10-12, 1894.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 732, fig. 1281, 1897.
Edrioaster priscus Bassler, Smiths. Misc. Coll., 93, no. 8, p. 9, 1936.
Ord. (Trenton-Curdsville ls.): Mercer Co., Ky.

Edrioaster saratogensis Ruedemann.

Ruedemann, N. Y. St. Mus., Bull. 162, p. 86, pl. 3, figs. 2-4, 1912.—Bather, Geol. Mag., (6) 1, no. 3, pp. 122, 170, 1914.
Ord. (Trenton-Snake Hill sh.): Snake Hill, near Saratoga, N. Y.

Edriocystis Haeckel = **Edrioaster**.**Foerstediscus** Bassler. Genotype: *F. grandis* Bassler.

Hemicystitidae. Ord.

Bassler, Smiths. Misc. Coll., 93, no. 8, p. 6, 1935; vol. 95, no. 6, p. 9, 1936.

Foerstediscus grandis Bassler.

Bassler, Smiths. Misc. Coll., 93, no. 8, p. 6, pl. 1, fig. 12, 1935.
Ord. (Trenton-Curdsville ls.): Near Troy, Woodford Co., Ky.

Foerstediscus parvus Bassler.

Bassler, Smiths. Misc. Coll., 95, no. 6, p. 10, pl. 2, figs. 6, 7, 1936.
Ord. (Trenton-Hull ls.): Kirkfield, Ontario.

Foerstediscus splendens Bassler.

Bassler, Smiths. Misc. Coll., 95, no. 6, p. 10, pl. 7, fig. 13, 1936.
Ord. (Black River-Decorah sh., Spechts Ferry mem.): St. Paul, Minn.

Haplocystis Haeckel = **Agelacrinites**.**Haplocystites** Roemer = **Agelacrinites**.**Hemicystis** Carpenter and authors = **Hemicystites**.**Hemicystis granulatus** Haeckel = **Cystaster granulatus**.**Hemicystites** Hall. Genotype: *H. parasiticus* Hall.

Hemicystitidae. Ord.; Sil.; ?Penn.

Hall, Nat. Hist. N. Y., Pal., 2, pp. 245, 355, 1852; 3, p. 152, 1859 (1861); 12th Rep. N. Y. St. Cab. Nat. Hist., p. 81, 1859.—Jaekel, Stammes. Pelmat., 1, p. 49, 1899.—Bassler, Smiths. Misc. Coll., 93, no. 8, p. 7, 1935; 95, no. 6, p. 10, 1936.

Hemicystis Carpenter, Jour. Linn. Soc. London, Zool., 24, p. 30, 1891.—Haeckel, Amphor. Cystoid., p. 111, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 207, 1900.

Hemicystites bellulus (Barrande).

Agelacrinites bellulus Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 85, pl. 37, figs. 1-4, 1887.

Hemicystites bellulus Jaekel, Stammes. Pelmat., 1, p. 49, 1899.

Ord. (Div. D4): Zahorzan, Bohemia.

Hemicystites billingsi (Chapman).

Agelacrinites billingsii Chapman, Can. Jour., 5, pp. 204, 353, 1860; Ann. Mag. Nat. Hist., (3) 6, p. 157, text fig., 1860.—Billings, Canadian Jour., 6, p. 516, text fig. 86, 1861.—Chapman, Canadian Jour., 8, p. 199, fig. 180, 1863; Expos. Min. Geol. Canada, p. 110, fig. 86, p. 171, p. 180, 1864.

Hemicystites billingsi Jaekel, Stammes. Pelmat., 1, p. 49, 1899.—Bassler, Smiths. Misc. Coll., 95, no. 6, p. 12, pl. 3, fig. 2, 1936.

Carneyella billingsi Foerste, Bull. Sci. Lab. Denison Univ., 18, p. 341, 1916.—Raymond, Canada Dep. Mines, Bull. 31, Geol. Ser., 38, p. 7, pl. 3, fig. 3, 1921.

Ord. (Trenton-Hull ls.): Near Jackson Park, Peterboro, Ontario.

Hemicystites boehmi (Thoral).

Hemicystis boehmi Thoral, Cont. Etude Pal. Ord. Inferieur Montagne Noire, p. 117, pl. 8, fig. 5, 1933.

Ord. (Low. Arenig): St. Chinian, France.

Hemicystites bohemicus (Roemer).

Agelacrinus bohemicus Roemer, Verhandl. Nat. Preuss. Rheinfl., 8, p. 375, 1851.

Hemicystites (Agelacrinus) bohemicus Sladen, Quart. Jour. Geol. Soc. London, 35, p. 750, 1879.

Agelacrinites bohemicus Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 86, pl. 37, figs. 11-25, 1887.

Hemicystites bohemicus Bassler, Smiths. Misc. Coll., 95, no. 6, pl. 7, figs. 3, 4, 1936.

Agelacrinites sp. indet., Beyrich, Neues. Jahrb. Min., Geol. Pal., p. 192, pl. 3, figs. 8, 9, 1843.

Agelacrinites tener Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 88, pl. 37, figs. 9, 10, 1887.

Ord. (Div. D2): Mt. Drabov, Bohemia.

Hemicystites? carbonarius Bassler.

Bassler, Smiths. Misc. Coll., 95, no. 6, p. 15, pl. 4, figs. 10, 11, 1936.

Miss. (Bluefield sh.): Railroad cut $\frac{1}{4}$ mile west of Adds Valley, W. Va.

Hemicystites carnensis Foerste = *Cincinnatiidiscus carnensis*.

Hemicystites chapmani (Raymond).

Lebetodiscus chapmani Raymond, Ottawa Nat., 29, p. 58, pl. 1, fig. 3, 1915.

Carneyella chapmani Foerste, Bull. Sci. Lab. Denison Univ., 18, p. 341, 1916.—Raymond, Canada Dep. Mines, Bull. 31, Geol. Ser., 38, p. 9, pl. 2, fig. 8, pl. 3, fig. 6, 1921.

Hemicystites chapmani Bassler, Smiths. Misc. Coll., 93, no. 8, p. 7, 1935; 95, no. 6, p. 11, pl. 3, fig. 9, 1936.

Ord. (Trenton-Hull ls.): Jackson Park, Peterboro, and Ottawa, Ontario; Hull, Quebec.

Hemicystites confertus (Barrande).

Agelacrinites confertus Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 86, pl. 37, figs. 34, 35, 1887.

Hemicystites confertus Jaekel, Stammes. Pelmat., 1, p. 49, 1899.—Bassler, Smiths. Misc. Coll., 95, no. 6, p. 11, pl. 7, fig. 5, 1936.

Agelacrinites velatus Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 89, pl. 37, figs. 26, 27, 1887.

Ord. (Div. D2): Mt. Drabov, Bohemia.

Hemicystites curtus Bassler.

Bassler, Smiths. Misc. Coll., 95, no. 6, p. 12, pl. 4, fig. 8, 1936.

Ord. (Black River-Platteville ls.): Rockton, Ill.

Hemicystites devonicus Bassler.

Bassler, Smiths. Misc. Coll., 95, no. 6, p. 14, pl. 7, fig. 1, 1936.

Dev. (Traverse-Ferron Point fm.): Alpena Portland Cement Co., Alpena Co., Mich.

Hemicystites eckeli Cullison and Prouty.

Cullison and Prouty, Jour. Pal., 13, no. 5, p. 524, text fig. 1, 1939.

Ord. (Chazy-Murfreesboro fm.): Yellow Branch, 3.5 miles southeast Rose Hill, Lee Co., Va.

Hemicystites germanus Bassler.

Bassler, Smiths. Misc. Coll., 95, no. 6, p. 13, pl. 4, fig. 7, 1936.

Ord. (Trenton-Catheys fm.): Love Branch, Maury Co., Tenn.

Hemicystites (Cystaster) granulatus Hall = *Cystaster granulatus*.

Hemicystites latiusculus (Barrande).

Agelacrinites latiusculus Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 87, pl. 37, figs. 5-8, 1887.

Hemicystites latiusculus Jaekel, Stammes. Pelmat., 1, p. 17, 1899.—Bassler, Smiths. Misc. Coll., 95, no. 6, p. 11, pl. 7, fig. 2, 1936.

Ord. (Div. D4): Zahorzan, Bohemia.

Hemicystites multibrachiatus (Raymond).

Lebetodiscus multibrachiatus Raymond, Ottawa Nat., 29, p. 60, pl. 1, fig. 2, 1915.

Carneyella multibrachiatus Raymond, Canada Dep. Mines, Bull. 31, Geol. Ser., 38, p. 11, pl. 3, fig. 5, 1921.

Hemicystites multibrachiatus Bassler, Smiths. Misc. Coll., 95, no. 6, p. 11, pl. 4, figs. 3, 4, 1936.

Ord. (Trenton-Hull ls.): Kirkfield, Ontario.

Hemicystites parasiticus Hall.

Hall, Nat. Hist. N. Y., Pal., 1, p. 246, pl. 51, figs. 18-20, 1852.—Bassler, Smiths. Misc. Coll., 95, no. 6, p. 11, pl. 4, figs. 5, 6, 1936.

Sil. (Niagaran-Rochester sh.): Lockport, N. Y.

Hemicystites paulianus Bassler.

Bassler, Smiths. Misc. Coll., 95, no. 6, p. 13, pl. 4, fig. 9, 1936.

Ord. (Black River-Decorah sh., Ion mem.): St. Paul, Minn.

Hemicystites rectiradiatus (Shideler).

Agelacrinites rectiradiatus Shideler, Ohio Jour. Sci., 19, no. 1, p. 58, 1918.—Williams, Ohio Jour. Sci., 19, no. 1, p. 65, pl. 5, figs. 28-30, pl. 8, fig. 49, pl. 9, figs. 54, 56, 1918.

Hemicystites rectiradiatus Bassler, Smiths. Misc. Coll., 95, no. 6, p. 14, pl. 5, fig. 10, 1936.

Early Sil. (Richmond-Whitewater fm.): Elk Run, east of Winchester, and Liberty or Cherry Fork, south of Harshville, Ohio.

Hemicystites richmondensis Bassler.

Bassler, Smiths. Misc. Coll., 95, no. 6, p. 13, pl. 5, figs. 5-7, 1936.

Early Sil. (Richmond): Warren Co. and Oxford, Ohio, Versailles, Ind. (Waynesville fm.); south of Harshville, Ohio (Whitewater fm.).

Hemicystites simplex (Barrande).

Agelacrinites simplex Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 88, pl. 37, figs. 28-33, 1887.

Hemicystites simplex Bassler, Smiths. Misc. Coll., 95, no. 6, p. 11, pl. 7, fig. 6, 1936.

Ord. (Div. D4): Zahorzan, Bohemia.

Hemicystites stellatus Meek = *Cincinnati-discus stellatus*.

Hemicystites youngi (Raymond).

Lebetodiscus youngi Raymond, Ottawa Nat., 29, p. 58, pl. 1, fig. 4, 1915.

Carneyella youngi Raymond, Canada Dep. Mines, Bull. 31, Geol. Ser. vol. 38, p. 9, pl. 3, fig. 4, 1921.

Hemicystites youngi Bassler, Smiths. Misc. Coll., 95, no. 6, p. 12, pl. 3, fig. 1, 1936.

Ord. (Trenton-Hull ls.): Eldon Township, Victoria Co., Ontario.

Isorophus Foerste. Genotype: *Agelacrinites cincinnatiensis* Roemer.

Agelacrinitidae. Ord.; Early Sil.

Foerste, Bull. Sci. Lab. Denison Univ., 18, pp. 286, 340, 1916.—Raymond, Canada Dep. Mines, Bull. 31, Geol. Ser., 38, p. 12, 1921.—Bassler, Smiths. Misc. Coll., 93, no. 8, p. 4, 1935; 95, no. 6, p. 16, 1936.

Isorophus austini (Foerste).

Agelacrinites austini Foerste, Bull. Sci. Lab. Denison Univ., 17, p. 444, pl. 6, figs. 1 A-C, 1914.—Williams, Ohio Jour. Sci., 19, p. 64, pl. 3, figs. 13, 14, 16, 17, pl. 9, fig. 53, pl. 8, fig. 50-A, 1918.

- Isorophus austini* Foerste, Bull. Sci. Lab. Denison Univ., 18, p. 341, 1916.—Bassler, Smiths. Misc. Coll., 93, no. 8, p. 5, 1935; 95, no. 6, p. 17, pl. 2, fig. 9, pl. 6, figs. 1, 2, 1936.
- Agelacrinites austini lawshe* Williams, Ohio Jour. Sci., 19, no. 1, p. 70, pl. 2, fig. 12, pl. 4, figs. 20–24, pl. 6, figs. 32–37, pl. 7, figs. 38–44, pl. 8, fig. 50, pl. 9, fig. 55, 1918.
- Early Sil. (Richmond): Near Wilmington, Oxford, Waynesville, and Adams Co., Ohio (Whitewater fm.); Versailles, Ind. (Liberty fm.).
- Isorophus cincinnatiensis** (Roemer).
- Agelacrinus cincinnatiensis* Roemer, Verhandl. Nat. Hist. Preuss. Rheinl., 8, p. 372, pl. 5, fig. 3, 1851.
- Agelacrinites (Lepidodiscus) cincinnatiensis* Meek, Geol. Surv. Ohio, Pal., 1, pt. 2, p. 55, pl. 3, figs. 6a, b, 1873.
- Agelacrinites cincinnatiensis* Jaekel, Stammes. Pemat., 1, p. 50, pl. 2, fig. 1, 1899.—Williams, Ohio Jour. Sci., 19, no. 1, p. 62, pl. 1, fig. 2, pl. 2, figs. 8, 9, 11, pl. 5, fig. 29-A, pl. 8, figs. 51–51B, pl. 7, fig. 46, 1918.
- Isorophus cincinnatiensis* Foerste, Bull. Sci. Lab. Denison Univ., 18, p. 340, 1916.—Bassler, Smiths. Misc. Coll., 95, no. 6, p. 17, pl. 5, fig. 11, 1936.
- Ord. (Maysville): Cincinnati, Ohio (Bellevue and Corryville fm.); Near Nashville, etc., Tenn. (Leipers ls.).
- Isorophus faberi* Bassler = *Carnyella faberi*.
- Isorophus germanus** Bassler.
- Bassler, Smiths. Misc. Coll., 95, no. 6, p. 18, pl. 6, figs. 3, 4, 1936.
- Early Sil. (Richmond-Waynesville ls.-Clarksville div.): Oxford and Morrow, Ohio.
- Isorophus holbrooki** (James).
- Agelacrinus holbrooki* James, Palaeontologist, no. 1, p. 2, 1878; Jour. Cincinnati Soc. Nat. Hist., 10, p. 25, text figs. A, B, 1887.—Foerste, Bull. Sci. Lab. Denison Univ., 17, pp. 405, 446, pl. 1, fig. 1, pl. 4, fig. 1, 1914.—Williams, Ohio Jour. Sci., 19, no. 1, p. 64, pl. 5, fig. 26, 1918.
- Isorophus holbrooki* Foerste, Bull. Sci. Lab. Denison Univ., 18, p. 341, 1916.—Bassler, Smiths. Misc. Coll., 95, no. 6, p. 18, pl. 5, figs. 8, 9, 1936.
- Early Sil. (Richmond-Arnheim sh.): Morrow, Ohio.
- Isorophus inconditus* Foerste = *Isorophusella inconditus*.
- Isorophus kentuckyensis** Bassler.
- Bassler, Smiths. Misc. Coll., 95, no. 6, p. 18, pl. 6, fig. 10, 1936.
- Ord. (Trenton-Woodburn, Greendale bed): Lair Station, Ky.
- Isorophus shideleri** Bassler.
- Bassler, Smiths. Misc. Coll., 95, no. 6, p. 19, pl. 6, fig. 9, 1936.
- Early Sil. (Richmond-Elkhorn fm.): West of Hamburg, Ind.
- Isorophus tennesseeensis** Bassler.
- Bassler, Smiths. Misc. Coll., 95, no. 6, p. 17, pl. 2, fig. 1, 1936.
- Ord. (Trenton-Cannon ls.): Fayetteville, Tenn.
- Isorophus trentonensis** Bassler.
- Bassler, Smiths. Misc. Coll., 95, no. 6, p. 17, pl. 5, fig. 1, 1936.
- Ord. (Trenton-Cobourg ls.): Trenton Falls, N. Y.
- Isorophus warrenensis** (James).
- Agelacrinus warrenensis* James, Palaeontologist, no. 7, p. 58, pl. 2, figs. 3, 3a, 1883.—Foerste, Bull. Sci. Lab. Denison Univ., 17, p. 448, pl. 1, fig. 4, 1914.—Williams, Ohio Jour. Sci., 19, no. 1, p. 63, pl. 5, fig. 27, 1918.
- Isorophus warrenensis* Bassler, Smiths. Misc. Coll., 93, no. 8, p. 5, 1935; 95, no. 6, p. 19, pl. 5, figs. 2, 3, pl. 6, fig. 11, 1936.
- Early Sil. (Richmond): Morrow and Oregonia, Ohio (Arnheim sh.); Clarksville, Ohio (Waynesville ls.).

Isorophusella Bassler. Genotype: *Lebetodiscus inconditus* Raymond.
Agelacrinitidae. Ord.

Bassler, Smiths. Misc. Coll., 93, no. 8, p. 5, 1935; 95, no. 6, p. 19, 1936.

Isorophusella incondita (Raymond).

Lebetodiscus inconditus Raymond, Ottawa Nat., 29, p. 61, pl. 1, fig. 1, 1915.

Isorophus inconditus Foerste, Bull. Sci. Lab. Denison Univ., 18, p. 341, 1916.—
Raymond, Canada Dep. Mines, Bull. 31, Geol. Ser. 38, p. 12, pl. 4, 1921.

Isorophusella inconditus Bassler, Smiths. Misc. Coll., 93, no. 8, p. 5, pl. 1, fig. 11,
1935; 95, no. 6, pp. 19, 20, pl. 7, fig. 12, 1936.

Ord. (Trenton-Hull ls.): Ottawa, Peterboro, and Kirkfield, Ontario; Hull, Quebec.

Lebetodiscus Bather. Genotype: *Agelacrinites dicksoni* Billings.

Hemicystitidae. Ord.

Bather, Geol. Mag., 5, pp. 543-550, 1908.—Raymond (part), Ottawa Nat., 29, p.
55, 1915; Canada Dep. Mines, Bull. 31, Geol. Ser., 38, p. 4, 1921.—Bassler,
Smiths. Misc. Coll., 93, no. 8, p. 6, 1935; 95, no. 6, p. 9, 1936.

Lebetodiscus billingsi Raymond = *Hemicystites billingsi*.

Lebetodiscus chapmani Raymond = *Hemicystites chapmani*.

Lebetodiscus dicksoni (Billings).

Agelacrinites dicksoni Billings, Geol. Surv. Canada, Rep. Prog. for 1853-1856, p.
294, 1857; Can. Org. Rem., dec. 3, p. 84, pl. 8, figs. 3, 3a, 4, 4a, 1858.—Jaekel,
Stammes. Pelmat., 1, p. 50, pl. 2, fig. 2, 1899.—Clarke, N. Y. St. Mus., Bull.
49, p. 191, text fig. 3, 1901.

Agelacrinites dicksoni Haeckel, Amphor. Cystoid., pl. 3, fig. 29, 1896.

Lebetodiscus dicksoni Bather, Geol. Mag., n.s., (5) 5, p. 543, pl. 1, fig. 1, 1908.—
Raymond, Canada Dep. Mines, Bull. 31, Geol. Ser., 38, p. 5, pl. 1, pl. 3, fig. 1,
1921.—Bassler, Smiths. Misc. Coll., 95, no. 6, p. 9, pl. 1, fig. 11, 1936.

Ord. (Trenton-Hull ls.): Chaudiere Falls, Ottawa, Peterboro, and Kirkfield,
Ontario.

Lebetodiscus inconditus Raymond = *Isorophusella incondita*.

Lebetodiscus loriformis Raymond.

Raymond, Ottawa Nat., 29, p. 56, pl. 1, fig. 6, 1915; Canada Dep. Mines, Bull. 31,
Geol. Ser., 38, p. 7, pl. 2, fig. 9, pl. 3, fig. 2, 1921.—Bassler, Smiths. Misc. Coll.,
95, no. 6, p. 9, pl. 3, fig. 10, 1936.

Ord. (Trenton-Hull ls.): Ottawa, Ontario.

Lebetodiscus multibrachiatus Raymond = *Hemicystites multibrachiatus*.

Lebetodiscus platys Raymond = *Carnyella? platys*.

Lebetodiscus youngi Raymond = *Hemicystites youngi*.

Lepidodiscus Meek and Worthen. Genotype: *Agelacrinites (Lepidodiscus) squamosus*,
Meek and Worthen.

Agelacrinitidae. Dev.; Low. Carb.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., pp. 357, 358, 1868; Geol. Surv.
Ill., 5, p. 513, 1873.—Hall, 24th Rep. N. Y. St. Cab. Nat. Hist., p. 214, 1872.—
Haeckel, Amphor. Cystoid., p. 113, 1896.—Bather, Treatise Zool. (Lankester),
pt. 3, p. 208, 1900.—Clarke, N. Y. St. Mus., Bull. 49, p. 184, 1901.—Bassler,
Smiths. Misc. Coll., 93, no. 8, p. 8, 1935; 95, no. 6, p. 20, 1936.

Lepidodiscus alleganius Clarke = *Cooperidiscus alleganius*.

Lepidodiscus alpenensis Bassler.

Bassler, Smiths. Misc. Coll., 95, no. 6, p. 20, pl. 3, fig. 3, 1936.

Dev. (Traverse-Ferron Point fm.): Alpena Cement Co., Alpena Co., Michigan.

Lepidodiscus beecheri (Clarke).

Agelacrinites beecheri Clarke, N. Y. St. Mus., Bull. 49, p. 195, text figs. 4-6, 1901.

- Agelacrinus beecheri* Foerste, Bull. Sci. Lab. Denison Univ., 17, p. 417, pl. 1, fig. 2, 1914.
- Lepidodiscus beecheri* Bassler, Smiths. Misc. Coll., 93, no. 8, 1935.
Miss. (Below Olean congl.): Warren, Pa.
- Lepidodiscus buttsi** (Clarke).
Agelacrinites buttsi Clarke, N. Y. St. Mus., Bull. 49, p. 196, pl. 10, figs. 7-9, 1901.
Lepidodiscus buttsi Bassler, Smiths. Misc. Coll., 93, no. 8, p. 8, 1935; 95, no. 6, p. 20, pl. 9, fig. 8, 1936.
Miss. (Between Wolf Creek congl. and Mt. Hermon ss.): Cattaraugus Co., N. Y.
- Lepidodiscus cincinnatiensis* Bather = *Carneyella cincinnatiensis*.
- Lepidodiscus faberi* Cumings = *Carneyella faberi*.
- Lepidodiscus fistulosus** Anderson.
Anderson, Bull. Geol. Surv. Gt. Britain, no. 1, p. 68, figs. 1-10, pl. 5, 1939.
Low. Carb. (Scremerston ser.): Hetton House borehole, Northumberland, England.
- Lepidodiscus lebouri** Sladen.
Sladen, Quart. Jour. Geol. Soc. London, 35, p. 745, pl. 37, 1879.—Bassler, Smiths. Misc. Coll., 95, no. 6, p. 20, pl. 1, fig. 19, 1936.
Agelacrinites lebouri Jaekel, Stammes. Pemat., 1, p. 51, pl. 1, fig. 7, 1899.
Agelacrinites (Lepidodiscus) squamosus Lebour, Ann. Soc. Geol. Belge, 3, p. 21, 1876.
Low. Carb. (Bernician beds): East Woodburn, Northumberland, England.
- Lepidodiscus milleri** Sharman and Newton.
Sharman and Newton, Quart. Jour. Geol. Soc. London, 48, p. 150, pl. 2, 1892.—Bassler, Smiths. Misc. Coll., 95, no. 6, p. 20, pl. 7, fig. 7, 1936.
Low. Carb.: River Irthing, Cumberland, England.
- Lepidodiscus pileus* Sladen = *Carneyella pileus*.
- Lepidodiscus squamosus** (Meek and Worthen).
Agelacrinites (Lepidodiscus) squamosus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 357, 1868; Geol. Surv. Ill., 5, p. 513, pl. 16, fig. 1, 1873.
Lepidodiscus squamosus Sharman and Newton, Quart. Jour. Geol. Soc. London, 48, p. 151, 1892.—Bassler, Smiths. Misc. Coll., 95, no. 6, p. 20, pl. 1, fig. 17, 1936.
Miss. (Keokuk ls.): Crawfordsville, Ind.
- Pyrgocystis** Bather. Genotype: *P. sardesoni* Bather.
Hemicystitidae. Ord.; Sil.
Bather, Geol. Mag., (6) 2, pp. 5-12, 1915.—Bassler, Smiths. Misc. Coll., 93, no. 8, p. 6, 1935.
- Pyrgocystis ansticei** Bather.
Bather, Geol. Mag., n.s., (6) 2, p. 49, pl. 3, figs. 3-15, 1915.
Sil. (Wenlock ls.): Shropshire, England.
- Pyrgocystis batheri** Ruedemann.
Ruedemann, N. Y. St. Mus., Bull. 265, p. 39, pl. 13, figs. 2-5, 1925.
Sil. (Cayugan-Bertie waterlime): North Buffalo, N. Y.
- Pyrgocystis cylindrica** (Aurivillius).
Scalpellum cylindricum Aurivillius, Bihang. Sven. Vet. Akad. Handl., 18, Afd. 4, no. 3, p. 18, 1892.
Pyrgocystis cylindrica Bather, Geol. Mag., n.s., (6) 2, p. 59, 1915.
Sil. (Gotlandian): Near Wisby, Island of Gotland.
- Pyrgocystis grayae** Bather.
Bather, Geol. Mag., n.s., (6) 2, p. 10, pl. 3, figs. 1, 2, 1915.
Ord. (Craighead ls.): Thraive Glen, Girvan, Scotland.

Pyrgocystis octogona Richter.Richter, *Senckenbergiana*, 12, p. 280, text fig. 1 a-g, 1930.

Low. Dev. (Low. Coblenzian): Bornich near Weisel am Rhein, Germany.

Pyrgocystis procera (Aurivillius).*Scalpellum procerum* Aurivillius, *Bihang. Sven. Vet. Akad. Handl.*, 18, Afd. 4, no. 3, p. 18, 1892.*Pyrgocystis procera* Bather, *Geol. Mag.*, n.s., (6) 2, p. 59, 1915.

Sil. (Gotlandian): Wisby, Island of Gotland.

Pyrgocystis sardesoni Bather.Bather, *Geol. Mag.*, n.s., (6) 2, p. 6, pl. 2, figs. 1-6, 1915.—Bassler, *Smiths. Misc. Coll.*, 93, no. 8, p. 6, pl. 1, fig. 6, 1935.

Ord. (Black River-Decorah sh., Spechts Ferry mem.): St. Paul, Minn.

Pyrgocystis sulcata (Aurivillius).*Scalpellum sulcatum* Aurivillius, *Bihang. Sven. Vet. Akad. Handl.*, 18, Afd. 4, no. 3, p. 13, 1892.*Pyrgocystis sulcata* Bather, *Geol. Mag.*, n.s., (6) 2, pp. 58, 212, 1915.*Scalpellum fragile, granulata, strobiloides, varium* Aurivillius, *Bihang. Sven. Vet. Akad. Handl.*, 18, Afd. 4, no. 3, pp. 13-19, 1892.

Sil. (Gotlandian): Near Wisby, etc., Island of Gotland.

Scalpellum cylindricum, etc. Aurivillius = *Pyrgocystis cylindrica*, etc.Steganoblastus Whiteaves = *Astrocystites*.**Streptaster** Hall. Genotype: *Agelacrinus vorticellatus* Hall.

Hemicystitidae. Ord.; Early Sil.

Hall, 24th Rep. N. Y. St. Cab. Nat. Hist., Expl. pl. 6, 1872.—Bather, *Treatise Zool.* (Lankester), pt. 3, p. 208, 1900.—Foerste, *Bull. Sci. Lab. Denison Univ.*, 17, p. 450, 1914.—Bassler, *Smiths. Misc. Coll.*, 93, no. 8, p. 5, 1935; 95, no. 6, p. 9, 1936.**Streptaster reversatus** Foerste.Foerste, *Bull. Sci. Lab. Denison Univ.*, 17, p. 451, pl. 4, fig. 3, 1914.—Williams, *Ohio Jour. Sci.*, 19, no. 1, p. 65, pl. 3, fig. 19, 1918.

Ord. (Eden-Southgate mem.): 2 miles west of Million, Madison Co., Ky.

Streptaster septembrachiatus (Miller and Dyer).*Agelacrinus septembrachiatus* Miller and Dyer, *Jour. Cincinnati Soc. Nat. Hist.*, 1, p. 27, pl. 1, fig. 9, 1878.*Streptaster septembrachiatus* Foerste, *Bull. Sci. Lab. Denison Univ.*, 17, p. 129, pl. 1, fig. 7, pl. 4, fig. 2, 1914.

Early Sil. (Richmond, Liberty-Elkhorn fm.): Waynesville and near Dayton, Ohio.

Streptaster vorticellatus (Hall).*Agelacrinus vorticellata* Hall, *Adv. Pub. Rep. N. Y. St. Cab. Nat. Hist.*, p. 7, 1866.*Agelacrinus (Streptaster) vorticellatus* Hall, 24th Rep. N. Y. St. Cab. Nat. Hist., p. 216, pl. 6, figs. 11-13, 1872 (adv. pub. 1871, pl. 2, figs. 11-13).*Agelacrinites vorticellatus* Meek, *Geol. Surv. Ohio, Pal.*, 1, p. 57, pl. 3, figs. 7a, b, 1873.*Streptaster vorticellatus* Foerste, *Bull. Sci. Lab. Denison Univ.*, 17, p. 438, pl. 6, fig. 4, 1914.—Williams, *Ohio Jour. Sci.*, 19, no. 1, p. 63, pl. 5, fig. 31, pl. 8, fig. 47, 1918.—Bassler, *Smiths. Misc. Coll.*, 93, no. 8, p. 5, pl. 1, fig. 5, 1935.

Ord. (Maysville): Cincinnati, Ohio (Fairmount-Corryville sh.); Columbia and Nashville, Tenn. (Leipers ls.).

Stromatocystis Bather = *Stromatocystites*.**Stromatocystites** Pompeckj. Genotype: *S. pentangularis* Pompeckj.

Stromatocystitidae. Cambrian.

- Pompeckj, *Jahr. Geol. Reichsanst.*, 45, heft 23, p. 505, 1896.—Jaekel, *Stammes. Pelmat.*, 1, p. 36, 1899.—Bassler, *Smiths. Misc. Coll.*, 93, no. 8, p. 2, 1935; 95, no. 6, p. 3, 1936.
- Stromatocystis* Bather, *Treatise Zool. (Lankester)*, pt. 3, p. 207, 1900.
- Stromatocystites balticus* Jaekel.**
Jaekel, *Stammes. Pelmat.*, 1, p. 42, pl. 2, figs. 5, 6, 1899; *Pal. Zeits.*, 3, p. 112, fig. 104-A, 1918.
Mid. Camb. (Drift): Rostock, Germany.
- Stromatocystites cannati* (Miquel).**
Trochocystis cannati Miquel, *Bull. Soc. Beziens*, 17, p. 9, 1895.
Stromatocystites cannati Miquel, *Bull. Soc. Geol. France*, 5, pp. 476, 482, pl. 15, fig. 5, 1905.
Stromatocystites? cannati Thoral, *Cont. Etude Pal. Ord. Inferieur Montagne Noire*, p. 35, 1935.
Mid. Camb. (*Paradoxides mediterraneus* beds): Coulouma (Herault), France.
- Stromatocystites pentangularis* Pompeckj.**
Pompeckj, *Jahr. Geol. Reichsanst.*, 45, heft 23, p. 506, pl. 13, figs. 1a, 4, 1896.—Bather, *Treatise Zool. (Lankester)* pt. 3, p. 206, text fig. 1, 1900.—?Zelizko, *Prag. Rozpr. Ceski ak Frant.*, Jos. 20, no. 10, p. 6, 1911.—Schuchert, *Smiths. Misc. Coll.*, 70, no. 1, p. 2, text fig. 1-E, 1919.—Bassler, *Smiths. Misc. Coll.*, 95, no. 6, p. 3, pl. 1, figs. 6, 7, 1936.
Mid. Camb.: Tegrovic, Bohemia.
- Stromatocystites walcotti* Schuchert.**
Schuchert, *Smiths. Misc. Coll.*, 70, no. 1, p. 3, text figs. 1 A-D, pl. 1, figs. 1-3, 1919.
Low. Camb. (*Olenellus* beds): East arm Bonne Bay, Newfoundland.
- Stromatocystites walcotti minor* Schuchert.**
Schuchert, *Smiths. Misc. Coll.*, 70, no. 1, p. 4, pl. 1, fig. 4, 1919.
Low. Camb. (*Olenellus* beds): East arm Bonne Bay, Newfoundland.
- Thecocystis* Jaekel = *Cystaster*.
- Thecocystis sacculus* Jaekel = *Cystaster granulatus*.
- Thresherodiscus* Foerste.** Genotype: *T. ramosus* Foerste.
Agelacrinitidae. Ord.
Foerste, *Bull. Sci. Lab. Denison Univ.*, 17, p. 432, 1914.—Bassler, *Smiths. Misc. Coll.*, 93, no. 8, p. 7, 1935; 95, no. 6, p. 15, 1936.
- Thresherodiscus ramosus* Foerste.**
Foerste, *Bull. Sci. Lab. Denison Univ.*, 17, pp. 432-437, text fig. 1, pl. 1, fig. 8, pl. 3, fig. 3, 1914.—Bassler, *Smiths. Misc. Coll.*, 95, no. 6, p. 15, pl. 2, fig. 8, 1936.
Ord. (Trenton-Curdsville ls.): Goat Island, Lake Huron, Ontario.
- Ulrichidiscus* Bassler.** Genotype: *Agelacrinus pulaskiensis* Miller and Gurley.
Agelacrinitidae. Miss.
Bassler, *Smiths. Misc. Coll.*, 93, no. 8, p. 8, 1935; 95, no. 6, p. 22, 1936.
- Ulrichidiscus pulaskiensis* (Miller and Gurley).**
Agelacrinus pulaskiensis Miller and Gurley, *Ill. St. Mus.*, Bull. 5, p. 16, pl. 3, fig. 18, 1894.
Ulrichidiscus pulaskiensis Bassler, *Smiths. Misc. Coll.*, 93, no. 8, p. 8, pl. 1, fig. 7, 1935.
Miss. (Chester-Glen Dean ls.): Pulaski Co., Ky.
- Walcottidiscus* Bassler.** Genotype: *W. typicalis* Bassler.
Stromatocystitidae. Mid. Camb.
Bassler, *Smiths. Misc. Coll.*, 93, no. 8, p. 3, 1935; 95, no. 6, p. 2, 1936.

Walcottidiscus magister Bassler.

Bassler, Smiths. Misc. Coll., 95, no. 6, p. 2, pl. 2, fig. 2, 1936.

Mid. Camb. (Burgess sh.): Burgess Pass, above Field, British Columbia.

Walcottidiscus typicalis Bassler.

Bassler, Smiths. Misc. Coll., 93, no. 8, p. 3, pl. 1, fig. 1, 1935.

Mid. Camb. (Burgess sh.): Burgess Pass, above Field, British Columbia.

Xenocystites Bassler. Genotype: *X. carteri* Bassler.

Stromatocystitidae. Dev.

Bassler, Smiths. Misc. Coll., 95, no. 6, p. 3, 1936.

Xenocystites carteri Bassler.

Bassler, Smiths. Misc. Coll., 95, no. 6, p. 3, pl. 7, fig. 14, 1936.

Dev. (Chemung-Hanover sh.): Cattaraugus Creek, Versailles, N. Y.

Class **BLASTOIDEA**

- Acentrotremites** Etheridge and Carpenter. Genotype: *Mitra elliptica* Cumberland.
Orbitremitidae (Eublastoidea). Low. Carb.
Etheridge and Carpenter, Ann. Mag. Nat. Hist., (5) 11, p. 232, 1883; Cat. Blastoidea, p. 234, 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 90, 1900.—Jaekel, Pal. Zeits., 3, p. 108, 1918.
- Acentrotremites ellipticus** (Cumberland).
Mitra elliptica Cumberland, Rel. Conserv., p. 33, pl. B, figs. 1-3, 1826.
Acentrotremites ellipticus Etheridge and Carpenter, Ann. Mag. Nat. Hist., (5) 11, p. 232, 1883; Cat. Blastoidea, pp. 158, 235, 237, pl. 13, figs. 17-19, 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 90, fig. 13, 1900; Proc. Bristol Soc. Nat., (4) 3, pt. 2, p. 48, figs. 3-7, 1912.
Low. Carb. (Mtn. ls.): Boland, etc., England.
- Ambolostoma** Peck. Genotype: *A. baileyi* Peck.
Pentremitidae (Eublastoidea). Miss.
Peck, Pan Amer. Geol., 54, p. 104, 1930.
- Ambolostoma baileyi** Peck.
Peck, Pan Amer. Geol., 54, p. 104, pl. 14, figs. 9-13, 1930.
Miss. (Brazer ls.): 6 miles east of Mendon, Utah.
- Angioblastus** Wanner. Genotype: *A. variabilis* Wanner.
Angioblastidae (Eublastoidea). Permian.
Wanner, Neue Beitr. kennt. Perm. Echin. Timor, VI, Blastoidea, p. 53, 1931; Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 235, 1940.
- Angioblastus depressus** Wanner.
Wanner, Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 257, pl. 2, figs. 3, 4, 1940.
Permian: Nifu Muti, Timor.
- Angioblastus variabilis** Wanner.
Wanner, Neue Beitr. kennt. Perm. Echin. Timor, VI, Blastoidea, p. 57, pl. 2, figs. 13, 14, pl. 3, figs. 1-10, pl. 4, figs. 1-3, text fig. 10, 1931; Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 256, figs. 4, 5, 1940.
Permian: Basleo, (Noko) Timor.
- Angioblastus wanneri** (Wanner) = *Sagittoblastus wanneri*.
- Anthoblastus** Wanner. Genotype: *A. brouweri* Wanner.
Anthoblastidae (Eublastoidea). Permian.
Wanner, Perm. Blast. Timor, 2e Nederl. Timor Exped. 1916, pp. 195, 205, 1924; Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, pp. 237, 258, 1940.
- Anthoblastus brouweri** Wanner.
Wanner, Perm. Blast. Timor, 2e Nederl. Timor Exped. 1916, p. 205, pl. 1, figs. 8-11, pl. 3, fig. 13, 1924.
Permian: Somohole, Timor.
- Anthoblastus stelliformis** Wanner.
Wanner, Perm. Blast. Timor, 2e Nederl. Timor Exped. 1916, p. 207, pl. 1, figs. 4-7, 1924; Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 258, pl. 1, figs. 10-13, 1940.
Permian: Basleo (Noko, etc.), Timor.
- Asteroblastus** Eichwald. Genotype: *A. stellatus* Eichwald.
Asteroblastidae (Protoblastoidea). Ord.
Eichwald, Bull. Soc. Geol. France, 19, p. 62, 1862.—Zittel, Handb. Pal., 1, p. 415, 1879.—Jaekel, Stammes. Pelmat., 1, p. 383, 1899.—Bather, Treatise Zool. (Lankester), pt. 3, pp. 79, 80, 1900.—Jaekel, Pal. Zeits., 3, p. 101, 1918.

Asteroblastus foveolatus (Eichwald) = *A. stellatus*.

Asteroblastus foveolatus Jaekel (part) = *Metasterocystis micropelta*, part = *A. stellatus*.

***Asteroblastus regularis* Jaekel.**

Jaekel, Pal. Zeits., 3, p. 100, figs. 91, 93, 1918.

Ord. (Kunda fm., B₃): Vicinity of St. Petersburg, Russia.

***Asteroblastus stellatus* Eichwald.**

Eichwald, Bull. Soc. Geol. France, 19, p. 62, fig., 1862.—Schmidt, Mém. Acad. Imp. Sci. St. Petersburg, (7) 21, no. 11, p. 29, pl. 3, figs. 2-5, 1874.

Protocrinites foveolatus Eichwald, Leth. Ross., 1, p. 623, pl. 32, figs. 8 a-c, 1860.

Asteroblastus foveolatus Jaekel, Stammes. Pelmat., 1, p. 389, pl. 7, figs. 2-7 (not pl. 18, fig. 9), 1899.

Ord. (Kunda or Walchow fm., B₂ or B₃): Pulkowa, Russia.

***Asteroblastus sublaevis* Jaekel.**

Jaekel, Stammes. Pelmat., 1, p. 389, pl. 18, fig. 10, 1899.

Ord. (Walchow fm., B₂): Obuchowo, St. Petersburg, Russia.

Asteroblastus tuberculatus Schmidt = *Asterocystis tuberculatus*.

***Asteroblastus volborthi* Schmidt.**

Schmidt, Mem. Acad. Imp. Sci. St. Petersburg, (7) 21, p. 32, pl. 3, figs. 6-8, 1874.

—Jaekel, Stammes. Pelmat., 1, p. 389, pl. 7, fig. 1, 1899.

Ord. (Walchow fm., B₂): Pavlovsk, Russia.

***Asterocystis* Haeckel.** Genotype: *Asteroblastus tuberculatus* Schmidt.

Asteroblastidae (Protoblastoidea). Ord.

Haeckel, Amphor. Cystoid., p. 116, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 80, 1900.—Jaekel, Pal. Zeits., 3, p. 101, 1918.

***Asterocystis globulus* Jaekel.**

Jaekel, Pal. Zeits., 3, p. 100, figs. 92, 93, 1918.

Ord. (Kunda fm., B₃): Estonia.

***Asterocystis tuberculatus* (Schmidt).**

Asteroblastus tuberculatus Schmidt, Mem. Acad. Imp. Sci. St. Petersburg, (7) 21, p. 33, pl. 3, fig. 9, 1874, Jaekel, Stammes. Pelmat., 1, p. 385, fig. 85, p. 389, pl. 7, fig. 11, 1899.

Asterocystis tuberculatus Haeckel, Amphor. Cystoid., p. 116, pl. 3, fig. 54, 1896.

Ord. (Kunda fm., B₃): Pavlovsk, Russia.

Astracrinites Austin = *Zygocrinus*.

Astrocrinus of authors = *Zygocrinus*.

Belemnoerinus Munier-Chalmas (not White) = *Belocrinus*.

***Belocrinus* Munier-Chalmas.** Genotype: *B. cottaldi* Munier-Chalmas.

Troosticrinidae (Eublastoidea). Low. Dev.

Munier-Chalmas, Bull. Soc. Geol. France, (3) 9, p. 503, 1881.

Belemnocrinus Munier-Chalmas, Jour. Conchyl., (3) 16, p. 105, 1876. (Genotype: *B. cottaldi* Munier-Chalmas.)

***Belocrinus cottaldi* (Munier-Chalmas).**

Belemnocrinus cottaldi Munier-Chalmas, Jour. Conchyl., 16, p. 105, 1876.

Belocrinus cottaldi Munier-Chalmas, Bull. Soc. Geol. France, (3) 9, p. 503, 1881.

—Oehlert, Bull. Soc. Geol. France, (3) 10, p. 362, text fig., pl. 9, figs. 3 a-e, 1882.

Metablastus cottaldi Etheridge and Carpenter, Cat. Blast., p. 201, pl. 5, fig. 22, 1886. Low Dev. (Gahard ss.): Bois Roux, Ille-et-Vilaine, France.

***Blastocystis* Jaekel.** Genotype: *B. rossica* Jaekel.

Blastoidocrinidae (Protoblastoidea). Ord.

Jaekel, Pal. Zeits., 3, p. 107, 1918.

Blastocystis rossica Jaekel.

Jaekel, Pal. Zeits., 3, p. 107, 1918.

Blastoidocrinus carchariaedens Schmidt (not Billings), Mem. Acad. Imp. Sci. St. Petersburg, (7) 21, no. 11, p. 29, pl. 3, figs. 1 a-c, 1874.

Ord. (Kunda fm., B₂): Near St. Petersburg, Russia.

Blastoidocrinus Billings. Genotype: *B. carchariaedens* Billings.

Blastoidocrinidae (Protoblastoidea). Ord.

Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 4, p. 18, 1859.—Zittel, Handb. Pal., 1, p. 423, 1879.—Bather, Treatise Zool. (Lankester), pt. 3, p. 80, 1900.—Hudson, N. Y. St. Mus., Bull. 107, p. 97, 1907.—Jaekel, Pal. Zeits., 3, p. 107, 1918.

Blastoidocrinus carchariaedens Billings.

Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 4, p. 18, pl. 1, figs. 1 a-n, text fig. 6, 1859.—S. A. Miller, N. Amer. Geol. Pal., p. 229, fig. 257, 1889.—Bather, Treatise Zool. (Lankester), pt. 3, p. 81, text fig. III-1, 2, 1900.—Jaekel, Pal. Zeits., 3, p. 106, fig. 99, 1918.—Wanner, Handwört. Naturwiss., p. 496, fig. 37, 1933.

Ord. (Chazyan): Islands of Montreal, Jesus, and Bizard, etc., Quebec, Canada (Aylmer fm.); Lake Champlain, New York (Day Point and Valcour ls.).

Blastoidocrinus carchariaedens Schmidt (not Billings) = *Blastocystis rossica*.

Calycoblastus Wanner. Genotype: *C. tricavatus* Wanner.

Pentremitidae (Eublastoidea). Permian.

Wanner, Pal. Timor, 23, Perm. Echin. Timor, 2 Teil, p. 35, 1924.

Calycoblastus tricavatus Wanner.

Wanner, Pal. Timor, 23, Perm. Echin. Timor, 2 Teil, p. 37, text figs. 6, 7, pl. 201 (3), figs. 11-15, 1924.

Permian: Somohole, near Soefa, Timor.

Carpenteroblastus Rowley. Genotype: *Granatocrinus magnibasis* Rowley.

Orbitremitidae (Eublastoidea). Miss.

Rowley, Amer. Geol., 27, p. 347, 1901.

Carpenteroblastus magnibasis (Rowley).

Granatocrinus (*Schizoblastus*) *magnibasis* Rowley, Amer. Geol., 16, p. 220, figs. 11-14, 1895.

Carpenteroblastus magnibasis Rowley, Amer. Geol., 27, p. 347, 1901.

Miss. (Up. Burlington ls.): Louisiana, Mo.

Carpenteroblastus pentagonus Rowley.

Rowley, Amer. Geol., 27, p. 347, pl. 28, figs. 26, 27, 1901.

Miss. (Low. Burlington ls.): Louisiana, Mo.

Carpenteroblastus pyriformis (Rowley and Hare).

Granatocrinus pyriformis Rowley and Hare, Kansas City Sci., 5, p. 118, pl. 3, figs. 15, 16, 1891.

Carpenteroblastus pyriformis Rowley, Amer. Geol., 27, p. 347, 1901.

Miss. (Up. Burlington ls.): Near Grass Sta., Marion Co., Mo.

Carpenteroblastus stella (Rowley).

Granatocrinus stella Rowley, Amer. Geol., 25, p. 68, pl. 2, figs. 26-28, 1900.

Carpenteroblastus stella Rowley, Amer. Geol., 27, p. 347, 1901.

Miss. (Up. Burlington ls.): Louisiana, Mo.

Carpenteroblastus veryi Rowley.

Rowley in Greene, Cont. Ind. Pal., 1, pt. 12, p. 127, pl. 36, figs. 46-48, 1903.

Miss (Keokuk ls.): 7 miles north of Burksville, Cumberland Co., Ky.

- Ceratoblastus** Wanner. Genotype: *C. nanus* Wanner.
Codasteridae (Eublastoidea). Permian.
Wanner, Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 233, 1940.
- Ceratoblastus nanus** Wanner.
Wanner, Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 246, pl. 2, figs. 5-7, 1940.
Permian: Noko, Timor.
- Cidaroblastus** Hambach = Orbitremites
- Clavaeblastus** Hambach = Troosticrinus
- Codaster** McCoy. Genotype: *C. acutus* McCoy.
Codasteridae (Eublastoidea). Sil.—Low. Carb.
McCoy, Ann. Mag. Nat. Hist., (2) 3, p. 250, 1849.—Roemer, Archiv. Natur. Jahrb., 17, 1, p. 381, 1851 (as *Codonaster*).—Etheridge and Carpenter, Cat. Blast., p. 259, 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 259, 1900.—Hambach, Trans. Acad. Sci. St. Louis, 13, pp. 20, 47, 1903.—Wanner, Perm. Blastoid. Timor, 2e Nederl. Timor Exped. 1916, p. 194, 1924.
Heteroschisma Wachsmuth, Geol. Surv. Ill., 7, p. 352, 1883. (Genotype: *H. gracile* Wachsmuth.)
- Codaster acutus** McCoy.
McCoy, Ann. Mag. Nat. Hist., (2) 3, p. 251, 1849; Brit. Pal. Foss., p. 123, pl. 3-B, fig. 7, 1854.—Billings, Amer. Jour. Sci. and Arts, 48, p. 79, text figs. 8, 9, 1869.—Springer, Zittel-Eastman Textb. Pal., 1, p. 168, fig. 260, 1913.
Codonaster acutus Roemer, Archiv. Natur. Jahrg., XVII, 1, p. 385, pl. 5, figs. 2 a-d, 1851.
Codaster trilobatus var. *acutus* Etheridge and Carpenter, Cat. Blast., p. 269, pl. 13, figs. 9-15, pl. 16, fig. 2, pl. 18, fig. 1, 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 83, fig. 1, 1900.
Pentremites? *astriformis* Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 111, 1845.—Bather, List. Gen. and Sp., p. 7, 1890.
Low. Carb.: Bolland, Lancashire, and Settle, Yorkshire, England.
- Codaster alatus** Reimann.
Reimann, Bull. Buffalo Soc. Nat. Hist., 17, p. 23, pl. 1, figs. 2, 3, 1933.
Dev. (Traverse-Norway Pt. fm.): Stony Point, Alpena, Michigan.
- Codaster alternatus** Lyon.
Lyon, Geol. Surv. Ky., 3, p. 493, pl. 5, fig. 3a (not 3 and 3b), as *C. attenuatus* on expl. of pl., 1857.
Heteroschisma alternatum Wachsmuth, Geol. Surv. Ill., 7, p. 354 (footnote), 1883.
Codaster attenuatus Rowley, in Greene, Contr. Ind. Pal., 1, pt. 10, pp. 94, 95, pl. 30, figs. (?) 14, 15; 20, 21, 1902; pt. 12, p. 128, pl. 36, figs. 50, 51, 1903.
Dev.: Falls of the Ohio and Beargrass Creek, Jefferson Co., Ky. (Sellersburg ls.); Columbus, Ohio (Columbus ls.).
- Codaster alternatus* Lyon (part) = *C. pyramidatus*; (part) = *C. alternatus elongatus*.
- Codaster alternatus elongatus** (Wachsmuth).
Heteroschisma alternatus var. *elongatus* Wachsmuth, Geol. Surv. Ill., 7, p. 354 (footnote), 1883.
Codaster alternatus var. *elongatus* Etheridge and Carpenter, Cat. Blast., pp. 33, 263, 267, pl. 10, figs. 19, 20, 1886.
Codaster alternatus (attenuatus) Lyon, Geol. Surv. Ky., 3, pl. 5, fig. 3b (not 3, 3a), 1857.
Dev. (Onondaga-Jeffersonville ls.): Falls of the Ohio and Jefferson Co., Ky.
- Codaster alternatus robustus** Rowley.
Codaster attenuatus var. *robustus* Rowley, in Greene, Contrib. Ind. Pal., 1, pt. 10, p. 94, pl. 30, figs. 12, 13, 16, 17, 1902.
Dev. (Hamilton-Sellersburg ls.): Cement Quarry, Clark Co., Ind.

Codaster americanus Shumard.

Shumard, Trans. Acad. Sci. St. Louis, 1, p. 239, 1858.

Dev. (Onondaga-Jeffersonville ls.): Falls of the Ohio.

Codaster attenuatus Lyon (by error) = (part) *C. alternatus*; (part) = *C. alternatus elongatus*; (part) = *C. pyramidatus*.

Codaster attenuatus of authors = *C. alternatus*.

Codaster blairi Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 7, p. 86, pl. 5, figs. 20-22, 1895.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 741, fig. 1327, 1897.—Peck, Univ. Mo. Studies, 13, no. 4, p. 58, pl. 26, figs. 30-37, 1938.

Miss. (Chouteau ls.): Near Sedalia and Providence, Mo.

Codaster canadensis Billings.

Billings, Amer. Jour. Sci. and Arts, (2) 48, p. 79, 1869.—Whiteaves, Contr. Can. Pal., 1, pt. 2, p. 109, pl. 14, fig. 44a, 1889 (adv. pub. 1887).

Dev. (Hamilton): Thedford, Ont. (Widder fm.); Western N. Y. (Deep River fm.).

Codaster conicus (Whidborne).

Codonaster conicus Whidborne, Mon. Dev. Fauna South England, 3, pt. 3, p. 214, pl. 29, figs. 4, 4a, 1899.

Low. Carb. (Pilton beds): Pilton, North Devon, England.

Codaster corrugatus Reimann.

Reimann, Bull. Buffalo Soc. Nat. Sci., 17, p. 25, pl. 4, figs. 1, 2, 1935.

Dev. (Onondaga ls.): Near Williamsville, Erie Co., N. Y.

Codaster curtus Reimann.

Reimann, Bull. Buffalo Soc. Nat. Sci., 17, p. 25, pl. 1, figs. 4, 5, 1935.

Dev. (Hamilton-Tichenor ls.): Eighteen Mile Creek, Erie Co., N. Y.

Codaster gracilis (Wachsmuth).

Heteroschisma gracile Wachsmuth, Geol. Surv. Ill., 7, p. 354, text figs. 1, 2, 1883; Proc. Davenport Acad. Sci., 4, p. 84, text figs. 1, 2, pl. 1, fig. 1, 1886 (adv. pub. 1885, p. 9).

Codaster gracilis Etheridge and Carpenter, Cat. Blast., p. 265, pl. 16, fig. 1, 1886.—Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 423, pl. 36, figs. 13, 14, 1924.

Dev. (Traverse-Thunder Bay ls.): 4 miles south of Alpena, Mich.

Codaster gracillimus Rowley and Hare.

Rowley and Hare, Kansas City Sci., 5, p. 99, pl. 2, figs. 6, 7, 1891.—Rowley, Amer. Geol., 25, p. 66, pl. 2, figs. 6-8, 1900; 35, p. 307, pl. 21, figs. 31, 32, 1908.

Miss (Low. Burlington ls.): Louisiana, Mo.

Codaster grandis Rowley and Hare.

Rowley and Hare, Kansas City Sci., 5, p. 99, pl. 2, fig. 8, 1891.—Rowley, Amer. Geol., 25, p. 66, pl. 2, figs. 9-11, 1900; 35, p. 309, pl. 21, figs. 40, 41, 1905.

Miss. (Up. Burlington ls.): Louisiana, Mo.

Codaster gratiosus S. A. Miller.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 2, p. 257, pl. 15, figs. 5, 5a, 1880.

Miss. (Keokuk ls.): New Bloomfield, Mo.

Codaster hindei Etheridge and Carpenter.

Etheridge and Carpenter, Ann. Mag. Nat. Hist., (5) 9, p. 235, 1882; Cat. Blast., p. 265, pl. 12, figs. 4-7, 1886.

Dev. (Hamilton-Widder beds): Arkona, Ontario.

Codaster jessieae Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 10, p. 89, pl. 5, figs. 20-22, 1896.—Peck, Univ. Mo. Studies, 13, no. 4, p. 59, pl. 26, fig. 38, 1938.

Miss. (Chouteau ls.): Sedalia, Mo.

Codaster kentuckyensis Shumard = *Phaenoschisma? kentuckyensis*.

Codaster laeviusculus (Rowley).

Codaster (*Cryptoschisma*?) *laeviusculus* Rowley, Amer. Geol., 25, p. 65, pl. 2, figs. 51-55, p. 271, pl. 5, fig. 74, 1900; 35, p. 309, pl. 21, figs. 37-39, 1905.

Miss. (Up. Burlington ls.): Louisiana, Mo.

Codaster lorae Dunbar.

Dunbar, Trans. Conn. Acad. Arts and Sci., 23, p. 119, pl. 2, fig. 1, 2, 1920.

Dev. (Helderbergian-Birdsong sh.): 1½ miles south of Allen's mill, Birdsong Creek, and 2½ miles n.e. Parsons, Tenn.

Codaster pentalobus Hall.

Hall, Trans. Albany Inst., 10, p. 69, 1882 (adv. pub. 1879, p. 13); 11th Ann. Rep. Geol. Nat. Hist. Ind., p. 280, pl. 15, fig. 15, 1882.

Metablastus? *pentalobus* Etheridge and Carpenter, Cat. Blast., p. 198, 1886.

Stephanocrinus pentalobus S. A. Miller, N. Amer. Geol. Pal., p. 283, 1889.

Sil. (Niagaran-Waldron sh.): Waldron, Ind.

Codaster pousirewskii (Stuckenberg).

Codonaster pousirewskii Stuckenberg, Mater. Gheol. Rossii, 6, p. 99, pl. 2, figs. 4 a-d, 1875.

Dev.: Russia.

Codaster pulchellus Miller and Dyer.

Miller and Dyer, Jour. Cincinnati Soc. Nat. Hist., 1, p. 35, pl. 2, figs. 13, 13a, 1878.

Codaster (*Stephanocrinus*?) *pulchellus* Hall, 11th Ann. Rep. Geol. Nat. Hist. Ind., p. 280, pl. 15, figs. 8-10, 1882.

Codaster? *pulchellus* Etheridge and Carpenter, Cat. Blast., p. 266, 1886.

Stephanocrinus pulchellus S. A. Miller, N. Amer. Geol. Pal., p. 283, fig. 434, 1889.

Sil. (Niagaran-Waldron sh.): Waldron, Ind.

Codaster pyramidatus Shumard.

Shumard, Trans. Acad. Sci. St. Louis, 1, p. 238, pl. 9, figs. 1 a-e, 1858.—Etheridge and Carpenter, Cat. Blast., p. 266, pl. 12, figs. 1-3, 1886.

Codaster attenuatus (by error for *alternatus*) Lyon, Geol. Surv. Ky., 3, pl. 5, fig. 3 (not 3a, 3b), 1857.

Dev. (Onondaga): Falls of the Ohio (Jeffersonville ls.); Columbus, Ohio (Columbus ls.); S. W. Ontario.

Codaster stelliformis Shumard = *Orophocrinus stelliformis*.

Codaster subtruncatus (Hall).

Pentremites subtruncatus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 485, pl. 1, fig. 4 (cited pl. 2, fig. 3, by error), 1858.

Troostocrinus subtruncatus Etheridge and Carpenter, Ann. Mag. Nat. Hist., (5) 9, p. 249, 1882.

Codaster subtruncatus Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 422, pl. 36, fig. 15, 1924.

Dev. (Cedar Valley ls.): Buffalo, Iowa.

Codaster superbus Rowley.

Rowley, Amer. Geol., 35, p. 308, pl. 21, figs. 35, 36, 1905.

Miss. (Up. Burlington ls.): Louisiana, Mo.

Codaster trilobatus McCoy.

McCoy, Ann. Mag. Nat. Hist., (2) 3, p. 251, 1849; Brit. Pal. Foss., 1, p. 123, pl. 3-D figs. 8, 8a, 1854.—Etheridge and Carpenter, Cat. Blast., p. 268, pl. 12, fig. 8, pl. 13, figs. 1-8, 1886.—Wanner, Handwört. Naturwiss., p. 494, figs. 28-A, 29, 1933.

Codonaster trilobatus Roemer, Archiv. Naturges. Troeschäl, Jahrg. XVII, p. 386, pl. 5, figs. 3a, b, 1851.

Low. Carb.: Derbyshire; Bolland, Lancashire; Settle, Yorkshire, Eng.

- Codaster trilobatus acutus* Etheridge and Carpenter = *Codaster acutus*.
Codaster whitei Hall = *Orophocrinus whitei*.
Codonaster Roemer = *Codaster*.
Codonites Meek and Worthen = *Orophocrinus*.
Codonites campanulatus Hambach = *Orophocrinus stelliformis campanulatus*.
Codonites inopinatus Rowley and Hare = *Lophoblastus inopinatus*.
Crioblastus Hambach = *Schizoblastus*.
Crioblastus melo Hambach = *Cryptoblastus melo*.
Crioblastus tenuis Hambach = *Cryptoblastus tenuis*.
Cryptoblastus Etheridge and Carpenter. Genotype: *Pentremites melo* Owen and Shumard.
 Orbitremitidae (Eublastoidea). Miss.
 Etheridge and Carpenter, *Cat. Blast.*, p. 229, 1886.—Bather, *Treatise Zool.* (Lankester), pt. 3, pp. 89, 92, 1900.—Cline, *Jour. Pal.*, 11, no. 8, p. 634, 1937.
Cryptoblastus bellatulus Peck.
 Peck, *Univ. Mo. Studies*, 13, no. 4, p. 68, pl. 26, figs. 1-3, 1938.
 Miss. (Chouteau ls.): 9 miles northeast of Osceola, Henry Co., Mo.
Cryptoblastus concinnulus Rowley = *Orbitremites concinnulus*.
Cryptoblastus conoideus (Rowley).
Lophoblastus conoideus Rowley, *Amer. Geol.*, 27, p. 345, pl. 28, figs. 1-4, 1901.
Cryptoblastus conoideus Peck, *Univ. Mo. Studies*, 13, p. 63, pl. 26, figs. 5-8, 1938.
Granatocrinus mutabilis Rowley, *Amer. Geol.*, 12, p. 306, pl. 14, figs. 6-9 (not figs. 4, 5), 1893.
 Miss. (Up. Chouteau ls.): Near Curryville; one mile east Edgewood; Chouteau Springs; Providence; Sweeney; 2 miles north Danville, Mo.
Cryptoblastus granulatus (Meek and Worthen).
Pentremites (Granatocrinus) granulatus Meek and Worthen, *Proc. Acad. Nat. Sci. Phila.*, p. 165, 1865.
Granatocrinus granulatus Meek and Worthen, *Geol. Surv. Ill.*, 5, p. 508, pl. 15, fig. 10, 1873.
Schizoblastus? granulatus Etheridge and Carpenter, *Cat. Blast.*, p. 223, 1886.
Crioblastus granulatus Hambach, *Trans. Acad. Sci. St. Louis*, 13, p. 40, 1903.
Cryptoblastus granulatus Cline, *Jour. Pal.*, 11, p. 643, pl. 88, figs. 11-16, 1937.
 Miss.: Warsaw, Otterville, etc., Ill.; Crawfordsville, etc., Ind. (Keokuk ls.); Burlington, Iowa (Upper Burlington).
Cryptoblastus? kirkwoodensis Etheridge and Carpenter = *Mesoblastus kirkwoodensis*.
Cryptoblastus melo (Owen and Shumard).
Pentremites melo Owen and Shumard, *Jour. Acad. Nat. Sci. Phila.*, 2, pt. 1, p. 65, pl. 7, figs. 14 a-c, 1850; *U. S. Geol. Surv. Wis., Iowa, Minn.*, p. 592, pl. 5-A, figs. 14 a-c, 1852.
Schizoblastus melo Etheridge and Carpenter, *Ann. Mag. Nat. Hist.*, (5) 9, p. 246, 1882.
Crioblastus melo Hambach, *Trans. Acad. Sci. St. Louis*, 13, p. 40, 1903.
Cryptoblastus melo Etheridge and Carpenter, *Cat. Blast.*, p. 232, pl. 7, figs. 14, 15, 1886.—Keyes, *Geol. Surv. Mo.*, 4, p. 139, pl. 13, figs. 7a, b, 1894.—Van Tuyl, *Geol. Surv. Iowa*, 30, pl. 4, figs. 5, 6, 1925.—Cline, *Jour. Pal.*, 11, no. 8, p. 636, 637, 1937.
 Miss.: Burlington, Iowa; Louisiana and Hannibal, Mo., etc. (Low. Burlington ls.); Florence, Ala. (Warsaw ls.).
Cryptoblastus melo calcaratus Cline.
 Cline, *Jour. Pal.*, 11, p. 640, pl. 87, figs. 11-16, 1937.
 Miss. (Low. Burlington ls.): Burlington, Iowa; Hannibal and Louisiana, Mo., etc.

Cryptoblastus melo cancellatus Cline.

Cline, Jour. Pal., 11, p. 639, pl. 88, figs. 17-20, 1937.

Schizoblastus (Granatocrinus) melo Wachsmuth (part), Davenport Acad. Sci., Proc., 4, p. 80, 1886.

Miss. (Low. Burlington ls.): Burlington, Iowa; Louisiana and Hannibal, Mo.

Cryptoblastus melo projectus (Meek and Worthen).

Pentremites melo var. *projectus* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 142, 1861.

Granatocrinus projectus Meek and Worthen, Geol. Surv. Ill., 3, p. 496, text fig., pl. 18, fig. 7, 1868.

Schizoblastus projectus Etheridge and Carpenter, Ann. Mag. Nat. Hist., (5) 9, p. 247, 1882.

Cryptoblastus projectus Etheridge and Carpenter, Cat. Blast., p. 232, 1886.

Cryptoblastus melo var. *projectus* Cline, Jour. Pal., 11, p. 641, pl. 87, figs. 17-21, 1937.

Miss. (Lower Burlington ls.): Burlington, Iowa; Louisiana and Hannibal, Mo.

Cryptoblastus melo stellatus Cline.

Cline, Jour. Pal., 11, no. 8, p. 642, pl. 87, figs. 22-25, 1937.

Miss. (Up. Burlington ls.): Hannibal, Mo.

Cryptoblastus missouriensis (Shumard).

Granatocrinus missouriensis Shumard, Trans. Acad. Sci. St. Louis, 2, p. 375, 1866.

Schizoblastus missouriensis Etheridge and Carpenter, Ann. Mag. Nat. Hist., (5) 9, p. 247, 1882.

Cryptoblastus missouriensis Peck, Univ. Mo. Studies, 13, no. 4, p. 65, pl. 26, figs. 9-11, 12-15, 39, 1938.

Pentremites roemeri Shumard, Geol. Surv. Mo., First and Second Ann. Repts., p. 186, pl. B, figs. 2 b-d (not fig. 2a), 1855.—Hambach, Trans. Acad. Sci. St. Louis, 4, pl. D, figs. 3, 3a, 1884.

Cribroblastus roemeri Hambach, Trans. Acad. Sci. St. Louis, 13, pl. 5, fig. 10, 1903.

Granatocrinus mutabilis Rowley (part), Amer. Geol., 12, p. 306, pl. 14, figs. 4, 5 (not figs. 6-9), 1893.

Miss. (Chouteau ls.): Providence, Boone Co., Sweeney, Hallsville, Curryville, South Fabius River, Mo.

Cryptoblastus? pentagonus (Rowley).

Lophoblastus pentagonus Rowley, Amer. Geol., 35, p. 202, pl. 21, figs. 5-8, 1905.

Cryptoblastus? pentagonus Peck, Univ. Mo. Studies, 13, no. 4, p. 67, pl. 26, figs. 4 5, 1938.

Miss. (Chouteau ls.): Bowling Green and Curryville, Mo.

Cryptoblastus pisum (Meek and Worthen).

Granatocrinus pisum Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 89, 1869; Geol. Surv. Ill., 5, p. 470, pl. 9, fig. 4, 1873.

Cryptoblastus pisum Etheridge and Carpenter, Cat. Blast., p. 232, 1886.—Cline, Jour. Pal., 11, p. 645, pl. 88, figs. 1-6, 1937.

Granatocrinus exiguus Rowley and Hare, Kansas City Scientist, 5, no. 7, p. 100, pl. 2, figs. 13, 14; no. 8, pl. 3, fig. 18, 1891.

Miss. (Up. Burlington ls.): Burlington, Iowa; Louisiana, Mo.

Cryptoblastus projectus Etheridge and Carpenter = *C. melo projectus*.

Cryptoblastus roemeri (Shumard).

Pentremites roemeri Shumard, Geol. Surv. Mo., p. 186, pl. B, fig. 2a (not 2 b-d) 1855.—Hambach, Trans. Acad. Sci. St. Louis, 4, pl. D, figs. 3, 3a, 1884.

Schizoblastus? roemeri Keyes, Geol. Surv. Mo., 6, pt. 1, p. 137, 1894.

Cryptoblastus roemeri Peck, Univ. Mo. Studies, 13, no. 4, p. 60, pl. 26, figs. 19-21, 23-24, 1938.

- Pentremites sampsoni* Hambach, Trans. Acad. Sci. St. Louis, 4, p. 551, pl. D, figs. 2, 2a, 1884.
- Schizoblastus sampsoni* Etheridge and Carpenter, Cat. Blast., p. 223, 1886.
Miss. (Chouteau ls.): Boone Co., Providence, Sweeney, Danville, Hallsville, and Pettis Co., Mo.
- Cryptoblastus rowleyi** Cline.
Cline, Jour. Pal., 11, p. 648, pl. 88, figs. 7-10, 1937.
Miss. (Low. Burlington ls.): Louisiana, Mo.
- Cryptoblastus? shumardi** (Meek and Worthen).
Granatocrinus shumardi Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 257, 1866; Geol. Surv. Ill., 3, p. 493, pl. 18, figs. 6b, text fig., 1868.
Schizoblastus? shumardi Bather, List. Gen. and Sp. Blast., p. 65, 1899.
Cryptoblastus? shumardi Cline, Jour. Pal., 11, p. 643, 1937.
Miss. (Low. Burlington ls.): Burlington, Iowa.
- Cryptoblastus tenuis** (Hambach).
Crioblastus tenuis Hambach, Trans. Acad. Sci. St. Louis, 13, p. 63, pl. 5, figs. 17, 17a, 1903.
Cryptoblastus tenuis Peck, Univ. Mo. Studies, 13, no. 4, p. 62, pl. 26, figs. 16, 17, 22, 1938.
Miss. (Chouteau ls.): Pettis Co., Osceola, Providence, Mo.
- Cryptoschisma** Etheridge and Carpenter. Genotype: *Pentremites schultzi* d'Archiac and Verneuil.
Phaenoscismidae (Eublastoidea). Dev.
Etheridge and Carpenter, Cat. Blastoidea, p. 280, 1886.—Bather, Treatise Zool. (Lankester), pt. 3, pp. 84, 92, 1900.—Wanner, Perm. Blast. Timor, 2e Nederl. Timor Exped. 1916, p. 195, 1924; Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 236, 1940.
- Cryptoschisma schultzi** (d'Archiac and Verneuil).
Pentremites schultzi d'Archiac and Verneuil, in Paillette, Bull. Soc. Geol. France, (2) 2, p. 479, pl. 15, figs. 12, 13, 1845.
Pentatrematites schultzi Roemer, Archiv. Naturges., XVII, p. 369, pl. 7, figs. 18a, b, 1851.
Cryptoschisma schultzi Etheridge and Carpenter, Cat. Blast., p. 281, pl. 5, figs. 23-26, pl. 13, fig. 20, pl. 16, figs. 3, 4, pl. 18, fig. 2, 1886.
Dev.: Near Sabero, Spain (Calcaire d'Arnao); Asturias and Leon, Spain (Calcaire de Ferrones).
- Devonoblastus Reimann**. Genotype: *Pentremites leda* Hall.
Pentremitidae (Eublastoidea). Dev.
Reimann, Bull. Buffalo Soc. Nat. Sci., 17, p. 30, 1935.
- Devonoblastus calyce** (Hall).
Pentremites calyce Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 150, 1862.
Devonoblastus calyce Reimann, Bull. Buffalo Soc. Nat. Sci., 17, p. 32, pl. 1, fig. 9, 1935.
Dev. (Hamilton): Western N. Y. (Tichenor sh.); East Bethany, etc., N. Y. (Moscow sh.).
- Devonoblastus leda** (Hall).
Pentremites leda Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 149, pl. 1, fig. 11, 1862.
Pentremitidea leda Etheridge and Carpenter, Cat. Blast., pp. 12, 17, pl. 5, figs. 12-14, 1886.
Granatocrinus leda S. A. Miller, N. Amer. Geol. Pal., p. 250, 1889.
Devonoblastus leda Reimann, Bull. Buffalo Soc. Nat. Sci., 17, p. 31, 1935.
Dev. (Hamilton): Western N. Y. (Centerfield sh.); East Bethany, near Alden etc., N. Y. (Moscow sh.); Widder, Ont. (Widder sh.).

Devonoblastus leda magna (Rowley).

Pentremitidea leda? var. *magna* Rowley, in Greene, Cont. Ind. Pal., 1, pt. 10, p. 93, pl. 30, figs. 9, 10, pp. 32, 33, 1902.

Dev. (Hamilton-Sellersburg ls.): Near Charlestown, Ind.

Devonoblastus maia (Hall).

Pentremites maia Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 150, pl. 1, fig. 10, 1862.

Pentremitidea leda var. *maia* Bather, List. Gen. Sp. Blast. British Mus., p. 57, 1899.

Devonoblastus maia Reimann, Bull. Buffalo Soc. Nat. Sci., 17, p. 31, 1935.

Dev. (Hamilton-Moscow sh.): Moscow, N. Y.

Devonoblastus whiteavesi Reimann.

Reimann, Bull. Buffalo Soc. Nat. Sci., 17, p. 32, pl. 1, fig. 8, 1935.

Granatocrinus leda Whiteaves, Cont. Canadian Pal., 1, pt. 2, p. 108, pl. 14, fig. 14, 1889.

Dev. (Hamilton-Widder beds): Thedford, Ontario.

Dipteroblastus Wanner. Genotype: *D. permicus* Wanner.

Dipteroblastidae (Eublastoidea). Permian.

Wanner, Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, pp. 234, 249, 1940.

Dipteroblastus permicus Wanner.

Wanner, Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 251, figs. 2, 3, pl. 3, figs. 1, 2, 1940.

Permian: Tunium Eno (Basleo), Timor.

Elaeacrinus Roemer = **Nucleocrinus**.

Elaeacrinus canadensis Etheridge and Carpenter = *Nucleocrinus elegans*.

Elaeacrinus ellipticus Shumard = *Orbitremites ellipticus*.

Elaeacrinus granulatus Shumard = *Orbitremites granulatus*.

Elaeacrinus kirkwoodensis Shumard = *Mesoblastus kirkwoodensis*.

Elaeacrinus lucina var. *canadensis* Etheridge and Carpenter = *Nucleocrinus elegans*.

Elaeacrinus Etheridge and Carpenter. See *Elaeacrinus*.

Eleutheroblastus Hambach = *Eleutherocrinus*.

Eleutherocrinus Shumard and Yandell. Genotype: *E. casedayi* Shumard and Yandell.

Eleutherocrinidae (Eublastoidea). Dev.

Shumard and Yandell, Proc. Acad. Nat. Sci. Phila., 8, pp. 73, 74, 1856.—Zittel, Handb. Pal., 1, p. 435, 1879.—Etheridge and Carpenter, Cat. Blast., p. 294, 1886.—Bather, Treatise Zool. (Lankester), pt. 3, pp. 87, 92, 1900.

Eleutheroblastus Hambach, Trans. Acad. Sci. St. Louis, 13, p. 50, 1903.

Eleutherocrinus casedayi Shumard and Yandell.

Shumard and Yandell, Proc. Acad. Nat. Sci. Phila., 8, p. 74, pl. 2, figs. 1-5, 1856.—Bronn, Klass. Ord. Thierr., 2, pl. 23, figs. 7 a-e, 1860.—Etheridge and Carpenter, Cat. Blast., pl. 19, figs. 2-6, 1886.—Whiteaves, Cont. Can. Pal., 1, p. 110, pl. 14, figs. 5, 5a, b, 1887.—Bather, Treatise Zool. (Lankester), pt. 3, p. 88, fig. 9, 1900.—Rowley, in Greene, Cont. Ind. Pal., 1, pt. 10, p. 91, pl. 30, figs. 1-4, 1902; pt. 16, p. 161, pl. 47, figs. 17-20, 1903.—Kirk, U. S. Nat. Mus., Proc., 41, p. 137, pl. 10, figs. 6-8, 1911.—Wanner, Handwort. Naturwiss., p. 495, fig. 33, 1933.

Dev. (Hamilton): Near Louisville, Ky. and Clark Co., Ind. (Sellersburg ls.); Thedford, Ontario (Widder beds).

Eleutherocrinus whitfieldi Hall.

Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 151, 1862.

Dev. (Hamilton-Kashong sh.): Kashong Creek, Muttonville, N. Y.

- Encrinites florealis* Schlotheim = *Pentremites florealis*.
Globoblastus Hambach = *Orbitremites*.
Granatocrinites Troost = *Orbitremites*.
Granatocrinites cidariformis Troost = *Orbitremites granulatus*.
Granatocrinites globosus Troost = *Orbitremites granulatus*.
Granatocrinus Hall = *Orbitremites*.
Granatocrinus cornutus Meek and Worthen = *Schizoblastus cornutus*.
Granatocrinus exiguus Rowley and Hare = *Cryptoblastus pisum*.
Granatocrinus fimbriatus Meek and Worthen = *Orbitremites fimbriatus*.
Granatocrinus glaber Meek and Worthen = *Mesoblastus glaber*.
Granatocrinus granulatus Meek and Worthen = *Cryptoblastus granulatus*.
Granatocrinus hibernica Etheridge and Carpenter = *Orophocrinus hibernicus*.
Granatocrinus humero-stellata Etheridge and Carpenter = *Orophocrinus humero-stellata*.
Granatocrinus leda S. A. Miller = *Devonoblastus leda*.
Granatocrinus leda Whiteaves = *Devonoblastus whiteavesi*.
Granatocrinus lotoblastus White = *Schizoblastus lotoblastus*.
Granatocrinus (Schizoblastus) magnibasis Rowley = *Carpenteroblastus magnibasis*.
Granatocrinus melonoides Meek and Worthen = *Schizoblastus melonoides*.
Granatocrinus missouriensis Shumard = *Cryptoblastus missouriensis*.
Granatocrinus mutabilis Rowley (part) = *Cryptoblastus conoideus*; (part) = *C. missouriensis*.
Granatocrinus neglectus Meek and Worthen = *Schizoblastus? neglectus*.
Granatocrinus norwoodi Meek and Worthen = *Orbitremites norwoodi*.
Granatocrinus norwoodi fimbriatus Etheridge and Carpenter = *Orbitremites fimbriatus*.
Granatocrinus oblongus Etheridge and Carpenter (part) = *Mesoblastus elongatus* (part) = *M. sowerbii*.
Granatocrinus pisiformis Etheridge and Carpenter = *Orbitremites campanulatus*.
Granatocrinus pisum Meek and Worthen = *Cryptoblastus pisum*.
Granatocrinus projectus Meek and Worthen = *Cryptoblastus melo projectus*.
Granatocrinus pyriformis Rowley and Hare = *Carpenteroblastus pyriformis*.
Granatocrinus roffi Etheridge and Carpenter = *Monoschizoblastus roffi*.
Granatocrinus shumardi Meek and Worthen = *Cryptoblastus? shumardi*.
Granatocrinus sphaeroidalis Miller and Gurley = *Mesoblastus glaber sphaeroidalis*.
Granatocrinus stella Rowley = *Carpenteroblastus stella*.
Heteroblastus Etheridge and Carpenter. Genotype: *H. cumberlandi* Etheridge and Carpenter.
Orbitremitidae (Eublastoidea). Low. Carb.
Etheridge and Carpenter, *Cat. Blast.*, p. 255, 1886.—Bather, *Treatise Zool.* (Lanckester), pt. 3, p. 90, 1900.
Heteroblastus cornutus Etheridge and Carpenter = *Schizoblastus cornutus*.
Heteroblastus cumberlandi Etheridge and Carpenter.
Etheridge and Carpenter, *Cat. Blast.*, pp. 141, 237, pl. 6, figs. 1-6, 1886.
Low. Carb. (Yoredale sh.): Near Hexham, Northumberland, England.
Heteroschisma Wachsmuth = *Codaster*.

Indoblastus Wanner. Genotype: *I. granulatus* Wanner.

Anthoblastidae (Eublastoidea). Permian.

Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, p. 28, 1924; Perm. Blast. Timor, 2e Nederl. Timor Exped. 1916, p. 196, 1924; Geol. Exped. Univ. Amsterdam Lesser Sunda Ids., 1, p. 238, 1940.

Indoblastus granulatus Wanner.

Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, p. 29, pl. 199 (1), figs. 1-8, text fig. 4, 1924; Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 260, pl. 2, figs. 6, 7, 1940.

Permian: Near Noil Fatoe and Basleo, Timor.

Indoblastus nuciformis Wanner.

Wanner, Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 261, pl. 1, fig. 14, pl. 2, figs. 1, 2, 1940.

Permian: Basleo (Maun-Mollo, etc.), Timor.

Lophoblastus Rowley. Genotype: *Codonites inopinatus* Rowley and Hare.

Orbitremitidae (Eublastoidea). Miss.

Rowley, Amer. Geol., 27, p. 344, 1901.

Lophoblastus conoideus Rowley = *Cryptoblastus conoideus*.**Lophoblastus inopinatus** (Rowley and Hare).*Codonites inopinatus* Rowley and Hare, Kansas City Sci., 5, p. 100, pl. 2, figs. 11, 12, p. 118, pl. 3, fig. 17, 1891.*Codonites?* (*Orophocrinus?*) *inopinatus* Rowley, Amer. Geol., 25, p. 67, pl. 2, figs. 18, 19, 1900.*Lophoblastus inopinatus* Rowley, Amer. Geol., 27, p. 346, 1901.

Miss. (Low. Burlington ls.): Louisiana, Mo.

Lophoblastus marginulus Rowley.

Rowley, Amer. Geol., 27, p. 345, pl. 28, figs. 18, 19, 1901.

Miss. (Low. Burlington ls.): Louisiana, Mo.

Lophoblastus pentagonus Rowley = *Cryptoblastus?* *pentagonus*.**Mesoblastus** Etheridge and Carpenter. Genotype: *Pentatrematites crenulatus* Roemer.

Orbitremitidae (Eublastoidea). Low. Carb.

Etheridge and Carpenter, Cat. Blast., p. 181, 1886.—Bather, Treatise Zool. (Lankester), pt. 3, pp. 90, 92, 1900.—Hambach, Trans. Acad. Sci. St. Louis, 13, p. 45, 1903.

Mesoblastus angulatus (Sowerby).*Pentatrematites angulata* Sowerby, Zool. Jour., 4, no. 13, p. 89, 1828; 4, no. 20, pl. 32, Suppl., fig. 1, 1834.*Pentremites angulatus* Gilbertson, in Phillips, Geol. Yorkshire, pt. 2, p. 207, pl. 3, fig. 13, 1836.*Mesoblastus angulatus* Etheridge and Carpenter, Cat. Blast., p. 183, pl. 6, fig. 7, pl. 8, figs. 7, 8, pl. 17, fig. 9, 1886.

Low. Carb.: Bolland, England.

Mesoblastus australis Etheridge.

Etheridge, in Jack and Etheridge, Geol. Pal. Queensland, p. 210, pl. 44, fig. 2, 1892. Permian (Bowen River ser. Gympie beds): Queensland, Australia.

Mesoblastus crenulatus (Roemer).*Pentatrematites crenulatus* Roemer, Archiv. Naturges., Jahrg. XVII, 1, p. 366 pl. 4, figs. 15 a-d, p. 350 (as *crenatus* by error), 1851.*Pentremites crenulatus* de Koninck and Lehon, Mem. Acad. Roy. Belge., 28, mem. 3, p. 190, pl. 7, figs. 4 a-d, 1854.

- Mesoblastus crenulatus* Etheridge and Carpenter, *Cat. Blast.*, p. 183, pl. 4, figs. 1, 2, pl. 6, figs. 8-10, 1886.
Low. Carb. (Low. Tournasian): Tournai, Belgium.
- Mesoblastus elongatus** (Cumberland).
Mitra elongata Cumberland, *Rel. Conserv.*, p. 35, pl. B, figs. 1-3 (2d row), 1826.
Mesoblastus elongatus Etheridge and Carpenter, *Cat. Blast.*, p. 186, pl. 6, fig. 11, pl. 8, figs. 1-4, pl. 11, fig. 15, pl. 17, fig. 10, 1886.
Pentatrematites oblonga Sowerby, *Zool. Jour.*, 4, p. 90, 1828; 5, *Suppl.*, pl. 33, figs. 3, 4, 1835.
Pentremites oblongus Gilbertson, in Phillips, *Geol. Yorkshire*, 2, p. 207, pl. 3, figs. 11, 12, 1836.
Low. Carb. (Mtn. ls.): Bolland, Lancashire, and Settle, Yorkshire, England.
- Mesoblastus giganteus* Etheridge and Carpenter.
Etheridge and Carpenter, *Cat. Blast.*, pp. 140, 183, 189, 1886 (nom. nud.).
Low. Carb.: Lancashire, England.
- Mesoblastus glaber** (Meek and Worthen).
Granatocrinus glaber Meek and Worthen, *Proc. Acad. Nat. Sci. Phila.*, p. 91, 1869; *Geol. Surv. Ill.*, 5, p. 537, pl. 20, fig. 11, 1873.
Mesoblastus? *glaber* Etheridge and Carpenter, *Cat. Blast.*, p. 183, 1886.
Mesoblastus glaber Ulrich, *U. S. Geol. Surv., Prof. Paper 36*, p. 47, pl. 6, figs. 13-17, 1905.—Butts, *Kentucky Geol. Surv.*, p. 62, pl. 15, figs. 27-31, 1917.—Weller, *Geol. Surv. Ill.*, *Bull.* 41, p. 327, pl. 8, figs. 25-28, 1920.—Croneis and Geis, *Jour. Pal.*, 14, p. 346, text fig. 1, 1940.
Mesoblastus cf. *glaber* Butts, *Geol. Surv. Ala., Spec. Rep. no. 14*, p. 180, pl. 59, fig. 3, 1926.
Miss. (Chester): Hardin Co., Ill. (Shetlerville fm.); Monroe Co., Ill. (Renault fm.); Floraville, Ill. (Paint Creek fm.); Princeton, etc., Ky., and Huntsville, Ala. (Ste. Genevieve ls.); also Gasper ls. of Ky.
- Mesoblastus glaber sphaeroidalis** (Miller and Gurley).
Granatocrinus sphaeroidalis Miller and Gurley, *Ill. St. Mus. Nat. Hist., Bull.* 3, p. 65, pl. 6, figs. 31-33, 1894.
Mesoblastus glaber var. *sphaeroidalis* Ulrich, *Kentucky Geol. Surv.*, p. 247, pl. 2, fig. 33, 1917.
Miss. (Chester-Gasper oolite): Meade Co., Ky.
- Mesoblastus haynesi** (T. H. Clark).
Schizoblastus haynesi T. H. Clark, *Bull. Mus. Comp. Zool.*, 61, no. 9, p. 371, pl. 1, figs. 15-20, 1917.
Mesoblastus haynesi Fritz and Cline, *Trans. Roy. Canadian Inst.* 21, pt. 2, pp. 307-312, pl. 17, figs. 1-13, 1937.
Miss.: Old Baldy and Squaw Creek, Montana (Madison ls.); Mt. Coleman, Alberta (Rundle ls.).
- Mesoblastus incurvatus** Weller.
Weller, *Geol. Surv. Ill., Bull.* 41, p. 358, pl. 8, figs. 29-34, 1920.
Miss. (Chester-Golconda ls.): Pope Co., Ill.
- Mesoblastus kirkwoodensis** (Shumard).
Elaeacrinus kirkwoodensis Shumard, *Trans. Acad. Sci. St. Louis*, 2, p. 113, 1863.
Cryptoblastus? *kirkwoodensis* Etheridge and Carpenter, *Cat. Blast.*, p. 232, 1886.
Cryptoblastus kirkwoodensis Keyes, *Geol. Surv. Mo.*, 4, p. 139, pl. 18, figs. 8a, b, 1894.
Miss. (St. Louis ls.): Near Kirkwood, St. Louis, etc., Mo.
- Mesoblastus melonianus** Schmidt.
Schmidt, *Abhandl. Preuss. Geol. Landesanst., n.f., heft 122*, pp. 69, 70, fig. 14, 1930.
Low. Carb. (Tournasian): Wasserfall, near Velbert, Germany.

Mesoblastus rofei Etheridge and Carpenter.Etheridge and Carpenter, *Cat. Blast.*, pp. 49, 188, 235, pl. 4, figs. 3, 4, 1886.*Acentrotremites* sp., Etheridge and Carpenter, *Ann. Mag. Nat. Hist.*, (3) 11, p. 233, 1883.

Low. Carb.: Clitheroe, Lancashire; Yorkshire, England.

Mesoblastus sowerbyi Etheridge and Carpenter.Etheridge and Carpenter, *Cat. Blast.*, p. 187, pl. 6, figs. 12-14, pl. 8, figs. 5, 6, 1886.*Granatocrinus oblongus* Etheridge and Carpenter (part), *Ann. Mag. Nat. Hist.*, 9, p. 239, 1882.

Low. Carb.: Bolland, England.

Mesocystis Bather. Genotype: *Mesites pusirefskii* Hoffman.

Asteroblastidae (Protoblastoidea). Ord.

Bather, *Ann. Mag. Nat. Hist.*, (7) 1, p. 102, 1898.—Jaekel, *Stammes. Pelmat.*, 1, p. 376, 1899.—Bather, *Treatise Zool.* (Lankester), pt. 3, p. 76, 1900.*Mesites* Hoffman (not Schoenherr), *Verh. Russ. Kais. Min. Ges.*, (2) 1, p. 2, 1866.—Nikitin, *Bull. Soc. Imp. Nat. Moscou*, p. 301, 1877.—Zittel, *Handb. Pal.*, 1, p. 414, 1879.—Haeckel, *Amphor. Cystoid.*, p. 118, 1896. (Genotype: *M. pusirefskii* Hoffman.)**Mesocystis jaekeli** Yakovlev.Yakovlev, *Central. Geol. & Prosp. Inst., Mater., Pal., and Strat., Mag.* 3, p. 35, pl. 1, figs. 3-7, 1937.

Ord.: Belaia River, Urals, Russia.

Mesocystis pusirefskii (Hoffman).*Mesites pusirefskii* Hoffman, *Verh. Russ. Kais. Min. Ges.*, (2) 1, p. 4, pl. 1, figs. 1-9, 1866.—Haeckel, *Amphor. Cystoid.*, p. 119, fig. 17, 1896.*Agelacrinus pusyrewskii* Schmidt, *Mem. Acad. Imp. Sci. St. Petersburg*, (7) 21, p. 34, pl. 3, fig. 10 a-d, 1874.*Mesocystis pusyrewskii* Jaekel, *Stammes. Pelmat.*, 1, p. 383, pl. 6, pl. 18, figs. 7, 8, 1899.*Mesocystis pusirefskii* Bather, *Treatise Zool.* (Lankester), pt. 3, p. 76, fig. 47, 1900.*Mesocystis pusireuskii* Wanner, *Handwort. Naturwiss.*, p. 491, figs. 20-1, 2, 1933.*Mesocystis pusireffskii* Yakovlev, *Central. Geol. Prosp. Inst. Mater. and Strat., Mag.* 3, p. 35, pl. 1, fig. 2, 1937.Ord.: St. Petersburg and vicinity (Walchow, B₂ and Kunda, B₂); Izvoz, Volkhof River, Russia.**Metablastus** Etheridge and Carpenter. Genotype: *Pentremites lineatus* Shumard.

Troosticrinidae (Eublastoidea). Dev., Low. Carb.

Etheridge and Carpenter, *Cat. Blast.*, p. 196, 1886.—Bather, *Treatise Zool.* (Lankester), pt. 3, pp. 87, 92, 1900.*Metablastus bipyramidalis* Etheridge and Carpenter = *Tricoelocrinus bipyramidalis*.*Metablastus cottaldi* Etheridge and Carpenter = *Belocrinus cottaldi*.**Metablastus hispanicus** (Etheridge and Carpenter).*Troostocrinus hispanicus* Etheridge and Carpenter, *Ann. Mag. Nat. Hist.*, (5) 11, p. 245, 1883.*Metablastus hispanicus* Etheridge and Carpenter, *Cat. Blast.*, p. 200, pl. 5, fig. 21, 1886.

Low. Dev. (Calcaire d'Arnao): Near Sabero (Leon), Spain.

Metablastus lineatus (Shumard).*Pentremites lineatus* Shumard, *Trans. Acad. Sci. St. Louis*, 1, p. 241, pl. 9, figs. 3a, b, 1858.*Metablastus lineatus* Etheridge and Carpenter, *Cat. Blast.*, p. 199, pl. 3, figs. 14, 15, pl. 17, fig. 18, 1886.—Keyes, *Geol. Surv. Mo.*, 4, p. 136, pl. 18, fig. 11, 1894.—Springer, *Zittel-Eastman Textb. Pal.*, 1, p. 165, fig. 258-C, 1913.—Wanner, *Handwort. Naturwiss.*, p. 494, fig. 28-C, 1933.

- Saccoblastus lineatus* Hambach, Trans. Acad. Sci. St. Louis, 13, p. 43, pl. 3, fig. 8, 1903.
Miss. (Low. and Up. Burlington ls.): Near Monmouth, Ill.; Burlington, Iowa, etc.
- Metablastus nitidulus** (Miller and Gurley).
Troostocrinus nitidulus Miller and Gurley, 16th Rep. Geol. Surv. Ind., for 1888, p. 373, pl. 9, figs. 14, 15, pl. 10, fig. 14, 1891 (adv. pub. 1890).
Metablastus nitidulus Rowley in Greene, Cont. Ind. Pal., pt. 12, p. 128, pl. 36, fig. 49, 1903.
Miss. (Spergen ls.): Lanesville, Ind.
- Metablastus? pentalobus* Etheridge and Carpenter = *Codaster pentalobus*.
- Metablastus varsouviensis** (Worthen).
Pentremites (Tricoelocrinus) varsouviensis Worthen, Geol. Surv. Ill., 6, p. 521, pl. 31, figs. 8, 9, 1875.
Metablastus varsouviensis Etheridge and Carpenter, Cat. Blast., p. 198, 1886.
Miss. (Warsaw ls.): Warsaw and near Columbus, Ill.; Boonville, Mo.
- Metablastus wachsmuthi** (Gurley).
Troostocrinus wachsmuthi Gurley, New Carb. Foss., Bull. 2, p. 1, 1884.
Metablastus wachsmuthi Etheridge and Carpenter, Cat. Blast., p. 198, pl. 18, fig. 15, 1886.
Miss. (Spergen ls.): Ellettsville and Spergen Hill, Ind.
- Metablastus wortheni** (Hall).
Pentremites wortheni Hall, Geol. Rep. Iowa, 1, pt. 2, p. 606, pl. 15, 1, fig. 1858.—Meek and Worthen, Geol. Surv. Ill., 5, p. 506, pl. 14, fig. 11, 1873.
Metablastus wortheni Etheridge and Carpenter, Cat. Blast., p. 198, pl. 3, fig. 13, 1886.—Keyes, Geol. Surv. Mo., 4, p. 137, pl. 18, fig. 12, 1894.—Beede, 30th Rep. Geol. Nat. Res. Ind., p. 1266, pl. 14, figs. 8, 8b, 1906.
Saccoblastus wortheni Hambach, Trans. Acad. Sci. St. Louis, 13, p. 43, 1903.
Miss.: Nauvoo, etc., Ill., Keokuk, Iowa, Crawfordsville and Canton, Ind. (Keokuk ls.); Colesburg, Ky. (Warsaw ls.); Indiana (Spergen ls.).
- Metasterocystis** Jaekel. Genotype: *M. micropelta* Jaekel.
Asteroblastidae (Protoblastoidea). Ord.
Jaekel, Pal. Zeits., 3, p. 101, 1918.
- Metasterocystis micropelta** Jaekel.
Jaekel, Pal. Zeits., 3, p. 101, 1918.
Asteroblastus foveolatus Jaekel (not Eichwald), Stammes. Pelmat., 1, pl. 18, fig. 9 (not. pl. 7, figs. 2-7), 1899.
Ord. (Kunda fm. B₂): Iswos, St. Petersburg, Russia.
- Mitra* Cumberland = *Orophocrinus*.
Mitra elliptica Cumberland = *Acentrotrematites ellipticus*.
Mitra elongata Cumberland = *Mesoblastus elongatus*.
Mitra rugosa quinqueperforata Cumberland = *Pentremites godoni*.
- Monoschizoblastus** Cline. Genotype: *Granatocrinus rofei* Etheridge and Carpenter.
Nucleocrinidae (Eublastoidea). Carb.
Cline, Jour. Pal., 10, p. 265, 1936.
- Monoschizoblastus bailii** (Etheridge and Carpenter).
Schizoblastus bailii Etheridge and Carpenter, Cat. Blast., p. 223, pl. 16, figs. 12, 13, 1886.
Monoschizoblastus bailii (bailyi) Cline, Jour. Pal., 10, p. 265, 1936.
Low. Carb.: Florence Court, Co. Fermanagh, Ireland.
- Monoschizoblastus rofei** (Etheridge and Carpenter).
Granatocrinus rofei Etheridge and Carpenter, Ann. Mag. Nat. Hist., (5) 9, p. 239, 1882.

- Schizoblastus rofei* Etheridge and Carpenter, Cat. Blast., p. 228, pl. 6, fig. 17, pl. 8, figs. 9-11, pl. 17, fig. 2, 1886.
- Monoschizoblastus rofei* Cline, Jour. Pal., 10, p. 265, 1936.
Low. Carb.: Florence Court, Co. Fermaugh, Ireland.
- Nannoblastus** Wanner. Genotype: *N. pyramidatus* Wanner.
Angioblastidae (Eublastoidea). Permian.
Wanner, Perm. Blastoid. Timor, 2e Nederl. Timor Exped. 1916, pp. 196, 200, 1924;
Neue Beitr. kennt. Perm. Echin. Timor, Blastoidea, p. 62, 1931.
- Nannoblastus cuspidatus** Wanner.
Wanner, Perm. Blastoid. Timor, 2e Nederl. Timor Exped. 1916, p. 213, pl. 3, figs. 8, 9, 1924.
Permian: Somohole, Timor.
- Nannoblastus pyramidatus** Wanner.
Wanner, Perm. Blast. Timor, 2e Nederl. Timor Exped. 1916, p. 211, pl. 1, figs. 1-3, pl. 4, fig. 10, 1924; Neue Beitr. kennt. Perm. Echin. Timor, VI, Blastoidea, p. 63, pl. 4, figs. 4-12, 1931.
Permian: Noil Tonini, Timor.
- Neoschisma** Wanner. Genotype: *N. verrucosum* Wanner.
Neoschismidae (Eublastoidea). Permian.
Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, Teil 2, p. 6, 1924; Perm. Blastoid. Timor, 2e Nederl. Timor Exped. 1916, p. 195, 1924; Geol. Exped. Univ. Amsterdam Lesser Sunda Ids., 1, pp. 238, 264, 1940.
- Neoschisma timorense** Wanner.
Wanner, Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 264, pl. 2, figs. 8-10, 1940.
Permian: Basleo, Timor.
- Neoschisma verrucosum** Wanner.
Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, Teil 2, p. 7, pl. 199 (1), figs. 9, 10, 1924.
Permian: One kilo south of Kapan, Timor.
- Nucleocrinus** Conrad. Genotype *N. elegans* Conrad.
Nucleocrinidae (Eublastoidea). Dev.
Conrad, Jour. Acad. Nat. Sci. Phila., 8, p. 280, 1842.—Meek and Worthen, Geol. Surv. Ill., 2, p. 275, 1866.—Zittel, Handb. Pal., 1, p. 435, 1879.—Bather, Treatise Zool. (Lankester), pt. 3, pp. 88, 92, 1900.—Hambach, Trans. Acad. Sci. St. Louis, 13, p. 22, 1913.
Elaeocrinus Roemer, Archiv. Naturges. Jahrb., XVII, 1, p. 379, 1852.—Etheridge and Carpenter, Ann. Mag. Nat. Hist., 11, p. 228, 1883 (as *Elaeocrinus*). (Genotype: *Pentremites verneuili* Troost.)
Olivanites Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.—Lyon, Geol. Surv. Ky., 3, pp. 487, 492, 1857.—Hambach, Trans. Acad. Sci. St. Louis, 13, p. 48, 1903. (Genotype: *Pentremites verneuili* Troost.)
- Nucleocrinus angularis** (Lyon).
Olivanites angularis Lyon, Owen's Rep. Geol. Surv. Ky., p. 492, pl. 5, figs. 2, 2a, b, 1857.
Elaeocrinus angularis Etheridge and Carpenter, Cat. Blast., p. 219, pl. 2, figs. 43, 44, 1886.
Nucleocrinus angularis Lyon and Casseday, Proc. Amer. Assoc. Adv. Sci., 4, p. 295, 1859.—Rowley in Greene, Cont. Ind. Pal., pt. 9, p. 82, pl. 27, figs. 1-4, 1902; pt. 19, p. 190, pl. 57, fig. 12, 1904.
Dev. (Hamilton-Sellersburg ls.): Falls of the Ohio, Rock Island, and Beargrass Creek, Ky.; Charlestown, etc., Ind.
- Nucleocrinus bondi** Thomas.
Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 431, pl. 36, figs. 2-5, 12, 18, 1924.
Dev. (Cedar Valley ls.): Iowa City, Iowa.

Nucleocrinus conradi Hall.

Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 149, 1862.

Elaeocrinus conradi Shumard, Trans. Acad. Sci. St. Louis, 2, p. 369, 1866.

Olivanites conradi Hambach, Trans. Acad. Sci. St. Louis, 13, p. 49, 1903.

Dev. (Onondaga-Jeffersonville ls.): Falls of the Ohio.

Nucleocrinus cucullatus Rowley.

Rowley in Greene, Cont. Ind. Pal., pt. 9, p. 77, pl. 26, figs. 1, 2, 1902.

Dev. (Onondaga-Jeffersonville ls.): Falls of the Ohio.

Nucleocrinus elegans Conrad.

Conrad, Jour. Acad. Nat. Sci. Phila., 8, p. 280, pl. 15, fig. 17, 1842.—Bather, List. Gen. and Sp. Blast. Brit. Mus., p. 21, 1899.

Elaeocrinus elegans Shumard, Trans. Acad. Sci. St. Louis, 2, p. 369, 1866.—Etheridge and Carpenter, Cat. Blast., p. 216, 1886.

Olivanites elegans Hambach, Trans. Acad. Sci. St. Louis, 13, p. 50, 1903.

Nucleocrinus cf. *elegans* Reimann, Bull. Buffalo Soc. Nat. Sci., 17, p. 37, pl. 3, fig. 9, 1935.

Nucleocrinus canadensis Montgomery, Canadian Nat., 10, p. 83, 1881.

Elaeocrinus canadensis (or *E. lucina* var. *canadensis*) Etheridge and Carpenter, Cat. Blast., pp. 36, 216, 218, pl. 13, fig. 19, 1886.

Nucleocrinus lucina Montgomery (not Hall), Canadian Nat., 10, p. 81, figs. 1 a-c, 1881.

Dev.: Moscow and Kashong Creek, N. Y. (Moscow sh.); Belfast, Bay View etc., N. Y. (Wanakah sh.); 3 miles north Sherburne, N. Y. (Tully-Westbrook mem.); Partridge Point, Mich. (Thunder Bay ls.); Davenport, Iowa (Cedar Valley ls.); Near Arkona, Ontario (Widder beds).

Nucleocrinus globosus (Troost).

Olivanites globosus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Nucleocrinus globosus Wood, U. S. Nat. Mus., Bull. 64, p. 19, pl. 3, fig. 6, 1909.

Dev. (Onondaga-Jeffersonville ls.): Falls of the Ohio. (?Bedford Co., Tenn.)

Nucleocrinus greenei Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 3, p. 62, pl. 6, figs. 24, 25, 1894.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 9, p. 83, pl. 27, figs. 12-15, 1902; pt. 12, p. 129, pl. 36, fig. 57, 1903.

Dev. (Hamilton-Sellersburg ls.): Falls of the Ohio, Louisville, Ky.; Charlestown, Ind.

Nucleocrinus hallii Vanuxem.

Vanuxem, Geol. N. Y., Rep. Third Dist., p. 165, 1842 (listed).

Dev. (Hamilton): New York.

Nucleocrinus imitator Rowley.

Rowley in Greene, Cont. Ind. Pal., 1, pt. 9, p. 84, pl. 27, figs. 24-28, 1902; pt. 19, p. 191, pl. 57, figs. 15-17, 1904.

Dev. (Hamilton-Sellersburg ls.): Near Charlestown, Ind.

Nucleocrinus kirkwoodensis Miller = *Mesoblastus kirkwoodensis*.**Nucleocrinus lucina** Hall.

Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 148, pl. 1, fig. 16, 1862.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 19, p. 192, pl. 57, figs. 19, 20, 1904.—Reimann, Bull. Buffalo Soc. Nat. Sci., 17, p. 34, pl. 4, fig. 3, 1935.

Elaeocrinus lucina Shumard, Trans. Acad. Sci. St. Louis, 2, p. 369, 1866.

Olivanites lucina Hambach, Trans. Acad. Sci. St. Louis, 13, p. 50, 1903.

Dev. (Hamilton): Livingston Co., Darien, etc., N. Y. (Kashong mem.); 3 miles east East Alexander, N. Y. (Centerfield ls.); 18 Mile Creek, N. Y. (Low. Moscow sh.); Clark Co., Ind. (Sellersburg ls.).

Nucleocrinus lucina Montgomery (not Hall) = *N. elegans*.**Nucleocrinus lucina** var. *Hall* = *N. powelli*.

Nucleocrinus meloniformis (Barris).

Elaeocrinus meloniformis Barris, Geol. Surv. Ill., 7, p. 361, 1883; Proc. Davenport Acad. Nat. Sci., 4, p. 91, pl. 1, fig. 3, 1886 (adv. pub. 1885).

Nucleocrinus meloniformis Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 423, pl. 36, figs. 10, 11, 1924.

Dev.: Near Buffalo, Iowa (Cedar Valley ls.); 4 miles south Alpena, Mich. (Thunder Bay ls.).

Nucleocrinus obovatus (Barris).

Elaeocrinus obovatus Barris, Geol. Surv. Ill., 7, p. 358, fig. 3, 1883; Proc. Davenport Acad. Sci., 4, p. 88, text fig. 3, pl. 1, figs. 1, 2, 1886 (adv. pub. 1885).

Nucleocrinus obovatus Cleland, Wisconsin Geol. Nat. Hist. Surv., Bull. 21, p. 43, pl. 3, fig. 2, 1911.—Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 423, pl. 36, figs. 1, 6-9, 16, 17, text fig. 65, 1924.

Dev.: Near Buffalo and Iowa City, Iowa (Cedar Valley ls.); 4 miles south of Alpena, Mich. (Thunder Bay ls.).

Nucleocrinus powelli Reimann.

Reimann, Bull. Buffalo Soc. Nat. Sci., 17, p. 34, pl. 3, figs. 4-6, 1935.

Nucleocrinus lucina var. Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 148, 1862.

Dev. (Hamilton): Cazenovia Creek, Springbrook, N. Y. (Tichenor ls.); York, N. Y. (Moscow sh.); Alden and Kashong Creek, N. Y. (Kashong mem.).

Nucleocrinus powelli glabra Reimann.

Reimann, Bull. Buffalo Soc. Nat. Sci., 17, p. 36, pl. 3, figs. 7, 8 (as *N. powelli*, var.), 1935.

Dev. (Hamilton-Moscow, Kashong-Windom sh.): Eighteen Mile Creek and Darien, N. Y.

Nucleocrinus priedei Reimann.

Reimann, Bull. Buffalo Soc. Nat. Sci., 17, p. 37, pl. 3, figs. 10, 11, 1935.

Dev. (Hamilton): 2½ miles east of East Alexander, Genesee Co., N. Y. (Centerfield ls.); Cazenovia Creek, N. Y. (Ludlowville sh.-Wanakah mem.).

Nucleocrinus stichteri Rowley.

Rowley in Greene, Cont. Ind. Pal., 1, pt. 9, p. 83, pl. 27, figs. 9-11, 1902.

Dev. (Hamilton-Sellersburg ls.): Near Charlestown, Ind.

Nucleocrinus venustus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 3, p. 63, pl. 8, figs. 26-30, 1894.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 9, p. 82, pl. 27, figs. 5-8, 1902.

Dev.: Falls of the Ohio, Louisville, and Lebanon, Ky., and near Charlestown, Ind. (Hamilton-Sellersburg ls.); Columbus, Ohio (Onondaga-Columbus ls.).

Nucleocrinus verneuili (Troost).

Pentremiles verneuili Troost, 6th Prelim. Rep. Geol. Tenn., p. 14, 1841.

Pentatrematites verneuili Bronn, Index Pal., 1, p. 946, 1848.

Elaeocrinus verneuili Roemer, Archiv. Naturges. Jahrg. 17, 1, p. 379, pl. 8, figs. 1 a-d, 1851; in Bronn, Leth. Geog., 1, pt. 2, p. 284, pl. 4, figs. 10a, b, 1852-1854.—Etheridge and Carpenter, Cat. Blast., p. 216, pl. 2, fig. 45, pl. 17, fig. 19, pl. 18, figs. 16-18, pl. 19, fig. 7, 1886.

Olivanites verneuili Lyon, Geol. Surv. Ky., 3, p. 487, pl. 5, figs. 1 a-d, 1857.

Nucleocrinus verneuili Billings, Amer. Jour. Sci. and Arts, (2) 50, p. 229, figs. 3-6, 1870.—Bather, Treatise Zool. (Lankester), pt. 3, p. 88, figs. 10, 11, 1900.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 9, p. 79, pl. 26, figs. 9-15, 18-22, pl. 27, figs. 17-23, 1902; pt. 12, p. 128, pl. 36, figs. 52-56, 1903.—Wood, U. S. Nat. Mus., Bull. 64, p. 18, pl. 3, figs. 7-13, 1909.—Springer, Zittel-Eastman Textb. Pal., p. 171, fig. 266, 1913.—Branson, Missouri Bur. Geol. and Mines, 17, ser. 2, p. 57, pl. 8, figs. 3, 4, 1922.

Dev.: Falls of the Ohio, etc. (Jeffersonville ls.); Leroy, etc. N. Y. (Onondaga ls.); Columbus, Ohio (Columbus ls.); Central Mo. (Mineola ls.); Southeast Mo. (Grand Tower ls.).

Nucleocrinus verneuili eriensis Reimann.

Reimann, Bull. Buffalo Soc. Nat. Sci., 17, p. 33, pl. 4, figs. 4, 5, 1935.

Dev. (Hamilton-Tichenor ls.): Cazenovia Creek, Springbrook, Erie Co., N. Y.

Nucleocrinus verneuili inflatus Rowley.

Rowley in Greene, Cont. Ind. Pal., 1, pt. 9, p. 78, pl. 26, figs. 3-5, 1902.

Dev. (Onondaga-Jeffersonville ls.): Falls of the Ohio.

Nucleocrinus verneuili pomum (Etheridge and Carpenter).

Elaeocrinus verneuili var. *pomum* Etheridge and Carpenter, Cat. Blast., pp. 137, 218, pl. 2, fig. 46, 1886.

Nucleocrinus verneuili var. *pomum*? Rowley in Greene, Cont. Ind. Pal., 1, pt. 9, p. 79, pl. 26, figs. 16, 17, 1902.

Dev. (Onondaga): Falls of the Ohio and Clark Co., Ind. (Jeffersonville ls.); Columbus, Ohio (Columbus ls.).

Nucleocrinus verneuili sulcatus Rowley.

Rowley in Greene, Cont. Ind. Pal., 1, pt. 9, p. 78, pl. 26, figs. 6-8, 1902.

Dev. (Onondaga-Jeffersonville ls.): Falls of the Ohio.

Nymphaeoblastus von Peetz. Genotype: *N. miljukovi* von Peetz.

Nymphaeoblastidae (Eublastoidea). Low. Carb.

Von Peetz, St. Petersburg Trav. Soc. Nat., 35, fasc. 5, pp. 15-20, 1907; Wanner, Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 237, 1940.

Nymphaeoblastus anossofi Yakovlev.

Yakovlev, Bull. Comité Géol., 45, no. 2, p. 46, pl. 1, fig. 2, 1926.

Low. Carb.: Province of Akmolinsk, Russia.

Nymphaeoblastus miljukovi von Peetz.

Von Peetz, St. Petersburg Trav. Soc. Nat., 35, fasc. 5, pp. 5, 15, pl. 1, 1907.—Yakovlev, Bull. Comité Géol., 45, no. 2, p. 45, 1926.

Low. Carb.: Kirghis Steppes, Russia.

Olivanites Troost = Nucleocrinus.

Orbitremites Austin and Austin. Genotype: *Pentremites derbiensis* Sowerby.

Orbitremitidae (Eublastoidea). Low. Carb.; Permian.

Austin and Austin in Gray, Synop. Contents Brit. Mus., (ed 42), p. 12, 1840; Ann. Mag. Nat. Hist., 10, p. 111, 1842.—Bather, Treatise Zool. (Lankester), pt. 3, pp. 90, 92, 1900.

Cidaroblastus Hambach, Trans. Acad. Sci. St. Louis, 13, p. 45, 1903. (Genotype: *Pentatrematites granulatus* Roemer.)

Globoblastus Hambach, Trans. Acad. Sci. St. Louis, 13, p. 46, 1903. (Genotype: *Pentremites norwoodi* Owen and Shumard.)

Granatocrinus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 420, 1849. (Genotype: *G. cidariformis* Troost.)

Granatocrinus Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 146, 1862.—Meek and Worthen, Geol. Surv. Ill., 2, p. 274, 1866.—Zittel, Handb. Pal., 1, p. 434, 1879.—Etheridge and Carpenter, Cat. Blast., p. 233, 1886. (Genotype: *Pentatrematites granulatus* Roemer.)

Orbitremites angulatus Austin and Austin = Mesoblastus angulatus.

Orbitremites aplatus (Rowley and Hare).

Granatocrinus aplatus Rowley and Hare, Kansas City Sci., 5, p. 117, pl. 3, figs. 11, 12, 1891.—Rowley, Amer. Geol., 25, p. 67, pl. 2, fig. 15, 1900.

Orbitremites aplatus Bather, List. Gen. and Sp. Blastoid. in Brit. Mus., p. 24, 1899. Miss. (Low. and Up. Burlington ls.): Louisiana and Spencer Creek, north of Curryville, Mo.

Orbitremites calycinus (Rowley).

Granatocrinus calycinus Rowley, Amer. Geol., 25, p. 66, pl. 2, figs. 12-14, 1900.

Miss. (Up. Burlington ls.): Louisiana, Mo.

Orbitremites campanulatus (McCoy).

Pentremites campanulatus McCoy, Ann. Mag. Nat. Hist., (2) 3, p. 249, 1849; Brit. Pal. Foss., p. 123, pl. 3-D, fig. 9, 1854.

Pentatrematites campanulatus Roemer, Archiv. Naturges. Troschel, XVII, 1, p. 361, pl. 5, fig. 4, 1851.

Granatocrinus campanulatus Etheridge and Carpenter, Cat. Blast., p. 251, pl. 8, figs. 13-15, pl. 9, figs. 8-10, pl. 10, figs. 9, 10, pl. 17, fig. 3, 1886.

Granatocrinus pisiformis Etheridge and Carpenter, Ann. Mag. Nat. Hist., (5) 9, p. 239, 1882.

Low. Carb.: Derbyshire, Bolland and Clitheroe, Lancashire, England.

Orbitremites chouteauensis Peck.

Peck, Univ. Mo. Studies, 13, no. 4, p. 69, pl. 26, fig. 18, 1938.

Miss. (Chouteau ls.): Near Providence, Mo.

Orbitremites concinnulus (Rowley and Hare).

Granatocrinus concinnulus Rowley and Hare, Kansas City Sci., 5, p. 117, pl. 3, figs. 13, 14, 1891.

Orbitremites concinnulus Bather, List. Gen. and Sp. Blast. Brit. Mus., p. 25, 1899.

Cryptoblastus concinnulus Rowley, Amer. Geol., 26, pp. 246, 251, 1900.

Miss. (Low. Burlington ls.): Louisiana, Mo.

Orbitremites derbiensis (Sowerby).

Pentremites derbiensis Sowerby, Zool. Jour. for 1825-1826, 2, no. 7, pl. 11, fig. 3, 1826.—Phillips, Geol. Yorkshire, 2, pl. 3, fig. 10, 1836.—Baily, Figs. Char. Brit. Foss., p. 67, pl. 36, figs. 1 a-c, 1875.

Granatocrinus derbiensis Etheridge and Carpenter, Cat. Blast., p. 250, pl. 6, fig. 23, pl. 9, figs. 1-7, pl. 11, figs. 11-13, pl. 17, fig. 4, 1886.

Pentremites aff. *derbyensis* Carpentier, Mem. Soc. Geol. Nord., 7, p. 352, pl. 4, fig. 12, 1913.

Orbitremites derbiensis Springer, Zittel-Eastman Textb. Pal., p. 165, fig. 258-A, 1913.—Wanner, Handwort. Naturwiss., p. 494, fig. 28-E, 1933.

Low. Carb.: Grassington, Derbyshire, Bolland and Clitheroe, Lancashire, England; Co. Fermanagh, Ireland.

Orbitremites ellipticus (Sowerby).

Pentremites elliptica Sowerby, Zool. Jour., 2, no. 7, p. 317, pl. 11, fig. 4, 1826.—Blainville, Man. Actinologie, p. 264, pl. 28, figs. 4, 4a, 1834.—Phillips, Geol. Yorkshire, 2, p. 207, pl. 3, figs. 6-8, 1836.—Rofe, Geol. Mag., 2, p. 249, pl. 8, fig. 7, 1865.

Elaeocrinus ellipticus Shumard, Trans. Acad. Sci. St. Louis, 2, p. 112, 1863.

Granatocrinus ellipticus Etheridge and Carpenter, Cat. Blast., p. 253, pl. 6, fig. 21, pl. 8, figs. 16-21, pl. 10, figs. 12-16, pl. 17, figs. 6, 7, 1886.

Low. Carb.: Bolland and Clitheroe, Lancashire, Derbyshire and Yorkshire, England; Co. Dublin, Ireland.

Orbitremites excavatus (Rowley and Hare).

Granatocrinus excavatus Rowley and Hare, Kansas City Sci., 5, p. 99, pl. 2, figs. 9, 10, 1891.

Miss. (Low. Burlington ls.): Louisiana, Mo.

Orbitremites exiguus Bather = *Cryptoblastus pismus*.

Orbitremites fimbriatus (Meek and Worthen).

Granatocrinus fimbriatus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 259, 1866.

Orbitremites fimbriatus Bather, List. Gen. and Sp. Blast. Brit. Mus., p. 29; p. 31 (as *O. norwoodi* var. *fimbriatus*), 1899.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Orbitremites grandis Rowley.

Rowley in Greene, Cont. Ind. Pal., 1, pt. 10, p. 96, pl. 30, figs. 34, 35, 1902.

Miss. (Ft. Payne ch.): Greene Co., Ky.

Orbitremites granulatus (Roemer).

Pentatrematites granulatus Roemer, Archiv. Naturges. Jahrg. XVII, 1, p. 363, pl. 3, fig. 13, 1851.

Elaeacrinus granulatus Shumard, Trans. Acad. Sci. St. Louis, 2, p. 112, 1866.

Granatocrinus? *granulatus* Etheridge and Carpenter, Cat. Blast., p. 244, pl. 6, fig. 22, 1886.

Cidaroblastus granulatus Hambach, Trans. Acad. Sci. St. Louis, 13, p. 45, 1903.

Orbitremites? *granulatus* Bather, List. Blastoid. Brit. Mus., p. 29, 1899.

Orbitremites granulatus Wood, U. S. Nat. Mus., Bull. 64, p. 21, pl. 4, figs. 12-17, 1909.

Granatocrinites cidariformis Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 420, 1849.

Granatocrinus cidariformis Hambach, Trans. Acad. Sci. St. Louis, 13, p. 29, pl. 3, figs. 1-3, 1903.

Granatocrinites globosus (Troost) Hambach, Trans. Acad. Sci. St. Louis, 13, p. 30, pl. 3, fig. 4, 1903 (as *Cidaroblastus globosus*).

Miss. (New Providence sh.): Allen and Crittenden Cos., Ky.; Shelbyville, Bedford Co., and Maury Co., Tenn.; Clark Co., Ind.

Orbitremites? *lotoblastus* Bather = *Schizoblastus lotoblastus*.

Orbitremites magnibasis Bather = *Carpenteroblastus magnibasis*.

Orbitremites magnificus (Hambach).

Globoblastus magnificus Hambach, Trans. Acad. Sci. St. Louis, 13, pl. 3, fig. 5, 1903.

Miss. (Low. Burlington ls.): Southwestern Mo., near Arkansas boundary.

Orbitremites malaianus Wanner.

Wanner, Perm. Blast. Timor, 2e Nederl. Timor Exped. 1916, p. 222, pl. 3, figs. 11, 12, pl. 4, figs. 6-9, 1924; Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids. 1 p. 275, figs. 8-11, 1940.

Permian: Basleo, Timor.

Orbitremites malaianus constrictus Wanner.

Wanner, Perm. Blast. Timor, 2e Nederl. Timor Exped. 1916, p. 224, pl. 3, fig. 10, pl. 4, figs. 3-5, 1924.

Permian: Basleo, Timor.

Orbitremites mccoysi (Etheridge and Carpenter).

Granatocrinus mccoysi Etheridge and Carpenter, Ann. Mag. Nat. Hist., (5) 9, p. 239, 1882; Cat. Blast., p. 252, pl. 8, fig. 12, pl. 10, figs. 5-8, 1886.

Orbitremites mccoysi Bather, List. Gen. and Sp. Blast. Brit. Mus., p. 29, 1899.

Low. Carb.: Clitheroe, Lancashire, England.

Orbitremites norwoodi (Owen and Shumard).

Pentremites norwoodi Owen and Shumard, Jour. Acad. Nat. Sci. Phila., (2) 2, pt. 1, p. 64, pl. 7, figs. 13 a-c, 1850; Geol. Surv. Wisconsin, Iowa, Minn., p. 591, pl. 5-A, figs. 15 a-c, 1852.

Granatocrinus norwoodi? Meek and Worthen, Geol. Surv. Ill., 3, p. 496, pl. 18, fig. 8, 1868; 5, p. 473, pl. 9, fig. 2, 1873.—Wachsmuth and Springer, Rev. Pal., pt. 2, pl. 19, fig. 6, 1881.—Etheridge and Carpenter, Cat. Blast., p. 245, pl. 2, figs. 34-36, pl. 3, fig. 16, pl. 6, figs. 19, 20, pl. 7, figs. 1-13, pl. 10, fig. 11, pl. 11, fig. 14, pl. 17, fig. 8, 1886.—Keyes, Geol. Surv. Mo., 4, p. 140, pl. 10, fig. 10, 1894.

Orbitremites norwoodi Bather, Treatise Zool. (Lankester), pt. 3, p. 90, fig. 12, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 162, fig. 253-A, p. 164, fig. 256-B, p. 165, fig. 258-B, 1913.—Van Tuyl, Geol. Surv. Iowa, 30, pl. 4, figs. 3, 4, 1925.

Miss. (Up. Burlington ls.): Burlington and Augusta, Iowa; Oquawka, etc., Ill.; Louisiana, Hannibal, etc., Mo.

Orbitremites norwoodi fimbriatus Bather. See *O. fimbriatus*.

Orbitremites oppelti Rowley.

Rowley in Greene, Cont. Ind. Pal., 1, pt. 10, p. 86, pl. 29, figs. 15-20, 1902.

Miss. (New Providence sh.): 2 miles north of New Albany, Clark Co., Ind.

Orbitremites orbicularis (Sowerby).

Pentatremitites orbicularis Sowerby, Zool. Jour., 5, p. 456, Suppl., pl. 33, fig. 5, 1834.

Pentremites orbicularis Gilbertson in Phillips, Geol. Yorkshire, 2, p. 207, pl. 3, fig. 9, 1836.

Granatocrinus orbicularis Etheridge and Carpenter, Cat. Blast., p. 249, pl. 9, figs. 11-16, pl. 17, fig. 5, 1886.

Orbitremites orbicularis Bather, Treatise Zool. (Lankester), pt. 3, p. 92, figs. 15-3, 4, 1900.

Low. Carb.: Bolland and Clitheroe, Lancashire, and Yorkshire, Eng.

Orbitremites ornatus (Hambach).

Globoblastus ornatus Hambach, Trans. Acad. Sci. St. Louis, 13, p. 62, pl. 5, fig. 4, 1903.

Miss. (Burlington ls.): Missouri.

Orbitremites parvus (Hambach).

Cidaroblastus parvus Hambach, Trans. Acad. Sci. St. Louis, 13, p. 58, pl. 5, fig. 1, 1903.

Miss. (Burlington-Boone chert): Joplin, Mo.

Orbitremites spathatus (Hambach).

Globoblastus spathatus Hambach, Trans. Acad. Sci. St. Louis, 13, p. 62, pl. 5, fig. 5, 1903.

Miss. (Burlington ls.): Allentown, St. Louis Co., Mo.

Orbitremites spinuliferus (Rowley).

Granatocrinus spinuliferus Rowley, Amer. Geol., 25, p. 69, pl. 2, figs. 25, 33, 34, 1900.

Miss. (St. Louis ls.): Grand Tower, Ill.; Wittenberg, Mo.

Orbitremites? wachsmuthi (Etheridge).

Granatocrinus? wachsmuthi Etheridge, in Jack and Etheridge, Geol. Pal. Queensland and New Guinea, p. 211, pl. 7, fig. 10, 1892.

Orbitremites? wachsmuthi Bather, List. Gen. Sp. Blast. Brit. Mus., p. 32, 1899.

Permian (Bowen River ser. Gympie beds): Stanwell, near Rockhampton, Australia.

Orbitremites winslowi (Miller and Gurley).

Granatocrinus winslowi Miller and Gurley, Ill. St. Mus., Bull. 3, p. 66, pl. 6, figs. 34, 35, 1894.

Orbitremites winslowi Bather, List. Gen. and Sp. Blast. Brit. Mus., p. 32, 1899.

Miss. (Burlington ls.): Drift at Danville, Ill.

Orophocrinus von Seebach. Genotype: *Pentremites stelliformis* Owen and Shumard. Phaenoscismidae (Eublastoidea). Low. Carb.

Von Seebach, Nach. Ges. Wissen. Göttingen, p. 110, 1864.—Zittel, Handb. Pal., 1, p. 434, 1879.—Etheridge and Carpenter, Cat. Blast., p. 283, 1886.—Bather, Treatise Zool. (Lankester), pt. 3, pp. 84, 92, 1900.—Wanner, Perm. Blast. Timor, 2e Nederl. Timor Exped. 1916, p. 195, 1924; Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 236, 1940.

Codonites Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 84, 1869. (Genotype: *Pentremites stelliformis* Owen and Shumard.)

Mitra Cumberland, Reliquae Conserv., p. 31, 1826. (Genotype: *M. vera* Cumberland.)

Orophocrinus conicus Wachsmuth and Springer.

Wachsmuth and Springer, Geol. Surv. Ill., 8, p. 201, pl. 15, figs. 1-3, 1890.—Bather, List Gen. and Sp. Blast. Brit. Mus., p. 33, 1899.

Codonites conicus Hambach, Trans. Acad. Sci. St. Louis, 13, p. 47, 1903.

Miss. (Kinderhook-Hampton fm.): Legrand, Marshall Co., Iowa.

Orophocrinus depressus (Cumberland).

Mitra depressa Cumberland, Rel. Conserv., p. 32, pl. A, fig. 3 (first row), not pl. B, 1826.

Low. Carb. (Mtn. Ls.): Border of Yorkshire and Lancashire, England.

Orophocrinus fusiformis (Wachsmuth and Springer).

Codonites fusiformis Wachsmuth and Springer, in S. A. Miller, N. Amer. Geol. Pal., p. 233, fig. 269, 1889.

Orophocrinus fusiformis Wachsmuth and Springer, Geol. Surv. Ill., 8, p. 203, pl. 17, fig. 4, 1890.—Bather, Treatise Zool. (Lanckester), pt. 3, p. 82, fig. 4, 1900.

Miss. (Kinderhook-Hampton fm.): Legrand, Iowa.

Orophocrinus gracilis (Meek and Worthen).

Codonites gracilis Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 32, 1870; Geol. Surv. Ill., 5, p. 467, pl. 8, fig. 6, 1873.

Orophocrinus gracilis Etheridge and Carpenter, Cat. Blast., p. 287, pl. 18, fig. 9, 1886. Miss. (Low. Burlington ls.): Burlington, Iowa.

Orophocrinus hibernicus (Cumberland).

Mitra hibernica Cumberland, Rel. Conserv., p. 34, pl. A (?B), figs. 1-3, third row, 1826.

Granatocrinus hibernica Etheridge and Carpenter, Cat. Blast. Brit. Mus., p. 243, 1886.

Low. Carb. (Mtn. Ls.): Co. Mayo, and Hook Head, Co. Wexford, Ireland.

Orophocrinus humero-stellata (Cumberland).

Mitra humero-stellata Cumberland, Rel. Conserv., p. 35, pl. (?A) figs. 1-3, third row, 1826.

Granatocrinus humerostellata Etheridge and Carpenter, Cat. Blast., p. 243, 1886.

Low. Carb. (Mtn. Ls.): Hotwells, Bristol, England.

Orophocrinus inflatus Etheridge and Carpenter, and authors = *O. verus*.

Orophocrinus orbignyanus (de Koninck).

Pentremites orbignyanus de Koninck, Des. Animaux Foss. Carb. Belg., p. 37, pl. E, figs. 4 a-c, 1842-1844;—Koninck and Lehon, Rech. Crin. Carb. Belg., p. 200, pl. 7, figs. 5 a-d, 1854.

Orophocrinus orbignyanus Etheridge and Carpenter, Cat. Blast., p. 287, pl. 11, fig. 10, pl. 14, figs. 16-18, 1886.

Pentatrematites pailletti Roemer (not Verneuil), part, Archiv. Naturges., XVII, 1, p. 359 (not 368, 369), 1851.

Low. Carb. (Tournaisian): Tournai, Belgium.

Orophocrinus pentangularis (Miller).

Platycrinites pentangularis Miller, Nat. Hist. Crin., p. 83, pl. figs. 2, 6, 7, (not fig. 1), 1821.

Orophocrinus pentangularis Etheridge and Carpenter, Cat. Blast., p. 229, pl. 15, figs. 5-9, pl. 17, fig. 14, 1886.

Orophocrinus (*Pentremites*) *praelongus* Baily (part), Proc. Roy. Dublin Soc., n.s., 5, art. 4, p. 41, pl. 1, figs. 2, 2a, 1886.

Pentremites waterhausianus Koninck and Lehon, Rech. Terr. Carb. Belg., p. 203, pl. 7, figs. 6 a-c, 1854.

Orophocrinus pentangularis var. *waterhausianus* Etheridge and Carpenter, Cat. Blast., p. 293, pl. 15, figs. 8-10, pl. 16, figs. 8, 9, 1886.

Low. Carb.: Co. Dublin, Ireland; Bolland and Clitheroe, Lancashire, Somersetshire, Gloucestershire (Mtn. Ls.); Tournai, Belgium (Tournaisian).

Orophocrinus pentangularis waterhausianus Etheridge and Carpenter = *O. pentangularis*.

Orophocrinus praelongus Baily.

Orophocrinus (*Pentremites*) *praelongus* Baily, Proc. Roy. Dublin Soc., n.s., 5, art. 4, p. 31, pl. 1, figs. 1, 1a, 2b (not 2, 2a), 1886.

Low. Carb.: Dublin, Ireland.

Orophocrinus (*Pentremites*) *praelongus* Baily (part) = *O. pentangularis*.

Orophocrinus puzos (Münster).

Pentremites puzos Münster, Beitr. Petref., heft 1, p. 1, pl. 1, figs. 5 a-d, 1839.

Pentatremitites puzos Roemer, Archiv. Naturges., XVII, 1, p. 356, 1851.

Orophocrinus puzos Etheridge and Carpenter, Cat. Blast., p. 90, pl. 14, figs. 14, 15, 1886.

Low. Carb. (Tournaisian): Tournai, Belgium.

Orophocrinus sirius (White).

Pentremites sirius White, Proc. Boston Soc. Nat. Hist., 9, p. 20, fig. 3, 1865 (adv. pub. 1862).

Orophocrinus sirius Etheridge and Carpenter, Cat. Blast., p. 287, 1886.

Miss. (Low. and Up. Burlington ls.): Burlington, Iowa.

Orophocrinus stelliformis (Owen and Shumard).

Pentremites stelliformis Owen and Shumard, Jour. Acad. Nat. Sci. Phila., (2) 2, pt. 1, p. 67, pl. 7, figs. 16a, b, 1850; Geol. Surv. Wis., Iowa, Minn., p. 593, pl. V-A, figs. 16a, b, 1852.

Codaster stelliformis Shumard, Trans. Acad. Sci. St. Louis, 2, p. 359, 1866.

Codonites stelliformis Meek and Worthen, Geol. Surv. Ill., 5, p. 464, pl. 9, fig. 5, 1873.—Hambach, Trans. Acad. Sci. St. Louis, 4, p. 554, pl. D, fig. 10, 1884.

Orophocrinus stelliformis Ludwig, Zeits. Wiss. Zool., 31, p. 389, pl. 27, figs. 30, 31, 1878.—Etheridge and Carpenter, Cat. Blast., p. 287, pl. 11, figs. 8, 9, pl. 15, figs. 11-15, pl. 16, figs. 6, 7, pl. 17, fig. 12, 1886.—Keyes, Geol. Surv. Mo., 4, p. 141, pl. 18, figs. 14a, b, 1894.—Springer, Zittel-Eastman Textb. Pal., 1, p. 162, fig. 253-B, p. 168, fig. 261, 1913.

Miss. (Low. Burlington ls.): Burlington, Iowa; Louisiana, Mo.

Orophocrinus stelliformis campanulatus (Hambach).

Codonites campanulatus Hambach, Trans. Acad. Sci. St. Louis, 4, p. 553, pl. D, figs. 8, 9, 1884.

Orophocrinus stelliformis var. *campanulatus* Etheridge and Carpenter, Cat. Blast., p. 289, pl. 16, fig. 5, 1886.

Miss. (Chouteau ls.): Sedalia, Mo.

Orophocrinus stelliformis catactus (Rowley).

Codonites stelliformis var. *catactus* Rowley, Missouri Bur. Geol. and Mines, 8, p. 97, pl. 20, fig. 12, 1876.

Miss. (Low. Burlington ls.): Louisiana, Mo.

Orophocrinus verus (Cumberland).

Mitra vera Cumberland, Rel. Conserv., p. 31, pl. B, figs. 1, 2, 1826.

Orophocrinus verus Etheridge and Carpenter, Cat. Blast., p. 290, pl. 12, fig. 9, pl. 13, fig. 16, pl. 15, figs. 1-4, pl. 16, fig. 10, pl. 17, fig. 13, 1886.

Pentremites inflatus Sowerby, Zool. Jour., 3, p. 89, Suppl., pl. 33, fig. 2, 1826.—Gilbertson in Phillips, Geol. Yorkshire, 2, p. 207, pl. 3, figs. 1-3, 1836.

Pentatremitites inflatus Sowerby, Zool. Jour., 4, Suppl., p. 90, 1828; vol. 5, pl. 33, fig. 2, 1834.

Orophocrinus inflatus Etheridge and Carpenter, Ann. Mag. Nat. Hist., 9, p. 252, 1882.

Low. Carb.: Bolland and Preston, Lancashire, England; Ireland (Mtn. Ls.); Belgium (Tournaisian).

Orophocrinus whitei (Hall).

Codaster whitei Hall, Jour. Boston Soc. Nat. Hist., 7, p. 327, 1861.

Orophocrinus whitei Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 1, p. 36, pl. 3, figs. 25-28, 1895.

Codonites (Orophocrinus) whitii Rowley, Amer. Geol., 25, p. 68, pl. 2, fig. 20, 1900.

Miss. (Burlington ls.): Burlington, Iowa.

Paracodaster Yakovlev. Genotype: *P. miloradovitschi* Yakovlev.

Codasteridae (Eublastoidea) Permian.

Yakovlev, Compt. Rend. (Doklady) Acad. Sci. URSS, 27, no. 8, p. 887, 1940.

Paracodaster miloradovitschi Yakovlev.

Yakovlev, Compt. Rend. (Doklady) Acad. Sci. URSS, 27, no. 8, p. 887, text fig., 1940.

Permian: Petschora River Basin, Ural, Russia.

Paracystis Sjöberg. Genotype: *P. ostrogothicus* Sjöberg.

?Asteroblastidae (Protoblastoidea). Ord.

Sjöberg, Geol. Foren Stockholm Forhandl., 37, p. 171, 1915.

Paracystis ostrogothica Sjöberg.

Sjöberg, Geol. Foren. Stockholm Forhandl., 37, p. 173, pls. 2, 3, 1915.

Ord. (Chasmops ls.): Ostergotlands.

Pentatrematites Sowerby = *Pentremites*.

Pentatrematites acuta Sowerby = *Phaenoschisma acutum*.

Pentatrematites angulata Sowerby = *Mesoblastus angulatus*.

Pentatrematites campanulatus Roemer = *Orbitremites campanulatus*.

Pentatrematites crenulatus Roemer = *Mesoblastus crenulatus*.

Pentatrematites eifelensis Roemer = *Pentremitidea eifelensis*.

Pentatrematites florealis Roemer = *Pentremites godoni*.

Pentatrematites gracilis Steininger = *Pentremitidea gracilis*.

Pentatrematites granulatus Roemer = *Orbitremites granulatus*.

Pentatrematites inflata Sowerby = *Orophocrinus verus*.

Pentatrematites oblonga Sowerby = *Mesoblastus elongatus*.

Pentatrematites orbicularis Sowerby = *Orbitremites orbicularis*.

Pentatrematites orbignyanus Roemer = *Phaenoschisma caryophyllatum*.

Pentatrematites ovalis Roemer = *Pentremites ovalis*.

Pentatrematites pailletti Roemer (not Verneuil) = (part) *Orophocrinus orbignyanus*; (part) *Pentremitidea eifelensis*; (part) *Pentremitidea pailletti*.

Pentatrematites planus Sandberger = *Pentremitidea plana*.

Pentatrematites puzos Roemer = *Orophocrinus puzos*.

Pentatrematites pyriformis Roemer = *Pentremites pyriformis*.

Pentatrematites schultzi Roemer = *Cryptoschisma schultzi*.

Pentatrematites sulcatus Roemer = *Pentremites sulcatus*.

Pentatrematites verneuili Bronn = *Nucleocrinus verneuili*.

Pentatremitidea Bronn. See *Pentremitidea*.

Pentephyllum Haughton. Genotype: *P. adarensis* Haughton.

Pentephyllidae (Eublastoidea). Carb.

Haughton, Jour. Geol. Soc. Dublin, 8, p. 183, 1859.—Etheridge and Carpenter, Cat. Blast., p. 296, 1886.—Bather, Treatise Zool. (Lankester), pt. 3, pp. 90, 93, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 172, 1913.

Pentephyllum adarensis Haughton.

Haughton, Jour. Geol. Soc. Dublin, 8, p. 183, pl. 12, figs. 2-d, 1859; Nat. Hist. Review, 6, p. 511, pl. 29, 1859.—Etheridge and Carpenter, Cat. Blast., p. 296, pl. 16, figs. 14-16, 1886.

Low. Carb. (Mt. Ls.): Adare, Co. Limerick, Ireland.

Pentremites Say. Genotype: *Encrina godoni* DeFrance.

Pentremitidae (Eublastoidea). Miss.; Penn.

Say, Amer. Jour. Sci. and Arts, 2, p. 36, 1820 (as *Pentremite*).—Sowerby, Zool. Jour. London, 2, p. 316, 1825 (as *Pentremites*).—De Koninck and Lehon, Mem. Acad. Roy. Belg., p. 189, 1854.—Zittel, Handb. Pal., 1, p. 454, 1879.—Hambach, Trans. Acad. Sci. St. Louis, 4, pp. 145-160, 1880.—Etheridge and Carpenter, Cat. Blast., p. 150, 1886.—Bather, Treatise Zool. (Lankester), pt. 3, pp. 86, 92, 1900.—Hambach, Trans. Acad. Sci. St. Louis, 13, pp. 2, 35, 1903.

- Pentrematites* Sowerby, Zool. Jour., 4, p. 89, 1828.—Bronn, Lethaea, ed. 2, 1, p. 11, 1837.—Sandberger and Sandberger, Verst. Rhein. Schichtensyst. Nassau, p. 402, 1856.
- Pentremites abbreviatus* Hambach = *P. godoni abbreviatus*.
- Pentremites abruptus* Ulrich.**
Ulrich, Ky. Geol. Surv., p. 248, pl. 2, fig. 45, p. 257, pl. 6, figs. 10-14, 1917.
Miss. (Chester): Near Cowan, Tenn. and Huntsville, Ala.; Caldwell Co., etc., Ky. (Gasper oolite); Floraville, Ill. (Renault fm.).
- Pentremites acutangulus* Schultze = *Pentremitea acutangulus*.
- Pentremites acutus* Gilbertson = *Phaenoschisma acutum*.
- Pentremites altimarginatus* T. H. Clark.**
T. H. Clark, Bull. Mus. Comp. Zool., 61, no. 9, p. 366, pl. 1, figs. 11-13, 1917.
Miss.? (Quadrant fm.): Old Baldy, near Virginia City, Mont.
- Pentremites altus* Rowley = *P. godoni*.
- Pentremites angularis* Lyon.**
Lyon, Trans. Acad. Sci. St. Louis, 1, p. 631, pl. 20, figs. 3 a-c, 1860.
Miss. (Chester-Glen Dean ls.): Falls of Rough Creek, Breckenridge Co., and Pulaski Co., Ky.
- Pentremites angulatus* Gilbertson = *Mesoblastus angulatus*.
- Pentremites angustus* Hambach.**
Hambach, Trans. Acad. Sci. St. Louis, 13, p. 53, fig. 14, 1903.—Mather, Bull. Sci. Lab. Denison Univ., 18, p. 100, pl. 3, figs. 10-13a, 1915.
Penn. (Brentwood ls.): 2 miles northwest Brentwood, Washington Co., Ark.
- Pentremites arctibrachiatus* Ulrich.**
Ulrich, Ky. Geol. Surv., p. 248, pl. 2, figs. 37-40, 1917.
Miss. (Chester): Huntsville, Ala., Caldwell Co., etc., Ky. (Gasper oolite); Floraville, Ill. (Renault fm.).
- Pentremites arctibrachiatus huntsvillensis* Ulrich.**
Ulrich, Ky. Geol. Surv., p. 248, pl. 2, figs. 41, 42, 1917.
Miss. (Chester): Huntsville, Ala., Caldwell Co., etc., Ky. (Gasper oolite); Floraville, Ill. (Paint Creek fm.).
- Pentremites? astraformis* Austin = *Codaster acutus*.
- Pentremites basilaris* Hambach.**
Hambach, Trans. Acad. Sci. St. Louis, 4, p. 159, pl. B, fig. 9, 1880.
Miss. (Chester-Okaw ls.): Evansville and Chester, Ill.
- Pentremites benedicti* Rowley.**
Rowley, Amer. Geol., 25, p. 69, pl. 2, figs. 29-32, 1900.
Miss. (Warsaw?, St. Louis ls.): Grand Tower, Ill., Wittenberg, Mo.
- Pentremites biconvexus* Ulrich.**
Ulrich in Butts, Ky. Geol. Surv., p. 78, pl. 21, figs. 18, 19, 1917 (as *P. godoni biconvexi*); Ulrich, Ky. Geol. Surv., p. 247, pl. 2, figs. 34-36, 1917.—Butts, Geol. Surv. Ala., Spec. Rep. no. 4, p. 180, pl. 59, fig. 2, 1926.
Miss. (Chester): Near Bowling Green, etc., Ky. (Gasper oolite); Floraville, Ill. (Paint Creek fm.).
- Pentremites bipyramidalis* Hall = *Tricoelocrinus bipyramidalis*.
- Pentremites boletus* Schmidt.**
Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 122, p. 68, fig. 13, 1930.
Low. Carb. (Etroeungtian): Isenbügel and Wunstorf, Germany.
- Pentremites bradleyi* Meek.**
Meek, 6th Ann. Rep. U. S. Geol. Surv. Terr. for 1872, p. 470, 1873.—Hambach, Trans. Acad. Sci. St. Louis, 13, p. 56, pl. 5, fig. 7, 1903.
Miss. (Madison ls.): Divide between Ross Fork and Lincoln Valley, Mont.

***Pentremites brevis* Ulrich.**

Ulrich in Butts, Ky. Geol. Surv., p. 100, pl. 24, fig. 6, 1917.—Weller, Geol. Surv. Ill., Bull. 41, p. 369, pl. 4, figs. 43-46, 1920.—Butts, Geol. Surv. Ala., Spec. Rep. no. 14, p. 198, pl. 65, fig. 3, 1926.

Miss. (Chester): Breckinridge, Pulaski, and Grayson Cos., Ky., and Hardin Co., Ill. (Glen Dean ls.); Randolph Co., Ill. (Okaw ls.).

***Pentremites broadheadi* Hambach.**

Hambach, Trans. Acad. Sci. St. Louis, 4, p. 159, pl. B, fig. 6, 1880.

Miss. (Chester-Okaw ls.): Evansville, Ill.

***Pentremites burlingtonensis* Meek and Worthen.**

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 33, 1870; Geol. Surv. Ill., 5, p. 461, pl. 8, fig. 7, 1873.—Etheridge and Carpenter, Cat. Blast., p. 456, pl. 12, fig. 16, 1886.

Miss. (Up. Burlington ls.): Burlington, Iowa.

***Pentremites buttsi* Ulrich.**

Ulrich, Ky. Geol. Surv., p. 61, pl. 15, figs. 8, 9, p. 245, pl. 2, figs. 18, 19, 1917.—Weller, Geol. Surv. Ill., Bull. 41, p. 323, pl. 4, figs. 16-20, 1920.

Miss. (Chester; Ste. Genevieve-Ohara ls.): Downeys Bluff, Rosiclare, and near Shetlerville, Hardin Co., Ill.; Caldwell and Crittenden Cos., Ky. Also in Renault fm. of Illinois.

Pentremites calyce Hall = *Devonoblastus calyce*.

***Pentremites calycinus* Lyon.**

Lyon, Trans. Acad. Sci. St. Louis, 1, p. 628, pl. 20, figs. 1 a-c, 1860.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 12, p. 125, pl. 36, figs. 39, 40, 1903.

Miss. (Chester): Eskridges Ferry, Grayson Co., Ky. (Glen Dean ls.); Chester, Ill. (Okaw ls.).

Pentremites campanulatus McCoy = *Orbitremites campanulatus*.

***Pentremites canalis* Ulrich.**

Ulrich in Butts, Ky. Geol. Surv., p. 100, pl. 24, fig. 7.—Ulrich, id. p. 262, pl. 7, figs. 23-26, 1917.

Miss. (Chester—Glen Dean ls.): Sloans Valley, etc., Pulaski Co. and Grayson Co., Ky.

***Pentremites canalis praecipuus* Ulrich.**

Ulrich, Ky. Geol. Surv., p. 147, 1917 (nom. nud.).

Miss. (Chester-Gasper oolite): Kentucky.

***Pentremites caroides* Owen.**

Owen, Cat. Geol. Spec. Ohio Valley, 1843. (nom. nud.)

Pentremites caryophyllatus de Koninck and Lehon = *Phaenoschisma caryophyllatus*;

***Pentremites cavus* Ulrich.**

Ulrich, U. S. Geol. Surv., Prof. Paper 36, p. 57, pl. 6, fig. 28, 1905.—Butts, Ky. Geol. Surv., p. 45, pl. 10, figs. 18, 19, 1917.

Miss. (Warsaw ls.): 4 miles northwest Princeton, Ky.

***Pentremites cervinus* Hall.**

Hall, Geol. Rep. Iowa, 1, pt. 2, p. 690, pl. 25, figs. 11a, b, 1858.

Miss. (Chester): Chester, Ill. (Okaw ls.); near Huntsville, Ala. (Gasper oolite); Grayson and Livingston Cos., Ky. (Glen Dean ls.).

***Pentremites cherokeus* Troost.**

Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 12, p. 116, pl. 36, fig. 6 (?), 1903.—Wood, U. S. Nat. Mus., Bull. 64, p. 16, 1909.—Weller, Geol. Surv. Ill., Bull. 41, p. 371, pl. 10, figs. 11-13, 1920.

Miss. (Chester): Base of Lookout Mtn., Tenn.; Ala.; Grayson Co., Ky. (Glen Dean ls.); Randolph and Johnson Cos., Ill. (Menard ls.).

Pentremites chesterensis Hambach.

Hambach, Trans. Acad. Sci. St. Louis, 4, p. 158, pl. B, fig. 8, 1880.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 12, p. 117, pl. 36, figs. 7-11, 1903.

Miss. (Chester-Okaw ls.): Randolph Co. and Chester, Ill.

Pentremites clavatus Hambach.

Hambach, Trans. Acad. Sci. St. Louis, 4, p. 157, pl. B, fig. 5, 1880.

Miss. (Chester): Evansville, Ill. (Okaw ls.); Grayson Co., Ky. (Glen Dean ls.).

Pentremites clavatus Schultze = *Pentremitidea clavata*.

Pentremites conoideus Hall.

Hall, Descr. N. Sp. Foss. etc., p. 5, 1856; Geol. Rep. Iowa, 1, pt. 2, p. 655, pl. 22, figs. 5-10, 1858; Suppl., pl. 1, figs. 1 a-d, 1860.—Shumard, Trans. Acad. Sci. St. Louis, 1, p. 243, pl. 9, fig. 4, 1858.—Etheridge and Carpenter, Cat. Blast., p. 162, pl. 2, figs. 16-18, pl. 3, figs. 4-6, pl. 18, figs. 6-8, 1886.—Keyes, Geol. Surv. Mo., 4, p. 134, pl. 18, fig. 5, 1894.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 10, p. 87, pl. 29, figs. 29, 30, 37-41, 1902; pt. 12, p. 126, pl. 36, figs. 41-44, 1903.—Hambach, Trans. Acad. Sci. St. Louis, 13, p. 14, figs. 6, 7, p. 18, fig. 9c, 1903.—Ulrich, U. S. Geol. Surv., Prof. Paper 36, pp. 30, 33, 47, pl. 6, figs. 1-6, 1905.—Smith, 30th Ann. Rep. Geol. Nat. Res. Ind., p. 1219, pl. 43, 44, 47, figs. 3-6, text figs. 1-3, 1906.—Beede, *ibid.*, p. 1263, pl. 26, figs. 32, 33, 1906.—Butts, Ky. Geol. Surv., p. 45, pl. 10, figs. 20-25, 1917; Geol. Surv. Ala. Spec. Rep. no. 14, p. 180, pl. 59, fig. 10, p. 176, pl. 58, fig. 1 (as *P. conoideus* var.) 1926.—T. H. Clark, Bull. Mus. Comp. Zool., 61, p. 369, 370, text figs. 1, 2, 1917.—Peck, Pan Amer. Geol., 54, p. 106, pl. 14, figs. 6-8, 1930.

Pentremites sulcatus Zittel (not Roemer) Handb. Pal., 1, p. 432, fig. 305a, 1879.

Miss.: Monroe Co., Ill., Sheffield, Ala. (Warsaw ls.); Florence, Ala. (Ste. Genevieve ls.); Spergen Hill, Ind. (Spergen ls.); Old Baldy, Mont. (Madison ls.).

Pentremites conoideus amplus Rowley.

Rowley in Greene, Cont. Ind. Pal., 1, pt. 10, p. 88, pl. 29, figs. 31-34, 1902.—Beede, 30th Rep. Geol. Nat. Res. Ind., p. 1263, pl. 7, figs. 8-8c, 1906.

Miss. (Spergen ls.): Lanesville, Ind.

Pentremites conoideus koninckianus Etheridge and Carpenter = *P. koninckianus*.

Pentremites conoideus perlongus Rowley.

Rowley in Greene, Cont. Ind. Pal., 1, pt. 10, p. 87, pl. 29, fig. 28, 1902.—Beede, 30th Rep. Geol. Nat. Res. Ind., p. 1263, pl. 7, fig. 7, 1906.

Miss. (Spergen ls.): Lanesville, Ind.

Pentremites cornutus Meek and Worthen = *Schizoblastus cornutus*.

Pentremites coronarius Ulrich = *P. ovooides*.

Pentremites crenulatus de Koninck and Lehon = *Mesoblastus crenulatus*.

Pentremites curtus Shumard = *Schizoblastus curtus*.

Pentremites decipiens Ulrich.

Ulrich, Ky. Geol. Surv., p. 254, pl. 5, figs. 31-33, 1917.

Miss. (Chester): Near Cowan, Tenn., Huntsville, Ala., Caldwell Co., etc. Ky. (Gasper oolite); Floraville, Ill. (Paint Creek fm.); Evansville, Ind. (Okaw ls.).

Pentremites decipiens decurtatus Ulrich.

Ulrich, Ky. Geol. Surv., p. 255, pl. 5, figs. 34, 35, 1917.

Miss. (Chester-Gasper oolite): Breckenridge Co., Ky.; near Cowan, Tenn.

Pentremites decussatus Shumard = *Schizoblastus decussatus*.

Pentremites derbiensis Sowerby = *Orbitremites derbiensis*.

Pentremites divergens T. H. Clark.

T. H. Clark, Bull. Mus. Comp. Zool., 61, no. 9, p. 355, pl. 1, figs. 7-10, 1917.

Miss.? (Quadrant fm.): Old Baldy, near Virginia City, Mont.

Pentremites downeyensis Ulrich.

Ulrich, Ky. Geol. Surv., p. 139, 1917 (nom. nud.).

Miss. (Chester-Ste. Genevieve-Ohara ls.): Caldwell and Crittenden Cos., Ky.

Pentremites eifelensis Schultze = (part) *Pentremitidea eifelensis*; (part) *P. roemeri*.

Pentremites elegans Lyon.

Lyon, Trans. Acad. Sci. St. Louis, 1, p. 632, pl. 20, figs. 4 a-c, 1860.—Whitfield, Ann. N. Y. Acad. Sci., p. 577, pl. 13, fig. 4, 1891; Geol. Surv. Ohio, 7, p. 466, pl. 9, fig. 4, 1895.—Wood, U. S. Nat. Mus., Bull. 64, p. 14, pl. 2, figs. 10-12, 1909.

Pentremites pyriformis Etheridge and Carpenter, Cat. Blast., pl. 1, fig. 3, pl. 2, figs. 26-28, 1886.

Miss. (Chester): Near Grayson Springs and 3 miles north of Litchfield, Grayson Co., and Livingston Co., Ky. (Glen Dean ls.); Evansville, Ill. (Okaw ls.).

Pentremites elliptica Sowerby = *Orbitremites ellipticus*.

Pentremites elongatus Shumard.

Shumard, Geol. Surv. Mo., 1, p. 187, pl. B, fig. 4, 1855.—Etheridge and Carpenter, Cat. Blast., p. 161, 162, pl. 1, figs. 4, 5, pl. 2, figs. 14, 15, pl. 5, fig. 29, pl. 18, fig. 4, 1886.—Keyes, Geol. Surv. Mo., 4, p. 133, pl. 18, fig. 4, 1894.

Miss. (Up. Burlington ls.): Near Columbia, Clarksville, and Rocheport, Mo.; Burlington, Iowa, and Illinois.

Pentremites florealis Say and authors = *P. godoni*.

Pentremites florealis Ulrich = (part) *P. princetonensis*; (part) *P. pulchellus*; (part) *P. pinguis*.

Pentremites florealis elongatus Troost = *P. godoni*.

Pentremites fohsi Ulrich.

Ulrich, U. S. Geol. Surv., Prof. Paper 36, p. 64, pl. 7, figs. 5-9, 1905.—Butts, Ky. Geol. Surv., p. 101, pl. 24, fig. 21, 1917.—Weller, Geol. Surv. Ill., Bull. 41, p. 370, pl. 10, fig. 4, 1920.

Miss. (Chester): 8 miles northwest of Princeton, Caldwell Co., Marion, Pulaski, and Livingston Cos., Ky., and Huntsville, Ala. (Glen Dean ls.); Chester, Ill. (Okaw ls.); near Golconda and Grand Tower, Ill. (Menard ls.).

Pentremites fohsi marionensis Ulrich.

Ulrich, U. S. Geol. Surv., Prof. Paper 36, p. 64, pl. 6, figs. 10, 11, 1905.

Miss. (Chester-Glen Dean ls.): Marion Co., Ky.

Pentremites fraiponti Dewalque = *Pentremitidea fraiponti*.

Pentremites gemmiformis Hambach.

Hambach, Trans. Acad. Sci. St. Louis, 4, p. 553, pl. D, fig. 5, 1884.—Ulrich, Ky. Geol. Surv., p. 260, pl. 7, figs. 1-7, 1917.—Weller, Geol. Surv. Ill., Bull. 41, p. 326, pl. 10, figs. 9, 10, 1920.

Miss. (Chester): Randolph Co., Ill. (Paint Creek fm.); Floraville, Ill. (Renault fm.); Caldwell Co., Ky. (Gasper fm.).

Pentremites girtyi Ulrich.

Ulrich, Ky. Geol. Surv., p. 261, pl. 7, figs. 11-16, 1917.

Miss. (Chester): Near New Bethel, Breckinridge Co., Caldwell Co., etc., Ky. (Gasper oolite); Floraville, Ill. (Paint Creek fm.); Newtonville, Ohio (Maxville ls.).

Pentremites globosa Christy = *P. godoni*.

Pentremites globosus Say.

Say, Jour. Acad. Nat. Sci. Phila., 4, p. 293, 1825; Zool. Jour., 2, p. 314, 1826 (not recognizable).

Low. Carb.: ?Vicinity of Bath, England.

Pentremites godoni (Defrance).

Encrina godoni Defrance, Dict. Sci. Nat., 14, p. 467, 1819. (Based on Parkinson's figure, 1808.)

- Pentremites godoni* Hall, Geol. Rep. Iowa, 1, pt. 2, p. 692, pl. 25, figs. 13a, b, 1858.—Billings, Amer. Jour. Sci. and Arts, (2) 48, p. 81, text fig. 13, 1869.—Etheridge and Carpenter, Cat. Blast., p. 157, pl. 1, fig. 11, pl. 2, figs. 2, 5-13, pl. 12, fig. 17, pl. 16, figs. 19, 22, 23, 1886.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 10, p. 89, pl. 29, figs. 1-3, 7, 8, p. 97, pl. 30, figs. 36, 39, 1902; pt. 12, pp. 121-124, pl. 36, figs. 18-38, 1903.—Hambach, Trans. Acad. Sci. St. Louis, 13, p. 38, pl. 3, fig. 18, 1903.—Ulrich, U. S. Geol. Surv., Prof. Paper 36, p. 38, pl. 6, fig. 19 a-d, 1905.—Wood, U. S. Nat. Mus., Bull. 64, p. 13, pl. 3, figs. 5, 15, 1909.—Springer, Zittel-Eastman Textb. Pal., 1, p. 162, fig. 252, p. 163, fig. 254a, p. 169, fig. 262, 1913.—Butts, Ky. Geol. Surv., p. 78, pl. 21, figs. 20-23, 1917; Geol. Surv. Ala., Spec. Rep. no. 14, p. 180, pl. 59, figs. 7-9, 1926.—Ulrich, Ky. Geol. Surv., p. 254, pl. 5, figs. 17-30, 1917.—Wanner, Handwort. Naturwiss., p. 493, fig. 27, 1933.
- Asterial fossil*, Parkinson, Organic Remains, 3, p. 235, pl. 13, figs. 36, 37, 1808.
- Asterite* from Kentucky, Mitchell, in Cuvier's Theory of the Earth, pl. 13, fig. 6, 1818.
- Mitra rugosa quinqueperforata* Cumberland, Rel. Conserv., p. 34, pl. A, figs. 1-3 (first row), 1826.
- Pentremites globosa* Christy, Letters on Geol., pl. 4, figs. 7, 8, 1848.
- Encrinites florealis* Schlotheim, Petref. jetz. Standp., p. 339, 1820. (Based on Parkinson's figures of 1808.)
- Pentremites florealis* Say, Jour. Acad. Nat. Sci. Phila., 4, p. 295, 1825; Zool. Jour., 2, p. 314, 1826.—Sowerby, Zool. Jour., 2, p. 320, pl. 11, fig. 2, 1826.—Goldfuss, Petref. Germ., p. 161, pl. 1, figs. 2 a-c, 1829.—Troost, Trans. Geol. Soc. Penn., 1, p. 229, pl. 10, fig. 3, 1835.—Castlenau, Essai Syst. Silur. Amer. Septen., p. 51, pl. 25, fig. 3, 1843.—Hambach, Trans. Acad. Sci. St. Louis, 13, p. 18, fig. 9-B, p. 36, fig. 12c, 1903.—Ulrich, U. S. Geol. Surv., Prof. Paper 36, p. 42, pl. 6, figs. 18 a-d, 1905.—Wood, U. S. Nat. Mus., Bull. 64, pp. 13, 15, pl. 3, fig. 1, 1909.
- Pentremites florealis* var. *elongatus* Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.—Wood, U. S. Nat. Mus., Bull. 64, p. 15, 1909.
- Pentatrematites florealis* Roemer, Archiv. Naturges. Jahrg. XVII, 1, p. 353, pl. 1, figs. 1-4, pl. 2, fig. 8; in Bronn, Leth. Geog., 1, pt. 2, p. 281, pl. 4, figs. 8 a-d, 1852-54.—Bronn, Klass. Ord. Thierr., 2, pl. 23, figs. 1 a-e, 1860.
- Pentremites godoni* var. *florealis* Etheridge and Carpenter, Cat. Blast., p. 160, pl. 2, fig. 3, 1886.
- Pentremites altus* Rowley, in Greene, Cont. Ind. Pal., 1, pt. 8, p. 64, pl. 23, figs. 1, 27, 37, 1901.
- Miss. (Chester): Kentucky, and various localities in Alabama, Illinois, Tennessee, Missouri, Arkansas, etc.
- Pentremites godoni abbreviatus*** Hambach.
- Pentremites abbreviatus* Hambach, Trans. Acad. Sci. St. Louis, 4, p. 155, pl. B, fig. 3, 1880; vol. 13, p. 36, fig. 12a, 1903.
- Pentremites godoni* var. *abbreviatus* Etheridge and Carpenter, Cat. Blast., p. 160, pl. 2, fig. 4, 1886.
- Miss. (Chester): Evansville, Ill. (Okaw ls.); Pulaski Co., Ky. (Glen Dean ls.).
- Pentremites godoni biconvexi* Ulrich. See *P. biconvexus*.
- Pentremites godoni florealis* Etheridge and Carpenter = *P. godoni*.
- Pentremites godoni major*** Etheridge and Carpenter.
- Etheridge and Carpenter, Cat. Blast., p. 160, pl. 2, fig. 1, 1886.
- Miss. (Chester): Franklin Co., Tenn.
- Pentremites grandis*** Warren.
- Warren, Geol. Surv. Canada, Mem. 153, p. 48, pl. 3, fig. 8, 1927.
- Penn.? (Rundle ls.): Cascade Mountain, Banff, Alberta, Can.
- Pentremites* (*Granatoerinus*?) *granulosus* Meek and Worthen = *Cryptoblastus granulosus*.
- Pentremites grosvenori* Shumard = *Troosticrinus grosvenori*.

Pentremites hambachi Butts.

Ulrich, Ky. Geol. Surv., p. 226, 1917 (nom. nud.).—Butts, Geol. Surv. Ala., Spec. Rep. no. 14, p. 198, pl. 65, fig. 2, 1926.

Miss. (Chester-Bangor ls., Glen Dean ls.): Frankfort, Franklin Co., Ala., and Ky.

Pentremites hemisphericus Hambach. = *P. robustus hemisphericus*.

Pentremites inflatus Sowerby = *Orophocrinus verus*.

Pentremites inflatus? de Koninck = *Phaenoschisma caryophyllatus*.

Pentremites (Codaster?) *kentuckyensis* Shumard = *Phaenoschisma?* *kentuckyense*.

Pentremites kirki Hambach.

Hambach, Trans. Acad. Sci. St. Louis, 13, p. 55, pl. 5, fig. 18, 1903.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Pentremites koninckanus Hall.

Hall, Descr. N. Sp. Foss., p. 4, 1856; Geol. Rep. Iowa, 1, pt. 2, p. 656, pl. 22, fig. 11, 1858; Suppl., pl. 1, figs. 1 a-c, 1860; 12th Ann. Rep. Ind. Geol. Nat. Hist., p. 322, pl. 32, fig. 33, 1883.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 10, p. 90, pl. 29, figs. 5, 6, 9-11, 13, 14, 1902; pt. 12, p. 126, pl. 36, fig. 45, 1903; pt. 19, p. 190, pl. 57, figs. 10, 11, 1904.

Pentremites conoideus var. *koninckanus* Etheridge and Carpenter, Cat. Blast., p. 163, pl. 2, figs. 19-23, pl. 3, figs. 7-12, 1886.

Miss.: Spergen Hill, Lanesville, Georgetown, etc., Ind. (Spergen ls.); Alton, Ill., Bloomington, Iowa, Barren Co., Ky., Tuscumbia, Ala. (Warsaw ls.).

Pentremites laterniformis Owen and Shumard = *Tricoelocrinus laterniformis*.

Pentremites leda Hall = *Devonoblastus leda*.

Pentremites lineatus Shumard = *Metablastus lineatus*.

Pentremites longicostalis Hall.

Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 85, 1860. (Nom. nud.)

Miss. (Warsaw ls.): Warsaw, Ill.

Pentremites lycorias Hall = *Pentremitidea lycorias*.

Pentremites lyoni Ulrich.

Ulrich, Ky. Geol. Surv., p. 262, pl. 7, figs. 27-29, 1917.

Miss. (Chester): 4 miles north of Marion, Ky., and Hardin Co., Ill. (Golconda fm.); Sloans Valley, Pulaski Co., Grayson and Livingston Cos., Ky. (Glen Dean ls.); Waterloo (Paint Creek fm.) and Chester (Okaw ls.), Ill.

Pentremites lyoni gracilens Ulrich.

Ulrich, Ky. Geol. Surv., p. 263, pl. 7, figs. 30-32, 1917.

Miss. (Chester): Golconda, Ill. (Golconda fm.); Meade Co., Ky. (Glen Dean ls.).

Pentremites maccalliei Schuchert.

Schuchert, U. S. Nat. Mus., Proc., 30, p. 759, text figs. 1-3, 1906.

Miss. (Chester): Near Cole City, Ga. (Bangor ls.); Grayson Co., Ky. (Golconda fm.).

Pentremites maia Hall = *Devonoblastus maia*.

Pentremites marionensis Ulrich.

Ulrich, Geol. Surv. Ky., p. 226, 1917 (nom. nud.).

Miss. (Chester-Glen Dean ls.): Kentucky.

Pentremites melo Owen and Shumard = *Cryptoblastus melo*.

Pentremites melo projectus Meek and Worthen = *Cryptoblastus melo projectus*.

Pentremites missouriensis Swallow.

Swallow, Trans. Acad. Sci. St. Louis, 2, p. 81, 1863.

Miss. (Chester): Missouri and Illinois.

Pentremites nodosus Hambach.

Hambach, Trans. Acad. Sci. St. Louis, 4, p. 155, pl. B, fig. 2, 1880.—Weller, Geol. Surv. Ill., Bull. 41, p. 356, pl. 4, fig. 5, 1920.

Miss. (Chester): Randolph Co., (Okaw ls.), and near Waterloo (Paint Creek fm. or higher), Ill.

Pentremites norwoodi Owen and Shumard = *Orbitremites norwoodi*.

Pentremites obesus Lyon.

Lyon, Geol. Surv. Ky., 3, p. 469, pl. 2, figs. 1-1d, 1857.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 12, p. 115, pl. 36, figs. 1-3, 1903.—Ulrich, U. S. Geol. Surv., Prof. Paper 36, p. 63, pl. 7, figs. 1-4, 1905.—Butts, Ky. Geol. Surv., p. 95, pl. 23, figs. 7-10, 1917.—Weller, Geol. Surv. Ill., Bull. 41, p. 355, pl. 10, figs. 1-3, 1920.

Miss. (Chester-Golconda fm.): Crittenden Co., Ky., and Pope Co., Ill.

Pentremites obesus modestus Ulrich.

Ulrich, Ky. Geol. Surv., p. 226, 1917 (nom. nud.).

Miss. (Chester-Glen Dean ls.): Grayson and Pulaski Cos., Ky.

Pentremites (*Tricoelocrinus*) *obliquatus* Meek and Worthen = *Tricoelocrinus obliquatus*.

Pentremites oblongus Gilbertson = *Mesoblastus elongatus*.

Pentremites obtusus Hambach.

Hambach, Trans. Acad. Sci. St. Louis, 13, p. 53, fig. 13, 1903.

Miss. (Warsaw ls.): Boonville, Mo.

Pentremites occidentalis Roemer = *Tricoelocrinus obliquatus*.

Pentremites okawensis Weller.

Weller, Geol. Surv. Ill., Bull. 41, p. 357, pl. 10, figs. 5-7, 1920.—Butts, Geol. Surv. Ala., Spec. Rep. no. 14, p. 198, pl. 65, fig. 4, 1926.

Miss. (Chester): Randolph Co., Ill. (Okaw ls.); Pope and Hardin Cos., Ill. (Golconda ls.); Hardin Co., Ill., and Huntsville, Ala. (Glen Dean ls.).

Pentremites orbicularis Gilbertson = *Orbitremites orbicularis*.

Pentremites orbignyanus de Koninck = *Orophocrinus orbignyanus*.

Pentremites ovalis Goldfuss.

Goldfuss, Petref. Germ., 1, p. 161, pl. 50, figs. 1 a-c, 1829.—Phillips, Pal. Foss. Cornwall, p. 29, pl. 14, figs. 40 a, b, 1841.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 122, p. 65, fig. 12, 1930.

Pentatrematites ovalis Roemer, Archiv. Naturges. Jahrg. XVII, Bd. 50, p. 355, pl. 4, figs. 14 a, b, 1851; in Bronn, Leth. Geog., 1, pt. 2, p. 282, pl. 4, figs. 12 a-d, 1852-54.

Pentremitidea phillipsi Whidborne, Pal. Soc. for 1898, p. 212, pl. 29, figs. 5, 5a, 6, 1899.

Low. Carb.: Ratingen, Germany (Etroungtian); Brushford, North Devon, England (Pilton beds); Ireland.

Pentremites ovalis Owen.

Owen, Amer. Jour. Sci. and Arts, (1) 43, p. 20, 1842 (not recognizable).

Miss.: Missouri, etc.

Pentremites ovooides Ulrich.

Ulrich in Butts, Ky. Geol. Surv., p. 61, pl. 15, figs. 6, 7, 1917.

Pentremites coronarius Ulrich, Ky. Geol. Surv., p. 139, 1917. (Nom. nud.)

Miss. (Chester-Ste. Genevieve-Ohara ls.): Near Carrsville, Livingston Co. Ky.

Pentremites pailletti de Verneuil = *Pentremitidea pailletti*.

Pentremites patei Ulrich.

Ulrich, Ky. Geol. Surv., p. 261, pl. 7, figs. 17-22, 1917.

Miss. (Chester): Breckinridge, Caldwell, and Crittenden Cos., Ky., Huntsville, Ala. (Gasper oolite): Floraville, Ill. (Renault and Paint Creek fm.).

Pentremites pediculatus Ulrich.

Ulrich, Ky. Geol. Surv., p. 248, pl. 2, fig. 44, 1917.

Miss. (Chester-Gasper oolite): Near Bowling Green, Ky., and Huntsville, Ala.

Pentremites pentagonalis Forbes.

Forbes, Mem. Geol. Surv. Great Britain, 2, pt. 2, p. 529, text fig. A, 1848.

Low. Carb. (Mtn. Ls.): Near Florence Court, Ireland.

Pentremites perelongatus Warren.

Warren, Mem. Geol. Surv. Canada, 153, p. 48, pl. 3, fig. 9, 1927.

Penn.? (Rundle ls.): Stoney Squaw Mtn., Banff, Alberta, Can.

Pentremites pinguis Ulrich.

Ulrich, Ky. Geol. Surv., p. 244, pl. 2, figs. 16, 17, 1917.—Weller, Geol. Surv. Ill., Bull. 41, p. 317, pl. 4, figs. 8-12, 1920.

Pentremites florealis Ulrich (part), U. S. Geol. Surv., Prof. Paper 36, pl. 6, figs. 18 e, f (not figs. 18 a-d), 1905.

Miss. (Chester): 2 miles east of Carrsville, and Caldwell and Christian Cos., Ky. (Up. Ohara ls.); View, Ky. (Fredonia oolite); Hardin Co., etc., Ill. (Renault fm.).

Pentremites planus Sandberger = *Pentremitidea plana*.

Pentremites planus Ulrich.

Ulrich, Ky. Geol. Surv., p. 253, pl. 5, figs. 1-13, 1917.

Miss. (Chester): Near Cowan, Tenn.; near Bowling Green, Caldwell and Christian Cos., Ky.; Huntsville, Ala. (Gasper fm.); 1.5 miles west Floraville, Ill. (Paint Creek fm.).

Pentremites planus transitus Ulrich.

Ulrich, Ky. Geol. Surv., p. 147, 1917 (nom. nud.).

Miss. (Chester-Gasper fm.): Caldwell and Christian Cos., Ky.; Ill.

Pentremites platybasis Weller.

Weller, Geol. Surv. Ill., Bull. 41, p. 355, pl. 4, figs. 37-42, 1920.

Miss. (Chester): Randolph and St. Clair Cos., Ill. (Lower Okaw ls.); Pope and Hardin Cos., Ill. (Lower Golconda ls.).

Pentremites potteri Hambach = *Schizoblastus sayi potteri*.

Pentremites prematurus Ulrich.

Ulrich, Ky. Geol. Surv., p. 245, pl. 2, fig. 20, 1917.

Miss. (Chester-Ohara ls.): Near Shetlerville, Ill.; Caldwell and Crittenden Cos., Ky.

Pentremites princetohensis Ulrich.

Ulrich, in Butts, Ky. Geol. Surv., p. 62, pl. 15, figs. 10-26, 1917.—Ulrich, id, p. 243, pl. 2, figs. 8-14, 1917.—Weller, Geol. Surv. Ill., Bull. 41, p. 314, pl. 4, figs. 1-7, 1920.—Butts, Geol. Surv. Ala., Spec. Rep. no. 14, p. 181, pl. 59, fig. 32, 1926.—Cronis and Geis, Jour. Pal., 14, p. 351, text fig. 2, 1940.

Pentremites florealis Ulrich (part), U. S. Geol. Surv., Prof. Paper 36, pl. 6, figs. 18a, c (not figs. 18b, d-f), 1905.

Miss. (Chester): Princeton, etc., Ky., and Rosiclare, Ill. (Fredonia oolite); Huntsville, Ala., and various localities in Kentucky and Ill. (Ohara ls.); Fountain Creek, Monroe Co., Ill. (Ste. Genevieve ls.); Johnson Co., Ill. (Renault fm.); Hardin Co., Ill. (Shetlerville fm.).

Pentremites pulchellus Ulrich.

Ulrich, Ky. Geol. Surv., p. 242, pl. 2, figs. 1-7, 1917.—Weller, Geol. Surv. Ill., Bull. 41, p. 316, pl. 4, figs. 14, 28-30, 1920.—Butts, Geol. Surv. Alabama, Spec. Rep. no. 14, p. 181, pl. 59, fig. 33, 1926.

Pentremites florealis Ulrich (part), U. S. Geol. Surv., Prof. Paper 36, pl. 6, figs. 18b, d (not figs. 18a, c, e-f), 1905.

- Miss. (Chester): Bakers Station, 2 miles southeast of Fredonia, Caldwell and Crittenden Cos., Ky., and Rosiclare, Ill. (Fredonia oolite); Hardin Co., Ill. (Shetlerville fm.).
- Pentremites puzos* Münster = *Orophocrinus puzos*.
- Pentremites pyramidatus* Ulrich.**
Ulrich, U. S. Geol. Surv., Prof. Paper 36, p. 64, pl. 7, figs. 12-14, 1905.—Butts, Ky. Geol. Surv., p. 99, pl. 24, figs. 1, 2?, 1917.—Weller, Geol. Surv. Ill., Bull. 41, p. 323, pl. 4, figs. 21-24, 1920.—Butts, Geol. Surv. Ala., Spec. Rep. no. 14, pp. 197, 199, pl. 65, fig. 1, 1926.
- Miss. (Chester): Flat Rock Church, Caldwell Co., Smithland, Pulaski and Livingston Cos., Ky. and Marshall Co., Ala. (Glen Dean ls.); Chester Co., Ill. (Okaw ls.); Johnson Co., Ill. (Paint Creek fm.).
- Pentremites pyramidatus planulatus* Ulrich.
Ulrich, Ky. Geol. Surv., p. 226, 1917 (nom. nud.).
Miss. (Chester-Glen Dean ls.): Kentucky.
- Pentremites pyriformis* Say.**
Say, Jour. Acad. Nat. Sci. Phila., (1) 4, p. 294; Zool. Jour., 2, p. 314, 1825.—Troost, Trans. Geol. Soc. Penn., 1, p. 228, pl. 10, fig. 8, 1835.—Owen, Amer. Jour. Sci. Arts, (1) 43, p. 20, fig. 3, 1842.—Christy, Letters on Geol., pl. 4, fig. 8, 1848.—Hall, Geol. Rep. Iowa, 1, pt. 2, p. 693, pl. 25, fig. 16, 1858.—Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 4, p. 20, text figs. 5, 7, 8, 1859.—Wachsmuth and Springer, Rev. Pal., pt. 1, pl. 17, fig. 5, 1880 (1879).—Etheridge and Carpenter, Cat. Blast., p. 167, pl. 1, figs. 1, 2, 6, 7, pl. 2, figs. 25, 28, 30, pl. 12, figs. 13-15, pl. 18, fig. 3, 1886.—Fritel, Le Naturaliste, 23, p. 237, fig. 10, 1901.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 10, p. 89, pl. 29, figs. 21-23, p. 97, pl. 30, figs. 37, 38, 40-45, 1902; pt. 12, p. 120, pl. 36, figs. 14-17, 1903.—Hambach, Trans. Acad. Sci. St. Louis, 13, p. 18, fig. 9-A, p. 38, pl. 3, figs. 8, 9, 15, 16, 1903.—Ulrich, U. S. Geol. Surv., Prof. Paper 36, p. 59, pl. 6, figs. 9-12, 1905.—Wood, U. S. Nat. Mus., Bull. 64, p. 13, pl. 2, figs. 13-15, 1909.—Springer, Zittel-Eastman Textb. Pal., 1, p. 164, fig. 255, 1913.—Butts, Ky. Geol. Surv., p. 78, pl. 21, figs. 14-17, 1917.—Ulrich, *ibid.*, p. 257, pl. 6, figs. 1-9, 1917.—Butts, Geol. Surv. Ala., Spec. Rep. no. 14, p. 180, pl. 59, fig. 11, 1926.
- Pentatrematites pyriformis* Roemer, Archiv. Naturges. Jahrb. XVII, 1 p. 354, pl. 5, figs. 9 a-c, 1851.
- Miss. (Chester): Kentucky; Caldwell and Christian Cos. Ky., Huntsville, Ala. (Gasper fm.); Floraville, Ill. (Paint Creek and Renault fm.).
- Pentremites pyriformis* Etheridge and Carpenter (part) = *P. elegans*.
- Pentremites pyriformis constrictus* Ulrich.
Ulrich, Ky. Geol. Surv., p. 147, 1917 (nom. nud.).
Miss. (Chester-Gasper oolite): Caldwell and Christian Cos., Ky.
- Pentremites pyriformis symmetricus* Etheridge and Carpenter = *P. symmetricus*.
- Pentremites reinwardti* Troost = *Troosticrinus reinwardti*.
- Pentremites robustus* Lyon.**
Lyon, Trans. Acad. Sci. St. Louis, 1, p. 629, pl. 20, figs. 2 a-c, 1860.—Bather, Treatise Zool. (Lankester), pt. 3, p. 92, fig. 15-1, 1900.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 12, p. 118, pl. 36, fig. 12, 1903.
- Miss. (Chester): Grayson and Pulaski Cos., Ky. (Glen Dean ls.); Chester, Ill. (Okaw ls.).
- Pentremites robustus hemisphericus* Hambach.**
Pentremites hemisphericus Hambach, Trans. Acad. Sci. St. Louis, 4, p. 157, pl. B, fig. 7, 1880.—Etheridge and Carpenter, Cat. Blast., p. 156, pl. 16, fig. 21, 1886.
Pentremites robustus var. *hemisphericus* Ulrich, Ky. Geol. Surv., p. 226, 1917.
- Miss. (Chester): Chester and Evansville, Ill. (Okaw ls.); Pulaski and Grayson Cos., Ky. (Glen Dean ls.).
- Pentremites roemeri* Shumard = (part) *Cryptoblastus roemeri*; (part) *C. missouriensis*.

Pentremites rusticus Hambach.

Hambach, Trans. Acad. Sci. St. Louis, 13, p. 54, fig. 15, 1903.—Mather, Bull. Sci. Lab. Denison Univ., 18, p. 101, pl. 3, figs. 3-6a, 1915.

Penn. (Brentwood ls.): 2 miles northwest of Brentwood, Washington Co., Ark.

Pentremites sampsoni Hambach = *Cryptoblastus roemeri*.

Pentremites saxiomontanus T. H. Clark.

T. H. Clark, Bull. Mus. Comt. Zool., 61, no. 9, p. 363, pl. 1, figs. 1-6, 14, 1917.

Miss. (Quadrant fm.): Old Baldy, near Virginia City, Mont.

Pentremites sayi Shumard = *Schizoblastus sayi*.

Pentremites schultzii d'Archiac and Verneuil = *Cryptoschisma schultzii*.

Pentremites serratus Hambach.

Hambach, Trans. Acad. Sci. St. Louis, 13, p. 56, pl. 4, fig. 9, 1903.

Pentremites serrata Butts, Ky. Geol. Surv., p. 116, pl. 28, figs. 11, 12, 1917.

Miss. (Chester): Ste. Genevieve, Mo., Claxton, Ky., Baldwin, Ill. (Clare ls.); Grayson Co., Ky. (Glen Dean ls.).

Pentremites simulans Ulrich.

Ky. Geol. Surv., p. 226, 1917 (nom. nud.).

Miss. (Chester-Glen Dean ls.): Pulaski Co., Ky.

Pentremites sirius White = *Orophocrinus sirius*.

Pentremites speciosus Rowley.

Rowley, in Greene, Cont. Ind. Pal., 1, pt. 12, p. 119, pl. 36, fig. 13, 1903.

Miss. (Chester-Glen Dean ls.): Crittenden Co., Ky.

Pentremites spicatus Ulrich.

Ulrich in Butts, Ky. Geol. Surv., p. 100, pl. 24, figs. 3, 4, 1917; p. 263, pl. 7, figs. 33-35, 1917.—Weller, Geol. Surv. Ill., Bull. 41, p. 368, pl. 10, fig. 8, 1920.

Miss. (Chester): Grayson and Pulaski Cos., and near Cloverport, Breckinridge Co., Ky. (Glen Dean ls.); Chester, Ill. (Okaw ls.); Randolph Co., Ill. (Upper Okaw ls.); Pope Co., Ill. and Dover Hill, Ind. (Glen Dean ls.).

Pentremites spinosus Hambach.

Hambach, Trans. Acad. Sci. St. Louis, 4, p. 154, pl. B, fig. 1, 1880.

Miss. (Chester-Clore ls.): East of Chester, Ill.

Pentremites springeri Ulrich.

Ulrich, Ky. Geol. Surv., p. 255, pl. 5, figs. 36-40, 1917.

Miss. (Chester-Gasper oolite): New Bethel, Breckinridge Co., Ky.

Pentremites subconoideus Meek.

Meek, 6th Ann. Rep. U. S. Geol. Surv. Terr. Mont., Idaho, Wyo., and Utah, p. 471, 1873.—Bather, List. Gen. and sp. Blastoidea British Mus., p. 53, 1899.—Wood, U. S. Nat. Mus., bull. 64, p. 14, 1909.—T. H. Clark, Bull. Mus. Comp. Zool., 61, no. 9, p. 370, 1917.

Miss. (Madison ls.): Divide between Ross Fork and Lincoln Valley, Mont.

Pentremites sulcatus (Roemer).

Pentatrematites sulcatus Roemer, Archiv. Naturges. Jahrg. XVII, 50, p. 354, pl. 3, figs. 10 a-c, 1851; in Bronn, Leth. Geog., 1, pt. 2, p. 232, pl. 4, figs. 9a, b, 1852-54.—Bronn, Klass. Ord. Thierr., 2, pl. 23, figs. 1 f-i, 1860.

Pentremites sulcatus Shumard, Trans. Acad. Sci. St. Louis, 1, pp. 243, 246, 1858.—Quenstedt, Handb. Petref., pl. 72, fig. 1, 1867; Petref. Deutsch., 4, p. 716, pl. 114, figs. 76, 77, 1876.—Etheridge and Carpenter, Cat. Blast., p. 165, pl. 1, figs. 8-10, pl. 2, fig. 31, pl. 16, fig. 20, pl. 18, fig. 5, 1886.—Keyes, Geol. Surv. Mo., 4, p. 135, pl. 18, figs. 6a, b, 1894.—Fritel, Le Naturaliste, 23, p. 235, fig. 8, 1901.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 12, p. 116, pl. 36, figs. 4, 5, 1903.—Hambach, Trans. Acad. Sci. St. Louis, 13, p. 39, pl. 6, figs. 1-12, 1903.—Wood, U. S. Nat. Mus., Bull. 64, p. 16, pl. 3, figs. 14-16, 1909.—Springer, Zittel-Eastman Textb. Pal., 1, p. 162, fig. 253-C, p. 165, fig. 257, p. 169, fig. 263, 1913.—Jaekel, Pal. Zeits., 3, p. 107, fig. 100, 1918.

- Miss. (Chester): Chester, and Randolph Co., Ill., St. Marys, Mo., Washington Co., Ark. (Okaw ls.); Chester, Ill. and near Tribune, Ky. (Menard ls.); Dover Hill, Ind. (Glen Dean ls.).
- Pentremites sulcatus* Zittel (not Roemer) = *P. conoideus*.
- Pentremites symmetricus* Hall.**
Hall, Geol. Rep. Iowa, 1, pt. 2, p. 694, pl. 25, fig. 14, 1853.—T. H. Clark, Bull. Mus. Comp. Zool., 61, no. 9, p. 371, 1917.—Ulrich, Ky. Geol. Surv., p. 260, pl. 7, figs. 8-10, 1917.—Weller, Geol. Surv. Ill., Bull. 41, p. 324, pl. 4, figs. 26, 27, 1920.
Pentremites pyriformis var. *symmetricus* Etheridge and Carpenter, Cat. Blast., p. 168, pl. 2, fig. 24, 1886.
Miss. (Chester): Kentucky and Huntsville, Ala.; Waterloo and Randolph Co., Ill. (Paint Creek fm.); Floraville, Ill. (Renault fm.); Old Baldy, Virginia City, Mont. (Quadrant fm.).
- Pentremites tennesseae* Troost.
Troost, Amer. Jour. Sci. Arts, (2) 8, p. 419, 1849 (nom. nud.).
Miss. (Chester): Crab Orchard Mtn., Tenn.; Evansville, Ill.
- Pentremites troosti* Shumard.
Shumard, Trans. Acad. Sci. St. Louis, 2, p. 386, 1866 (nom. nud.).
Miss. (Chester): Hardin Co., Ill.; Monte Sana, Ala.
- Pentremites truncata* Conrad.
Conrad, Proc. Acad. Nat. Sci. Phila., p. 334, 1843 (nom. nud.).
Miss.: Edwardsville, Ill.
- Pentremites tulipaeformis* Hambach.**
Hambach, Trans. Acad. Sci. St. Louis, 13, p. 52, pl. 4, figs. 10, 11, 1903.
Pentremites tulipaeformis Butts, Ky. Geol. Surv., p. 100, pl. 24, fig. 5, 1917.
Miss. (Chester): Kaskaskia and Evansville, Ill. (Okaw ls.); Pulaski Co., Ky. (Glen Dean fm.).
- Pentremites turbinatus* Hambach,**
Hambach, Trans. Acad. Sci. St. Louis, 13, p. 54, pl. 5, fig. 6, 1903.
Miss. (Chester): Evansville, Ill. (Okaw ls.); Huntsville, Ala. (Gasper fm.).
- Pentremites tuscumbiae* Ulrich.**
Ulrich, Ky. Geol. Surv., p. 244, pl. 2, figs. 14, 15, 1917.
Miss. (Chester): Tuscumbia, Ala. (Monte Sana ls.); 2 miles east Carrsville, Ky. (Up. Ohara ls.); Hardin Co., Ill. (Shetlerville ls.).
- Pentremites* (*Tricoelocrinus*) *varsouviensis* Worthen = *Metablastus varsouviensis*.
- Pentremites verneuili* Troost = *Nucleocrinus verneuili*.
- Pentremites waterhausianus* de Koninck = *Orophocrinus pentangularis*.
- Pentremites welleri* Ulrich.**
Ulrich, Ky. Geol. Surv., p. 258, pl. 6, figs. 15-26, 1917.—Butts, Geol. Surv. Ala., Spec. Rep. no. 14, p. 180, pl. 59, fig. 1 (fig. 4?), 1926.
Miss. (Chester): Near Huntsville, Ala. (Monte Sana ls.); Bowling Green and Caldwell Co., etc., Ky. (Gasper fm.); Floraville, Ill. (Paint Creek or Renault fm.); Evansville, Ill. (Okaw ls.).
- Pentremites whitei* Hall = *Pentremitidea whitei*.
- Pentremites woodmani* Meek and Worthen = *Tricoelocrinus woodmani*.
- Pentremites wortheni* Hall = *Metablastus wortheni*.
- Pentremitidaea* d'Orbigny. See *Pentremitidea*.
- Pentremitidea* d'Orbigny.** Genotype: *Pentremites pailletti* Verneuil.
Pentremitidae (Eublastoidea). Dev.

- D'Orbigny, Prodr. Pal. Strat., 1, p. 102, 1849; Cours Element. Pal., 2, fasc. 1, p. 139, 1851 (as *Pentremitidaea*).—Quenstedt, Petref. Deutsch., 4, p. 718, 1876 (as *Pentremitida*).—Etheridge and Carpenter, Cat. Blast., p. 169, 1886.—Bather, Treatise Zool. (Lankester), pt. 3, pp. 85, 92, 1900.
- Pentremitidea acutangula** (Schultze).
Pentremites acutangulus Schultze, Denk. Akad. Wiss., Math. Nat. Cl., 26, p. 225, pl. 13, fig. 6, 1867 (adv. pub., 1866).
 Dev. (Eifelian): Pelm, Germany.
- Pentremitidea americana** Barris.
 Barris, Geol. Surv. Ill., 7, p. 363, 1883; Proc. Davenport Acad. Nat. Sci., 4, p. 93, pl. 1, fig. 4, 1886 (adv. pub. 1885).
 Dev. (Traverse-Thunder Bay ls.): Thunder Bay, Mich.
- Pentremitidea angulata** Etheridge and Carpenter.
 Etheridge and Carpenter, Ann. Mag. Nat. Hist., (5) 9, pp. 223, 224, 1882; Cat. Blast., p. 180, pl. 4, figs. 13, 14, 16, 1886.
 Dev. (Calcaire de Ferrones): Ferrones (Asturias), Spain.
- Pentremitidea? approximata** Rowley.
 Rowley, in Greene, Cont. Ind. Pal., 1, pt. 10, p. 93, pl. 30, fig. 8, 1902.
 Dev. (Hamilton-Sellersburg ls.): Near Charlestown, Ind.
- Pentremitidea clavata** (Schultze).
Pentremites clavatus Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 225, pl. 13, fig. 7, 1867 (adv. pub., 1866).
Pentremitidea clavata Etheridge and Carpenter, Cat. Blast., p. 176, pl. 4, figs. 17, 18, 1886.
 Mid. Dev.: Nollenbach and near Kerpen, Germany (Eifelian); near Sabero (Leon), Spain (Calcaire d'Arnao).
- Pentremitidea clavata schultzei** Etheridge and Carpenter.
 Etheridge and Carpenter, Cat. Blast., p. 177, pl. 5, figs. 3-5, 1886.
 Low. Dev. (Calcaire d'Arnao): Near Sabero (Leon), Spain.
- Pentremitidea claviformis** Reimann.
 Reimann, Bull. Buffalo Soc. Nat. Sci., 17, p. 30, pl. 2, figs. 21, 22, 1935.
 Dev. (Traverse-Norway Point fm.): 7-Mile Dam, 7 miles from mouth of Thunder Bay River, Mich.
- Pentremitidea cummingsi** Reimann.
 Reimann, Bull. Buffalo Soc. Nat. Sci., 17, p. 28, pl. 2, fig. 19, pl. 4, fig. 8, 1935.
 Dev. (Hamilton-Widder? beds): Thedford, Ont.
- Pentremitidea cummingsi kentuckyensis** Reimann.
 Reimann, Bull. Buffalo Soc. Nat. Sci., 17, p. 29, pl. 2, fig. 20, 1935.
 Dev. (Hamilton-Sellersburg ls.): Beargrass Creek, near Louisville, Ky.
- Pentremitidea? dubia** Rowley.
 Rowley in Greene, Cont. Ind. Pal., 1, pt. 10, p. 92, pl. 30, figs. 5-7, 11, 1902.
 Dev. (Hamilton-Sellersburg ls.): Near Charlestown, Ind.
- Pentremitidea eifelensis** (Roemer).
Pentatrematites eifelensis Roemer, in Bronn, Leth. Geog., 1, pt. 2, p. 280 (foot note), 1852-54.
Pentremites eifelensis Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 223, pl. 13, figs. 5b, c (not figs. 5, 5a, d, e), 1867 (adv. pub. 1866).
Pentremitidea eifelensis Etheridge and Carpenter, Cat. Blast., p. 174, pl. 5, figs. 1, 2, 1886.
 Mid. Dev. (Eifelian): Prüm and Gerolstein, Germany.

Pentremitidea erecta Schmidt.Schmidt, *Palaeontographica*, 76, p. 32, pl. 4, fig. 13, 1931.

Low. Dev. (Calcaire d'Arnao): Landzunge El Mugaron, Concha d'Arnao, Spain.

Pentremitidea filosa Whiteaves.Whiteaves, *Contrib. Canadian Pal.*, 1, pt. 2, p. 104, pl. 14, figs. 1a, b, 1889 (adv. pub. 1887).—Weller, *Ann. N. Y. Acad. Sci.*, 11, pp. 122, 123, pl. 14, fig. 3, 1898.—Cleland, *Geol. Nat. Hist. Surv. Wis.*, Bull. 21, p. 44, pl. 3, fig. 2, 1911.

Dev.: Thedford and Arkona, Ontario (Hamilton-Widder beds); 7-Mile Dam, near Thunder Bay, Mich. (Traverse-Norway Point fm.).

Pentremitidea fraiponti (Dewalque).*Pentremities fraiponti* Dewalque in Fraipont, *Ann. Soc. Geol. Belgique*, 11, p. 114, pl. 1, figs. 6 a-g, 1884.*Pentremitidea fraiponti* Bather, *List Gen. and Sp. Blastoid. Brit. Mus.*, p. 57, 1899.

Low. Dev. (Famennian): Champlon, Belgium.

Pentremitidea gilbertsoni Etheridge and Carpenter.Etheridge and Carpenter, *Cat. Blast.*, pp. 24, 179, pl. 5, figs. 9-11, 1886.*Pentremitidea* cf. *gilbertsoni* Oehlert, *Bull. Soc. Geol.*, (3) 24, p. 829, pl. 26, figs. 9, 10, 1897; *Bol. Com. Map. Geol. Espana*, 26, p. 99, pl. 3, figs. 9, 10, 1902.

Low. Dev. (Calcaire d'Arnao): Near Sabero (Leon), Spain.

Pentremitidea goldringae Reimann.Reimann, *Bull. Buffalo Soc. Nat. Sci.*, 17, p. 26, pl. 2, figs. 1-7, 1935.

Dev.: Bay View etc., Erie Co., and Cazenovia N. Y. (Hamilton-Wanakah and Tichenor ls.); near Geneseo, N. Y. (Ludlowville sh.).

Pentremitidea goldringae juvenis Reimann.Reimann, *Bull. Buffalo Soc. Nat. Sci.*, 17, p. 27, pl. 2, figs. 8, 9, 1935.

Dev. (Hamilton-Wanakah sh.): Bay View, Erie Co., N. Y.

Pentremitidea goldringae lata Reimann.Reimann, *Bull. Buffalo Soc. Nat. Sci.*, 17, p. 27, pl. 2, figs. 10-13, 1935.

Dev. (Hamilton-Wanakah sh.): Bay View, Erie Co., Athol Springs, etc., Cazenovia Creek, N. Y.

Pentremitidea goldringae obesa Reimann.Reimann, *Bull. Buffalo Soc. Nat. Sci.*, 17, p. 27, pl. 2, figs. 14, 15, 1935.

Dev. (Hamilton-Wanakah sh.): Smokes Creek, Windom, N. Y.

Pentremitidea? gracilis (Steininger).*Penttetramites gracilis* Steininger, *Jahresb. Schul.-Cursus*, 1848-49, p. 19, 1849.*Pentremitidea? gracilis* Etheridge and Carpenter, *Cat. Blast.*, p. 171, 1886.

Low. Dev.: Eifel, Germany.

Pentremitidea leda Etheridge and Carpenter = *Devonoblastus leda*.*Pentremitidea leda maia* Hall = *Devonoblastus maia*.*Pentremitidea leda magna* Rowley = *Devonoblastus leda magna*.**Pentremitidea lusitanica** Etheridge and Carpenter.Etheridge and Carpenter, *Ann. Mag. Nat. Hist.*, (5) 9, p. 223, 1882; *Cat. Blast.*, p. 173, pl. 4, figs. 11, 12, 15, pl. 5, fig. 20, pl. 10, fig. 1, 1886.

Low. Dev. (Calcaire de Ferrones): Ferrones, Asturias, Spain.

Pentremitidea lycorias (Hall).*Pentremites lycorias* Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 151, 1862.*Pentremitidea* cf. *lycorias* Reimann, *Bull. Buffalo Soc. Nat. Sci.*, 17, p. 30, pl. 3, fig. 1, 1935.

Dev. (Hamilton): Western N. Y. (Tichenor ls.); Darien, N. Y. (Moscow sh.?).

Pentremitidea malladai Etheridge and Carpenter.

Etheridge and Carpenter, *Ann. Mag. Nat. Hist.*, (5) 11, p. 243, 1883 (*P. malladae*);
Cat. Blast., p. 176, pl. 5, figs. 18, 19, 1886 (*P. malladai*).

Pentremitidea cf. *maladai* Schmidt, *Palaeontographica*, 76, p. 32, pl. 4, fig. 12, 1931.
 Low. Dev. (Calcaire d'Arnao): Near Sabero (Leon), Spain.

Pentremitidea medusa Jaekel.

Jaekel, *Pal. Abhandl.*, 7, p. 12, pl. 2, fig. 2, p. 15, fig. 1, 1895.

Dev. (Hunsrück sl.): Caub am Rhein, Germany.

Pentremitidea milwaukeeensis Weller.

Weller, *Ann. N. Y. Acad. Sci.*, 11, p. 123, pl. 14, fig. 5, 1898.—Cleland, *Wis. Geol. Nat. Hist. Surv.*, Bull. 21, p. 43, pl. 3, fig. 1, 1911.

Dev. (Hamilton): Milwaukee, Wis. (Milwaukee fm.); Partridge Point, Mich. (Thunder Bay ls.).

Pentremitidea pailletti (Verneuil).

Pentremites pailletti Verneuil, *Institut*, sec. 1 (*Sci. Math. Phys. et Nat.*), p. 216, 1844; *Bull. Soc. Geol. France*, (2) 1, p. 213, pl. 2, figs. 4, 5, 1844.—Verneuil and d'Archaic, *Bull. Soc. Geol. France*, (2) 2, p. 479, pl. 15, figs. 10, 11, 1845; *Quart. Jour. Geol. Soc. London*, 2, pt. 2, pp. 65–68, 1846.

Pentremitidea pailletti d'Orbigny, *Prodr. Pal. Strat.*, 1, p. 102, 1849.—Etheridge and Carpenter, *Cat. Blast.*, p. 172, pl. 4, figs. 8–10, pl. 14, fig. 13, pl. 17, fig. 11, 1886.

Pentatrematites pailletti Roemer, *Archiv. Natur.*, Jahrg. XVII, 1, p. 368, pl. 7, figs. 17 a–c (p. 374, as *Pentremites dutertrii* by error), 1851.

Low. Dev.: Asturias, Spain (Calcaire de Ferrones); near Sabero (Leon) Spain (Calcaire d'Arnao).

Pentremitidea pailletti Carpenter (part) = *Phaenoschisma archiaci*.

Pentremitidea phillipsi Whidborne = *Pentremites ovalis*.

Pentremitidea plana (Sandberger).

Pentremites planus Sandberger, *Neues Jahrb. Min., Geol., Pal.*, p. 396, 1842.

Pentatrematites planus Sandberger and Sandberger, *Verst. Rhein. Schicht. Nassau*, p. 403, pl. 35, figs. 4a, b, 1855.

Pentremitidea planus Etheridge and Carpenter, *Cat. Blast.*, p. 171, 1886.

Mid. Dev. (Givetian-*Stringocephalus* ls.): Villmar, Nassau, Germany.

Pentremitidea roemeri Etheridge and Carpenter.

Etheridge and Carpenter, *Cat. Blast.*, pp. 104, 171, 175, pl. 5, fig. 15, pl. 16, fig. 11, 1886.

Pentremites eifelensis Schultze, *Denk. Kais. Akad. Wiss., Math. Nat. Cl.*, 26, p. 223, pl. 13, figs. 5, 5a, d, e (not figs. 5b, c), 1867 (adv. pub. 1866, p. 111).

Mid. Dev. (Eifelian): Eifel, Germany.

Pentremitidea similis Etheridge and Carpenter.

Etheridge and Carpenter, *Ann. Mag. Nat. Hist.*, (5) 9, pp. 223, 225, 1882; *Cat. Blast.*, p. 180, pl. 5, fig. 16, pl. 10, figs. 2–4, 1886.

Mid. Dev. (Eifelian): Prüm, Germany.

Pentremitidea southworthi Reimann.

Reimann, *Bull. Buffalo Soc. Nat. Sci.*, p. 28, pl. 2, figs. 16, 17, 1935.

Dev. (Hamilton-Arkona fm.): Thedford, Ontario.

Pentremitidea wachsmuthi Etheridge and Carpenter.

Etheridge and Carpenter, *Cat. Blast.*, pp. 20, 178, pl. 5, figs. 6–8, 1886.

Low. Dev. (Calcaire d'Arnao): Near Sabero (Leon), Spain.

Pentremitidea whidbornei Etheridge and Carpenter.

Etheridge and Carpenter, *Cat. Blast.*, pp. 130, 171, pl. 4, fig. 7, 1886.

Mid. Dev.: South Devon, England.

Pentremitidea whitei (Hall).

Pentremites whitei Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 150, 1862.

Pentremitidea whitei Reimann, Bull. Buffalo Soc. Nat. Sci., 17, pl. 3, fig. 2, 1935.
Dev. (Hamilton-Moscow sh.): Vincent, N. Y.

Pentremitidia Quenstedt. See *Pentremitidea*.

Phaenoscisma Etheridge and Carpenter. Genotype: *Pentatrematites acutum* Sowerby.

Phaenoscismidae (Eublastoidea). Dev., Low. Carb.

Etheridge and Carpenter, Ann. Mag. Nat. Hist., (5) 9, p. 226, 1882; Cat. Blast., p. 270, 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 84, 1900.—Wanner, Perm. Blast. Timor, 2e Nederl. Timor Exped. 1916, p. 194, 1924; Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 236, 1940.

Phaenoscisma acutum (Sowerby).

Pentatrematites acuta Sowerby, Zool. Jour., 5, p. 456, pl. 33, Suppl., figs. 6 a-c, 1834.

Pentremites acutus Gilbertson, in Phillips, Geol. Yorkshire, 2, p. 207, pl. 3, figs. 4, 5, 1836.

Phaenoscisma acutum Etheridge and Carpenter, Ann. Mag. Nat. Hist., (5) 9, p. 229, 1882; Cat. Blast., p. 276, pl. 14, figs. 10-12, 1886.—Springer, Zittel-Eastman Textb. Pal., 1, p. 163, fig. 254-B, 1913.

Low. Carb.: Bolland, Lancashire, England.

Phaenoscisma archiaci Etheridge and Carpenter.

Etheridge and Carpenter, Ann. Mag. Nat. Hist., (5) 9, pp. 229, 230, 1882; Cat. Blast., p. 274, pl. 11, fig. 7, pl. 12, fig. 10, pl. 14, figs. 5-7, pl. 17, fig. 15, 1886.

Pentremitidea pailletti Carpenter (part), Rep. British Assoc. for 1881, pt. 2, p. 634, 1882.

Low. Dev.: Ferrones, (Asturias), Spain (Calcaire de Ferrones); near Sabero (Leon), Spain (Calcaire d'Arnao).

Phaenoscisma benniei Etheridge and Carpenter.

Etheridge and Carpenter, Cat. Blast., pp. 88, 278, pl. 2, fig. 37, pl. 4, figs. 5, 6, 1886.

Low. Carb.: Near Gifford, Haddingtonshire, Scotland.

Phaenoscisma caryophyllatus (De Koninck and Lehon).

Pentremites caryophyllatus de Koninck and Lehon, Rech. Crin. Terr. Carb. Belgique, p. 197, pl. 7, figs. 3 a-c, 1854.—Billings, Amer. Jour. Sci. Arts, (2) 48, pp. 79, 80, text fig. 11, 1869.

Phaenoscisma caryophyllatus Etheridge and Carpenter, Ann. Mag. Nat. Hist., (5) 9, p. 229, 1882; Cat. Blast., p. 277, pl. 14, figs. 1-4, pl. 17, fig. 16, 1886.

Pentatrematites orbignyianus Roemer (not de Koninck), Archiv. Naturges., XVII, 1, p. 358, pl. 4, figs. 16 a-c, 1851.

Pentremites inflatus? de Koninck, Descr. Animaux Foss. Carb. Belg., p. 38, 1842.

Low. Carb. (Low. Tournaisian): Tournai, Belgium.

Phaenoscisma? kentuckyense (Shumard).

Pentremites (*Codaster?*) *kentuckyensis* Shumard, Trans. Acad. Sci. St. Louis, 1, pt. 2, p. 239, pl. 9, fig. 5, 1858.

Phaenoscisma kentuckyensis Etheridge and Carpenter, Cat. Blast., p. 273, 1886.

Miss. (New Providence sh.): Button Mold Knob, 12 miles south of Louisville, Ky.

Phaenoscisma nobile Etheridge and Carpenter.

Etheridge and Carpenter, Ann. Mag. Nat. Hist., (5) 11, p. 246, 1883; Cat. Blast., p. 275, pl. 11, figs. 1-4, 1886.

Low. Dev. (Calcaire d'Arnao): Near Sabero, Spain.

Phaenoscisma verneuili Etheridge and Carpenter.

Etheridge and Carpenter, Ann. Mag. Nat. Hist., (5) 9, p. 229, 1882; Cat. Blast., p. 273, pl. 10, fig. 18, pl. 11, figs. 5, 6, pl. 14, figs. 8, 9, 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 85, fig. 7, 1900.

Dev. (Calcaire de Ferrones): Ferrones (Asturias), Spain.

- Pteroblastus Wanner.** Genotype: *P. gracilis* Wanner.
Codasteridae (Eublastoidea). Permian.
Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, p. 9, 1924; Perm. Blast. Timor, 2e Nederl. Timor Exped. 1916, p. 196, 1924; Neue Beitr. Kennt. Perm. Echin. Timor, VI, Blastoidea, p. 42, 1931; Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, pp. 233, 240, 1940.
- Pterotoblastus brevialetus Wanner.**
Wanner, Neue Beitr. kennt. Perm. Echin. Timor, VI, Blastoidea, p. 45, pl. 1, figs. 4-10, pl. 2, figs. 1, 2, 1931; Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 241, pl. 1, figs. 1, 2, 1940.
Permian: Basleo (Noko, etc.), Timor.
- Pterotoblastus brevialetus depressus Wanner.**
Wanner, Neue Beitr. kennt. Perm. Echin. Timor, VI, Blastoidea, p. 48, pl. 2, figs. 3-5, 1931.
Permian: Basleo, Timor.
- Pterotoblastus decemcostis Wanner.**
Wanner, Neue Beitr. kennt. Perm. Echin. Timor, VI, Blastoidea, p. 48, pl. 2, figs. 6-7, 1931.
Permian: Basleo, Timor.
- Pterotoblastus ferrugineus Wanner.**
Wanner, Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 242, pl. 1, figs. 3, 4, 1940.
Permian: Taë Wei, Timor.
- Pterotoblastus gracilis Wanner.**
Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, p. 10, text figs. 1, 2, pl. 199, figs. 11-18, 1924; Neue Beitr. kennt. Perm. Echin. Timor, VI, Blastoidea, p. 44, text figs. 1, 2, 1931; Handwort. Naturwiss., p. 494, fig. 30, 1933.
Permian: Basleo, Timor.
- Pterotoblastus oyensi Wanner.**
Wanner, Geol. Exped. Univ. Amsterdam, Lesser, Sunda Ids., 1, p. 243, pl. 1, figs. 5, 6, 1940.
Permian: Basleo, Timor.
- Rhopaloblastus Wanner.** Genotype: *R. timoricus* Wanner.
Pentremitidae (Eublastoidea). Permian.
Wanner, Perm. Blast. Timor, 2e Nederl. Timor Exped., 1916, p. 215, 1924; Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 272, 1940.
- Rhopaloblastus timoricus Wanner.**
Wanner, Perm. Blast. Timor, 2e Nederl. Timor Exped., 1916, p. 217, pl. 3, figs. 1-5, 1924; Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 273, pl. 1, figs. 18, 19, pl. 2, fig. 16, 1940.
Permian: Basleo (Noko, etc.), Timor.
- Saccoblastus Hambach** = *Tricoelocrinus*.
Saccoblastus lineatus Hambach = *Metablastus lineatus*.
Saccoblastus wortheni Hambach = *Metablastus wortheni*.
- Sagittoblastus Yakovlev.** Genotype: *Timoroblastus wanneri* Yakovlev.
Angioblastidae (Eublastoidea). Permian.
Yakovlev, Soc. Pal. Russie, Ann., 11, p. 10, 1937.—Wanner, Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 236, 1940.
- Sagittoblastus elongatus Yakovlev.**
Yakovlev, Soc. Pal. Russie, Ann., 11, p. 10, pl. 1, fig. 4, 1937.
Permian: Krasnooufimsk, Russia.

Sagittoblastus wanneri (Yakovlev).

Timoroblastus wanneri Yakovlev, Bull. Comité Géol., 45, no. 2, pp. 54, 55, text fig. 5, pl. 1, figs. 8-10, 1926.

Angioblastus wanneri Wanner, Neue Beitr. kennt. Perm. Echin. Timor, VI, Blastoidea, p. 54, 1931.

Sagittoblastus wanneri Yakovlev, Soc. Pal. Russie, Ann., 11, p. 10, pl. 1, fig. 3, 1937. Permian: Krasnooufinsk, Russia.

Schizoblastus Etheridge and Carpenter. Genotype: *Pentremites sayi* Shumard.

Nucleocrinidae (Eublastoidea). Low. Carb.; Permian.

Etheridge and Carpenter, Ann. Mag. Nat. Hist., (ser. 5), 9, pp. 238, 243, 1882; Cat. Blast., p. 220, 1886.—Bather, Treatise Zool. (Lankester), pt. 3, pp. 89, 92, 1900.—Wanner, Pal. Timor, XXIII, 2 Teil, p. 40, 1924.—Cline, Jour. Pal., 10, no. 4, p. 263, 1936.

Cribroblastus Hambach, Trans. Acad. Sci. St. Louis, 13, p. 39, 1903. (Genotype: *Pentremites cornutus* Meek and Worthen.)

Schizoblastus baillii Etheridge and Carpenter = *Monoschizoblastus baillii*.

Schizoblastus batheri Wanner.

Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, pp. 44, 64, text figs. 20-22, pl. 205, figs. 1-8, 13, 17-19, pl. 206, figs. 4-9, 1924; Neue Beitr. kennt. Perm. Echin. Timor, VII, pp. 11, 12, 15, 19, pl. 1, figs. 7, 10, pl. 3, figs. 25a, b, pl. 4, figs. 35a, b, 1932.—Jansen, Koninck. Akad. Wettens Amsterdam, Proc., 37, no. 10, p. 820, text fig., 1934.

Permian: Basleo, Timor.

Schizoblastus burlingtonensis Cline.

Cline, Jour. Pal., 10, p. 280, pl. 45, figs. 9-11, 1936.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Schizoblastus cornutus (Meek and Worthen).

Pentremites cornutus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 141, 1861.

Granatocrinus cornutus Meek and Worthen, Geol. Surv. Ill., 2, p. 276, pl. 20, fig. 1, 1866.

Heteroblastus cornutus Etheridge and Carpenter, Cat. Blast., p. 256, 1886.

Cribroblastus cornutus Hambach, Trans. Acad. Sci. St. Louis, 13, p. 40, 1903.

Miss.: Dry Fork, Brown Co., Ill. (St. Louis ls.?) ; Fenton, Mo. (Ste. Genevieve ls.).

Schizoblastus crassus Jansen.

Jansen, Koninck. Akad. Wetens. Amsterdam, Proc., 37, no. 10, p. 820, text fig., p. 821, text fig. 2, 1934.

Permian: Nipol and Basleo, Timor.

Schizoblastus curtus (Shumard).

Pentremites curtus Shumard, 2d Rep. Geol. Surv. Mo., p. 187, pl. B, figs. 3a, b, 1855.

Miss. (Warsaw or Ste. Genevieve ls.): Fenton, St. Louis Co., Mo.

Schizoblastus decussatus (Shumard).

Pentremites decussatus Shumard, Trans. Acad. Sci. St. Louis, 1, p. 242, pl. 9, figs. 6a, b, 1858.—Weller, Bull. Geol. Soc. Amer., 20, p. 288, pl. 11, figs. 28, 29, 1909.

Schizoblastus decussatus Bassler, U. S. Nat. Mus., Proc., 41, p. 220, 1911.

Miss. (New Providence sh.): Button Mold Knob, 12 miles south Louisville, Ky.

Schizoblastus delta Bather.

Bather, in Boehm. Neues Jahrb. Min. Geol. Pal., Beil. Bd. 25, pp. 312, 319, pl. 10, figs. 8-10, 1908.—Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, pp. 44, 56, text figs. 11-15, pl. 203, figs. 8-11, pl. 205, figs. 14-16, 20-22, 1924.—Jansen, Koninck. Akad. Wetens. Amsterdam, Proc., 37, no. 10, p. 820, text fig., 1934.

Permian: Bisano Hill, south of Baung, Timor.

Schizoblastus delta elongatus Wanner.

Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, pp. 44, 61, text figs. 16, 17, pl. 204, fig. 1, 1924.

Permian: Dicasnian, Timor.

Schizoblastus delta subglobosus Wanner.

Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, pp. 44, 61, text figs. 18, 19, 1924.

Permian: Toeporo, Timor.

Schizoblastus etheridgei Cline.

Cline, Jour. Pal., 10, p. 275, pl. 45, figs. 17-20, 1936.

Schizoblastus melonoides Etheridge and Carpenter, Ann. Mag. Nat. Hist., (5) 9, p. 247, 1882 (part); Cat. Blast., pp. 226, 227, pl. 6, figs. 15, 16, 1886 (part).

Miss. (Up. Burlington ls.): Burlington and near Elrick Junction, Iowa.

Schizoblastus granulosus Etheridge and Carpenter = *Cryptoblastus granulosus*.

Schizoblastus haynesi T. H. Clark = *Mesoblastus haynesi*.

Schizoblastus incisus (Hambach).

Crioblastus incisus Hambach, Trans. Acad. Sci. St. Louis, 13, p. 57, pl. 5, fig. 2, 1903.

Schizoblastus? incisus Bather, in Boehm, Neues. Jahrb. Min., Geol. Pal., Beil.-Bd. 25, p. 316, 1908.

Miss. (Low. Burlington ls.): Burlington, Iowa, and Louisiana, Mo.

Schizoblastus jonkeri Wanner.

Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, p. 41, text fig. 8, pp. 43, 53, text fig. 10, pl. 206, figs. 10-17, 1924.

Permian: Noil Tonini, Timor.

Schizoblastus laudoni Cline.

Cline, Jour. Pal., 10, p. 277, pl. 44, figs. 1-5, 1936.

Miss. (Low. Burlington ls.): Dolbe Creek, southeastern Iowa.

Schizoblastus lotoblastus (White).

Granatocrinus lotoblastus White, Final Rep. U. S. Geol. Surv. West 100th Merid., p. 80, pl. 5, figs. 3a, b, 1875 (Prelim. rept. 1874).

Schizoblastus lotoblastus T. H. Clark, Bull. Mus. Comp. Zool., 61, no. 9, p. 373, 1917.

Miss.: Ewalls Spring, Arizona.

Schizoblastus magnificus Wanner.

Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, pp. 44, 62, pl. 203, figs. 12, 13, 1924.

Permian: Koaneke, Timor.

Schizoblastus melo Etheridge and Carpenter = *Cryptoblastus melo*.

Schizoblastus (*Granatocrinus*) *melo* Wachsmuth (part) = *Cryptoblastus melo cancelatus*.

Schizoblastus melonoides (Meek and Worthen).

Granatocrinus melonoides Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 88, 1869; Geol. Surv. Ill., 5, p. 468, pl. 9, fig. 1, 1873.

Schizoblastus melonoides Etheridge and Carpenter (part), Ann. Mag. Nat. Hist., (5) 9, p. 247, 1882; Cat. Blast., p. 226, pl. 6, figs. 15, 16, 1886.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Schizoblastus melonoides Etheridge and Carpenter (part) = *S. etheridgei*.

Schizoblastus missouriensis Etheridge and Carpenter = *Cryptoblastus missouriensis*.

Schizoblastus molengraffi Wanner.

Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, pp. 43, 44, text fig. 9, pl. 202, figs. 9, 10, 1924.

Permian: Basleo, Timor.

Schizoblastus molengraffi sebotensis Wanner.

Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, pp. 43, 48, pl. 206, fig. 18, 1924.

Permian: Sebot, Timor.

Schizoblastus moorei Cline.

Cline, Jour. Pal., 10, p. 279, pl. 45, figs. 13-16, 1936.

Miss. (Fern Glen-Reeds Spring ls.): Reeds Spring, Mo.

Schizoblastus neglectus (Meek and Worthen).

Granatocrinus neglectus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 90, 1869; Geol. Surv. Ill., 5, p. 471, pl. 9, fig. 3, 1873.

Schizoblastus neglectus Etheridge and Carpenter, Ann. Mag. Nat. Hist., (5) 9, p. 246, 1882.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Schizoblastus permicus Wanner.

Wanner, Zs. Indukt. Abst., 4, heft 2, p. 138, pl. 2, figs. 7-9, 1910; Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, pp. 44, 69, pl. 204, figs. 13-18, pl. 205, figs. 9-12, 23, pl. 206, figs. 1-3, p. 70, text fig. 23-30, 1924; Beitr. kennt. Perm. Echin. Timor, VII, pp. 10-22, pl. 1, figs. 1-6, 8, 9, 11-13, pl. 2, figs. 14-23, 39, pl. 3, figs. 26-33, pl. 4, figs. 34a, b, 36, 37, 38, 40-46, 1932; Handwort Naturwiss., p. 495, fig. 35, 1933.—Jansen, Konink. Akad. Wetens. Amsterdam, Proc., 37, no. 10, p. 820, text fig., p. 823, text fig. 5, 1934.

Permian: Basleo, Timor.

Schizoblastus permicus ellipticus Wanner.

Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, pp. 44, 74, text fig. 31, pl. 201, figs. 16-19, pl. 204, figs. 1-8, 1924; Neue Beitr. kennt. Perm. Echin. Timor, VII, pp. 11, 12, 15, pl. 2, figs. 24a, b, 1932.

Permian: Basleo, Timor.

Schizoblastus potteri Etheridge and Carpenter = *S. sayi potteri*.

Schizoblastus projectus Etheridge and Carpenter = *Cryptoblastus melo projectus*.

Schizoblastus pseudodelta Wanner.

Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, pp. 44, 68, pl. 204, figs. 2, 3, pl. 205, fig. 24, 1924.

Permian: Basleo, Timor.

Schizoblastus? *roemeri* Keyes = *Cryptoblastus roemeri*.

Schizoblastus rofei Etheridge and Carpenter = *Monoschizoblastus rofei*.

Schizoblastus sampsoni Etheridge and Carpenter = *Cryptoblastus roemeri*.

Schizoblastus sayi (Shumard).

Pentremites sayi Shumard, Geol. Surv. Mo., p. 185, pl. B, figs. 1 a-d, 1855.

Granatocrinus sayi Wachsmuth and Springer, Rev. Pal., pt. 2, pl. 19, fig. 3, 1881.

Schizoblastus sayi Etheridge and Carpenter, Ann. Mag. Nat. Hist., (5) 9, p. 246, 1882; Cat. Blast., pp. 223, 224, pl. 3, figs. 1-3, pl. 6, fig. 18, pl. 10, fig. 17, pl. 17, fig. 1, 1886.—Keyes, Geol. Surv. Mo., 4, p. 138, pl. 18, figs. 9a, b, 1894.

Cribroblastus sayi Hambach, Trans. Acad. Sci. St. Louis, 13, p. 42, pl. 5, fig. 14, 1903.

Schizoblastus sayi var. *sayi* Cline, Jour. Pal., 10, p. 269, pl. 44, figs. 17-22, 1936.

Miss.: Marion, Boone, Jefferson, St. Louis, and Ste. Genevieve Cos., Mo. (Up. Burlington ls.); Sedalia, Mo. (Chouteau ls.).

Schizoblastus sayi bellulus Cline.

Cline, Jour. Pal., 10, p. 271, pl. 45, figs. 1-8, 1936.

Miss. (Burlington ls.): Hannibal and Springfield, Mo. (Upper); Gospel Run, se. Iowa (Lower).

Schizoblastus sayi obesus Cline.

Cline, Jour. Pal., 10, p. 272, pl. 44, figs. 6-16, 1936.

Miss. (Lower Burlington ls.): Hannibal and Sedalia, Mo.

Schizoblastus sayi potteri (Hambach).

Pentremites potteri Hambach, Trans. Acad. Sci. St. Louis, 4, p. 158, pl. B, fig. 4, 1880.

Schizoblastus potteri Etheridge and Carpenter, Ann. Mag. Nat. Hist., 5, (9) p. 247, 1882.

Cribroblastus potteri Hambach, Trans. Acad. Sci. St. Louis, 13, p. 41, pl. 5, fig. 15, 1903.

Schizoblastus sayi var. *potteri* Cline, Jour. Pal., 10, p. 272, pl. 45, figs. 21-25, 1936. Miss. (Up. Burlington ls.): Burlington, Iowa; Springfield, Mo.

Schizoblastus sayi Cline = *S. sayi*.

Schizoblastus sayi verrucosus (Hambach).

Cribroblastus verrucosus Hambach, Trans. Acad. Sci. St. Louis, 13, p. 58, pl. 5, fig. 3, 1903.

Schizoblastus sayi var. *verrucosus* Cline, Jour. Pal., 10, p. 274, pl. 45, fig. 12, 1936. Miss. (Burlington ls.): Allentown, St. Louis Co., Mo.; Burlington, Iowa.

Schizoblastus schucherti (Hambach).

Cribroblastus schucherti Hambach, Trans. Acad. Sci. St. Louis, 13, p. 59, pl. 5, figs. 8, 8a, 1903.

Miss. (Madison ls.): Divide between Ross Fork and Lincoln Valley, Mont.

Schizoblastus? *shumardi* Bather = *Cryptoblastus?* *shumardi*.

Schizoblastus somoholensis Wanner.

Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, p. 43, 1924; Perm. Blast. Timor, 2e Nederl. Timor Exped. 1916, p. 219, pl. 4, figs. 11, 12, 1924.

Permian: Somohole, Timor.

Schizoblastus tenuistriatus (Hambach).

Cribroblastus tenuistriatus Hambach, Trans. Acad. Sci. St. Louis, 13, p. 59, pl. 5, fig. 16, 1903.

Miss. (Burlington ls.): Cooper Co., Mo.

Schizoblastus timorensis Bather.

Bather, in Boehm, Neues. Jahrb. Min., Geol. Pal., Biel.-Bd. 25, pp. 304, 319, pl. 11, figs. 1a, b, 1908.—Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, pp. 43, 48, pl. 204, figs. 4-8, 1924.

Permian: Bisano Hill, south of Baung, Timor.

Schizoblastus timorensis globosus Wanner.

Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, pp. 43, 51, pl. 204, figs. 9-12, 1924.

Permian: Basleo and Koeafeoe, near Baung, Timor.

Schizoblastus verbeeki Wanner.

Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, pp. 44, 54, pl. 202, figs. 20, 21, pl. 203, figs. 1-7, 1924.

Permian: Basleo, Timor.

Schizoblastus verbeeki elongatus Jansen.

Jansen, Konink. Akad. Wetens. Amsterdam, Proc., 37, no. 10, p. 822, text fig. 4, 1934.

Permian: Basleo, Timor.

Sphaeroschisma Wanner. Genotype: *S. somoholense* Wanner.

Nymphaeoblastidae (Eublastoidea). Permian.

Wanner, Perm. Blast. Timor, 2e Nederl. Timor Exped. 1916, p. 195, 1924; Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 237, 1940.

Sphaeroschisma somoholense Wanner.

Wanner, Perm. Blast. Timor, 2e Nederl. Timor Exped. 1916, p. 197, pl. 3, figs. 6, 7, pl. 4, fig. 1, 1924.

Permian: Somohole, Timor.

Stephanocrinus pentalobus S. A. Miller = *Codaster pentalobus*.

Sundablastus Wanner. Genotype: *S. weberi* Wanner.

Anthoblastidae (Eublastoidea). Permian.

Wanner, Pal. Timor, XXIII, Perm. Blast. Timor, Teil 2, p. 32, 1924; Perm. Blast. Timor, 2e Nederl. Timor Exped. 1916, p. 195, 1924; Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 238, 1940.

Sundablastus weberi Wanner.

Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, p. 33, text fig. 5, pl. 201, figs. 8-10, 1924.

Permian: Hatu Dame, Timor.

Thaumatoblastus Wanner. Genotype: *T. longiramus* Wanner.

Codasteridae (Eublastoidea). Permian.

Wanner, Perm. Blast. Timor, 2e Nederl. Timor Exped. 1916, pp. 195, 199, 1924; Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 239, 1940.

Thaumatoblastus longiramus Wanner.

Wanner, Perm. Blast. Timor, 2e Nederl. Timor Exped. 1916, p. 201, pl. 2, figs. 1-17, pl. 4, fig. 2, pl. 5, 1924.

Permian: Basleo, Timor.

Thaumatoblastus longispinus Wanner.

Wanner, Perm. Blast. Timor, 2e Nederl. Timor Exped. 1916, p. 204, pl. 2, figs. 18-20, 1924.

Permian: Basleo, Timor.

Timoroblastus Wanner. Genotype: *T. coronatus* Wanner.

Codasteridae (Eublastoidea). Permian.

Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, p. 14, 1924; Perm. Blast. Timor, 2e Nederl. Timor Exped. 1916, p. 196, 1924; Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 239, 1940.

Timoroblastus coronatus Wanner.

Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, p. 18, pl. 200, figs. 1-19, pl. 201, figs. 1-7, text figs. 3, 4, 1924; Neue Beitr. kennt. Perm. Echin. Timor, VI, Blastoidea, p. 50, pl. 2, figs. 8-12, text figs. 3-9, 1931; Handwort Naturwiss., p. 494, fig. 31 A, B, 1933.

Timoroblastus coronatus typus Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, p. 22, pl. 200, figs. 16-18, 1924.

Permian: Basleo, Timor.

Timoroblastus coronatus alatus Wanner.

Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, p. 27, pl. 201, fig. 5, 1924.

Permian: Sebot, near Kapan, Timor.

Timoroblastus coronatus basiplanus Wanner.

Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, p. 27, pl. 200, figs. 10, 11, 1924.

Permian: Noil Tonini, Timor.

Timoroblastus coronatus carinatus Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, VI, Blastoidea, p. 51, pl. 2, figs. 8-12, 1931.

Permian: Kioemoko, near Basleo, Timor.

Timoroblastus coronatus constrictus Wanner.

Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, p. 24, pl. 200, fig. 4, 1924.

Permian: Noil Fatoe, Timor.

Timoroblastus coronatus depressus Wanner.

Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, p. 24, pl. 200, figs. 6, 7, 1924.

Permian: Basleo, Timor.

- Timoroblastus coronatus elongatus** Wanner.
Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, p. 27, pl. 201, fig. 5, 1924.
Permian: Basleo, Timor.
- Timoroblastus coronatus erectus** Wanner.
Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, p. 26, pl. 200, fig. 9, 1924.
Permian: Basleo, Timor.
- Timoroblastus coronatus expansus** Wanner.
Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, p. 25, pl. 200, fig. 12, 1924.
Permian: Basleo, Timor.
- Timoroblastus coronatus informis** Wanner.
Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, p. 23, pl. 201, fig. 1, 1924.
Permian: Basleo, Timor.
- Timoroblastus coronatus ingens** Wanner.
Wanner, Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, pl. 2, figs. 13, 14, 1940.
Permian: Tunium Eno (Basleo), Timor.
- Timoroblastus coronatus levis** Wanner.
Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, p. 23, pl. 200, fig. 8, 1924.
Permian: Basleo, Timor.
- Timoroblastus coronatus longipedatus** Wanner.
Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, p. 22, pl. 200, figs. 14, 15, 1924.
Permian: Basleo, Timor.
- Timoroblastus coronatus pentagonalis** Wanner.
Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, p. 28, pl. 200, figs. 1-3, 1924.
Permian: Basleo, Timor.
- Timoroblastus coronatus semiconstrictus** Wanner.
Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, p. 25, pl. 200, fig. 5, 1924.
Permian: Basleo, Timor.
- Timoroblastus coronatus tessellatus** Wanner.
Wanner, Pal. Timor, XXIII, Perm. Echin. Timor, 2 Teil, p. 26, pl. 200, figs. 13, 19, 1924.
Permian: Noil Fatoe, Timor.
- Timoroblastus coronatus ungulatus** Wanner.
Wanner, Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 268, pl. 2, figs. 11, 12, 1940.
Permian: Basleo, Timor.
- Timoroblastus coronatus typus** Wanner = *T. coronatus*.
- Timoroblastus wanneri** Yakovlev = *Sagittoblastus wanneri*.
- Timoroblastus weiensis** Wanner.
Wanner, Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 270, pl. 1, fig. 15, pl. 2, fig. 15, 1940.
Permian: Taë Wei, Timor.
- Tricoelocrinus** Meek and Worthen. Genotype: *Pentremites (Troostocrinus?) woodmani* Meek and Worthen.
Troosticrinidae (Eublastoidea). Dev.(?); Miss.; ?Permian.
Meek and Worthen, Proc. Acad. Nat. Sci. Phila., 20, p. 356, 1868.—Etheridge and Carpenter, Cat. Blast., p. 203, 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 87, 1900.

Tricoelocrinus? belfordi Crockford and Brown.

Crockford and Brown, Proc. Linn. Soc. N. S. W., 65, p. 167, pl. 4, figs. 1-3, 1940.
Permian (Up. Marine ser., *Fenestella* sh.): 2½ mi. north and ½ mi. west of Belford,
New South Wales.

Tricoelocrinus bipyramidalis (Hall).

Pentremites bipyramidalis Hall, Geol. Rep. Iowa, 1, pt. 2, p. 607, pl. 15, fig. 2, 1858.
Metablastus bipyramidalis Keyes, Geol. Surv. Mo., 4, p. 137, pl. 18, fig. 13, 1894.—
Rowley in Greene, Cont. Ind. Pal., 1, pt. 10, p. 96, pl. 30, figs. 28-31 (?), 1902;
pt. 16, p. 162, pl. 47, figs. 21-24, 1903.
Saccoblastus bipyramidalis Hambach, Trans. Acad. Sci. St. Louis, 13, p. 43, 1903.
Miss. (Warsaw ls.): Boonville and Cooper Co., Mo.; Colesburg, Ky.

Tricoelocrinus? carpenteri Etheridge.

Etheridge, in Jack and Etheridge, Geol. Pal. Queensland and New Guinea, p. 212,
p. 44, fig. 3, 1892.
Permian (Gympie beds): Rockhampton District, Queensland, Australia.

Tricoelocrinus laterniformis (Owen and Shumard).

Pentremites laterniformis Owen and Shumard, Jour. Acad. Nat. Sci. Phila., (2)
2, p. 66, pl. 7, fig. 15, 1850; Rep. Geol. Surv. Iowa, Wis., Minn., p. 592, pl. 5-A,
fig. 15, 1852.
Tricoelocrinus? laterniformis Bather, List Gen. Sp. Blast., p. 66, 1899.
Miss. (Chester ls.): Mill Creek, near Chester, Randolph Co., Ill.

Tricoelocrinus? leai Whidborne.

Whidborne, Geol. Mag., (3) 6, p. 80, 1889.—Bather, List Gen. and Sp. Blast. Brit.
Mus., p. 66, 1899.
Pentremites sp. Whidborne, Geol. Mag., (2) 8, p. 288, 1881.
Metablastus sp. Etheridge and Carpenter, Cat. Blast., pp. 130, 139, 198, 1886.
Mid. Dev. (Tor Bay ls.): Barton, South Devon, England.

Tricoelocrinus meekianus Etheridge and Carpenter.

Etheridge and Carpenter, Cat. Blast., pp. 126, 208, pl. 16, figs. 17, 18, 1886.—Beede,
30th Rep. Geol. Nat. Res. Ind., p. 1266, pl. 14, figs. 7-7b, 1906.
Miss. (Spergen ls.): Spergen Hill, etc., Ind.

Tricoelocrinus obliquatus (Roemer).

Pentatrematites obliquatus Roemer, Archiv. Naturges., Jahrg. XVII, 1, p. 367,
pl. 6, figs. 11a, b, 1851.
Pentremites obliquatus Safford, Geol. Tenn., p. 346, pl. 6, figs. 2 a-d, 1869.
Pentremites (Tricoelocrinus) obliquatus Meek and Worthen, Geol. Surv. Ill., 6,
p. 521, pl. 31, figs. 4a, b, 1875.
Tricoelocrinus obliquatus Etheridge and Carpenter, Cat. Blast., p. 206, pl. 18, figs.
10-13, 1886.—Bather, List Gen. and Sp. British Mus., p. 67, 1899.
Saccoblastus obliquatus Hambach, Trans. Acad. Sci. St. Louis, 13, p. 43, pl. 4, fig.
3, 1903.
Pentremites occidentalis (Shumard Ms.) Roemer, Archiv. Naturges., Jahrg. XVII,
1, p. 367, 1851.
Miss.: Greenville, Washington Co., Salem, etc., Ind. (Spergen ls.); Boonville, Mo.,
Monroe Co., Ill., Clarksville, Tenn. (Warsaw ls.).

Tricoelocrinus ventricosus (Hambach).

Saccoblastus ventricosus Hambach, Trans. Acad. Sci. St. Louis, 13, p. 60, pl. 4, fig.
7, 1903.
Miss. (Warsaw ls.): Boonville, Mo.

Tricoelocrinus woodmani (Meek and Worthen).

Pentremites (Troostocrinus?) woodmani Meek and Worthen, Proc. Acad. Nat. Sci.
Phila., p. 356, 1868; Geol. Surv. Ill., 5, p. 506, pl. 16, fig. 4, 1873.

- Tricoelocrinus woodmani* Etheridge and Carpenter, Cat. Blast., p. 206, pl. 19, figs. 13-16, 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 92, text fig. 15-2, 1900.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 10, p. 90, pl. 29, figs. 35, 36, 42, 43, 1902; pt. 19, p. 189, pl. 57, figs. 5-7, 1904.—Beede, 30th Rep. Geol. Nat. Res. Ind., p. 1267, text figs. 4, 5, 1906.
- Miss.: Salem, Spergen Hill, etc., Ind. (Spergen ls.); Putnam Co., Tenn., and Kentucky (Warsaw ls.).
- Troosticrinus** Shumard. Genotype: *Pentremites reinwardti* Troost.
- Troosticrinidae (Eublastoidea). Sil.; Early Dev.
- Shumard, Trans. Acad. Sci. St. Louis, 2, p. 384, 1866.—Meek and Worthen, Proc. Acad. Nat. Sci., Phila., p. 356, 1868; Geol. Surv. Ill., 5, p. 507, 1873 (as *Troostocrinus*).—Etheridge and Carpenter, Cat. Blast., p. 191, 1886 (as *Troostocrinus*).—Bather, Treatise Zool. (Lankester), pt. 3, pp. 86, 92, 1900 (as *Troostocrinus*).
- Clavaeblastus* Hambach, Trans. Acad. Sci. St. Louis, 13, p. 44, 1903. (Genotype: *Pentremites reinwardti* Troost.)
- Troosticrinus dubius** (Rowley).
- Troostocrinus?* *dubius* Rowley, Amer. Geol., 25, p. 70, pl. 2, figs. 36-38, 1900; 34, p. 274, pl. 26, figs. 28, 29, 1904.
- Dev. (Helderbergian-Bailey ls.): Near Wittenberg, Mo.
- Troosticrinus grosvenori** (Shumard).
- Pentremites grosvenori* Shumard, Trans. Acad. Sci. St. Louis, 1, p. 240, pl. 9, figs. 2 a-d, 1858.—Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., pl. 1, fig. 3, 1860.
- Troostocrinus grosvenori* Etheridge and Carpenter, Ann. Mag. Nat. Hist., (5) 9, p. 249, 1882.
- Miss. (Spergen ls.): Spergen Hill, Ind.
- Troosticrinus reinwardti** (Troost).
- Pentremites reinwardti* Troost, Trans. Geol. Soc. Penn., 1, pt. 2, p. 224, pl. 10, figs. 10, 11, 1835.
- Pentatrematites reinwardtii* Roemer, Archiv. Naturges. Jahrg. XVII, 1, p. 373, pl. 6, figs. 13 a-c, 1851; Sil. Fauna West Tenn., p. 60, pl. 3, figs. 2 a-c, 1860; in Bronn, Leth. Geog., Atlas, pl. 11, fig. 10, 1876.
- Troosticrinus reinwardtii* Shumard, Trans. Acad. Sci. St. Louis, 2, p. 385 (footnote), 1866.
- Troostocrinus reinwardtii* Etheridge and Carpenter, Cat. Blast., p. 193, text fig. 7, p. 194, pl. 12, figs. 11, 12, pl. 17, fig. 17, 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 87, fig. 8, 1900.—Wood, U. S. Nat. Mus., Bull. 64, pp. 13, 17, pl. 3, figs. 2-4, 1909.—Springer, Zittel-Eastman Textb. Pal., 1, p. 170, fig. 264, 1913.—Jaekel, Pal. Zeits., 3, p. 107, fig. 101, 1918.—Springer, Amer. Sil. Crin., p. 141, pl. 33, figs. 1-8, 1926.—Wanner, Handwort Naturwiss., p. 495, fig. 32, 1933.
- Sil. (Niagaran): Perry, Decatur, and Wayne Cos., Tenn. (Beech River fm.); near Louisville, Ky. (Louisville ls.).
- Troosticrinus reinwardti minimus** (Foerste).
- Troostocrinus reinwardti minimus* Foerste, Ohio Jour. Sci., 21, no. 2, p. 64, pl. 1, fig. 14, 1920.—Springer, Amer. Sil. Crin., p. 141, pl. 33, fig. 9, 1926.
- Sil. (Niagaran-Laurel ls.): St. Paul, Ind.
- Troosticrinus sanctipaulensis** (Foerste).
- Troostocrinus sanctipaulensis* Foerste, Ohio Jour. Sci., 21, no. 2, p. 64, pl. 1, fig. 16, 1920.—Springer, Amer. Sil. Crin., p. 141, pl. 33, fig. 9, 1926.
- Sil. (Niagaran-Laurel ls.): St. Paul, Ind.
- Troosticrinus subcylindricus** (Hall and Whitfield).
- Pentremites subcylindricus* Hall and Whitfield, Geol. Surv. Ohio, 2, pt. 2, Pal., p. 129, pl. 6, fig. 13, 1875.
- Troostocrinus subcylindricus* Etheridge and Carpenter, Ann. Mag. Nat. Hist., (5) 9, p. 249, 1882.—Foerste, Ohio Jour. Sci., 21, no. 2, p. 65, pl. 3, figs. 3 a-c, 1920.
- Sil. (Niagaran): Yellow Springs and Cedarville, Ohio (Cedarville ls.); Chicago, Ill. (Racine dol.).

Troostocrinus of authors. See Troosticrinus.

Troostocrinus hispanicus Etheridge and Carpenter = *Metablastus hispanicus*.

Troostocrinus nitidulus Miller and Gurley = *Metablastus nitidulus*.

Troostocrinus subtruncatus Etheridge and Carpenter = *Codaster subtruncatus*.

Troostocrinus wachsmuthi Gurley = *Metablastus wachsmuthi*.

Zygocrinus Bronn. Genotype: *Astrocrinites tetragonus* Austin.

Zygocrinidae (Eublastoidea). Low. Carb.

Bronn, Index Pal., Nomenclatur., p. 1381, 1848.—Bather, Treatise Zool. (Lankester), pt. 3, pp. 91, 93, 1900.—Wanner, Centralbl. Min. Geol. Pal., Abt. B, no. 9, pp. 455-464, 1932; Geol. Exped. Univ. Amsterdam, Lesser Sunda Ids., 1, p. 235, 1940.

Astracrinites Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 110, 1842; 11, p. 206, 1843 (*Astrocrinites*). (Genotype: *A. tetragonus* Austin).

Astrocrinus Morris, Cat. British Foss., p. 49, 1843 (2d ed., 1854, p. 72).—Austin and Austin, Quart. Jour. Geol. Soc. London, 4, p. 293, 1848.—Etheridge and Carpenter, Cat. Blast., p. 297, 1886.

Zygocrinus benniei (Etheridge).

Astrocrinites benniei Etheridge, Quart. Jour. Geol. Soc. London, 32, p. 103, 1878.

Astrocrinus benniei Etheridge and Carpenter, Cat. Blast., p. 301, pl. 19, fig. 1, pl. 20, figs. 3-20, 1886.

Zygocrinus benniei Bather, List Gen. and Sp. Blast. Brit. Mus., p. 69, 1899; Treatise Zool. (Lankester), pt. 3, p. 91, text fig. 14, 1900.—Wanner, Centralbl. Min., Geol., Pal., Abt. B, no. 9, p. 456, fig. 1, p. 458, figs. 2-4, 1932; Handwort Naturwiss., p. 496, fig. 36, 1933.

Low. Carb.: Midlothian and Fife, East Salton, Haddingtonshire, Scotland.

Zygocrinus tetragonus (Austin).

Astracrinites tetragonus Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 110, 1842; 11, p. 206, 1843 (*Astrocrinites*).

Astrocrinites tetragonus Etheridge, Quart. Jour. Geol. Soc. London, 32, pp. 109, 114, pl. 13, fig. 26, 1876.

Astrocrinus tetragonus Etheridge and Carpenter, Cat. Blast., p. 300, pl. 20, figs. 1, 2, 1886.

Zygocrinus tetragonus Bather, List Gen. and Sp. Blast. British Mus., p. 70, 1899.

Low. Carb.: Settle, Yorkshire, England.

Class CRINOIDEA

Aatocrinus Moore and Plummer. Genotype: *Zeacrinus? robustus* Beede.

Poteriocrinitidae (Inadunata-Fistulata). Penn.

Moore and Plummer, Univ. Texas Pub. no. 3945, p. 213, 1940.

Aatocrinus caviumbilicatus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. no. 3945, p. 215, pl. 7, figs. 2, 3, text fig. 46, 1940.

Penn. (Mineral Wells fm.): Barber Mt., southwest of Mineral Wells, Tex.

Aatocrinus mucrospinus (McChesney).

Zeacrinus mucrospinus McChesney, Descr. N. Sp. Fossils Pal. Rocks Western States, p. 10, 1860; Illustr. N. Sp. Fossils, pl. 4, figs. 7a, b, 1865; Trans. Chicago Acad. Sci., 1, p. 7, pl. 4, figs. 7a, b, text fig., 1868.

Poteriocrinites (Zeacrinus) mucrospinus Meek and Worthen, Geol. Surv. Ill., 5, p. 563, pl. 24, fig. 10, 1873.

Hydreionocrinus mucrospinus Plummer and Moore, Univ. Texas, Bull., no. 2132, p. 79, pl. 13, figs. 2, 5, 1921.

Aatocrinus mucrospinus Moore and Plummer, Univ. Texas Pub. no. 3945, p. 71, 1940.

Penn.: Carlinville, Macoupin Co. and Sangamon Co., Ill.; mouth of Rush Creek, Ind.; Holt and Sullivan Cos., Mo.; 28 mi. above Wheeling, W. Va.; Mineral Wells, Tex. (Strawn fm.).

Aatocrinus patulus (Girty).

Hydreionocrinus patulus Girty, Ann. N. Y. Acad. Sci., 21, p. 123, 1911; U. S. Geol. Surv., Bull. 544, p. 36, pl. 3, figs. 13-13c, 1915.—Plummer and Moore, Univ. Texas, Bull., no. 2132, p. 213, 1921.

Aatocrinus patulus Moore and Plummer, Univ. Texas Pub. no. 3945, p. 71, 1940.

Penn.: Wewoka Quadrangle, Okla. (Wewoka fm.); Brad, Tex. (Canyon fm.).

Aatocrinus robustus (Beede).

Zeacrinus? robustus Beede, Kansas Univ. Quart., 9, p. 22, pl. 5, figs. 1, 1a, 1900.

Aatocrinus robustus Moore and Plummer, Univ. Texas Pub. no. 3945, p. 213, 1940.

Penn. (Missouri ser.): Kansas City, Mo.

Abacocrinus Angelin. Genotype: *Actinocrinites tesseracontadactylus* Goldfuss.

Periechocrinitidae (Camerata). Sil.

Angelin, Icon. Crin. Suec., p. 19, 1878.—Zittel, Handb. Pal., 1, p. 373, 1879.—Wachsmuth and Springer, Rev. Pal. pt. 2, p. 133 (307), 1881; *ibid.* pt. 3, p. 106 (328), 1885; N. Amer. Crin. Camerata, p. 363, 1897.—Bather, Treatise Zool., (Lankester), pt. 3, p. 165, 1900.—Springer, Zittel-Eastman Textb. Pal., p. 194, 1913.

Carolicrinus Waagen and Jahn., Syst. Sil. Centre Bohême, 7, pt. 1, pp. 22-28, 1899.—Bather, Ann. Mag. Nat. Hist., (7) 6, p. 107, 1900. (Genotype: *C. barrandei* Waagen and Jahn.)

Abacocrinus barrandei (Waagen and Jahn).

Carolicrinus barrandei Waagen and Jahn, Syst. Sil. Centre Bohême, 7, pt. 1, p. 28, pl. 58, 1899.

Sil. (Div. E1, E2): Karlstein, Loch Kov, Bohemia.

Abacocrinus capelleri Angelin.

Angelin, Icon. Crin. Suec., p. 19, pl. 3, figs. 8, 8a, 1878.

Encrinus Capeller, Epistola apud Klein, Sciographica Lith., p. 13, figs. 1a, b, 1740.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Abacocrinus erraticus Jaekel.

Jaekel, Pal. Zeits., 3, p. 29, fig. 21, 1918.

Sil.: Drift of North Germany.

Abacocrinus medius Angelin.

Angelin, Icon. Crin. Suec., p. 19, pl. 24, fig. 1, 1878.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Abacocrinus tessellatus Angelin.

Angelin, Icon. Crin. Suec., p. 19, pl. 18, fig. 6; pl. 23, figs. 24, 25, 1878.—Wilson, Jour. Geol., 24, p. 509, pl. 2, fig. 9, 1916.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Abacocrinus tesseracontadactylus (Goldfuss).

Actinocrinites tesseracontadactylus Goldfuss, Petref. Germ., 1, p. 194, pl. 59, fig. 5, 1831.

Rhodocrinus tesseracontadactylus Schultze, Denk. Akad. Wiss., Math. Natur.-Cl., 26, p. 169, 1867 (Adv. pub., 1866, p. 57).

Abacocrinus tesseracontadactylus Angelin, Icon. Crin. Suec., p. 19, pl. 18, figs. 2-5; pl. 23, figs. 23, 23a, 1878.

Sil. (Gotlandian): Wisby and Follingbo, Island of Gotland.

Abrahiocrinus Wanner. Genotype: *Sycocrinites clausus* Austin and Austin.

Hypocrinidae (Inadunata-Fistulata). Low. Carb. Permian.

Wanner, Verh. Geol. Mijnb. Genoots. Nederl. Kolon., Geol. ser., Deel V, p. 29, 1920; Perm. Krin. Timor, 2e Nederl. Timor-Exped. 1916, p. 141, 1924; Neue Beitr. kennt. Perm. Echin. Timor, pp. 39, 62, 1929.

Abrachiocrinus clausus (Austin and Austin).

Sycocrinites clausus Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 111, 1842 (mentioned); *ibid.*, 11, p. 206, 1843 (defined).

Sycocrinus clausus Bather, Ann. Mag. Nat. Hist., (8) 14, pp. 246, 249, pl. 10, figs. 3-3e, 1914.

Abrachiocrinus (*Sycocrinus*) *clausus* Wanner, Verh. Geol. Mijnb. Genoots. Nederl. Kolon., p. 23, fig. 6; p. 26, fig. 16, 1920.

Low. Carb. (Mtn. Ls.): Settle, Yorkshire, England.

Abrachiocrinus conicus Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, p. 63, text fig. 8, pl. 3, figs. 13, 14, 1929.

Permian: Basleo, Timor.

Abrachiocrinus timoricus Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, p. 64, pl. 2, fig. 15; pl. 3, figs. 15, 16, 1929.

Permian: Basleo, Timor.

Abraerinus d'Orbigny = *Carpocrinus*.**Abraerinus pusillus d'Orbigny** = *Actinocrinites pusillus*.**Abrotocrinus** Miller and Gurley. Genotype: *A. cymosus* Miller and Gurley.

Pelecocrinidae (Inadunata-Fistulata). Low. Carb.

Miller and Gurley, Jour. Cincinnati Soc. Nat. Hist., 13, p. 30, 1890; 16th Rep. Geol. Surv. Ind., p. 350, 1890.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 177, 1924.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 72, 1926.

Abrotocrinus angustatus Wright.

Wright, Geol. Mag., 71, p. 250, text figs. 22-24, pl. 13, figs. 4-6, 1934; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 37, text figs. 43-45, pl. 7, fig. 5; pl. 8, figs. 2, 8-10, 1939.

Low. Carb. (Califerous ss. ser.): Between Elie and St. Monance, Fife, Scotland.

Abrotocrinus cymosus Miller and Gurley.

Miller and Gurley, 16th Rep. Geol. Surv. Ind., p. 350, pl. 5, fig. 2 (authors' ed. p. 31), 1890.

Miss. (Keokuk ls.): Washington Co., Canton, and Indian Creek, Ind.

Abrotocrinus occidentalis (Worthen).

Poteroocrinus occidentalis Worthen, Ill. St. Mus., Bull. 1, p. 10, 1882; Geol. Surv. Ill., 7, p. 278, pl. 27, fig. 2, 1883.

Scaphioocrinus occidentalis Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 2, p. 236 (160), 1886.

Miss. (Keokuk ls.): Hamilton, Ill.

Abrotocrinus orestes (Worthen).

Poteroocrinus orestes Worthen, Ill. St. Mus., Bull. 1, p. 7, 1882; Geol. Surv. Ill., 7, p. 273, pl. 27, fig. 3, 1883 (not fig. 3a = *Sarocrinus keokuk*).

Scaphioocrinus orestes Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 2, p. 236 (160), 1886.

Miss. (Keokuk ls.): Keokuk, Iowa.

Abrotocrinus parviglyptus Laudon and Beane = *Pelecocrinus parviglyptus*.

Abrotocrinus rusticellus Springer = *Ascetocrinus rusticellus*.

Abrotocrinus sculptus (Worthen).

Poteroocrinus sculptus Worthen, Ill. St. Mus., Bull. 1, p. 21, 1882; Geol. Surv. Ill., 7, p. 292, pl. 29, fig. 8, 1883.

Scaphioocrinus sculptus Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 2, p. 237 (161), 1886.

Miss. (Chester): Burksville, Monroe Co., Ill. (Renault fm.); Huntsville, Ala. (Gasper fm. and Ste. Genevieve ls.).

Abrotocrinus unicus (Hall).

Scaphioocrinus unicus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 313 (Prelim. note, p. 8), 1861; N. Y. St. Mus., Bull. 1, pl. 6, fig. 6, 1872.—Wachsmuth and Springer, N. Amer. Crin. Camerata, pl. 7, fig. 6, 1897.

Poteroocrinus (Scaphioocrinus) unicus Meek and Worthen, Geol. Surv. Ill., 5, p. 493, pl. 15, fig. 5, 1873.

Abrotocrinus unicus Springer, U. S. Nat. Mus., Proc., 67, art. 9, pp. 65, 73, pl. 17, figs. 1-3, 1926.

Miss. (Keokuk ls.): Crawfordsville and Indian Creek, Ind.

Acacocrinus Wachsmuth and Springer. Genotype: *A. elrodi* Wachsmuth and Springer. Carpoocrinidae (Camerata). Sil.; Dev.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 515, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 166, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 194, 1913.

Acacocrinus americanus Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 516, pl. 34, figs. 15a, b, 1897. Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Acacocrinus elrodi Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 515, pl. 34, fig. 16, 1897.

Sil. (Niagaran-Waldron sh.): Hartsville, Ind.

Acacocrinus pentadactylus (Grabau).

Habroocrinus pentadactylus Grabau, Bull. Buffalo Soc. Nat. Sci., 6, p. 143, fig. 25, 1899.

Acacocrinus pentadactylus Goldring, N. Y. St. Mus., Mem. 16, p. 200, text figs. 45, 46, pl. 26, fig. 1, 1923.

Dev. (Hamilton-Moscow sh.): Eighteen Mile Creek, Erie Co., N. Y.

Acantharthropterum pendens Moore = *Delocrinus?* *pendens*.

Acanthocrinus Roemer. Genotype: *A. longispina* Roemer.

Rhodocrinitidae (Camerata). Dev.

Roemer, Neues Jahrb. Min., Geol. Pal., p. 679, 1850.—Zittel, Handb. Pal., 1, p. 376, 1879.—Jaekel, Pal. Abhandl. Dames Kayser, N. F., 3, heft 1, p. 24, 1895.—Wachsmuth and Springer, N. Amer. Crin. Cam., pp. 216, 218, 1897.—Bather,

Treatise Zool. (Lankester), pt. 3, p. 201, 1900.—Ehrenberg, Acta Zool., 3, p. 277, 1922.—Goldring, N. Y. St. Mus., Mem. 16, p. 92, 1923.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 117, 1934.

Acanthocrinus brevispina Roemer.

Roemer, Neues Jahrb. Min., etc., p. 680, pl. 6-B, fig. 2, 1860.
"Kolenkalk": North America.

Acanthocrinus gracilis Hall = *Thylacocrinus gracilis*.

Acanthocrinus gracilior Jaekel.

Jaekel, Pal. Abhandl., 7, p. 27, 1895.

Dev. (Coblentzian): Coblenz, Germany.

Acanthocrinus gregarius Zeiler and Wirtgen.

Zeiler and Wirtgen, Verhand. Naturhist. Preuss. Rheinl., 11, p. 479, 1854; *ibid.*, 12, p. 9, 1855.—Jaekel, Pal. Abhandl. 7, p. 26, text fig. 5, 1895.

Dev. (Coblentzian): Coblenz, Germany.

Acanthocrinus heroldi Schmidt.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, pp. 119, 143, text fig. 27, pl. 21, fig. 1, 1934.

Dev. (Hunsrück sl.): Bundenbach, Germany.

Acanthocrinus longispina Roemer.

Acanthocrinus longispina Roemer, Neues. Jahrb. Min., etc., p. 679, pl. 6-B, fig. 1, 1850.—Pictet, Traite Pal., 4, p. 315, pl. 100, fig. 11, 1857.—Quenstedt, Petref. Deutsch., 4, p. 601, pl. 111, fig. 509, 1876.

Rhodocrinus longispina Wachsmuth and Springer, Rev. Pal., pt. 2, p. 212, 1881.

Acanthocrinus longispinus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 219, 1897.—Dahmer, Jahrb. Kongl. Preuss. Geol. Landesanst., 36, Teil 1, p. 246, 1916; *ibid.*, 40, Teil 2, p. 291, pl. 16, figs. 2, 3, 1921.

Dev. (Coblentzian): Clausthal, near Coblenz, Germany.

Acanthocrinus onondaga Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 94, pl. 2, fig. 12, 1923.

Dev. (Onondaga ls.): Lime Rock, Genesee Co., N. Y.

Acanthocrinus rex Jaekel.

Jaekel, Pal. Abhandl., 7, p. 18, text fig. 2, pl. 1, 1895.—Kirk, U. S. Nat. Mus., Proc., 41, p. 57, 1911.—Ehrenberg, Acta Zool., 3, p. 276, figs. 9, 10, 1922; Bull. Amer. Mus. Nat. Hist., 59, p. 26, fig. 15, 1929.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, pp. 118, 143, pl. 23, 1934.

Dev. (Hunsrück sl.): Caub, Germany.

Acanthocrinus spinosus (Hall).

Rhodocrinus spinosus Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 127 (adv. pub-p. 99), 1862; N. Y. St. Mus., Bull. 1, pl. 1-A, fig. 10, 1872.

Acanthocrinus spinosus Goldring, N. Y. St. Mus., Mem. 16, p. 92, pl. 2, figs. 7-11, 1923.

Dev. (Hamilton): Vincent, Ontario Co. (Moscow sh.) and Bay View, Erie Co. (Wanakah sh.), N. Y.

Acariaiocrinus Wanner. Genotype: *A. clavulus* Wanner.

Hypocrinidae (Inadunata-Fistulata). Permian.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, pp. 141, 164, 1924.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 94, 1926.—Wanner, Neues. Beitr. kennt. Perm. Echin. Timor, pp. 39, 71, 1929.

Streptostomocrinus Yakovlev, Bull. Comité Géol., 36, p. 186, 1927. (Genotype: *S. caryophylloides* Yakovlev.)

Acariaiocrinus angulosus Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, p. 74, pl. 5, fig. 10; pl. 6, figs. 1, 2, 1929.—Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 326, pl. 3, fig. 11, 1940.

Permian: Noko, Basleo, Timor.

Acariaiocrinus caryophylloides (Yakovlev).

Streptostomocrinus caryophylloides Yakovlev, Bull. Comité Géol., 46, p. 186, pl. 6, figs. 1-6, p. 191, text fig. 2, 1927.

Acariaiocrinus caryophylloides Wanner, Neue Beitr. kennt. Perm. Echin. Timor, p. 74, 1929.

Permian: Krasnooufimsk, Ural, Russia.

Acariaiocrinus clavulus Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 165, text fig. 14, p. 8, figs. 22-26, 1924; Neue Beitr. kennt. Perm. Echin. Timor, p. 72, pl. 4, fig. 6-10, pl. 5, figs. 3-9, 1929.

Permian: Basleo, Timor.

Achradocrinus Schultze. Genotype: *A. ventrosus* Schultze.

Gasterocomidae (Inadunata-Fistulata). Sil.; Dev.

Schultze, Denk. Kais. Akad. Wiss. Math.-Naturw. Cl., 26, abth. 2, p. 213, 1867 (Adv. pub., 1866).—Zittel, Handb. Pal., 1, p. 364, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 3, pp. 191, 227 (115, 151), 1886.—Bather, Ann. Mag. Nat. Hist., ser. 6, 5, pp. 324, 382, 1890; Treatise Zool. (Lankester), pt. 3, p. 178, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 219, 1913.

Achradocrinus patulus Slocum.

Slocum, Field Columbian Mus., Geol. Ser., 2, no. 10, p. 288, pl. 85, figs. 1-4, 1908. Sil. (Niagaran-Racine dol.): Romeo, Ill.

Achradocrinus ventrosus Schultze.

Schultze, Denk. kais. Akad. Wiss. Math. Nat. Cl., abth. 2, p. 213, 1867 (adv. pub. 1866).—Quenstedt, Petref. Deutsch., 4, p. 532, pl. 108, fig. 64, 1876.—Bather, Treatise Zool. (Lankester), pt. 3, p. 178, text fig. 95, 1900.

Dev. (Eifelian): Kerpen, Eifel, Germany.

Acrocrinus Yandell. Genotype: *A. shumardi* Yandell.

Acrocrinidae (Adunata). Miss.; Penn.

Yandell, Amer. Jour. Sci., 20, p. 135, 1855.—Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, p. 124 (346), 1885; N. Amer. Crin. Cam., p. 805, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 159, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 201, 1913.—Jaekel, Pal. Zeits., 3, p. 30, 1918.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 40, 1926.—Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 217, 1938.

Acrocrinus amphora Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 808, pl. 80, figs. 4-9, 1897. Bather, Treatise Zool. (Lankester), pt. 3, p. 159, fig. 73, 1900.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 45, pl. 9, figs. 8, 9; pl. 12, figs. 8, 9; pl. 18, fig. 4, 1926.

Miss. (Chester-Gasper fm.): Huntsville, Ala.

Acrocrinus brentwoodensis Moore and Plummer.

Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 222, pl. 12, figs. 3 a-d, text fig. 3, 1938.

Penn. (Brentwood ls.): 1.5 and 2 mi. northeast of Woolsey, Ark.

Acrocrinus intermedius Springer.

Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 43, pl. 12, figs. 2-5, 1926.

Miss. (Chester-Renault fm.): Burksville, Monroe Co., Ill.

Acrocrinus mjatschkowensis Yakovlev.

Yakovlev, Bull. Comité Geol., 45, no. 2, pp. 47, 48, text figs. 3, 4, 1926.

Carb. (Moscovian): Mjatschkowa, near Moscow, Russia.

Acrocrinus pirum Moore and Plummer.

Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 218, pl. 12, figs. 1 a-d, 2 a-d, text figs. 1, 2, 1938.

Penn. (Brentwood ls.): 2 mi. north of Ft. Gibson, Okla.

Acrocrinus praecursor Springer.

Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 42, pl. 12, fig. 1, 1926.
Miss. (Up. Burlington ls.): Burlington, Iowa.

Acrocrinus primitivus Laudon and Beane.

Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 252, pl. 17, figs. 5, 6, 1937.
Miss. (Kinderhook-Hampton fm.): Le Grand, Iowa.

Acrocrinus shumardi Yandell.

Yandell, Amer. Jour. Sci. and Arts, 20, p. 135, fig., 1855.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 806, pl. 80, figs. 1-3, 1897.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 45, pl. 12, figs. 6, 7, 1926.

Acrocrinus urnaeformis Hall, Geol. Surv. Iowa, 1, pt. 2, p. 690, pl. 25, figs. 9a, b, 1858.

Miss. (Chester): Grayson, Breckinridge, and Pulaski Cos., Ky.; Huntsville, Ala. (Glen Dean ls.); Pope Co., Burksville, etc., Ill. (Paint Creek fm.).

Acrocrinus urnaeformis Hall = *Acrocrinus shumardi*.

Acrocrinus wortheni Wachsmuth.

Wachsmuth, Ill. St. Mus. Nat. Hist., Bull. 1, p. 41, 1882.—Wachsmuth and Barris, Geol. Surv. Ill., 7, p. 343, pl. 30, fig. 13, text fig., 1883.—Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, p. 125, pl. 9, fig. 1, 1885; N. Amer. Crin. Cam., p. 807, pl. 80, figs. 10a, b, 1897.—Springer, U. S. Nat. Mus., 67, art. 9, p. 45, pl. 12, fig. 10, 1926.

Penn.: Peoria Co., Ill.

Actinocrinites Miller. Genotype: *A. triacontadactylus* Miller.

Actinocrinitidae (Camerata). Sil.-Permian.

Miller, Nat. Hist. Crin., pp. 15, 94, 1821.—Goldfuss, Petref. Germ. 1, p. 193, 1831.—Meek and Worthen, Geol. Surv. Ill., 5, p. 330, 1873.

Actinocrinus Phillips, Geol. Yorkshire, 2, p. 206, 1836.—Agassiz, Mem. Soc. Sci. Nat. Neuchatel, 1, p. 196, 1836.—Sandberger and Sandberger, Verst. Rhein. Schicht. in Nassau, p. 394, 1850-1856.—De Koninck and Lehon, Rec. Crin. Belg., p. 125, 1853.—McCoy, Brit. Pal. Foss., p. 55, 1854.—Meek and Worthen, Geol. Surv. Ill., 2, p. 147, 1866.—Schultze, Denk. Kais. Akad. Wiss., Math.-Naturw. Cl., 26, p. 171, 1867 (Adv. pub., 1866, p. 59).—Zittel, Handb. Pal., 1, p. 369, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, pp. 96, 138, 223, (270, 312, 397), 1881; N. Amer. Crin. Cam., p. 552, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, pp. 132, 169, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 197, 1913.

Amphora Cumberland, Reliquiae Conserv., p. 36, 1826. (Genotype: Sp. No. 1, unnamed.)

Blairocrinus S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 679, 1892 (adv. pub., 1891, p. 69). (Genotype: *B. trijugis* S. A. Miller.)

Phillipsocrinus McCoy, Syn. Char. Carb. Foss. Ireland, p. 183, 1844 (2d ed. 1862).—Wachsmuth and Springer, Rev. Pal., pt. 2, pp. 119, 140 (293, 314), 1881.—Bather, Treatise Zool. (Lankester), pt. 3, p. 170, 1900. (Genotype: *P. caryocrinoides* McCoy.)

Sampsonocrinus Miller and Gurley, Ill. St. Mus., Bull. 7, p. 51, 1895.—Bather, Treatise Zool. (Lankester), pt. 3, p. 170, 1900. (Genotype: *S. hemisphericus* Miller and Gurley.)

Actinocrinites aculeatus Austin and Austin.

Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 109, 1842 (mentioned); *ibid.*, 2, p. 200, 1843 (defined).

Actinocrinus aculeatus Wachsmuth and Springer, Rev. Pal., pt. 2, p. 223 (397), 1881.

Low. Carb.: Bristol, England.

Actinocrinites agassizi Troost = *Eretmocrinus ramulosus*.

Actinocrinites albersi (Miller and Gurley).

Actinocrinus albersi Miller and Gurley, Ill. St. Mus., Nat. Hist., Bull. 7, p. 46, pl. 2, figs. 21-23, 1895.—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 81, 1938.

Miss. (Chouteau ls.): Sedalia, Mo.

Actinocrinites albersi (Miller and Gurley).

Steganocrinus albersi Miller and Gurley, Ill. St. Mus., Bull. 12, p. 33, pl. 2, figs. 13-16, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Actinocrinites amphora Gilbertson = *Amphocrinus gilbertsoni*.

Actinocrinites armatus (de Koninck and Lehon).

Actinocrinus armatus de Koninck and Lehon, Rec. Crin. Belg., p. 138, pl. 4, figs. 4a, b, c, 1854.

Low. Carb. (Tournasian): Tournai, Belgium.

Actinocrinites arrosus (S. A. Miller).

Blairocrinus arrosus S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 295, pl. 7, figs. 1-5, 1894 (Adv. pub., 1892).

Actinocrinus arrosus Keyes, Geol. Surv. Mo., 4, pt. 1, p. 186, 1894.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 577, pl. 55, figs. 7, 8 a-c, 1897.—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 79, pl. 28, figs. 9, 10, 17, 1938.

Blairocrinus bullatus S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 295, pl. 7, figs. 6, 7, 1894 (adv. pub., 1892).

Miss. (Chouteau ls.): Sedalia, Pettis Co., and Cooper Co., Mo.

Actinocrinites? arthriticus Phillips = *Gissocrinus arthriticus*.

Actinocrinites asperrimus (Meek and Worthen).

Strotocrinus? asperrimus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 160, 1869; Geol. Surv. Ill., 5, p. 349, pl. 8, fig. 3, 1873.

Actinocrinus asperrimus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 575, pl. 60, figs. 5, 6, 1897.

Miss. (Low. Burlington ls.): Quincy, Ill., and Burlington, Iowa.

Actinocrinites augustatus (Miller and Gurley).

Actinocrinus augustatus Miller and Gurley, Ill. St. Mus., Bull. 3, p. 11, 1894.

Actinocrinus lobatus Worthen (not Hall), Geol. Surv. Ill., 8, p. 97, pl. 12, figs. 8, 8a, 1890.—Wachsmuth and Springer, N. Amer. Crin. Cam., pp. 557, 567, 1897.

Miss. (Keokuk ls.); Greene Co., Ill.

Actinocrinites? batheri (Whidborne).

Actinocrinus? batheri Whidborne, Proc. Geol. Assoc., 14, p. 377, 1896; Mon. Devon. Fauna South England, 3, pt. 3, p. 222, pl. 32, figs. 2, 3, 1899.

Low. Carb. (Marwood beds): Braunton and Sloy, North Devon, England.

Actinocrinites benedicti (S. A. Miller).

Steganocrinus benedicti S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 281, pl. 4, figs. 10-12, 1894 (adv. pub., 1892, p. 27); N. Amer. Geol. Pal., First App., p. 682, fig. 1248, 1892.

Miss. (Keokuk ls.): Canton, Washington Co., and Harrison Co., Ind.

Actinocrinites bischoffi (Miller and Gurley).

Actinocrinus bischoffi Miller and Gurley, Ill. St. Mus., Bull. 10, p. 8, pl. 3, figs. 1, 2, 1896.

Miss. (Burlington ls.): Burlington, Iowa. Drift at Danville, Ill.

Actinocrinites blairi (Miller and Gurley).

Steganocrinus blairi Miller and Gurley, Ill. St. Mus., Bull. 12, p. 35, pl. 2, figs. 21-22, 1897.

Miss. (Burlington ls.): Near Sharon, Mo.

- Actinocrinites bonoensis** (Peck and Keyte).
Actinocrinus bonoensis Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 89, pl. 28, figs. 21, 22, 1938.
 Miss. (Chouteau ls.): Easley, Mo.
- Actinocrinites botruosus** (Miller and Gurley).
Actinocrinus botruosus Miller and Gurley, Ill. St. Mus., Bull. 6, p. 22, pl. 2, figs. 1, 2, 1895.
 Miss. (Ft. Payne ch.): Tennessee.
- Actinocrinites brevispina** (Wanner).
Actinocrinus brevispina Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 71, pl. 1, figs. 5-8, 1924.
 Permian: Basleo, Timor.
- Actinocrinites brouweri** (Wanner).
Actinocrinus brouweri Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 68, pl. 1, figs. 11, 12, 1924; Neue Beitr. kennt. Perm. Echin. Timor, 8, p. 64, pl. 5, fig. 7, 1937.
 Permian: Basleo, Timor.
- Actinocrinites carinatus** (Wanner).
Actinocrinus carinatus Wanner, Neue Beitr. kennt. Perm. Echin. Timor, 8, p. 65, pl. 5, figs. 8-12, 1937.—Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 298, pl. 1, fig. 3, 1940.
 Permian: Basleo, Timor.
- Actinocrinites caryocrinoides** (McCoy).
Phillipsocrinus caryocrinoides McCoy, Syn. Char. Carb. Foss. Ireland, p. 183, pl. 26, fig. 5, 1844.
 Low. Carb. (Mountain Ls.): Ireland.
- Actinocrinites cataphractus** Austin and Austin.
 Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 109, 1842 (mentioned); *ibid.* 11, p. 200, 1843 (defined).
 Low. Carb. (Mountain Ls.): Bristol, England, and Ireland.
- Actinocrinites chouteauensis** (S. A. Miller).
Actinocrinus chouteauensis S. A. Miller, 18th Rep. Ind. Geol. Nat. Res., p. 272, pl. 3, figs. 9-11, 1894 (adv. pub., 1892).—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 570, pl. 46, figs. 11a, b, 1897.—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 81, pl. 27, figs. 16, 17, 1938.
 Miss. (Chouteau ls.): near Sedalia, Mo.
- Actinocrinites cingulatus** Goldfuss.
 Goldfuss, Petref. Germ., 1, p. 195, pl. 59, figs. 7a, b, 1831 (stems only).
Melocrinus cingulatus d'Orbigny, Prodr. Pal. Strat., 1, p. 104.
 Dev. (Eifelian): Eifel, Germany.
- Actinocrinites constrictus** (McCoy).
Actinocrinus constrictus McCoy, Syn. Char. Carb. Foss. Ireland, p. 181, pl. 27, fig. 3, 1844.
Dimerocrinus constrictus d'Orbigny, Prodr. Pal. Strat., 1, p. 156, 1849.
 Low. Carb. (Mountain Ls.): Manorhamilton, Ireland.
- Actinocrinites cornutus** Troost = *Eretmocrinus praegravis*.
- Actinocrinites crassus** Austin and Austin.
 Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 109; 1842 (nom. nud.); *ibid.* 11, p. 201, 1843.
Amphocrinus crassus Austin, Quart. Jour. Geol. Soc. London, 4, p. 292, 1848.
 Carb.: England.

- Actinocrinites cyathiformis** (Sandberger and Sandberger).
Actinocrinus cyathiformis Sandberger and Sandberger, Vers. Rhein. Schicht. in Nassau, p. 394, pl. 35, fig. 13, 1855.
 Dev. (Givetian-Stringocephalus ls.): Villmar, Germany.
- Actinocrinites daphne** (Hall).
Actinocrinus daphne Hall, Prelim. Not. Sp. Crin. Waverly Sandstone, etc., p. 52, 1863; 17th Ann. Rep. Regents Univ. State N. Y., p. 52, 1864.—Hall and Whitfield, Geol. Ohio, Pal., 2, pt. 2, p. 162, pl. 11, fig. 11, 1875.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 574, pl. 56, fig. 1, 1897.
 Miss. (Waverlyan-Cuyahoga fm.): Richfield, Summit Co., and Royalton, Cuyahoga Co., Ohio.
- Actinocrinites decadactylus* Tannenbergr = *Ctenocrinus decadactylus*.
- Actinocrinites decadactylus** (Portlock).
Actinocrinus decadactylus? Portlock, Geol. Rep. Londonderry, p. 349, 1843.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 143 (317), 1881.
 Low. Carb. (Mountain Ls.): Stewartstown, Tyrone, Ireland.
Actinocrinites delicatus Meek and Worthen = *Teleocrinus umbrosus*.
- Actinocrinites deornatus** (de Koninck and Lehon).
Actinocrinus deornatus de Koninck and Lehon, Rec. Crin. Belg., p. 142, pl. 3, figs. 5a, b, 1854.
 Low. Carb.: Tournai, Belgium (Tournaisian); Co. Wexford, Ireland (Mountain Ls.).
- Actinocrinites dilatatus** (Wanner).
Actinocrinus dilatatus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 70, pl. 1, figs. 9, 10, 1924.
 Permian: Basleo, Timor.
- Actinocrinites dorsatus** (deKoninck and Lehon).
Actinocrinus dorsatus deKoninck and Lehon, Rec. Crin. Belg., p. 139, pl. 4, figs. 5a, b, 1854.
 Low. Carb. (Tournaisian): Tournai, Belgium.
- Actinocrinites elephantinus** Austin and Austin.
 Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 109 (nom. nud.); 1842; *ibid.*, 11, p. 200, 1843.
 Low. Carb.: Hook Head, Co. Wexford, Ireland (fide Wright).
- Actinocrinites erraticus** (Miller and Gurley).
Actinocrinus erraticus Miller and Gurley, Ill. St. Mus., Bull. 3, p. 14, pl. 2, figs. 2, 3, 1894.
 Miss. (Low. Burlington ls.): Drift at Danville, Ill.
- Actinocrinites exornatus** (Wanner).
Actinocrinus exornatus Wanner, Neue Beitr. kennt. Perm. Echin Timor, VIII, p. 62, pl. 5, figs. 4-6, 1937.
 Permian: Basleo, Timor.
- Actinocrinites* (?) *expansus* Phillips = *Sagenocrinus expansus*.
- Actinocrinites fibula* Troost = *Dizygocrinus sacculus*.
- Actinocrinites foveatus** (Miller and Gurley).
Actinocrinus foveatus Miller and Gurley, Ill. St. Mus., Bull. 7, p. 49, pl. 2, figs. 25, 26, 1895.
 Miss. (Chouteau ls.): Sedalia, Mo.
- Actinocrinites gibbosus* Troost = *Batocrinus gibbosus*.
- Actinocrinites gibsoni** (Miller and Gurley).
Actinocrinus gibsoni Miller and Gurley, Ill. St. Mus., Bull. 3, p. 10, pl. 2, fig. 1, 1894.
 Miss. (Keokuk ls.): Indian Creek, Montgomery Co., Indiana; Keokuk, Iowa.

Actinocrinites goldfussi (Schmidt).

Actinocrinus goldfussi Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., Heft 122, p. 23, pl. 1, fig. 11, 1930.

Actinocrinites laevis Goldfuss (not Miller), Petref. Germ., 1, p. 193, pl. 59, figs. 3 a-c, 1831.—Quenstedt, Handb. Petref. p. 746, pl. 69, figs. 5, 6, 1867.

Low. Carb. (Viséan): Ratingen, Germany.

Actinocrinites gracilis (Wachsmuth and Springer).

Actinocrinus gracilis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 572, pl. 56, fig. 11, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Actinocrinites granulatus Austin and Austin = *Amphoracrinus granulatus*.**Actinocrinites granulatus** Goldfuss.

Goldfuss, Petref. Germ., 1, p. 193, pl. 59, figs. 4 a-k, 1831 (stems only).

Actinocrinus? granulatus Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., Heft 122, p. 24, 1930.

Low. Carb. (Viséan): Near Ratingen and Regnitzlosau, Eifel, and Bayreuth, Germany.

Actinocrinites griffithi (Wachsmuth and Springer).

Actinocrinus griffithi Wachsmuth and Springer, N. Amer. Crin. Cam., p. 568, pl. 52, fig. 7, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa; Missouri and Illinois.

Actinocrinites hemisphericus (Miller and Gurley).

Sampsonocrinus hemisphericus Miller and Gurley, Ill. St. Mus., Bull. 7, p. 51, pl. 3, figs. 7-10, 1895.—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 89, pl. 27, figs. 1-4, 1938.

Miss. (Chouteau ls.): Sedalia, Mo.

Actinocrinites holbrooki Troost = *Uperocrinus robustus*.**Actinocrinites humboldti** Troost = *A. magnificus*.**Actinocrinites icosidactylus** Portlock.

Portlock, Rep. County Londonderry, p. 348, pl. 15, fig. 7, 1843.

Actinocrinus icosidactylus deKoninck and Lehon, Rec. Crin. Carb. Belg., p. 141, pl. 2, fig. 4; pl. 4, fig. 6, 1853.

Low. Carb.: The Hook, Co. Wexford, Ireland (Mountain Ls.); Tournai, Belgium (Tournaisian).

Actinocrinites jessieae (Miller and Gurley).

Amphoracrinus jessieae Miller and Gurley, Ill. St. Mus., Bull. 10, p. 21, pl. 3, figs. 18, 19, 1896.—S. A. Miller, N. Amer. Geol. Pal., App. 2, p. 734, fig. 1294, 1897.

Actinocrinus jessieae Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 82, pl. 27, fig. 5; pl. 28, figs. 4, 5, 1938.

Miss. (Chouteau ls.): Sedalia, Mo.

Actinocrinites jugosus (Hall).

Actinocrinus jugosus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 49, 1860.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 563, pl. 54, fig. 1, 1897.

Miss.: Warsaw, Ill. and Keokuk, Iowa (Keokuk ls.); Barren Co., Ky., and 7 miles n.e. Livingstone, Tenn. (Ft. Payne ch.).

Actinocrinites laevis Miller.

Miller, Nat. Hist. Crin., p. 105, pl. opposite, 1821.

Actinocrinus laevis de Koninck and Lehon, Anim. Foss. Terr. Carb., p. 52, pl. G, figs. 4 a-c, 1844; Rec. Crin. Belg., p. 152, pl. 3, fig. 6, 1853.

Amphora No. 1 Cumberland, Rel. Cons., p. 36, pl. A, fig. 5, 1826.

Encrinites dubius Schlothheim, Nacht. Petref., 3, p. 100, pl. 28, figs. 2a, b, 1823.

- Encrinites (Pentacrinites) dubius* Quenstedt, Archiv. Natur., I Jahrg, 2, p. 226, pl. 4, fig. 2, 1835.
Low. Carb.: Mitchellean Limestone Basin, Eng. (Mountain Ls.); Tournai, Belgium (Tournaisian).
- Actinocrinites laevis* Goldfuss = *Actinocrinites goldfussi*.
- Actinocrinites laevis** Austin and Austin.
Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 109, 1842 (nom. nud.); *ibid.*, 11, p. 201, 1843.
Low. Carb.: Bristol, England.
- Actinocrinites lobatus** (Hall).
Actinocrinus lobatus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 51, 1860.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 557, pl. 52, figs. 1a, b; pl. 54, fig. 3; pl. 55, figs. 1a, b, 1897.
Miss.: Warsaw, Ill., Crawfordsville and Canton, Ind., Keokuk, Iowa (Keokuk ls.); Burlington, Iowa (Up. Burlington ls.); Pleasant Grove, Iowa (Burlington-Keokuk Trans. beds).
- Actinocrinites longispinosus** Austin and Austin.
Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 109, 1842 (nom. nud.); *ibid.*, 11, p. 201, 1843.
Low. Carb.: Clevedon (Somerset), Derbyshire, Eng.
- Actinocrinites longus* Meek and Worthen = *Cactocrinus longus*.
- Actinocrinites lowei** (Hall).
Actinocrinus lowei Hall, Geol. Iowa, 1, pt. 2, p. 611, pl. 15, figs. 5a, b, text fig. 93, 1858.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 562, pl. 54, fig. 2, 1897.
Actinocrinus brontes Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 47, 1860.
Miss.: Keokuk, Iowa, Canton, Ind., Warsaw, Hamilton, and Nauvoo, Ill., Clark Co., Mo. (Keokuk ls.); Barren Co., Ky. (Ft. Payne ch.).
- Actinocrinites magnificus** (Wachsmuth and Springer).
Actinocrinus magnificus Wachsmuth and Springer, N. Amer. Crin. Cam., pp. 558, 567, pl. 53, fig. 2, 1897.—Wood, U. S. Nat. Mus., Bull. 64, p. 80, pl. 1, fig. 1, 1909.
Actinocrinites humboldtii Troost, Amer. Jour. Sci., (2) 8, p. 419, 1849 (nom. nud.).
Miss.: Indian Creek, Ind. and Warsaw, Ill. (Keokuk ls.); Whites Creek Springs, Tenn. (Ft. Payne ch.).
- Actinocrinites major** (Angelin).
Actinocrinus major Angelin, Icon. Crin. Suec., p. 6, pl. 18, fig. 10, 1878.
Sil. (Gotlandian): Likkershamn, Gotland.
- Actinocrinites marcoui** (Collingnon).
Actinocrinus marcoui Collingnon, Bull. Soc. Geol. France, 24, pp. 13-15, text figs. 1-3, 1924.
Miss.: Williams Canon, Manitou, Col.
- Actinocrinites marineri* Troost = *Eretmocrinus spinosus*.
- Actinocrinites milleri** (Peck and Keyte).
Actinocrinus milleri Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 83, pl. 27, figs. 14, 15, 1938.
Melocrinus sampsoni Miller and Gurley, Ill. St. Mus., Bull. 7, p. 55, pl. 2, figs. 27-29, 1895.—Wilson, Jour. Geol., 24, p. 5-9, pl. 2, fig. 8, 1916.
Miss. (Chouteau ls.): Sedalia, Mo.
- Actinocrinites moniliferus** Goldfuss.
Goldfuss, Petref. Germ., 1, p. 190, pl. 59, figs. 10a, b, 1831 (stems only).
Melocrinus moniliferus d'Orbigny, Prod. Pal. Strat., 1, p. 104, 1840.
Dev. (Eifelian): Eifel, Germany.

- Actinocrinites moniliformis* Miller = *Periechocrinites moniliformis*.
- Actinocrinites monticuliferus** (Miller and Gurley).
Actinocrinus monticuliferus Miller and Gurley, Ill. St. Mus., Bull. 5, p. 46, pl. 4, fig. 1, 1894.
 Miss. (Ft. Payne ch.): Tennessee.
- Actinocrinites mortoni* Troost = (part) *Dizygocrinus unionensis*, (part) *D. unionensis divalis*.
- Actinocrinites multiradiatus** (Shumard).
Actinocrinus multiradiatus Shumard, Trans. Acad. Sci. St. Louis, 1, p. 75, pl. 1, fig. 5, 1857.—Hall, Geol. Surv. Iowa, 1, pt. 2, p. 579, pl. 10, fig. 9, 1858.—Keyes, Geol. Surv. Mo., 4, p. 188, pl. 20, fig. 3, 1894.—Wachsmuth and Springer, N. Amer. Crin. Cam., pp. 109, 555, pl. 52, figs. 3-6, 1897.—Wilson, Jour. Geol., 24, p. 509, pl. 2, fig. 9, 1916.
 Miss. (Up. Burlington ls.): Quincy, Ill.
- Actinocrinites multiramosus** (Wachsmuth and Springer).
Actinocrinus multiramosus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 564, pl. 53, fig. 1; pl. 55, fig. 3, 1897.—Rowley in Greene, Cont. Ind. Pal., 2, pt. 2, p. 31, pl. 6, fig. 15, 1906.
Actinocrinus grandis Miller and Gurley, 16th Geol. Rep. Ind., p. 346, pl. 5, fig. 1; pl. 6, fig. 1 (authors' ed., p. 25), 1890.
 Miss. (Keokuk ls.): Indian Creek, Montgomery Co., and Washington Co., Ind.
- Actinocrinites multiramosus altidorsatus** (Rowley).
Actinocrinus multiramosus var. *altidorsatus* Rowley in Greene, Cont. Ind. Pal., 1, pt. 19, p. 187, pl. 57, figs. 1, 2, 1904.
 Miss. (Keokuk ls.): Washington Co., Ind.
- Actinocrinites muricatus* Goldfuss.
 Goldfuss, Petref. Germ., 1, p. 195, pl. 59, figs. 8 a-c, 1831 (stems only).
 Dev. (Eifelian): Eifel, Germany.
- Actinocrinites nashvillae* Troost = *Uperocrinus nashvillae*.
- Actinocrinites nodulosus* Goldfuss.
 Goldfuss, Petref. Germ., 1, p. 195, pl. 59, fig. 9, 1831 (stems only).
 Dev. (Eifelian): Eifel, Germany.
- Actinocrinites olla** (McCoy).
Actinocrinus (*Amphorocrinus*?) *olla* McCoy, Ann. Mag. Nat. Hist., (2) 3, p. 248, 1849; British Pal. Foss., p. 121, pl. 3-D, fig. 6, 1854.
 Low. Carb.: Derbyshire, Eng.
- Actinocrinites pallubrum** (Miller and Gurley).
Actinocrinus pallubrum Miller and Gurley, Ill. St. Mus., Bull. 9, p. 26, pl. 1, figs. 25-27, 1896.
 Miss. (Chouteau ls.): Sedalia, Mo.
- Actinocrinites penicillus** Meek and Worthen.
 Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 155, 1869; Geol. Surv. Ill., 5, p. 342, pl. 8, fig. 2, 1873.
 Miss. (Low. Burlington ls.): Burlington, Iowa.
- Actinocrinites permicus** (Wanner).
Actinocrinus permicus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 65, pl. 1, figs. 1, 2, 1924.
 Permian: Basleo, Timor.
- Actinocrinites pernodosus** (Hall).
Actinocrinus pernodosus Hall, Geol. Surv. Iowa, 1, pt. 2, p. 608, text fig. 91, pl. 15, figs. 3a, b; pl. 16, fig. 7, 1858.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 561, pl. 55, figs. 2a, b, 1897.

- Miss.: Warsaw, Hancock Co., Ill., Keokuk, Iowa, Clark Co., Mo., Canton, Ind. (Keokuk ls.); Barren Co., Ky., 7 mi. northeast Livingstone and Whites Creek Springs, Tenn. (Ft. Payne ch.).
- Actinocrinites pettisensis** (Miller and Gurley).
Actinocrinites pettisensis Miller and Gurley, Ill. St. Mus., Bull. 10, p. 6, pl. 1, figs. 3, 4, 1896.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 731, fig. 1279, 1897.
 Miss. (Chouteau ls.): Sedalia, Mo.
- Actinocrinites plagosus** (Miller and Gurley).
Actinocrinites plagosus Miller and Gurley, Ill. St. Mus., Bull. 3, p. 16, pl. 2, figs. 5, 6, 1894.
 Miss. (Burlington ls.): Burlington, Iowa.
- Actinocrinites polydactylus** Miller.
 Miller, Nat. Hist. Crin., p. 103, pls. 1, 2, 1821.—Bronn, Urv. Pflanzenth., pp. 8, 41, pl. 3, fig. 8, 1825.—Blainville, Man. Actinologie, p. 261, pl. 28, fig. 1, 1834.
Encrinites polydactylus Scholotheim, Nacht. Petref., p. 100, pl. 27, fig. 4; pl. 28, figs. 1 a-e, 1823.
Actinocrinites polydactylus Phillips, Geol. Yorkshire, 2, p. 206, pl. 4, figs. 17, 18, 1836.—De Koninck, Anim. Foss. Terr. Carb. Belg., p. 51, pl. G, figs. 3a, b, 1842.—Roemer in Bronn, Leth. Geog., ed. 3, (1) pt. 2, p. 248, pl. 4, figs. 4a, b, 1852-1854 (ed. 1 and 2, p. 61).
 Low. Carb.: Mendip Hills and Bolland, Yorkshire, Somersetshire and Clendon Bay, England; Hook Head, Co. Wexford, Ireland (Mountain Ls.); Tournai, Belgium (Tournaisian); Aachen, Germany; Caldys Island, Wales.
- Actinocrinites polydactylus* Bonny = *Ctenocrinites pachydactylus*.
- Actinocrinites porteri** (Whidborne).
Actinocrinites porteri Whidborne, Proc. Geol. Assoc., 14, p. 377, 1896; Mon. Dev. Fauna S. Eng., 3, pt. 3, p. 220, pl. 5, fig. 21; pl. 30, fig. 8; pl. 31, figs. 1, 2, 5; pl. 33, fig. 1, 1899.
 Low. Carb. (Marwood beds): Barnstaple, North Devon, England.
- Actinocrinites pusillus** (McCoy).
Actinocrinites pusillus McCoy, Synop. Carb. Foss. Ireland, p. 182, pl. 26, fig. 4, 1844.
 Low. Carb. (Mt. Ls.): Manorhamilton, Ireland.
- Actinocrinites quinquangularis** (Angelin).
Actinocrinites quinquangularis Angelin, Icon. Crin. Suec., p. 6, pl. 16, figs. 27, 27a, 28, 1878.
 Sil. (Gotlandian): Lickershamn, Island of Gotland.
- Actinocrinites regularis* Hisinger = *Eucalyptocrinites regularis*.
- Actinocrinites?* *retarius* Phillips = *Hapalocrinites retarius*.
- Actinocrinites rubra** (Weller).
Actinocrinites rubra Weller, Bull. Geol. Soc. Amer., 20, p. 285, pl. 11, figs. 4, 5, 1909.
 Miss. (Fern Glen ls.): Fern Glen, Mo.
- Actinocrinites sampsoni** (Miller and Gurley).
Actinocrinites sampsoni Miller and Gurley, Ill. St. Mus., Bull. 10, p. 5, pl. 1, figs. 1, 2, 1896.
 Miss. (Chouteau ls.): Sedalia, Mo.
- Actinocrinites sayi* Troost = *Batocrinites sayi*.
- Actinocrinites scitulus** (Meek and Worthen).
Actinocrinites scitulus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 386 (*scitulus* by error), p. 472, 1860; Geol. Surv. Ill., 2, p. 202, pl. 15, figs. 7a, b; p. 204, text fig. 12, 1866.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 559, pl. 55, figs. 5, 6a, b, 1897.
Actinocrinites rusticus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 267, 1861.—Whitfield, Mem. Amer. Mus. Nat. Hist., 1, p. 10, pl. 1, fig. 13, 1893.

- Actinocrinus sillimani* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 134, 1861; Geol. Surv. Ill., 2, p. 204, text fig. 13, 1866.
- Actinocrinus wachsmuthi* White, Proc. Boston Acad. Nat. Sci., 9, p. 15, 1862.
- Miss. (Low. and Up. Burlington ls.): Cedar Creek, Warren Co., and Monmouth, Ill.; Burlington, Iowa.
- Actinocrinites sedaliensis** (Miller and Gurley).
- Amphocrinus sedaliensis* Miller and Gurley, Bull. 7, Ill. St. Mus., p. 54, pl. 5, figs. 34-37, 1895.—Miller, N. A. Geol. and Pal., 2d App., p. 734, fig. 1295, 1897.—Weller, U. S. Geol. Surv., Bull. 153, p. 83, 1898.
- Actinocrinus sedaliensis* Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 84, pl. 28, figs. 6-8, 1938.
- Miss. (Chouteau ls.): Sedalia, Mo.
- Actinocrinites semimultiramosus** (Whitfield).
- Actinocrinus semimultiramosus* Whitfield, Bull. Amer. Mus. Nat. Hist., 13, art. 3, p. 23, pl. 3, 1900.
- Miss. (Keokuk ls.): South of Salem, Ind.
- Actinocrinites senectus** (Miller and Gurley).
- Actinocrinus senectus* Miller and Gurley, Ill. St. Mus., Bull. 12, p. 36, pl. 2, figs. 23-25, 1897.—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 85, pl. 27, figs. 12, 13, 1938.
- Miss. (Chouteau ls.): Sedalia, Mo.
- Actinocrinites sharonensis** (Miller and Gurley).
- Steganocrinus sharonensis* Miller and Gurley, Ill. St. Mus., Bull. 12, p. 32, pl. 2, figs. 10-12, 1897.
- Miss. (Burlington ls.): Near Sharon, Mo.
- Actinocrinites sobrinus** (Miller and Gurley).
- Actinocrinus sobrinus* Miller and Gurley, Ill. St. Mus., Bull. 10, p. 10, pl. 3, figs. 4, 5, 1896.
- Miss. (Burlington ls.): Burlington, Iowa.
- Actinocrinites spectabilis** (Miller and Gurley).
- Actinocrinus spectabilis* Miller and Gurley, Ill. St. Mus., Bull. 10, p. 9, pl. 3, fig. 3, 1896.
- Miss. (Burlington ls.): Burlington, Iowa.
- Actinocrinites spergenensis** (Miller and Gurley).
- Steganocrinus spergenensis* Miller and Gurley, Ill. St. Mus., Bull. 8, p. 29, pl. 2, figs. 4-7, 1896.
- Miss. ("St. Louis ls."): ?Spergen Hill, Ind. (Probably Burlington ls.)
- Actinocrinites spinaetectus** (Wanner).
- Actinocrinus spinaetectus* Wanner, Neue Beitr. kennt. Perm. Echin. Timor, VIII, p. 61, pl. 5, figs. 1-3, 1937.
- Permian: Basleo, Timor.
- Actinocrinites spinulosus** (Miller and Gurley).
- Blairocrinus spinulosus* Miller and Gurley, Ill. St. Mus., Bull. 3, p. 28, pl. 7, figs. 16-18, 1894.
- Actinocrinus spinulosus* Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 88, pl. 28, figs. 23-25, 1938.
- Miss. (Chouteau ls.): Sedalia, Mo.
- Actinocrinites stellaris** (de Koninck and Lehon).
- Actinocrinus stellaris* de Koninck and Lehon, Rec. Crin. Carb. Belg., p. 136, pl. 3, figs. 3a, b, 4 a-g; pl. 4, fig. 3, 1854.—Quenstedt, Handb. Petref. Deutsch., 4, p. 491, pl. 107, fig. 119; p. 575, pl. 110, figs. 6-8, 1876.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., Heft 122, p. 25, 1930.

- Actinocrinus gilbertsoni* de Koninck and Lehon, Anim. Foss. Terr. Carb. Belg., p. 50, pl. G, 1842-1844.
Low. Carb.: Tournai, Belgium (Tournaisian); Bolland, Clitheroe, etc., England (Mtn. Ls.).
- Actinocrinites subpulchellus** (Miller and Gurley).
Actinocrinus subpulchellus Miller and Gurley, Ill. St. Mus., Bull. 10, p. 13, pl. 3, figs. 13-14, 1896.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 732, fig. 1280, 1897.
Miss. (Burlington ls.): Burlington, Iowa.
- Actinocrinites subscitulus** (Miller and Gurley).
Actinocrinus subscitulus Miller and Gurley, Ill. St. Mus., Bull. 10, p. 12, pl. 3, figs. 6-8, 1896.
Miss. (Burlington ls.): Burlington, Iowa; Curryville, Mo.
- Actinocrinites tennesseensis* Troost = (in part) *Periechocrinus tennesseensis*; (in part) *P. dubius*.
- Actinocrinites tenuis** (de Koninck and Lehon).
Actinocrinus tenuis de Koninck and Lehon, Rec. Crin. Carb. Belg., p. 128, pl. 2, figs. 3a, b, 1854.
Low. Carb. (Tournaisian): Tournai, Belgium.
- Actinocrinites tenuisculptus** (McChesney).
Actinocrinus tenuisculptus McChesney, Desc. N. Sp. Foss. Pal. Rocks Western States, p. 15, 1860; Trans. Chicago Acad. Sci., 1, p. 11, pl. 5, figs. 1a, b; p. 12, text fig., 1868 (adv. pub., 1865).—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 571, pl. 55, figs. 4a, b, 1897.
Actinocrinus chloris Hall, Jour. Boston Soc. Nat. Hist., 7, p. 275, 1861.
Miss.: Columbia, Mo. (Low. Burlington ls.); Sedalia, Mo. (Chouteau ls.); Burlington, Iowa (Burlington ls.); Lake Valley, N. Mex. (Lake Valley ls.).
- Actinocrinites tenuistriatus** (Phillips).
Actinocrinus? tenuistriatus Phillips, Pal. Foss. Cornwall, p. 31, pl. 16, fig. 44, 1841.
Actinocrinites tenuistriatus F. A. Roemer, Verst. Harzgebirges, p. 9, pl. 3, fig. 16, 1843.
Low. Carb.: Pilton, Linton, etc. North Devonshire, Eng. (Pilton beds); Plymouth, Devonshire, Eng. (slates); Co. Waterford, Ireland.
- Actinocrinites tessellatus** (Phillips).
Actinocrinus tessellatus Phillips, Geol. Yorkshire, pt. 2, p. 206, pl. 4, fig. 21, 1836.—Rofe, Geol. Mag., 2, p. 246, pl. 8, fig. 3, 1865.
Low. Carb. (Mt. Ls.): Near Frome, Somersetshire, and Yorkshire, Eng.; Co. Waterford, Ireland.
- Actinocrinites tesseracontadactylus* Goldfuss = *Abacocrinus tesseracontadactylus*.
- Actinocrinites tesseratus* Goldfuss.
Goldfuss, Petref. Germ., 1, p. 196, pl. 59, figs. 11a, b, 1831 (detached plates and columns).
Dev.: Near Schwelm, Eifel, Germany.
- Actinocrinites timoricus** (Wanner).
Actinocrinus timoricus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 67, pl. 1, figs. 3, 4; pl. 3, fig. 7, 1924.
Permian: Basleo, Timor.
- Actinocrinites triacontadactylus** Miller.
Miller, Nat. Hist. Crin., p. 95, pl. figs. 1-6, 1821.
Actinocrinus 30-dactylus Phillips, Geol. Yorkshire, pt. 2, p. 206, pl. 4, fig. 16, 1836.
Actinocrinus triacontadactylus Phillips, Pal. Foss. Cornwall, p. 31, pl. 16, fig. 43, 1841.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 55, 1897.
Low. Carb.: Broughton and Stokes, Yorkshire; Clitheroe, Lancashire; near Bristol, England; Kildare, Ireland (Mt. Ls.); Tournai, Belgium (Tournaisian).

Actinocrinites tricuspидatus (de Koninck and Lehon).

Actinocrinus tricuspидatus de Koninck and Lehon, Rec. Crin. Carb. Belg., p. 143, pl. 2, figs. 5a, b, 1854.

Low. Carb. (Viséan): Visé, Belgium.

Actinocrinites trijugis (S. A. Miller).

Blaiocrinus trijugis S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 679, pl. 11, figs. 1-3, 1892 (adv. pub., 1891).

Actinocrinus trijugis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 576, pl. 54, figs. 4a, b, 1897.—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 86, pl. 28, figs. 1-3, 15, 16, 18-20, 1938.

Miss. (Chouteau ls.): Near Sedalia, Mo.

Actinocrinites tuberculatus (Wachsmuth and Springer).

Actinocrinus tuberculatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 573, pl. 52, figs. 8 a-c, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Actinocrinites umbrosus Hall = *Teleiocrinus umbrosus*.

Actinocrinites unicarınatus (Hall).

Actinocrinus unicarınatus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 48, 1860.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 557, 1897.

Miss. (Keokuk ls.): Nauvoo, Ill., and Keokuk, Iowa.

Actinocrinites urna Troost = *Batocrinus grandis*.

Actinocrinites verneuili Troost = *Melocrinites verneuili*.

Actinocrinites verrucosus (Hall).

Actinocrinus verrucosus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 578, pl. 10, figs. 7a, b, 1858.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 558, pl. 52, figs. 2a, b, c, 1897.

Actinocrinus asterias McChesney, Desc. N. Sp. Foss. Pal. Rocks Western States, p. 13, 1860; Illustr. N. Sp. Foss., pl. 5, figs. 6a, b, 1865; Trans. Chicago Acad. Sci., 1, p. 9, pl. 5, figs. 6a, b, text fig. p. 11, 1868.

Miss. (Burlington ls.): Burlington, Iowa (Upper); Monmouth, Ill.

Actinocrinites viaticus (White).

Actinocrinus viaticus White, in Wheeler, Rep. U. S. Geogr. Surv. West 100th Merid., 4, Pal., p. 82, pl. 5, fig. 1, 1875 (Prelim. Rep., 1874).

Miss.: Mountain Spring, Old Mormon Road, Nev.

Actinocrinus of authors = *Actinocrinites*.

Actinocrinus abnormis Lyon = *Megistocrinus abnormis*.

Actinocrinus aeglops Hall = *Teleiocrinus umbrosus*.

Actinocrinus aequalis Hall = *Batocrinus aequalis*.

Actinocrinus aequibrachiatus McChesney = *Uperocrinus aequibrachiatus*.

Actinocrinus aequibrachiatus alatus Hall = *Uperocrinus aequibrachiatus asteriscus*.

Actinocrinus (*Calathocrinus*, *Strotocrinus*) *althea* Hall = *Teleiocrinus althea*.

Actinocrinus amphora papillata Quenstedt = *Amphorocrinus gilbertsoni*.

Actinocrinus (*Pradocrinus*) *amplus* Meek and Worthen = *Periechocrinites whitei*.

Actinocrinus andrewsianus McChesney = *Dizygoocrinus andrewsianus*.

Actinocrinus araneolus Meek and Worthen = *Steganocrinus araneolus*.

Actinocrinus arnoldi Wachsmuth and Springer = *Cactocrinus arnoldi*.

Actinocrinus arrosus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 3, p. 15, pl. 2, fig. 4, 1894. (Probably *Cactocrinus*.)

Miss. (Burlington ls.): Burlington, Iowa.

- Actinocrinus asterias* McChesney = *Actinocrinites verrucosus*.
Actinocrinus asteriscus Meek and Worthen = *Uperocrinus aequibrachiatus asteriscus*.
Actinocrinus (*Amphoracrinus*) *atlas* McCoy = *Amphoracrinus atlas*.
Actinocrinus biturbinatus Hall = *Dizygocrinus biturbinatus*.
Actinocrinus blairi S. A. Miller = *Cactocrinus glans*.
Actinocrinus (*Amphoracrinus*) *brevicalix* Rofe = *Amphoracrinus brevicalix*.
Actinocrinus brevicornis Hall = *Megistocrinus evansii*.
Actinocrinus brevimanus Angelin = *Periechocrinites brevimanus*.
Actinocrinus brevis Hall = *Agaricocrinus brevis*.
Actinocrinus brittsi S. A. Miller = *Physetocrinus ornatus*.
Actinocrinus brontes Hall = *Actinocrinites lowei*.
Actinocrinus calyculoides Hall = *Eretmocrinus calyculoides*.
Actinocrinus calyculus Hall = *Batocrinus calyculus*.
Actinocrinus calyculus hardinensis Meek and Worthen = *Batocrinus calyculus*.
Actinocrinus calypso Hall = *Corocrinus* (?) *calypso*.
Actinocrinus carica Hall = *Macrocrinus carica*.
Actinocrinus caroli Hall = *Dizygocrinus unionensis*.
Actinocrinus cassedayi Lyon = *Aorocrinus cassedayi*.
Actinocrinus cauliculus Hall = *Aorocrinus cauliculus*.
Actinocrinus chloris Hall = *Actinocrinites tenuisculptus*.
Actinocrinus christyi Hall = *Periechocrinites whitfieldi*.
Actinocrinus christyi Shumard = *Eutrochocrinus christyi*.
Actinocrinus clarus Hall = *Cactocrinus clarus*.
Actinocrinus clavigerus Hall = *Natocrinus mundulus*.
Actinocrinus clio Hall = *Eretmocrinus clio*.
Actinocrinus clivosus Hall = *Teleiocrinus rudis*.
Actinocrinus cloelia Hall = *Eretmocrinus cloelia*.
Actinocrinus clypeatus Hall = *Batocrinus clypeatus*.
Actinocrinus coelatus Hall = *Cactocrinus coelatus*.
Actinocrinus (*Amphoracrinus*) *concaus* Meek and Worthen = *Coelocrinus concaus*.
Actinocrinus concinnus Shumard = *Steganoocrinus concinnus*.
Actinocrinus copei S. A. Miller = *Physetocrinus copei*.
Actinocrinus corbulis Hall = *Eretmocrinus corbulis*.
Actinocrinus coreyi Lyon and Casseday = *Agaricocrinus coreyi*.
Actinocrinus corniculum Hall = *Agaricocrinus brevis*.
Actinocrinus cornigerus Hall = *Dorycrinus cornigerus*.
Actinocrinus cornigerus Lyon and Casseday = *Gennaeocrinus kentuckiensis*.
Actinocrinus coronatus Hall = *Eretmocrinus coronatus*.
Actinocrinus costatus Eichwald.
 Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, no. 5, p. 118, 1856; Leth. Russie, 1, p. 606, pl. 33, figs. 14 a-e, 1860 (stems only).
 Ord. (*Orthoceras* ls.): Pulkowa, Russia.
Actinocrinus costus McCoy = *Physetocrinus costus*.
Actinocrinus dalyanus S. A. Miller = *Cactocrinus proboscidualis*.

- Actinocrinus decornis* S. A. Miller = *Dorycrinus cornigerus*.
Actinocrinus delicatus Meek and Worthen = *Teleiocrinus umbrosus*.
Actinocrinus (*Megistocrinus*) *depressus* Hall = *Megistocrinus depressus*.
Actinocrinus desideratus Hall = *Dorycrinus missouriensis*.
Actinocrinus discoideus Hall = *Batocrinus subaequalis*.
Actinocrinus divaricatus Hall = *Dorycrinus cornigerus*.
Actinocrinus divergens Hall = *Amphoracrinus divergens*.
Actinocrinus dodecadactylus Meek and Worthen = *Dizygocrinus dodecadactylus*.
Actinocrinus doris Hall = *Batocrinus aequalis*.
Actinocrinus eris Hall and Whitfield = *Aorocrinus helice*.
Actinocrinus (*Calathocrinus*) *erodus* Hall = *Teleiocrinus rudis*.
Actinocrinus eryx Hall = *Cactocrinus glans*.
Actinocrinus eucharis Hall = *Gennaeocrinus eucharis*.
Actinocrinus (*Alloprosalloocrinus*) *euconus* Meek and Worthen = *Dizygocrinus euconus*.
Actinocrinus evansii Owen and Shumard = *Megistocrinus evansii*.
Actinocrinus excerptus Hall = *Cactocrinus excerptus*.
Actinocrinus fiscellus Hall = *Agaricocrinus fiscellus*.
Actinocrinus formosus Hall = *Batocrinus formosus*.
Actinocrinus fossatus S. A. Miller = *Cactocrinus fossatus*.
Actinocrinus fosteri McChesney = *Cactocrinus fosteri*.
Actinocrinus gemmiformis Hall = *Macrocrinus gemmiformis*.
Actinocrinus (*Agaricocrinus*) *geometricus* Hall = *Agaricocrinus stellatus*.
Actinocrinus gilbertsoni S. A. Miller = *Amphoracrinus gilbertsoni*.
Actinocrinus gilbertsoni de Koninck and Lehon = *Actinocrinites stellaris*.
Actinocrinus glans Hall = *Cactocrinus glans*.
Actinocrinus globosus Phillips = *Megistocrinus globosus*.
Actinocrinus glyptus Hall = *Strotocrinus glyptus*.
Actinocrinus gouldi Hall = *Dorycrinus gouldi*.
Actinocrinus grandis Miller and Gurley = *Actinocrinites multiramus*.
Actinocrinus hageri McChesney = *Uperocrinus hageri*.
Actinocrinus helice Hall = *Aorocrinus helice*.
Actinocrinus helice eris Hall = *Aorocrinus helice*.
Actinocrinus hurdianus McChesney = *Cactocrinus hurdianus*.
Actinocrinus indianensis Lyon and Casseday = *Dizygocrinus indianensis*.
Actinocrinus inflatus Hall = *Amphoracrinus spinobrachiatus*.
Actinocrinus infrequens Hall = *Cactocrinus thalia*.
Actinocrinus inornatus Hall = *Batocrinus clypeatus*.
Actinocrinus (*Calathocrinus*) *inseulptus* Hall = *Teleiocrinus rudis*.
Actinocrinus interradiatus Angelin = *Periechocrinites lindströmi*.
Actinocrinus jessieae Miller and Gurley.
 Miller and Gurley, Ill. St. Mus., Bull. 8, p. 32, pl. 2, figs. 15, 16, 1896. (Probably a Burlington *Cactocrinus*.)
 Miss. (Chouteau ls.): Sedalia, Mo.

- Actinocrinus kentuckiensis* Shumard = *Genneocrinus kentuckiensis*.
Actinocrinus konincki Shumard = *Macrocrinus konincki*.
Actinocrinus lagena Hall = *Cactocrinus proboscidualis*.
Actinocrinus lagunculus Hall = *Macrocrinus lagunculus*.
Actinocrinus (*Megistocrinus*) *latus* Hall = *Megistocrinus latus*.
Actinocrinus laura Hall = *Batocrinus laura*.
Actinocrinus lepidus Hall = *Batocrinus lepidus*.
Actinocrinus leucosia Hall = *Eretmocrinus leucosia*.
Actinocrinus limabrachiatus Hall = *Cactocrinus limabrachiatus*.
Actinocrinus liratus Hall = *Teleiocrinus liratus*.
Actinocrinus lobatus Worthen = *Actinocrinites augustatus*.
Actinocrinus locellus Hall = *Cactocrinus reticulatus*.
Actinocrinus longidigitatus Angelin = *Periechocrinites longidigitatus*.
Actinocrinus longimanus Angelin = *Periechocrinites longimanus*.
Actinocrinus longirostris Hall = *Uperocrinus longirostris*.
Actinocrinus lucina Hall = *Cactocrinus lucina*.
Actinocrinus magnificus Lyon and Casseday = *Eretmocrinus magnificus*.
Actinocrinus matuta Hall = *Eretmocrinus matuta*.
Actinocrinus matuta attenuata Hall = *Eretmocrinus attenuatus*.
Actinocrinus medius Angelin = *Dimerocrinites medius*.
Actinocrinus meeki Lyon = *Macrostylocrinus meeki*.
Actinocrinus minor Hall = *Megistocrinus evansii*.
Actinocrinus mississippiensis spiniger Hall = *Dorycrinus mississippiensis*.
Actinocrinus missouriensis Shumard = *Dorycrinus missouriensis*.
Actinocrinus multibrachiatus Hall = *Cactocrinus multibrachiatus*.
Actinocrinus multibrachiatus echinatus Hall = *Cactocrinus multibrachiatus*.
Actinocrinus multicornis Lyon = *Centriocrinus pentaspinus*.
Actinocrinus mundulus Hall = *Batocrinus mundulus*.
Actinocrinus nashvillae subtractus White = *Uperocrinus nashvillae subtractus*.
Actinocrinus nodiger Eichwald = *Hexacrinites nodiger*.
Actinocrinus nodobrachiatus Wachsmuth and Springer = *Cactocrinus nodobrachiatus*.
Actinocrinus nodosus S. A. Miller = *Cactocrinus thalia*.
Actinocrinus nubilus Angelin = *Periechocrinites nubilus*.
Actinocrinus nyssa Hall = *Genneocrinus nyssa*.
Actinocrinus obesus Keyes = *Cactocrinus obesus*.
Actinocrinus oblatum Hall = *Dizygocrinus rotundus*.
Actinocrinus obpyramidalis Winchell and Marcy = *Melocrinites obpyramidalis*.
Actinocrinus (*Amphoraerinus*?) *olla* McCoy = *Actinocrinites olla*.
Actinocrinus (*Megistocrinus*) *olliculus* Hall = *Periechocrinites whitei*.
Actinocrinus (*Megistocrinus*) *ontario* Hall = *Megistocrinus ontario*.
Actinocrinus opusculus Hall = *Cactocrinus opusculus*.
Actinocrinus ornatissimus Wachsmuth and Springer = (in part) *Cactocrinus arnoldi*;
(in part) *C. ornatissimus*.
Actinocrinus ornatus Hall = *Physetocrinus ornatus*.

- Actinocrinus ovatus* Hall = *Cactocrinus reticulatus ovatus*.
Actinocrinus papillatus Hall = *Batocrinus clypeatus*.
Actinocrinus parvus Shumard = *Aorocrinus parvus*.
Actinocrinus pendens Hall = *Dorycrinus unicornis*.
Actinocrinus pentactis Quenstedt.
 Quenstedt, *Handb. Petref.*, ed. 2, pl. 71, figs. 22a, b, 1867; ed. 3, p. 957, pl. 77, fig. 5, 1885; *Petref. Deutsch.*, 4, p. 610, pl. 111, fig. 32, 1876. (Some undeterminable *Dolatocrinus*).
 Dev.: Falls of the Ohio.
Actinocrinus pentagonus Hall = *Steganocrinus pentagonus*.
Actinocrinus (*Agaricocrinus*) *pentagonus convexus* Hall = *Agaricocrinus convexus*.
Actinocrinus pentaspinus Lyon = *Centriocrinus pentaspinus*.
Actinocrinus perumbrosus Hall = *Strotocrinus perumbrosus*.
Actinocrinus (*Uperocrinus*) *pistilliformis* Meek and Worthen = *Uperocrinus pyri-formis*.
Actinocrinus pistillus Meek and Worthen = *Batocrinus pistillus*.
Actinocrinus planobasalis Hall = *Amphoracrinus divergens*.
Actinocrinus planodiscus Hall = *Eutrochocrinus planodiscus*.
Actinocrinus plumosus Hall = *Glyptocrinus plumosus*.
Actinocrinus pocillum Hall = *Megistocrinus depressus*.
Actinocrinus praecursor Hall = *Aorocrinus praecursor*.
Actinocrinus proboscidualis Hall = *Cactocrinus proboscidualis*.
Actinocrinus prūmiensis Zeiler and Wirtgen = *Periechocrinites prūmiensis*.
Actinocrinus prūmiensis geometricus Schultze = *Periechocrinites prūmiensis geometricus*.
Actinocrinus pulcher Salter = *Periechocrinites pulcher*.
Actinocrinus punctatus Eichwald = *Ctenocrinus punctatus*.
Actinocrinus puteatus Rowley and Hare = *Cactocrinus lucina*.
Actinocrinus pyramidatus Hall = *Agaricocrinus pyramidatus*.
Actinocrinus pyriformis Shumard = *Uperocrinus pyriformis*.
Actinocrinus pyriformis rudis Meek and Worthen = *Uperocrinus pyriformis*.
Actinocrinus quadrispinus White = *Amphoracrinus divergens*.
Actinocrinus quaternarius Hall = *Cactocrinus proboscidualis*.
Actinocrinus quaternarius spiniferus Hall = *Cactocrinus proboscidualis*.
Actinocrinus quinquelobus Hall = *Dorycrinus quinquelobus*.
Actinocrinus ramulosus Hall = *Eretmocrinus ramulosus*.
Actinocrinus regalis Hall = *Strotocrinus regalis*.
Actinocrinus remibrachiatus Hall = *Eretmocrinus remibrachiatus*.
Actinocrinus reticulatus Hall = *Cactocrinus reticulatus*.
Actinocrinus rotundus Yandell and Shumard = *Dizygoocrinus rotundus*.
Actinocrinus rudis Hall = *Teleiocrinus rudis*.
Actinocrinus rugosus Billings.
 Billings, *Geol. Surv. Canada, Can. Org. Rem.*, dec. 3, p. 26, text figs. 7, 8, 1858).
 (Based on sketches of some undetermined camerate.)
Actinocrinus rugosus Trenkner = *Melocrinites heiroglyphicus*.

- Actinocrinus* (*Amphoracrinus*) *rugosus* Rofe = *Amphoracrinus rugosus*.
Actinocrinus rusticus Hall = *Actinocrinites scitulus*.
Actinocrinus schultzi Angelin = *Periechocrinites schultzi*.
Actinocrinus scilutus Meek and Worthen = *Actinocrinites scitulus*.
Actinocrinus sculptus Hall = *Steganocrinus sculptus*.
Actinocrinus securus Hall = *Cactocrinus thetis*.
Actinocrinus sedaliensis S. A. Miller.
 Miller, 18th Rep. Geol. Surv. Ind., p. 270, pl. 3, figs. 11-3, 1894 (adv. pub., 1892).
 (Probably some Burlington *Teleocrinus*.)
 Miss. (Chouteau ls.): Sedalia, Mo.
Actinocrinus (*Saccoocrinus*) *semiradiatus* Hall = ?*Macrostylocrinus semi-radiatus*.
Actinocrinus senarius Hall = *Physetocrinus ornatus*.
Actinocrinus sexarmatus Hall = *Cactocrinus sexarmatus*.
Actinocrinus sexarmatus Hall = *Cactocrinus extensus*.
Actinocrinus sillimani Meek and Worthen = *Actinocrinites scitulus*.
Actinocrinus similis Hall = *Batocrinus mundulus*.
Actinocrinus simplex Phillips = *Carpocrinus simplex*.
Actinocrinus sinuosus Hall = *Batocrinus laura sinuosus*.
Actinocrinus speciosus Meek and Worthen = *Strotocrinus regalis*.
Actinocrinus spinobrachiatus Hall = *Amphoracrinus spinobrachiatus*.
Actinocrinus spinulosus Hall = *Aorocrinus spinulosus*.
Actinocrinus spinotentaculus Hall = *Cactocrinus coelatus spinotentaculus*.
Actinocrinus (*Agaricocrinus*) *stellatus* Hall = *Agaricocrinus stellatus*.
Actinocrinus steropes Hall = *Batocrinus steropes*.
Actinocrinus striatus Münster = *Melocrinites striatus*.
Actinocrinus subaculeatus Hall = *Aorocrinus subaculeatus*.
Actinocrinus subaequalis McChesney = *Batocrinus subaequalis*.
Actinocrinus subrotundus Hall.
 Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., pl. 2, fig. 4, 1860. (Diagram only.)
 Horizon and locality not known.
Actinocrinus (*Amphoracrinus*) *subturbinatus* Meek and Worthen = *Dorycrinus sub-*
turbinatus.
Actinocrinus subumbrosus Hall = *Teleocrinus liratus*.
Actinocrinus subventricosus McChesney = *Physetocrinus subventricosus*.
Actinocrinus superlatus Hall = *Megistocrinus evansii*.
Actinocrinus symmetricus Hall = *Aorocrinus parvus*.
Actinocrinus tenuidiscus Hall = *Periechocrinites tenuidiscus*.
Actinocrinus tenuiradiatus Hall 1847 = *Palaeocystites tenuiradiatus* (cystid).
Actinocrinus tenuiradiatus Hall, 1861 = *Teleocrinus tenuiradiatus*.
Actinocrinus tessacontadactylus Hisinger = *Carpocrinus simplex*.
Actinocrinus thalia Hall = *Cactocrinus thalia*.
Actinocrinus themis Hall = *Cactocrinus proboscidiialis*.
Actinocrinus thetis Hall = *Cactocrinus thetis*.
Actinocrinus thoas Hall = *Cactocrinus reticulatus*.

- Actinocrinus tholus* Hall = *Cactocrinus glans*.
Actinocrinus tricornis Hall = *Dorycrinus unicornis*.
Actinocrinus trinodus Hall = *Dorycrinus unispinus*.
Actinocrinus turbinatus Hall = *Batocrinus turbinatus*.
Actinocrinus turbinatus elegans Hall = *Batocrinus turbinatus elegans*.
Actinocrinus unicornis Owen and Shumard = *Dorycrinus unicornis*.
Actinocrinus unispina Hall = *Dorycrinus unispinus*.
Actinocrinus urnaeformis McChesney = *Macrocrinus konincki*.
Actinocrinus validus Meek and Worthen = *Steganocrinus concinnus*.
Actinocrinus ventricosus Hall = *Physetocrinus ventricosus*.
Actinocrinus ventricosus cancellatus Hall = *Physetocrinus ventricosus*.
Actinocrinus ventricosus internodius Hall = *Physetocrinus ventricosus*.
Actinocrinus ventricosus reticulatus Hall = *Physetocrinus ventricosus*.
Actinocrinus verneuillianus Shumard = *Macrocrinus verneuillianus*.
Actinocrinus viminalis Hall = *Amphocrinus viminalis*.
Actinocrinus wachsmuthi White, 1862 = *Actinocrinites scitulus*.
Actinocrinus wachsmuthi White, 1880 = *Batocrinus grandis*.
Actinocrinus waldronensis Shumard = *Periechocrinites whitfieldi*.
Actinocrinus (*Megistocrinus*) *whitei* Hall = (in part) *Periechocrinites whitei*; (in part) *Cactocrinus glans*.
Actinocrinus (*Saccocrinus*) *whitfieldi* Hall = *Periechocrinites whitfieldi*.
- Actinocrinus wynnei* Baily.**
 Baily, Mem. Geol. Surv. Ireland, p. 11, figs. 1 a-i, 1860.
 Ord. (Upper Llandeilo): Reafadda, etc., Ireland.
- Actinocrinus yandelli* Shumard = *Eretmocrinus yandelli*.
- Adelocrinus* Phillips.** Genotype: *A. hystrix* Phillips.
 Phillips, Pal. Foss. Cornwall, p. 30, 1831.—Whidborne, Mon. Dev. Fauna S. England, III, Pal. Soc., p. 223, 1898.—Bather, Treatise Zool. (Lankester), pt. 3, p. 201, 1900. (Founded on fragments of columns.)
- Adelocrinus hystrix* Phillips.**
 Phillips, Pal. Foss. Cornwall, p. 30, pl. 16, fig. 42, 1841.—Whidborne, Mon. Dev. Fauna S. England, 3, pt. 3, p. 224, pl. 30, figs. 1-7a, 1898.—Drevermann, Zeits. Deutsch. Geol. Gesell., 54, p. 518, pl. 14, figs. 23, 23a, 1902.
- Arthroacantha hystrix* Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 122, p. 19, 1930.
- Perischodomus magnus* Tornquist, Mt. Geol. Landesanst. Elsass, 4, p. 103, 1894.—Bather, Treatise Zool. (Lankester), pt. 3, p. 203, 1900.
- Low. Carb.: Brushford, Braunton, N. Devon, England (Pilton beds); Ratingen and Elsass, Germany.
- Adinocrinus* Kirk.** Genotype: *Zeacrinus nodosus* Wachsmuth and Springer.
 Poteriocrinitidae (Inadunata-Fistulata). Miss., Penn.
 Kirk, Jour. Washington Acad. Sci., 28, p. 161, 1938.
- Adinocrinus compactilis* (Worthen).**
Poteriocrinites (*Zeacrinus*) *compactilis* Worthen, in Meek and Worthen, Geol. Surv. Ill., 5, p. 536, pl. 21, fig. 5, 1873.
- Adinocrinus compactilis* Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 161, 1938. Miss. (Keokuk ls.): Cumberland Co., Ky.

Adinocrinus nodosus (Wachsmuth and Springer).

Zeacrinus nodosus Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, pl. 6, fig. 9; pl. 9, fig. 3, 1885; sec. 2, p. 243, 1886.

Adinocrinus nodosus Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 162, 1938. Miss. (Ft. Payne ch.): Whites Creek Springs, Tenn.

Adinocrinus pentagonus (Miller and Gurley).

Hydreionocrinus pentagonus Miller and Gurley, Jour. Cincinnati Soc. Nat. Hist., 13, pl. 17, pl. 2, figs. 6, 7; 16th Rep. Geol. Nat. Res. Ind., p. 339, pl. 2, figs. 6, 7 (authors ed., p. 17), 1890.

Adinocrinus pentagonus Moore and Plummer, Univ. Texas Pub. no. 3945, pp. 71, 240, 1940.

Penn. (Missouri series): Kansas City, Mo.

Aesiocrinus Miller and Gurley. Genotype: *A. magnificus* Miller and Gurley. Poteriocrinitidae (Inadunata-Fistulata). Penn.

Miller and Gurley, Jour. Cincinnati Soc. Nat. Hist., 13, p. 14; 16th Rep. Geol. Nat. Res. Ind., p. 337, 1890.—Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 304, 1938.—Moore, Denison Univ. Bull., Jour. Sci. Lab., 39, p. 250, 1939.—Moore and Plummer, Texas Univ. Pub. No. 3945, p. 385, 1940.

Moundocrinus Strimple, Bull. Amer. Pal., 24, no. 87, p. 9 (369), 1939. (Genotype: *M. osagensis* Strimple.)

Pentadelocrinus Strimple, Bull. Amer. Pal., 24, no. 87, p. 11 (371), 1939. (Genotype: *P. typus* Strimple.)

Phialocrinus Trautschold, Trudy Sjesda Russ. Est., 2, p. 7, 1869 (as *Phyalocrinus*); Mon. Kalkbr. v. Mjatsch., p. 122, 1879; N. Mem. Soc. Moscou, 14, p. 24, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 124 (347), 1880.—Bather, Ann. Mag. Nat. Hist., (6) 5, pp. 332, 374, 1890; Treatise Zool. (Lankester), pt. 3, p. 181, 1900. (Genotype: *P. patens* Trautschold.)

Aesiocrinus angulatus Miller and Gurley = *Stellarocrinus angulatus*.

Aesiocrinus barydactylus (Keyes).

Phialocrinus barydactylus Keyes, Geol. Surv. Mo., 4, p. 220, pl. 28, fig. 1, 1894.

Aesiocrinus barydactylus Moore and Plummer, Univ. Texas Pub. no. 3945, p. 387, pl. 14, fig. 7, text fig. 77, 1940.

Penn.: Kansas City, Mo. (Lane sh.); $5\frac{1}{2}$ miles north-northwest Mineral Wells, Tex. (Mineral Wells fm.); northwest side Kyle Mtn., Palo Pinto Co., Tex. (Graford fm.).

Aesiocrinus basilicus Miller and Gurley.

Miller and Gurley, 16th Rep. Geol. Nat. Res. Ind., p. 369, pl. 9, figs. 4-6, 1890 (authors ed., p. 53).

Phialocrinus basilicus (*basiliscus*) Keyes, Geol. Surv. Mo., 4, p. 280, 1894.

Penn. (Missouri ser.-Lane sh.): Kansas City, Mo.

Aesiocrinus dilatatus Moore.

Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 252, pl. 5, figs. 9 a-c, 10a, b, text figs. 23 a-l, 1939.

Penn. (Brownville ls.): 5 miles west of Strohm, Okla.

Aesiocrinus harii Miller and Gurley.

Miller and Gurley, Jour. Cincinnati Soc. Nat. Hist., 13, p. 16, pl. 3, fig. 1; 16th Rep. Geol. Nat. Res. Ind., p. 338, pl. 3, fig. 1, 1890 (authors' ed., p. 16).

Phialocrinus harii Keyes, Geol. Surv. Mo., 4, p. 219, pl. 29, fig. 1, 1894.

Penn. (Missouri ser.-Lane sh.): Kansas City, Mo.

Aesiocrinus lykinsi Butts.

Butts, The Naturalist (Kansas City), 4, p. 10, fig., 1890 (type lost, ?recognizable).

Penn. (Missouri ser.-Lane sh.): Kansas City, Mo.

Aesiocrinus magnificus Miller and Gurley.

Miller and Gurley, Jour. Cincinnati Soc. Nat. Hist., 13, p. 15, pl. 2, figs. 1-5; 16th Rep. Geol. Nat. Res. Ind., p. 337, pl. 2, figs. 1-5, (authors ed., p. 15), 1890.

Phialocrinus magnificus Keyes, Geol. Surv. Mo., 4, p. 220, pl. 28, fig. 4, 1894.

Penn. (Missouri ser.-Lane sh.): Kansas City, Mo.

Aesiocrinus osagensis (Strimple).

Moundocrinus osagensis Strimple, Bull. Amer. Pal., 24, no. 87, p. 10 (370), pl. 1, figs. 5, 6, 10, 1939.

Penn. (Stanton ls.): Mound just west of Bartlesville, Okla.

Aesiocrinus patens (Trautschold).

Phialocrinus patens Trautschold, Trudy Sjesda Russ. Est., 2, p. 7 (as *Phyalocrinus patens*), 1869; Mon. Kalkbr. Mjatschk., p. 123, 1879.

Low. Carb. (Moscovian): Near Moscow, Russia.

Aesiocrinus twinensis (Strimple).

Pentadelocrinus twinensis Strimple, Bull. Amer. Pal., 25, no. 92, p. 8 (106), pl. 1 (9), figs. 7, 9, 10, 1939.

Penn. (Ochelata gr.): "Twin Mounds", 5 miles southeast Ochelata, Okla.

Aesiocrinus typus (Strimple).

Pentadelocrinus typus Strimple, Bull. Amer. Pal., 24, no. 87, p. 11 (371), pl. 1 (9), figs. 7-9, 1939.

Penn. (Stanton ls.): 3 miles west Ramona, Okla.

Agariococrinites Troost = *Agaricocrinus*.

Agariococrinites tuberosus Troost = (part) *Agaricocrinus americanus tuberosus*; (part) *A. arcula*; (part) *A. attenuata*; (part) *A. crassus*; (part) *A. ponderosus*.

Agaricocrinus Hall. Genotype: *Amphoracrinus americanus* Roemer.

Batocrinidae (Camerata). Miss.

Hall, Geol. Surv. Iowa, 1, pt. 2, pp. 525, 560, 562, 1858.—Shumard, Trans. Acad. Sci. St. Louis, p. 350, 1866.—Meek and Worthen, Geol. Surv. Ill., 2, p. 210, 1866.—Zittel, Handb. Pal., 1, p. 371, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, pp. 109, 228 (283, 402), 1881.—Miller and Gurley, Ill. St. Mus. Nat. Hist., Bull. 12, p. 9, 1897.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 486, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 167, 1900.—Wood, U. S. Nat. Mus., Bull. 64, p. 57, 1909.—Springer, Zittel-Eastman Textb. Pal., 1, p. 196, 1913.

Agariococrinites Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849 (as *Agaricocrinites*); Proc. Amer. Assoc. Adv. Sci., 20, p. 60, 1850. (Genotype: *A. tuberosus* Troost.)

Agaricocrinus adamsensis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 9, p. 24, pl. 1, figs. 7-9, 1896.

Miss. (Burlington ls.): Adams Co., Ill.

Agaricocrinus americanus (Roemer).

Amphoracrinus americanus Roemer, Bronn's Leth. Geogn., ed. 3, p. 250, pl. 4, figs. 15a, b, 1852-1854.

Agaricocrinus americanus Keyes, Geol. Surv. Mo., 4, p. 168, pl. 22, figs. 8a, b, 1894.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 488, pl. 42, figs. 1a, 2a, b, 1897.—Wood, U. S. Nat. Mus., Bull. 64, p. 58, pl. 5, fig. 9, 1909.

Agaricocrinus dissimilis S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 665, pl. 8, fig. 11, 1891.

Miss.: Whites Creek Springs, Tenn.; Allen, Barren, Metcalf, etc. Cos., Ky. (Ft. Payne ch.); Louisiana, Mo. (Up. Burlington ls.); Indian Creek, Ind.; Hamilton, Nauvoo, etc., Ill.; Clark Co., Mo.; Keokuk, Iowa (Keokuk ls.).

Agaricocrinus americanus tuberosus (Troost).

Agariococrinites tuberosus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Agaricocrinus tuberosus Hall, Geol. Iowa, 1, pt. 2, p. 617, pl. 16, figs. 2 a-c, text fig., 1858.

- Agaricocrinus americanus* var. *tuberosus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 489, pl. 39, figs. 3-5, 1897.
Miss.: Whites Creek Springs, Tenn. (Ft. Payne ch.); Keokuk, Iowa, Nauvoo, Ill. (Keokuk ls.).
- Agaricocrinus arcula** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 6, p. 30, pl. 3, figs. 7, 8, 1895.
Agaricocrinites tuberosus Troost (part), Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.
Miss. (Ft. Payne ch.): Whites Creek Springs, Tenn.; Barren Co., Ky.
- Agaricocrinus attenuatus** Wood.
Wood, U. S. Nat. Mus., Bull. 64, p. 61, pl. 14, figs. 3, 4, 1909.
Agaricocrinites tuberosus Troost (part), Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.
Miss. (Ft. Payne ch.): Whites Creek Springs, Tenn.
- Agaricocrinus bellatrema** (Hall).
Agaricocrinus (*Amphoracrinus*) *bellatrema* Hall, Jour. Boston Soc. Nat. Hist., 7, p. 281, 1861.
Agaricocrinus bellatrema Wachsmuth and Springer, N. Amer. Crin. Cam., p. 506, pl. 41, figs. 4 a-d, 1897.
Agaricocrinus ornotrema Hall, Descr. N. Sp. Crin., p. 3, 1861.—Whitfield, Mem. Amer. Mus. Nat. Hist., 1, p. 24, pl. 2, figs. 19, 22, 1893.
Miss. (Up. Burlington ls.): Burlington and Pleasant Grove, Iowa; Louisiana, Mo.
- Agaricocrinus bellatrema major** Wachsmuth and Springer.
Wachsmuth and Springer, N. Amer. Crin. Camerata, p. 507, pl. 41, fig. 5, 1897.
Miss. (Up. Burlington ls.): Burlington, Iowa; Louisiana, Mo.
- Agaricocrinus blairi** S. A. Miller.
S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 275, pl. 3, figs. 12-14, 1894 (Adv. pub., 1892).—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 78, pl. 29, figs. 1, 2, 1938.
Miss. (Chouteau ls.): Sedalia, Mo.
- Agaricocrinus brevis** (Hall).
Actinocrinus brevis Hall, Geol. Iowa, 1, pt. 2, p. 567, pl. 10, figs. 3a, b, 1858; Suppl., pl. 2, fig. 3, 1860.
Agaricocrinus brevis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 511, pl. 38, figs. 2 a-e, 1897.
Actinocrinus corniculum Hall, Geol. Iowa, 1, pt. 2, p. 566, pl. 10, figs. 1 a-c, 1858; Suppl., pl. 2, fig. 2, 1860.
Miss. (Low. Burlington ls.): Burlington, Iowa; Louisiana and Hannibal, Mo.
- Agaricocrinus bullatus** Hall.
Hall, Geol. Iowa, 1, pt. 2, p. 662, pl. 9, figs. 11a, b, 1858.—Wachsmuth and Springer, N. Amer. Crin. Cam., pp. 489, 493, pl. 41, figs. 2 a-d, 1897.
Agaricocrinus pentagonus Hall, Geol. Iowa, 1, pt. 2, Suppl., p. 57, text fig., 1860.—Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 1, p. 25, pl. 2, figs. 17, 18, 1893.—Keyes, Geol. Surv. Mo., 4, p. 167, pl. 22, fig. 9, 1894.
Miss. (Up. Burlington ls.): Quincy, Ill.; Burlington, Iowa; Eureka Springs, Ark.
- Agaricocrinus chouteauensis* S. A. Miller = *A. sampsoni*.
- Agaricocrinus conicus** Wachsmuth and Springer.
Wachsmuth and Springer, N. Amer. Crin. Cam., p. 501, pl. 39, figs. 7, 8, 1897.
Miss. (Keokuk ls.): Indian Creek, Ind.
- Agaricocrinus convexus** (Hall).
Actinocrinus (*Agaricocrinus*) *pentagonus* var. *convexus* Hall, Geol. Iowa, 1, pt. 2, Suppl., p. 58, 1860.

- Agaricocrinus pentagonus* var. *convexus* Hall, New York St. Mus., Bull. 1, pl. 4, figs. 4-17, 1872.
- Agaricocrinus convexus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 508, pl. 38, figs. 1a, b, 1897.
- Miss. (Up. Burlington ls.): Burlington, Iowa.
- Agaricocrinus coreyi** (Lyon and Casseday).
- Actinocrinus coreyi* Lyon and Casseday, Amer. Jour. Sci. and Arts, (2) 29, p. 76, 1860.
- Agaricocrinus coreyi* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 510, pl. 39, figs. 1a, b, 1897.
- Agaricocrinus springeri* White, 11th Ann. Rep. Geol. Nat. Res. Ind., p. 363, pl. 40, figs. 2-4, 1882.
- Miss.: Hardin and Allen Cos., Ky.; Whites Creek Springs, Tenn. (Ft. Payne ch.); Washington Co., Ind. (Keokuk ls.).
- Agaricocrinus* (*Amphoracrinus*) *corrugatus* Hall = *Agaricocrinus pyramidatus*.
- Agaricocrinus crassus** Wetherby.
- Wetherby, Jour. Cincinnati Soc. Nat. Hist., 4, p. 178, pl. 5, figs. 1a, b, 1881.
- Agaricocrinites tuberosus* Troost (part), Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.
- Miss.: Whites Creek Springs, Tenn.; Allen, Barren, and Metcalf Cos., Ky. (Ft. Payne ch.); Keokuk, Iowa (Keokuk ls.).
- Agaricocrinus decornis* Rowley and Hare = *A. planoconvexus*.
- Agaricocrinus? depressus** (Casseday and Lyon).
- Alloprosallocrinus depressus* Casseday and Lyon, Proc. Amer. Acad. Arts and Sci., 5, p. 31, 1862.
- Agaricocrinus? depressus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 407, 1897.
- Miss. (Ft. Payne ch.): Clear Creek, Hardin Co., Ky.
- Agaricocrinus dissimilis* S. A. Miller = *A. americanus*.
- Agaricocrinus elegans** Wetherby.
- Wetherby, Jour. Cincinnati Soc. Nat. Hist., 4, p. 179, pl. 5, figs. 4, 4b, 1881.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 500, pl. 40, figs. 5a, b, 1897.
- Miss.: Whites Creek Springs, Tenn.; Allen, Barren, and Metcalf Cos., Ky. (Ft. Payne ch.); Hamilton etc., Ill. and Keokuk, Iowa (Keokuk ls.).
- Agaricocrinus excavatus** (Hall).
- Agaricocrinus* (*Amphoracrinus*) *excavatus* Hall, Jour. Boston Soc. Nat. Hist., 7, p. 282, 1861.
- Agaricocrinus excavatus* Whitfield, Mem. Amer. Mus. Nat. Hist., 1, p. 26, pl. 2, figs. 14, 16, 1893.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 491, pl. 39, figs. 3-5, 1897.
- Miss.: Brush Creek, Flint River, and Burlington, Iowa; Sagetown, Ill. (Up. Burlington); Nauvoo, Ill. (Burlington-Keokuk transition).
- Agaricocrinus fiscellus** (Hall).
- Actinocrinus fiscellus* Hall, Jour. Boston Soc. Nat. Hist., 7, p. 272, 1861.
- Agaricocrinus fiscellus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 512, pl. 38, figs. 3 a-c, 1897.
- Miss. (Low. Burlington ls.): Burlington, Iowa.
- Agaricocrinus germanus* S. A. Miller = *A. sampsoni*.
- Agaricocrinus gorbyi* S. A. Miller = *A. splendens*.
- Agaricocrinus gracilis** Meek and Worthen.
- Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 135, 1861.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 513, pl. 41, figs. 3a, b, c, 1897.
- Miss. (Up. Burlington ls.): Burlington, Iowa.

Agaricocrinus hodgsoni Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 8, p. 23, pl. 1, figs. 17-20, 1896.

Miss. (Up. Burlington ls.): Adams Co., Ill.

Agaricocrinus illinoisensis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 8, p. 25, pl. 1, figs. 21-23, 1896.

Miss. (Up. Burlington ls.): Adams Co., Ill.; Burlington, Iowa.

Agaricocrinus indianensis S. A. Miller = *A. splendens*.

Agaricocrinus inflatus (Hall).

Agaricocrinus (Amphoracrinus) inflatus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 284, 1861.

Agaricocrinus inflatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 502, pl. 41, figs. 1 a-d, 1897.

Miss. (Burlington ls.): Burlington, Iowa (Upper); Sagetown, Ill., and Marion Co., Mo.

Agaricocrinus iowensis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 12, p. 5, pl. 1, figs. 1-3, 1897.

Miss. (Keokuk ls.): Keokuk, Iowa; Warsaw, Ill.; Clark Co., Mo.

Agaricocrinus jerseyensis (Worthen).

Amphoracrinus jerseyensis Worthen, Geol. Surv. Ill., 8, p. 96, pl. 14, figs. 8, 8a, 1890.

?*Agaricocrinus jerseyensis* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 587, 1897.

Miss. (Fern Glen ls.): Jersey Co., Ill.

Agaricocrinus keokukensis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 12, p. 7, pl. 1, figs. 4-6, 1897.

Miss. (Keokuk ls.): Keokuk, Iowa.

Agaricocrinus louisianensis Rowley.

Rowley, Amer. Geol., 25, p. 74, pl. 2, figs. 42-44, 1900.

Miss. (Low. Burlington ls.): Louisiana, Mo.

Agaricocrinus macadamsi Worthen = *A. nodulosus macadamsi*.

Agaricocrinus montgomeryensis Peck and Keyte.

Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 78, pl. 29, figs. 5, 6, 14, 1938.

Miss. (Chouteau ls.): Montgomery Co. and Browns Sta., Boone Co., Mo.

Agaricocrinus nodosus Meek and Worthen.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 187, 1860; Geol. Surv. Ill., 5, p. 397, pl. 10, fig. 7, 1873.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 489, 1897.

Miss. (Burlington ls.): Burlington, Iowa (Upper); Pleasant Grove, Iowa.

Agaricocrinus nodulosus Worthen.

Worthen, in Miller, N. Amer. Geol. Pal., p. 221, 1889; Geol. Surv. Ill., 8, p. 94, pl. 13, figs. 1-1a, 1890.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 497 pl. 40, fig. 2; pl. 43, figs. 7a, b, 1897.

Miss.: Keokuk, Iowa; Hamilton, etc., Ill.; Vermillion Co., and Canton, Ind.; Clark Co., Mo. (Keokuk ls.); Whites Creek Springs, Tenn. (Ft. Payne ch.).

Agaricocrinus nodulosus macadamsi (Worthen).

Agaricocrinus macadamsi Worthen, in Miller, N. Amer. Geol. Pal., p. 221, 1889; Geol. Surv. Ill., 8, p. 94, pl. 13, figs. 2, 2a, 1890.

Agaricocrinus nodulosus var. *macadamsi* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 498, pl. 39, fig. 6, 1897.

Miss. (Keokuk ls.): Jersey Co. and Hamilton, Ill.; Canton and Indian Creek, Ind.; Clark Co., Mo.; Keokuk, Iowa.

Agaricocrinus ornatrema Hall = *A. bellatrema*.

Agaricocrinus pentagonus Hall = *A. bullatus*.

Agaricocrinus pentagonus convexus Hall = *A. convexus*.

***Agaricocrinus planoconvexus* Hall.**

Agaricocrinus (Amphoracrinus) planoconvexus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 280, 1861.

Agaricocrinus planoconvexus Keyes, Geol. Surv. Mo., Bull. 4, p. 167, pl. 22, figs. 7a, b, 1894.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 503, pl. 38, figs. 6 a-c, 1897.

Agaricocrinus decornis Rowley and Hare, Kansas City Sci., 5, p. 117, pl. 3, fig. 10, 1891.

Miss.: Burlington, Iowa; Louisiana, Mo. (Low. and Up. Burlington); Sedalia, Mo. (Chouteau ls.).

***Agaricocrinus ponderosus* Wood.**

Wood, U. S. Nat. Mus., Bull. 64, p. 60, pl. 14, figs. 1, 2, 1909.

Agaricocrinites tuberosus Troost (part), Amer. Jour. Sci., (2) 8, p. 419, 1849.

Miss. (Ft. Payne ch.): Whites Creek Springs, Tenn.

***Agaricocrinus praecursor* Rowley.**

Rowley, Amer. Geol., 29, p. 303, pl. 18, figs. 1-5, 1902.—Weller, Bull. Geol. Soc. Amer., 20, p. 283, pl. 11, figs. 7-12, 1909.

Miss. (Fern Glen ls.): Fern Glen, St. Louis Co., Mo.

***Agaricocrinus profundus* Miller and Gurley.**

Miller and Gurley, Ill. St. Mus., Bull. 6, p. 26, pl. 3, figs. 1-3, 1895.—Miller, N. Amer. Geol. Pal., 2d App., p. 732, figs. 1285-1287, 1897.

Miss. (Ft. Payne ch.): Tennessee; Metcalf, Allen, and Barren Cos., Ky.

***Agaricocrinus pyramidatus* (Hall).**

Actinocrinus pyramidatus Hall, Geol. Surv. Iowa, 1, pt. 2, p. 565, 1858.

Agaricocrinus pyramidatus Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 1, p. 23, pl. 2, figs. 23-25, 1893.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 512, pl. 38, figs. 4, 5, 1897.

Agaricocrinus (Amphoracrinus) corrugatus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 283, 1861.

Agaricocrinus corrugatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 512, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa.

***Agaricocrinus sampsoni* S. A. Miller.**

S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 274, pl. 3, fig. 8, 1894 (adv. pub., 1892). N. Amer. Geol. Pal., 2d App., p. 733, fig. 1288, 1897.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 505, pl. 46, fig. 5, 1897.—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 76, pl. 29, figs. 3, 4, 7, 9, 1938.

Agaricocrinus chouteauensis S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 297, pl. 7, figs. 11-13, 1894 (adv. pub., 1892).

Agaricocrinus germanus S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 296, pl. 7, figs. 8-10, 1894 (adv. pub., 1892).

Miss. (Chouteau ls.): Chouteau Springs and Sedalia, Mo.

***Agaricocrinus splendens* Miller and Gurley.**

Miller and Gurley, Jour. Cincinnati Soc. Nat. Hist., 13, p. 18, pl. 4, figs. 1, 2, 1890; 16th Rep. Geol. Surv. Ind., p. 340, pl. 4, figs. 1, 2, 1890.—Miller, 17th Rep. Geol. Surv. Ind., p. 665, pl. 8, fig. 10, 1892 (adv. pub., 1891).—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 495, pl. 40, figs. 1 a-c, 1897.

Agaricocrinus gorbyi S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 664, pl. 8, fig. 9, 1892 (adv. pub., 1891).

Agaricocrinus indianensis S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 663, pl. 8, fig. 5, 1892 (adv. pub., 1891).

Miss. (Keokuk ls.): Crawfordsville, Indian Creek, Canton, etc., Ind.

Agaricocrinus springeri White = *A. coreyi*.

***Agaricocrinus stellatus* (Hall).**

Actinocrinus (Agaricocrinus)? stellatus Hall, Geol. Surv. Iowa, 1, pt. 2, p. 564, text fig. 79, 1858.

Agaricocrinus stellatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 508, pl. 38, figs. 7 a-e, 1897.

Actinocrinus (Agaricocrinus) geometricus Hall, Geol. Surv. Iowa, 1, pt. 2, Suppl., p. 56, text fig., 1860.

Miss. (Up. Burlington ls.): Quincy, Ill.; Burlington, Iowa.

***Agaricocrinus turgurium* Miller and Gurley.**

Miller and Gurley, Ill. St. Mus., Bull. 6, p. 28, pl. 3, figs. 4-6, 1895.—Miller, N. Amer. Geol. Pal., 2d App., p. 733, figs. 1289-1291, 1897.

Miss. (Ft. Payne ch.): Brown Co., Ky.

***Agaricocrinus whitfieldi* Hall.**

Hall, Geol. Iowa, 1, pt. 2, p. 621, 1858; Suppl., pl. 3, fig. 5, 1860.—Meek and Worthen, Geol. Surv. Ill., 5, p. 499, pl. 12, figs. 1a, b; pl. 15, fig. 8, 1873.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 496, pl. 42, fig. 3; pl. 43, figs. 8a, b, 1897.

Miss.: Green and Jersey Cos., Ill.; Clark Co., Mo.; Keokuk, Iowa (Keokuk ls.); Hardin Co., Ky. (Ft. Payne ch.).

***Agaricocrinus wortheni* Hall.**

Hall, Geol. Surv. Iowa, 1, pt. 2, p. 619, pl. 16, fig. 1, 1858.—Wachsmuth and Springer, N. Amer. Crin. Cam., pp. 488, 490, 493, pl. 3, fig. 22; pl. 39, fig. 9, 1897.

Ampboracrinus americanus Quenstedt (not Roemer), Handb. Petref., p. 742, pl. 71, fig. 20, 1867.

Miss.: Warsaw and Jersey Co., Ill., Clark Co., Mo., Keokuk, Iowa (Keokuk ls.); Blount Co., Ala. (Ft. Payne ch.); Spergen Hill, Ind. (Spergen ls.).

Agaricronites Troost. See *Agaricocrinus*.

Agassizocrinites Troost = *Agassizocrinus*.

Agassizocrinites dactyliformis Troost = *Agassizocrinus laevis*.

Agassizocrinites gracilis Troost = *Phacelocrinus gracilis*.

***Agassizocrinus* Owen and Shumard. Genotype: *A. conicus* Owen and Shumard. Poteriocrinitidae (Inadunata-Fistulata). Miss.-Permian.**

Owen and Shumard, Jour. Acad. Nat. Sci. Phila., p. 93, 1852; Geol. Rep. Iowa, Wis. and Minn., p. 597, 1852.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 262 (186), 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 103, 1900.—Wood, U. S. Nat. Mus., Bull. 64, p. 96, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 224, 1913.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped., 1916, pp. 178, 179, 1924.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, pp. 53, 61, 1926.—Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 250, 1938; Univ. Texas Pub. no. 3945, p. 334, 1940.—Kirk, Amer. Jour. Sci., 238, no. 1, p. 52, 1940.

Agassizocrinites Troost, Amer. Jour. Sci., (2) 8, p. 420, 1849; Proc. Amer. Assoc. Adv. Sci., p. 60, 1850 (nom. nud.). (Genotype: *A. dactyliformis* Troost.)

Astylocrinus Roemer, Bronn's Leth. Geogn., ed. 3, 1, pt. 2, p. 229, 1852-1854.—Dujardin and Hupe, Hist. Nat. Zooph. Echin., p. 150, 1862. (Genotype: *A. laevis* Roemer.)

***Agassizocrinus calyculus* Moore and Plummer.**

Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 253, pl. 14, fig. 8, text fig. 12, 1938.

Penn. (Brentwood ls.): Near Ft. Gibson, Okla.; U. S. Highway 71, opposite Woolsey, Ark.

Agassizocrinus carbonarius Worthen = ?*Paragassizocrinus carbonarius*.

Agassizocrinus chesterensis Worthen = *A. gibbosus*.

Agassizocrinus conicus Owen and Shumard.

Owen and Shumard, Jour. Acad. Nat. Sci. Phila., (2) 2, p. 93, pl. 11, fig. 6, 1852.—Owen, Rep. Geol. Surv. Wisconsin, Iowa and Minn., p. 597, pl. 5-B, fig. 6, 1852.—Meek and Worthen, Geol. Surv. Ill., 5, p. 557, pl. 21, fig. 8, 1873.—Butts, Kentucky Geol. Surv., p. 80, pl. 21, figs. 27-29, 1917; Geol. Surv. Alabama, Spec. Rep. no. 14, p. 180, pl. 59, figs. 5, 6, 1926.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, pp. 53, 59, 63, pl. 15, figs. 1-4, 1926.

Miss. (Chester): Chester, Ill. (Okaw fm.); Pulaski Co., Ky. (Glen Dean ls.); Huntsville, Ala. (Gasper fm.).

Agassizocrinus constrictus Hall.

Hall, Geol. Surv. Iowa, 1, pt. 2, p. 687, pl. 25, fig. 10, text fig. 115, 1858.

Miss. (Chester-Okaw fm.): Chester, Ill.

Agassizocrinus dactyliformis Shumard and authors = *A. laevis*.

Agassizocrinus dissimilis Weller.

Weller, Geol. Surv. Ill., Bull. 41, p. 344, pl. 5, figs. 29, 30, 1920.

Miss. (Chester-Paint Creek fm.): 1½ mi. northwest Floraville, Ill.

Agassizocrinus gibbosus Hall.

Hall, Geol. Iowa, 1, pt. 2, p. 686, pl. 25, fig. 6, text fig. 114, 1858.—Worthen, Geol. Surv. Ill., 5, p. 558, pl. 21, fig. 11, 1873.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, pp. 53, 57, 63, pl. 15, figs. 8, 9, 1926.

Agassizocrinus chesterensis Worthen, Geol. Surv. Ill., 5, p. 558, pl. 21, fig. 9, 1873.

Miss. (Chester): Chester, Ill. (Okaw fm.); Breckinridge Co., Ky. (Gasper fm.).

Agassizocrinus globosus Worthen.

Worthen, in Meek and Worthen, Geol. Surv. Ill., 5, p. 557, pl. 21, fig. 12, 1873.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, pp. 54, 57, 63, pl. 15, fig. 14, 1926.

Cromyocrinus globosus Springer, Zittel-Eastman Textb. Pal., 1, p. 224, fig. 326, 1913 (*globulus* by error).

Miss. (Chester): Chester, Ill. (Okaw fm.); Breckinridge Co. and Bowling Green, Ky. (Gasper fm.).

Agassizocrinus hemisphericus Worthen = *A. papillatus*.

Agassizocrinus inequidactylus Springer = *Anartiocrinus lyoni*.

Agassizocrinus laevis (Roemer).

Astylocrinus laevis Roemer, Bronn's Leth. Geogn., 1, pt. 2, p. 229, pl. 4, figs. 13 a-d, 1852-1854.

Agassizocrinus laevis Springer, U. S. Nat. Mus., Proc., 67, art. 9, pp. 53, 55, 63, pl. 15, figs. 5-7, 1926.

Agassizocrinites dactyliformis (*dactilyformis*) Troost, Amer. Jour. Sci., (2) 8, p. 419 (nom. nud.), 1849.

Agassizocrinus dactyliformis Shumard, Marcy's Red River Exped. Louisiana, App. E, p. 173, pl. 1, fig. 7, 1854.—Meek and Worthen, Geol. Surv. Ill., 5, p. 21, figs. 7a, b, 1873.—Wood, U. S. Nat. Mus., Bull. 64, p. 96, pl. 12, fig. 1, 1909.—Kirk, U. S. Nat. Mus., Proc., 41, p. 107, pl. 10, fig. 5, 1911.

Miss. (Chester): South of Belleville, Ill. (Okaw fm.); Pulaski, Livingston, and Marion Cos., Ky. (Glen Dean ls.); Near Huntsville, Ala. (Gasper fm.); Washington Co., Ark.

Agassizocrinus lobatus Springer.

Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 63, pl. 26, figs. 13-18, 1926.

Miss. (Chester-Gasper fm.): Huntsville, Ala.

Agassizocrinus magnus Moore and Plummer.

Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 251, pl. 16, fig. 5, text fig. 11, 1938; Univ. Texas Pub. no. 3945, pp. 342, 343, 1940.

Penn. (Kessler ls.): Hale Mt., 0.5 mi. south of Morrow, Ark.

Agassizocrinus mcguirei Strimple = *Paragassizocrinus mcguirei*.

Agassizocrinus ovalis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 9, p. 36, pl. 2, figs. 13, 14, 1896.—Miller, N. Amer. Geol. Pal., 2d App., p. 733, fig. 1292, 1897.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, pp. 54, 63, pl. 15, figs. 15-17, 1926.

Miss. (Chester): Randolph Co., Ill. (Paint Creek fm.); Breckinridge and Hardin Cos., Ky. (Gasper fm.).

Agassizocrinus papillatus Worthen.

Worthen, Ill. St. Mus., Bull. 1, p. 36, 1882; Geol. Surv. Ill., 7, p. 315, pl. 29, fig. 17, 1883.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, pp. 54, 57, 63, 1926.

Agassizocrinus hemisphericus Worthen, Ill. St. Mus., Bull. 1, p. 37, 1882; Geol. Surv. Ill., 7, p. 316, pl. 29, fig. 7, 1883.

Poteriocrinus occidentalis Owen and Shumard, Jour. Acad. Nat. Sci. Phila., (2) 2, p. 92, pl. 11, figs. 5a, b, 1852.—Owen, Rep. Geol. Surv. Wis., Iowa, Minn., p. 596, pl. 5-B, figs. 5a, b, 1852.

Miss. (Chester): Monroe, Chester, and Randolph Cos., Ill.

Agassizocrinus pentagonus Worthen.

Worthen, in Meek and Worthen, Geol. Surv. Ill., 5, p. 556, pl. 21, fig. 10, 1873.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, pp. 57, 63, 1926.

Miss. (Chester): Chester, Ill. (Paint Creek fm.); Huntsville, Ala. (Gasper fm.).

Agassizocrinus (?) striatiferus Yakovlev.

Yakovlev, Bull. Acad. Sci. URSS, pp. 909, 910, text fig. 1, pl. 1, fig. 3, 1930.

Permian: Sicily.

Agassizocrinus tarri Strimple = *Paragassizocrinus tarri*.

Agassizocrinus tumidus (Owen and Shumard).

Poteriocrinus tumidus Owen and Shumard, Jour. Acad. Nat. Sci. Phila., 2, p. 90, pl. 11, fig. 3, 1852.—Owen, Rep. Geol. Surv. Wis., Iowa, Minn., p. 595, pl. 5-B, figs. 3a, b, 1852.

Agassizocrinus tumidus Wachsmuth and Springer, Rev. Pal., pt. 3, p. 189 (265), 1886.

Miss. (Chester ls.): Chester, Ill.

Agriocrinus Jaekel = *Hapalocrinus*.

Agriocrinus frechi Opitz = *Imitatocrinus gracilior*.

Agriocrinus gracilior Jaekel = *Imitatocrinus gracilior*.

Agriocrinus inermis Klahn = *Thallocrinus procerus*.

Aidemocrinus J. M. Weller = *Kallimorphocrinus*.

Ainacrinus Wright. Genotype: *Synerocrinus? smithi* Wright.

Ichthyocrinidae (Flexibilia). Low. Carb.

Wright, Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 56, 1939.

Ainacrinus smithi (Wright).

Synerocrinus? smithi Wright, Geol. Mag., 71, p. 253, text figs. 25, 26, pl. 13, figs. 8, 14, 1934.

Ainacrinus smithi Wright, Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 56, pl. 11, figs. 9-11, 16, 17, text figs. 75-77, 1939.

Low. Carb. (Lower Ls. gr.): Auchenskeith, Ayrshire, Scotland.

Alcimocrinus Kirk. Genotype: *Zeacrinus girtyi* Springer.

Zeacrinitidae (Inadunata-Fistulata). Penn.

Kirk, Jour. Washington Acad. Sci., 28, p. 162, 1938.

Alcimocrinus girtyi (Springer).

Zeacrinus girtyi Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 83, text fig. 3, p. 84, pl. 23, figs. 9, 9a, 1926.—Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 268, text fig. 19, 1938.

Alcimocrinus girtyi Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 163, 1938.

Penn. (Morrow fm.): near Crittenden, northeastern Okla.

Alisocrinus Kirk. Genotype: *Mariacrinus warreni* Ringueberg.
Melocrinitidae (Camerata). Sil.

Kirk, Amer. Jour. Sci., 18, p. 343, 1929.

Alisocrinus aureatus (S. A. Miller).

Mariacrinus aureatus S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 644, pl. 6, fig. 36, 1892 (adv. pub., 1891).—Springer, Amer. Sil. Crin., p. 29, pl. 5, figs. 11, 11a, 1926.

Alisocrinus aureatus Kirk, Amer. Jour. Sci., 18, p. 345, 1929.

Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Alisocrinus carleyi (Hall).

Glyptocrinus carleyi Hall, Adv. Abstr. Not. N. Sp. Foss. Niagara Gr., p. 9, 1863; 28th Rep. N. Y. St. Mus., (Doc. ed., 1877, Mus. ed., 1879), p. 132, pl. 14, figs. 7-10, 1877.

Mariacrinus carleyi Hall, 11th Rep. Ind. Dep. Geol. Nat. Hist., p. 261, pl. 13, figs. 7-10; pl. 15, fig. 5, 1882.—Wachsmuth and Springer, N. Amer. Grin. Cam., p. 282, pl. 22, figs. 2 a-c, 1897.

Alisocrinus carleyi Kirk, Amer. Jour. Sci. 18, p. 344, 1929.

Sil. (Niagaran): Waldron, Ind., Hartsville, Vernon, and Newsom, Tenn. (Waldron sh.); St. Paul, Ind. (Laurel ls.).

Alisocrinus laevis Kirk.

Kirk, Amer. Jour. Sci., 18, p. 344, 1929.

Mariacrinus carleyi Springer, Amer. Sil. Crin., p. 29, pl. 5, figs. 9, 10, 1926.

Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Alisocrinus warreni (Ringueberg).

Mariacrinus warreni Ringueberg, Proc. Acad. Nat. Sci. Phila., p. 133, pl. 7, fig. 4, 1888.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 283, pl. 22, fig. 1, 1897.—Ehrenberg, Acta Zool., 3, p. 274, fig. 2, 1922.

Alisocrinus warreni Kirk, Amer. Jour. Sci., 18, p. 343, 1929.

Sil. (Niagaran-Rochester sh.): Lockport, N. Y.

Allagecrinus Carpenter and Etheridge. Genotype: *A. scoticus* Carpenter and Etheridge.

Allagecrinidae (Inadunata-Larviformis). Miss.-Permian.

Carpenter and Etheridge, Ann. Mag. Nat. Hist., (5) 7, p. 282, 1881.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 163 (87), 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 151, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 200, 1913.—Wanner, Neue Beitr. kennt. Perm. Echin. Timor, pp. 3-15, 1929; ibid. III, p. 22, 1930.—J. M. Weller, State Geol. Surv. Ill., Rep. Invest. no. 21, p. 8, 1930.—Moore, Denison Univ. Bull., 40, Jour. Sci. Lab., 35, p. 63, 1940.

Allagecrinus acutus Wanner = *Kallimorphocrinus acutus*.

Allagecrinus americanus Rowley = *Hybochilocrinus americanus*.

Allagecrinus austinii Carpenter and Etheridge (part) = *A. garpelensis*; *Kallimorphocrinus elongatus*; *K. scoticus*.

Allagecrinus austinii Carpenter and Etheridge.

Carpenter and Etheridge, Ann. Mag. Nat. Hist., 7, p. 289, pl. 15, figs. 1, 2, 4, 6 (not fig. 7a nor pl. 16), 1881.—Wright, Geol. Mag., 69, pp. 342, 355, 356, pl. 23, figs. 39, 40, pl. 24, text figs. 1-4, 1932; ibid. 70, p. 202, text figs. 13-15, p. 205, pl. 14, figs. 4-8, 10, 11, 1933; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 48, pl. 10, figs. 13-15, 19, 21, 1939.—Wright, Geol. Mag., 78, no. 4, p. 300, pl. 7, figs. 1, 7, 10, 15, 1941.

Low. Carb. (Low. Ls. gr.): Invertiel, Fife, and Carlups, Scotland.

Allagecrinus bassleri Strimple.

Strimple, A Group of Crinoids from the Pennsylvanian of Northwestern Oklahoma, p. 1, pl. 1, figs. 18-23, 1938.

- Allagecrinus* cf. *bassleri* Moore, Denison Univ. Bull., 40, Jour. Sci. Lab., 35, p. 106, text fig. 8 (as *A. wewokanus*); p. 126, pl. 2, figs. 7 a-c, text figs. 12 i-l, 1940. Penn.: Near Bartlesville (Plattsburg-Lansing fm.) and 6 mi. s.w. Okmulgee (Des Moines gr.-Wewoka fm.), Oklahoma.
- Allagecrinus biplex* Wright = *Wrightocrinus biplex*.
- Allagecrinus carpelensis* Wright (by error) = *A. garpelensis*.
- Allagecrinus carpenteri* Wachsmuth = *Allocatillocrinus carpenteri*.
- Allagecrinus constellatus** Moore.
Moore, Denison Univ. Bull. 40, Jour. Sci. Lab., 35, p. 120, pl. 2, figs. 1-4, pl. 3, fig. 4, text figs. 11m, n, 12 a-h, 1940.
Penn. (Oologah ls.): 7 miles northeast Tulsa, Okla.
- Allagecrinus dignatus** Moore.
Moore, Denison Univ. Bull. 40, Jour. Sci. Lab., 35, p. 116, pl. 2, figs. 5a, b, 6a, b, text figs. 11 i-l, 1940.
Penn. (Oologah ls.): 7 miles northeast Tulsa, Okla.
- Allagecrinus donetzensis* Yakovlev = *Kallimorphocrinus donetzensis*.
- Allagecrinus dux** Wanner.
Wanner, Neue Beitr. kennt. Perm. Echin. Timor, III, p. 23, pl. 2, figs. 10-15, 1930.
Permian: Basleo, Timor.
- Allagecrinus elongatus* Wright = *Kallimorphocrinus elongatus*.
- Allagecrinus excavatus* Wanner = *Kallimorphocrinus excavatus*.
- Allagecrinus garpelensis** Wright.
Wirhgt, Geol. Mag., 69, p. 346, text figs. 5-11, pl. 25, figs. 1-13, p. 356, 1932; *ibid.* 70, p. 206, pl. 14, figs. 9, 12, 1933; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 49, pl. 10, figs. 16-18, 20, 25, 28, 1939.
Allagecrinus austinii Carpenter and Etheridge, Ann. Mag. Nat. Hist., 7, pl. 15, fig. 7a, 1881.
Low. Carb. (Up. Ls. gr.): Garpel Water, Muirkirk, Ayrshire, Scotland.
- Allagecrinus indoaustralicus* Wanner = *Kallimorphocrinus indoaustralicus*.
- Allagecrinus inflatus* Wanner = *Kallimorphocrinus inflatus*.
- Allagecrinus jakovlevi* Wanner = *Wrightocrinus jakovlevi*.
- Allagecrinus multibrachiatus* Yakovlev = *Kallimorphocrinus multibrachiatus*.
- Allagecrinus ornatus* Wanner = *Kallimorphocrinus ornatus*.
- Allagecrinus pecki** Moore.
Moore, Denison Univ. Bull. 40, Jour. Sci. Lab., 35, p. 122, text figs. 13 a-n, 1940.
Penn. (Cherokee sh.): South of Hinkson Creek, etc., Boone Co., Mo.
- Allagecrinus procerus* Wanner = *Kallimorphocrinus procerus*.
- Allagecrinus quinquebrachiatus* Wanner = *Kallimorphocrinus quinquebrachiatus*.
- Allagecrinus quinquelobus* Wanner = *Kallimorphocrinus quinquelobus*.
- Allagecrinus rowleyi* Peck = *Hybochilocrinus rowleyi*.
- Allagecrinus scoticus* Wright = *Kallimorphocrinus scoticus*.
- Allagecrinus strimplei** Kirk.
Kirk, Jour. Washington Acad. Sci., 26, no. 4, pp. 162-165, text figs. 1-10, 1936.
Penn. (Dewey ls.): Near Dewey, Okla.
- Allagecrinus uralensis* Yakovlev = *Kallimorphocrinus uralensis*.
- Allagecrinus uralensis nodocarinatus* Yakovlev = *Kallimorphocrinus uralensis nodocarinatus*.
- Allagecrinus wewokanus* Moore. See *A. bassleri*.

Allagecrinus yakovlevi Wanner = *Wrightocrinus jakovlevi*.

Allocatillocrinus Wanner. Genotype: *Allagecrinus carpenteri* Wachsmuth.

Catillocrinidae (Inadunata-Fistulata). Miss.; Penn.

Wanner, Beitr. Geol. Nederl.-Ind., Abt. 4, pt. 2, pp. 109, 111, 1937.—Moore, Denison Univ. Bull., 40, Jour. Sci. Lab., 35, p. 87, 1940.

Allocatillocrinus carpenteri (Wachsmuth).

Allagecrinus carpenteri Wachsmuth, Ill. St. Mus., Bull. 1, p. 40, 1882.—Wachsmuth and Barris, Geol. Surv. Ill., 7, p. 341, pl. 29, fig. 14, 1883.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 78, pl. 8, fig. 11, 1897.

Catillocrinus carpenteri Springer, Smiths. Misc. Coll., 76, no. 3, p. 28, pl. 4, fig. 1, 1923.—Wright, Geol. Mag., 70, p. 196, text figs. 3, 6, 1938.

Allocatillocrinus carpenteri Wanner, Beitr. Geol. Nederl.-Ind., Abt. 4, pt. 2, p. 111, 1937.

Miss. (Chester): Burksville, Monroe Co., Ill. (Renault fm.); Huntsville, Ala. (Gasper fm.).

Allocatillocrinus morrowensis (Strimple).

Catillocrinus morrowensis Strimple, Bull. Amer. Pal., 25, no. 91, p. 92, pl. 8, figs. 7-10, 1940.

Allocatillocrinus morrowensis Moore, Denison Univ. Bull., 40, Jour. Sci. Lab., 35, p. 89, 1940.

Penn. (Morrow fm.): 6 miles southeast of Fittstown, Oklahoma.

Allocatillocrinus rotundus Moore.

Moore, Denison Univ. Bull. 40, Jour. Sci. Lab., 35, pp. 97, 127, pl. 2, fig. 8, pl. 3, fig. 1, text figs. 6 a-w, 14 a-f, 1940.

Penn. (Brentwood ls.): Greenleaf Lake, southeast of Braggs, and 2 miles north of Ft. Gibson, Oklahoma.

Allocatillocrinus rotundus multibrachiatus Moore.

Moore, Denison Univ. Bull. 40, Jour. Sci. Lab., 35, p. 132, pl. 3, figs. 2, 3, text fig. 14 e-j, 1940.

Penn. (Brentwood ls.): 2 miles north Ft. Gibson, and Greenleaf Lake, southeast of Braggs, Okla.

Allocatillocrinus scoticus (Wright).

Catillocrinus scoticus Wright, Geol. Mag., 70, pp. 194, 196, text figs. 1, 2, 4-7, pl. 13, figs. 1-3, 7, 8, 1933; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 52, pl. 10, figs. 22-24, text figs. 69-74, 1939.

Allocatillocrinus scoticus Wanner, Beitr. Geol. Nederl.-Ind., Abt. 4, pt. 2, pp. 111, 112, text fig. 27, 1937.

Low. Carb. (Low. Ls. gr.): Invertiel, Carlops, Scotland.

Allocrinus Wachsmuth and Springer. Genotype: *A. typus* Wachsmuth and Springer.

Patellocrinidae (Camerata). Sil.

Wachsmuth and Springer, in Miller, N. Amer. Geol. Pal., p. 222, 1889; Geol. Surv. Ill., 8, p. 206, 1890; N. Amer. Crin. Cam., p. 306, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 162, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 191, 1913; U. S. Nat. Mus., Bull. 115, p. 3, 1921; Amer. Sil. Crin., p. 30, 1926.

Allocrinus benedicti S. A. Miller.

S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 647, pl. 7, fig. 1, 1892 (adv. pub., 1891).—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 308, pl. 24, figs. 8a, b, 1897.—Springer, Amer. Sil. Crin., p. 31, pl. 6, figs. 11, 12, 1926.

Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Allocrinus longidactylus Springer.

Springer, Amer. Sil. Crin., p. 30, pl. 6, figs. 7-9, 1926.

Sil. (Niagaran-Beech River fm.): 2 miles north of Decaturville, Tenn.

***Allocrinus longidactylus magniradialis* Springer.**

Springer, Amer. Sil. Crin., pl. 6, fig. 10, 1926.

Sil. (Niagaran-Beech River fm.): 2 miles north of Decaturville, Tenn.

***Allocrinus ponderosus* Springer.**

Springer, Amer. Sil. Crin., p. 30, pl. 6, figs. 5, 6, 1926.

Sil. (Niagaran-Beech River fm.): $\frac{1}{2}$ mile west Dixon Spring, Decatur Co., Tenn.***Allocrinus typus* Wachsmuth and Springer.**

Wachsmuth and Springer, in Miller, N. Amer. Geol. Pal., p. 222, 1889; Geol. Surv. Ill., 8, p. 207, pl. 14, figs. 7, 7a, b, 1890; N. Amer. Crin. Cam., p. 307, pl. 24, figs. 7a, b, 1897.—Springer, Amer. Sil. Crin., p. 30, pl. 6, figs. 1-4, 1926.

Sil. (Niagaran-Beech River fm.): 2 miles north of Decaturville, etc., Tenn.

***Alloprosallocrinus* Casseday and Lyon. Genotype: *A. conicus* Casseday and Lyon. Batocrinidae (Camerata). Miss.**

Casseday and Lyon, Proc. Amer. Acad. Arts and Sci. (May 29, 1860), 5, p. 29, 1862.—Meek and Worthen, Geol. Surv. Ill., 5, p. 367, 1873.—Zittel, Handb. Pal., 1, p. 370, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 113 (328), 1881.—Bather, Treatise Zool. (Lankester), pt. 3, p. 167, 1900.—Wood, U. S. Nat. Mus., Bull. 64, p. 60, 1909.—Springer, Zittel-Eastman Textb. Pal., 1, p. 195, 1913.

Conocrinites Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849; Proc. Amer. Assoc. Adv. Sci., 2, p. 60, 1850 (nom. nud.).—Wood, U. S. Nat. Mus., Bull. 64, p. 60, 1909. (Genotype: *C. tuberculosus* Troost.)*Conocrinus* Shumard, Trans. Acad. Sci. St. Louis, 2, p. 353, 1866.—Bather, Treatise Zool. (Lankester), pt. 3, p. 202, 1900. (Substituted for *Conocrinites* Troost.)***Alloprosallocrinus celsus* Miller and Gurley.**

Miller and Gurley, Ill. St. Mus., Bull. 5, p. 47, pl. 4, figs. 9-11, 1894.

Miss.: Tennessee (Ft. Payne ch.); Knob south of Louisville, Ky. (Keokuk ls.).

***Alloprosallocrinus conicus* Casseday and Lyon.**

Casseday and Lyon, Proc. Amer. Acad. Arts and Sci., 5, for 1860, p. 29, 1862.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 407, pl. 42, figs. 14 a-c, 1897.—Rowley in Greene, Cont. Indiana Pal., 2, pt. 1, p. 10, pl. 3, figs. 14, 15, 1906.

Alloprosallocrinus gurleyi S. A. Miller, 17th. Rep. Geol. Surv. Ind., p. 668, pl. 10, figs. 1, 2, 1892 (adv. pub., 1891).*Conocrinites leae* Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419 (nom. nud.), 1849.—Wood, U. S. Nat. Mus., Bull. 64, p. 71, 1909.

Miss.: Hardin, Barren, and Metcalf Cos., Ky., Whites Creek Springs, Tenn. (Ft. Payne ch.); Montgomery Co., Ind. (Keokuk ls.).

Alloprosallocrinus depressus Casseday and Lyon = *Agaricocrinus?* *depressus*.*Alloprosallocrinus gurleyi* S. A. Miller = *A. conicus*.***Alloprosallocrinus tuberculosus* (Troost).***Conocrinites tuberculosus* Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849 (nom. nud.).*Alloprosallocrinus tuberculosus* Wood, U. S. Nat. Mus., Bull. 64, pp. 69, 70, text fig., pl. 5, figs. 14, 15, 1909.

Miss. (Ft. Payne ch.): Whites Creek Springs, Tenn.

***Allosycocrinus* Wanner. Genotype: *A. pusillus* Wanner.**

Hypocrinidae (Inadunata-Fistulata). Permian.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, pp. 141, 154, 1924; Neue Beitr. kennt. Perm. Echin. Timor, pp. 39, 54, 1929.

***Allosycocrinus?* *grandis* Wanner.**

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 159, pl. 8, fig. 10, 1924.

Permian: Basleo, Timor.

Allosyocrinus? medius Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 158, pl. 8, figs. 16, 17, 1924.

Permian: Basleo, Timor.

Allosyocrinus pusillus Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 157, text fig. 12, pl. 8, figs. 6-9, 1924; Neue Beitr. kennt. Perm. Echin. Timor, p. 54, text figs. 5, 6, pl. 3, figs. 1-9, 1929; id., III, p. 12, pl. 1, figs. 17, 18, 1930.

Permian: Basleo, Timor.

Alsopocrinus Tansey. Genotype: *A. anna* Tansey.

Poteriocrinidae (Inadunata-Fistulata). Dev.

Tansey, Mo. Bur. Geol. and Mines, 17, ser. 2, p. 181, 1924.

Alsopocrinus anna Tansey.

Tansey, Mo. Bur. Geol. and Mines, 17, ser. 2, p. 181, pl. 44, figs. 4-6, 1924.

Dev. (Bailey ls.): Little Saline Creek area, Ste. Genevieve Co., Mo.

Amblacrinus d'Orbigny. Genotype: *Platycrinus rosaceus* Roemer.

Platycrinidae (Adunata). Sil.-Low. Carb.

D'Orbigny, Prod. Pal. Strat., 1, pp. 104, 156, 1849.

Cococrinus Müller, in Zeiler and Wirtgen, Verh. Nat. Rheinl., 12, p. 20, 1855.—Schultze, Denk. Kais. Akad. Wiss., Math. Naturw. Cl., 26, abth. 2, p. 200, 1867 (Adv. pub., 1866).—Zittel, Handb. Pal., 1, p. 347, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 52 (232), 1881; pt. 3, pp. 58, 114 (280, 336), 1886; N. Amer. Crin. Cam., p. 738, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 156, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 199, 1913. (Genotype: *Platycrinus rosaceus* Roemer.)

Amblacrinus inequidactylus (McCoy).

Cyathocrinus inequidactylus McCoy, Syn. Char. Carb. Foss. Ireland, p. 179, pl. 26, fig. 8, 1844.

Low. Carb. (Mt. Ls.): Hook Head, Ireland.

Amblacrinus moravicus (Remes).

Cococrinus moravicus Remes, Vest. St. Geol. Ust. Ceskoslov. Repub., 5, p. 242, pl. 1, fig. 2, 1929.

Dev.: Czechoslovakia.

Amblacrinus rosaceus (Roemer).

Platycrinus rosaceus Roemer, Rhein. Ueberg. Pal.-Geog. Darstellung, p. 63, pl. 3, figs. 3 a-c, 1844.

Amblacrinus rosaceus d'Orbigny, Prod. Pal. Strat., 1, p. 104, 1849.

Cococrinus rosaceus Müller, in Zeiler and Wirtgen, Verh. Nat. Rheinl., 12, p. 21, pl. 7, figs. 5 a-c, 1855.—Schultze, Denk. Kais. Akad. Wiss., Math. Naturw. Cl., 26, p. 201, p. 12, fig. 13, 1867 (adv. pub., 1866).—Wachsmuth and Springer, N. Amer. Crin. Cam., pl. 3, fig. 14, 1897.—Springer, Amer. Sil. Crin., p. 61, pl. 11, figs. 1, 1a, b, 2, 1926.

Dev. (Eifelian): Gerolstein, Germany.

Ammonicrinus Springer. Genotype: *A. wanneri* Springer.

Heterocrinidae (Inadunata-Fistulata). Dev.

Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 22, 1926.

Ammonicrinus doliiformis Wolburg.

Wolburg, Jahrb. Preuss. Geol. Landesanst., 58, pp. 230-241, fig., 1937; Centralbl. Min., Geol., Pal., Abt. B, p. 260, text fig. 2, 1938.

Dev. (Selscheider beds): Near Ohle, Sauerland, Germany.

Ammonicrinus wanneri Springer.

Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 22, pl. 6, figs. 4-6, 1926.—Krause, Zeits. Deutsch. Geol. Gesell., 79, Abh. 4, p. 456, pl. 8, 1927.—Ehrenberg, Palaeobiol., 3, p. 323, pl. 16, figs. 14-17, 1930.

Dev. (Eifelian): Prüm, Germany.

Ampelocrinus Kirk. Genotype: *A. bernhardinae* Kirk.

Ampelocrinidae (Inadunata-Fistulata). Miss., Penn.

Kirk, Amer. Jour. Sci., 240, p. 23, 1942.

Ampelocrinus bernhardinae Kirk.

Kirk, Amer. Jour. Sci., 240, p. 25, pl. 1, fig. 1, 2, 1942.

Miss. (Chester-Glen Dean ls.): Sloans Valley, Pulaski Co., Ky.

Ampelocrinus fimbriatus Kirk.

Kirk, Amer. Jour. Sci., 240, p. 26, pl. 2, figs. 5, 6, 1942.

Miss. (Chester-Glen Dean): Sloans Valley, Pulaski Co., Ky.

Ampelocrinus kaskaskiensis (Worthen).

Poteriocrinus kaskaskiensis Worthen, Ill. St. Mus., Bull. 1, p. 27, 1882; Geol. Surv. Ill., 7, p. 300, pl. 29, fig. 15, 1883.

Ampelocrinus kaskaskiensis Kirk, Amer. Jour. Sci., 240, p. 24, 1942.

Miss. (Chester-Glen Dean ls.): Bluffs Kaskaskia River, above Chester, Ill.

Ampelocrinus mundus Kirk.

Kirk, Amer. Jour. Sci., 240, p. 27, pl. 2, figs. 1-4, 1942.

Miss. (Chester-Ste. Genevieve): Near Whitesburg, 7 miles south of Huntsville, Ala.

Ampheristocrinus Hall. Genotype: *A. typus* Hall.

Carabocrinidae (Inadunata-Fistulata). Sil.

Hall, Prelim. Not. N. Sp. Foss., etc., p. 11, 1879 (Trans. Albany Inst., 10, 1882); 11th Rep. Geol. Nat. Hist. Ind., p. 278, 1882.—Wachsmuth and Springer, Rev. Pal., pt. 3, pp. 191, 219 (115, 143), 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 173, 1900.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, p. 67, 1900.

Ampheristocrinus? calyx (Hall).

Poteriocrinus? calyx Hall, Prelim. Not. N. Sp. Foss., etc., p. 10, 1879 (Trans. Albany Inst., 10, 1882); 11th Rep. Geol. Nat. Hist. Ind., p. 266, pl. 15, fig. 14, 1882.

Ampheristocrinus? calyx Bassler, U. S. Nat. Mus., Bull. 92, p. 32, 1915.

Sil. (Niagaran-Waldron sh.): Waldron and Hartsville, Ind.

Ampheristocrinus dubius Weller.

Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 67, pl. 14, fig. 11, 1900.

Sil. (Niagaran-Racine dol.): Romeo, Ill.

Ampheristocrinus typus Hall.

Hall, Prelim. Not. N. Sp. Foss., etc., p. 11, 1879 (Trans. Albany Inst., 10, 1882); 11th Rep. Geol. Nat. Hist. Ind., p. 278, pl. 15, figs. 17, 18, 1882.—Springer, Amer. Sil. Crin., p. 132, pl. 31, fig. 1, 1926.

Sil. (Niagaran): Waldron, Ind. (Waldron sh.); Decatur Co., Tenn. (Beech River fm.).

Amphicrinus Springer. Genotype: *A. scoticus* Springer.

Ichthyocrinidae (Flexibilia). Low Carb., Penn.

Springer, Jour. Geol., 14, p. 518, 1906; Zittel-Eastman Textb. Pal., 1, p. 205, 1913; Crin. Flexibilia, pp. 261, 337, 1920.

Amphicrinus carbonarius Springer.

Springer, Crin. Flexibilia, p. 341, pl. 60, figs. 12a, b, 1920.

Penn.: Girard, Kansas; near Tulsa, Okla. (Oologah ls.).

Amphicrinus divergens Strimple.

Strimple, Bull. Amer. Pal., 25, no. 91, p. 91, pl. 8, figs. 11, 12, 1940.
Penn. (Morrow fm.): 6 miles southeast Fittstown, Okla.

Amphicrinus oklahomaensis Strimple.

Strimple, Bull. Amer. Pal., 24, no. 87, p. 4 (364), p. 1, figs. 1, 2, 1939.
Penn. (Ochelata, Stanton ls.): Mound just west of Bartlesville, Okla.

Amphicrinus poundi Strimple.

Strimple, Bull. Amer. Pal., 24, no. 87, p. 5 (365), pl. 2, figs. 18, 19, 1939.
Penn. (Stanton ls.): Near Wayside, Kansas.

Amphicrinus scoticus Springer.

Springer, in Wright, Trans. Edinburgh Geol. Soc., 10, pt. 2, p. 161, pl. 10, figs. 3, 4, 1914; Crinoidea Flexibilia, p. 338, pl. 40, figs. 9-11, 1920.—Wright, Trans. Royal Soc. Edinburgh, 60, pt. 1, p. 53, pl. 11, figs. 1-6, 1939.

Low. Carb. (Hurler Is.): Lemahagow and Invertiel, Roscobie, Carllops, etc., Scotland.

Amphicrinus simplex Strimple.

Strimple, Bull. Amer. Pal., 25, no. 92, p. 103, pl. 9, fig. 1, 1940.
Penn. (Wewoka fm.): Holdenville, Okla.

Amphipsalidocrinus J. M. Weller. Genotype: *A. scissurus* J. M. Weller.

Hypocrinidae (Inadunata-Fistulata). Penn.

J. M. Weller, State Geol. Surv. Ill., Rep. Invest. no. 21, p. 22, 1930.

Amphipsalidocrinus scissurus J. M. Weller.

J. M. Weller, State Geol. Surv. Ill., Rep. Invest. no. 21, p. 33, text fig. 6, pl. 2, figs. 8 a-c, 1930.

Low. Penn.: N $\frac{1}{2}$ Sec. 35, T 21 N, R 9 W, Warren Co., Ind.

Amphora Cumberland = *Actinocrinites*.

Amphora gilbertsoni Bronn = *Amphoracrinus gilbertsoni*.

Amphoracrinus Austin. Genotype: *Actinocrinus gilbertsoni* Miller.

Actinocrinitidae (Camerata). Low. Carb.

Austin, Quart. Jour. Geol. Soc. London, 4, p. 292, 1848.—Meek and Worthen, Geol. Surv. Ill., 5, p. 386, 1873.—Zittel, Handb. Pal., 1, p. 370, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 151 (325), 1881; N. Amer. Crin. Cam., pp. 550, 586, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 170, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 197, 1913.

Amphoracrinus americanus Roemer = *Agaricocrinus americanus*.

Amphoracrinus americanus Quenstedt = *Agaricocrinus wortheni*.

Amphoracrinus atlas (McCoy).

Actinocrinus (Amphoracrinus) atlas McCoy, Ann. Mag. Nat. Hist., (2) 3, p. 248, 1849; British Pal. Foss., p. 120, pl. 3-D, fig. 5, 1854.

Low. Carb.: Bolland and Yorkshire, England.

Amphoracrinus blairi Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 6, p. 26, pl. 1, figs. 45-50, 1896.

Miss. (Chouteau ls.): Sedalia, Mo.

Amphoracrinus brevicealix (Rofe).

Actinocrinus (Amphoracrinus) brevicealix Rofe, Geol. Mag., 2, p. 12, text figs. 1-3, 1865.

Low. Carb. (Mt. Ls.): Near Clitheroe, Lancashire, England.

Amphoracrinus crassus Austin = *Actinocrinites crassus*.

Amphoracrinus divergens (Hall).

Actinocrinus divergens Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 36, text fig., 1860.

- Amphoracrinus divergens* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 347, 1868; Geol. Surv. Ill., 5, p. 368, pl. 6, fig. 6, 1873.—Whitfield, Mem. Amer. Mus. Nat. Hist., 1, p. 21, pl. 2, figs. 12, 13, 1893.—Keyes, Mo. Geol. Surv., 4, p. 166, pl. 22, fig. 4, 1894.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 588, pl. 62, figs. 5–10, 1897.
- Amphoracrinus multiramosus* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 349, 1866.
- Amphoracrinus divergens* var. *multiramosus* Wachsmuth and Springer, N. Amer. Crin. Cam., pp. 588, 590, 1897.
- Actinocrinus planobasalis* Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 19, 1860; N. Y. St. Mus., Bull. 1, pl. 4, figs. 10, 11, 1872.
- Amphoracrinus planobasalis* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 348, 1868.
- Actinocrinus quadrispinus* White, Proc. Boston Soc. Nat. Hist., 9, p. 15, 1865 (Adv. pub., 1862).
- Miss.: Burlington, Iowa (Low. Burlington ls.); Lake Valley, N. Mex. (Lake Valley ls.).
- Amphoracrinus divergens multiramosus* Wachsmuth and Springer = *Amphoracrinus divergens*.
- Amphoracrinus gilbertsoni* (Miller).**
- Actinocrinus gilbertsoni* Miller, in Phillips, Geol. Yorkshire, 2, p. 206, pl. 4, fig. 19, 1836.
- Amphora gilbertsoni* Bronn, Klass. Thierr., 2, pl. 28, fig. 2, 1860.
- Amphoracrinus gilbertsoni* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 587, 1897.
- Amphora* No. 2, Cumberland, Rel. Cons., p. 37, pl. C, figs. 1, 3, 4, 22, 1826.
- Melocrinites amphora* Goldfuss, Nova Acta Acad. Leop. Carol. Nat. Cur., 19, pl. 31, fig. 4, 1839.
- Actinocrinites amphora* Gilbertson, in Portlock, Rep. Geol. Londonderry, p. 347, pl. 15, figs. 4–6, 1843.
- Actinocrinus amphora papillata* Quenstedt, Petref. Deutsch., 4, p. 573, pl. 110, fig. 2, 1876.
- Low. Carb. (Mt. Ls.): Bolland, Clitheroe, Lancashire, and Yorkshire, England; Florence Court, etc., Ireland.
- Amphoracrinus granulatus* (Austin and Austin).**
- Actinocrinites granulatus* Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 109, 1842 (Nom. nud.); 11, p. 201, 1843.
- Amphoracrinus granulatus* Austin and Austin, Quart. Jour. Geol. Soc. London, 4, p. 292, 1848.
- Low. Carb.: England.
- Amphoracrinus inflatus* Whitfield = *A. spinobrachiatus*.
- Amphoracrinus jerseyensis* Worthen = *Agaricocrinus jerseyensis*.
- Amphoracrinus jessieae* Miller and Gurley = *Actinocrinites jessieae*.
- Amphoracrinus multiramosus* Meek and Worthen = *A. divergens*.
- Amphoracrinus planobasalis* Meek and Worthen = *A. divergens*.
- Amphoracrinus rugosus* Rofe.**
- Actinocrinus (Amphoracrinus) rugosus* Rofe, Geol. Mag., 12, p. 245, 1865 (not defined).
- Low. Carb. (Mt. Ls.): England.
- Amphoracrinus sampsoni* Miller and Gurley = *Corocrinus sampsoni*.
- Amphoracrinus sedaliensis* Miller and Gurley = *Actinocrinites sedaliensis*.

Amphoracrinus spinobrachiatus (Hall).

Actinocrinus spinobrachiatus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 6, text fig., 1860.

Amphoracrinus spinobrachiatus Meek and Worthen, Geol. Surv. Ill., 5, p. 389, pl. 6, figs. 5 a-c, 1873.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 478, pl. 62, figs. 1-4, 1897.

Actinocrinus inflatus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 20, text fig., 1860.

Amphoracrinus inflatus Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 1, p. 22, pl. 2, figs. 10, 11, 1893.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Amphoracrinus subturbيناتus Meek and Worthen = *Dorycrinus subturbيناتus*.

Amphoracrinus viminalis (Hall).

Actinocrinus viminalis Hall, 17th Rep. Regents Univ. St. New York, p. 54, Prelim. Rep., 1863; Final Rep., 1864.—Hall and Whitfield, Rep. Geol. Surv. Ohio, 2, pt. 2, Pal., p. 165, pl. 11, figs. 12-14, 1875.

Amphoracrinus viminalis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 590, pl. 54, fig. 8, 1897.

Miss. (Waverlyan-Cuyahoga fm.): Richfield, Summit Co., Ohio.

Anamesocrinus Goldring. Genotype: *A. lutheri* Goldring.

Anamesocrinidae (Inadunata-Larviformia). Dev.

Goldring, N. Y. St. Mus., Mem. 16, p. 323, 1923.

Anamesocrinus lutheri Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 324, text fig. 53, pl. 40, figs. 6-9, 1923; Ann Carnegie Mus., 24, p. 342, pl. 24, figs. 1-9, 1935.

Dev.: Laona, Chautauqua Co. (Portage-Laona ss.); Alfred Station, Allegany Co., N. Y. (Low. Chemung-Alfred sh.).

Anarchocrinus Jaekel. Genotype: *A. rossicus* Jaekel.

Cyathocrinitidae (Inadunata-Fistulata). Ord.

Jaekel, Pal. Zeits., 3, p. 51, 1918.

Anarchocrinus rossicus Jaekel.

Jaekel, Pal. Zeits., 3, p. 50, fig. 39, 1918.

Ord. (Wassalem beds): Uxnorm, near Reval, Estonia.

Anartiocrinus Kirk. Genotype: *A. lyoni* Kirk.

Poteroicrinidae (Inadunata-Fistulata). Miss.

Kirk, Amer. Jour. Sci., 238, no. 1, p. 47, 1940.

Anartiocrinus lyoni Kirk.

Kirk, Amer. Jour. Sci., 238, no. 1, pp. 47-49, pl. 1, figs. 1-5, 9, 1940.

Agassizocrinus inequidactylus Springer (not *Cyathocrinus inequidactylus* Whitfield, not McCoy), U. S. Nat. Mus., Proc., 67, art. 9, pp. 57, 62, 63 (not p. 61), pl. 15, figs. 10-13, 1926.

Miss. (Chester-Glen Dean ls.): Grayson Springs, Sloans Valley, and Stephensonport, Ky.

Anartiocrinus maxvillensis (Whitfield).

Cyathocrinus maxvillensis Whitfield, Ann. N. Y. Acad. Sci., 2, p. 219, 1891; Geol. Surv. Ohio, 7, p. 465, pl. 9, figs. 5-8, 1893.—Morse, Proc. Ohio Acad. Sci., 5, p. 361, figs. 3 a-d, 1911.

Anartiocrinus maxvillensis Kirk, Amer. Jour. Sci., 238, no. 1, pp. 48, 50, pl. 1, figs. 6-8, 1940.

Cyathocrinus inequidactylus Whitfield, Ann. N. Y. Acad. Sci., 2, p. 219, 1882.

Miss. (Chester-Maxville ls.): White Cottage, Newton Township, Muskingum Co., Ohio. (Formerly "Newtonville").

Ancistrocrinus Wanner. Genotype: *A. vermistriatus* Wanner.

Lecanocrinidae (Flexibilia). Permian.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, pp. 89, 119, 1924; Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia; Wetenschappelijke Mededeelingen, no. 14, p. 44, 1930.

Ancistrocrinus depressus Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia: Wetens. Meded., no. 14, p. 45, text fig. 28, pl. 4, figs. 5-8, 1930.

Permian: Basleo, Timor.

Ancistrocrinus vermistriatus Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 119, pl. 6, figs. 10-13, 1924; Neue Beitr. Perm. Echin. Timor, IV, Flexibilia: Wetens. Meded., no. 14, p. 44, pl. 3, figs. 20-21, 1930.

Permian: Basleo, Timor.

Ancyrocrinus Hall. Genotype: *A. bulbosus* Hall.

Botryocrinidae (Inadunata-Fistulata). Dev.

Hall, 15th Rep. N. Y. St. Mus. Nat. Hist., p. 117, 1862.—Grabau, Bull. Buffalo Soc. Nat. Sci., 6, p. 146, 1890.—Ehrenberg, Bull. Amer. Mus. Nat. Hist., 59, p. 11, 1929.—Lowenstam, Bull. Buffalo Soc. Nat. Hist., 17, no. 3, p. 21, 1942.—Goldring, Bull. Buffalo Soc. Nat. Sci., 17, no. 3, p. 13, 1942.

Ancyrocrinus bulbosus Hall.

Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 118, pl. 1, figs. 25, 26, 1862.—Kirk, U. S. Nat. Mus., Proc., 41, p. 46, pl. 5, fig. 9, 1911.—Springer, The Crinoid Genus *Scyphocrinus*, p. 10, pl. 5, figs. 7-10, 1917.—Goldring, N. Y. St. Mus., Mem. 16, p. 456, pl. 59, fig. 14, 1923.—Roy, Field Mus., Pub. 254, p. 204, pl. 33, figs. 1-10, 1929.—Ehrenberg, Bull. Amer. Mus. Nat. Hist., 59, pp. 11-13, figs. 7, 8, 10, 1929.—Goldring, Bull. Buffalo Soc. Nat. Sci., 17, no. 3, p. 15, pl. 4, textf. 1, 2, 1942.

Dev. (Hamilton): Lake Erie shore, 18 Mile Creek, Geneseo, Canandaigua Lake, etc., N. Y. (Moscow sh.); 18 Mile Creek, Bay View and Windom, Erie Co., N. Y., Deer Lake, Schuylkill Co., Pa. (Ludlowville sh.); Thedford, Ontario (Ipperwash ls.); Charleston, etc., Ind. (Sellersburg ls.).

Ancyrocrinus quinquepartitus Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 458, pl. 59, figs. 15, 16, 1923.—Ehrenberg, Bull. Amer. Mus. Nat. Hist., 59, p. 14, fig. 9, 1929.

Dev. (Oriskany-Glenerie ls.): Glenerie, N. Y.

Ancyrocrinus spinosus Hall.

Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 119, pl. 1, figs. 27, 28, 1862.—Ehrenberg, Bull. Amer. Mus. Nat. Hist., 59, p. 15, fig. 11, 1929.

Dev. (Hamilton-Sellersburg ls.): Falls of the Ohio.

Anemetocrinus Wright. Genotype: *A. biserialis* Wright.

Poteriocrinidae (Inadunata-Fistulata). Low. Carb.

Wright, Geol. Mag., 75, p. 339, 1938.

Anemetocrinus ardrossensis Wright.

Wright, Geol. Mag., 75, p. 340, pl. 13, figs. 4, 6, 7, text fig. 2, 1938; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 45, pl. 8, figs. 4, 7; text fig. 61, 1939.

Low. Carb. (Calciferous ss. ser., shales above Ardross ls.): Ardross, Fife, Scotland.

Anemetocrinus biserialis Wright.

Wright, Geol. Mag., 75, p. 339, pl. 13, fig. 9; pl. 14, fig. 7, text fig. 1; 1938; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 43, pl. 2, figs. 3, 4; pl. 9, fig. 11, text fig. 60, 1939.

Low. Carb. (Low. Ls. gr.): Shore west of Kirkcaldy, Inveriel, Carlops, Roscobie, etc., Fife, Scotland.

Anemetocrinus covensis (Wright).

Scytalocrinus covensis Wright, Geol. Mag., 71, p. 250, text fig. 21, pl. 14, fig. 1, 1934.

Anemetocrinus covensis Wright, Geol. Mag., 75, p. 342, text fig. 4, pl. 13, fig. 5, 1938;
Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 46, pl. 8, fig. 3, text figs. 63, 65, 1939.

Low. Carb. (Calceiferous ss. ser.): Cove Harbour, Cocksburnpath, Berwickshire, Scotland.

Anemetocrinus pentonensis (Wright).

Scytalocrinus pentonensis Wright, Geol. Mag., 71, p. 250, text fig. 20, pl. 14, fig. 5, 1934.

Anemetocrinus pentonensis Wright, Geol. Mag., 75, p. 341, text fig. 3, pl. 13, fig. 1, 1938; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 45, pl. 8, fig. 6, text figs. 62, 64, 1939.

Low. Carb. (Low. Ls. gr.): Penton Linns, Liddesdale, Scotland.

Angelinocrinus Jaekel. Genotype: *Briarocrinus angustus* Angelin.

Patelloocrinidae (Camerata). Sil.

Jaekel, Pal. Zeits., 3, p. 38, 1918.

Angelinocrinus angustus (Angelin).

Briarocrinus angustus Angelin, Icon. Crin. Suec., p. 1, pl. 10, fig. 22, 1878.

Angelinocrinus angustus Jaekel, Pal. Zeits., 3, p. 38, 1918.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Anisocrinus Angelin. Genotype: *A. interradiatus* Angelin.

Lecanocrinidae (Flexibilia). Sil.

Angelin, Icon. Crin. Suec., p. 13, 1878.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 37 (260), 1880 (1879).—Zittel, Handb. Pal., 1, p. 356, 1879.—Bather, Treatise Zool. (Lankester), pt. 3, p. 189, 1900.—Springer, Amer. Geol., 30, p. 94, 1902; Jour. Geol., 14, pp. 479, 517, 1906; Zittel-Eastman Textb. Pal., 1, p. 203, 1913; Crin. Flexibilia, p. 160, 1920; Amer. Sil. Crin., p. 65, 1926.

Anisocrinus angelini Wachsmuth and Springer.

Wachsmuth and Springer, Rev. Pal., pt. 1, p. 37 (260), 1880 (1879).—Springer, Jour. Geol., 14, p. 480, pl. 6, fig. 10, 1906; Crinoidea Flexibilia, p. 163, pl. 10, figs. 4a, b, 1920; Amer. Sil. Crin., p. 66, pl. 20, fig. 19, 1926.

Lecanocrinus macropetalus Angelin, Icon. Crin. Suec., p. 12, pl. 19, figs. 3, 4; pl. 22, fig. 24, 1878.

Sil. (Gotlandian): Island of Gotland.

Anisocrinus greenei (Miller and Gurley).

Lecanocrinus greenei Miller and Gurley, Ill. St. Mus., Bull. 8, p. 52, pl. 3, fig. 28, 1896.

Anisocrinus greenei Springer, Crin. Flexibilia, p. 163, pl. 10, figs. 8, 9, 1920; Amer. Sil. Crin., p. 66, pl. 20, figs. 16, 17, 1926.

Sil. (Niagaran): Near Louisville, Ky. (Louisville ls.); Decatur Co., Tenn. (Beech River fm.).

Anisocrinus interradiatus Angelin.

Angelin, Icon. Crin. Suec., p. 13, pl. 22, figs. 18, 18a, 1878.—Springer, Jour. Geol., 14, p. 479, pl. 6, fig. 9, 1906; Crin. Flexibilia, p. 162, pl. 10, figs. 1-3b, 1920.

Sil. (Gotlandian): Klintaberg and Wisby, Island of Gotland.

Anisocrinus (?) *irregularis* Springer.

Springer, Crin. Flexibilia, p. 165, pl. 10, figs. 5, 6, 1920.

Sil. (Gotlandian): Island of Gotland.

Anisocrinus oswegoensis (Miller and Gurley).

Lecanocrinus oswegoensis Miller and Gurley, Ill. St. Mus., Bull. 4, p. 33, pl. 3, figs. 15-17, 1894.

Anisocrinus oswegoensis Springer, Crin. Flexibilia, p. 164, pl. 10, figs. 7 a-c, 1920; Amer. Sil. Crin., p. 66, pl. 20, fig. 18, 1926.

Sil. (Niagaran): Oswego, Ill.

Anomalocrinus Meek and Worthen. Genotype: *Heterocrinus? incurvus* Meek and Worthen.

Anomalocrinidae (Inadunata-Fistulata). Ord.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., (2) 9, p. 148, 1865; Geol. Surv. Ill., 3, p. 327, 1868.—Meek, Geol. Surv. Ohio, Pal., 1, p. 17, 1873.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 72 (295), 1880 (1879).—Zittel, Handb. Pal., 1, p. 350, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 211 (135), 1886.—Bather, Ann. Mag. Nat. Hist., (6) 5, pp. 323, 374, 1890; Treatise Zool. (Lankester), pt. 3, p. 146, 1900.—Cumings, 32d Ann. Rep. Geol. Nat. Res. Ind. for 1907, p. 710, 1908.

Ataxiacrinus Lyon, Trans. Amer. Philos. Soc., 13, p. 463, 1869. (Genotype: *A. caponiformis* Lyon.)

Ataxocrinus Bather, Treatise Zool. (Lankester), pt. 3, p. 146, 1900.

Anomalocrinus caponiformis (Lyon).

Ataxiacrinus caponiformis Lyon, Trans. Amer. Philos. Soc., 13, p. 464, pl. 27, figs. o, ol-o3, 1869.

Anomalocrinus caponiformis S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 2, p. 109, pl. 9, figs. 4, 4a, 1879.

Ord. (Maysville-Corryville sh.): Cincinnati, Ohio.

Anomalocrinus incurvus (Meek and Worthen).

Heterocrinus? incurvus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 148, 1865.

Hybocrinus? (Anomalocrinus) incurvus Meek and Worthen, Geol. Surv. Ill., 3, p. 327, text fig., 1868.

Anomalocrinus incurvus Meek and Worthen, Geol. Surv. Ohio, 1, pt. 2, p. 17, pl. 2, figs. 6 a-f, 1873.

Ord. (Maysville-Fairmount ls.): Cincinnati, etc., Ohio.

Anthemocrinus Wachsmuth and Springer. Genotype: *Eucrinus venustus* Angelin.

Rhodocrinitidae (Camerata). Sil.

Wachsmuth and Springer, Rev. Pal., pt. 2, p. 208 (382), 1881.—Bather, Treatise Zool. (Lankester), pt. 3, p. 200, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 189, 1913.—Jaekel, Pal. Zeits., 3, p. 40, 1918 (cites *Eucrinus minor* Angelin as genotype).

Anthemocrinus minor (Angelin).

Eucrinus minor Angelin, Icon. Crin. Suec., p. 25, pl. 15, fig. 5, 1878.

Anthemocrinus minor Wachsmuth and Springer, Rev. Pal., pt. 2, p. 209 (383), 1881; Jaekel, Pal. Zeits., 3, p. 40, fig. 31, 1918.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Anthemocrinus venustus (Angelin).

Eucrinus venustus Angelin, Icon. Crin. Suec., p. 25, pl. 25, figs. 7, 16, 1878.

Anthemocrinus venustus Wachsmuth and Springer, Rev. Pal., pt. 2, p. 209 (383), 1881.

Sil. (Gotlandian): Island of Gotland.

Anthocrinus Müller = *Crotalocrinites*.

Anthocrinus loveni Müller = *Crotalocrinites pulcher*.

Antihomocrinus Schmidt. Genotype: *Homocrinus tenuis* Bather.

Dendrocrinidae (Inadunata-Fistulata). Sil., Dev.

Schmidt, Abhandl. Preuss. Landesanst., n. f., heft 163, p. 79, 1934.

Antihomocrinus armatus Schmidt.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 79, text fig. 16, pl. 18, fig. 3; pp. 143, 145, 147, 1934.

Low. Dev. (Hunsrück sl.): Bundenbach, Germany.

Antihomocrinus tenuis (Bather).

Homocrinus tenuis Bather, Königl. Sv. Vet. Akad. Handl., 25, no. 2, p. 105, pl. 4, figs. 143-147, 1893.

Lasiocrinus tenuis Goldring, N. Y. St. Mus., Mem. 16, p. 342, pl. 43, fig. 8, 1923.

Antihomocrinus tenuis Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 79, 1934.

Sil. (Gotlandian): Bursvik, Island of Gotland.

Aorocrinus Wachsmuth and Springer. Genotype: *Dorycrinus immaturus* Wachsmuth and Springer.

Batoerinidae (Camerata). Sil.-Miss.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 470, 1897.—Springer, Zittel-Eastman Textb. Pal., 1, p. 196, 1913.

Aorocrinus armatus Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 255, pl. 35, figs. 11, 12, 1923.

Dev. (Low. Moscow sh.): Cashong Creek, near Bellona, N. Y.

Aorocrinus canaliculatus (Meek and Worthen).

Dorycrinus canaliculatus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 166, 1869; Geol. Surv. Ill., 5, p. 381, pl. 6, fig. 4, 1873.

Aorocrinus canaliculatus Wachsmuth and Springer, N. Amer. Crin. Cam., pp. 455, 475, pl. 45, figs. 6a, b, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Aorocrinus casedayi (Lyon).

Actinocrinus casedayi Lyon, Proc. Acad. Nat. Sci. Phila., (2) 5, p. 410, pl. 4, figs. 3, 3a, 1861.

Aorocrinus casedayi Wachsmuth and Springer, N. Amer. Crin. Cam., p. 483, pl. 42, figs. 11a, b, 12, 1897.—Rowley, in Greene, Cont. Ind. Pal., pt. 8, p. 65, pl. 23, figs. 4, 5, 1901; pt. 11, p. 101, pl. 32, figs. 7-9, p. 108, pl. 33, figs. 13-15, 1903.

Dev. (Hamilton): Beargrass Quarry, near Louisville, Ky., Clark Co., Ind. (Sellersburg ls.); Partridge Point, near Alpena, Mich. (Thunder Bay ls.).

Aorocrinus casedayi charlestownensis Rowley.

Rowley, in Greene, Cont. Indiana Pal., 1, pt. 8, p. 65, pl. 23, fig. 6, 1901; pt. 14, p. 142, pl. 41, figs. 8-13, 1903.

Dev. (Hamilton-Sellersburg ls.): Charlestown, Ind.

Aorocrinus cauliculus (Hall).

Actinocrinus cauliculus Hall, 15th Rep. Regents Univ. St. N. Y., p. 132, 1862.

Aorocrinus cauliculus Goldring, N. Y. St. Mus., Mem. 16, p. 249, pl. 35, figs. 1-3, 1923.

Dev. (Hamilton-Moscow sh.): Vincent and near Canandaigua, N. Y.

Aorocrinus clarkensis Springer.

Springer, Amer. Sil. Crin., p. 47, pl. 10, figs. 17, 17a, 1926.

Dev. (Hamilton-Sellersburg ls.): Clark Co., Ind.

Aorocrinus concavus Wachsmuth and Springer = *Coelocrinus concavus*.**Aorocrinus depressus** Rowley.

Rowley, in Greene, Cont. Ind. Pal., pt. 8, p. 65, pl. 23, fig. 7, 1901.

Dev. (Hamilton-Sellersburg ls.): Charlestown, Ind.

Aorocrinus elegans (S. A. Miller).

Dorycrinus elegans S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 271, pl. 3, figs. 4, 5, 1894 (adv. pub., 1892).

Aorocrinus elegans Wachsmuth and Springer, N. Amer. Crin. Cam., p. 480, pl. 34, figs. 17a, b, 1897.

Miss. (Chouteau ls.): Near Sedalia, Mo.

Aorocrinus formosus Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 259, pl. 35, figs. 5-9, 1923; Jour. Pal., 10, p. 19, pl. 7, figs. 7, 8, 1936.

Dev. (Hamilton): Cashong Creek, near Bellona, and near Canandaigua, N. Y. (Moscow sh.); 3 miles south of Sherburne, N. Y. (Tully-Westbrook).

Aorocrinus helice (Hall).

Actinocrinus helice Hall, 17th Rep. Regents Univ. St. N. Y., p. 53, 1867 (Prelim. Not., 1863).—Hall and Whitfield, Geol. Surv. Ohio, 2, pt. 2, Pal., p. 163, pl. 11, figs. 5-8, 1875.

Aorocrinus helice Wachsmuth and Springer, N. Amer. Crin. Cam., p. 481, pl. 45, figs. 2, 75, 1897.

Actinocrinus helice var. *eris* Hall, 17th Rep. Regents St. Univ. N. Y., p. 53, 1867 (Prelim. Not., 1863).

Actinocrinus eris Hall and Whitfield, Geol. Surv. Ohio, 2, pt. 2, Pal., p. 164, pl. 11, figs. 9, 10, 1875.

Miss. (Waverlyan-Cuyahoga fm.): Richfield, Summit Co., and Royalton, Ohio.

Aorocrinus immaturus (Wachsmuth and Springer).

Dorycrinus immaturus Wachsmuth and Springer, in Miller, N. A. Geol. Pal., p. 240, 1889; Geol. Surv. Ill., 8, p. 175, pl. 16, fig. 5; pl. 17, figs. 6, 17, 1890.

Aorocrinus immaturus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 471, pl. 45, figs. 4a, b, 1897.—Laudon and Beane, Iowa Univ. Studies, 17, no. 6, p. 244, pl. 15, fig. 17; pl. 17, fig. 1, 1937.

Coelocrinus immaturus Bather, Treatise Zool. (Lankester), pt. 3, p. 167, fig. 81, 1900. Miss. (Kinderhook-Hampton fm.): Legrand, Iowa.

Aorocrinus iola Laudon.

Laudon, Univ. Iowa Studies in Nat. Hist., 15, no. 2, p. 49, pl. 2, figs. 7, 8, 1933.

Miss. (Kinderhook-Gilmore City fm.): Gilmore City, Iowa.

Aorocrinus longidactylus Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 262, pl. 35, fig. 10, 1923.

Dev. (Hamilton-Moscow sh.): Near Cascade Mills, 3 miles west of Dundee, N. Y.

Aorocrinus multicostatus Goldring.

Goldring, Ann. Carnegie Mus., 27, p. 109, pl. 6, figs. 1-4, 1938.

Upper Dev. ss.: Road between Center City, McKeen Co., and Kinzua, Warren Co., Pa.

Aorocrinus nodosus Springer.

Springer, Amer. Sil. Crin., p. 47, pl. 10, figs. 16-16b, 1926.

Sil. (Niagaran-Decatur ls.): Tennessee River, 10 miles above Clifton, Perry Co., Tenn.

Aorocrinus parvibasis (Wachsmuth and Springer).

Dorycrinus parvibasis Wachsmuth and Springer, in Miller, N. Amer. Geol. Pal., p. 241, fig. 291, 1889; Geol. Surv. Ill., 8, p. 177, pl. 17, figs. 7, 9, 9a, 1890.

Aorocrinus parvibasis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 473, pl. 45, figs. 3a, b, 1897.—Laudon and Beane, Iowa Univ. Studies, 17, no. 6, p. 245, pl. 15, fig. 16, 1937.

Miss. (Kinderhook-Hampton fm.): Legrand, Marshall Co., Iowa.

Aorocrinus parvus (Shumard).

Actinocrinus parvus Shumard, 2d Rep. Geol. Surv. Mo., p. 193, pl. A, fig. 9, 1855.

Aorocrinus parvus Wachsmuth and Springer, N. Amer. Crin. Cam., pp. 455, 477, pl. 45, figs. 11a, b, 1897.

Actinocrinus symmetricus Hall, Geol. Iowa, 1, pt. 2, p. 574, pl. 10, figs. 8a, b, 1858; Suppl., pl. 2, fig. 10, 1860.

Dorycrinus amoenus S. A. Miller, Geol. Surv. Mo., p. 35, pl. 3, figs. 5, 6, 1891.

Miss.: St. Louis Co., Mo. (Low. Burlington ls.); Burlington, Iowa, and Louisiana, Mo. (Up. Burlington ls.); Sedalia, etc., Mo. (Chouteau ls.).

Aorocrinus praecursor (Hall).

Actinocrinus praecursor Hall, 15th Rep. Regents Univ. St. N. Y., p. 131, 1862.

?*Aorocrinus praecursor* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 484, 1897.

Aorocrinus praecursor Goldring, N. Y. St. Mus., Mem. 16, p. 253, pl. 35, fig. 4, 1923.

Dev. (Hamilton-Moscow sh.): Canandaigua Lake, western N. Y.

Aorocrinus? *prümiensis* Wachsmuth and Springer = *Periechocrinites prümiensis*.

Aorocrinus puteatus Rowley.

Rowley in Greene, Cont. Ind. Pal., 2, pt. 1, p. 9, pl. 3, figs. 6-8, 1906.

Dev. (Hamilton-Sellersburg ls.): Speeds Cement Quarry, Clark Co., Ind.

Aorocrinus radiatus (Wachsmuth and Springer).

Dorycrinus radiatus Wachsmuth and Springer, in Miller, N. Amer. Geol. Pal., p. 241, fig. 292, 1889; Geol. Surv. Ill., 8, p. 176, pl. 17, figs. 5, 5a, 1890.

Aorocrinus radiatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 472, pl. 45,

fig. 1, 1897.—Laudon and Beane, Iowa Univ. Studies, 17, no. 6, p. 245, pl. 15, fig. 18, 1937.

Miss. (Kinderhook-Hampton fm.): Legrand, Marshall Co., Iowa.

Aorocrinus spinosulus (Hall).

Actinocrinus spinosulus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 52, 1860.

Aorocrinus spinosulus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 476, pl. 43, fig. 4; pl. 44, figs. 8a, b, 1897.

Dorycrinus kelloggi Worthen, Geol. Surv. Ill., 6, p. 513, pl. 29, fig. 8, 1875.

Miss.: Nauvoo, etc., Ill., Keokuk, Iowa (Keokuk ls.); Burlington, Iowa (Up. Burlington ls.).

Aorocrinus subaculeatus (Hall).

Actinocrinus subaculeatus Hall, Geol. Surv. Iowa, 1, pt. 2, p. 570, pl. 10, figs. 2a, b, 1858.

Aorocrinus subaculeatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 476, pl. 45, figs. 7a, b, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Aorocrinus wachsmuthi Rowley.

Rowley, Amer. Geol., 27, p. 348, pl. 28, fig. 38, 1901.

Miss. (Low. Burlington ls.): Louisiana, Mo.

Apiocrinites Hisinger (not Miller) = *Enallocrinus*.

Apiocrinites punctatus Hisinger = *Enallocrinus scriptus*.

Apiocrinus radiatus Eichwald = *Cyathocrinites radiatus*.

Aplocrinus d'Orbigny = *Haplocrinites*.

Apogaphiocrinus Moore and Plummer. Genotype: *A. typicalis* Moore and Plummer.

Poteriocrinitidae (Inadunata-Fistulata). Penn., Permian.

Moore and Plummer, Univ. Texas Pub. no. 3945, p. 115, 1940.

Apogaphiocrinus calycinus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 128, pl. 3, fig. 7, text fig. 16, 1940.

Penn. (Graford fm.): Northwest side Kyle Mtn., Palo Pinto Co., Tex.

Apogaphiocrinus carbonarius (Meek and Worthen).

Poteriocrinus (Scaphiocrinus) carbonarius Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 140, 1861; Geol. Surv. Ill., vol. 5, p. 562, pl. 24, fig. 2, 1873.

?*Graphiocrinus carbonarius* Wachsmuth and Springer, Rev. Pal., pt. 1, p. 123, 1880 (1879).

Apogaphiocrinus carbonarius Moore and Plummer, Univ. Texas Pub. no. 3945, p. 116, 1940.

Penn.: Near Springfield, Ill.

Apogradioocrinus decoratus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 126, pl. 3, fig. 2, text fig. 16, 1940.

Penn. (Mineral Wells fm.): 5½ miles north-northwest of Mineral Wells, Palo Pinto Co., Tex.

Apogradioocrinus exculptus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 123, pl. 3, fig. 1, text fig. 14, 1940.

Penn. (Mineral Wells fm.): 2½ miles west Brownwood, Texas.

Apogradioocrinus facetus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 125, pl. 3, fig. 16, 1940.

Penn. (Mineral Wells fm.): 2½ miles west Brownwood, Texas.

Apogradioocrinus pumilus (Wanner).

Delocrinus verbeeki var. *pumila* Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 194, pl. 107 (12), fig. 10; pl. 108 (13), fig. 2, 1916.

Apogradioocrinus pumila Moore and Plummer, Univ. Texas Pub. No. 3945, p. 116, 1940.

Permian: Basleo, Timor.

Apogradioocrinus quinquelobus (Wanner).

Graphioocrinus quinquelobus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 174, pl. 104 (9), fig. 14, 1916.

Apogradioocrinus quinquelobus Moore and Plummer, Univ. Texas Pub. No. 3945, p. 116, 1940.

Permian: Basleo, Timor.

Apogradioocrinus typicalis Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 118, pl. 3, figs. 4, 5, text figs. 14-16, 1940.

Graphioocrinus carbonarius Strimple, A Group of Crinoids from the Penn. of N. E. Oklahoma, p. 4, pl. 1, figs. 1-11, 1938.

Penn.: 5 miles southeast of Fredonia, etc., Wilson Co., Allen and Montgomery Cos., Kansas, and Bartlesville, Okla. (Plattsburg ls.); 1.5 mi. southeast of Fredonia, Wilson Co., 1 mile southeast of Ottawa, Franklin Co., and 4 miles east of Wayside, Kansas (Stanton ls.); Bridgeport, Wise Co., Texas (Palo Pinto ls.).

Apogradioocrinus wolfcampensis Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. no. 3945, p. 129, pl. 3, fig. 6, text fig. 16, 1940.

Permian (Cibolo ls.): Sierra Alta Creek, 3 miles north of Shafter, Presidio Co., Texas.

Apolloocrinus Moore and Plummer = **Stellarocrinus**.**Arachnoocrinus** Meek and Worthen. Genotype: *Cyathocrinus bulbosus* Hall.

Gasterocomidae (Inadunata-Fistulata). Dev.

Meek and Worthen, Geol. Surv. Ill., 2, p. 177, 1866.—Zittel, Handb. Pal., 1, p. 351, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 92 (315), 1880 (1879).—Bather, Treatise Zool. (Lankester), pt. 3, p. 175, 1900.—Springer, Mem. Mus. Comp. Zool. Harvard, 25, no. 3, p. 127, 1911; Zittel-Eastman Textb. Pal., 1, p. 219, 1913.

Arachnoocrinus bulbosus (Hall).

Cyathocrinus bulbosus Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 123, pl. 1, figs. 19-22, 1862.

Arachnoocrinus bulbosus Bather, Königl. Sven. Vet. Akad. Handl., 25, p. 169, 1893. Springer, Mem. Mus. Comp. Zool. Harvard, 25, p. 128, pl. 2, figs. 3-12, 1911.—Goldring, N. Y. St. Mus., Mem. 16, p. 353, pl. 45, pl. 46, fig. 1, 1923.

Dev. (Onondaga ls.): Le Roy, Genesee Co., and Livingston Co., N. Y.; Ontario, Canada.

Arachnoocrinus canadensis Whiteaves = **Pycnosaccus canadensis**.

Arachnocrinus extensus Wachsmuth and Springer.

Wachsmuth and Springer, Rev. Pal., pt. 1, p. 93 (316), 1880 (1879).—Rowley in Greene, Cont. Ind. Pal., 1, pt. 18, p. 180, pl. 54, fig. 1, 1904.—Springer, Mem. Mus. Comp. Zool., Harvard, 25, no. 3, p. 129, pl. 1, figs. 1-4; pl. 2, figs. 1, 2, 1911.—Goldring, N. Y. St. Mus., Mem. 16, p. 355, pl. 46, fig. 6; pl. 47, figs. 1, 2, 1923.

Dev. (Onondaga): Falls of the Ohio (Jeffersonville ls.); Le Roy, N. Y.

Arachnocrinus ignotus Stauffer.

Stauffer, Jour. Geol., 26, no. 6, p. 555, pl. 1, fig. 1, 1918.—Goldring, N. Y. St. Mus., Mem. 16, p. 357, pl. 46, figs. 2-5, 1923.

Dev. (Onondaga ls.): North shore of Lake Erie, 3½ miles east of Port Dover, Ontario.

Arachnocrinus knappi Wachsmuth and Springer.

Wachsmuth and Springer, Rev. Pal., pt. 1, p. 93 (316), 1880 (1879).—Springer, Mem. Mus. Comp. Zool., Harvard, vol. 25, p. 131, pl. 1, figs. 5-7, 1911.

Dev. (Onondaga): Near Louisville, Ky. (Jeffersonville ls.); Stafford, N. Y.

Archaeocrinus Wachsmuth and Springer. Genotype: *Glyptocrinus lacunosus* Billings.

Rhodocrinitidae (Camerata). Ord., Sil.

Wachsmuth and Springer, Rev. Pal., pt. 2, p. 189 (363), 1881; pt. 3, sec. 1, p. 96 (318), 1885; N. Amer. Crin. Cam., p. 253, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 200, 1900.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 88, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 188, 1913.

Archaeocrinus asperatus Miller and Gurley = *Diaboloocrinus asperatus*.

Archaeocrinus? *delicatus* Hudson.

Hudson, N. Y. St. Mus., Bull. 107, p. 129, text fig., 1907.

Ord. (Chazyan-Valcour ls.): Valcour Island, Lake Champlain, N. Y.

Archaeocrinus depressus Weller.

Weller, Chicago Acad. Sci., Bull. Nat. Hist. Surv., 4, pt. 1, p. 89, pl. 3, figs. 9, 10, 1900.

Sil. (Niagaran-Racine dol.): Bridgeport, Cicero, and Hawthorne, Ill.

Archaeocrinus desideratus W. R. Billings.

W. R. Billings, in Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, p. 98 (320), 1885.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 257, pl. 10, figs. 4a, b, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 200, fig. 125, 1900.

Ord. (Up. Trenton): Rochesterville, Ontario, Canada.

Archaeocrinus globularis (Nicholson and Etheridge).

Glyptocrinus globularis Nicholson and Etheridge, Mon. Sil. Foss. Girvan Dist. etc., p. 329, pl. 22, figs. 9-11, 1880.

Archaeocrinus globularis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 269, 1897.

Ord. (Caradocian-Craighead ls.): Thraive Glen, Girvan District, Scotland.

Archaeocrinus knoxensis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 6, p. 34, pl. 3, figs. 10-12, 1895.

Ord. (Chazyan-Heiskell sh.): Knoxville, Tenn.

Archaeocrinus lacunosus (Billings).

Glyptocrinus lacunosus Billings, Geol. Surv. Canada, Rep. Prog. 1853-1856, p. 261, 1857; Geol. Surv. Canada, Can. Org. Rem., Dec. IV, p. 61, pl. 8, figs. 3 a-e, 1859.

Archaeocrinus lacunosus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 255, pl. 10, fig. 1, 1897.

Ord. (Trenton-Hull ls.): Ottawa and Kirkfield, Ontario, Canada.

Archaeocrinus marginatus (Billings).

Glyptocrinus marginatus Billings, Geol. Surv. Canada, Rep. Prog. 1853-1856, p. 60, 1857; Geol. Surv. Canada, Can. Org. Rem., Dec. IV, p. 59, pl. 9, figs. 1, 1a, 1859. Wachsmuth and Springer, N. Amer. Crin. Cam., pp. 254, 275, pl. 20, fig. 2, 1897.

Archaeocrinus marginatus Wachsmuth and Springer, Rev. Pal., pt. 2, p. 190 (364), 1881.

Ord. (Trenton-Hull ls.): Ottawa, Canada.

Archaeocrinus microbasalis (Billings).

Thysanocrinus (Rhodocrinus) microbasalis Billings, Geol. Surv. Canada, Rep. Prog. 1853-1856, p. 264, 1857.

Rhodocrinus microbasalis Billings, Geol. Surv. Canada, Can. Org. Rem., Dec. IV, p. 63, pl. 6, fig. 2, 1859.

Archaeocrinus microbasalis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 256, pl. 10, figs. 2, 2 a-c, 1897.

Ord. (Trenton): Ottawa and Kirkfield, Ontario, Hull, Quebec, Canada (Hull ls.); Woodford Co., Ky. (Curdsville ls.).

Archaeocrinus obconicus Slocom.

Slocom, Iowa Geol. Surv., 29, p. 328, pl. 29, figs. 10-13, 1924.

Early Sil. (Richmond-Low. Maquoketa, Elgin sh.): Clermont, Iowa.

Archaeocrinus parvus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 5, p. 21, pl. 2, figs. 26-28, 1894.

Ord. (Chazyan-Heiskell sh.): Knox Co., Tenn.

Archaeocrinus peculiaris Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 5, p. 17, pl. 2, figs. 1-3, 1894.

Ord. (Chazyan-Heiskell sh.): Knox Co., Tenn.

Archaeocrinus pyriformis (Billings).

Thysanocrinus (Rhodocrinus) pyriformis Billings, Geol. Surv. Canada, Rep. Prog. 1853-1856, p. 262, 1857.

Rhodocrinus pyriformis Billings, Geol. Surv. Canada, Can. Org. Rem., Dec. IV, p. 61, pl. 6, figs. 1 a-d, 1859.

Archaeocrinus pyriformis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 255, pl. 10, figs. 3a, b, 1897.

Ord. (Trenton-Hull ls.): Montreal and Kirkfield, Ontario, Canada.

Aristocrinus Rowley = *Dactylocrinus*.

Arthracantha Hinde = *Arthroacantha*.

Arthracantha punctobrachiata Wachsmuth and Springer = *Arthroacantha carpenteri*.

Arthroacantha Williams. Genotype: *A. ithacensis* Williams.

Hexacrinitidae (Adunata). Dev.

Williams, Proc. Amer. Philos. Soc., p. 84, 1883.—Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, p. 116 (338), 1885.—Whiteaves, Cont. Canadian Pal., 1, p. 96, 1887.—Schmidt, Centralbl. Min., Geol. Pal., p. 110, 1915; Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 49, 1934. (See also *Platyhexacrinus*.)

Arthroacantha Hinde, Ann. Mag. Nat. Hist., (6) 17, p. 273, 1886.—Wachsmuth and Springer, N. Amer. Crin. Cam., pp. 741, 747, 1897.—Bather, Treatise Zool. (Lanckester), pt. 3, p. 158, 1900.

Hystericrinus Hinde, Ann. Mag. Nat. Hist., (5) 15, p. 168, 1885. (Genotype: *H. carpenteri* Hinde.)

Arthroacantha carpenteri (Hinde).

Hystericrinus carpenteri Hinde, Ann. Mag. Nat. Hist., (5) 15, p. 162, pl. 6, figs. 1-16, text fig., 1885.

Arthroacantha carpenteri Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, p. 119 (341), 1885.

- Arthracantha carpenteri* Goldring, N. Y. St. Mus., Mem. 16, p. 288, text fig. 52, pl. 60, figs. 1-3, 1923.—Stewart, Bull. Geol. Surv. Ohio, 32, p. 22, pl. 1, figs. 9-11; Ohio Jour. Sci., 40, no. 2, p. 55, pl. 1, fig. 5; p. 56, text fig. 1, 1940.
- Arthroacantha punctobrachiata* Whiteaves, Cont. Can. Pal., 1, p. 96, pl. 13, figs. 1, 1a, 1887.
- Arthracantha punctobrachiata* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 750, pl. 76, figs. 2a, b, 1897.—Wood, Smiths. Misc. Coll., 47, p. 81, pl. 16, fig. 4, 1904.—Shimer and Grabau, N. A. Index Foss., 2, p. 520, fig. 1844, 1912.
Dev.: Arkona; Ontario (Arkona fm.); Sylvania, Ohio (Silica sh.).
- Arthroacantha? claviger** Schmidt.
Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 49, text fig. b, b-1, pl. 6, figs. 1a, b, 1934.
Low. Dev. (Hunsrück sl.): Gemunden, Germany.
- Arthroacantha cooperi** (Goldring).
Arthracantha cooperi Goldring, in Cooper and Williams, Bull. Geol. Soc. Amer., 46, p. 834, pl. 58, figs. 13, 19, 1935.
Dev. (Tully-Westbrook mem.): 3 miles south of Sherburne, N. Y.
- Arthroacantha depressa** (Wachsmuth and Springer).
Arthracantha depressa Wachsmuth and Springer, N. Amer. Crin. Cam., p. 751, pl. 76, figs. 3a, b, 1897.—Schmidt, Centralbl. Min. Geol. Pal., no. 4, p. 125, 1915.—Goldring, N. Y. St. Mus., Mem. 16, p. 295, pl. 37, figs. 9-11, 1923.
Dev. (Low. Chemung-Prattsburg ss.): Steuben Co., N. Y.
- Arthroacantha eboracea** (Hall).
Platycrinus eboraceus Hall, 15th Rep. Regents Univ. St. N. Y., p. 119, 1862.
Arthracantha eboracea Goldring, N. Y. St. Mus., Mem. 16, p. 279, text fig. 51, pl. 37, figs. 1-4, 1923.
Dev. (Hamilton): Near York, Livingston Co., Moscow, etc. (Moscow sh.); Canandaigua Lake, N. Y. (Centerfield ls.).
- Arthroacantha eupelmatus* Schmidt = *Castrocrinus eupelmatus*.
- Arthroacantha granosa** (Goldring).
Arthracantha granosa Goldring, N. Y. St. Mus., Mem. 16, p. 298, pl. 37, figs. 12-15, 1923.
Dev. (Portage-Grimes ss.): Deyo Basin, 2 miles south Naples, N. Y.
- Arthroacantha hystrix* Schmidt = *Adelocrinus hystrix*.
- Arthroacantha ithacensis** Williams.
Williams, Proc. Amer. Philos. Soc., pp. 83, 85, text figs., 1883.
Arthracantha ithacensis Wachsmuth and Springer, N. Amer. Crin. Cam., pp. 747, 749, pl. 76, figs. 1 a-c, 1897.—Goldring, N. Y. St. Mus., Mem. 16, p. 292, pl. 37, figs. 6-8, 1923.
Dev.: Ithaca (Portage fm.-Ithaca sh.) and Georgetown (Hamilton-Moscow sh.), N. Y.
- Arthroacantha mamelonifera** (Thomas).
Arthracantha mamelonifera Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 463, pl. 42, figs. 14-18, 1924.
Dev. (Independence sh.): Near Brandon, Iowa.
- Arthroacantha? ornata* Schmidt = *Platyhexacrinus ornatus*.
- Arthroacantha punctobrachiata** (Hall).
Platycrinus? punctobrachiatus Hall, N. Y. St. Mus., Bull. 1, pl. 1, fig. 15, 1872.
Arthracantha punctobrachiata Goldring, N. Y. St. Mus., Mem. 16, p. 285, pl. 37, fig. 5, 1923.
Dev.: Western N. Y. (Hamilton-Ludlowville sh.); Thedford, etc., Ontario (Arkona beds).
- Arthroacantha punctobrachiata* Whiteaves = *A. carpenteri*.

- Arthroacantha schwerdii** (Follmann).
Hystricrinus schwerdii Follmann, Verh. Nat. Preuss. Rheinl., etc. Jahrg. 58, p. 66, pl. 1, 1901.
Arthroacantha schwerdii Schmidt, Centralbl. Min., Geol. Pal., no. 4, p. 124, 1915.
 Dev. (Upper Coblenzian): Coblenz, Germany.
- Arthroacantha similis** (Goldring).
Arthroacantha similis Goldring, in Cooper and Williams, Bull. Geol. Soc. Amer., 46, p. 835, pl. 58, fig. 18, 1935.
 Dev. (Tully-Westbrook mem.): 3 miles south of Sherburne, N. Y.
- Arthroacantha splendens** (Goldring).
Arthroacantha splendens Goldring, N. Y. St. Mus., Mem. 16, p. 302, pl. 37, fig. 16, 1923.
 Dev. (Low. Chemung beds): 4 miles north of Bath, N. Y.
- Arthroacantha tenuispinata** Schmidt.
 Schmidt, Centralbl. Min. Geol. Pal., no. 4, p. 124, fig. 3, 1915.
 Dev. (Upper Coblenzian): Liesertales, Germany.
- Artichthyocrinus** Wright. Genotype: *A. springeri* Wright.
 Ichthyocrinidae (Flexibilia). Low. Carb.
 Wright, Geol. Mag., 60, p. 481, 1923.
- Artichthyocrinus springeri** Wright.
 Wright, Geol. Mag., 60, p. 484, fig. 8, 1923; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 55, pl. 11, figs. 12-15, 1939.
 Low. Carb. (Low. Ls. gr.): Invertiel, Roscobie, etc., Fife, Scotland.
- Asaphocrinus** Springer. Genotype: *A. bassleri* Springer.
 Lecanocrinidae (Flexibilia). Sil.
 Springer, Crin. Flexibilia, p. 174, 1920; Amer. Sil. Crin., p. 66, 1926.
- Asaphocrinus bassleri** Springer.
 Springer, Crin. Flexibilia, p. 178, pl. 10, figs. 10-14, 1920; Amer. Sil. Crin., p. 66, pl. 20, figs. 20, 20a, 21, 1926.
 Sil. (Niagaran-Beech River ls.): 2 miles north Decaturville, Tenn.
- Asaphocrinus excavatus** (Ringueberg).
Lecanocrinus excavatus Ringueberg, Bull. Buffalo Soc. Nat. Sci., 5, p. 11, pl. 1, fig. 7, 1886.
Asaphocrinus excavatus Springer, Crin. Flexibilia, p. 177, pl. 4, figs. 23-29, 1920.
 Sil. (Niagaran-Rochester sh.): Lockport, N. Y.
- Asaphocrinus incisus** (Ringueberg).
Lecanocrinus incisus Ringueberg, Bull. Buffalo Soc. Nat. Sci., 5, p. 10, pl. 1, fig. 6, 1886.
Asaphocrinus incisus Springer, Crin. Flexibilia, p. 178, pl. 4, fig. 30, 1920.
 Sil. (Niagaran-Rochester sh.): Lockport, N. Y.
- Asaphocrinus minor** Springer.
 Springer, Amer. Sil. Crin., p. 67, pl. 20, fig. 22, 1926.
 Sil. (Niagaran-Laurel ls.): St. Paul, Ind.
- Asaphocrinus ornatus** (Hall).
Lecanocrinus ornatus Hall, Nat. Hist. N. Y., Pal., 2, p. 201, pl. 44, figs. 2 a-m, 1852.
Asaphocrinus ornatus Springer, Crin. Flexibilia, p. 176, pl. 4, figs. 1-22, 1920.
Lecanocrinus nitidus Ringueberg, Bull. Buffalo Soc. Nat. Sci., 5, p. 9, pl. 1, fig. 5, 1896.
 Sil. (Niagaran-Rochester sh.): Lockport, N. Y.
- Ascarum** Gregorio. Genotype: *A. montanum* Gregorio.
 Gregorio, Ann. Geol. Pal., 52, Palermo, p. 42, 1930. (Unrecognizable fragments.)

Ascarum montanum Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 42, pl. 15, fig. 7, 1930.
Permian: Sicily.

Ascetocrinus Kirk. Genotype: *Scaphiocrinus rusticellus* White.

Poteriocrinitidae (Inadunata-Fistulata). Miss.
Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 324, 1940.

Ascetocrinus rusticellus (White).

Scaphiocrinus rusticellus White, Boston Jour. Nat. Hist., 7, p. 505, 1863.—Keyes,
Geol. Surv. Mo., 4, p. 212, pl. 26, fig. 1, 1894.

Abrotocrinus rusticellus Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 72, pl. 16,
fig. 11, 1926.

Ascetocrinus rusticellus Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 325, 1940.
Miss. (Up. Burlington ls.): Burlington, Iowa.

Ascetocrinus whitei (Hall).

Scaphiocrinus whitei Hall, Jour. Boston Soc. Nat. Hist., 7, p. 306, 1861. (Prelim.
Not., p. 7.)

Poteriocrinus whitei Wachsmuth and Springer, Rev. Pal., pt. 1, p. 112 (335), 1880
(1879).

Ascetocrinus whitei Kirk, Jour. Washington Acad. Sci. 30, no. 8, p. 325, 1940.
Miss. (Low. Burlington ls.): Burlington, Iowa.

Ascocrinus Jaekel (not Barrande). Genotype: *A. bohemicus* Jaekel.

Homocrinidae (Inadunata-Fistulata). Dev.

Jaekel, Pal. Zeits., 3, p. 54, 1918.

Ascocrinus bohemicus Jaekel.

Jaekel, Pal. Zeits., 3, p. 54, fig. 44, 1918.

Dev. (Div. H₁): Hlubocep, Bohemia.

Aspidocrinus Hall. Genotype: *A. scutelliformis* Hall.

Hall, Amer. Jour. Sci., (2) 25, p. 278, 1858; Nat. Hist. N. Y., Pal., 3, p. 122, 1859
(1861).—Ehrenberg, Bull. Amer. Mus. Nat. Hist., 29, p. 40, 1929. (Incrusting
root of crinoid.)

Aspidocrinus callosus Hall.

Hall, Nat. Hist. N. Y., Pal., 3, p. 125, pl. 5, figs. 13, 14, 1859.—Goldring, N. Y.
St. Mus., Mem. 16, p. 444, pl. 59, figs. 10–12, 1923.

Dev. (Helderbergian-New Scotland ls.): Helderberg Mts. and Schoharie, N. Y.

Aspidocrinus caroli Swartz.

Swartz, U. S. Geol. Surv., Prof. Paper 158-C, p. 52, pl. 9, figs. 10–12, 1929.

Dev. (Helderbergian, Becraft ls.-Giles fm.): Hollybrook, Va.

Aspidocrinus digitatus Hall.

Hall, Nat. Hist. N. Y., Pal., 3, p. 123, pl. 5, figs. 19, 20, 1859.—Goldring, N. Y. St.
Mus., Mem. 16, p. 443, pl. 59, figs. 8, 9, 1923.

Dev. (Helderbergian-New Scotland ls.): Schoharie, N. Y.

Aspidocrinus onondagensis Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 444, pl. 59, fig. 13, 1923.

Dev. (Onondaga ls.): Limerock, Genesee Co., N. Y.

Aspidocrinus scutelliformis Hall.

Hall, Nat. Hist. N. Y., Pal., 3, p. 122, pl. 5, figs. 15–18, 1859.—Goldring, N. Y.
St. Mus., Mem. 16, p. 442, pl. 59, figs. 6, 7, 1923.—Ehrenberg, Bull. Amer. Mus.
Nat. Hist., 59, p. 40, figs. 29a, b, 1929.

Dev. (Helderbergian): Helderberg Mts. and Schoharie, N. Y. (New Scotland ls.);
near Hudson, N. Y. (Becraft ls.).

Asterocrinites Roemer = *Asterocrinus*.

Asterocrinus Lyon = *Pterotocrinus*.

Asterocrinus Münster. Genotype: *A. murchisoni* Münster.

Münster, *Stellerid foss. Mü.*, *Beit. I*, p. 180, 1831; *Beit. Petref.*, 1, p. 4, 1839.—
Bather, *Treatise Zool. (Lankester)*, pt. 3, p. 201, 1900.

Asterocriniles Roemer, *Archiv. Natur.*, *Jahrg. 17*, 1, p. 390, 1851. (Substituted
for *Asterocrinus* Münster.)

Asterocrinus münsteri Eichwald.

Eichwald, *Ueber Sil. Schichtensyst. in Esthland*, p. 195 (German ed.), p. 207
(French ed.), 1840; *Leth. Ross.*, 1, p. 658, pl. 31, figs. 61 a-c, 1860 (columnals).

Ord. (Walchow fm., B 2a): Estland.

Asterocrinus murchisoni Münster.

Münster, *Beit. Petref.*, 1, p. 4, pl. 16, fig. 7, 1839 (columnals only).

Dev. (*Orthoceras* ls.): Elbersreuth, Germany.

Asterocrinus priscus Eichwald.

Eichwald, *Ueber Silur. Schichtensyst. in Esthland*, p. 196 (German ed.), p. 208
(French ed.), 1840.

Ord.: Pulkowa, Russia.

Astrocrinites Conrad = *Ctenocrinus*.

Astrocrinus Bather = *Ctenocrinus*.

Astroporites Lambe. Genotype: *A. ottawaensis* Lambe.

Lambe, *Canadian Rec. Sci.*, 7, p. 1, 1896.—Springer, *Geol. Surv. Canada, Mem.*
15-P, p. 46, 1911. (Basal portion of crinoid root.)

Astroporites ottawaensis Lambe.

Lambe, *Canadian Rec. Sci.*, 7, p. 1, pl. 1, 1896.—Ehrenberg, *Bull. Amer. Mus. Nat.*
Hist., 59, p. 59, fig. 37, 1929.

Ord. (Trenton): Ottawa and Kirkfield, Ontario, Can. (Hull ls.); Mercer Co., Ky.
(Curdsville ls.).

Astylocrinus Roemer = *Agassizocrinus*.

Asymmetrocrinus Wanner. Genotype: *A. poteriocrinoides* Wanner.

Hypocrinidae (Inadunata-Fistulata). Permian.

Wanner, *Beitr. Geol. Niederl.-Ind.*, *Abt. 4*, pt. 2, pp. 130, 133, 1937.

Asymmetrocrinus poteriocrinoides Wanner.

Wanner, *Beitr. Geol. Niederl.-Ind.*, *Abt. 4*, pt. 2, p. 134, pl. 9, figs. 15-26, 1937.

Permian: Basleo, Timor.

Atactocrinus Weller. Genotype: *A. wilmingttonensis* Weller.

Rhodocrinitidae (Camerata). Early Silurian.

Weller, *Cont. Walker Mus.*, 1, p. 239, 1916.—Bather, *Geol. Mag.*, 4, p. 133, 1917.

Atactocrinus wilmingttonensis Weller.

Weller, *Cont. Walker Mus.*, 1, p. 239, pl. 15, figs. 1-10, 1916.

Early Sil. (Richmond-Maquoketa sh., Fernvale zone): Kankakee River, near Wil-
mington, Ill.

Ataxiacrinus Lyon = *Anomalocrinus*.

Ataxocrinus Bather = *Anomalocrinus*.

Atelestocrinus Wachsmuth and Springer. Genotype: *A. delicatus* Wachsmuth and
Springer.

Botryocrinidae (Inadunata-Fistulata). Miss.

Wachsmuth and Springer, *Rev. Pal.*, pt. 3, p. 221 (145), 1886.—Bather, *Ann. Mag.*
Nat. Hist., (6) 5, p. 332, 1890; *Treatise Zool. (Lankester)*, pt. 3, p. 179, 1900.—
Springer, *Zittel-Eastman Textb. Pal.*, 1, p. 218, 1913.—Jaekel, *Pal. Zeits.*, 3,
p. 60, 1918.

- Atelestocrinus delicatus** Wachsmuth and Springer.
Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 2, p. 223 (147), 1886.
Miss. (Low. Burlington ls.): Burlington, Iowa.
- Atelestrocrinus robustus** Wachsmuth and Springer.
Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, pl. 6, fig. 4, pl. 9, fig. 4, 1885;
sec. 2, p. 223 (147), 1886.
Miss. (Burlington-Keokuk transition bed); near Burlington, Iowa.
- Athlocrinus** Moore and Plummer. Genotype: *A. placidus* Moore and Plummer.
Poteriocrinitidae (Inadunata-Fistulata). Penn.
Moore and Plummer, Univ. Texas Pub., no. 3945, p. 169, 1940.
- Athlocrinus clypeiformis** Moore and Plummer.
Moore and Plummer, Univ. Texas Pub. No. 3945, p. 172, pl. 6, fig. 2, text fig. 31, 1940.
Penn. (Graford fm.): 2½ miles northwest Graford, Palo Pinto Co., Tex.
- Athlocrinus nitidus** Moore and Plummer.
Moore and Plummer, Univ. Texas Pub. No. 3945, p. 171, pl. 6, fig. 3, 1940.
Penn. (Mineral Wells fm.): 2.5 miles north, 2.5 miles east of Rochelle, McCulloch Co., Tex.
- Athlocrinus placidus** Moore and Plummer.
Moore and Plummer, Univ. Texas Pub. No. 3945, p. 170, pl. 6, fig. 1, text fig. 30, 1940.
Penn. (Plattsburg ls.): 2.4 miles west Altoona, Kansas.
- Atocrinus* McCoy = *Cyathocrinites*.
- Atremacrinus** Wanner. Genotype: *A. calyculus* Wanner.
Hypocrinidae (Inadunata-Fistulata). Permian.
Wanner, Neue Beitr. kennt. Perm. Echin. Timor, pp. 40, 82, 1929.
- Atremacrinus calyculus** Wanner.
Wanner, Neue Beitr. kennt. Perm. Echin. Timor, p. 83, pl. 6, fig. 16; pl. 7, fig. 13, 1929.
Permian: Basleo, Timor.
- Atyphocrinus** Ulrich. Genotype: *A. corryvillensis* Ulrich.
Heterocrinidae (Inadunata-Fistulata). Ord.
Ulrich, in Foerste, Geol. Surv. Canada, Mem. 138, p. 85, 1924.
- Atyphocrinus corryvillensis** Ulrich.
Ulrich, in Foerste, Geol. Surv. Canada, Mem. 138, p. 85, text fig. 4, 1924.
Heterocrinus juvenis Meek, Geol. Surv. Ohio, 1, pl. 1, fig. 3a (not 3b, c), 1873.
Ord. (Maysville-Corryville sh.): Cincinnati, Ohio.
- Aulocrinus** Wachsmuth and Springer. Genotype: *A. agassizi* Wachsmuth and Springer.
Poteriocrinitidae (Inadunata-Fistulata). Miss.
Wachsmuth and Springer, N. Amer. Crin. Cam., p. 138, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 190, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 224, 1913.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 178, 1924.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 70, 1926.
- Aulocrinus agassizi** Wachsmuth and Springer.
Wachsmuth and Springer, N. Amer. Crin. Cam., p. 138, pl. 7, fig. 9, 1897.—Springer, Amer. Geol., 26, p. 140, pl. 16, figs. 11, 12, 1900; U. S. Nat. Mus., Proc., 67, art. 9, p. 74, pl. 19, figs. 1-5, 1926.
Miss. (Keokuk ls.): Indian Creek, Ind.
- Bactrocrinites** Schnur. Genotype: *Poteriocrinus fusiformis* Roemer (part).
Paleocrinidae (Inadunata-Fistulata). Dev.
Schnur, in Steininger, Verst. Uebergang. Eifel, p. 22, 1849.—Geogn. Beschreib. Eifel, p. 38, 1853.

- Bactrocrinus* Quenstedt, Petref. Deutsch., 4, p. 533, 1875.—Zittel, Handb. Pal., 1, p. 361, 1879.—Jaekel, Pal. Abhandl., n. f., 3, p. 81, 1895.—Bather, Treatise Zool. (Lankester), pt. 3, p. 173, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 218, 1913.—Schmidt, Abhandl. Preuss. Geol. Landes., n. f., heft 163, pp. 56, 141, 144, 1849.
- Bactrocrinites birmanicus** Reed.
Reed, Pal. Indica, II, Mem. 5, p. 39, pl. 5, fig. 12, 1908.
Dev.: Padaukpin, India.
- Bactrocrinites fusiformis** (Roemer).
Poteroicrinus fusiformis Roemer, Rheinische Uebergangs., p. 61, pl. 3, figs. 2 a-d, 1844.—Schultze, Denk. Kais. Akad. Wiss., Math. Naturw. Cl., 26, p. 157, pl. 5, figs. 1, 1a-g (not 1h, li), 1867 (adv. pub., 1866).
Bactrocrinites fusiformis (Schnur ms.) Steininger, Jahres. Schul.-Cursus Gym. Trier, p. 22, 1849; Geogn. Beschreib. Eifel, p. 38, 1853.
Bactrocrinus fusiformis Jaekel, Pal. Abhandl., 7, p. 83, fig. 26, 1895.
Mid. Dev.: (Eifelian): Gerolstein, Kerpen, and Felm, Germany.
- Bactrocrinites jaekeli** (Schmidt).
Bactrocrinus jaekeli Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 56, text figs. 9a, 9a₁; pp. 141, 145, 147, 1934.
Bactrocrinus nanus Jaekel, Pal. Abhandl., 7, p. 85, pl. 6, figs. 1, 2, 1895.
Low. Dev. (Hunsrück sl.): Bundenbach, Germany.
- Bactrocrinites mülleri** (Jaekel).
Bactrocrinus mülleri Jaekel, Pal. Abhandl., 7, p. 84, pl. 6, fig. 4, 1895.
Poteroicrinus fusiformis Müller (not Roemer), Neues. Crin. Eifelkalk, p. 250, pl. 2, fig. 2, 1856.
Mid. Dev. (Eifelian): Gerolstein, Germany.
- Bactrocrinites tenuis** (Jaekel).
Bactrocrinus tenuis Jaekel, Pal. Abhandl., 7, p. 82, 1895.
Bactrocrinites fusiformis Schnur (part), in Steininger, Jahr. Schul.-Cursus Gym. Trier, p. 22, 1849; Geogn. Beschreib. Eifel, p. 38, 1853.
Poteroicrinus fusiformis Schultze (part), Denk. Kais. Akad. Wiss., Math. Naturw. Cl., 26, p. 157, pl. 5, fig. 1h, li (not 1, 1a-g), 1867 (adv. pub., 1866).
Mid. Dev. (Eifelian): Gerolstein, Germany.
- Bactrocrinites? trabicus** (Schmidt).
Bactrocrinus? trabicus Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, pp. 57, 58, text figs. 9 b-b₂, pl. 11, fig. 2; pp. 141, 145, 147, 1934.
Low. Dev. (Hunsrück sl.): Gemunden and Bundenbach, Germany.
- Bactrocrinites westoni** (Belanski).
Bactrocrinus westoni Belanski, Amer. Mid. Nat., 11, no. 5, p. 177, pl. 13, figs. 35-37, 1928.
Dev. (Shellrock ls.): Rockford and Nora Springs, Iowa.
- Bactrocrinites zeileri** (Jaekel).
Bactrocrinus zeileri Jaekel, Pal. Abhandl., 7, p. 84, 1895.
Poteroicrinus rhenanus Müller (part), in Zeiler and Wirtgen, Verh. Naturhist. Preuss. Rheinl. Westphal., 12, p. 20, pl. 7, fig. 2 (not 1 and 3), 1855.
Low. Dev. (Coblentzian): Niederlahnstein, Germany.
- Bactrocrinus* of authors = *Bactrocrinites*.
Bactrocrinus nanus Jaekel = *Bactrocrinites jaekeli*.
- Baerocrinus** Volborth. Genotype: *B. ungeri* Volborth.
Hybocrinidae (Inadunata-Fistulata). Ord.
Volborth, Eine neue Crin. Gattung, p. 65, 1864; Bull. St. Petersb. Acad., 8, p. 178, 1865; Bull. Soc. Imp. Nat. Moscou, 38, pp. 11, 442, 1866.—Wachsmuth and

- Springer, Rev. Pal., pt. 3, p. 195 (119), 1886.—Bather, Ann. Mag. Nat. Hist., (6) 5, p. 334, 1890; Geol. Mag., 5, p. 420, 1896.—Springer, Zittel-Eastman Textb. Pal., 1, p. 211, 1913.
- Baerocrinus parvus** Jaekel.
Jaekel, Verh. 5, Internat. Zool. Congr., Berlin, p. 1086, fig. 16, 1902.
Ord. (Kunda fm.-Orthoceras ls.): St. Petersburg, Russia.
- Baerocrinus ungerni** Volborth.
Volborth, Bull. Acad. Imp. Sci. St. Petersburg, 8, p. 178, with plate, 1865; Bull. Soc. Imp. Sci. Moscou, 38, p. 442, 1865 (adv. pub., 1864).—Carpenter, Quart. Jour. Geol. Soc. London, 38, p. 298, text figs. 1, 2, pl. 11, fig. 1, 1882.—Bather, Quart. Jour. Geol. Soc. London, 45, p. 163, text fig. 1-B, 1889; Ann. Mag. Nat. Hist., (6) 6, p. 386, pl. 15, fig. 3, 1890; Königl. Sv. Vat. Akad. Handl., 25, p. 104, 1893; Treatise Zool. (Lankester), pt. 3, p. 145, fig. 57-4, 1900.
Ord. (Kuckers fm.): Erras, Estonia.
- Balanocrinites Troost = Lampteroocrinus.
Balanocrinus Hall = Lampteroocrinus.
- Barrandeoocrinus** Angelin. Genotype: *B. sceptrum* Angelin.
Carpocrinidae (Camerata). Sil.
Angelin, Icon. Crin. Suec., p. 7, 1878.—Zittel, Handb. Pal., 1, p. 368, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, p. 125 (347), 1885.—Bather, Treatise Zool. (Lankester), pt. 3, p. 166, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 195, 1913.
- Barrandeoocrinus sceptrum** Angelin.
Angelin, Icon. Crin. Suec., p. 8, pl. 4, figs. 5, 5a, pl. 5, figs. 6, 6a; pl. 22, figs. 2-4, 1878.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 485, pl. 8, fig. 1, 1927.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 35, pl. 9, figs. 6, 7, 1926.
Sil. (Gotlandian): Follingbo, Island of Gotland.
- Barycrinus** Wachsmuth. Genotype: *Cyathocrinus spurius* Hall.
Botryocrinidae (Inadunata-Fistulata). Miss.
Wachsmuth, in Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 338, 1868.—Zittel, Handb. Pal., p. 352, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 99 (322), 1880 (1879); pt. 3, p. 224 (148), 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 179, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 218, 1913.
- Barycrinus angulatus** (Meek and Worthen).
Cyathocrinus angulatus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 393, 1860; Geol. Surv. Ill., 2, p. 234, pl. 17, fig. 4, 1866.
Barycrinus angulatus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 340, 1868.
Miss.: Nauvoo, Ill. and Crawfordsville, Ind. (Keokuk ls.); Sagetown, Ill. (Burlington-Keokuk ls. transition).
- Barycrinus asperrimus** Springer.
Springer, U. S. Nat. Mus., Proc., 11, p. 200, 1911.
Miss.: Whites Creek Springs, Tenn. (New Providence sh.); Burlington, Iowa (Burlington ls.).
- Barycrinus blairi** S. A. Miller.
S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 25, pl. 3; figs. 11-13, 1891.
Miss. (Warsaw ls.): Boonville, Mo.
- Barycrinus boonvillensis** S. A. Miller.
S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 24, pl. 3, fig. 5, 1891; N. Amer. Geol. Pal., 2d App., p. 735, fig. 1301, 1897.
Miss. (Warsaw ls.): Boonville, Mo.
- Barycrinus bullatus** (Hall).
Cyathocrinus bullatus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 624, pl. 18, fig. 1, 1858.

- Barycrinus bullatus* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 340, 1868.
Cyathocrinus protuberans Hall, Geol. Rep. Iowa, 1, pt. 2, p. 626, pl. 18, fig. 9, text fig. 99, 1858.
 Miss.: Green Co. and Warsaw, Ill.; Crawfordsville, Ind. (Keokuk ls.); Whites Creek Springs, Tenn. (Ft. Payne ch.); Colesburg and Hardin Co., Ky. (Warsaw ls.).
- Barycrinus cornutus** (Owen and Shumard).
Cyathocrinus cornutus Owen and Shumard, Jour. Acad. Nat. Sci. Phila., (2) 2, pt. 1, p. 63, pl. 7, figs. 8a, b, 1850; Geol. Surv. Wisconsin, Iowa, and Minn., p. 591, pl. 5, figs. 8a, b, 1852.
Barycrinus cornutus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., 20, p. 340, 1868.
 Miss.: Burlington, Iowa (Low. Burlington ls.); Whites Creek Springs, Tenn., Clark Co., Ind.; Button Mold Knob, Ky. (New Providence sh.).
- Barycrinus crassibrachiatus** (Hall).
Cyathocrinus crassibrachiatus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 60, 1860.
Barycrinus crassibrachiatus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., 20, p. 340, 1868.
 Miss. (Keokuk ls.): Warsaw, Ill.
- Barycrinus elrodi** Miller and Gurley.
 Miller and Gurley, Ill. St. Mus., Bull. 8, p. 38, pl. 2, figs. 25-27, 1896.
 Miss. (Spergen ls.): Spergen Hill, Ind.
- Barycrinus expansus** Miller and Gurley.
 Miller and Gurley, Ill. St. Mus., Bull. 5, p. 41, pl. 4, fig. 2, 1894.
 Miss.: Whites Creek Springs, Tenn. (Ft. Payne ch.); Washington and Montgomery Cos., Ind. (Keokuk ls.).
- Barycrinus formosus** Miller and Gurley.
 Miller and Gurley, Ill. St. Mus., Bull. 3, p. 33, pl. 3, fig. 6, 1894.
 Miss. (Keokuk ls.): Washington Co. and Indian Creek, Montgomery Co., Ind.
- Barycrinus geometricus** Meek and Worthen.
 Meek and Worthen, Geol. Surv. Ill., 5, p. 485, pl. 12, fig. 3, 1873.
 Miss. (Keokuk ls.): Near Warsaw, Ill.
- Barycrinus granulatus** Rowley.
 Rowley, in Green, Cont. Indiana Pal., 2, pt. 2, p. 30, pl. 6, figs. 13, 20, 1906.
 Miss. (Warsaw ls.): Taylor Co., Colesburg, etc., Hardin Co., Ky.
- Barycrinus herculeus** (Meek and Worthen).
Barycrinus hoveyi var. *herculeus* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 341, 1868; Geol. Surv. Ill., 5, p. 485, pl. 13, fig. 2, 1873.
Barycrinus herculeus Wachsmuth and Springer, Rev. Pal., pt. 1, p. 102, 1880 (1879).
 Miss. (Keokuk ls.): Crawfordsville, etc., Ind.; Keokuk, Iowa.
- Barycrinus hoveyi** (Hall).
Cyathocrinus hoveyi Hall, Jour. Boston Soc. Nat. Hist., 7, p. 293, 1861 (Prelim. Descr., p. 5); N. Y. St. Mus., Bull. 1, pl. 5, fig. 11, 1872.
Barycrinus hoveyi Meek and Worthen, Geol. Surv. Ill., 5, p. 486, pl. 13, fig. 1, 1873.
Cyathocrinus corrugatus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419 (nom. nud.), 1849.—Wood, U. S. Nat. Mus., Bull. 64, p. 85, 1909.
 Miss.: Crawfordsville and Indian Creek, Ind. (Keokuk ls.); Whites Creek Springs, etc., Tenn. (Ft. Payne ch.).
- Barycrinus hoveyi herculeus* Meek and Worthen = *B. herculeus*.
- Barycrinus kelloggi** (White).
Cyathocrinus kelloggi White, Proc. Boston Soc. Nat. Hist., 9, p. 8, 1865. (Adv. pub., 1862).

- Barycrinus kelloggi* Wachsmuth and Springer, Rev. Pal., pt. 1, p. 102 (325), 1880 (1879).
Miss. (Up. Burlington ls.): Near Burlington, Iowa.
- Barycrinus latus** (Hall).
Cyathocrinus latus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 292, (prelim. descr., p. 5), 1861.
Barycrinus latus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., 20, p. 340, 1868.
Miss. (Burlington ls.): Adams Co., Ill., Burlington, Iowa.
- Barycrinus magister** (Hall).
Cyathocrinus magister Hall, Geol. Rep. Iowa, 1, pt. 2, p. 628, pl. 18, figs. 2a, b, 3a, b, 1858.
Barycrinus magister Meek and Worthen, Proc. Acad. Nat. Sci. Phila., 20, p. 340, 1868.
Miss. (Keokuk ls.): Keokuk, Iowa; Hancock Co., Ill.; Clark Co., Mo.
- Barycrinus magnificus** Meek and Worthen.
Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 340, 1868; Geol. Surv. Ill., 5, p. 483, pl. 12, fig. 2, 1873.—Keyes, Geol. Surv. Mo., 4, p. 210, pl. 26, fig. 4, 1894.
Miss. (Keokuk ls.): Near Biggsville, Henderson Co., Ill.; Keokuk, Iowa.
- Barycrinus mammatus** Worthen.
Worthen, in Meek and Worthen, Geol. Surv. Ill., 5, p. 486, pl. 15, fig. 4, 1873.
Miss. (Keokuk ls.): Otter Creek, Jersey Co., Ill.; Keokuk, Iowa.
- Barycrinus meekianus* Keyes = *Poteriocrinites meekianus*.
- Barycrinus neglectus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 9, p. 28, pl. 2, figs. 10-12, 1896.
Miss. (Keokuk ls.): Crawfordsville, Ind.
- Barycrinus pentagonus** Worthen.
Worthen, in Meek and Worthen, Geol. Surv. Ill., 5, p. 487, pl. 15, fig. 3, 1873.
Miss. (Keokuk ls.): Otter Creek, Jersey Co. and Warsaw, Ill.; Crawfordsville, Ind.
- Barycrinus pentasphaericus** (Troost).
Barycrinus pentasphaericus Wood, (*Cyathocrinites pentasphaericus* Troost, Ms.), U. S. Nat. Mus., Bull. 64, p. 84, pl. 5, figs. 7, 8, 1909.
Miss. (Ft. Payne ch.): Near Woodbury, Cannon Co., Tenn.
- Barycrinus princeps** Miller and Gurley.
Miller and Gurley, 16th Rep. Geol. Surv. Ind., p. 368, pl. 9, figs. 2, 3, (authors' ed., p. 52), 1890.—Miller, N. Amer. Geol. Pal., 1st App., p. 674, figs. 1212, 1213, 1892.
Miss. (Keokuk ls.): Crawfordsville, Ind.
- Barycrinus rhombiferus** (Owen and Shumard).
Poteriocrinus rhombiferus Owen and Shumard, Jour. Acad. Nat. Sci. Phila., (2) 2, pt. 2, p. 89, pl. 11, figs. 2 a-c, 1852; Geol. Surv. Wisconsin, Iowa, Minn., p. 595, pl. 5a, figs. 2 a-c, 1852.
Barycrinus rhombiferus Wachsmuth and Springer, Rev. Pal., pt. 1, p. 103 (326), 1880 (1879).
Miss.: Burlington, Iowa (Low. and Up. Burlington ls.); Button Mold Knob, Ky. (New Providence sh.).
- Barycrinus sampsoni** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 10, p. 81, pl. 5, figs. 1-3, 1896.
Miss. (Chouteau ls.): Sedalia, Mo.
- Barycrinus sculptilis** (Hall).
Cyathocrinus sculptilis Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 59, text fig., 1860.—Meek and Worthen, Geol. Surv. Ill., 2, p. 178, pl. 15, figs. 2a, 2b, 1866; 5, p. 401, pl. 4, fig. 5, 1873.

- Barycrinus sculptilis* Wachsmuth and Springer, Rev. Pal., pt. 1, p. 103 (325), 1880 (1879).—Whitfield, Mem. Amer. Mus. Nat. Hist., 1, p. 29, pl. 3, fig. 12, 1893. Miss. (Up. Burlington ls. and Burlington-Keokuk transition beds): Burlington, Iowa.
- Barycrinus solidus** (Hall).
Cyathocrinus solidus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 293, 1861; Prelim. Desc. N. Sp. Crin., p. 5, 1861.
Barycrinus solidus Hall, Proc. Acad. Nat. Sci. Phila., p. 340, 1868. Miss. (Burlington ls.): Burlington, Iowa.
- Barycrinus spectabilis** Meek and Worthen.
 Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 23, 1870.
Cyathocrinus (Barycrinus) spectabilis Meek and Worthen, Geol. Surv. Ill., 5, p. 530, pl. 20, fig. 8, 1873. Miss. (Keokuk ls.): Otter Creek, Jersey Co., Ill.
- Barycrinus spurius** (Hall).
Cyathocrinus spurius Hall, Geol. Surv. Iowa, 1, pt. 2, p. 625, pl. 18, figs. 7, 8, 1858. *Barycrinus spurius* Worthen, Geol. Surv. Ill., 8, p. 99, pl. 14, fig. 4, 1890. Miss. (Keokuk ls.): Warsaw, etc., Ill.; Keokuk, Iowa.
- Barycrinus stellatus** (Troost).
Cyathocrinites stellatus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849 (nom. nud.).
Cyathocrinus stellatus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 623, pl. 16, figs. 3, 8, 1858. *Barycrinus stellatus* Wachsmuth and Springer, Rev. Pal., pt. 1, p. 103 (326), 1880 (1879).—Wood, U. S. Nat. Mus., Bull. 64, p. 84, pl. 8, figs. 6–8, 1909.
Cyathocrinus quinquelobus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 150, 1865; Geol. Surv. Ill., 3, p. 519, pl. 20, figs. 6a, b, text fig., 1868. Miss.: Stewart Co., Whites Creek Springs, etc., Tenn. (Ft. Payne ch.); Boonville, Mo. (Warsaw ls.); New Market, etc., Ky., Warsaw etc., Ill., Clark Co., Mo., Keokuk, Iowa, Crawfordsville and Indian Creek, Ind. (Keokuk ls.).
- Barycrinus stellifer** S. A. Miller.
 S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 300, pl. 8, figs. 6–9, 1894. (Adv. pub., 1892.)
 Miss.: Harrison and Washington Cos., and Crawfordsville, Ind. (Keokuk ls.); Boonville, Mo. (Warsaw ls.).
- Barycrinus striatus** Worthen.
 Worthen, Geol. Surv. Ill., 6, p. 515, pl. 29, fig. 5, 1875. Miss. (Keokuk ls.): Otter Creek, Jersey Co., Ill.; Indian Creek, Ind.
- Barycrinus subtumidus** (Meek and Worthen).
Cyathocrinus subtumidus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 151, 1865.
Barycrinus subtumidus Meek and Worthen, Geol. Surv. Ill., 5, p. 487, pl. 13, fig. 3, 1873. Miss.: Near White Hall, Greene Co., Ill. (Keokuk ls.); Whites Creek Springs, Tenn. and Larue Co., Ky. (Ft. Payne ch.).
- Barycrinus thomae** (Hall).
Cyathocrinus thomae Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 61, pl. 1, figs. 8, 9, 1860.
Barycrinus thomae Meek and Worthen, Proc. Acad. Nat. Sci. Phila., 20, p. 340, 1868. Miss.: Warsaw, Ill. (Warsaw ls.); Lanesville, Ind. (Spergen ls.).
- Barycrinus tumidus** (Hall).
Cyathocrinus tumidus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 624, pl. 18, figs. 1b, c, 1858. *Barycrinus tumidus* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., 20, p. 340, 1868.—Worthen, Geol. Surv. Ill., 8, p. 100, pl. 14, fig. 6, 1890.—Springer, Mem. Mus. Comp. Zool., 25, pl. 4, fig. 14, 1911.

- Miss. (Keokuk ls.): Warsaw, etc., Ill.; Keokuk, Iowa; Crawfordsville, Indian Creek, and Canton, Ind.
- Barycrinus wachsmuthi** (Meek and Worthen).
Cyathocrinus wachsmuthi Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 136; Geol. Surv. Ill., 3, p. 482, pl. 16, fig. 5, text fig., 1868.
Barycrinus wachsmuthi Meek and Worthen, Proc. Acad. Nat. Sci. Phila., (1) 20, p. 340, 1868.
 Miss.: Burlington, Iowa (Low. Burlington ls.); Button Mold Knob, Ky. (New Providence sh.).
- Barycrinus washingtonensis** Miller and Gurley.
 Miller and Gurley, Ill. St. Mus., Bull. 6, p. 49, pl. 4, figs. 18, 19, 1895.—Miller, N. Amer. Geol. Pal., 2d App., p. 735, fig. 1302, 1897.
 Miss. (Keokuk ls.): Washington Co., Ind.
- Basleocrinus** Wanner. Genotype: *B. pocillum* Wanner.
 Poteriocrinitidae (Inadunata-Fistulata). Permian.
 Wanner, Pal. Timor, Perm. Echin. Timor, 1 Teil, p. 214, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, pp. 180, 262, 1924; Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 194, 1937.
- Basleocrinus conicus** Wanner.
 Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 216; 1916; Neue Beitr. kennt. Perm. Echin. Timor, XII, p. 195, text fig. 68, pl. 13, figs. 4, 5, 1937.—Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 337, pl. 4, fig. 5, 1940.
 Permian: Basleo, Netoe Pantoekak, Timor.
- Basleocrinus cryptobasalis** Yakovlev.
 Yakovlev, Palaeontographia Ital., 34, p. 281, pl. 19, fig. 14, 1934.
 Permian: Palazzo Adriano, Sicily.
- Basleocrinus krasnooufmskensis** Yakovlev.
 Yakovlev, Soc. Pal. Russia Ann., 11, p. 8, pl. 1, fig. 5, 1937.
 Permian: Krasnooufmsk, Russia.
- Basleocrinus? kukaensis** Wanner.
 Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 217, pl. 109 (14), fig. 2, 1916.
 Permian: Koeka, near Baung, Timor.
- Basleocrinus obliquus** Wanner.
 Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 264, pl. 16, figs. 25-28; pl. 17, figs. 6, 7, 1924.
 Permian: Basleo, Timor.
- Basleocrinus pocillum** Wanner.
 Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 214, pl. 109 (14), fig. 1, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 262, pl. 17, figs. 8, 9, 1924.
 Permian: Basleo, Timor.
- Basleocrinus pusillus** Wanner.
 Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 263, pl. 16, figs. 29, 30, 1924.
 Permian: Basleo, Timor.
- Basleocrinus scrobiculatus** Wanner = *Graphiocrinus scrobiculatus*.
- Basleocrinus striategranulatus** Wanner.
 Wanner, Neue Beitr. kennt. Perm. Echin. Timor, XII, p. 196, pl. 13, figs. 6-9, 1937.—Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 339, pl. 4, fig. 6, 1940.
 Permian: Basleo, Safneo Noko, etc., Timor.

Basleocrinus turbinatus Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 266, pl. 16, figs. 22-24, 1924.

Permian: Basleo, Timor.

Bathericrinus Jaekel. Genotype: *Botryocrinus ramosus* Bather.

Botryocrinidae (Inadunata-Fistulata). Sil.; Dev.

Jaekel, Pal. Zeits., 3, p. 58, 1918.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 92, 1924.

Bathericrinus ericius (Schmidt).

Botryocrinus (*Bathericrinus*) *ericius* Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 94, text fig. 21, pl. 13, fig. 1; pl. 14, figs. 1a, b; pp. 142, 145, 147, 1934.

Low. Dev. (Hunsrück sl.): Bundenbach, Germany.

Bathericrinus hystrix (Schmidt).

Botryocrinus (*Bathericrinus*) *hystrix* Schmidt, Abhandl. Preuss. Geol. Landesanst. n. f., heft 163, p. 92, text fig. 20 a-c, pl. 13, fig. 2; pl. 16, fig. 2; pl. 18, fig. 1b (parts); pl. 30, pp. 142, 145, 147, 1934.

Low. Dev. (Hunsrück sl.): Bundenbach, Germany.

Bathericrinus ramosus (Bather).

Botryocrinus ramosus Bather, Ann. Mag. Nat. Hist., (6) 7, p. 394, pl. 13, figs. 1-4, 1891.—Haarmann, Jahrb. Preuss. Geol. Landesanst., 41, p. 8, text fig., 1921.

Bathericrinus ramosus Jaekel, Pal. Zeits., 3, p. 58, 1918.

Sil. (Up. Wenlock ls.): Dudley, England.

Bathericrinus semipinnulatus (Schmidt).

Botryocrinus (*Bathericrinus*)? *semipinnulatus* Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 97, text fig. 22, pl. 14, fig. 2, pp. 142, 146, 147, 1934.

Low. Dev. (Hunsrück sl.): Bundenbach, Germany.

Bathericrinus speciosus (Schmidt).

Botryocrinus (*Bathericrinus*) *speciosus* Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 96, text fig. 20-d, pl. 3, fig. 4; pp. 142, 146, 147, 1934.

Low. Dev. (Hunsrück sl.): Bundenbach, Germany.

Batocrinus Casseday. Genotype: *B. icosidactylus* Casseday.

Batocrinidae (Camerata). Miss.

Casseday, Zeits. Deutsch. Geol. Gesell., 6, p. 237, 1854.—Meek and Worthen, Geol. Surv. Ill., 5, p. 364, 1873.—Zittel, Handb. Pal., 1, p. 370, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 162 (336), 1881.—Miller, 18th Rep. Geol. Nat. Res. Ind., p. 277, 1894 (adv. pub., p. 23, 1892).—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 366, 1897.—Bather, Treatise Zool. (Lanckester), pt. 3, p. 167, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 195, 1913.

Batocrinus adamsensis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 8, p. 14, pl. 1, figs. 33-35, 1896.

Miss. (Burlington ls.): Adams Co., Ill.

Batocrinus aequabilis Miller and Gurley = *B. subaequalis*.

Batocrinus aequalis (Hall).

Actinocrinus aequalis Hall, Geol. Rep. Iowa, 1, pt. 2, p. 592, pl. 11, figs. 4a, b; text fig. 90, 1858.

Actinocrinus (*Batocrinus*) *aequalis* Roemer, Leth. Geog., Leth. Pal., 1, Atlas, pl. 40, fig. 5, 1876.

Batocrinus aequalis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 371, pl. 28, figs. 5, 6, 1897.

Actinocrinus doris Hall, Prelim. Descr. New Crin., p. 15, 1861.

Miss. (Low. Burlington ls.): Burlington, Iowa.

- Batocrinus affinis** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 10, p. 55, pl. 4, figs. 8, 9, 1896
Miss. (Burlington ls.): Sagetown, Ill.
- Batocrinus agnatus** S. A. Miller = *Macrocrinus jucundus*.
- Batocrinus albersi** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 10, p. 38, pl. 2, figs. 6-8, 1896.
Miss. (Up. Burlington ls.): Burlington, Iowa.
- Batocrinus altiusculus** Miller and Gurley = *Eutrochocrinus christyi*.
- Batocrinus approximatus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 10, p. 56, pl. 4, figs. 10-12, 1896.
Miss. (Up. Burlington ls.): Burlington, Iowa.
- Batocrinus arcula** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 6, p. 16, pl. 2, figs. 3-5, 1895.—Miller, N.
Amer. Geol. Pal., 2d App., p. 735, fig. 1303, 1897.
Miss.: Washington Co., Ind. (Spergen ls.); Glasgow, etc., Ky. (Warsaw ls.).
- Batocrinus argutus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 8, p. 9, pl. 1, figs. 8, 9, 1896.
Miss.: Sedalia, Mo. (Chouteau ls.); Burlington, Iowa (Low. Burlington ls.).
- Batocrinus asper** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 8, p. 13, pl. 1, figs. 15, 16, 1896.
Miss. (Chouteau ls.): Sedalia, Mo.
- Batocrinus asperatus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 8, p. 12, pl. 1, figs. 13, 14, 1896.
Miss. (Burlington ls.): Adams Co., Ill.
- Batocrinus aspratilis** Miller and Gurley = *B. clypeatus*.
- Batocrinus basilicus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 8, p. 11, pl. 1, figs. 10-12, 1896.
Miss. (Chouteau ls.): Sedalia, Mo.
- Batocrinus birmanicus** Reed.
Reed, Pal. Indica, II, Mem. 5, pl. 5, fig. 12, 1908.
Dev.: Northern Shan States, China.
- Batocrinus bisbrachiatus** Whitfield = *Eutrochocrinus christyi*.
- Batocrinus blairi** Miller = *Eretmocrinus leucosia*.
- Batocrinus boonvillensis** S. A. Miller = *Dizygocrinus originarius adultus*.
- Batocrinus brittsi** S. A. Miller.
S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 287, pl. 5, figs. 21-23, 1894 (adv. pub.,
1892).
Miss. (Chouteau ls.): Sedalia, Mo.
- Batocrinus broadheadi** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 7, p. 15, pl. 1, figs. 10, 11, 1895.
Miss. (Warsaw ls.): Boonville, Mo.
- Batocrinus bulbosus** Rowley and Hare = *Uperocrinus inflatus*.
- Batocrinus burketi** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 6, p. 19, pl. 2, fig. 9, 1895.
Miss. (Keokuk ls.): Hamilton, Ill.

Batocrinus calvini Rowley.

Rowley, Amer. Geol., 5, p. 146, text fig., 1890.—Keyes, Geol. Surv. Mo., 4, p. 180, pl. 23, fig. 4, 1894.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 373, pl. 46, figs. 8a, b, 1897.

Miss. (Low. Burlington ls.): Louisiana, Mo.

Batocrinus calyculus (Hall).

Actinocrinus calyculus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 55, text fig., pl. 1, figs. 1 a-c, 1860.

Batocrinus calyculus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., 20, p. 351, 1868.—Beede, 30th Rep. Geol. Nat. Res. Ind., p. 1247, pl. 14, figs. 3-3b, 1906.

Actinocrinus calyculus var. *hardinensis* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 253, 1866.

Miss.: Spergen Hill, Ind. (Spergen ls.); 2 miles south of Princeton, Ky. (Chester-Ohara ls.).

Batocrinus cantonensis Miller and Gurley.

Miller and Gurley, 16th Rep. Geol. Nat. Res. Ind., p. 354, pl. 6, fig. 9, 1890 (authors ed., p. 36).—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 383, pl. 27, figs. 7a, b, 1897.

Miss. (Keokuk ls.): Near Canton, Ind.

Batocrinus casedayanus Meek and Worthen = *Uperocrinus longirostris*.

Batocrinus casualis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 6, p. 15, pl. 1, figs. 17, 18, 1895.

Miss. (Ft. Payne ch.): Tennessee.

Batocrinus casula Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 6, p. 8, pl. 1, figs. 7, 8, 1895.

Miss. (Ft. Payne ch.): Little Barren River, Ky.

Batocrinus christyi Meek and Worthen = *Eutrochocrinus christyi*.

Batocrinus cystula Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 8, p. 18, pl. 1, figs. 24-26, 1896.

Miss. (Spergen ls.): Lanesville, Ind.

Batocrinus clypeatus (Hall).

Actinocrinus clypeatus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 12, text fig., 1860; N. Y. St. Mus., Bull. 1, pl. 3, fig. 12, 1872.

Batocrinus clypeatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 380, pl. 27, figs. 8 a-e, 1897.

Actinocrinus inornatus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 24, 1860.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 380, pl. 5, fig. 17 (as *Batocrinus*), 1897.

Batocrinus inornatus Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 1, p. 15, pl. 2, figs. 1-3, 1893.

Batocrinus comparilis Miller, 18th Rep. Geol. Surv. Ind., p. 286, pl. 5, figs. 18, 19, 1894 (adv. pub., 1892).

Batocrinus aspratilis Miller and Gurley, Ill. St. Mus., Bull. 3, p. 21, pl. 5, figs. 4-6, 1894.

Actinocrinus papillatus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 29, text fig., 1860; N. Y. St. Mus., Bull. 1, pl. III-A, figs. 10, 11, 1872.

Miss.: Burlington, Iowa, Louisiana, Mo. (Low. Burlington ls.); Sedalia, Mo. (Chouteau ls.).

Batocrinus cognatus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 10, p. 60, pl. 4, figs. 18-21, 1896.

Miss. (Burlington ls.): Burlington, Iowa.

- Batocrinus commendabilis** (Miller and Gurley).
Eretmocrinus commendabilis Miller and Gurley, Ill. St. Mus., Bull. 6, p. 25, pl. 2, fig. 16, 1895.
Batocrinus commendabilis Miller, N. Amer. Geol. Pal., 2d App., p. 736, 1897.
 Miss. (Keokuk ls.): Crawfordsville, Ind.
- Batocrinus comparilis* S. A. Miller = *B. clypeatus*.
- Batocrinus complanatus** Miller and Gurley.
 Miller and Gurley, Ill. St. Mus., Bull. 10, p. 27, pl. 1, figs. 19, 20, 1896.
 Miss. (Up. Burlington ls.): Burlington, Iowa.
- Batocrinus consanguineus** Miller and Gurley.
 Miller and Gurley, Ill. St. Mus., Bull. 10, p. 63, pl. 4, figs. 22, 23, 1896.
 Miss. (Up. Burlington ls.): Burlington, Iowa.
- Batocrinus copiosus** Miller and Gurley.
 Miller and Gurley, Ill. St. Mus., Bull. 5, p. 51, pl. 5, figs. 5, 6, 1894.
 Miss. (Chester ls.): Little Barren River, Ky.
- Batocrinus crassitestus** Rowley.
 Rowley, in Greene, Cont. Ind. Pal., 1, pt. 17, p. 172, pl. 51, figs. 10-12, 1904.—Beede, 30 Rep. Geol. Nat. Res. Ind., p. 1249, pl. 15, figs. 10-12, 1906.
 Miss. (Spergen ls.): Lanesville, Ind.
- Batocrinus crawfordsvillensis* S. A. Miller = *Dizygocrinus crawfordsvillensis*.
- Batocrinus curiosus** Miller and Gurley.
 Miller and Gurley, Ill. St. Mus., Bull. 6, p. 6, pl. 1, figs. 4-6, 1895.
 Miss. (Ft. Payne ch.): Allen Co., Ky.
- Batocrinus curiosus** Rowley (not Miller and Gurley).
 Rowley, Missouri Bur. Geol. and Mines, 8, p. 98, pl. 20, figs. 13, 14, 1908.
 Miss. (Low. Burlington ls.): Louisiana, Mo.
- Batocrinus davisii* Rowley and Hare = *Dizygocrinus unionensis*.
- Batocrinus davisii lanesvillensis* Rowley = *Dizygocrinus unionensis lanesvillensis*.
- Batocrinus davisii sculptus* Rowley = *Dizygocrinus unionensis sculptus*.
- Batocrinus decrepitus** S. A. Miller.
 S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 288, pl. 5, fig. 24, 1894 (adv. pub., 1892, p. 34).
 Miss. (Keokuk ls.): Crawfordsville, Ind.
- Batocrinus delicatulus** Miller and Gurley.
 Miller and Gurley, Ill. St. Mus., Bull. 9, p. 12, pl. 1, figs. 20, 21, 1896.
 Miss. (Warsaw ls.): Boonville, Mo.
- Batocrinus discoideus* Wachsmuth and Springer = *B. subaequalis*.
- Batocrinus divalis* S. A. Miller = *Dizygocrinus unionensis divalis*.
- Batocrinus douglassii** Miller and Gurley.
 Miller and Gurley, Ill. St. Mus., Bull. 12, p. 29, pl. 2, fig. 26, 1897.
 Miss. (Madison ls.): Bridger Mts., near Bozeman, Mont.
- Batocrinus enodatus** Miller and Gurley.
 Miller and Gurley, Ill. St. Mus., Bull. 10, p. 46, pl. 2, figs. 21-23, 1896.
 Miss. (Burlington ls.): Sagetown, Ill.
- Batocrinus enodus** Miller and Gurley.
 Miller and Gurley, Ill. St. Mus., Bull. 10, p. 25, pl. 1, figs. 16-18, 1896.—Miller, N. Amer. Geol. Pal., 2d App., p. 736, fig. 1307, 1897.
 Miss. (Burlington ls.): Burlington, Iowa.

Batocrinus faberi Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 9, p. 18, pl. 2, figs. 3, 4, 1896.
Miss. (Burlington ls.): Adams Co., Ill.

Batocrinus facetus Miller and Gurley = *Dizygocrinus facetus*.

Batocrinus folliculus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 8, p. 15, pl. 1, figs. 36-38, 1896.
Miss. (Chouteau ls.): Sedalia, Mo.

Batocrinus formaceus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 7, p. 24, pl. 1, figs. 23, 24, 1895.
Miss. (Chouteau ls.): Sedalia, Mo.

Batocrinus germanus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 8, p. 5, pl. 1, figs. 1-3, 1896.
Miss. (Chouteau ls.): Sedalia, Mo.

Batocrinus gibbosus (Troost).

Actinocrinites gibbosus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849 (nom. nud.).

Batocrinus gibbosus Wood, U. S. Nat. Mus., Bull. 64, p. 64, pl. 15, fig. 9, 1909.
Miss. (Ft. Payne ch.): Whites Creek Springs, Tenn.

Batocrinus glaber Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 10, p. 32, pl. 1, figs. 26-28, 1896.—Miller, N. Amer. Geol. Pal., 2d App., p. 736, fig. 1308, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Batocrinus gorbyi S. A. Miller = ?*Dizygocrinus gorbyi*.

Batocrinus grandis (Lyon and Casseday).

Actinocrinus sp. nobis (*grandis*) Lyon and Casseday, Amer. Jour. Sci. and Arts, (2) 28, pp. 240, 241, 1859.

Batocrinus grandis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 381, pl. 1, fig. 2, pl. 27, figs. 1a, b, 2a, b; p. 567, 1897.—Wood, U. S. Nat. Mus., Bull. 64 p. 63, pl. 15, fig. 11, 1909.

Actinocrinus wachsmuthi White, 12th Ann. Rep. U. S. Geol. Surv. Terr., p. 162, pl. 40, fig. 10-b, 1880; Geol. Rep. Indiana, 1879-1880, p. 142, pl. 7, fig. 6; 2d Rep. Dep. St. and Geol. Ind., p. 510, pl. 7, fig. 6, 1881.

Actinocrinites urna Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419 (nom. nud.), 1849.

Miss.: Crawfordsville, Ind. (Keokuk ls.); Whites Creek Springs, Tenn. (Ft. Payne ch.).

Batocrinus gurleyi S. A. Miller = *Dizygocrinus gurleyi*.

Batocrinus gurleyi Rowley and Hare = *Dizygocrinus montgomeryensis*.

Batocrinus heteroclitus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 7, p. 31, pl. 1, figs. 37-39, 1895.
Miss. (Warsaw ls.): Boonville, Mo.

Batocrinus hodgsoni Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 8, p. 8, pl. 1, figs. 6, 7, 1896.
Miss. (Burlington ls.): Adams Co., Ill.

Batocrinus honorabilis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 6, p. 10, pl. 1, figs. 9, 10, 1895.
Miss. (Ft. Payne ch.): Tennessee; Barren Co., Ky.

Batocrinus icosidactylus Casseday.

Casseday, Zeits. Deutsch. Geol. Gesell., 6, p. 238, pl. 2, figs. 1 a-c, 3, 1854.—Miller, N. Amer. Geol. Pal., 1st. App., p. 675, fig. 1214, 18th Rep. Geol. Surv. Ind.,

- p. 24, pl. 4, figs. 1-5, 1894 (adv. pub., 1892).—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 368, pl. 27, figs. 3 a-c, 1897.—Rowley in Greene, Cont. Ind. Pal., pt. 17, p. 173, pl. 51, figs. 16-18; p. 174, pl. 51, figs. 19-21, 24-28, 1904.—Beede, 30th Ann. Rep. Geol. Nat. Res. Ind., p. 1243, pl. 12, figs. 6-6b; pl. 15, figs. 16-21, 24-28, 1906.
- Miss.: Spergen Hill, Georgetown, etc., Ind. (Spergen ls.); Glasgow, etc., Ky. (Warsaw ls.).
- Batocrinus ignotus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 7, p. 28, pl. 1, figs. 31-33, 1895.
Miss. (Warsaw ls.): Boonville, Mo.
- Batocrinus imparilis** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 7, p. 20, pl. 1, figs. 17, 18, 1895.
Miss. (Chouteau ls.): Sedalia, Mo.
- Batocrinus inconsuetus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 7, p. 25, pl. 1, figs. 25-27, 1895.
Miss. (Warsaw ls.): Boonville, Mo.
- Batocrinus incultus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 7, p. 21, pl. 1, figs. 19, 20, 1895.
Miss. (Chouteau ls.): Sedalia, Mo.
- Batocrinus inflatus* Rowley and Hare = *Uperocrinus inflatus*.
- Batocrinus inopinatus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 7, p. 36, pl. 2, figs. 4-6, 1895.
Miss. (Warsaw ls.): Boonville, Mo.
- Batocrinus inornatus* Whitfield = *B. clypeatus*.
- Batocrinus insolens** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 10, p. 35, pl. 2, figs. 1, 2, 1896.
Miss. (Burlington ls.): Burlington, Iowa.
- Batocrinus insperatus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 7, p. 22, pl. 1, figs. 21, 22, 1895.
Miss. (Chouteau ls.): Sedalia, Mo.
- Batocrinus insuetus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 7, p. 14, pl. 1, figs. 8, 9, 1895.
Miss. (Warsaw ls.): Boonville, Mo.
- Batocrinus irregularis** Casseday.
Casseday, Zeits. Deutsch. Geol. Gesell., 6, p. 240, pl. 2, figs. 2 a-c, 1854.—S. A. Miller, 18th Rep. Geol. Nat. Res. Ind., p. 280, pl. 4, figs. 6-9, 1894 (adv. pub., 1892).—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 369, pl. 27, figs. 4 a-c, 1897.—Rowley in Greene, Cont. Ind. Pal., pt. 17, p. 171, pl. 51, figs. 4-6, 1904.—Beede, 30th Ann. Rep. Dep. Geol. Nat. Res. Ind., p. 1224, pl. 12, figs. 1, 1a; pl. 15, figs. 4-6, 1906.—Butts, Geol. Surv. Ala., Spec. Rep. no. 14, p. 176, pl. 58, fig. 2, 1926.
Miss.: Spergen Hill, Georgetown, etc., Ind. (Spergen ls.); Sheffield, Ala.; Colesburg, Ky. (Warsaw ls.).
- Batocrinus jessieae** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 8, p. 20, pl. 1, figs. 27-32, 1896.
Miss. (Chouteau ls.): Sedalia, Mo.
- Batocrinus jucundus* Miller and Gurley = *Macrocrinus jucundus*.
- Batocrinus labellum** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 6, p. 21, pl. 2, figs. 10-12, 1895.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 737, fig. 1310, 1897.
Miss. (Keokuk ls.): Washington Co., Ind.

Batocrinus lacinosus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 6, p. 14, pl. 1, figs. 15, 16, 1895.

Miss. (Ft. Payne ch.): Tennessee.

Batocrinus laetus Miller and Gurley = *B. turbinatus*.

Batocrinus laterna Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 6, p. 12, pl. 1, figs. 13, 14, 1895.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 737, fig. 1311, 1897.

Miss. (Ft. Payne ch.): Whites Creek Springs, Tenn.

Batocrinus laura (Hall).

Actinocrinus laura Hall, Descr. New Sp. Crin., Prelim. Not., p. 15, 1861.

Batocrinus laura Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 1, p. 17, pl. 1, figs. 15, 16, 1893.—Keyes, Geol. Surv. Mo., 4, p. 182, pl. 23, fig. 8, 1894.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 384, pl. 29, figs. 5 a-d, 1897.

Batocrinus scyphus Miller and Gurley, Ill. St. Mus., Bull. 3, p. 23, pl. 5, figs. 7-9, 1894.

Miss.: Burlington, Iowa (Upper Burlington ls.); Sedalia, Mo. (Chouteau ls.).

Batocrinus laura sinuosus (Hall).

Actinocrinus sinuosus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 26, text fig., 1860; N. Y. St. Mus., Bull. 1, pl. 3-A, figs. 8, 9, 1872.

Batocrinus laura var. *sinuosus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 385, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Batocrinus lepidus (Hall).

Actinocrinus lepidus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 32, text fig., 1860.

Batocrinus lepidus Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 1, p. 16, pl. 1, figs. 16, 18, 1893.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 372, pl. 28, figs. 2, 3, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Batocrinus levigatus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 10, p. 29, pl. 1, figs. 21, 22, 1896.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Batocrinus levis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 10, p. 23, pl. 1, figs. 13-15, 1896.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 737, fig. 1312, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Batocrinus longirostris Wachsmuth and Springer = *Uperocrinus longirostris*.

Batocrinus lovei Wachsmuth and Springer = *Eutrochocrinus lovei*.

Batocrinus lyonanus Miller and Gurley = *Dizygoocrinus biturbinatus*.

Batocrinus macbridei Wachsmuth and Springer.

Wachsmuth and Springer, in Miller, N. Amer. Geol. Pal., p. 228, fig. 253, 1889; Geol. Surv. Ill., 8, p. 172, pl. 15, fig. 4; pl. 17, figs. 11, 12, 1890; N. Amer. Crin. Cam., p. 376, pl. 30, figs. 1-3, 1897.—Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 244, pl. 15, figs. 13, 14, 1937.

Miss. (Kinderhook-Hampton fm.): Legrand, Iowa.

Batocrinus magnirostris Rowley.

Rowley, in Greene, Cont. Ind. Pal., 1, pt. 17, p. 170, pl. 51, figs. 1-3, 1904.—Beede, 30th Ann. Rep. Dep. Geol. Nat. Res. Ind., p. 1244, pl. 15, figs. 1-3, 1906.

Miss. (Spergen ls.): Lanesville, Ind.

Batocrinus marinus Miller and Gurley.

Miller and Gurley, Jour. Cincinnati Soc. Nat. Hist., 13, p. 19, pl. 4, figs. 3, 4; 16th Rep. Geol. Surv. Ind., p. 340, pl. 4, figs. 3, 4, 1890.

Miss. (Keokuk ls.): Crawfordsville, Ind.

- Batoerinus medioeris* S. A. Miller = *Dizygocrinus originarius* adultus.
- Batoerinus modestus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 7, p. 30, pl. 1, figs. 34-36, 1895.
Miss. (Warsaw ls.): Boonville, Mo.
- Batoerinus modulus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 8, p. 16, pl. 1, figs. 39-41, 1896.
Miss. (Burlington ls.): Adams Co., Ill.
- Batoerinus montgomeryensis* Worthen = *Dizygocrinus montgomeryensis*.
- Batoerinus mundulus** (Hall).
Actinocrinus mundulus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 39, 1860.
Batoerinus mundulus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 382, pl. 30, figs. 4a, b, 5, 1897.
Actinocrinus similis Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 40, 1860.
Actinocrinus clavigerus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 44, text fig., 1860.
Miss. (Keokuk ls.): Warsaw and Nauvoo, Ill.; Crawfordsville, Canton, etc., Indiana.
- Batoerinus nanus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 8, p. 17, pl. 1, figs. 42-44, 1896.
Miss. (Chouteau ls.): Sedalia, Mo.
- Batoerinus nashvillae* Worthen = *Uperocrinus nashvillae*.
- Batoerinus* (*Eretmocrinus*) *neglectus* Meek and Worthen = *Eretmocrinus neglectus*.
- Batoerinus niteus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 9, p. 15, pl. 1, figs. 30-32, 1896.
Miss. (Burlington ls.): Burlington, Iowa.
- Batoerinus nitidulus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 7, p. 17, pl. 1, figs. 12, 13, 1895.
Miss. (Warsaw ls.): Boonville, Mo.
- Batoerinus nodosarius** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 10, p. 22, pl. 1, figs. 11, 12, 1896.—Miller, N. Amer. Geol. Pal., 2d App., p. 737, fig. 1314, 1897.
Miss. (Burlington ls.): Adams Co., Ill.
- Batoerinus nodosus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 9, p. 5, pl. 1, figs. 1-3, 1896.
Miss. (Burlington ls.): Adams Co., Ill.
- Batoerinus nodulosus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 9, p. 6, pl. 1, figs. 4-6, 1896.
Miss. (Burlington ls.): Adams Co., Ill.
- Batoerinus oblatum* Whitfield = *Dizygocrinus rotundum*.
- Batoerinus parilis** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 9, p. 17, pl. 2, figs. 1, 2, 1896.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 738, fig. 1315, 1897.
Miss. (Warsaw ls.): Boonville, Mo.
- Batoerinus peculiaris** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 7, p. 18, pl. 1, figs. 14-16, 1895.
Miss. (Warsaw ls.): Boonville, Mo.
- Batoerinus pettisensis** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 9, p. 19, pl. 2, figs. 5, 6, 1896.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 738, fig. 1316, 1897.
Miss. (Chouteau ls.): Sedalia, Mo.

Batocrinus pileus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 6, p. 18, pl. 2, figs. 6-8, 1895.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 738, fig. 1317, 1897.

Miss. (Spergen ls.): Washington Co., Ind.

Batocrinus pistillus (Meek and Worthen).

Actinocrinus pistillus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 152, 1865.

Actinocrinus (*Batocrinus*) *pistillus* Meek and Worthen, Geol. Surv. Ill., 3, p. 472, pl. 16, figs. 4a, b, 1868.

Batocrinus pistillus Wachsmuth and Springer, N. Amer. Crin. Camerata, p. 378, pl. 31, figs. 4a, b, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Batocrinus planus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 7, p. 37, pl. 2, figs. 11-14, 1895.

Miss. (Chouteau ls.): Sedalia, Mo.

Batocrinus poculum Miller and Gurley.

Miller and Gurley, Descr. Some N. Gen. and Sp. Echin. etc., p. 34, pl. 6, fig. 6; 16th Rep. Geol. Surv. Ind., p. 352, pl. 6, figs. 6, 7, 1890 (1889).—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 378, pl. 30, fig. 6, 1897.—Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 244, pl. 15, fig. 15, 1937.

Miss. (Kinderhook-Hampton fm.): LeGrand, Iowa.

Batocrinus politus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 10, p. 31, pl. 1, figs. 23-25, 1896.

Miss. (Burlington ls.): Burlington, Iowa; Sagetown, Ill.

Batocrinus polydactylus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 7, p. 5, pl. 1, fig. 1, 1895.

Miss. (Warsaw ls.): Boonville, Mo.

Batocrinus procerus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 7, p. 33, pl. 1, figs. 40-42, 1895.

Miss. (Warsaw ls.): Boonville, Mo.

Batocrinus prodigialis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 7, p. 39, pl. 3, figs. 4-6, 1895.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 738, fig. 1318, 1897.

Miss. (New Providence sh.): Button Mold Knob, Ky.

Batocrinus proximus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 8, p. 7, pl. 1, figs. 4, 5, 1896.

Miss. (Chouteau ls.): Sedalia, Mo.

Batocrinus pulchellus S. A. Miller = *Dizygoocrinus unionensis*.

Batocrinus pyriformis Meek and Worthen = *Uperocrinus pyriformis*.

Batocrinus quasillus Meek and Worthen.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., pp. 351, 352, 1868; Geol. Surv. Ill., 5, pp. 367, 369, pl. 5, figs. 2a, b, 1873.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 372, pl. 28, figs. 4a, b, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Batocrinus regalis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 9, p. 14, pl. 1, figs. 22-24, 1896.

Miss. (Chouteau ls.): Sedalia, Mo.

Batocrinus reliquus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 12, p. 22, pl. 1, figs. 15-17, 1897.

Miss. (Burlington ls.): Near Sharon, Mo.

- Batocrinus* (*Eretmocrinus*) *remibrachiatus* Meek and Worthen = *Eretmocrinus remibrachiatus expansus*.
- Batocrinus remotus*** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 10, p. 43, pl. 2, figs. 15-17, 1896.
Miss. (Burlington ls.): Burlington, Iowa.
- Batocrinus repertus*** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 10, p. 70, pl. 4, figs. 28-30, 1896.
Miss. (Chouteau ls.): Sedalia, Mo.
- Batocrinus repositus*** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 10, p. 45, pl. 2, figs. 18-20, 1896.
Miss. (Up. Burlington ls.): Burlington, Iowa.
- Batocrinus reservatus*** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 12, p. 25, pl. 1, figs. 22-25, 1897.
Miss. (Burlington ls.): Near Sharon, Mo.
- Batocrinus rotadentatus*** Rowley and Hare.
Rowley and Hare, Kansas City, Sci., 5, p. 102, pl. 2, figs. 17, 18, 1891.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 374, pl. 46, fig. 7, 1897.
Miss. (Low. Burlington ls.): Louisiana, Mo.
- Batocrinus rotuliformis*** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 12, p. 26, pl. 1, figs. 26, 27; pl. 2, figs. 1, 2, 1897.
Miss. (Burlington ls.): Near Sharon, Mo.
- Batocrinus rotundus* Keyes = *Dizygocrinus rotundus*.
- Batocrinus rudis*** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 10, p. 52, pl. 4, fig. 4, 1896.
Miss. (Ft. Payne ch.): Little Barren River, Ky.
- Batocrinus rusticellus*** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 12, p. 23, pl. 1, figs. 18-21, 1897.
Miss. (Burlington ls.): Near Sharon, Mo.
- Batocrinus?* *rusticus*** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 12, p. 28, pl. 2, figs. 3-6, 1897.
Miss. (Burlington ls.): Near Sharon, Mo.
- Batocrinus saccellus*** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 10, p. 40, pl. 2, figs. 9-11, 1896.
Miss. (Burlington ls.): Burlington, Iowa.
- Batocrinus sacculus* Miller and Gurley = *Dizygocrinus sacculus*.
- Batocrinus sagetownensis*** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 10, p. 54, pl. 4, figs. 5-7, 1896.
Miss. (Burlington ls.): Sagetown, Ill.
- Batocrinus salemensis*** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 9, p. 8, pl. 1, figs. 10-12, 1896.—Beede, 30th Ann. Rep. Dep. Geol. Nat. Res. Ind., p. 1245, pl. 12, figs. 2-2b, 1906.
Miss. (Spergen ls.): Salem, Ind.
- Batocrinus sampsoni*** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 7, p. 7, pl. 1, figs. 2, 3, 1895.
Miss. (Warsaw ls.): Boonville, Mo.
- Batocrinus sayi*** (Troost).
Wood (*Actinocrinites sayi* Troost, Ms.), U. S. Nat. Mus., Bull. 64, p. 65, pl. 13, figs. 7, 8, 1909.
Miss. (Ft. Payne ch.): Whites Creek Springs, Tenn.

Batocrinus scitulus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 12, p. 19, pl. 1, figs. 10, 11, 1897.
Miss. (Burlington ls.): Near Sharon, Mo.

Batocrinus scyphus Miller and Gurley = *B. laura*.

Batocrinus sedaliensis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 10, p. 71, pl. 4, figs. 31, 32, 1896.
Miss. (Chouteau ls.): Sedalia, Mo.

Batocrinus selectus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 10, p. 37, pl. 2, figs. 3-5, 1896.
Miss. (Burlington ls.): Sagetown, Ill.

Batocrinus senex Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 12, p. 21, pl. 1, figs. 12-14, 1897.
Miss. (Burlington ls.): Near Sharon, Mo.

Batocrinus serratus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 7, p. 27, pl. 1, figs. 28-30, 1895.
Miss. (Warsaw ls.): Boonville, Mo.

Batocrinus sharonensis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 12, p. 18, pl. 1, figs. 7-9, 1897.
Miss. (Burlington ls.): Near Sharon, Mo.

Batocrinus shepardii Rowley.

Rowley, Amer. Geol., 12, p. 305, 1893.
Miss. (Burlington ls.): Springfield, Mo.

Batocrinus signatus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 9, p. 10, pl. 1, figs. 16, 17, 1896.
Miss. (Keokuk ls.): Keokuk, Iowa.

Batocrinus simplex S. A. Miller = *Dizygocrinus indianensis simplex*.

Batocrinus solitarius Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 8, p. 22, pl. 2, figs. 8-11, 1896.
Miss. (Burlington ls.): Adams Co., Ill.

Batocrinus speciosus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 10, p. 47, pl. 2, figs. 24-26, 1896.
Miss. (Up. Burlington ls.): Burlington, Iowa.

Batocrinus spergenensis S. A. Miller = *Dizygocrinus whitei*.

Batocrinus spinosus Miller and Gurley = *Eretmocrinus spinosus*.

Batocrinus springeranus Bassler.

Bassler, Smithsonian Misc. Coll., 77, no. 2, p. 18, text fig. 26, 1925.
Miss. (Ft. Payne ch.): 7 miles northeast of Livingston, Overton Co., Tenn.

Batocrinus? springeri Rowley = *Cactocrinus springeri*.

Batocrinus spurius Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 9, p. 20, pl. 2, figs. 7-9, 1896.
Miss. (Low. Burlington ls.): Burlington, Iowa.

Batocrinus stelliformis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 9, p. 9, pl. 1, figs. 13-15, 1896.
Miss. (Warsaw ls.): Boonville, Mo.

Batocrinus steropes (Hall).

Actinocrinus steropes Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 43, 1860.
Batocrinus steropes Wachsmuth and Springer, Rev. Pal., pt. 2, p. 168 (342), 1881.
Miss. (Keokuk ls.): Hamilton, Ill.

Batocrinus strenuus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 9, p. 11, pl. 1, figs. 18, 19, 1896.
Miss. (Warsaw ls.): Boonville, Mo.

Batocrinus subaequalis (McChesney).

Actinocrinus subaequalis McChesney, Descr. New Pal. Foss., p. 17, 1860; Illustr. N. Sp. Foss., pl. 5, figs. 7a, b, 1865; Trans. Chicago Acad. Sci., 1, p. 13, pl. 5, figs. 7a, b; p. 14, text fig., 1868.

Batocrinus subaequalis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 369, pl. 4, fig. 10; pl. 28, figs. 7-9, 1897.

Actinocrinus discoideus Hall, Geol. Surv. Iowa, 1, pt. 2, p. 594; Suppl., pl. 2, fig. 9, 1860.

Batocrinus discoideus Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 1, p. 14, pl. 1, figs. 19, 20, 1893.

Batocrinus aequabilis Miller and Gurley, Ill. St. Mus., Bull. 3, p. 25, pl. 5, figs. 13-15, 1894.

Actinocrinus formosus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 30, text fig., 1860; N. Y. St. Mus., p. 3-A, fig. 1, 1872.

Miss.: Burlington, Iowa, Louisiana, Mo. (Low. Burlington ls.); Sedalia, Mo. (Chouteau ls.).

Batocrinus subaequatus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 10, p. 72, pl. 4, figs. 33, 35, 1896.
Miss. (Chouteau ls.): Sedalia, Mo.

Batocrinus subconicus Worthen = *Dizygocrinus euconus*.

Batocrinus sublevis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 10, p. 41, pl. 2, figs. 12-14, 1896.
Miss. (Burlington ls.): Sagetown, Ill.

Batocrinus subovatus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 10, p. 50, pl. 2, figs. 30, 31, 1896.
Miss. (Up. Burlington ls.): Burlington, Iowa.

Batocrinus subrotundus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 10, p. 48, pl. 2, figs. 27-29, 1896.
Miss. (Up. Burlington ls.): Burlington, Iowa.

Batocrinus subsцитulus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 10, p. 51, pl. 3, figs. 9-11, 1896.
Miss. (Chouteau ls.): Sedalia, Mo.

Batocrinus superbus S. A. Miller = *Eretmocrinus remibrachiatus expansus*.

Batocrinus sweeti Rowley and Hare = *Dizygocrinus montgomeryensis*.

Batocrinus trochiscus Meek and Worthen = *Eutrochoocrinus trochiscus*.

Batocrinus tuberculatus Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 379, pl. 28, figs. 10a, b, 1897.
Miss. (Low. Burlington ls.): Burlington, Iowa.

Batocrinus turbinatus (Hall).

Actinocrinus turbinatus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 587, pl. 11, fig. 1, 1858.

Batocrinus turbinatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 375, pl. 27, figs. 5 a-c, 1897.

Batocrinus laetus Miller and Gurley, Ill. St. Mus., Bull. 3, p. 24, pl. 5, figs. 10-12, 1894.

Miss.: Burlington, Iowa, and Grundy Co., Ill. (Low. Burlington ls.); Sedalia, Mo. (Chouteau ls.).

Batocrinus turbinatus elegans (Hall).

Actinocrinus turbinatus var. *elegans* Hall, Geol. Rep. Iowa, 1, pt. 2, p. 587, pl. 11, fig. 5, text fig. 87, 1858.

- Batocrinus turbinatus* var. *elegans* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 376, pl. 27, figs. 6a, b, 1897.
Miss. (Low. Burlington ls.): Burlington, Iowa; Louisiana, Mo.
- Batocrinus unionensis* Worthen = (part) *Dizygocrinus unionensis*; (part) *Globocrinus unionensis*).
- Batocrinus variabilis** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 10, p. 58, pl. 4, figs. 13-17, 1896.
Miss. (Up. Burlington ls.): Burlington, Iowa.
- Batocrinus venustus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 7, p. 12, pl. 1, fig. 7, 1895.
Miss. (Warsaw ls.): Boonville, Mo.
- Batocrinus venustus* S. A. Miller = *Dizygocrinus euconus abscissus*.
Batocrinus verneuilianus Meek and Worthen = *Macrocrinus verneuilianus*.
- Batocrinus veterator** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 7, p. 8, pl. 1, fig. 4, 1895.
Miss. (Warsaw ls.): Boonville, Mo.
- Batocrinus vetustus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 7, p. 10, pl. 1, figs. 5, 6, 1895.
Miss. (Warsaw ls.): Boonville, Mo.
- Batocrinus vicinus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 7, p. 34, pl. 2, figs. 1-3, 1895.
Miss. (Warsaw ls.): Boonville, Mo.
- Batocrinus wetherbyi** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 6, p. 11, pl. 1, figs. 11, 12, 1895.
Miss. (Ft. Payne ch.): Whites Creek Springs, Tenn.
- Batocrinus whitei* Wachsmuth and Springer = *Dizygocrinus whitei*.
Belemnocrinus Munier-Chalmas = *Belocrinus* (Blastoid).
- Belemnocrinus** White. Genotype: *B. typus* White.
Belemnocrinidae (Inadunata-Fistulata). Miss.
White, Proc. Boston Soc. Nat. Hist., 9, p. 13, 1865 (adv. rep. 1862).—Zittel, Handb. Pal., 1, p. 362, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 213 (187), 1886.—Bather, Ann. Mag. Nat. Hist., (6) 5, p. 332, 1890; Treatise Zool. (Lankester), pt. 3, p. 152, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 215, 1913.—Jaekel, Pal. Zeits., 3, p. 58, 1918.
- Belemnocrinus florifer* Wachsmuth and Springer = *Whiteocrinus florifer*.
- Belemnocrinus pourtalesi** Wachsmuth and Springer.
Wachsmuth and Springer, Amer. Jour. Sci., (3) 13, p. 258, 1877.
Miss. (Low. Burlington ls.): Burlington, Iowa.
- Belemnocrinus sampsoni** S. A. Miller.
S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 26, pl. 3, fig. 8, 1891; N. Amer. Geol. Pal., 2d App., p. 739, fig. 1320, 1897.
Belemnocrinus? sampsoni Keyes, Geol. Surv. Mo., 4, p. 207, pl. 25, fig. 9, 1894.
Miss. (Chouteau ls.): Sedalia, Mo.
- Belemnocrinus typus** White.
White, Proc. Boston Soc. Nat. Hist., 9, pp. 13, 14, figs. 1, 2, 1865.—Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, pl. 5, fig. 10, 1885; sec. 2, p. 214 (138), 1886.
Miss. (Up. Burlington ls.): Burlington, Iowa.

Belemnocrinus whitii Meek and Worthen.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 251, 1866; Geol. Surv. Ill., 3, p. 463, pl. 18, figs. 4 a-c, 1868.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Benthocrinus Wanner. Genotype: *B. cryptobasalis* Wanner.

Poteroicrinitidae (Inadunata-Fistulata). Permian.

Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 187, 1937.

Benthocrinus cryptobasalis Wanner.

Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 187, pl. 12, figs. 15-20, 1937.

Permian: Pantukat, Timor.

Beyrichocrinus Waagen and Jahn. Genotype: *B. humilis* Waagen and Jahn.

Periechocrinitidae (Camerata). Low. Dev.

Waagen and Jahn, Syst. Sil. Centre Bohême, 7, pt. 2, p. 12, 1899.—Bather, Ann. Mag. Nat. Hist., ser. 7, 6, p. 103, 1900.—Jaekel, Pal. Zeits., 3, p. 32, 1918.

Beyrichocrinus humilis Waagen and Jahn.

Waagen and Jahn, Syst. Sil. Centre Bohême, 7, pt. 2, p. 15, pls. 59-61, 1899.

Low. Dev. (F2): Koniepruss, Bohemia.

Bichirocrinus Jaekel. Genotype: No species named.

Jaekel, Pal. Zeits., 3, p. 88, 1918.

"Silurian: North America and Europe."

Biciclocrinus Ivanov. Genotype: *B. calyciformis* Ivanov.

Ivanov, Bull. Soc. Nat. Moscow, Sec. Geol., 34, p. 176, 1926 (nom. nud.). (Also, *B. parvus* Ivanov, nom. nud.)

Carboniferous: Gov. Moscow, Russia.

Blairocrinus S. A. Miller = Actinocrinites.**Blothrocrinus** Kirk. Genotype: *Poteroicrinus jesupi* Whitfield.

Poteroicrinitidae (Inadunata-Fistulata). Miss.

Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 321, 1940.

Blothrocrinus cultidactylus (Hall).

Poteroicrinus cultidactylus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 62, 1860.—Worthen, Geol. Surv. Ill., 7, p. 301, pl. 30, fig. 1, 1883.

Poteroicrinus (*Scaphiocrinus*) *cultidactylus* Wachsmuth and Springer, Rev. Pal., pt. 1, p. 114 (337), 1880 (1879).

Blothrocrinus cultidactylus Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 322, 1940. Miss. (Burlington): Near Hamburg, Ill. (Lower); Burlington, Iowa (Upper).

Blothrocrinus jesupi (Whitfield).

Poteroicrinus jesupi Whitfield, Amer. Mus. Nat. Hist., Bull. 1, p. 7, pl. 1, pl. 2, fig. 1, 1881.

Pachylocrinus jesupi Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 71, 1926.

Blothrocrinus jesupi Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 322, 1940.

Miss. (Burlington ls.): Burlington, Iowa.

Blothrocrinus spartarius (Miller and Gurley).

Poteroicrinus spartarius Miller and Gurley, 16th Rep. Geol. Surv. Ind., p. 355, pl. 7, fig. 1, 1890 (authors ed., p. 37).

Pachylocrinus spartarius Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 71, 1926.—Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 254, pl. 19, fig. 5; pl. 18, fig. 2, 1926.

Blothrocrinus spartarius Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 322, 1940.

Poteroicrinus genista Miller and Gurley, 16th Rep. Geol. Surv. Ind., p. 357, pl. 7, fig. 3, 1890 (authors' ed., p. 38).

- Poteroicrinus scopae* Miller and Gurley, 16th Rep. Geol. Surv. Ind., p. 356, pl. 7, fig. 2, 1890 (authors' ed., p. 38); Ill. St. Mus., Bull. 5, p. 33, pl. 3, figs. 1, 2, 1894. Miss. (Kinderhook-Hampton fm.): Legrand, Marshall Co., Iowa.
- Blothrocrinus swallowi** (Meek and Worthen).
Poteroicrinus swallowi Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 394, 1860; Geol. Surv. Ill., 2, p. 183, pl. 16, figs. 4a, b, text fig. 3, 1866.
Scaphiocrinus swallowi Bather, Ann. Mag. Nat. Hst., (6) 5, p. 388, pl. 15, fig. 12, 1890.
Blothrocrinus swallowi Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 322, 1940. Miss. (Up. Burlington ls.): Burlington, Iowa.
- Bogotacrinus** Schmidt. Genotype: *B. scheibei* Schmidt.
 Platycrinitidae (Adunata). Sil.
 Schmidt, Fosiles paleozoicos Cordillera Oriental, Dept. Minas Petroleos, Ministerio Industrias Trabajo Repub. Colombia, p. 5, 1937.
- Bogotacrinus scheibei** Schmidt.
 Schmidt, Fosiles paleozoicos Cordillera Oriental, Dept. Minas Petroleos, Ministerio Industrias Trabajo Repub. Colombia, p. 5, pl. 2, figs. 14-17, 1937.
 Sil.: Quebrada Honda, north of Villavicencio, Colombia, South America.
- Bohemiocrinus** Waagen and Jahn. Genotype: *B. pulverens* Waagen and Jahn.
 ?Batoocrinidae (Camerata). Sil.
 Waagen and Jahn in Jahn, Jahrb. Geol. Reichsanst., 42, p. 416, 1892; Syst. Sil. Centre Bohême, 7, pt. 2, pp. 15, 19, 1899.—Sharpe, Zool. Rec., 36, p. 3, 1899 (as *Bohemiocrinus*).—Bather, Ann. Mag. Nat. Hist., (7) 6, p. 106, 1900; Treatise Zool. (Lankester), pt. 3, p. 202, 1900.
- Bohemiocrinus pulverens** Waagen and Jahn.
 Waagen and Jahn, Syst. Sil. Centre Bohême, 7, pt. 2, p. 19, pls. 57, 61, 62, 1899. Sil. (Transition beds): Near Kesor and Dvorce, Bohemia.
- Bohemiocrinus** Sharpe. See *Bohemiocrinus*.
- Bolbocrinus** Wanner. Genotype: *B. hieroglyphicus* Wanner.
 Hypocrinidae (Inadunata-Fistulata). Permian.
 Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 115, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 140, 1924; Neue Beitr. kennt. Perm. Echin. Timor, III, p. 4, 1930.
- Bolbocrinus curvatus** Marez Oyens.
 Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 319, pl. 3, fig. 8, 1940. Permian: Noko (Basleo), Timor.
- Bolbocrinus eudoxiae** Yakovlev.
 Yakovlev, Bull. Comite Geol., 46, p. 184, pl. 6, figs. 11, 11a, b, c; p. 190, 1927. Permian: Krasnooufimsk, Russia.
- Bolbocrinus hieroglyphicus** Wanner.
 Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 115, text fig. 30, pl. 102 (7), fig. 16, 1916.
Bolbocrinus hieroglyphicus typus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 142, 1924; Neue Beitr. kennt. Perm. Echin. Timor, III, p. 4, pl. 1, figs. 5, 6, 1930.
 Permian: Basleo, Timor.
- Bolbocrinus hieroglyphicus exornatus** Wanner.
 Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 143, pl. 7, figs. 21-23, 1924.
 Permian: Basleo, Timor.
- Bolbocrinus hieroglyphicus tenuisculptus** Wanner.
 Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 143, pl. 7, figs. 3, 4, 1924.
 Permian: Basleo, Timor.

Bolbocrinus hieroglyphicus tuberculatus (Wanner).

Bolbocrinus tuberculatus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 117, pl. 102 (7), fig. 17, 1916.

Bolbocrinus hieroglyphicus tuberculatus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 142, 1924.

Permian: Basleo, Timor.

Bolbocrinus hieroglyphicus typus Wanner = *B. hieroglyphicus*.

Bolbocrinus irregularis Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 125, text fig. 31, pl. 102 (7), fig. 19, 1916.

Permian: Basleo, Timor.

Bolbocrinus pusillus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 124, pl. 102 (7), fig. 18, 1916.

Permian: Basleo, Timor.

Bolbocrinus rex Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 119, pl. 101 (6), fig. 1, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 145, pl. 7, figs. 1, 2, 1924; Neue Beitr. kennt. Perm. Echin. Timor, III, p. 5, pl. 1, fig. 7, 1930.

Permian: Noil Tonini, Timor.

Bolbocrinus tuberculatus Wanner = *B. hieroglyphicus tuberculatus*.

Bolbocrinus turbinatus Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 145, pl. 7, figs. 16-20, text fig. 10, 1924; Neue Beitr. kennt. Perm. Echin. Timor, III, pp. 5, 6, text fig. 1, 1930.

Permian: Basleo, Timor.

Bolbocrinus waldthauseniae Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 122, pl. 101 (6), figs. 2, 3, 1916.

Permian: Koeafeoe, Timor.

Bolbocrinus waldthauseniae basleoensis Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 124, pl. 101 (6), fig. 4, 1916.

Permian: Basleo, Timor.

Bolboporites Pander. Genotype: *B. mitralis* Pander.

Position uncertain. Ord.

Pander, Beitr. Geog. Russlands, p. 106, 1830.—Edwards and Haime, Mon. Polyp. Foss. Terr. Pal., p. 246, 1851.—Eichwald, Leth. Ross., 1, pt. 1, p. 495, 1860.—Wanner, Konink. Akad. Wetens. Amsterdam, Proc., 22, p. 705, 1920.

Bolboporites americanus Billings.

Billings, Canadian Nat. Geol., 4, p. 429, figs. 3-6, 1859; Geol. Surv. Canada, p. 124, figs. 124 a-d, 1863.—Chapman, Canadian Jour., n.s., 8, p. 195, fig. 165b; Expos. Min. Geol. Canada, p. 167, fig. 165b, 1863.—S. A. Miller, N. Amer. Geol. Pal., p. 174, fig. 140, 1889.—Ruedemann, N. Y. St. Mus., Bull. 49, p. 11, pl. 1, fig. 1, 1901.

Ord.: Montreal, Canada (Aylmer fm.); Lake Champlain, N. Y. (Day Point ls.); Mingan Island, Quebec (Mingan fm.); Rysedorph, Rensselaer Co., N. Y. (Rysedorph congl.).

Bolboporites mitralis Pander.

Pander, Beitr. Geog. Russlands, p. 107, pl. 2, figs. 4a, 4b, 1830.—Wanner, Konink. Akad. Wetens. Amsterdam, Proc., 22, pl. figs. 14-15, 1920.

Ord. (B-2, Glauconite ls.): St. Petersburg and vicinity, Russia.

Bolboporites semiglobosus Pander.

Pander, Beitr. Geogn. Russlands, p. 107, pl. 2, fig. 1, 1830.

Ord. (B-2, Glauconite ls.): St. Petersburg and vicinity; Iswos; Zarskoje Selo; Russia.

Bolboporites stellifer Eichwald.

Eichwald, Leth. Ross., 1, pt. 1, p. 496, pl. 27, figs. 13 a-d, 1860.

Ord. (Glauconite ls., B2): Zarskoje Selo and Poulkowa, Russia.

Bolboporites triangularis Pander.

Pander, Beitr. Geog. Russlands, p. 107, pl. 2, fig. 2, 1830.

Ord. (Glauconite ls., B2): Zarskoje Selo, etc., Russia.

Bolboporites uncinatus Pander.

Pander, Beitr. Geog. Russlands, p. 107, pl. 2, fig. 3, 1830.

Ord. (Glauconite ls., B2): Zarskoje Selo, Russia.

Bornium Gregorio. Genotype: *B. vetustum* Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 35, 1930. (Stems only.)

Bornium vetustum Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 35, pl. 14, figs. 1-3, 1930.

Permian: Sicily.

Bornium vetustum inane Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 36, pl. 13, fig. 4, 1930.

Permian: Sicily.

Botryocrinus Angelin. Genotype: *B. ramosissimus* Angelin.

Botryocrinidae (Inadunata-Fistulata). Sil.; Dev.

Angelin, Icon. Crin. Suec., p. 24, 1878.—Zittel, Handb. Pal., 1, p. 353, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 97 (320), 1880 (1879).—Bather, Ann. Mag. Nat. Hist., (6) 5, p. 324, 1890; *ibid.*, 7, p. 389, 1891; Köngl. Sv. Vet. Akad. Handl., 25, p. 116, 1893; Treatise Zool. (Lankester) pt. 3, p. 179, 1900; Ottawa Nat., 20, p. 93, 1906.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 65, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 221, 1913.—Haarmann, Jahrb. Preuss. Geol. Landesanst., 41, p. 7, 1920.—Springer, Amer. Sil. Crin., p. 137, 1926.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n. v., heft 163, p. 92, 1934.

Sicyocrinus Angelin, Icon. Crin. Suec., p. 23, 1878.—Wachsmuth and Springer, Rev. Pal., pt. 1, pp. 62, 99 (285, 322), 1880 (1879).—Zittel, Handb. Pal., 1, p. 352, 1879. (Genotype: *S. cucurbitaceus* Angelin.)

Botryocrinus americanus Rowley.

Rowley in Greene, Cont. Ind. Pal., 1, pt. 18, p. 184, pl. 54, figs. 12-14, 1904.—Goldring, N. Y. St. Mus., Mem. 16, p. 367, pl. 47, figs. 9, 10, 1923.

Dev. (Hamilton-Sellersburg ls.): Charlestown, Ind.

Botryocrinus concinnus Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 369, pl. 47, figs. 11, 12, 1923.

Dev. (Hamilton-Skaneateles sh.): East side Owasco Lake, Cayuga Co., N. Y.

Botryocrinus corallum Angelin = *B. ramosissimus*.**Botryocrinus crassus** (Whiteaves).*Homocrinus crassus* Whiteaves, Contrib. Canadian Pal., 1, pt. 2, p. 95, pl. 12, 1887.*Botryocrinus crassus* Goldring, N. Y. St. Mus., Mem. 16, p. 365, pl. 47, figs. 7, 8, 1923; Ann. Carnegie Mus., 24, p. 361, pl. 27, fig. 3, 1935.

Dev. (Hamilton): Near Thedford, Ontario; Ludlowville, Highland Acres, Erie Co., N. Y. (Wanakah sh.).

Botryocrinus cucurbitaceus (Angelin).*Sicyocrinus cucurbitaceus* Angelin, Icon. Crin. Suec., p. 24, pl. 4, fig. 9; pl. 16, fig. 5, 1878.

- Botryocrinus cucurbitaceus* Bather, Königl. Sv. Vet. Akad. Handl., 25, p. 119, fig. 17-2, pl. 6, figs. 130-193, 1893.
Sil. (Gotlandian): Bursvik, Island of Gotland.
- Botryocrinus cyathiformis** Haarmann.
Haarmann, Jahrb. Preuss. Geol. Landesanst., 41, p. 26, pl. 3, fig. 1, 1921.
Dev. (Up. Coblenzian): Dorrbahtales near Coblenz, Germany.
- Botryocrinus decadactylus* Bather = *Dictenocrinus decadactylus*.
- Botryocrinus doubleti** Kirk.
Kirk, in Clarke, Mon. Geol. Surv. Brasil, 1, p. 316, text fig. 1913.
Dev.: Pebble Island, Falkland Islands.
- Botryocrinus* (*Bathericrinus*) *ericus* Schmidt = *Bathericrinus ericius*.
- Botryocrinus* (*Bathericrinus*) *hystrix* Schmidt = *Bathericrinus hystrix*.
- Botryocrinus irregularis** Haarmann.
Haarmann, Jahrb. Preuss. Geol. Landesanst., 41, p. 8, pl. 1, figs. 1a, b, 1921.
Dev. (Coblenzian): Herdorf, Rhine Valley, Germany.
- Botryocrinus longibrachiatus** Chapman.
Chapman, Proc. Roy. Soc. Victoria, n.s., 15, p. 108, figs. 6-8, 1903.
Sil.: Brunswick, Victoria, Australia.
- Botryocrinus nucleus** (Hall).
Dendrocrinus nucleus Hall, 28th Rep. N. Y. St. Mus., Doc. ed. expl. pls., pl. 15, figs. 7-9, 1877; Mus. ed., p. 136, 1879 (as *Cyathocrinus nucleus*); 11th Rep. Geol. Nat. Hist. Ind., p. 265, pl. 14, figs. 7-9, 1882.
Botryocrinus nucleus Bather, Königl. Sv. Vet. Akad. Handl., 25, p. 104, 1893.
Sil. (Niagaran): Waldron and Hartsville, Ind. (Waldron sh.); Louisville, Ky. (Louisville ls.).
- Botryocrinus nycteus** (Hall).
Potriocrinus nycteus Hall, 15th Rep. Regents Univ. St. N. Y., p. 120, 1862; N. Y. St. Mus., Bull. 1, pl. 1-A, figs. 3, 4, 1872.
Botryocrinus nycteus Goldring, N. Y. St. Mus., Mem. 16, p. 363, pl. 47, figs. 3-6, 1923.
Dev. (Hamilton-Moscow sh.): Vincent, Ontario Co. and Kashong Creek, near Beltona, N. Y.
- Botryocrinus obconicus** Goldring.
Goldring, N. Y. St. Mus., Mem. 16, p. 371, pl. 47, fig. 13, 1923.
Dev. (Hamilton-Moscow sh.): West shore Canandaigua Lake, probably vicinity of Menteth's Point, N. Y.
- Botryocrinus pachydactylus* Haarmann = *Nassoviocrinus pachydactylus*.
- Botryocrinus patellaris** Haarmann.
Haarmann, Jahrb. Preuss. Geol. Landesanst., 41, p. 11, pl. 1, figs. 2a, b, 3a, b, 1921.
Low. Dev. (Siegen beds): Trupbach, near Siegen, Rhine Valley, Germany.
- Botryocrinus pinnulatus* Bather = *Dictenocrinus pinnulatus*.
- Botryocrinus polyxo** (Hall).
Cyathocrinus polyxo Hall, Adv. Abstr. Not. Some N. Sp. Foss. Niagara Gr., p. 5, 1863; 28th Rep. N. Y. St. Mus., p. 135, pl. 15, figs. 10-17, Doc. ed., 1877, Mus. ed., 1879; 11th Rep. Geol. Nat. Res. Indiana, p. 264, pl. 14, figs. 10-17, 1882.
Botryocrinus polyxo Bather, Königl. Sv. Vet. Akad. Handl., 25, p. 105, 1893.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 66, pl. 14, fig. 12, 1900.—Springer, Amer. Sil. Crin., p. 138, pl. 31, 1926.
Sil. (Niagaran): Waldron and Hartsville, Ind. (Waldron sh.): Bridgeport, Ill. (Racine dol.).

Botryocrinus procerus Haarmann.

Haarmann, Jahrb. Preuss. Geol. Landesanst., 41, p. 25, pl. 5, figs. 3a, b, 4, 1921.
Dev. (Low. Coblenzian): Oberstadtfeld; Lauzert near Niederstadtfeld, Rhine Valley, Germany.

Botryocrinus quinquelobus Bather.

Bather, Ann. Mag. Nat. Hist., (6) 9, p. 189, pl. 11, figs. 1, 2, 1892.
Cyathocrinus quinquangularis Phillips, in Salter, Cat. Camb. and Sil. Foss., p. 123, 1873.
Sil. (Wenlock ls.): Dudley, England.

Botryocrinus ramosissimus Angelin.

Angelin, Icon. Crin. Suec., p. 24, pl. 20, fig. 2; pl. 23, fig. 14, 1878.
Botryocrinus corallum Angelin, Icon. Crin. Suec., p. 24, pl. 15, fig. 9a; pl. 23, figs. 15, 16, 16a; pl. 24, fig. 4, 1878.
Sil. (Gotlandian): Follingbo, etc., Island of Gotland.

Botryocrinus ramosus Bather = *Bathericrinus ramosus*.

Botryocrinus reimanni Goldring.

Goldring, Bull. Buffalo Soc. Nat. Sci., 15, p. 193, pl. 2, figs. 8-12, 1934.
Dev. (Hamilton): Bayview, Erie Co., N. Y. (Wanakah sh.); Arkona, Ontario (Arkona sh.).

Botryocrinus schultzei Haarmann.

Haarmann, Jahrb. Preuss. Geol. Landesanst., 41, p. 14, pl. 2, figs. 1-4b, text fig. 2, p. 17, 1921.
Dev. (Low. Coblenzian): Lauzert near Niederstadtfeld, Rhine Valley, Germany.
Botryocrinus (*Bathericrinus*)? *semipinnulatus* Schmidt = *Bathericrinus semipinnulatus*.

Botryocrinus sentosus Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 372, pl. 41, fig. 10, 1923.
Dev. (Hamilton-Moscow sh.): Kashong Creek, near Bellona, Yates Co., N. Y.
Botryocrinus (*Bathericrinus*) *speciosus* Schmidt = *Bathericrinus speciosus*.

Botryocrinus tenuidactylus Springer.

Springer, Amer. Sil. Crin., p. 137, pl. 31, fig. 9, 1926.
Sil. (Niagaran-Beech River fm.): 2 miles north Decaturville, Tenn.

Botryocrinus thomasi Laudon.

Laudon, Jour. Pal., 10, p. 62, figs. 4-6, 1936.
Dev. (Cedar Valley ls.-Littleton mem.): Linwood, and Linders boat landing, Iowa River, north of Iowa City, Iowa.

Brachiocrinus Hall = *Myelodactylus*.

Brachypus Wanner. Genotype: *B. adhaerens* Wanner.

Lecanocrinidae (Flexibilia). Permian.

Wanner, Pal. Zeits., 11, pp. 319, 321, 1929; Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia: Wetens. Meded., no. 14, p. 46, 1930.

Brachypus adhaerens Wanner.

Wanner, Pal. Zeits., 11, p. 320, pl. 8, figs. 6-9, 1929; Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia: Wetens. Meded., no. 14, p. 47, text fig. 29, p. 49, pl. 4, figs. 9-12, 1930.
Permian: Basleo, Timor.

Brahmacrinus Sollas. Genotype: *B. ponderosus* Sollas.

Platycrinidae (Adunata). Sil.; Low. Carb.

Sollas, Quart. Jour. Geol. Soc. London, 56, p. 264, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 200, 1913; Amer. Sil. Crin., p. 53, 1926.

Brahmacrinus elongatus Springer.

Springer, Amer. Sil. Crin., p. 53, pl. 12, figs. 9-15, 1926.

Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Brahmacrinus ponderosus Sollas.

Sollas, Quart. Jour. Geol. Soc. London, 56, p. 264, pl. 16, figs. 1, 2, text figs. 1, 2, 1900.

Low. Carb. (Mt. Ls.): Yorkshire; Preston, Lancashire, England.

Briarocrinus Angelin. Genotype: *B. inflatus* Angelin.

Patelloocrinidae (Camerata). Sil.

Angelin, Icon. Crin. Suec., p. 1, 1878.—Zittel, Handb. Pal., 1, p. 367, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 96 (270), 1881.—Bather, Treatise Zool. (Lankester), pt. 3, p. 162, 1900.—Jaekel, Pal. Zeits., 3, p. 38, 1918.

Briarocrinus angustus Angelin = *Angelinocrinus angustus*.**Briarocrinus inflatus** Angelin.

Angelin, Icon. Crin. Suec., p. 1, pl. 10, fig. 23, 1878.

Sil. (Gotlandian): Follingbo and Fårö, Island of Gotland.

Brychioerinus Moore and Plummer. = *Stellarocrinus* Strimble.**Bursacrinus** Meek and Worthen. Genotype: *B. wachsmuthi* Meek and Worthen.

Poteriocrinidae (Inadunata-Fistulata). Miss.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 136, 1861; Geol. Surv. Ill., 3, p. 478, 1868.—Zittel, Handb. Pal., 1, p. 361, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 123 (346), 1880 (1879); pt. 3, pp. 191, 252 (115, 176), 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 180, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 225, 1913.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 180, 1924.

Bursacrinus confirmatus White.

White, Proc. Boston Soc. Nat. Hist., 9, p. 11, 1865 (adv. pub., 1862).

Miss. (Low. Burlington ls.): Burlington, Iowa.

Bursacrinus magnificus Wanner = *Parabursacrinus magnificus*.*Bursacrinus procerus* Wanner = *Parabursacrinus procerus*.*Bursacrinus pyramidatus* Wanner = *Parabursacrinus pyramidatus*.**Bursacrinus wachsmuthi** Meek and Worthen.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 137, 1861; Geol. Surv. Ill., 3, p. 479, pl. 17, fig. 6, text fig., 1868.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Cacabocrinites Troost = *Dolatoerinus*.*Cacabocrinites sculptus* Troost = *Dolatoerinus grandis*.*Cacabocrinus* Hall = *Dolatoerinus*.*Cacabocrinus troosti* Hall = *Clarkeocrinus troosti*.**Cactocrinus** Wachsmuth and Springer. Genotype: *Actinocrinus proboscivalis* Hall.

Actinocrinidae (Camerata). Miss.; Carb.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 600, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 170, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 197, 1913.

Cactocrinus arnoldi (Wachsmuth and Springer).*Actinocrinus arnoldi* Wachsmuth and Springer, in Miller, N. Amer. Geol. Pal., p. 218, fig. 232, 1889; Geol. Surv. Ill., 8, p. 168, pl. 17, fig. 10, 1890.*Cactocrinus arnoldi* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 624, pl. 57, figs. 4a, b, 1897.—Laudon and Beane, Iowa Univ. Studies, 17, no. 6, p. 16, figs. 3, 4, 1937.

Miss. (Kinderhook-Hampton fm.): Legrand, Marshall Co., Iowa.

Cactocrinus baccatus Wood.

Wood, Ann. N. Y. Acad. Sci., 24, p. 4, pl. 1, fig. 3; pl. 2, figs. 3, 4, 4a, b, 1914.
 Miss. (Burlington ls.): Burlington, Iowa.

Cactocrinus? brownei Dun and Benson.

Dun and Benson, Proc. Linn. Soc. New South Wales, 45, p. 342, pl. 19, fig. 1, 1920.
 Carb.: 4 miles east Currabubula, New South Wales.

Cactocrinus clarus (Hall).

Actinocrinus clarus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 277, 1861; N. Y. St. Mus., Bull. 1, pl. 3-A, figs. 24, 25, 1872:

Cactocrinus clarus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 612, pl. 57, figs. 9, 10; pl. 58, fig. 1, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Cactocrinus coelatus (Hall).

Actinocrinus coelatus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 585, pl. 10, figs. 14a, b, 1858; Suppl., pl. 2, fig. 1, 1860.

Cactocrinus coelatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 618, pl. 59, figs. 8, 9, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Cactocrinus coelatus spinotentaculus (Hall).

Actinocrinus spinotentaculus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 86, 1860.—N. Y. Mus., Bull. 1, pl. 3-A, figs. 13-17, 1872.

Cactocrinus coelatus var. *spinotentaculus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 619, pl. 59, fig. 10, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Cactocrinus denticulatus Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 606, pl. 57, figs. 5a, b, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Cactocrinus ectypus (Meek and Worthen).

Strotocrinus ectypus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 159, 1869; Geol. Surv. Ill., 5, p. 353, pl. 7, fig. 5, 1873.

Cactocrinus ectypus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 611, pl. 56, fig. 10, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Cactocrinus excerptus (Hall).

Actinocrinus excerptus Hall, Prelim. Descr. New Crin., p. 3; Jour. Boston Soc. Nat. Hist., 7, p. 276, 1861.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Cactocrinus extensus Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 616, pl. 57, figs. 6, 7, 1897.

Actinocrinus sexarmatus var. Hall, N. Y. St. Mus., Bull. 1, pl. 3, fig. 26, 1872.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Cactocrinus fossatus (S. A. Miller).

Actinocrinus fossatus S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 294, pl. 6, figs. 11, 12, 1894 (adv. pub., 1892).

Cactocrinus fossatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 620, pl. 55, fig. 12, 1897.

Miss. (Chouteau ls.): Sedalia, Mo.

Cactocrinus fosteri (McChesney).

Actinocrinus fosteri McChesney, Descr. N. Sp. Foss. Pal. Rocks Western States, p. 19, 1860; Illustr. N. Sp. Foss., pl. 5, figs. 2a, b, 1865; Trans. Chicago Acad. Sci., 1, pp. 14, 15, text fig., pl. 5, figs. 2a, b, 1868.

- Cactocrinus fosteri* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 601, 1897. Miss. (Burlington ls.): Burlington, Iowa.
- Cactocrinus glans** (Hall).
Actinocrinus glans Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 16, text fig., 1860.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 143 (317), pl. 19, figs. 8, 15, 1881.—Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 1, p. 10, pl. 1, figs. 11, 12, 1893.—Keyes, Geol. Surv. Mo., 4, p. 189, pl. 24, figs. 2a, b, 1894.
- Cactocrinus glans* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 625, pl. 4, fig. 8; pl. 54, figs. 5-7, 1897.
- Actinocrinus* (*Megistocrinus*) *whitei* Hall, N. Y. St. Mus., Bull. 1, pl. 4, fig. 6 (not 4 and 5), 1872.
- Actinocrinus blairi* S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 289, pl. 5, figs. 27-29, 1894 (adv. pub. 1892, p. 35).
- Actinocrinus eryx* Hall, Prelim. Descr. N. Sp. Crin., p. 12, 1861.
- Actinocrinus tholus* Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 35, text fig., 1860. Miss.: Burlington, Iowa, Louisiana, Hannibal, etc., Mo. (Up. Burlington ls.); Sedalia, Mo. (Chouteau ls.).
- Cactocrinus hurdianus** (McChesney).
Actinocrinus hurdianus McChesney, Descr. N. Sp. Foss. Pal. Rocks Western States, p. 24, 1860; Illustr. N. Sp. Foss., pl. 5, figs. 9a, b; pl. 11, fig. 1, 1865; Trans. Chicago Acad. Sci., 1, p. 17, pl. 5, figs. 9a, b, p. 18, text fig., 1868.
- Cactocrinus hurdianus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 601, 1897. Miss. (Low. Burlington ls.): Burlington, Iowa.
- Cactocrinus imperator** Laudon.
 Laudon, Univ. Iowa Studies, 15, no. 2, p. 51, pl. 2, fig. 9; pl. 3, fig. 1, 1933. Miss. (Kinderhook-Gilmore City fm.): Gilmore City, Iowa.
- Cactocrinus limabrachiatus** (Hall).
Actinocrinus limabrachiatus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 268, 1861 (adv. pub., p. 2).—Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 1, p. 5, pl. 1, figs. 8, 9, 1893.
- Cactocrinus limabrachiatus* Wachsmuth and Springer, N. Amer. Crin. Cam. p. 608, pl. 58, figs. 9, 10a, b, 1897.
- Miss. (Low. Burlington ls.): Burlington, Iowa.
- Cactocrinus longus** (Meek and Worthen).
Actinocrinites longus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 156, 1869; Geol. Surv. Ill., 5, p. 345, pl. 8, fig. 1, 1873.
- Cactocrinus longus* Wachsmuth and Springer, N. Amer. Crin. Cam., n. 609, pl. 57, fig. 8, 1897.
- Miss. (Low. Burlington ls.): Burlington, Iowa.
- Cactocrinus lucina** (Hall).
Actinocrinus lucina Hall, Descr. N. Sp. Crin., p. 11, 1861.
- Cactocrinus lucina* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 603, pl. 56, figs. 8, 9, 1897.
- Actinocrinus puteatus* Rowley and Hare, Kansas City Sci., 5, p. 101, pl. 2, fig. 16, 1891.
- Miss. (Low. Burlington ls.): Burlington, Iowa; Louisiana, Mo.
- Cactocrinus multibrachiatus** (Hall).
Actinocrinus multibrachiatus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 580, pl. 10, fig. 10, text fig. 85, 1858.
- Cactocrinus multibrachiatus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 617, pl. 56, figs. 6, 7; pl. 58, fig. 8, 1897.
- Actinocrinus multibrachiatus* var. *echinatus* Hall, Prelim. Descr. N. Sp. Crin., p. 10, 1861.
- Miss. (Low. Burlington ls.): Burlington, Iowa.

Cactocrinus nodobrachiatus (Wachsmuth and Springer).

Actinocrinus nodobrachiatus Wachsmuth and Springer, in Miller, N. Amer. Geol. Pal., p. 219, 1889; Geol. Surv. Ill., 8, p. 165, pl. 15, fig. 5; pl. 16, fig. 10, 1890.

Cactocrinus nodobrachiatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 622, pl. 57, figs. 1, 2, 1897.—Rowley, in Greene, Cont. Ind. Pal., 2, pt. 2, p. 31, pl. 6, fig. 14, 1906.—Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 247, pl. 16, fig. 2, 1937.

Miss. (Kinderhook-Hampton fm.): Legrand, Marshall Co., Iowa.

Cactocrinus obesus (Keyes).

Actinocrinus obesus Keyes, Geol. Mo., 4, p. 187, pl. 24, fig. 4, 1894.

Cactocrinus obesus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 613, pl. 55, figs. 9a, b, 1897.

Miss. (Up. Burlington ls.): Hannibal and Louisiana, Mo.; Quincy, Ill.

Cactocrinus opusculus (Hall).

Actinocrinus opusculus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., pl. 2, fig. 6, 1860.—Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 1, p. 9, pl. 1, figs. 6, 7, 1893.

Cactocrinus opusculus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 607, pl. 56, figs. 5a, b, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Cactocrinus ornatissimus (Wachsmuth and Springer).

Actinocrinus ornatissimus Wachsmuth and Springer, in Miller, N. Amer. Geol. Pal., p. 219, 1889; Geol. Surv. Ill., 8, p. 163, pl. 16, fig. 9 (not pl. 17, fig. 3 = *C. arnoldi*), 1890.

Cactocrinus ornatissimus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 621, pl. 57, fig. 3, 1897.—Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 247, pl. 16, fig. 5, 1937.

Miss.: Legrand, Marshall Co., Iowa (Kinderhook-Hampton fm.); Spring Canyon, Alden, Mont. (Madison ls.).

Cactocrinus platybrachiatus Wood.

Wood, Ann. N. Y. Acad. Sci., 24, p. 5, pl. 1, fig. 2; pl. 3, figs. 2-2b, 1914.

Miss. (Burlington ls.): Burlington, Iowa.

Cactocrinus proboscidiialis (Hall).

Actinocrinus proboscidiialis Hall, Geol. Rep. Iowa, 1, pt. 2, p. 584, pl. 10, fig. 13, 1858; Suppl., pl. 3, fig. 2, 1860.—Meek and Worthen, Geol. Surv. Ill., 5, pp. 328, 330, 332, pl. 9, figs. 7 a-c, ? figs. 8a, b, 1873.—Keyes, Geol. Surv. Mo., 4, p. 185, pl. 24, fig. 1; pl. 20, fig. 2, 1894.

Cactocrinus proboscidiialis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 601, pl. 5, fig. 10; pl. 58, figs. 3-7d, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 129, fig. 44, 1900.—Kirk, U. S. Nat. Mus., Proc., 41, pl. 5, figs. 4, 5, 1911.—Springer, Zittel-Eastman Textb. Pal., 1, p. 174, fig. 268; p. 179, fig. 280; p. 198, fig. 299-A, 1913.

Actinocrinus lagena Hall, Prelim. Descr. N. Sp. Crin., p. 13, 1861.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 453, pl. 35, fig. 4, 1897.

Actinocrinus dalyanus S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 4, p. 309, pl. 7, figs. 1, 1a, 1881.

Actinocrinus themis Hall, Prelim. Descr. N. Sp. Crin., p. 11, 1861.

Actinocrinus quaternarius Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 22, text fig., 1860.—Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 1, p. 7, pl. 1, figs. 1-3, 1881.

Actinocrinus quaternarius var. *spiniferus* Hall, Prelim. Descr. N. Sp. Crin., p. 11, 1861.

Miss.: Burlington, Iowa (Low. Burlington ls.); Sedalia, Mo. (Chouteau ls.); Lake Valley, N. Mexico (Lake Valley ls.).

Cactocrinus reticulatus (Hall).

Actinocrinus reticulatus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 269, 1861.

Cactocrinus reticulatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 605, pl. 58, figs. 2a, b, 1897.

- Actinocrinus locellus* Hall, Prelim. Descr. N. Sp. Crinoids, p. 15, 1861.
Actinocrinus thoas Hall, Prelim. Descr. N. Sp. Crin., p. 11, 1861.
 Miss. (Low. Burlington ls.): Burlington, Iowa.
- Cactocrinus reticulatus ovatus** (Hall).
Actinocrinus ovatus Hall, Prelim. Descr. N. Sp. Crin., p. 10, 1861.
Cactocrinus reticulatus var. *ovatus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 606, pl. 57, fig. 11, 1897.
 Miss. (Low. Burlington ls.): Burlington, Iowa.
- Cactocrinus sexarmatus** (Hall).
Actinocrinus sexarmatus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 21, text fig., 1860.
Cactocrinus sexarmatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 615, pl. 55, figs. 10, 11, 1897.
 Miss. (Low. Burlington ls.): Burlington, Iowa.
- Cactocrinus springeri** (Rowley).
Batocrinus? *springeri* Rowley, Amer. Geol., 25, p. 72, pl. 2, fig. 16, 1900.
Cactocrinus springeri Rowley, Amer. Geol., 27, pp. 346, 348, pl. 28, figs. 30, 31, 49, 50, 1901.
 Miss. (Low. Burlington ls.): Louisiana, Mo.
- Cactocrinus thalia** (Hall).
Actinocrinus thalia Hall, Descr. N. Sp. Crin., p. 13, 1861.
Cactocrinus thalia Wachsmuth and Springer, N. Amer. Crin. Cam., p. 604, pl. 56, fig. 2; pl. 57, figs. 12, 13, 1897.
Actinocrinus infrequens Hall, Descr. N. Sp. Crin., p. 14, 1861.
Actinocrinus nodosus S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 33, pl. 5, fig. 7, 1891.
 Miss.: Burlington, Iowa (Low. Burlington ls.); Sedalia, Mo. (Chouteau ls.).
- Cactocrinus thetis** (Hall).
Actinocrinus thetis Hall, Prelim. Descr. N. Sp. Crin., p. 11, 1861.—Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 2, p. 6, pl. 8, fig. 10, 1893.
Cactocrinus thetis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 614, pl. 5, fig. 11; pl. 56, figs. 3, 4, 1897.
Actinocrinus securus Hall, Prelim. Descr. N. Sp. Crin., p. 14, 1861.—Meek and Worthen, Geol. Surv. Ill., 5, p. 328, pl. 9, figs. 6a, b, 1873.
 Miss. (Low. Burlington ls.): Hannibal, Mo.; Burlington, Iowa.
- Cadocrinus** Wanner. Genotype: *Hydreionocrinus variabilis* Wanner.
 Poteriocrinitidae (Inadunata-Fistulata). Permian.
 Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, pp. 180, 250, 1924.
- Cadocrinus amarassicus** (Wanner).
Hydreionocrinus amarassicus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 165, pl. 104 (9), figs. 10, 11, 1916.
Cadocrinus amarassicus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 253, 1924.
 Permian: Koeafeoe, Timor.
- Cadocrinus variabilis** (Wanner).
Hydreionocrinus variabilis Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 150, text fig. 42, p. 153, text fig. 43, p. 155, text fig. 44, pl. 104 (9), figs. 4-9, pl. 105 (10), figs. 1-18, 1916.—Yakovlev, Centralbl. Min., Geol., Pal., Abt. B, no. 9, p. 377, fig. 8, 1930.
Cadocrinus variabilis Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 251, text figs. 42, 43, 1924.
 Permian: Basleo, etc., Timor.

Cadocrinus variabilis canaliculatus Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped., p. 252, pl. 12, fig. 4, pl. 13, figs. 1, 2, 1924.

Permian: Basleo, Timor.

Calathocrinus Hall = *Teleocrinus*.

Calceocrinus Hall. Genotype: *C. halli* Ringueberg.

Calceocrinidae (Inadunata-Fistulata). Sil. ?Miss.

Hall, Nat. Hist. N. Y., Pal., 2, p. 352, 1852; 28th Rep. N. Y. St. Cab. Nat. Hist., p. 146, 1879; 11th Rep. Dep. Geol. Nat. Hist. Ind., p. 281, 1882.—Meek and Worthen, Geol. Surv. Ill., 5, p. 442, 1873.—Ulrich, 14th Ann. Rep. Geol. Nat. Hist. Surv. Minn., p. 104, 1886.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 278 (202), 1886.—Ringueberg, Ann. N. Y. Acad. Sci., 4, p. 401, 1889.—Bather, Königl. Sv. Vet. Akad. Handl., 25, no. 2, pp. 21, 54, 61, 1893; Treatise Zool. (Lankester), pt. 3, p. 148, 1900.—Springer, Amer. Sil. Crin., p. 115, 1926.

Cheirocrinus Salter (not Hall; not Eichwald), in Murchison's Siluria (ed. 3), p. 535, 1859.—Zittel, Handb. Pal., p. 358, 1879. (Substituted by Salter for *Pendulocrinus* Austin.)

Chirocrinus Angelin, Icon. Crin. Suec., p. 22, 1878 (substituted for *Cheirocrinus* Salter).

Pendulocrinus (Austin, Ms.) Salter, in Murchison's Siluria, (ed. 3), p. 535, footnote, 1859. [Genotype: *P. (Cheirocrinus) serialis* Austin Ms.]

Synchirocrinus Jaekel, Pal. Zeits., 3, p. 86, 1918. (Genotype: *S. anglicus* Jaekel.)

Calceocrinus alleni Rowley.

Rowley, Amer. Geol., 34, p. 275, pl. 16, figs. 30-33, 1904.

Sil. (Medinan-Edgewood ls.): Watson Station, Pike Co., Mo.

Calceocrinus barrandii Walcott = *Euchirocrinus barrandii*.

Calceocrinus barrisi Worthen = *Halysiocrinus barrisi*.

Calceocrinus bassleri Springer.

Springer, Amer. Sil. Crin., p. 117, pl. 29, figs. 12a, b, 13, 14, pl. 28, fig. 21, 1926.

Sil. (Niagaran-Beech River fm.): 2 miles north Decaturville, Tenn.

Calceocrinus bidentatus Ringueberg.

Ringueberg, Ann. N. Y. Acad. Sci., 4, p. 404, pl. 10, fig. 10, 1889.

Sil. (Niagaran-Rochester sh.): Lockport, N. Y.

Calceocrinus bifurcatus Springer.

Springer, Amer. Sil. Crin., p. 117, pl. 29, figs. 15, 15a, b, 1926.

Sil. (Niagaran-Beech River fm.): West of Tucks Mill, Decatur Co., Tenn.

Calceocrinus bradleyi Meek and Worthen = *Halysiocrinus bradleyi*.

Calceocrinus centervilleensis Foerste.

Foerste, Ohio Jour. Sci., 36, p. 271, pl. 2, figs. 3, 4, 1936.

Sil. (Medinan-Brassfield ls.): Centerville, Ohio.

Calceocrinus chrysalis Hall = *Euchirocrinus chrysalis*.

Calceocrinus fletcheri (Salter).

Cheirocrinus fletcheri Salter, Cat. Camb. Sil. Foss., p. 118, fig., 1873.

Calceocrinus fletcheri Bather, Königl. Sv. Vet. Akad. Handl., 25, p. 66, 1893.

Sil. (Wenlock ls.): Dudley, England.

Calceocrinus foerstei Springer.

Springer, Amer. Sil. Crin., p. 94, fig. 2c, p. 116, pl. 29, figs. 7a, b, 8a, b, 9-11, 1926.

Sil. (Niagaran-Beech River fm.): 2 miles north Decaturville, Tenn.

Calceocrinus furcatus Billings = *Cremacrinus furcillatus*.

Calceocrinus gotlandicus (Angelin).

Chirocrinus gotlandicus Angelin, Icon. Crin. Suec., p. 22, pl. 16, figs. 6-14, 1878.

Calceocrinus gotlandicus Bather, Köngl. Sv. Vet. Akad. Handl., 25, no. 2, pp. 66, 77, 81, pl. 3, figs. 83-97, 1893.—Springer, Amer. Sil. Crin., p. 94, fig. 2b, 1926.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Calceocrinus? granuliferus Rowley.

Rowley, in Greene, Cont. Ind. Pal., 1, pt. 12, p. 114, pl. 35, figs. 7-9, 1903.

Miss. (New Providence sh.): Button Mold Knob, 12 mi. s. Louisville, Ky.

Calceocrinus halli Ringueberg.

Ringueberg, Ann. N. Y. Acad. Sci., 4, p. 403, pl. 10, fig. 9, 1889.—Springer, Amer.

Sil. Crin., p. 119, pl. 29, fig. 19, 1926.

Sil. (Niagaran-Rochester sh.): Middleport, N. Y.

Calceocrinus (?) incertus Foerste.

Foerste, Ohio Jour. Sci., 36, p. 271, pl. 2, figs. 5-8, 1936.

Sil. (Medinan-Brassfield ls.): Near Centerville, Ohio.

Calceocrinus indianensis S. A. Miller = *Eucheirocrinus indianensis*.

Calceocrinus interpres Bather.

Bather, Köngl. Sv. Vet. Akad. Handl., 25, no. 2, p. 94, pl. 4, figs. 123-128, 1893.

Sil. (Gotlandian): Klinteberg, Island of Gotland.

Calceocrinus kentuckiensis Miller and Gurley = *Cremacrinus kentuckiensis*.

Calceocrinus lamellosus (Hall).

Chirocrinus lamellosus Hall, 13th Rep. N. Y. St. Cab. Nat. Hist., p. 123, 1860.

Calceocrinus lamellosus Shumard, Trans. Acad. Sci. St. Louis, 2, p. 358, 1866.

Miss. (Burlington ls.): Burlington, Iowa.

Calceocrinus marylandicus Ohern = *Halysioocrinus marylandicus*.

Calceocrinus nitidus Bather.

Bather, Köngl. Sv. Vet. Akad. Handl., 25, p. 91, pl. 4, figs. 117-122, 1893.—Springer,

Amer. Sil. Crin., p. 119, pl. 29, fig. 20, 1926.

Synchirocrinus anglicus Jaekel, Pal. Zeits., 3, p. 86, figs. 81-83, 1918.—Ehrenberg, Bull. Amer. Mus. Nat. Hist., 59, p. 65, fig. 40, 1929.

Sil.: Klinteberg, Follingbo, Bruten, etc., Island of Gotland (Gotlandian); Dudley, England (Wenlock).

Calceocrinus pinnulatus Bather.

Bather, Köngl. Sv. Vet. Akad. Handl., 25, p. 96, pl. 4, figs. 129-140, 1893.

Sil. (Gotlandian): Klinteberg, Farö, Island of Gotland.

Calceocrinus pugil Bather.

Bather, Köngl. Sv. Vet. Akad. Handl., 25, p. 82, pl. 3, figs. 98-104, 1893.—Springer, Amer. Sil. Crin., p. 120, pl. 29, fig. 21, 1926.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Calceocrinus radiculus Ringueberg = *Eucheirocrinus chrysalis*.

Calceocrinus robustus Worthen = *Halysioocrinus robustus*.

Calceocrinus rugosus Billings = *Cremacrinus rugosus*.

Calceocrinus (*Chirocrinus*) *secundus* Hall = *Halysioocrinus secundus*.

Calceocrinus stigmatus (Hall).

Chirocrinus stigmatus Hall, Trans. Albany Inst., 4, p. 225, 1864 (Adv. pub., 1863, p. 3).

Calceocrinus stigmatus Hall, 28th Rep. N. Y. St. Mus. Nat. Hist., p. 147, pl. 19, figs. 9-11, 1879; 11th Rep. Geol. Nat. Hist. Ind., p. 281, pl. 19, figs. 9-11, 1882.

—Springer, Amer. Sil. Crin., p. 119, pl. 29, fig. 16, 1926.

Sil. (Niagaran-Waldron sh.): Waldron, Ind.

Calceocrinus tenax Bather.

Bather, Königl. Sv. Vet. Akad. Handl., 25, p. 88, pl. 3, figs. 109-115, 1893.
Sil. (Gotlandian): Follingbo, Island of Gotland.

Calceocrinus tucanus Bather.

Bather, Königl. Sv. Vet. Akad. Handl., 25, p. 86, pl. 3, figs. 105-108, 1893; Treatise Zool. (Lankester), pt. 3, p. 148, text fig. 60, 1900.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Calceocrinus tunicatus Hall = *Halysiocrinus tunicatus*.

Calceocrinus typus Ringueberg.

Ringueberg, Ann. N. Y. Acad. Sci., 4, p. 402, pl. 10, fig. 8, 1889.—Bather, Königl. Sv. Vet. Akad. Handl., 25, p. 66, 1893.—Springer, Amer. Sil. Crin., p. 118, pl. 29, figs. 17, 17a, 1926.

Sil. (Niagaran-Rochester sh.): Lockport, N. Y.

Calceocrinus? *wachsmuthi* Meek and Worthen = *Halysiocrinus wachsmuthi*.

Calceolispongia Etheridge Jr. Genotype: *C. hindei* Etheridge, Jr.

Poteroicrinitidae (Inadunata-Fistulata). Up. Carb.

Etheridge, Jr., Perth Geol. Surv., West. Australia, 58, p. 9, 1914. (See *Dinocrinus Wannier*.)

Calceolispongia hindei Etheridge, Jr.

Etheridge Jr., Geol. Surv. West. Australia, 58, p. 9, pl. 4, figs. 1-9; pl. 7, figs. 5, 6, 1914.

Dinocrinus cornutus var. *hindei* Gerth, Konink. Akad. Wetens. Amsterdam, Proc., 39, p. 866, text figs. 1-3, 1936.

Permian: Mount Marmion, Western Australia.

Caleidocrinus Waagen and Jahn. Genotype: *C. multiramus* Waagen and Jahn.

Heterocrinidae (Inadunata-Fistulata). Ord.

Waagen and Jahn, in Jahn, Jahrb. Geol. Reichsanst., 42, p. 399, 1892; Syst. Sil. Centre Bohême, 7, pt. 2, pp. 106-113, 1899.—Bather, Ann. Mag. Nat. Hist., (7) 6, p. 111, 1900; Treatise Zool., (Lankester), pt. 3, p. 202, 1900.—Jaekel, Intern. Zool. Congr., Verh. 5, Berlin, p. 1075, 1902 (as *Kaleidocrinus*).—Springer, Jour. Geol., 14, pp. 485, 519, 1906; Zittel-Eastman Textb. Pal., 1, 1913, p. 206, 1913.—Jaekel, Pal. Zeits., 3, p. 57, 1918 (as *Kaleidocrinus*).—Springer, Crin. Flexibilia, p. 442, 1920.

Caleidocrinus barrandei Waagen and Jahn.

Waagen and Jahn, Syst. Sil. Centre Bohême, 7, pt. 2, p. 112, text figs. 31a, b, 1899.
Ord. (D4): Haj, near Zahorzan, Bohemia.

Caleidocrinus multiramus Waagen and Jahn.

Waagen and Jahn, in Jahn, Jahrb. geol. Reichsanst., 42, p. 399, 1892; Syst. Sil. Centre Bohême, 7, pt. 2, p. 112, pl. 63, figs. 1-22, text figs. 27-30, 1899.—Bather, Ann. Mag. Nat. Hist., (7) 6, p. 111, fig. 5, 1900.

Iocrinus ("Caleidocrinus") *multiramus* Springer, Crin. Flexibilia, p. 442, pl. 75, fig. 9; pl. 76, fig. 24, 1920.

Ord. (D4): Near Zahorzan, Bohemia.

Callawayocrinus Rowley = *Dactylocrinus*.

Callicrinus Angelin = *Calliocrinus*.

Callimorphocrinus Peck = *Kallimorphocrinus*.

Calliocrinites Chapman = *Calliocrinus*.

Calliocrinus d'Orbigny. Genotype: *Eugeniocrinites costatus* Hisinger.

Eucalyptocrinitidae (Camerata). Sil., ?Dev.

D'Orbigny, Prodr. Pal. Strat., 1, p. 45, 1849.

- Callicrinus* Angelin, Icon. Crin. Suec., p. 14, 1878.—Zittel, Handb. Pal., 1, p. 378, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, p. 135 (357), 1885; N. Amer. Crin. Cam., p. 353, 1897.—Weller, Jour. Geol., 5, p. 774, 1897; Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, p. 117, 1900.—Bather, Treatise Zool. (Lankester), pt. 3, p. 164, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 192, 1913; Amer. Sil. Crin., p. 50, 1926.
- Calliocrinites* Chapman, Canadian Jour., n.s., 2, p. 304, 1857.
- Cryptodiscus* Hall, 20th Rep. N. Y. St. Cab. Nat. Hist., pl. 11, fig. 8, 1865 (Rev. ed. 1868, fig. 18).—Weller, Jour. Geol., 5, p. 744, 1897 (footnote); Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, pp. 121, 803, 1900.—Bather, Treatise Zool. (Lankester), pt. 3, p. 164, 1900. (Genotype: *C. bilobus* Weller; selected by Weller.)
- Calliocrinus acanthinus** (Ringueberg).
- Callicrinus acanthinus* Ringueberg, Ann. N. Y. Acad. Sci., 5, p. 302, pl. 3, figs. 1, 1a, 1890.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 356, pl. 83, fig. 18, 1897.
- Sil. (Niagaran-Gasport ls.): Lockport, N. Y.
- Calliocrinus beachleri** (Wachsmuth and Springer).
- Callicrinus beachleri* Wachsmuth and Springer, Amer. Geol., 10, p. 140, 1892; N. Amer. Crin. Cam., p. 355, pl. 83, figs. 14a, b, 1897.—Springer, Amer. Sil. Crin., p. 40, pl. 9, figs. 8-13, 1926.
- Sil. (Niagaran-Laurel ls.): St. Paul, Ind.
- Calliocrinus beyrichianus** (Angelin).
- Callicrinus beyrichianus* Angelin, Icon. Crin. Suec., p. 15, pl. 2, fig. 6, 1878.
- Sil. (Gotlandian): Lickershamn, Island of Gotland.
- Calliocrinus bifurcatus** (Weller).
- Callicrinus bifurcatus* Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 125, pl. 8, fig. 7, 1900.
- Sil. (Niagaran-Racine dol.): Joliet, Ill.
- Calliocrinus bilobus** (Weller).
- Cryptodiscus bilobus* Weller, Jour. Geol., 5, p. 749, fig. 8, 1897; Chicago, Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 125, pl. 10, fig. 4, 1900.
- Sil. (Niagaran-Racine dol.): Chicago, Ill.
- Calliocrinus cornutus** (Hall).
- Eucalyptocrinus cornutus* Hall, 20th Rep. N. Y. St. Cab. Nat. Hist., Doc. ed., p. 322, pl. 11, figs. 8, 9, 1867; Rev. ed., p. 363, 1870 (adv. pub., 1865).—Whitfield, Geol. Wisconsin, 4, p. 285, pl. 16, figs. 5-8, 1882.
- Callicrinus cornutus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 357, pl. 83, figs. 15-17, 1897.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 118, pl. 8, figs. 1-3, 1900.
- Silurian (Niagaran): Waukesha and Racine, Wis., Chicago, Ill. (Racine dol.); Greenville, Ohio (Cedarville ls.).
- Calliocrinus cornutus excavatus** (Hall).
- Eucalyptocrinus cornutus* var. *excavatus* Hall, 20th Rep. N. Y. St. Cab. Nat. Hist., Doc. ed., p. 322, pl. 11, figs. 6, 7, 1867; Rev. ed., p. 364, 1870 (adv. pub., 1865).
- Sil. (Niagaran-Racine dol.): Waukesha and Racine, Wis.; Delphi, Ind.
- Calliocrinus corrugatus** (Weller).
- Cryptodiscus corrugatus* Weller, Jour. Geol., 5, p. 747, figs. 1, 2, 1897.
- Callicrinus corrugatus* Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 123, pl. 11, figs. 6, 7, 1900.
- Sil. (Niagaran-Racine dol.): Joliet and Lemont, Ill.
- Calliocrinus costatus** (Hisinger).
- Eugeniocrinites? costatus* Hisinger, Leth. Suec., p. 90, pl. 30, figs. 14a, b, 1837.
- Callicrinus costatus* Angelin, Icon. Crin. Suec., p. 15, pl. 1, fig. 6, pl. 2, figs. 1-4, pl. 21, figs. 4, 5, pl. 24, figs. 23-26, pl. 28, figs. 19-22, 24, 25 (pl. 2, figs. 5, 5a as *C. costatus* var.), 1878.—Bather, Treatise Zool. (Lankester), pt. 3, p. 163, text

figs. 77-3, 5, 1900.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 11, fig. 4, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 193, fig. 293; p. 179, fig. 281-B, 1913.

Sil. (Gotlandian): Klinteberg, Lickershamn, etc., Island of Gotland.

Calliocrinus desideratus (Weller).

Callicrinus desideratus Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 122, pl. 9, fig. 2; pl. 10, fig. 3; pl. 11, figs. 1-3, 1900.

Sil. (Niagaran-Racine dol.): Racine, Wis.

Calliocrinus diadema (Angelin).

Callicrinus diadema Angelin, Icon. Crin. Suec., p. 16, pl. 28, figs. 27, 27a, 1878.

Sil. (Gotlandian): Lickershamn, Island of Gotland.

Calliocrinus digitatus (Weller).

Cryptodiscus digitatus Weller, Jour. Geol., 5, p. 749, figs. 6, 7, 1897.

Callicrinus digitatus Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 124, pl. 9, figs. 3, 4, pl. 11, fig. 5, 1900.

Sil. (Niagaran-Racine dol.): Joliet, Ill.

Calliocrinus hydei (Weller).

Cryptodiscus hydei Weller, Jour. Geol., 5, p. 748, pl. figs. 3, 4, 1897.

Callicrinus hydei Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 124, pl. 8, fig. 8, pl. 9, fig. 1, pl. 10, figs. 1, 2, 1900.

Sil. (Niagaran-Racine dol.): Joliet, Ill.; Racine, Wis.

Calliocrinus koninckianus (Angelin).

Callicrinus koninckianus Angelin, Icon. Crin. Suec., p. 15, pl. 1, fig. 4, 4a, pl. 28, figs. 18a, 26, 26a, 1878.

Sil. (Gotlandian): Wisby, Island of Gotland.

Calliocrinus longispinus (Weller).

Callicrinus longispinus Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 119, pl. 8, figs. 4, 5, 1900.

Sil. (Niagaran-Racine dol.): Joliet, Ill.

Calliocrinus minor (Angelin).

Callicrinus minor Angelin, Icon. Crin. Suec., p. 16, pl. 4, fig. 4, 1878.

Sil. (Gotlandian): Wisby, Island of Gotland.

Calliocrinus murchisonianus (Angelin).

Callicrinus murchisonianus Angelin, Icon. Crin. Suec., p. 15, pl. 1, figs. 3, 3a, 3b, pl. 28, figs. 14-17b, 1878.—Bather, Treatise Zool. (Lankester), pt. 3, p. 163, text fig. 77-1, 2, 1900.

Sil. (Gotlandian): Wisby, Island of Gotland.

Calliocrinus pentangularis (Weller).

Callicrinus pentangularis Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 120, pl. 8, fig. 6, 1900.

Sil. (Niagaran-Racine dol.): Bridgeport, Ill.

Calliocrinus roemerianus (Angelin).

Callicrinus roemerianus Angelin, Icon. Crin. Suec., p. 15, pl. 1, figs. 1, 2, 2b, c, pl. 28, figs. 23, 23a, 1878.

Sil. (Gotlandian): Farö, Island of Gotland.

Calliocrinus sedgwickianus (Angelin).

Callicrinus sedgwickianus Angelin, Icon. Crin. Suec., p. 15, pl. 1, fig. 5, 1878.

Sil. (Gotlandian): Wisby, Island of Gotland.

Calliocrinus uralicus (Tschernyschew).

Callicrinus uralicus Tschernyschew, Bull. Comité Géol. St. Petersburg, 11, p. 123; Mem. Comité Géol., 4, p. 91, pl. 14, fig. 1, 1893.

Low. Dev.: Eastern slope of the Urals, Russia.

Calocrinites Steining. Genotype: *C. emarginatus* Steining.

Dicyelic Inadunate. (Possibly = *Cupressocrinites*). Dev.

Steining (Schnur, MS), Verst. Uebergangs.-Geb. Eifel, p. 21, 1849.

Calocrinus Bather, Treatise Zool. (Lankester), pt. 3, p. 202, 1900.

Calocrinites emarginatus Steining.

Steining (Schnur, Ms.), Die Verst. Uebergangs.-Geb. Eifel, p. 21, 1849.

Middle Dev. (Eifelian): Gerolstein, Eifel, Germany.

Calocrinus Bather = *Calocrinites*.

Calpiocrinus Angelin. Genotype: *C. fimbriatus* Angelin.

Lecanocrinidae (Flexibilia). Sil.

Angelin, Icon. Crin. Suec., p. 12, 1878.—Zittel, Handb. Pal., 1, p. 356, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 38 (261), 1880 (1879).—Bather, Treatise Zool. (Lankester), pt. 3, p. 189, 1900.—Springer, Amer. Geol., 30, p. 94, 1902; Jour. Geol., 14, pp. 480, 517, 1906; Zittel-Eastman Textb. Pal., 1, p. 203, 1913; Crin. Flexibilia, p. 145, 1920.

Calpiocrinus bohemicus Waagen and Jahn.

Calpiocrinus? bohemicus Waagen and Jahn, Syst. Sil. Centre Bohême, 7, pt. 1, p. 21, pls. 59-79, 1899.—Bather, Ann. Mag. Nat. Hist., (7) 6, p. 113, fig. 6, 1900. Sil. (Div. E2, F1): Near Klein Kuchel, Bohemia.

Calpiocrinus fimbriatus Angelin.

Angelin, Icon. Crin. Suec., p. 12, pl. 29, figs. 77, 77a, b, 1878.—Springer, Jour. Geol., 14, pl. 7, figs. 1, 2, 1906; Crin. Flexibilia, p. 158, pl. 8, figs. 1-5, 1920.

Sil. (Gotlandian): Wisby, Island of Gotland.

Calpiocrinus heterodactylus Angelin.

Angelin, Icon. Crin. Suec., p. 12, pl. 13, figs. 10, 10a, pl. 26, figs. 8, 8a, 1878.—Springer, Jour. Geol., 14, pl. 7, fig. 3, 1906; Crin. Flexibilia, p. 157, pl. 7, figs. 5 a-e, 1920.

Sil. (Gotlandian): Island of Gotland.

Calpiocrinus humilis Angelin = *Cleistocrinus humilis*.

Calpiocrinus intermedius Springer.

Springer, Crin. Flexibilia, p. 156, pl. 7, figs. 1-3, 1920.

Sil.: Dudley, England (Wenlock); Wisby, Island of Gotland (Gotlandian).

Calpiocrinus ovatus Angelin.

Angelin, Icon. Crin. Suec., p. 12, pl. 16, figs. 17-19, 1878.—Springer, Jour. Geol., 14, p. 482, pl. 7, fig. 4, 1906; Crin. Flexibilia, p. 157, pl. 7, figs. 4 a-f, 1920.

Sil. (Gotlandian): Island of Gotland.

Calpiocrinus rotundatus Springer.

Springer, Crin. Flexibilia, p. 159, pl. 8, figs. 6-8, 1920.—Wanner, Neue Beitr. kennt. Perm. Echin. Timor, XIII, p. 208, text fig. 82, 1937.

Sil. (Gotlandian): Bara and Wisby, Island of Gotland.

Calycanthocrinus Follmann. Genotype: *C. decadactylus* Follmann.

Pisocrinidae (Inadunata-Larviformia). Dev.

Follmann, Verh. Nat. Hist. Verpreuss. Rheinl., (5) 4, p. 115, 1887.—Bather, Königl. Sv. Vet. Akad. Handl., 25, pp. 21, 26, 1893; Treatise Zool. (Lankester), pt. 3, p. 149, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 208, 1913.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., Heft 163, pp. 27, 140, 1934.

Calycanthocrinus decadactylus Follmann.

Follmann, Verh. Nat. Hist. Preuss. Rheinl., 4, p. 115, pl. 1, fig. 2, 1887.—Jaekel, Pal. Abhandl., 7, p. 51, pl. 3, figs. 2, 3, 1895.—Frech, Leth. Pal., p. 145, pl. 23b, fig. 4, 1897-1902.—Opitz, Bilder Erdges. Nahe-Hunsrücklandes Birkenfeld, p. 106, fig. 105, 1932.—Schmidt, Abhandl. Preuss. Geol. Landes., n. f., Heft 163, p. 28, text fig. 3, pl. 27, fig. 2, pp. 140, 144, 1934.

- Low. Dev. (Hunsrück sl.): Bundenbach and near Gemunden; Wisperthal near Caub, Germany.
- Calycanthocrinus decadactylus latus** Schmidt.
Schmidt, Abhandl. Preuss. Geol. Landes., n. f., Heft 163, p. 31, pl. 1, fig. 4, pp. 140, 144, 1934.
Low. Dev. (Hunsrück sl.): Bundenbach and Gemunden, Germany.
- Calycanthocrinus inaequidactylus** Schmidt.
Schmidt, Jahrb. Geol. Landes., 33, p. 298, pl. 23, fig. 10, 1913.
Mid. Dev. (Wissenbach or Orthoceras beds): Hamberg near Halberbracht, Germany.
- Calycocrinus** Wanner. Genotype: *C. curvatus* Wanner.
Lecanocrinidae (Flexibilia). Permian.
Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, pp. 250, 260, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, pp. 88, 95, 1924; Pal. Zeits., 11, p. 321, 1929; Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 19, 1937.
- Calycocrinus amarassicus** Wanner.
Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 270, pl. 111 (16), fig. 3, 1916.
Permian: Koeafeoe, near Baung, Timor.
- Calycocrinus coronatus* Wanner = *C. curvatus coronatus*.
- Calycocrinus crassus** Wanner.
Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 272, pl. 111 (16), fig. 5, 1916.
Permian: Mandeo, Timor.
- Calycocrinus curvatus** Wanner.
Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 261, pl. 110 (15), fig. 10, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 95, pl. 4, figs. 7-24, 1924.
Calycocrinus curvatus var. *typus* Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 96, text fig. 2, 1924; Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia: Wetens. Meded. no. 14, p. 17, pl. 1, fig. 9, text figs. 7-9, 1930.—Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 309, pl. 2, fig. 8, 1940.
Permian: Fatu Tonini, Basleo, Timor.
- Calycocrinus curvatus conicus** Wanner.
Wanner, Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia: Wetens. Meded., no. 14, p. 26, pl. 2, figs. 13-15, p. 27, fig. 15, 1930; id., IX, p. 100, pl. 8, figs. 32, 33, 1937.
Permian: Basleo, Timor.
- Calycocrinus curvatus coronatus** (Wanner).
Calycocrinus coronatus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 267, pl. 110 (15), figs. 14, 15, 1916.
Calycocrinus curvatus coronatus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped., 1916, p. 99, 1924.—Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 310, pl. 2, fig. 9, 1940.
Permian: Basleo, Snob Nenoë, Timor.
- Calycocrinus curvatus depressus** Wanner.
Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 98, pl. 4, figs. 13-16, 1924; Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia: Wetens. Meded., no. 14, p. 19, pl. 1, figs. 14-17, pl. 2, figs. 1-4, p. 23, figs. 10-13, 1930.
Permian: Basleo, Timor.
- Calycocrinus curvatus elongatus** Wanner.
Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 97, pl. 4, figs. 10-12, 1924.
Permian: Basleo, Timor.

Calycocrinus curvatus informis Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 96, pl. 4, figs. 7-9; Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia: Wetens. Meded., no. 14, p. 19, pl. 1, figs. 10-13, 1930.

Permian: Basleo, Timor.

Calycocrinus curvatus labrosus Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia: Wetens. Meded., no. 14, p. 25, pl. 2, figs. 7-12, 1930; Neue Beitr. kennt. Perm. Echin. Timor, IX, p. 99, pl. 8, figs. 28-31, 1937.—Marez Oyens, Geol. Exped. Lesser Sunda Islands, vol. 1, p. 311, pl. 3, fig. 2, 1940.

Permian: Basleo, Soempek, Timor.

Calycocrinus curvatus subcoronatus Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 98, pl. 4, figs. 17-20, 1924; Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia: Wetens. Meded., no. 14, p. 23, pl. 2, figs. 5, 6, p. 24, fig. 14, 1930.—Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 310, pl. 3, fig. 1, 1940.

Permian: Basleo, Toenioen Eno, Timor.

Calycocrinus curvatus subturbinatus Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 99, text fig. 3, pl. 4, figs. 21, 22, 1924.

Permian: Basleo, Timor.

Calycocrinus curvatus turbinatus (Wanner).

Calycocrinus turbinatus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 268, pl. 111 (16), fig. 1, 1916.

Calycocrinus curvatus var. *turbinatus* Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 100, pl. 4, figs. 23, 24, 1924.

Permian: Koeafeoe near Baung, Timor.

Calycocrinus curvatus typus Wanner = *C. curvatus*.

Calycocrinus erectus Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia: Wetens. Meded., no. 14, p. 29, pl. 2, figs. 22-23, pl. 3, fig. 1, 1930.

Permian: Basleo, Timor.

Calycocrinus granulatus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 271, pl. 111 (16), fig. 4, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 104, pl. 5, figs. 1-7, 1924.

Permian: Basleo, Timor.

Calycocrinus granulatus altior Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 105, pl. 5, figs. 8, 9, 1924.

Permian: Basleo, Timor.

Calycocrinus kupangensis Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 269, pl. 111 (16), fig. 2, 1916.

Permian: Koepang, Timor.

Calycocrinus labiatus Marez Oyens.

Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 312, pl. 3, fig. 3, 1940.

Permian: Taewei, Basleo, Timor.

Calycocrinus major Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 265, pl. 110 (15), fig. 12, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 103, pl. 4, figs. 27, 28, 1924; Neue Beitr. kennt. Perm. Echin. Timor, IX, p. 102, pl. 9, figs. 1, 2, text fig. 21, 1937.

Permian: Basleo, Timor.

***Calycocrinus malaianus* Wanner.**

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 264, pl. 110 (15), fig. 11, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 102, 1924.

Permian: Basleo, Timor.

***Calycocrinus millericrinoides* Wanner.**

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 107, pl. 6, fig. 18, pl. 7, figs. 5, 6, 1924; Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia: Wetens. Meded., no. 14, p. 32, 1930; id., IX, p. 104, text fig. 23, 1937.

Permian: Basleo, Timor.

***Calycocrinus nuciformis* Wanner.**

Wanner, Pal. Zeits., 11, pp. 321, 322, text fig. 3, pl. 8, figs. 13-17, 1929; Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia: Wetens. Meded., no. 14, p. 34, pl. 3, figs. 7-11, text fig. 13, 1930.

Permian: Basleo, Timor.

***Calycocrinus patella* Wanner.**

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 106, pl. 5, figs. 10-16, pl. 6, figs. 1, 2, 1924; Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia: Wetens. Meded., no. 14, pp. 31, 32, text fig. 16, 1930; id., IX, p. 102, pl. 8, fig. 38, text fig. 22, 1937.

Permian: Basleo, Timor.

***Calycocrinus perplexus* Wanner.**

Wanner, Pal. Zeits., 11, pp. 321, 322, text fig. 4, pl. 8, figs. 10-12, 1929; Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia: Wetens. Meded., no. 14, p. 36, pl. 3, figs. 12-14, text fig. 19, 1930.

Permian: Basleo, Timor.

***Calycocrinus piriformis* Wanner.**

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 101, pl. 4, figs. 25, 26, 1924.

Permian: Basleo, Timor.

***Calycocrinus poculus* Wanner.**

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 266, pl. 110 (15), fig. 13, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 103, 1924; Neue Beitr. kennt. Perm. Echin. Timor, IX, p. 100, pl. 8, figs. 34-37, 1937.

Permian: Basleo, Timor.

***Calycocrinus rossicus* Yakovlev.**

Yakovlev, Bull. Comité Géol., 46, p. 182, pl. 6, figs. 13-13b, p. 190, 1927; Bull. Géol. Prosp. Serv. USSR, 49, pp. 99, 101, pl. 1, figs. 5a, b, 1930.

Permian: Krasnooufimsk, Urals, Russia.

***Calycocrinus similis* Wanner.**

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia: Wetens. Meded., no. 14, p. 30, pl. 3, figs. 2, 3, 1930.

Permian: Basleo, Timor.

***Calycocrinus spinosus* Wanner.**

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 263, pl. 110 (15), fig. 9, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 100, pl. 3, figs. 13-16, 1924.

Permian: Basleo, Timor.

***Calycocrinus tuberculatus* Wanner.**

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia: Wetens. Meded., no. 14, p. 32, pl. 3, figs. 4-6, p. 34, text fig. 17, 1930; id., IX, p. 104, pl. 9, figs. 3-5, text fig. 24, 1937.

Permian: Basleo, Timor.

Calycocrinus turbinatus Wanner = *C. curvatus turbinatus*.

Calycocrinus venemai Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia: Wetens. Meded., no. 14, p. 27, pl. 2, figs. 16-18, 1930.

Permian: Basleo, Timor.

Calycocrinus venemai angulatus Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia: Wetens. Meded., no. 14, p. 27, pl. 2, figs. 19-21, 1930.

Permian: Basleo, Timor.

Calycocrinus venemai planus Marez Oyens.

Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 314, pl. 3, fig. 4, 1940.

Permian: Basleo, Timor.

Camarocrinus Hall = *Scyphocrinites*.**Camerocrinus** Fric. See *Camarocrinus*.**Campanulites** Troost = *Cleioocrinus*.**Camptocrinus** Wachsmuth and Springer. Genotype: *C. myelodactylus* Wachsmuth and Springer.

Hexacrinidae (*Adunata*). Miss.; Permian.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 779, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 150, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 201, 1913.—Ehrenberg, Acta Zool., 3, p. 281, 1922.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 25, 1926.—Ehrenberg, Palaeobiol., 9, p. 261, etc., 1930.

Camptocrinus cirrifer (Wachsmuth and Springer).

Dichocrinus (*Camptocrinus*) *cirrifer* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 780, pl. 76, figs. 13a, b (not c), 1897.

Camptocrinus cirrifer Ehrenberg, Acta Zool., 3, p. 283, fig. 15, 1922; Pal. Zeits., 7, heft. 4, p. 257, fig. 5, 1926; Palaeobiologica, 3, p. 323, pl. 17, fig. 8, 1930.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 32, pl. 8, figs. 10, 10a, 1926.

Miss. (Chester): Near Sloans Valley, Pulaski Co., Ky. (Glen Dean ls.); Near Burksville, Ill. (Paint Creek fm.).

Camptocrinus compressus Wright.

Wright, Geol. Mag., 74, p. 396, pl. 14, fig. 7, pl. 15, figs. 2-9, 11, 12, 14, 1937; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 13, pl. 9, fig. 19, 1939.

Low. Carb. (Low. Ls. gr.): Carlops and Invertiel, Scotland.

Camptocrinus crawfordsvillensis Springer.

Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 30, pl. 8, figs. 1-3e, 1926.

Dichocrinus (*Camptocrinus*) *myelodactylus* Wachsmuth and Springer (part), N. Amer. Crin. Cam., p. 779, pl. 75, fig. 1 (not figs. 2a, b), 1897.

Miss. (Keokuk ls.): Crawfordsville, Ind.

Camptocrinus indoaustralicus Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 81, pl. 3, figs. 9-11, 1924; Beitr. kennt. Perm. Echin. Timor, VIII, p. 88, pl. 8, figs. 9-11, 1937.—Ehrenberg, Pal. Zeits., 7, heft 4, p. 250, figs. 1 a-d, 1926.

Permian: Basleo, Timor.

Camptocrinus multicirrus Springer.

Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 31, pl. 8, figs. 4-9, 1926.—Ehrenberg, Palaeobiol., 3, p. 323, pl. 17, figs. 2, 6, 7, 1930.

Dichocrinus (*Camptocrinus*) *cirrifer* Wachsmuth and Springer (part), N. Amer. Crin. Cam., p. 780, pl. 76, fig. 13c (not 13a, b), 1897.

Miss. (Chester): Huntsville, Ala. (Ohara ls.); Burksville, Monroe Co., Ill. (Renault fm.).

Camptocrinus myelodactylus (Wachsmuth and Springer).

Dichocrinus (*Camptocrinus*) *myelodactylus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 779, pl. 75, figs. 2, 3 (not fig. 1), 1897.

- Camptocrinus myelodactylus* Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 28, pl. 7, figs. 2-5b, 1926.—Ehrenberg, Palaeobiol., 3, p. 323, pl. 17, figs. 4, 9, 1930. Miss. (Keokuk ls.): Indian Creek, Montgomery Co., Ind.
- Camptocrinus permianensis** Yakovlev.
Yakovlev, Bull. Comité Géol., 46, p. 188, pl. 6, figs. 19, 19 a-3, p. 191, 1927; Bull. Géol. Prosp. Serv. USSR, 49, pp. 99, 101, pl. 1, fig. 4, 1930.
Permian: Krasnooufinsk, Urals, Russia.
- Camptocrinus planicirrus** Springer.
Springer, U. S. Nat. Mus., Proc. 67, art. 9, p. 30, pl. 7, figs. 6, 6a, 1926.
Miss. (Keokuk ls.): Crawfordsville, Ind.
- Camptocrinus praenuntius** Springer.
Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 27, pl. 7, fig. 1, 1926.—Ehrenberg, Palaeobiol., 3, p. 323, pl. 17, fig. 1, 1930.
Miss. (Up. Burlington ls.): Burlington, Iowa.
- Canistocrinus James. See Canistrocrinus.
- Canistrocrinus** Wachsmuth and Springer. Genotype: *Glyptocrinus richardsoni* Wetherby.
Xenocrinidae (Camerata). Early Sil.
Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, pp. 88, 94 (310, 316), 1885; N. Amer. Crin. Cam., p. 174, 1897.—James, Jour. Cincinnati Soc. Nat. Hist., 19, p. 104, 1897 (as *Canistocrinus*).
- Canistrocrinus richardsoni** (Wetherby).
Glyptocrinus richardsoni Wetherby, Jour. Cincinnati Soc. Nat. Hist., 2, p. 245, pl. 16, fig. 1, 1880.
Canistrocrinus richardsoni Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, p. 95 (317), 1885.
Early Sil. (Richmond-Waynesville ls.): Clinton Co., Ohio.
- Carabocrinus** Billings. Genotype: *C. radiatus* Billings.
Carabocrinidae (Inadunata-Fistulata). Ord.; Early Sil.
Billings, Geol. Surv. Canada, Rep. Prog. 1853-1856, p. 275, 1857; Geol. Surv. Canada, Can. Org. Rem., Dec. 4, p. 30, 1859.—Zittel, Handb. Pal., 1, p. 353, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 143 (366), 1880 (1879); pt. 3, p. 216 (140), 1886.—Bather, Ann. Mag. Nat. Hist., (6) 5, p. 332, 1890; Treatise Zool. (Lankester), pt. 3, p. 172, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 271, 1913.—Foerste, Iowa Geol. Surv., 29, p. 345, 1924.
- Carabocrinus conoideus** Sardeson.
Sardeson, Pan Amer. Geol., 43, p. 62, pl. 5, fig. 4, 1925; 71, p. 36, pl. 2, fig. 4, 1939.
Ord. (Black River-Decorah sh., Spechts Ferry mem.): St. Paul, Minn.; Ellsworth, Wis.
- Carabocrinus dicyclicus** Sardeson.
Sardeson, Pan Amer. Geol., 43, p. 61, pl. 5, fig. 5, 1925; 71, p. 32, pl. 2, fig. 4, 1939.
Ord. (Black River-Decorah sh., Spechts Ferry mem.): St. Paul, Minn.
- Carabocrinus esthonus** Jaekel.
Jaekel, Pal. Zeits., 3, p. 50, fig. 38, 1918.
Ord. (Wassalem beds, D3): Uxnorm, near Reval, Estonia.
- Carabocrinus geometricus** Hudson.
Hudson, N. Y. St. Mus., Bull. 80, p. 282, pl. 1, figs. 1, 2, text fig. 7, 1905.
Ord. (Chazy-Valcour ls.): Valcour Island, Lake Champlain, N. Y.
- Carabocrinus granulatus** Evans.
Evans, Abstracts of Theses, Sci. ser., 11, Univ. Chicago, p. 200, 1926 (nom. nud.).
Early Sil. (Richmond): Northeastern Ill.

Carabocrinus huronensis Foerste.

Foerste, Iowa Geol. Surv., 29, pp. 345-349, pl. 31, figs. 11, 13, 14, 1924.

Ord. (Trenton-Curdsville ls.): Goat Island, Lake Huron, Ontario.

Carabocrinus magnificus Sardeson.

Sardeson, Pan. Amer. Geol., 71, p. 33, pl. 2, figs. 1, 2, 1939.

Ord. (Black River-Decorah sh., Ion mem.): Near Cannon Falls, Minn.

Carabocrinus ovalis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 5, p. 25, pl. 2, figs. 20, 21, 1894.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 740, fig. 1323, 1897.

Ord. (Trenton-Curdsville ls.): Mercer Co., Ky.

Carabocrinus radiatus Billings.

Billings, Geol. Surv. Canada, Rep. Prog. for 1853-1856, p. 276, 1857; Geol. Surv. Canada, Can. Org. Rem., Dec. 4, p. 31, pl. 2, figs. 3 a-e, 1859.

Ord. (Trenton) : Ottawa, Canada (Hull ls.); Mercer Co., Ky. (Curdsville ls.); Saratoga, N. Y. (Snake Hill fm.).

Carabocrinus slocomi Foerste.

Foerste, Iowa Geol. Surv., 29, p. 350, pl. 31, figs. 1-10; pl. 32, figs. 1, 7-9, 11-14, 26-29, 19?, 20?, text fig. 59, 1924.—Thomas and Ladd, Univ. Iowa Studies, 11, no. 8, p. 14, pl. 3, fig. 3, 1926.

Early Sil. (Low. Maquoketa-Elgin ls.): Clermont, Iowa.

Carabocrinus slocomi costatus Foerste.

Foerste, Iowa Geol. Surv., 29, p. 353, pl. 32, figs. 15-18, 21-25, 30, ? 2-6, ? 10, 1924.—Thomas and Ladd, Univ. Iowa Studies, 11, no. 8, p. 14, pl. 3, figs. 1, 2, 4, 1926.

Early Sil. (Low. Maquoketa-Elgin ls.): Clermont, Iowa.

Carabocrinus (?) tuberculatus Billings.

Billings, Geol. Surv. Canada, Can. Org. Rem., Dec. 4, p. 33, pl. 10, figs. 2 a-c, 1859.

Early Sil. (Richmond-English Head fm.): Charleton Point, Anticosti.

Carabocrinus vancortlandi Billings.

Billings, Geol. Surv. Canada, Can. Org. Rem., Dec. 4, p. 52, pl. 2, fig. 4, 1859.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 28, text fig. 9, 1900.

Ord. (Trenton) : Township of McNab and Kirkfield, Ont., (Hull ls.); Goat Island, Lake Huron, and Mercer Co., Ky. (Curdsville ls.).

Carcinocrinus Laudon. Genotype: *C. stevensi* Laudon.

Poteroicrinidae (Inadunata-Fistulata). Miss.

Laudon, Jour. Pal., 15, no. 4, p. 390, 1941.

Carcinocrinus stevensi Laudon.

Laudon, Jour. Pal., 15, no. 4, p. 390, pl. 56, fig. 5, 1941.

Miss. (Chester-Pitkin ls.): 1½ m. S. E. Hulbert, Okla.

Carduocrinus von Koenen = *Lophocrinus*.**Carduocrinus jaekeli** von Koenen = *Lophocrinus minutus*.**Carlopsocrinus** Wright. Genotype: *C. bullatus* Wright.

?Lecanocrinidae (Flexibilia). Low. Carb.

Wright, Geol. Mag., 70, p. 198, 1933.

Carlopsocrinus bullatus Wright.

Wright, Geol. Mag., 70, p. 198, text figs. 9-12, pl. 13, figs. 4-6, 1933; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 47, pl. 10, figs. 26, 27, text figs. 66-68, 1939.

Low. Carb. (Low. Ls. gr.): Carlops, Scotland.

Carolicrinus Waagen and Jahn = *Abacocrinus*.**Carpocrinites** Geinitz = *Carpocrinus*.**Carpocrinus** Müller. Genotype: *Actinocrinites simplex* Phillips.

Carpocrinidae (Camerata). Sil.

- Müller, Verhandl. Berlin Akad., p. 33, 1840; Archiv. Naturges., p. 311, 1840.—Zittel, Handb. Pal., 1, pp. 19, 366, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 105 (279), 1881.—Bather, Treatise Zool. (Lankester), pt. 3, p. 166, 1900.—Springer, Zittel-Eastman Textb. Pal., p. 104, 1913; Amer. Sil. Crin., p. 42, 1926.
- Abracrinus* d'Orbigny, Prodr. Pal. Strat., 1, pp. 47, 156, 1849; Cours Elem. Pal. Geol., 2, p. 144, 1851. (Genotype: *Actinocrinites simplex* Phillips.)
- Carpocrinites* Geinitz, Grund. Verst.-Kunde, p. 550, 1846.
- Habrocrinus* Angelin, Icon. Crin. Suec., p. 3, 1878.—Zittel, Handb. Pal., 1, p. 366, 1879.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 515, 1897.—Grabau, Bull. Buffalo Soc. Nat. Sci., 6, p. 143, 1899.
- Leptocrinus* Angelin, Icon. Crin. Suec., p. 3, 1878.—Zittel, Handb. Pal., 1, p. 367, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 105 (327), 1885. (Genotype: *L. raridigitatus* Angelin.)
- Phoenicocrinites* Austin and Austin, Ann. Mag. Nat. Hist., (1) 11, p. 205, 1843. (Genotype: *Actinocrinites simplex* Phillips.)
- Phoenicocrinus* Springer, Zittel-Eastman Textb. Pal., 1, p. 194, 1913.
- Pionocrinus* Angelin, Icon. Crin. Suec., p. 4, 1878. (Genotype: *P. pulchellus* Angelin.)
- Carpocrinus affinis*** (Angelin).
Pionocrinus affinis Angelin, Icon. Crin. Suec., p. 5, pl. 22, fig. 7, 1878.
Sil. (Gotlandian): Island of Gotland.
- Carpocrinus anulatus*** (Angelin).
Habrocrinus anulatus Angelin, Icon. Crin. Suec., p. 4, pl. 22, fig. 15, 1878.
Sil. (Gotlandian): Wisby, Island of Gotland.
- Carpocrinus cariosulus*** (Angelin).
Habrocrinus cariosulus Angelin, Icon. Crin. Suec., p. 3, pl. 3, figs. 7, 7a, 1878.
Sil. (Gotlandian): Follingbo, Island of Gotland.
- Carpocrinus comtus*** (Angelin).
Habrocrinus comtus Angelin, Icon. Crin. Suec., p. 4, pl. 22, fig. 13, 1878.
Sil. (Gotlandian): Island of Gotland.
- Carpocrinus decadactylus*** (Angelin).
Habrocrinus decadactylus Angelin, Icon. Crin. Suec., p. 4, pl. 25, figs. 18, 19, 1878.
Sil. (Gotlandian): Follingbo, Island of Gotland.
- Carpocrinus elegantulus*** (Angelin).
Pionocrinus elegantulus Angelin, Icon. Crin. Suec., p. 5, pl. 22, figs. 16, 17, 1878.
Sil. (Gotlandian): Island of Gotland.
- Carpocrinus farctus*** (Angelin).
Pionocrinus farctus Angelin, Icon. Crin. Suec., p. 5, pl. 16, fig. 23; pl. 22, figs. 5, 6, 1878.
Sil. (Gotlandian): Follingbo, Island of Gotland.
- Carpocrinus farringtoni*** (Slocum).
Habrocrinus farringtoni Slocum, Field Col. Mus., Geol. Ser., 2, p. 298, pl. 87, figs. 1-5, 1908.
Sil. (Niagaran-Racine dol.): Near Lemont, Ill.
- Carpocrinus grandis*** (Angelin).
Habrocrinus grandis Angelin, Icon. Crin. Suec., p. 4, pl. 26, fig. 10, 1878.
Sil. (Gotlandian): Island of Gotland.
- Carpocrinus granulatus*** (Angelin).
Habrocrinus granulatus Angelin, Icon. Crin. Suec., p. 4, pl. 19, figs. 13, 13a, 1878.
Sil. (Gotlandian): Klinteberg, Island of Gotland.

Carpocrinus laevis (Angelin).

Habrocrinus laevis Angelin, Icon. Crin. Suec., p. 4, pl. 10, figs. 21, 21a, b, 1878.
Sil. (Gotlandian): Klinteberg, Island of Gotland.

Carpocrinus lemontensis (Slocum).

Habrocrinus lemontensis Slocum, Field Col. Mus., Geol. Ser., 2, p. 297, pl. 87, figs. 8-10, 1908.
Sil. (Niagaran-Racine dol.): Near Lemont, Ill.

Carpocrinus longimanus (Angelin).

Habrocrinus longimanus Angelin, Icon. Crin. Suec., p. 4, pl. 22, figs. 11, 12, 1878.
Sil. (Gotlandian): Follingbo, Island of Gotland.

Carpocrinus ornatissimus (Angelin).

Habrocrinus ornatissimus Angelin, Icon. Crin. Suec., p. 3, pl. 6, fig. 9, 1878.
Sil. (Gotlandian): Follingbo, Island of Gotland.

Carpocrinus ornatus (Angelin).

Habrocrinus ornatus Angelin, Icon. Crin. Suec., p. 4, pl. 21, figs. 19, 20, pl. 26, figs. 11, 12b, pl. 27, fig. 5, 1878.
Sil. (Gotlandian): Follingbo, Island of Gotland.

Carpocrinus pinnulatus (Angelin).

Habrocrinus pinnulatus Angelin, Icon. Crin. Suec., p. 4, pl. 22, fig. 14, 1878.
Sil. (Gotlandian): Follingbo, Island of Gotland.

Carpocrinus pulchellus (Angelin).

Pionocrinus pulchellus Angelin, Icon. Crin. Suec., p. 5, pl. 3, figs. 9, 9a, 1878.
Sil. (Gotlandian): Follingbo, Island of Gotland.

Carpocrinus raridigitatus (Angelin).

Leptocrinus raridigitatus Angelin, Icon. Crin. Suec., p. 3, pl. 20, figs. 18, 19, pl. 28, figs. 4, 4a, 1878.
Sil. (Gotlandian): Eksta, Island of Gotland.

Carpocrinus robustus (Angelin).

Habrocrinus robustus Angelin, Icon. Crin. Suec., p. 4, pl. 22, fig. 19, 1878.
Sil. (Gotlandian): Follingbo, Island of Gotland.

Carpocrinus sculptus Springer.

Springer, Amer. Sil. Crin., p. 42, pl. 7, figs. 21-21b, 1926.
Sil. (Niagaran-Laurel ls.): St. Paul. Ind.

Carpocrinus simplex (Phillips).

Actinocrinites simplex Phillips, in Murchison, Sil. Syst., p. 673, pl. 18, fig. 9, 1839.
Pionocrinus simplex Angelin, Icon. Crin. Suec., p. 5, pl. 15, figs. 15, 15a, 1878.
Carpocrinus simplex Bather, Treatise Zool. (Lankester), pt. 3, p. 166, fig. 79-2, 1900.—Springer, Amer. Sil. Crin., p. 42, pl. 7, figs. 22-23, 1926.
Actinocrinus tesseracontadactylus Hisinger (not Goldfuss), Leth. Suecica, p. 90, pl. 35, figs. 4a, b, 1837.
Cyathocrinus tesseracontadactylus Salter, in Murchison, Siluria, ed. 4, pl. 14, fig. 4, 1847.
Sil.: Dudley, England (Wenlock); Island of Gotland (Gotlandian).

Carpocrinus tenuis (Angelin).

Habrocrinus tenuis Angelin, Icon. Crin. Suec., p. 4, pl. 26, figs. 9, 9a, 1878.
Sil. (Gotlandian): Follingbo, Island of Gotland.

Carpocrinus umbonatus (Angelin).

Habrocrinus umbonatus Angelin, Icon. Crin. Suec., p. 4, pl. 26, figs. 13, 13a, 1878.
Sil. (Gotlandian): Island of Gotland.

Castanocrinus Roemer = Melocrinites.

Castocrinus Ringueberg = *Cremacrinus*.

Castrocrinus Wachsmuth and Springer. See *Castocrinus*.

***Catactocrinus* Goldring.**

Glossocrinidae (Inadunata-Fistulata). Dev.

Goldring, N. Y. St. Mus., Mem. 16, p. 416, 1923.

Genotype: *C. leptodactylus* Goldring.

***Catactocrinus leptodactylus* Goldring.**

Goldring, N. Y. St. Mus., Mem. 16, p. 405, pl. 53, figs. 5-9, 1923.

Up. Dev. (Chemung fm.): Cotton Hill, 1 mile north of Avoca, Steuben Co., N. Y.

Catillierinus S. A. Miller = *Catillocrinus*.

Catillocrinites Troost = *Catillocrinus*.

***Catillocrinus* Shumard.** Genotype: *C. tennesseae* Shumard.

Catillocrinidae (Inadunata-Fistulata). Miss.

Shumard, Trans. Acad. Sci. St. Louis, 2, p. 357, 1866.—Zittel, Handb. Pal., 1, p. 348, 1879.—S. A. Miller, N. Amer. Geol. Pal., p. 231, 1889 (as *Catillierinus*).—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 268 (192), 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 149, 1900.—Wood, U. S. Nat. Mus., Bull. 64, p. 23, 1909.—Springer, Zittel-Eastman Textb. Pal., 1, p. 214, 1913.—Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 9, 1916.—Springer, Smiths. Misc. Coll., 76, no. 3, pp. 7, 25, 1923.—Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 110, 1937.—Moore, Denison Univ. Bull., Jour. Sci. Lab., 35, p. 80, 1940.

Catillocrinites Troost, Amer. Jour. Sci., and Arts, (2) 8, p. 419, 1849. (Genotype: *C. tennesseae* Troost, nom. nud.)

Nematocrinus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 251, 1866. (Genotype: *Synbathocrinus wachsmuthi* Meek and Worthen.)

Catillocrinus bradleyi Meek and Worthen = *Eucatillocrinus bradleyi*.

Catillocrinus carpenteri Springer = *Allocatillocrinus carpenteri*.

Catillocrinus morrowensis Strimple = *Allocatillocrinus morrowensis*.

Catillocrinus scoticus Wright = *Allocatillocrinus scoticus*.

***Catillocrinus shumardi* Springer.**

Springer, Smiths. Misc. Coll., 76, no. 3, p. 27, 1923.

Miss. (Keokuk ls.): Indian Creek, Montgomery Co., Ind.

***Catillocrinus tennesseae* (Troost) Shumard.**

Catillocrinites tennesseae Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849 (nom. nud.).

Catillocrinus tennesseae Shumard, Trans. Acad. Sci. St. Louis, 2, p. 358, 1866.—Wood, U. S. Nat. Mus., Bull. 64, p. 24, pl. 9, figs. 1-3, 1909.—Springer, Smiths. Misc. Coll., 76, no. 3, p. 26, pl. 2, figs. 1-22, 1923.

Miss. (New Providence sh.): Whites Creek Springs, Tenn.; Button Mold Knob, near Louisville, Ky.

***Catillocrinus turbinatus* Springer.**

Springer, Smiths. Misc. Coll., 76, no. 3, p. 26, pl. 1, figs. 14-17, 1923.

Miss. (New Providence sh.): Button Mold Knob, near Louisville, Ky.; Whites Creek Springs, Tenn.

***Catillocrinus wachsmuthi* (Meek and Worthen).**

Synbathocrinus (Nematocrinus) wachsmuthi Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 251, 1866.

Catillocrinus wachsmuthi Meek and Worthen, Geol. Surv. Ill., 3, p. 465, pl. 18, fig. 5, 1868.—Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, pl. 5, figs. 15, 16, 1885; pt. 3, sec. 2, p. 272 (196), 1886; N. Amer. Crin. Cam., pl. 8, fig. 14, 1897.—Springer, Smiths. Misc. Coll., 76, no. 3, p. 26, pl. 3, figs. 1-11, 1923.

Miss. (Up. Burlington ls.): Burlington, Iowa.

- Centriocrinus** Bather. Genotype: *Actinocrinus pentaspinus* Lyon.
 Patelloocrinidae (Camerata). Dev.
 Bather, Geol. Mag., Dec. 4, vol. 5, p. 127, 1899; Treatise Zool., (Lankester), pt. 3, p. 162, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 191, 1913; U. S. Nat. Mus., Bull. 115, p. 3, 1921.
Centrocrinus Wachsmuth and Springer (not Austin and Austin), Rev. Pal., pt. 2, pp. 96, 104 (270, 278), 1881; N. Amer. Crin. Cam., p. 308, 1897.
- Centriocrinus pentaspinus** (Lyon).
Actinocrinus pentaspinus Lyon, Trans. Amer. Philos. Soc., 13, p. 453, pl. 26, figs. d, d-1, 1869.
Centrocrinus pentaspinus Wachsmuth and Springer, Rev. Pal., pt. 2, p. 105 (279), 1881; N. Amer. Crin. Cam., p. 309, pl. 25, figs. 10 a-c, 1897.
Actinocrinus multicornis Lyon, Trans. Amer. Philos. Soc., 13, p. 455, pl. 26, fig. e, 1869.
 Dev. (Onondaga-Jeffersonville ls.): Falls of the Ohio.
- Centrocrinus* Austin and Austin = *Platycrinites*.
Centrocrinus Wachsmuth and Springer = *Centriocrinus*.
Centrocrinus tennesseensis Worthen = *Hormocrinus tennesseensis*.
Ceramocrinus Müller = *Gasterocoma*.
- Ceratocrinus** Wanner. Genotype: *C. exornatus* Wanner.
 Poteriocrinitidae (Inadunata-Fistulata). Permian.
 Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 177, 1937.
- Ceratocrinus exornatus** Wanner.
 Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 178, text fig. 63, pl. 11, figs. 22-26, 1937.
 Permian: Basleo, Timor.
- Ceratocrinus gracilis** Wanner.
 Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 180, text fig. 64, pl. 11, fig. 27, pl. 12, figs. 1-3, 1937.
 Permian: Basleo, Timor.
- Cercidocrinus** Kirk. Genotype: *Poteriocrinus bursaeformis* White.
 Poteriocrinitidae (Inadunata-Fistulata). Miss.
 Kirk, Jour. Washington Acad. Sci., 28, p. 163, 1938.
- Cercidocrinus blairi** (Miller and Gurley).
Poteriocrinus blairi Miller and Gurley, Ill. St. Mus., Bull. 7, p. 61, pl. 4, figs. 1, 2, 1895.
Cercidocrinus blairi Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 163, 1938.
 Miss. (Chouteau ls.): Sedalia, Mo.
- Cercidocrinus bursaeformis** (White).
Poteriocrinus bursaeformis White, Proc. Boston Soc. Nat. Hist., 9, p. 10, 1865 (adv. pub., 1862).
Zeacrinus bursaeformis Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 79, pl. 21, fig. 1, 1926.
Cercidocrinus bursaeformis Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 163, 1938.
 Miss. (Low. Burlington ls.): Burlington, Iowa.
- Cercidocrinus cirrifer** (Laudon).
Pachylocrinus cirrifer Laudon, Iowa Studies in Nat. Hist., 15, no. 2, p. 63, pl. 6, figs. 3, 4, 1933.
Cercidocrinus cirrifer Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 164, 1938.
 Miss. (Kinderhook-Gilmore City fm.): Gilmore City, Iowa.
- Cercidocrinus fimbria** (Laudon).
Pachylocrinus fimbria Laudon, Univ. Iowa Studies in Nat. Hist., 15, no. 2, p. 64, pl. 5, figs. 2, 3, 1933.

- Cercidocrinus fimbria* Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 164, 1938. Miss. (Kinderhook-Gilmore City fm.): Gilmore City, Iowa.
- Cercidocrinus infrequens** (Laudon and Beane).
Zeaocrinus infrequens Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 257, pl. 17, figs. 11, 12, 1937.
Cercidocrinus infrequens Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 164, 1938. Miss. (Kinderhook-Hampton fm.): Legrand, Iowa.
- Cercidocrinus? sampsoni** (Miller and Gurley).
Poteriocrinus sampsoni Miller and Gurley, Ill. St. Mus., Bull. 7, p. 65, pl. 4, figs. 9, 10, 1895.—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 106, pl. 31, figs. 9-11, 1938.
Cercidocrinus? sampsoni Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 164, 1938. Miss. (Chouteau ls.): Sedalia, Mo.
- Ceriocrinus* White = *Delocrinus*.
- Cestocrinus** Kirk. Genotype: *C. striatus* Kirk.
 Lecythocrinidae (Inadunata-Fistulata). Miss.
 Kirk, U. S. Nat. Mus., Proc., 88, no. 3080, p. 221, 1940.
- Cestocrinus striatus** Kirk.
 Kirk, U. S. Nat. Mus., Proc., 88, no. 3080, p. 223, pl. 31, 1940.
 Miss. (Keokuk ls.): Indian Creek, Montgomery Co., Ind.
- Charientocrinus** Goldring. Genotype: *C. ithacensis* Goldring.
 Glossoocrinidae (Inadunata-Fistulata). Dev.
 Goldring, N. Y. St. Mus., Mem. 16, p. 402, 1923.
- Charientocrinus (?) cooperi** Goldring.
 Goldring, N. Y. St. Mus., Bull. 267, p. 89, pl. 1, figs. 1-3, text fig. 1, 1926.
 Dev. (Hamilton-Skaneateles sh.; Chenango mem.): Campus quarry, Colgate University, Hamilton, N. Y.
- Charientocrinus ithacensis** Goldring.
 Goldring, N. Y. St. Mus., Mem. 16, p. 402, pl. 53, figs. 1-4, 1923.
 Dev. (Portage-Ithaca beds): Ithaca, N. Y.
- Cheirocrinus* Hall = *Eucheirocrinus*.
- Cheirocrinus* Salter = *Calceocrinus*.
- Cheirocrinus abdominalis* Salter.
 Salter, Cat. Camb. Sil. Foss., etc., p. 118, 1878 (nom. nud.).
 Sil. (Wenlock ls.): Dudley, England.
- Cheirocrinus chrysalis* Hall = *Eucheirocrinus chrysalis*.
- Cheirocrinus clarus* Hall = *Deltaocrinus clarus*.
- Cheirocrinus dactylus* Hall = *Halysiocrinus dactylus*.
- Cheirocrinus gradatus* Salter.
 Salter, Cat. Camb. Sil. Foss., p. 118, 1873 (nom. nud.).
 Sil. (Wenlock ls.): Dudley, England.
- Cheirocrinus lamellosus* Hall = *Calceocrinus lamellosus*.
- Cheirocrinus nodosus* Hall = *Halysiocrinus nodosus*.
- Cheirocrinus* (*Calceocrinus?*) *perplexus* Shumard = *Halysiocrinus perplexus*.
- Cheirocrinus serialis* (Austin Ms.) Salter.
 Salter, Murchison's Siluria, ed. 3, p. 535, 1859 (*Pendulocrinus serialis* Austin, Ms.).
 Sil. (Wenlock ls.): England.

- Chairocrinus stigmatus* Hall = *Calceocrinus stigmatus*.
Chairocrinus ventricosus Hall = *Halysiocrinus dactylus*.
Chicagocrinus Weller. Genotype: *C. ornatus* Weller.
 Eucalyptocrinitidae (Camerata). Sil.
 Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 126, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 193, 1913.
- Chicagocrinus inornatus** Weller.
 Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 128, pl. 7, figs. 10-12, 1900.—Wilson, Jour. Geol., 24, p. 508, pl. 2, fig. 2, 1916.
 Sil. (Niagaran-Racine dol.): Joliet, Ill.
- Chicagocrinus ornatus** Weller.
 Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 127, pl. 7, fig. 9, 1900.
 Sil. (Niagaran-Racine dol.): Bridgeport, Ill.
- Chirocrinus* Angelin. See *Calceocrinus*.
- Cholocrinus** Springer. Genotype: *Forbesiocrinus obesus* Angelin.
 Lecanocrinidae (Flexibilia). Sil.
 Springer, Jour. Geol., 14, pp. 515, 517, 1906; Zittel-Eastman Textb. Pal., 1, p. 203, 1913; Crin. Flexibilia, pp. 46, 170, 1920.
- Cholocrinus obesus** (Angelin).
Forbesiocrinus obesus Angelin, Icon. Crin. Suec., p. 9, pl. 21, fig. 18, 1878.
Cholocrinus obesus Springer, Jour. Geol., 14, p. 517, 1906; Crin. Flexibilia, p. 173, pl. 9, figs. 1-4, 1920.
Forbesiocrinus divaricatus Angelin (part), Icon. Crin. Suec., p. 9, pl. 26, figs. 6, 6a, 1878.
 Sil. (Gotlandian): Follingbo, Island of Gotland.
- Chytrocrinus** Jaekel. Genotype: *Stelidiocrinus laevis* Angelin (part).
 Patellocrinidae (Camerata). Sil.
 Jaekel, Pal. Zeits., 3, p. 33, 1918.
- Chytrocrinus laevis** (Angelin).
Stelidiocrinus laevis Angelin, Icon. Crin. Suec., p. 21, pl. 15, figs. 20, 20a (not figs. 7, 7a, b), 1878.
Chytrocrinus laevis Jaekel, Pal. Zeits., 3, p. 33, 1918.
 Sil. (Gotlandian): Follingbo, Island of Gotland.
- Cibolocrinus** Weller. Genotype: *C. typus* Weller.
 Lecanocrinidae (Flexibilia). Penn.; Permian.
 Weller, Jour. Geol., 17, p. 630, 1909.—Springer, Zittel-Eastman Textb. Pal., 1, p. 225, 1913.—Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 206, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, pp. 180, 253, 1924.—Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 225, 1938.—Moore, *ibid.*, 34, p. 189, 1939.—Moore and Plummer, Univ. Texas Pub. no. 3945, p. 81, 1940.
- Cibolocrinus banioni** Moore.
 Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 191, pl. 5, figs. 3-8, pl. 7, fig. 7; text figs. 2, 3, 1939.
 Penn. (Brownville ls.): 7 miles west of Strohm, Osage Co., Okla.
- Cibolocrinus jonkeri* Wanner = *Stuartwellerocrinus jonkeri*.
Cibolocrinus minimus Wanner = *Stuartwellerocrinus minimus*.
Cibolocrinus nodosus Yakovlev.
 Yakovlev, Palaeontographia Ital., 34, p. 278, pl. 19, fig. 16, 1934.
 Permian. Sicily.
- Cibolocrinus propinquus* Wanner = *Stuartwellerocrinus propinquus*.

Cibolocrinus punctatus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 86, pl. 1, figs. 2-4, text figs. 7, 8, 1940.

Penn. (Marble Falls ls.): 11.5 miles southwest San Saba, San Saba Co., Texas.

Cibolocrinus pusillus Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, XII, p. 193, pl. 12, figs. 28-31, 1937.

Permian: Basleo, Timor.

Cibolocrinus regalis Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 89, pl. 1, fig. 5, 1940.

Permian (Cibolo ls.): 3 miles north Shafter, Presidio Co., Texas.

Cibolocrinus regularis Moore and Plummer.

Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 235, pl. 16, figs. 2 a-d, text fig. 5, 1938.

Penn. (Brentwood ls.): 2 miles north Fort Gibson, Okla.

Cibolocrinus robustus Strimple.

Strimple, Bull. Amer. Pal., 24, no. 87, p. 7 (367), pl. 1, figs. 3, 4, 1939.

Penn. (Stanton ls.): Just west of Bartlesville, Okla.

Cibolocrinus spinosus Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, XII, p. 194, pl. 12, figs. 32-34, pl. 13, figs. 1-3, 1937.

Permian: Basleo, Timor.

Cibolocrinus symmetricus Weller = *Stuartwellerocrinus symmetricus*.

Cibolocrinus texanus Weller = *Stuartwellerocrinus texanus*.

Cibolocrinus timorensis Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, XII, p. 191, pl. 12, figs. 14-27, 1937.

Permian: Basleo, Timor.

Cibolocrinus transitorius Wanner = *Paraplasocrinus transitorius*.

Cibolocrinus treuteri Yakovlev.

Yakovlev, Bull. Comité Geol., 46, p. 183, pl. 6, figs. 12, 12a, b, 14, 15, 15a, 1927.

Permian: Krasnooufmsk, Urals, Russia.

Cibolocrinus tumidus Moore and Plummer.

Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 232, pl. 12, figs. 4 a-e, text fig. 4, 1938.

Penn. (Brentwood ls.): 2 miles north and 3 miles southeast of Ft. Gibson, Okla.; U. S. Highway 71, opposite Woolsey, Ark.

Cibolocrinus turbinatus Weller = *Stuartwellerocrinus turbinatus*.

Cibolocrinus typus Weller.

Weller, Jour. Geol., 17, p. 631, pl. 1, figs. 20-22, 1909.—Moore and Plummer, Univ. Texas Pub. No. 3945, p. 85, pl. 1, fig. 1, 1940.

Permian (Cibolo ls.): 3 miles north Shafter, Presidio Co., Texas.

Cicerocrinus Sollas. Genotype: *C. elegans* Sollas.

Pisocrinidae (Inadunata-Larviformia). Sil.

Sollas, Quart. Jour. Geol. Soc. London, 56, p. 267, 1900.

Lagarocrinus Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 480, 1900. (Genotype: *L. osiliensis* Jaekel.)

Cicerocrinus anglicus (Jaekel).

Lagarocrinus anglicus Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 486, 1900.

Sil. (Low. Ludlow beds): Prestleigh, Radnorshire, South Wales.

Cicerocrinus elegans Sollas.

Sollas, Quart. Jour. Geol. Soc. London, 56, p. 267, pl. 16, text fig. 3, 1900.
Sil. (Wenlock ls.): England.

Cicerocrinus osiliensis (Jaekel).

Lagarocrinus osiliensis Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 486, text figs. 1, 2, 1900.
Sil. (Upper Oesel zone): Ohesaar Pank, Oesel, Russia.

Cicerocrinus scanicus (Jaekel).

Lagarocrinus scanicus Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 486, text figs. 3, 4, 6, 7, 1900.
Sil. (Beyrichia ls.): Klinta, Schonen, Sweden.

Cicerocrinus tenuis (Jaekel).

Lagarocrinus tenuis Jaekel, Zeits. Deutsch. Geol. Gesell., 52, p. 487, 1900.
Sil. (Up. Ludlow): Ludlow, England.

Cladocrinites Austin and Austin = Taxocrinus.

Cladocrinites brevidactylus Austin and Austin = Pachylocrinus brevidactylus.

Cladocrinites longidactylus Austin and Austin = Taxocrinus longidactylus.

Cladocrinites pentagonus Austin and Austin = Taxocrinus pentagonus.

Cladocrinus Morris = Taxocrinus.

Cladostoma Rafinesque.

Rafinesque, Jour. Physique, 88, p. 429, 1819 (unrecognizable).

Clarkeocrinus Goldring. Genotype: *Cacabocrinus troosti* Hall.

Dolatocrinidae (Camerata). Dev.
Goldring, N. Y. St. Mus., Mem. 16, p. 179, 1923.

Clarkeocrinus troosti (Hall).

Cacabocrinus troosti Hall, 15th Rep. Regents Univ. St. N. Y., p. 138, 1862.
Clarkeocrinus troosti Goldring, N. Y. St. Mus., Mem. 16, p. 181, pls. 21-24, figs. 1-4, pl. 25, text fig. 41, 1923.

Dolatocrinus canadensis Wachsmuth and Springer (not Whiteaves), N. Amer. Crin. Cam., p. 315, pl. 25, figs. 7a, b, 1897.
Dev. (Hamilton-Moscow sh.): Vincent and near Canandaigua, N. Y.

Cleioocrinus Billings. Genotype: *C. regius* Billings.

Cleioocrinidae (Camerata). Ord.

Billings, Geol. Surv. Canada, Rep. Prog. for 1853-1856, p. 276, 1857; Geol. Surv. Canada, Can. Org. Rem., Dec. 4, p. 52, 1859.—Zittel, Handb. Pal., 1, p. 357, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 147 (370), 1880 (1879); pt. 3, p. 152 (76), 1886.—Bather, Treatise Zool. (Lanckester), pt. 3, p. 191, 1900.—Springer, Amer. Geol., 30, p. 94, 1902; Mem. Mus. Comp. Zool., Harvard, vol. 25, pp. 93-114, 1905; Jour. Geol., 14, p. 519, 1906.—Ludwig, Zool. Jahresber., 1905, Echinod., p. 8, 1906 (as *Cleistocrinus*).—Wood, U. S. Nat. Mus., Bull. 64, p. 100, 1909.—Hudson, N. Y. St. Mus., Bull. 149, p. 211, 1911 (as *Cleioocrinus*).—Springer, Geol. Surv. Canada, Mem. 15-P, pp. 41-44, 1911; Zittel-Eastman Textb. Pal., 1, p. 186, 1913; Crin. Flexibilia, p. 441, 1920.

Campanulites Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.—Wood, U. S. Nat. Mus., Bull. 64, p. 100, 1909. (Genotype: *C. tessellatus* Troost (nom. nud.))

Cleioocrinus billingsi Ford and Dwight.

Ford and Dwight, Amer. Jour. Sci., 31, p. 252, pl. 7, fig. 5, 1886 (fragment of column).
Mid. Ord.: Canaan, N. Y.

Cleioocrinus grandis Billings.

Billings, Geol. Surv. Canada, Can. Org. Rem., Dec. 4, p. 54, pl. 5, figs. 2 a-c, 1859 (root end of column only).

Ord. (Trenton-Hull ls.): Ottawa, Canada.

Cleiocrinus laevis Springer = *C. tessellatus*.

Cleiocrinus libanus Safford = *C. tessellatus*.

Cleiocrinus magnificus Billings.

Billings, Geol. Surv. Canada, Can. Org. Rem., Dec. 4, p. 54, pl. 5, fig. 3, 1859.—
Springer, Mem. Mus. Comp. Zool., 25, no. 2, p. 111, pl. 1, figs. 11, 12, 1905
(columns only).

Ord. (Trenton-Hull ls.): Ottawa, Canada.

Cleiocrinus perforatus (Hudson).

Cleiocrinus perforatus Hudson, N. Y. St. Mus., Bull. 149, p. 211, figs. 2, 3, 1911.

Ord. (Chazy-Valcour ls.): Valcour Island, Lake Champlain, N. Y.

Cleiocrinus regius Billings.

Billings, Geol. Surv. Canada, Rep. Prog. for 1853-1856, p. 276, 1857; Geol. Surv.
Canada, Can. Org. Rem., Dec. 4, p. 53, pl. 5, figs. 1 a-g, 1859.—S. A. Miller,
N. Amer. Geol. Pal., p. 232, fig. 264, 1889.—Springer, Mem. Mus. Comp. Zool.,
25, p. 110, pl. 1, figs. 1-10, 1905; Geol. Surv. Canada, Mem. 15-P, p. 41, pl. 5,
figs. 7-9, 1911.

Ord. (Trenton-Hull ls.): Ottawa, and Kirkfield, Ontario, Canada.

Cleiocrinus sculptus Springer.

Springer, Geol. Surv. Canada, Mem. 15-P, p. 44, pl. 5, fig. 10, 1911.

Ord. (Trenton-Curdsville ls.): Mercer Co., Ky.

Cleiocrinus tessellatus (Troost).

Campanulites tessellatus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Cleiocrinus tessellatus Wood, U. S. Nat. Mus., Bull. 64, p. 100, pl. 7, fig. 11, 1909.

Cleiocrinus laevis Springer, Geol. Surv. Canada, Mem. 15-P, p. 44, pl. 5, fig. 11,
1911.

Cleiocrinus libanus Safford, Geol. Tenn., p. 285, 1869.

Ord. (Black River-Lebanon ls.): Near Columbia, Lebanon, and Shelbyville, Tenn.

Cleistocrinus Ludwig. See *Cleiocrinus*.

Cleistocrinus Springer. Genotype: *Calpiocrinus humilis* Angelin.

Ichthyocrinidae (Flexibilia). Sil.

Springer, Crin. Flexibilia, p. 292, 1920.

Cleistocrinus humilis (Angelin).

Calpiocrinus humilis Angelin, Icon. Crin. Suec., p. 12, pl. 23, figs. 28, 28 a-c, pl. 26,
fig. 17, 1878.

Cleistocrinus humilis Springer, Crin. Flexibilia, p. 293, pl. 38, figs. 1, 2, 1920.

Sil. (Gotlandian): Klinteberg, Island of Gotland.

Clematocrinus Jaekel = *Hapalocrinus*.

Clidochirus Angelin. Genotype: *C. pyrum* Angelin.

Ichthyocrinidae (Flexibilia). Sil., Miss.

Angelin, Icon. Crin. Suec., p. 12, 1878.—Zittel, Handb. Pal., 1, p. 355, 1879.—
Bather, Treatise Zool. (Lankester), pt. 3, p. 188, 1900.—Springer, Amer. Geol.,
30, p. 94, 1902; Jour. Geol., 14, no. 6, pp. 479, 516, 1906; Zittel-Eastman Textb.
Pal., 1, p. 205, 1913.—Wanner, Pal. Timor, XI, Perm. Echin. Timor, p. 251,
1916 (as *Clidocrinus*).—Springer, Crin. Flexibilia, pp. 261, 294, 1920.—Gold-
ring, N. Y. St. Mus., Mem. 16, p. 305, 1923.—Springer, Amer. Sil. Crin., p. 69,
1926.

Clidochirus americanus Springer.

Springer, Crin. Flexibilia, p. 296, pl. 37, figs. 7, 8, 1920; Amer. Sil. Crin., p. 69,
pl. 21, figs. 10, 11, 1926.

Sil. (Medinan-Brassfield fm.): Dayton, and one mile northeast of Centerville, Ohio.

Clidochirus greenii (S. A. Miller).

Ichthyocrinus greenii S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 306, pl. 8, fig. 3, 1894 (adv. pub., 1892).

?*Clidochirus greenii* Springer, Crin. Flexibilia, p. 300, pl. 37, fig. 14, 1920.

Miss. (Keokuk-Ft. Payne ch.): Muldrough Hill, Ky. (?Niagaran of Jefferson Co., Ky.).

Clidochirus iowensis Thomas.

Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 465, pl. 42, figs. 19-34, pl. 43, figs. 10-44, 1924.

Dev. (Hackberry-Lime Creek sh.): West of Rockford and vicinity Bird Hill, Iowa.

Clidochirus keyserensis Springer.

Springer, Crin. Flexibilia, p. 298, pl. 39, figs. 9-11, 1920.

Dev. (Helderbergian-Keyser fm.): Keyser, W. Va., and Cumberland, Md.

Clidochirus (?) maximus Thomas.

Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 467, pl. 42, figs. 35-37, 1924.

Dev. (Independence sh.): Near Brandon, Iowa.

Clidochirus pyrum Angelin.

Angelin, Icon. Crin. Suec., p. 12, pl. 22, fig. 23; pl. 17, fig. 6, 1878.—Springer, Jour. Geol., 14, no. 6, p. 479, pl. 6, fig. 7; 1906; Crin. Flexibilia, p. 296, pl. 37, figs. 1-6, 1920.

Ichthyocrinus pyriformis Angelin (part), Icon. Crin. Suec., pl. 17, fig. 6, 1878.

Sil. (Gotlandian): Wisby, Island of Gotland.

Clidochirus schucherti (Talbot).

Ichthyocrinus schucherti Talbot, Amer. Jour. Sci., 20, p. 30, pl. 3, fig. 1, text fig., 1905.

Clidochirus schucherti Springer, Crin. Flexibilia, p. 299, pl. 37, figs. 12, 13, 1920.—Goldring, N. Y. St. Mus., Mem. 16, p. 305, pl. 38, figs. 1, 2, 1923.

Dev. (Helderbergian-New Scotland ls.): Near Clarksville, and Schoharie, N. Y.

Clidochirus ulrichi Foerste.

Foerste, Bull. Sci. Lab. Denison Univ., 19, p. 17, pl. 2, figs. 1-A, 1-B, text fig. 1, 1919.

Sil. (Medinan-Brassfield fm.): Near Soldiers Home, Dayton, Ohio.

Clidocrinus Wanner. See *Clidochirus*.

Cliocrinus Hudson. See *Cleioocrinus*.

Clistocrinus Kirk = *Clithrocrinus*.

Clithrocrinus Kirk. Genotype: *Clistocrinus pyriformis* Kirk.

Hypocrinidae (Inadunata-Fistulata). Miss.

Kirk, Jour. Washington Acad. Sci., 27, no. 9, p. 373, 1937.

Clistocrinus Kirk (not *Cleistocrinus* Springer), Jour. Washington Acad. Sci., 27, no. 3, p. 106, 1937. (Genotype: *C. pyriformis* Kirk.)

Clithrocrinus pyriformis (Kirk).

Clistocrinus pyriformis Kirk, Jour. Washington Acad. Sci., 27, no. 3, p. 107, text figs. 1-8, 1937.

Clithrocrinus pyriformis Kirk, Jour. Washington Acad. Sci., 27, no. 9, p. 373, 1937

Low. Penn.: Northwest end of large island at head of Saginaw Bay, Kuiu Island, Alaska.

Clonocrinus Oehlert (not Quenstedt) = *Melocrinites*.

Clonocrinus Quenstedt. Genotype: *Eucalyptocrinus polydactylus* McCoy.

Clonocrinidae (Camerata). Sil.; ?Dev.

Quenstedt, Petref. Deutsch., 4, p. 638, 1876.—Bather, Treatise Zool. (Lankester) pt. 3, p. 162, 1900.—Springer, Zittel-Eastman Textb. Pal., p. 190, 1913; U. S. Nat. Mus., Bull. 115, p. 3, 1921; Amer. Sil. Crin., p. 34, 1926.

- Corymbocrinus* Angelin, Icon. Crin. Suec., p. 18, 1878.—Zittel, Handb. Pal., 1 p. 373, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, p. 106 (328), 1885.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 99, 100. (Genotype: *Eucalyptocrinus polydactylus* McCoy.)
- Polypeltis* Angelin, Icon. Crin. Suec., p. 27, 1878.—Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, p. 108 (330), 1885. (Genotype: *P. granulatus* Angelin.)
- Clonocrinus chicagoensis** (Weller).
Corymbocrinus chicagoensis Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 100, pl. 4, figs. 1-3, 1900.
 Sil. (Niagaran-Racine dol.): Chicago, Cicero, and Romeo, Ill.
- Clonocrinus corolliferus** (Hisinger).
Cyathocrinus? corolliferus Hisinger, Leth. Suec., Suppl. sec., p. 6, pl. 39, figs. 3 a-c, 1840.
Corymbocrinus corolliferus Angelin, Icon. Crin. Suec., p. 18, pl. 23, fig. 19, 1878:
 Sil. (Gotlandian): Klinteberg, Island of Gotland.
- Clonocrinus gotthandicus** Quenstedt.
 Quenstedt, Petref. Deutschl., 4, p. 638, pl. 112, fig. 62, 1876.
 Sil. (Gotlandian): Island of Gotland.
- Clonocrinus grandis** (Angelin).
Corymbocrinus grandis Angelin, Icon. Crin. Suec., p. 18, pl. 9, figs. 2, 2a, 3, 1878.
 Sil. (Gotlandian): Klinteberg, Island of Gotland.
- Clonocrinus grandistellatus** (Angelin).
Corymbocrinus grandistellatus Angelin, Icon. Crin. Suec., p. 18, pl. 9, fig. 4; pl. 23, figs. 18, 21, 1878.
 Sil. (Gotlandian): Follingbo, Island of Gotland.
- Clonocrinus granulatus** (Angelin).
Polypeltis granulatus Angelin, Icon. Crin. Suec., p. 27, pl. 24, figs. 2, 3, 1878
 Sil. (Gotlandian): Wisby, Island of Gotland.
- Clonocrinus klintbergi** Jaekel.
 Jaekel, Pal. Zeits., 3, p. 31, fig. 23, 1918.
 Sil. (Gotlandian): Wisby, Island of Gotland.
- Clonocrinus laevis** (Angelin).
Corymbocrinus laevis Angelin, Icon. Crin. Suec., p. 18, pl. 23, fig. 20, 1878.
 Sil. (Gotlandian): Island of Gotland.
- Clonocrinus (?) macropetalus** (Hall).
Mariacrinus macropetalus Hall, Nat. Hist. N. Y., Pal., 3, p. 111, pl. 3, figs. 1, 2, 1859.
Clonocrinus (?) macropetalus Goldring, N. Y. St. Mus., Mem. 16, p. 153, pl. 20, fig. 10, 1923.
 Dev. (Helderbergian-Becraft ls.): Schoharie and Helderberg Mts., N. Y.
- Clonocrinus niagarensis** (Weller).
Corymbocrinus niagarensis Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 101, pl. 4, figs. 4, 5, 1900.
 Sil. (Niagaran-Racine dol.): Chicago, Ill.
- Clonocrinus occidentalis** Springer.
 Springer, Amer. Sil. Crin., p. 34, pl. 7, figs. 18, 18a, 1926.
 Sil. (Niagaran-Decatur ls.): Near Perryville, Tenn.
- Clonocrinus panderi** (Angelin).
Corymbocrinus panderi Angelin, Icon. Crin. Suec., p. 18, pl. 9, fig. 5, pl. 23, figs. 17, 17a, b, 1878.
 Sil. (Gotlandian): Follingbo, Island of Gotland.

Clonocrinus polydactylus (McCoy).

Eucalyptocrinus (*Eucalyptocrinus* by error) *polydactylus* McCoy, Ann. Mag. Nat. Hist., (2) 3, p. 249, 1849; Brit. Pal. Foss., p. 58, pl. 1-D, fig. 2, 1854.

Corymbocrinus polydactylus Angelin, Icon. Crin. Suec., p. 18, pl. 9, figs. 1, 6-12, pl. 21, fig. 17, 1878.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 31, text fig. 15; p. 42, text fig. 31, 1900.

Clonocrinus polydactylus Bather, Treatise Zool. (Lankester), pt. 3, p. 162, text fig. 76, 1900.

Sil.: Dudley, England (Wenlock ls.); Follingbo and Wisby, Gotland (Gotlandian).

Closterocrinus Hall. Genotype: *C. elongatus* Hall.

Carabocrinidae (Inadunata-Fistulata). Sil.

Hall, Nat. Hist. N. Y., Pal., 2, p. 179, 1852.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 231 (405), 1886 (as *Glosterocrinus*).

Closterocrinus elongatus Hall.

Hall, Nat. Hist. N. Y., Pal., 2, p. 179, pl. A-41, figs. 2 a-f, 1852.

Sil. (Niagaran-Irondequoit ls.): Lockport, N. Y.

Cococrinus Müller = *Amblacrinus*.**Cococrinus bacca** Roemer = *Lyonicrinus bacca*.**Cococrinus? conicus** (Troost).

Cococrinus conicus Wood (*Cupellacrinites conicus* Troost MS), U. S. Nat. Mus., Bull. 64, p. 29, pl. 15, fig. 1, 1909.

Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.

Codiocrinus Schultze. Genotype: *C. granulatus* Schultze.

Cyathocrinitidae (Inadunata-Fistulata). Dev.

Schultze, Denk. Kais. Akad. Wiss., Math. Naturw. Cl., 26, Abth. 2, p. 143, 1867 (adv. pub., 1866, p. 31).—Zittel, Handb. Pal., 1, p. 364, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 228 (152), 1886.—Follmann, Verh. Nat. Preuss. Rheinl., 44, pl. 3, fig. 1, 1887.—Bather, Ann. Mag. Nat. Hist., ser. 6, 5, p. 324, 1890.—Jaekel, Pal. Abhandl., 7, p. 63, 1895.—Bather, Treatise Zool. (Lankester), pt. 3, p. 177, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 221, 1913.—Schmidt, Abhandl. Preuss. Geol. Landes., n. f., Heft 163, p. 71, 1934.

Codiocrinus granulatus Schultze.

Schultze, Denk. Akad. Wiss., Math. Naturw. Cl., 25, p. 144, pl. 3, fig. 9, 1867 (adv. pub., 1866).—Oehlert, Bull. Geol. Soc. France, ser. 3, 24, p. 827, pl. 26, fig. 8, 1897.

Dev.: Prüm, Germany (Eifelian); Santa Lucia (Leon), Spain (Calcaire d'Arno).

Codiocrinus schultzei Follmann.

Follmann, Verh. Nat. Hist. ver Preuss. Rheinl., (5) 4, p. 123, pl. 2, figs. 1, 1a, b, 1887.—Opitz, Natur Mus., 61, heft 4, p. 167, fig. 4, 1931; Bilder Erdges. Nahe-Hunsrück-Landes Birkenfeld, p. 10, fig. 6, p. 108, fig. 100, 1932.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 71, fig. 14, pl. 7, figs. 1, 2, pl. 27, fig. 1, 1934.

Dev. (Hunsrück sl.): Bundenbach and Gemunden, Germany.

Codonocrinites Troost = *Pterotocrinus*.**Codonocrinites gracilis** Troost = *Pterotocrinus acutus*.**Codonocrinus** Shumard = *Pterotocrinus*.**Coeliocrinus** White. Genotype: *Poteriocrinus dilatatus* Hall.

Poteriocrinitidae (Inadunata-Fistulata). Miss.

White, Boston Jour. Nat. Hist., 7, p. 498, 1863.—Meek and Worthen, Geol. Surv. Ill., 2, pp. 181, 182, 1866.—Zittel, Handb. Pal., 1, p. 360, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, pp. 63, 161 (286, 354), 1880 (1879); pt. 3, pp. 191, 244 (115, 168), 1886.—Springer, Zittel-Eastman Textb. Pal., 1, p. 223, 1913.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 178, 1924.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, pp. 65, 85, 1926.

Coeliocrinus cariniferous Weller = *Linocrinus cariniferous*.

Coeliocrinus dilatatus (Hall).

Poteriocrinus dilatatus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 300; Prelim. Descr. N. Sp. Crin., p. 6, 1861.

Coeliocrinus dilatatus White, Jour. Boston Soc. Nat. Hist., 7, p. 501, 1863.—Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 1, p. 33, pl. 3, fig. 18, 1893.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 86, pl. 24, figs. 9–13, 1926.

Miss.: Burlington, Iowa (Low. Burlington ls.): Lake Valley, N. Mex. (Lake Valley ls.).

Coeliocrinus lyra (Meek and Worthen).

Poteriocrinites (Zeacrinus) lyra Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 152, 1869.

Zeacrinus lyra Meek and Worthen, Geol. Surv. Ill., 5, p. 432, pl. 1, fig. 11, 1873.

Coeliocrinus lyra Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 88, 1926.

Miss. (Low. and Up. Burlington ls.): Burlington, Iowa.

Coeliocrinus subspinosus White.

White, Jour. Boston Soc. Nat. Hist., 7, p. 501, 1863.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 86, pl. 25, figs. 2, 3, 1926.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Coeliocrinus ventricosus (Hall).

Poteriocrinus ventricosus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 301; Prelim. Not. N. Sp. Crin., p. 6, 1861.

Coeliocrinus ventricosus White, Jour. Boston Soc. Nat. Hist., 7, p. 501, 1863.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 86, pl. 24, figs. 1–8, pl. 25, fig. 1, 1926.

Miss.: Burlington, Iowa (Low. Burlington ls.); Lake Valley, N. Mex. (Lake Valley ls.).

Coelocrinus Meek and Worthen. Genotype: *Actinocrinus concavus* Meek and Worthen.

Batocrinidae (Camerata). Miss.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., 17, p. 273, 1865; Geol. Surv. Ill., 2, p. 214, 1866.—Zittel, Handb. Pal., 1, p. 371, 1879.—Bather, Treatise Zool. (Lankester), pt. 3, p. 167, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 196, 1913.

Sphaerocrinus Meek and Worthen (not Roemer, 1858), Proc. Acad. Nat. Sci. Phila., 17, p. 154, 1865.

Coelocrinus Salter (not Meek and Worthen) = *Rhaphanocrinus*.

Coelocrinus concavus (Meek and Worthen).

Actinocrinus (Amphoracrinus) concavus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 132, 1861.

Coelocrinus concavus Meek and Worthen, Geol. Surv. Ill., 2, p. 215, pl. 15, figs. 10, 10a, b, c, text fig. 16, 1866.

Aorocrinus concavus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 482, pl. 42, figs. 13 a–c, 1897.

Miss. (Burlington ls.): Burlington, Iowa.

Coelocrinus immaturus Bather = *Aorocrinus immaturus*.

Coencystis Peck. See *Coenocystis*.

Coenocrinus Valette. Genotype: *C. elegans* Valette.

Valette, Mem. Carte Geol. Tunisie, n. s., no. 1, p. 94, 1934. (Uncertain crinoid; columnals only.)

Coenocrinus elegans Valette.

Valette, Mem. Serv. Carte Geol. Tunisie, n. s., no. 1, p. 94, pl. figs. 2a, b, 1934. Permian: Djebel Tabaga, Tunis.

Coenocrinus solignaci Valette.

Valette, Mem. Serv. Carte Geol. Tunisia, n. s., no. 1, p. 95, pl. figs. 3 a-d, 1934.
(Stems only.)

Permian: Djebel Tabaga, Tunis.

Coenocystis Girty. Genotype: *C. richardsoni* Girty.

Hypocrinidae (Inadunata-Fistulata). Miss.; Permian.

Girty, U. S. Geol. Surv., Prof. Paper 58, p. 108, 1908.—Bather, Proc. Zool. Soc. London, p. 897, 1913.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, pp. 141, 161, 1924; Neue Beitr. kennt. Perm. Echin. Timor, pp. 40, 78, 1929.—Peck, Jour. Pal., 10, p. 289, 1936 (as *Coenocystis*).—Moore and Plummer, Univ. Texas Pub. No. 3945, p. 391, 1940.

Coenocystis angulosa Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, p. 79, pl. 6, figs. 11-14, text figs. 15a, b, 1929.

Permian: Basleo, Timor.

Coenocystis moreyi (Peck).

Coenocystis moreyi Peck, Jour. Pal., 10, p. 289, pl. 46, figs. 11-15, 1936.

Miss. (Fern Glen ls.): Near Kimmswick, Mo.

Coenocystis perforata Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, p. 80, pl. 6, fig. 15, pl. 7, figs. 1-12, 1929.

Permian: Basleo, Timor.

Coenocystis richardsoni Girty.

Girty, U. S. Geol. Surv., Prof. Paper 58, p. 108, pl. 27, figs. 19-22, 1908.—Wanner, Ueber armlose krin. Jung. Paleont., Verh. Mijnb. Genoots Nederl. Kolonien, p. 23, fig. 7, p. 26, fig. 13, 1920.—Moore and Plummer, Univ. Texas Pub. No. 3945, p. 391, text fig. 79, 1940.

Permian (Delaware Mtn. fm.): Southern Delaware Mts., Texas.

Coenocystis somoholensis Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 161, text fig. 13, pl. 8, figs. 18, 19, 1924.

Permian: Somohole, Timor.

Columbicrinus Ulrich. Genotype: *C. crassus* Ulrich.

Heterocrinidae (Inadunata-Fistulata). Ord.

Ulrich, in Foerste, Geol. Surv. Canada, Mem. 138, p. 91, 1924.

Columbicrinus crassus Ulrich.

Ulrich, in Foerste, Geol. Surv. Canada, Mem. 138, p. 91, text fig. 8, 1924.

Ord. (Black River-Lebanon ls.): Columbia, Tenn.

Comanthocrinus Springer. Genotype: *Stereocrinus indianensis* Miller and Gurley.

Dolatocrinidae (Camerata). Dev.

Springer, U. S. Nat. Mus., Bull. 115, pp. 3, 4, text figs. 1, 2, 1921.—Goldring, N. Y. St. Mus., Mem. 16, p. 190, 1923.

Comanthocrinus indianensis (Miller and Gurley).

Stereocrinus indianensis Miller and Gurley, Ill. St. Mus., Bull. 12, p. 38, pl. 3, figs. 13-15, 1897.—Rowley, in Greene, Cont. Ind. Pal., 1, no. 18, p. 182, pl. 54, figs. 7, 8, 1904.

Comanthocrinus indianensis Springer, U. S. Nat. Mus., Bull. 115, p. 6, pl. 1, figs. 1-6, 1921.—Goldring, N. Y. St. Mus., Mem. 16, p. 192, pl. 24, figs. 5-8, 1923.

Dev. (Hamilton): Near Charlestown, Ind. (Sellersburg ls.); Canandaigua Lake and Cashong Creek, New York (Moscow sh.).

Comanthocrinus priscus Springer.

Springer, U. S. Nat. Mus., Bull. 115, p. 7, pl. 1, figs. 7-10, 1921.—Goldring, N. Y. St. Mus., Mem. 16, p. 197, pl. 24, fig. 9, 1923.

- Dev. (Onondaga): Louisville, Ky. (Jeffersonville ls.); Leroy, etc., Genesee Co., N. Y.
- Compsocrinus** S. A. Miller. Genotype: *Glyptocrinus harrisi* S. A. Miller.
Xenocrinitidae (Camerata). Early Sil.
- S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 6, pp. 219, 223, 1883.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 516, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 165, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 194, 1913.
- Compsocrinus harrisi** (S. A. Miller).
Glyptocrinus harrisi S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 4, p. 74, pl. 1, figs. 4, 4a, 1881.
- Compsocrinus harrisi* S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 6, p. 234, 1883.—Wachsmuth and Springer, N. Amer. Crin. Cam., pp. 269, 282, 517, pl. 21, figs. 8a, b, 1897.—Foerste, Geol. Surv. Canada, Mem. 138, p. 103, pl. 6, figs. 1a, b, c, 1924.
- Early Sil. (Richmond): Near Waynesville, Ohio (Waynesville ls.—Blanchester div.); Clay Cliffs, Manitoulin Island, Lake Huron (Meaford mem.).
- Compsocrinus miamiensis** (S. A. Miller).
Glyptocrinus miamiensis S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 5, p. 34, pl. 1, fig. 1, 1883.
- Compsocrinus miamiensis* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 518, pl. 21, figs. 7a, b, 1897.
- Early Sil. (Richmond-Waynesville ls., Blanchester div.): Near Waynesville, Ohio.
- Compsocrinus nuntius** Perner.
Perner, in Zelizko, Prag. Rozpr. Ceske Ak. Frant. Jos., 20, no. 10, p. 6, 1911. (Nom. nud.)
- Concretum** Gregorio. Genotype: *C. perplexum* Gregorio. (Unrecognizable.)
Gregorio, Ann. Geol. Pal., 52, Palermo, p. 42, 1930.
- Concretum perplexum** Gregorio.
Gregorio, Ann. Geol. Pal., 52, Palermo, p. 42, pl. 15, figs. 8–11, 1930.
Permian: Sicily.
- Condylocrinus** Eichwald. Genotype: *C. verrucosus* Eichwald.
Rhodocrinitidae (Camerata). ?Dev.
- Eichwald, Leth. Ross., 1, p. 612, 1860.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 220 (394), 1881.—Tschernyschew, Mem. Comite Geol., 4, no. 3, pp. 93, 188, 1893.—Bather, Treatise Zool. (Lankester), pt. 3, p. 201, 1900.
- Condylocrinus verrucosus** Eichwald.
Eichwald, Leth. Ross., 1, p. 612, pl. 31, fig. 51a, b, 1860.
Dev.? ("Orthoceras ls."): Bogoslovsk, Russia.
- Conocrinites Troost = *Alloprosallocrinus*.
- Conocrinites leae Troost = *Alloprosallocrinus conicus*.
- Conocrinus Shumard = *Alloprosallocrinus*.
- Cophinus** Murchison. Genotype: *C. dubius* Murchison.
Murchison, Sil. Syst., p. 697, 1839.—Bather, Treatise Zool. (Lankester), pt. 3, p. 202, 1900. (Unrecognizable; impressions of stems.)
- Cophinus dubius** Murchison.
Murchison, Sil. Syst., p. 697, 1839; Siluria, ed. 3, p. 147, pl. 12, fig. 5, 1859.
Sil. (Up. Ludlow): Ludlow and Ludford Park, England.
- Cordylocrinus** Carpenter. See *Corylocrinus*. (Under Cystoidea).
- Cordylocrinus** Angelin. Genotype: *C. comtus* Angelin.
Platyrcinitidae (Adunata). Sil.; Dev.

- Angelin, *Icon. Crin. Suec.*, p. 3, 1878.—Zittel, *Handb. Pal.*, 1, p. 365, 1879.—Wachsmuth and Springer, *Rev. Pal.*, pt. 2, p. 60 (234), 1881; pt. 3, p. 115 (337), 1886; *N. Amer. Crin. Cam.*, p. 775, 1897.—Bather, *Treatise Zool. (Lankester)*, pt. 3, p. 156, 1900.—Springer, *Zittel-Eastman Textb. Pal.*, 1, p. 199, 1913.
- Cordylocrinus comtus** Angelin.
 Angelin, *Icon. Crin. Suec.*, p. 3, pl. 23, fig. 6, 1878.
 Sil. (Gotlandian): Island of Gotland.
- Cordylocrinus? dubius** Rowley.
 Rowley, *Amer. Geol.*, 34, p. 272, pl. 16, figs. 20–22, 1904.
 Sil. (Niagaran-Bainbridge ls.): Near St. Marys, Ste. Genevieve Co., Mo.
- Cordylocrinus plumosus** (Hall).
Platylocrinus plumosus Hall, *Nat. Hist. N. Y.*, *Pal.*, 3, p. 113, pl. 4, figs. 1–5, 1859.
Cordylocrinus plumosus Wachsmuth and Springer, *N. Amer. Crin. Cam.*, p. 737, pl. 75, fig. 20, 1897.—Talbot, *Amer. Jour. Sci.*, (4) 20, p. 28, pl. 3, figs. 2, 4, text fig. 3, 1905.—Goldring, *N. Y. St. Mus.*, *Mem.* 16, p. 273, pl. 36, figs. 6–13, 1923.
Platylocrinus parvus Hall, *Nat. Hist. N. Y.*, *Pal.*, 3, p. 114, pl. 4, figs. 6–9, 1859.
 Dev. (Helderbergian-Coeymans ls.): Jerusalem Hill, Litchfield, Herkimer Co., and Schoharie, N. Y.
- Cordylocrinus ramulosus** (Hall).
Platylocrinus ramulosus Hall, *Nat. Hist. N. Y.*, *Pal.*, 3, p. 115, pl. 4, figs. 10–13, 1859.
Cordylocrinus ramulosus Wachsmuth and Springer, *N. Amer. Crin. Cam.*, p. 737, 1897.
Cordylocrinus (?) *ramulosus* Goldring, *N. Y. St. Mus.*, *Mem.* 16, p. 276, pl. 36, figs. 14–17, 1923.
 Dev. (Helderbergian-Coeymans ls.): Jerusalem Hill, Litchfield, Herkimer Co., N. Y.
- Corematocrinus** Goldring. Genotype: *C. plumosus* Goldring.
 Poteriocrinitidae (Inadunata-Fistulata). Dev.
 Goldring, *N. Y. St. Mus.*, *Mem.* 16, p. 434, 1923.
- Corematocrinus plumosus** Goldring.
 Goldring, *N. Y. St. Mus.*, *Mem.* 16, p. 435, pl. 56, figs. 6–9, text fig. 60, 1923.
 Dev.: Chemung Narrows, N. Y. (Lower Chemung beds): 2 miles south of Naples, N. Y. (Portage-Gardeau ss.).
- Corocrinus** Goldring. Genotype: *C. ornatus* Goldring.
 Periechocrinitidae (Camerata). Dev.; Miss.
 Goldring, *N. Y. St. Mus.*, *Mem.* 16, p. 202, 1923.
- Corocrinus? calypso** (Hall).
Actinocrinus calypso Hall, 15th Rep. Regents Univ. St. N. Y., p. 133, 1862.—Wachsmuth and Springer, *N. Amer. Crin. Cam.*, p. 483, 1897.
Corocrinus (?) *calypso* Goldring, *N. Y. St. Mus.*, *Mem.* 16, p. 205, pl. 26, fig. 5, 1923; *Bull. Buffalo Soc. Nat. Sci.*, 15, p. 186, pl. 1, figs. 8–10, 1934.
 Dev. (Hamilton): Jaycox Run, Genesee Valley, N. Y. (Moscow sh.); Thedford, etc., Ontario (Arkona beds).
- Corocrinus ornatus** Goldring.
 Goldring, *N. Y. St. Mus.*, *Mem.* 16, p. 203, text fig. 47, pl. 26, figs. 2–4, 1923.
 Dev. (Hamilton-Ludlowville sh.): Fall Brook, near Genesee, N. Y.
- Corocrinus sampsoni** (Miller and Gurley).
Amphorocrinus sampsoni Miller and Gurley, *Ill. St. Mus.*, *Bull.* 9, p. 27, pl. 1, figs. 28, 29, 1896.
Corocrinus sampsoni Peck and Keyte, *Univ. Mo. Studies*, 13, no. 4, p. 75, pl. 29, figs. 10–13, 1938.
 Miss. (Chouteau ls.): Sedalia, Mo.

- Coronocrinus** Hall. Genotype: *C. polydactylus* Hall.
 Dolatocrinidae (Camerata). Dev.
 Hall, Nat. Hist. N. Y., Pal., 3, p. 124, 1859.—Zittel, Handb. Pal., 1, p. 369, 1879.
 (See *Himerocrinus* Springer.)
- Coronocrinus polydactylus** Hall.
 Hall, Nat. Hist. N. Y., Pal., 3, p. 124, pl. 6, figs. 4-6, 1859.
Himerocrinus? *polydactylus* Goldring, N. Y. St. Mus., Mem. 16, p. 199, pl. 20, fig. 11, 1923.
 Dev. (Helderbergian-New Scotland ls.): Schoharie Co., N. Y.
- Corymboerinus** Angelin = **Clonocrinus**.
- Corynecrinus** Kirk. Genotype: *C. romingeri* Kirk.
 Lecythocrinidae (Inadunata-Fistulata). Dev.
 Kirk, U. S. Nat. Mus., Proc., 83, no. 2972, p. 1, 1934.
- Corynecrinus romingeri** Kirk.
 Kirk, U. S. Nat. Mus., Proc., 83, no. 2972, p. 2, pl. 1, figs. 1-4, 1934.
 Dev. (Onondaga-Jeffersonville ls.): Clark Co., Ind.
- Cosmetocrinus** Kirk. Genotype: *C. gracilis* Kirk.
 Poteriocrinitidae (Inadunata-Fistulata). Miss.
 Kirk, Jour. Pal., 15, no. 1, p. 86, 1941.
- Cosmetocrinus crawfordsvillensis** (Miller and Gurley).
Poteriocrinus crawfordsvillensis Miller and Gurley, Jour. Cincinnati Soc. Nat. Hist., 13, p. 23, pl. 4, fig. 8; Geol. Surv. Ind., 16th Rep., p. 344, pl. 4, fig. 8, 1890.
 Miss. (Keokuk ls.): Crawfordsville, Ind.
- Cosmetocrinus crineus** (Hall).
Poteriocrinus crineus Hall, 17th Rep. Regents Univ. St. N. Y., p. 56, 1864 (Prelim. Not., 1863).—Hall and Whitfield, Geol. Surv. Ohio, 2, pt. 2, Pal., p. 172, pl. 12, figs. 6, 7, 1875.
Poteriocrinus (*Scaphiocrinus*) *crineus* Wachsmuth and Springer, Rev. Pal., pt. 1, p. 112 (335), 1880 (1879).
Cosmetocrinus crineus Kirk, Jour. Pal., 15, no. 1, p. 87, 1941.
 Miss. (Waverlyan-Cuyahoga fm.): Richfield, Summit Co., Ohio.
- Cosmetocrinus delicatus** (Meek and Worthen).
Poteriocrinites (*Graphiocrinus*; *Scaphiocrinus*) *delicatus* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 144, 1869.
Poteriocrinites (*Scaphiocrinus*) *delicatus* Meek and Worthen, Geol. Surv. Ill., 5, p. 407, pl. 1, fig. 5, 1873.
Cosmetocrinus delicatus Kirk, Jour. Pal., 15, no. 1, p. 87, 1941.
 Miss. (Up. and Low. Burlington ls.): Burlington, Iowa.
- Cosmetocrinus elegantulus** (Wachsmuth and Springer).
Scaphiocrinus elegantulus Wachsmuth and Springer, in S. A. Miller, N. Amer. Geol. Pal., p. 279, fig. 424, 1889; Geol. Surv. Ill., 8, p. 195, pl. 17, fig. 13, 1890.
Cosmetocrinus elegantulus Kirk, Jour. Pal., 15, no. 1, p. 87, 1941.
Poteriocrinus legrandensis Miller and Gurley, 16th Rep. Geol. Surv. Ind., p. 357, pl. 7, figs. 4-5 (authors' ed., p. 39), 1890.
Pachyloerinus legrandensis Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 256, pl. 18, fig. 3, 1937.
 Miss. (Kinderhook-Hampton fm.): Legrand, Iowa.
- Cosmetocrinus gracilis** Kirk.
 Kirk, Jour. Pal., 15, no. 1, p. 87, pl. 17, figs. 1, 2, 1941.
 Miss. (Keokuk ls.): Indian Creek, Montgomery Co., Ind.

Cosmetocrinus indianensis (Meek and Worthen).

Poteriocrinus indianensis Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 155, 1865; Geol. Surv. Ill., vol. 3, p. 515, pl. 20, fig. 4, text fig., 1868.

Poteriocrinus (Scytalocrinus) indianensis Wachsmuth and Springer, Rev. Pal., pt. 1, p. 117 (340), 1880 (1879).

Cosmetocrinus indianensis Kirk, Jour. Pal., 15, no. 1, p. 88, 1941.

Miss. (Keokuk ls.): Crawfordsville, Ind.

Cosmetocrinus meeki Kirk = *C. nanus*.

Cosmetocrinus nanus (Meek and Worthen).

Poteriocrinites (Graphiocrinus; Scaphiocrinus) nanus Meek and Worthen (not Roemer), Proc. Acad. Nat. Sci. Phila., p. 141, 1869.

Poteriocrinites (Scaphiocrinus) nanus Meek and Worthen, Geol. Surv. Ill., 5, p. 425, pl. 1, fig. 8, 1873.

Cosmetocrinus meeki Kirk, Jour. Pal., 15, no. 1, p. 88, 1941.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Cosmetocrinus richfieldensis (Worthen).

Poteriocrinus richfieldensis Worthen, Ill. St. Mus., Bull. 1, p. 15, 1882; Geol. Surv. Ill., 7, p. 285, pl. 30, fig. 5, 1883.

Cosmetocrinus richfieldensis Kirk, Jour. Pal., 15, no. 1, p. 88, 1941.

Miss. (Waverlyan-Cuyahoga sh.): Near Richfield, Ohio.

Cosmocrinus Jaekel. Genotype: *C. holzapfeli* Jaekel.

Botryocrinidae (Inadunata-Fistulata). Dev.

Jaekel, Zeits. Deutsch. Geol. Gesell., 50, p. 23, 1898.—Bather, Treatise Zool. (Lankester), pt. 3, p. 179, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 221, 1913.—Haarmann, Jahrb. Preuss. Geol. Landesanst., 41, p. 31, 1921.

Cosmocrinus dilatatus Jaekel = *Costalocrinus dilatatus*.

Cosmocrinus holzapfeli Jaekel.

Jaekel, Zeits. Deutsch. Geol. Gesell., 50, p. 32, 1898.

Up. Dev. (Nehden beds): Nehden, Germany.

Costalocrinus Jaekel. Genotype: *Poteriocrinus dilatatus* Schultze.

Botryocrinidae (Inadunata-Fistulata). Dev.

Jaekel, Pal. Zeits., 3, p. 61, 1918.

Costalocrinus dilatatus (Schultze).

Poteriocrinus dilatatus Schultze, Denk. Kais. Akad. Wiss., Math. Naturw. Cl., 26, p. 161, pl. 5, fig. 5, 1867 (adv. pub., 1866, p. 49).

Cosmocrinus dilatatus Jaekel, Zeits. Deutsch. Geol. Gesell., 50, p. 31, 1898.

Costalocrinus dilatatus Jaekel, Pal. Zeits., 3, p. 61, 1918.

Dev. (Eifelian): Kerpen, Eifel, Germany.

Cothocrinites Phillipi. Genotype: *C. verrucosus* Phillipi.

Phillipi, Zeits. Ges. Naturwiss., 13, p. 68, 1876.

Cothocrinus Zittel, Handb. Pal., 1, pp. 346, 387, 1879.

Cothocrinites verrucosus Phillipi.

Phillipi, Zeits. Ges. Naturwiss., 13, p. 68, pl. II-A, 1876.

Formation unknown: ?Dona Ana Mountains, province of Coquimba, Chile. (Not recognizable, based on indistinct specimens in Museum at Santiago, Chile; figs. represent a platycrinoid.)

Cothocrinus Zittel = *Cothocrinites*.

Cotyledonocrinus Casseday and Lyon = *Dichocrinus*.

Cradeocrinus Goldring. Genotype: *C. elongatus* Goldring.

Carabocrinidae (Inadunata-Fistulata). Dev.

Goldring, N. Y. St. Mus., Mem. 16, p. 347, 1923.

- Cradeocrinus elongatus** Goldring.
Goldring, N. Y. St. Mus., Mem. 16, p. 348, pl. 41, figs. 11-13, 1923.
Dev. (Low. Chemung beds): Cotton Hill, 1 mile north Avoca, Steuben Co., N. Y.
- Cradeocrinus pergracilis** Goldring.
Goldring, N. Y. St. Mus., Mem. 16, p. 350, pl. 42, fig. 1, 1923.
Dev. (Portage-Ithaca beds): East of South Otselic, N. Y.
- Cranocrinus Wanner.** Genotype: *C. timoricus* Wanner.
Hypocrinidae (Inadunata-Fistulata). Permian.
Wanner, Neue Beitr. kennt. Perm. Echin. Timor, pp. 39, 41, 1929.
- Cranocrinus timoricus** Wanner.
Wanner, Neue Beitr. kennt. Perm. Echin. Timor, pp. 41, 42, text figs. 1, 2, pl. 1, figs. 4-16; pl. 2, figs. 1-3, 1929.
Permian: Basleo, Timor.
- Cranocrinus turbinatus** Wanner = *Cydonocrinus turbinatus*.
Cranocrinus turbinatus minor Wanner = *Cydonocrinus turbinatus minor*.
- Craspedocrinus Dahmer.** Genotype: *C. schmidti* Dahmer.
?Reteocrinidae (Camerata). Dev.
Dahmer, Jahrb. Preuss. Geol. Landesanst., 40, Teil 2, p. 292, 1921.
- Craspedocrinus schmidti** Dahmer.
Dahmer, Jahrb. Preuss. Geol. Landesanst., 40, Teil 2, p. 292, pl. 16, figs. 4-8, 1921.
Low. Dev. (Kahleberg ss.): Oberharzer, Germany.
- Craterocrinus Goldring.** Genotype: *C. ruedemanni* Goldring.
Dolatoocrinidae (Camerata). Dev.
Goldring, N. Y. St. Mus., Mem. 16, p. 185, 1923.
- Craterocrinus ruedemanni** Goldring.
Craterocrinus ruedemanni Goldring, N. Y. St. Mus., Mem. 16, p. 186, text fig. 42, pl. 20, figs. 7, 8, 1923.
Dev. (Onondaga ls.): Cherry Valley, N. Y.
- Craterocrinus schoharie** Goldring.
Goldring, N. Y. St. Mus., Mem. 16, p. 189, text fig. 43, pl. 20, fig. 9, 1923; N. Y. St. Mus., Bull. 315, p. 77, figs. 23, 24, 1938.
Dev.: ?Schoharie, N. Y. (?New Scotland ls.); Williamsville, Erie Co., N. Y. (Onondaga ls.).
- Cremacrinus Ulrich.** Genotype: *C. punctatus* Ulrich.
Calceocrinidae (Inadunata-Fistulata). Ord.; Sil.
Ulrich, 14th Ann. Rep. Geol. Nat. Hist. Surv. Minnesota, p. 107, 1886.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 277 (201), 1886.—Ringueberg, Ann. N. Y. Acad. Sci., 4, pp. 396, 405, 1889.—Springer, Zittel-Eastman Textb. Pal., 1, p. 213, 1913; Amer. Sil. Crin., p. 105, 1926.
Castocrinus Ringueberg, Ann. N. Y. Acad. Sci., 4, p. 392, 1889.—Wachsmuth and Springer, Proc. Acad. Nat. Sci. Phila., p. 387, 1890 (as *Castrocrinus*).—Bather, Ann. Mag. Nat. Hist., (6) 5, p. 332, 1890; Königl. Sv. Vet. Akad. Handl., 25, no. 2, pp. 21, 58, 61, 1893; Treatise Zool. (Lankester), pt. 3, p. 148, 1900.—Zittel, Grundzüge Pal., 1, p. 152, 1910. (Genotype: *Calceocrinus fucillatus* W. R. Billings.)
- Cremacrinus arctus** Sardeson.
Sardeson, Pan Amer. Geol., 49, pp. 36, 37, text figs. 1-5, p. 41, 1928.
Ord. (Black River-Platteville ls.): Minneapolis, Minn.
- Cremacrinus articulatus** (Billings).
Heterocrinus articulatus Billings, Geol. Surv. Canada, Can. Org. Rem., Dec. 4, p. 51, pl. 4, fig. 6, 1859.

- Castocrinus articulatus* Ringueberg, Ann. N. Y. Acad. Sci., 4, p. 395, pl. 10, fig. 4, 1889.
- Cremacrinus articulatus* Springer, Amer. Sil. Crin., pp. 100, 108, pl. 28, figs. 9-13, 1926.
- Ord. (Trenton): Ottawa and Kirkfield, Ont. (Hull ls.); Woodford Co., Ky. (Curdsville ls.).
- Cremacrinus billingsianus** (Ringueberg).
- Castocrinus billingsianus* Ringueberg, Ann. N. Y. Acad. Sci., 4, p. 394, pl. 10, fig. 3, 1889.
- Cremacrinus billingsianus* Bassler, U. S. Nat. Mus., Bull. 92, 1, p. 289, 1915.
- Ord. (Trenton-Hull ls.): Ottawa, Canada.
- Cremacrinus decatur** Springer.
- Springer, Amer. Sil. Crin., p. 107, pl. 28, fig. 7, 1926.
- Sil. (Niagaran-Decatur ls.): Near Rise Mill, Perry Co., Tenn.
- Cremacrinus furcillatus** (W. R. Billings).
- Calceocrinus furcillatus* W. R. Billings, Ottawa Field Nat. Club, Ottawa Nat., 1, no. 4, pp. 51, 53, text fig., 1887.
- Castocrinus furcillatus* Ringueberg, Ann. N. Y. Acad. Sci., 4, p. 393, pl. 10, fig. 1, 1889.
- Cremacrinus furcillatus* Bassler, U. S. Nat. Mus., Bull. 92, 1, p. 289, 1915.
- Ord. (Trenton): Rochesterville, Ottawa, Ontario, Canada; Escanaba River, Mich.
- Cremacrinus inaequalis** (Billings).
- Heterocrinus inaequalis* Billings, Geol. Surv. Canada, Can. Org. Rem., Dec. 4, p. 51, pl. 4, fig. 7a, 1859.
- Cremacrinus inaequalis* Ulrich, 14th Rep. St. Geol. Minnesota, p. 113, 1886.
- Ord. (Trenton): Ottawa and Kirkfield, Ontario, Canada (Hull ls.); 3 miles west Green Bay, Wis. (Prosser ls.).
- Cremacrinus kentuckiensis** (Miller and Gurley).
- Calceocrinus kentuckiensis* Miller and Gurley, Ill. St. Mus., Bull. 5, p. 29, pl. 2, figs. 24, 25, 1894.
- Cremacrinus kentuckiensis* Springer, Amer. Sil. Crin., p. 109, pl. 28, figs. 14, 14a, 15, 1926.
- Ord. (Trenton-Curdsville ls.): Mercer Co., Ky.
- Cremacrinus punctatus** Ulrich.
- Ulrich, Ann. Rep. Geol. Nat. Hist. Surv. Minnesota, 14, pp. 106, 107, fig. 1, 1886.—Springer, Amer. Sil. Crin., p. 110, pl. 28, figs. 16-20a, 1926.—Sardeson, Pan Amer. Geol., 49, pp. 35, 37, text figs. 6-8, 1928.
- Ord. (Black River): Near Minneapolis, and St. Paul, Minn. (Decorah sh.-Spechts Ferry mem.); Escanaba River, Mich.
- Cremacrinus rugosus** (W. R. Billings).
- Calceocrinus rugosus* W. R. Billings, Ottawa Nat., 1, no. 4, Trans. Ottawa Field Nat. Club, p. 53, figs., 1887.
- Castocrinus rugosus* Ringueberg, Ann. N. Y. Acad. Sci., 4, p. 393, pl. 10, fig. 2, 1889.
- Cremacrinus rugosus* Bassler, U. S. Nat. Mus., Bull. 92, 1, p. 289, 1915.
- Ord. (Trenton-Hull ls.): Belleville and Kirkfield, Ontario, Canada.
- Cremacrinus simplex** Springer.
- Springer, Amer. Sil. Crin., p. 107, pl. 28, figs. 8, 8a, 1926.
- Sil. (Niagaran-Beech River fm.): 2 miles north Decaturville, Tenn.
- Cremacrinus tubuliferus** Springer.
- Springer, Amer. Sil. Crin., p. 94, fig. 2a, pp. 96, 106, pl. 28, figs. 3, 3a, b, 4, 4a, 4b, 5, 5a, 6, 1926.
- Sil. (Niagaran-Beech River fm.): 2 miles north Decaturville, Tenn.

Cremaerinus ulrichi Springer.

Springer, Amer. Sil. Crin., p. 105, pl. 28, figs. 1, 2, 1926.

Sil. (Niagaran-Beech River fm.): 2 miles north Decaturville, Tenn.

Crinocystis Haeckel = Eucalyptocrinites.

Crinocystites Hall = Eucalyptocrinites.

Crisantum Gregorio. Genotype: *C. stvensoni* Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 36, 1930. (Unrecognizable; based on columns only.)

Crisantum stvensoni Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 36, pl. 13, figs. 7-10, 1930.

Permian: Sicily.

Crisantum stvensoni submissum Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 36, pl. 13, fig. 11, 1930.

Permian: Sicily.

Cromyocrinus Trautschold. Genotype: *C. simplex* Trautschold.

Poteroicrinitidae (Inadunata-Fistulata). Low. Carb.; Penn.

Trautschold, Crin. Jung. Bergkalk Moskau, pp. 12, 19, 1867.—Zittel, Handb. Pal., 1, p. 360, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 246 (170), 1886.—Bather, Ann. Mag. Nat. Hist., (6) 5, p. 332, 1890; Treatise Zool. (Lankester), pt. 3, p. 181, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 224, 1913.—Jaekel, Pal. Zeits., Bd. 3, p. 66, 1918.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 178, 1924.—Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 254, 1938; Univ. Texas Pub. No. 3945, pp. 351, 352, 1940.

Dicromyocrinus Jaekel, Pal. Zeits., 3, p. 66, 1918.—Moore and Plummer, Univ. Texas Pub. No. 3945, pp. 351, 366, 367, 1940. (Genotype: *Cromyocrinus nodosus* Trautschold.) (No species *nodosus* was described by Trautschold. Moore and Plummer, 1940, recognize the genus, citing *C. ornatus* Trautschold as the genotype.)

Cromyocrinus buttsi Miller and Gurley = *Ulocrinus buttsi*.

Cromyocrinus geminatus Trautschold.

Trautschold, Bull. Soc. Imp. Nat. Moscou, 40, p. 25, pl. 4, figs. 6-8, text fig., 1867.—Wright, Geol. Mag., 71, p. 243, pl. 13, figs. 1-3, text figs. 1, 2, 1934; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 30, pl. 8, figs. 14, 15, 1939.

Carb.: Mjatschkowa, Russia (Moscovian); St. Andrews, Scotland (Califerous ss. ser.-Encrinite bed).

Cromyocrinus globosus Springer (globulus, by error) = *Agassizocrinus globosus*.

Cromyocrinus gracilis Wetherby = *Phanocrinus gracilis*.

Cromyocrinus grandis Mather.

Mather, Bull. Sci. Lab. Denison Univ., 18, p. 102, pl. 3, figs. 2, 2a, text fig. 1, 1915.—Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 255, text fig. 13, 1938.

Penn.: 2 miles northwest Brentwood, Ark. (Brentwood ls.); near Ft. Gibson, Oklahoma (Morrow).

Cromyocrinus kansasensis Keyes = *Ulocrinus kansasensis*.

Cromyocrinus longimanus Ivanov.

Ivanov, Bull. Soc. Nat. Moscow, Sec. Geol., 34, p. 176, 1926 (listed only).

Carb.: Gov. Moscow, Russia.

Cromyocrinus nuciformis (McCoy).

Poteroicrinus nuciformis McCoy, Ann. Mag. Nat. Hist., (2) 3, p. 245, 1849; British Pal. Foss., p. 117, pl. 3-D, fig. 4, 1854.

Cromyocrinus nuciformis Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 2, p. 248 (172), 1886.

- Ulocrinus nuciformis* Hind, Proc. Yorkshire Geol. Polytec. Soc., n. s., 14, p. 464, 1902.
Low. Carb.: Derbyshire, England.
- Cromyocrinus ornatus** Trautschold.
Trautschold, Kalkbrüche Mjatschkowa, p. 121, pl. 14, figs. 9, 10, 1879.
Dicromyocrinus ornatus Moore and Plummer, Univ. Texas Pub. No. 3945, p. 367, 1940.
Carb. (Moscovian): Mjatschkowa, near Moscow, Russia.
- Cromyocrinus patulus* Ivanov.
Ivanov, Bull. Soc. Nat. Moscow, Sec. Geol., 34, p. 176, 1926 (listed only).
Carb.: Gov. Moscow, Russia.
- Cromyocrinus sangamonensis* Wachsmuth and Springer, = *Ulocrinus sangamonensis*.
- Cromyocrinus simplex** Trautschold.
Trautschold, Bull. Soc. Imp. Moscou, 40, p. 10, pl. 3, figs. 1-4, text fig., 1867; Kalkbrüche Mjatschkowa, p. 117, pl. 14, figs. 6-8, 1879.—Yakovlev, Ann. Soc. Pal. Russie, 4, pp. 113-122, text figs. 2-4, 1926.
Carb. (Moscovian): Mjatschkowa, near Moscow, Russia.
- Cromyocrinus verticillatus* Ivanov.
Ivanov, Bull. Soc. Nat. Moscow, Sec. Geol., 34, p. 176, 1926 (listed only).
Carb.: Gov. Moscow, Russia.
- Crotalocrinites** Austin and Austin. Genotype: *Cyathocrinites rugosus* Miller.
Crotalocrinitidae (Inadunata-Fistulata). Sil.
Austin and Austin, Ann. Mag. Nat. Hist., 10, p. 109, 1842; 11, p. 198, 1843.
Anthocrinus Müller, Abhandl. Akad. Wiss., Berlin, p. 192, 1853. (Genotype: *A. loveni* Müller.)
- Crotalocrinus* Morris, Cat. Brit. Foss., ed. 1, p. 50, 1843; ed. 2, p. 75, 1854.—Zittel, Handb. Pal., 1, p. 356, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 145 (69), 1886; Proc. Acad. Nat. Sci. Phila., pp. 364-390, pls. 19, 20, 1888.—Bather, Treatise Zool. (Lankester), pt. 3, p. 176, 1900.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, pp. 19, 141, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 216, 1913; Amer. Sil. Crin., p. 128, 1926.
- Crotalocrinites cora** (Hall).
Cyathocrinus cora Hall, Adv. Pub. 18th Rep. N. Y. St. Cab. Nat. Hist., p. 20, pl. 2, figs. 13, 14, 1865; 20th Rep. N. Y. St. Cab. Nat. Hist., Doc. ed., p. 324, pl. 11, figs. 13, 14, 1867; Rev. ed., p. 366, pl. 11, figs. 13, 14, 1870.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 62, pl. 14, figs. 6-10, 1900.
Crotalocrinus cora Weller, Jour. Geol., 10, p. 532, pl. 3, figs. 1-5, 1902.—Springer, Amer. Sil. Crin., p. 129, pl. 26, fig. 17, 1926.
Crotalocrinus americanus Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 143, pl. 14, fig. 1, 1900.
Sil. (Niagaran): Racine, Wis.; Chicago, etc., Ill. (Racine dol.); Iowa (Gower dol.).
- Crotalocrinites pulcher** (Hisinger).
Cyathocrinus pulcher Hisinger, Leth. Suec., Supp. II, p. 6, pl. 39, figs. 5a, b, 1840.
Crotalocrinus pulcher Angelin, Icon. Crin. Suec., p. 26, pl. 7, figs. 5-7; pl. 8, figs. 1-9a; pl. 17, figs. 1, 1 a-d; pl. 25, figs. 8-20, 1878.—Bather, Treatise Zool. (Lankester), pt. 3, p. 176, text fig. 92-3, 1900.—Springer, Amer. Sil. Crin., p. 130, pl. 26, fig. 21, 1926.
Anthocrinus loveni Müller, Abhandl. Akad. Wiss. Berlin, p. 192, pl. 8, figs. 1-11, 1853.
Sil.: Klinteberg and Farö, Island of Gotland (Gotlandian); Dudley, England (Wenlock ls.).
- Crotalocrinites rugosus** (Miller).
Cyathocrinites rugosus Miller, Nat. Hist. Crin., p. 89, pl. opposite p. 90, figs. 1-4, 1821.

- Crotalocrinites rugosus* Austin and Austin, Ann. Mag. Nat. Hist., (1), 11, p. 198, 1843.
- Crotalocrinus rugosus* Salter, Cambr. Philos. Soc., 11, p. 481, pl. 1, 1871.—Baily, Figs. Char. Brit. Foss., p. 42, pl. 18, figs. 5a, b, 1875.—Angelin, Icon. Crin. Suec., p. 26, pl. 7, fig. 4, 1878.—Wachsmuth and Springer, Proc. Acad. Nat. Sci. Phila., p. 386, pl. 19, figs. 1a-1c, 2a-c, 3-5, pl. 20, figs. 2a, b, 1888.—Springer, Amer. Sil. Crin., p. 129, pl. 26, figs. 18-20, 1926.
- Cyathocrinus rugosus annulatus* Quenstedt, Petrefactenkunde, 4, p. 508, 1876.
- Cyathocrinus rugosus punctata* Quenstedt, Petrefactenkunde, 4, p. 507, 1876.
- ?*Helmintholithus entrochus verrucosus* Linnaeus, Syst. Naturae, 12th ed., III, p. 168, 1768.
- Encrinites verrucosus* Schlotheim, Petref. jetzigen Standp., p. 333, 1820; Merk. Schlotheim's Samml., Expl. pls., p. 25, pl. 27, figs. 1 a-c, 1832.
- Encrinites verrucosus* vars. *punctata* and *verrucosa* Schlotheim Petref. jetzigen Standp., p. 334, 1820.
- Crotalocrinus verrucosus* Bather, Ann. Mag. Nat. Hist., (6), 9, p. 202, 1892.
- Sil.: Dudley, Shropshire, Herefordshire, England (Wenlock ls.); Island of Oeland and Klinteberg, Gotland (Gotlandian); Dalecarlia, Norway; Sweden, Russia.
- Crotalocrinites superbus** (Angelin).
- Crotalocrinus superbus* Angelin, Icon. Crin. Suec., p. 26, pl. 17, figs. 2, 2a, b, 1878.
- Sil. (Gotlandian): Klinteberg, Island of Gotland.
- Crotalocrinites vanhornei** (S. A. Miller).
- Cyathocrinus vanhornei* S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 4, p. 261, pl. 6, fig. 3, 1881.—Weller, Chicago Acad. Sci. Nat. Hist. Surv., Bull. 4, pt. 1, p. 64, pl. 14, fig. 5, 1900.
- Sil. (Niagaran-Racine dol.): Bridgeport, Ill.
- Crotalocrinus* Morris and authors = *Crotalocrinites*.
- Crotalocrinus verrucosus* Bather = *Crotalocrinites rugosus*.
- Crumenaecrinites* Troost = *Periechocrinites*.
- Crumenaecrinus* Bather = *Periechocrinites*.
- Cryphiocrinus** Kirk. Genotype: *C. girtyi* Kirk.
- Poteriocrinitidae (Inadunata-Fistulata). Miss.
- Kirk, Amer. Jour. Sci., 17, pp. 153-157, 1929.
- Cryphiocrinus girtyi** Kirk.
- Kirk, Amer. Jour. Sci., 17, p. 158, figs. 1-6, 1929.
- Miss. (Chester-Greenbrier ls.): 1½ miles south-southeast of Crellin, W. Va.
- Cryphiocrinus rotundus** Kirk.
- Kirk, Amer. Jour. Sci., 17, p. 159, figs. 7, 8, 1929.
- Miss. (Chester-Gasper fm.): New Bethel, Breckinridge Co., Ky.
- Cryptodiscus* Hall = *Calliocrinus*.
- Ctenocrinites* Steininger = *Ctenocrinus*.
- Ctenocrinus** Bronn. Genotype: *C. typus* Bronn.
- Melocrinitidae (Camerata). Sil.; Dev.
- Bronn, Neues Jahrb. Min., Geol. Pal., pp. 542, 547, 1840; *ibid.*, p. 355, 1848.—Sandberger and Sandberger, Vers. Rhein-Schichten Nassau, p. 395, 1856.—Zittel, Handb. Pal., 1, p. 372, 1879.—Jaekel, Pal. Abhandl., 7, p. 31, 1895.—Bather, Treatise Zool. (Lankester), pt. 3, p. 161, 1900.—Kirk, Amer. Jour. Sci., 18, p. 342, 1929.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 51, 1934.
- Astrocrinites* Conrad, Fifth Ann. Rep. Pal. N. Y., p. 34, 1851. (Genotype: *A. pachydactylus* Conrad.)
- Astrocrinus* Bather, Treatise Zool. (Lankester), pt. 3, p. 161, 1900.

- Ctenocrinites* Steininger, Jahres. Gym. Trier. p. 22, 1849; Geog. Beschreib. der Eifel, p. 37, 1853.
- Mariacrinus* Hall, Amer. Jour. Sci., (2) 25, p. 278, 1858; Nat. Hist. N. Y., Pal., 3, pp. 104, 139, 1859.—Wachsmuth and Springer, Rev. Pal., pt. 2, pp. 114, 118, 233 (288, 292, 407), 1881; N. Amer. Crin. Cam., p. 281, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 161, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 190, 1913.—Ehrenberg, Acta Zool., 3, p. 273, 1922.—Goldring, N. Y. St. Mus., Mem. 16, p. 109, 1923.—Springer, Amer. Sil. Crin., p. 28, 1926.—Kirk, Amer. Jour. Sci., 18, pp. 337-346, 1929. (Genotype: *M. nobilissimus* Hall.)
- Xenocrinus* Jahn, Jahrb. Geol. Reichsanst., 42, heft 2, p. 416, 1892.—Bather, Treatise Zool. (Lankester), pt. 3, p. 204, 1900.
- Zenkericrinus* Waagen and Jahn, Syst. Sil. Centre Bohême, 7, pt. 1, p. 102, pl. 42, fig. 6, 1899.—Bather, Ann. Mag. Nat. Hist., (7) 6, p. 111, 1900; Treatise Zool. (Lankester), pt. 3, pp. 161, 204, 1900. (Genotype: *Z. melocrinoides* Waagen and Jahn.)
- Ctenocrinus acicularis** Follmann.
Follmann, Verh. Nat. Hist. Preuss. Rheinl., (5) 4, p. 131, pl. 2, figs. 4, 4 a-f, 1887.
Low Dev. (Coblentzian): Manderscheid, near Coblenz, Germany.
- Ctenocrinus decadactylus** (Tannenbergl).
Actinocrinites decadactylus Tannenbergl, in Goldfuss, Nova Acta Leop. Carol. Nat. Cur., 19, p. 342, pl. 31, fig. 5, 1839.
Ctenocrinus decadactylus Roemer, Rheinische Uebergangs. Pal.-Geog. Darstellung, p. 61, 1844.
Low Dev. (Coblentzian): Prüm, near Coblenz, and Gemunden, Germany.
- Ctenocrinus decadactylus elegans** Jaekel.
Jaekel, Pal. Abhandl., 7, heft 1, p. 32, 1895.
Low Dev. (Coblentzian): Niederlahnstein, Germany.
- Ctenocrinus decadactylus hercynicus** (Jaekel).
Ctenocrinus hercynicus Jaekel, Pal. Abhandl., 7, heft 1, p. 33, 1895.
Ctenocrinus decadactylus var. *hercynica* Beushausen, Abh. Preuss. Geol. Landesanst., n. f., heft 30, p. 77, 1900.—Dahmer, Jahrb. Preuss. Geol. Landesanst., 40, teil 2, p. 290, pl. 16, fig. 1, 1921.
Low. Dev. (Kahlenberg ss.): Rammelsberg near Goslar, Harz, Germany.
- Ctenocrinus gracilis** Jaekel.
Jaekel, Pal. Abhandl., 7, pp. 35, 36, text fig. 7, 1895.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 32, text fig. 8a, pp. 143, 146, 1934.
Low. Dev. (Hunsrück sl.): Lorch am Rhein, near Caub, Germany.
- Ctenocrinus granulatus** (S. A. Miller).
Mariacrinus granulatus S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 645, pl. 6, fig. 35, 1892 (adv. pub., 1891).
Sil. (Niagaran-Laurel ls.): St. Paul, Ind.
- Ctenocrinus hercynicus* Jaekel = *C. decadactylus hercynicus*.
- Ctenocrinus lamellosus** (Eichwald).
Melocrinus lamellosus Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, no. 1, p. 120, 1855; Leth. Ross., Pal. Russ., 1, p. 607, pl. 33, figs. 13 a-d, 1860.
Ctenocrinus lamellosus Wachsmuth and Springer, Rev. Pal., pt. 2, p. 230 (404), 1881.
Dev.: Ficht, Island of Oesel.
- Ctenocrinus malcontractus** Schmidt.
Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 53, text fig. 8b, pl. 6, fig. 2, pp. 143, 146, 1934.
Hexacrinus spinosus Opitz, Bilder Erd. Nahe-Hunsrück-Landes Birkenfeld, p. 93, fig. 90, 1932.
Low. Dev. (Hunsrück sl.): Near Zorn, Germany.

Ctenocrinus melocrinoides (Waagen and Jahn).

Zenkericrinus melocrinoides Waagen and Jahn, Syst. Sil. Centre Bohême, 7, pt. 1, p. 106, pl. 62, 1899.

Sil. (Div. E1, E2): Dvorce, Bohemia.

Ctenocrinus nobilissimus (Hall).

Mariacrinus nobilissimus Hall, Nat. Hist. N. Y., Pal., 3, p. 105, pl. 2, figs. 1-4, pl. 2-A, fig. 1, 1859.

Melocrinus nobilissimus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 295, pl. 23, figs. 1a, 2, 3, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 161, text fig. 74-2, 1900.—Goldring, N. Y. St. Mus., Mem. 16, p. 117, pls. 6, 7, 1923.

Ctenocrinus nobilissimus Kirk, Amer. Jour. Sci., 18, p. 342, 1929.

Mariacrinus beecheri Talbot, Amer. Jour. Sci., 20, p. 25, pl. 1, fig. 3, text fig., 1905.—Goldring, N. Y. St. Mus., Mem. 16, p. 114, text fig. 36, pl. 5, fig. 5, 1923.—Kirk, Amer. Jour. Sci., 18, p. 342, 1929.

Mariacrinus ramosus Hall, Nat. Hist. N. Y., Pal., 3, p. 147, pl. 2, fig. 6, 1859.—Goldring, N. Y. St. Mus., Mem. 16, p. 111, pl. 5, figs. 3, 4, 1923.—Kirk, Amer. Jour. Sci., 18, p. 342, 1929.

Dev. (Helderbergian-Coeymans ls.): Wheelocks Hill, Litchfield, Herkimer Co., N. Y.

Ctenocrinus nodiferus Follmann.

Follmann, Verh. Natur. Hist. Ver., (4) 9, p. 167, 1882.

Dev.: Olkenbach in Alfthals, south edge of Eifel, Germany.

Ctenocrinus notatus Eichwald.

Eichwald, Leth. Ross. Pal., 1, p. 610, pl. 31, figs. 37, 38 a-c, 1860. (Columns only).

Ord. (Orthoceras ls.): Pulkowa, Russia.

Ctenocrinus oehlerti Jaekel.

Jaekel, Pal. Abhandl., 7, heft 1, p. 32, 1895.

Low. Dev.: Pont-aux-Bouchers, near Nehou, France.

Ctenocrinus pachydactylus (Conrad).

Astrocrinites pachydactylus Conrad, Cat. Ann. Rep. Pal. N. Y., p. 34, 1841.—Mather, Nat. Hist. N. Y., Geol., pt. 4, p. 347, text fig. 6, 1843.

Mariacrinus pachydactylus Hall, Nat. Hist. N. Y., Pal., 3, p. 107, pl. 3, figs. 1-4, 1859.

Melocrinus pachydactylus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 296, pl. 23, figs. 4, 5, pl. 24, figs. 4a, b, 1897.—Talbot, Amer. Jour. Sci., 20, p. 27, pl. 1, fig. 1, 1905.—Goldring, N. Y. St. Mus., Mem. 16, p. 119, pl. 8, figs. 1-4, 1923.

Ctenocrinus pachydactylus Kirk, Amer. Jour. Sci., 18, p. 342, 1929.

Mariacrinus plumosus Hall, Nat. Hist. N. Y., Pal., 3, p. 110, pl. 5, figs. 6-11, 1859.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 284, pl. 23, figs. 6, 7, 1897.—Goldring, N. Y. St. Mus., Mem. 16, p. 109, pl. 5, figs. 1, 2, 1923.—Kirk, Amer. Jour. Sci., 18, p. 342, 1929.

Actinocrinites polydactylus Bonny, Schenectady Reflector, woodcut, 1835.

Dev. (Helderbergian-Coeymans ls.): Schoharie, N. Y.

Ctenocrinus paucidactylus (Hall).

Mariacrinus paucidactylus Hall, Nat. Hist. N. Y., Pal., 3, p. 109, pl. 3, fig. 5, 1859.

Melocrinus paucidactylus Goldring, N. Y. St. Mus., Mem. 16, p. 122, pl. 8, fig. 5, pls. 9-11, 1923.

Ctenocrinus paucidactylus Kirk, Amer. Jour. Sci., 18, p. 342, 1929.

Dev. (Helderbergian-Coeymans ls.): Litchfield, Herkimer Co., N. Y.

Ctenocrinus punctatus (Eichwald).

Actinocrinrus punctatus Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, p. 118, 1856.

Ctenocrinus punctatus Eichwald, Leth. Ross. Pal. Russie, 1, p. 609, pl. 31, figs. 36 a-c, 1860. (Columns only.)

Dev.: Polkova, Pawlowsk, Russia.

Ctenocrinus rhenanus Follmann.

Follmann, Verh. Nat. Hist. Ver. Preuss. Rheinl., (5) 4, p. 133, pl. 2, fig. 3, 1887.—
Dahmer, Jahrb. K. Preuss. Geol. Landesanst., 36, (1), p. 245, pl. 9, fig. 2, 1916.
Low. Dev. (Coblentzian): Lahnstein, Germany.

Ctenocrinus sculptus Jaekel.

Jaekel, Pal. Abhandl., 7, p. 34, 1895.
Dev. (Eifelian): Oberweiler, near Prüm, Germany.

Ctenocrinus stellaris Roemer = *Melocrinites stellaris*.

Ctenocrinus stellifer Follmann.

Follmann, Ver. Nat. Hist. Preuss. Rheinl., (5) 4, p. 133, pl. 2, figs. 2-2b, 1867.
Low. Dev. (Coblentzian): Guls, Coblenz, and Niederlahnstein, Germany.

Ctenocrinus stoloniferus (Hall).

Mariacrinus stoloniferus Hall, Nat. Hist. N. Y., Pal., 3, p. 112, pl. 3-A, fig. 2, pl. 3-B, figs. 3-7, 1859.—Goldring, N. Y. St. Mus., Mem. 16, p. 113, pl. 59, figs. 1-5, 1923.

Dev. (Helderbergian-New Scotland ls.): Clarksville and Schoharie, N. Y.

Ctenocrinus sulcatus Trenkner.

Trenkner, Abhandl. Naturf. Gesell. Halle, 10, p. 9, pl. 5, fig. 18, 1868.
Dev. (Eifelian): Auerhahn, Halle, Germany.

Ctenocrinus typus Bronn.

Bronn, Neues Jahrb. Min., Geol. Pal., p. 547, pl. 8, fig. B, 1840.—D'Archaic and Verneuil, Trans. Geol. Soc. London, 6, p. 376, pl. 37, fig. 7, 1842.—Springer, Zittel-Eastman Textb. Pal., 1, p. 190, fig. 288, 1913.

Melocrinus (Ctenocrinus) typus Goldring, N. Y. St. Mus., Mem. 16, p. 116, pl. 12, fig. 1, 1923.

Low. Dev. (Siegen beds): Siegen, Niederlahnstein; Coblenz, Germany.

Culicocrinus Müller. Genotype: *Platycrinus nodosus* Wirtgen and Zeiler.

Platycrinidae (Aduata): Sil.; Dev.

Müller, in Zeiler and Wirtgen, Verh. Nat. Ver. Rheinl., 12, p. 23, 1854.—Roemer, in Bronn, Leth. Geol., 1, pt. 2, p. 213, 1852-1854.—Zittel, Handb. Pal., 1, p. 36, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 61 (235), 1881; pt. 3, sec. 1, p. 114 (336), 1885.—Jaekel, Pal. Abhandl., 7, p. 37, 1895.—Bather, Treatise Zool. (Lankester), pt. 3, p. 156, 1900 (as *Cylicocrinus*).—Springer, Zittel-Eastman Textb. Pal., 1, p. 199, 1913.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 46, 1934.

Protoeuryale Müller, in Zeiler and Wirtgen, Ver. Nat. Ver. Rheinl., 12, p. 23, 1854. (Genotype: *P. confluentina* Müller.)

Culicocrinus confluentinus (Müller)

Protoeuryale confluentina Müller, in Zeiler and Wirtgen, Verh. Nat. Ver. Rheinl., 12, p. 24, pl. 9, figs. 2, 3, 1854.

Low Dev. (Coblentzian): Near Coblenz, Germany.

Culicocrinus inermis Jaekel.

Jaekel, Pal. Abhandl., 7, p. 40, 1895.

Low Dev. (Coblentzian): Niederlahnstein and Hohenrhein, near Coblenz, Germany.

Culicocrinus nodosus (Wirtgen and Zeiler).

Platycrinus nodosus Wirtgen and Zeiler, Verh. Nat. Ver. Preuss. Rheinl., 12, p. 15, pl. 6, figs. 2, 3, 1854.

Culicocrinus nodosus Müller, in Zeiler and Wirtgen, Verh. Nat. Ver. Preuss. Rheinl., 12, p. 23, pl. 8, figs. 1-4, pl. 9, figs. 2, 3, 1854.—Springer, Amer. Sil. Crin., p. 51, pl. 11, figs. 3, 3a, 1926.

Low. Dev. (Coblentzian): Lahnstein and Hallenstein, near Coblenz, Germany.

Culicocrinus spinatus Jaekel.

Jaekel, Pal. Abhandl., 7, pp. 39, 40, text fig. 8, 1895.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 47, pl. 5, figs. 1a, b, p. 142, 1930.

Low. Dev. (Hunsrück sl.): Lorch, near Caub, and Gemunden, Germany.

Culicocrinus spinosus Springer.

Springer, Amer. Sil. Crin., p. 51, pl. 11, figs. 4, 4 a-c, 1926.

Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.

Culmicrinus Jaekel. Genotype: *Poteriocrinus regularis* von Meyer.

Poteriocrinitidae (Inadunata-Fistulata). Low. Carb.

Jaekel, Pal. Zeits., 3, p. 62, 1918.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 177, 1924.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 73, 1926.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 122, p. 39, 1930.

Culmicrinus elegans (Wachsmuth and Springer).*Scaphiocrinus elegans* Wachsmuth and Springer, N. Amer. Crin. Cam., pl. 7, figs. 1a, b, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 120, text fig. 26-4, 1900.*Culmicrinus elegans* Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 74, pl. 18, figs. 1, 1a, 1926.

Miss. (Chester-Glen Dean ls.): Sloans Valley, Ky.

Culmicrinus missouriensis (Shumard).*Poteriocrinus missouriensis* Shumard, Trans. Acad. Sci. St. Louis, 1, p. 80, 1857.*Scaphiocrinus missouriensis* Keyes, Geol. Surv. Missouri, 4, p. 211, pl. 26, fig. 2, 1894.*Culmicrinus missouriensis* Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 74, pl. 18, fig. 3, 1926.*Poteriocrinus longidactylus* Shumard, Geol. Surv. Mo., 2, p. 188, pl. B, figs. 5 a-c, 1855.

Miss. (St. Louis ls.): St. Louis Co., Mo.; Alton, Ill.

Culmicrinus regularis (von Meyer).*Poteriocrinus regularis* von Meyer, Neues Jahrb. Min., Geol., Pal., p. 60, 1858;

Palaeontographica, 7, p. 119, pl. 14, fig. 4, 1860.—Weigelt, Jahrb. K. Preuss. Geol. Landesanst., 37, teil 2, p. 196, pl. 15, 1919.

Culmicrinus regularis Jaekel, Pal. Zeits., 3, p. 62, fig. 53, 1918.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 122, p. 40, text fig. 7, pl. 1, figs. 1-4, pl. 3, figs. 2-8, 22a, b, 1930.

Low. Carb. (Viséan): Herborn, Germany.

Culmicrinus? singulocirrus Schmidt.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 122, p. 48, fig. 9, pl. 1, figs. 5-8, 1930.

Low. Carb. (Etroungtian): Cromford near Ratingen, Germany.

Culmicrinus tensus (Whidborne).*Poteriocrinus tensus* Whidborne, Proc. Geol. Assoc., 14, p. 377, 1896; Mon. Devon. Fauna S. England, 3, pt. 2, p. 226, pl. 35, figs. 1, 2, pl. 38, fig. 1, 1899.*Culmicrinus tensus* Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 122, p. 87, 1930.

Low. Carb. (Pilton and Marwood beds): Barnstaple, Pilton, England.

Culmicrinus thomasi Laudon.

Laudon, Univ. Iowa Studies in Nat. Hist., 15, no. 2, p. 67, pl. 6, figs. 5, 6, 1933.

Miss. (Kinderhook-Gilmore City fm.): Gilmore City, Iowa.

Cupellaecrinites Troost = *Marsupiocrinus*.**Cupellaecrinites buchii** Troost = *Marsupiocrinus tennesseensis*.**Cupellaecrinites laevis** Troost (Ms.) = *Marsupiocrinus tennesseensis*.**Cupellaecrinites striatus** Troost = *Marsupiocrinus inflatus*.**Cupellaecrinus** Shumard = *Marsupiocrinus*.**Cupellaecrinus** Meek and Worthen. See *Cupellaecrinites*.**Cupressocrinites** Goldfuss. Genotype: *C. crassus* Goldfuss.

Cupressocrinitidae (Inadunata-Larviformia). Dev.

- Goldfuss, Petref. Germ., 1, p. 212, 1831; 2d ed., pt. 1, p. 197, 1862.—Steininger, Jahr. Gym. Trier, p. 20, 1849 (as *Cypressocrinites*).
- Cypressocrinus* Agassiz, Mem. Soc. Neuchatel, 1, p. 198, 1836; Ann. Nat. Hist., 1, p. 448, 1838.—Sandberger and Sandberger, Verst. Rhein. Schichtensyst. Nassau, p. 401, 1856.—Zittel, Handb. Pal., 1, p. 348, 1870.—Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 2, p. 176 (100), 1886.—Springer, Zittel-Eastman Textb. Pal., 1, p. 210, 1913.—Jaekel, Pal. Zeits., 3, pp. 82, 85, 1918.—Bather, Bull. Soc. Belg., Geol. Pal., Hyd., 36, p. 39, 1926.—Sieverts, Sitz. Nieder. Geol. Ver., 26, 27 (1932, 1933), p. 89, 1934.
- Cypellocrinites* Steininger, Jahr. Gym. Trier, p. 22, 1849. (Genotype: *C. elegans* Steininger.)
- Cypellocrinus* Bather, Treatise Zool. (Lankester), pt. 3, p. 177, 1900.
- Halocrinites* Steininger, Bemerk. über die Verst. etc., p. 23, 1831; Mem. Soc. Geol. France, 1, p. 349, 1834. (Genotype: *H. schlotheimi* Steininger.)
- Halocrinus* d'Orbigny, Cours. Elem. Pal., 2, fasc. 2, p. 140, 1852.—Bather, Treatise Zool. (Lankester), pt. 3, p. 177, 1900.
- Procypressocrinus* Jaekel, Pal. Zeits., 3, p. 82, 1918. (Genotype: *Cypressocrinites gracilis* Goldfuss.)
- Cypressocrinites abbreviatus** Goldfuss.
- Cypressocrinus abbreviatus* Goldfuss, Nova Acta Acad. Leop. Nat.-Cur., 19, pt. 1, p. 333, pl. 30, fig. 4, 1839.—Schultze, Denk. K. Akad. Wiss., 26, p. 131, pl. 2, figs. 1-13, pl. 3, fig. 3, 1867 (adv. pub., 1866).—Beyer, Verh. Nat. Ver. Preuss. Rheinl. Westf., 53, p. 88, pl. 3, figs. 75, 76, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 177, text fig. 94-2, 3, 1900.—Yakovlev, Centralbl. Min., Geol. Pal., Abt. B, no. 9, p. 377, figs. 5, 9, 10; Compt. Rend. Acad. Sci. URSS, p. 463, fig. 1, p. 464, fig. 2, 1930.—Sieverts, Sitz. Naturhist. Verein Preuss. Rheinl. und Westf., 1932-1933, pp. 90, 91, 93, text fig. 1, 1934.
- Halocrinites schlotheimi* Steininger, Bem. über die Verst., etc., p. 22, 1831; Mém. Soc. Géol. France, 1, p. 349, pl. 21, figs. 1, 1a, 1834.
- Cypressocrinus schlotheimi* Reed, Pal. Indica, 2, n. s., Mem. 5, p. 38, pl. 5, figs. 9, 9a, 10, 1908.
- Dev.: Pelm and Gerolstein, Eifel, Germany (Eifelian); Germany (Orthocrinus beds); Lummaton, England; India.
- Cypressocrinites abbreviatus altus** (Schultze).
- Cypressocrinus abbreviatus* var. *alta* Schultze, Denk. Kais. Akad. Wiss., Math. Natur. Cl., 26, p. 133, pl. 2, fig. 2, 1867 (adv. pub., 1866).
- Mid. Dev. (Eifelian): Kerpen, Prüm, etc., Germany.
- Cypressocrinites abbreviatus concentricus** (Quenstedt).
- Cypressocrinus abbreviatus concentricus* Quenstedt, Petref. Deutschl., 4, p. 619, pl. 111, fig. 64, 1876.
- Mid. Dev. (Eifelian): Gerolstein, Germany.
- Cypressocrinites abbreviatus granulatus** (Schultze).
- Cypressocrinus abbreviatus* var. *granulosus* Schultze, Denk. Kais. Akad. Wiss., Math. Naturw. Cl., 26, p. 131, pl. 2, fig. 3, 1867 (adv. pub., 1866).
- Mid. Dev. (Eifelian): Pelm, Gerolstein, Germany.
- Cypressocrinites abbreviatus hybridus** (Schultze).
- Cypressocrinus abbreviatus* var. *hybrida* Schultze, Denk. Kais. Akad. Wiss., Math. Naturw. Cl., 26, p. 133, pl. 3, fig. 3, 1867 (adv. pub., 1866).
- Mid. Dev. (Eifelian): Kerpen, Germany.
- Cypressocrinites abbreviatus minor** (Schultze).
- Cypressocrinus abbreviatus* var. *minor* Schultze, Denk. Kais. Akad. Wiss., Math. Naturw. Cl., 26, p. 133, pl. 2, fig. 12, 1867 (adv. pub., 1866).
- Mid. Dev. (Eifelian): Kerpen, Germany.
- Cypressocrinites abbreviatus spinosus** (Sieverts).
- Cypressocrinus abbreviatus* var. *spinosus* Sieverts, Sitz. Naturhist. Var. Preuss. Rheinl. und Westf., 1932-1933, pp. 100, 101, text fig. 4, 1934.
- Mid. Dev. (Eifelian): Eifel, Germany.

Cupressocrinites crassus Goldfuss.

Goldfuss, Petref. Germ., 1, p. 212, pl. 64, fig. 4; Nova Acta Acad. Leop. Nat.-Cur., 19, pt. 1, p. 331, pl. 30, fig. 1, 1838.

Cupressocrinus crassus Schultze, Denk. Kais. Akad. Wiss., Math. Naturw. Cl., 26, p. 134, pl. 1, fig. 1, 1867 (adv. pub., 1866).—Springer, Zittel-Eastman Textb. Pal., 1, p. 210, fig. 311, 1913.

Cupressocrinites tetragonus Goldfuss, Nova Acta Acad. Leop. Nat.-Cur., 19, p. 332, pl. 30, figs. 3a, b, 1839.

Dev.: Pelm and Gerolstein, Eifel (Eifelian); Woolborough and Newton Bushel, England.

Cupressocrinites dubius Roemer.

Roemer, Vers. Hartz, p. 8, pl. 12, fig. 10, 1843.

Low. Dev. (Coblentzian-*Spirifer* ss.): Schalke, Harz, Germany.

Cupressocrinites elegans (Steininger).

Cypellocrinites elegans (Schnur) Steininger, Ver. Uebergangs. Eifel, p. 22, 1849.

Mid. Dev. (Eifelian): Gerolstein, Eifel.

Cupressocrinites elongatus Goldfuss.

Goldfuss, Nova Acta Acad. Leop. Nat.-Cur., 19, pt. 1, p. 331, pl. 30, fig. 2, 1839.—Münster, Beit. Petrefact., 1, figs. 1a, b, 1839.

Cupressocrinus elongatus Schultze, Denk. Kais. Akad. Wiss., Math. Natur. Cl., 26, p. 135, pl. 5, fig. 1, 1867 (adv. pub., 1866).—Sieverts, Sitz. Naturhist. Ver. Preuss. Rheinl. und Westf., 1932-1933, pp. 96-99, text figs. 2, 3, 1934.

Cypressocrinites gerolsteinensis Steininger, Vers. Uebergangs. Eifel, p. 20, 1849.

Cypressocrinites prismaticus Steininger, Verst. Uebergangs. Eifel, p. 20, 1849.

Halocrinites elongatus Steininger, Bull. Soc. Geol. France, 6, p. 169, pl. 1, fig. 11 or 12, 1835.

Mid. Dev. (Eifelian): Gerolstein and Pelm, Eifel, Germany.

Cupressocrinites gibber (Bather).

Cupressocrinus gibber Bather, Bull. Soc. Belge Geol., 28, pp. 129, 135, text figs. 1-4, 1919; 36, pp. 39, 40, text figs. 1-5, 1926.

Up. Dev. (Frasnian): Boussu-en-Faque, Belgium.

Cupressocrinites gracilis Goldfuss.

Goldfuss, Petref. Germ., 1, p. 213, pl. 64, fig. 5, 1831; Nova Acta Acad. Leop. Nat.-Cur., 19, pt. 1, p. 334, pl. 30, figs. 5, 5 a-c (not 5d), 1839.

Cupressocrinus gracilis Quenstedt, Handb. Petref., p. 747, pl. 71, fig. 16, 1866; Petref. Deutsch., 4, p. 622, pl. 111, fig. 69, 1876.

Mid. Dev. (Eifelian): Pelm, Eifel, Germany.

Cupressocrinites hieroglyphicus (Schultze).

Cupressocrinus hieroglyphicus Schultze, Denk. Kais. Akad. Wiss., Math. Natur. Cl., 26, p. 137, pl. 1, fig. 3, 1867 (adv. pub. 1866).

Mid. Dev. (Eifelian): Pelm, Kerpen, Prüm, Gerolstein, Eifel, Germany.

Cupressocrinites inflatus (Schultze).

Cupressocrinus inflatus Schultze, Denk. Kais. Akad. Wiss., Math. Natur. Cl., 26, p. 137, pl. 1, fig. 2, 1867 (adv. pub., 1866).—Bather, Treatise Zool. (Lankester), pt. 3, p. 177, text fig. 94-1, 1900.

Mid. Dev. (Eifelian): Gerolstein, Pelm, Kerpen, etc., Germany.

Cupressocrinites nodosus (Sandberger).

Cupressocrinus nodosus Sandberger, Verst. Rhein. Schicht. Nassau, p. 401, pl. 35, figs. 5a-c, 1852-1856.

Dev. (Givetian-Stringocephalus ls.): Lahnstein near Weilburg, Germany.

Cupressocrinites nuciformis Fischer de Waldheim = *Poteriocrinites nuciformis*.

Cupressocrinites pentamerus (Quenstedt).

Cupressocrinus pentamerus Quenstedt, Handb. Petref., ed. 2, pl. 71, fig. 15, 1866; ed. 3, p. 963, pl. 78, fig. 16, 1885; Petref. Deutsch., 4, p. 623; pl. 111, fig. 71, 1876.

Mid. Dev. (Eifelian): Gerolstein, Germany.

Cupressocrinites pentaporus Eichwald.

Eichwald, Ueber Sil. Schichtensyst. Esthland, German ed., p. 171; French ed., p. 183, 1840; Leth. Ross., 1, p. 600, pl. 31, figs. 16a, b, 55a, b, 56a, b, 1860. (Columnals only.)

Ord. (Orthoceras ls.): Dolgaja River; Esthland; Pulkowa, etc., Russia.

Cupressocrinites pyramidalis (Steininger).

Halocrinites pyramidalis Steininger, Bull. Soc. Geol. France, 9, p. 295, pl. 6, 1838. Mid. Dev. (Eifelian): Schoenicken, Eifel, Germany.

Cupressocrinites scaber (Schultze).

Cupressocrinus scaber Schultze, Denk. Kais. Akad. Wiss., Math. Natur. Cl., 26, p. 137, pl. 1, fig. 4, 1867 (adv. pub., 1866).

Mid. Dev. (Eifelian): Pelm, Kerpen, Germany.

Cupressocrinites teres Roemer.

Roemer, Verstein. Hartsgeb., p. 8, pl. 3, fig. 10, 1843.

Dev. (Rammelsberg beds): Near Rubeland, Germany.

Cupressocrinites tesseratus Goldfuss.

Goldfuss, Petref. Germ., 1, p. 213, pl. 59, figs. 11f, h, 1831.

Mid. Dev. (Eifelian): Near Schwein, Eifel, Germany.

Cupressocrinites tetragonus Goldfuss = *C. crassus*.

Cupressocrinites townsendi (Koenig).

Encrinus townsendi Koenig, Icones Fossilium, no. 97, 1825.

Cupressocrinus townsendi Bather, Ann. Mag. Nat. Hist., (8) 14, p. 397, text figs. 1, 2, 1914.

Mid. Dev. (Eifelian): Asturias, Spain.

Cupressocrinites trimerus (Quenstedt).

Cupressocrinus trimerus Quenstedt, Handb. Petref., pl. 71, fig. 12, 1866; Petref. Deutsch., 4, p. 623, pl. 111, figs. 69, 70, 1876; Handb. Petref., ed. 3, p. 963, pl. 78, fig. 15, 1885.

Mid. Dev. (Eifelian): Gerolstein, Germany.

Cupressocrinites urogalli (Roemer).

Cupressocrinus urogalli Roemer, Palaeontographica, 3, p. 222, pl. 2, figs. 7 a-c, 1850.

Mid. Dev. (Eifelian): Auerhahn, Westphalia, and Harz, Germany.

Cupressocrinus Agassiz and authors = *Cupressocrinites*.

Cupressocrinus bohemicus Barrande = *Calpionocrinus bohemicus*.

Cupressocrinus calyx McCoy = *Phanocrinus calyx*.

Cupressocrinus impressus McCoy = *Zeaerinites konincki*.

Cupressocrinus schlotheimi Reed = *Cupressocrinites abbreviatus*.

Cupulocrinus d'Orbigny. Genotype: *Scyphocrinus heterocostalis* Hall.

Dendrocrinidae (Inadunata-Fistulata). Ord.; Early Sil.

D'Orbigny, Prodr. Pal. Strat., 1, p. 23, 1849.—Zittel, Handb. Pal. 1, p. 375, 1879.—Springer, Mem. Geol. Surv. Canada, 15-P, p. 28, 1911; Zittel-Eastman Textb. Pal., 1, p. 215, 1913.

Scyphocrinus Hall (not Roemer), Nat. Hist. N. Y., Pal., 1, p. 85, 1847.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 221 (395), 1881. (Genotype: *S. heterocostalis* Hall.)

Cupulocrinus conjugans (Billings).

Dendrocrinus conjugans Billings, Geol. Surv. Canada, Rep. Prog. 1853-1856, p. 268, 1857; Geol. Surv. Canada, Can. Org. Rem., Dec. 4, p. 41, pl. 4, figs. 1a, b, 2a, b, 1859.

Ord. (Trenton-Hull ls.): Ottawa and Kirkfield, Ontario; Montreal, Quebec, Canada.

Cupulocrinus cylindricus (Billings).

Dendrocrinus cylindricus Billings, Canadian Geol. Surv., Can. Org. Rem., Dec. 4, pp. 44, pl. 3, figs. 8a, b, 1859.

Ord. (Trenton-Hull ls.): Montreal, Quebec; Kirkfield and Belleville, Ontario, Canada.

Cupulocrinus heterocostalis (Hall).

Scyphocrinus heterocostalis Hall, Nat. Hist. N. Y., Pal., 1, p. 85, pl. 28, figs. 3 a-f, 1847.

Cupulocrinus heterocostalis d'Orbigny, Prodr. Pal. Strat., 1, p. 23, 1849.

"*Scyphocrinus*" *heterocostalis* Springer, Geol. Surv. Canada, Mem. 15-P, p. 30, text fig. 3, 1911.

Ord. (Trenton ls.): Middleville, Herkimer Co., N. Y.

Cupulocrinus humilis (Billings).

Dendrocrinus humilis Billings, Geol. Surv. Canada, Rep. Prog. for 1853-1856, p. 270, 1857; Can. Org. Rem., Dec. 4, p. 39, pl. 3, fig. 4, 1859.

Cupulocrinus humilis Springer, Geol. Surv. Canada, Mem. 15-P, pp. 28, 29, text fig. 2, pl. 1, figs. 8, 9, 1911.

Ord. (Trenton): Ottawa, Kirkfield, and Belleville, Ontario, Can. (Hull ls.); Mercer Co., Ky. (Curdsville ls.); Near Saratoga, N. Y. (Snake Hill fm.).

Cupulocrinus jewetti (Billings).

Dendrocrinus jewetti Billings, Geol. Surv. Canada, Can. Org. Rem., Dec. 4, p. 43, text fig. 13, 1859.—W. R. Billings, Trans. Ottawa Field Nat. Club, 1, no. 4, p. 51, pl. figs., 1883.—S. A. Miller, N. Amer. Geol. Pal., p. 238, fig. 283, 1889.

Cupulocrinus jewetti Springer, Geol. Surv. Canada, Mem. 15-P, p. 28, pl. 1, figs. 10-12, pl. 3, figs. 5-7c, 1911; Crin. Flexibilia, p. 88, pl. 75, figs. 2-4, 1920.

Ord. (Trenton): Bay of Quinte, Belleville, and Kirkfield, Ontario (Hull ls.); Mercer Co., Ky. (Curdsville ls.).

Cupulocrinus jewetti kentuckiensis Springer.

Springer, Geol. Surv. Canada, Mem. 15-P, p. 32, pl. 3, figs. 8, 9, 1911.

Ord. (Trenton-Curdsville ls.): Woodford Co., Ky.

Cupulocrinus latibrachiatus (Billings).

Dendrocrinus latibrachiatus Billings, Geol. Surv. Canada, Rep. Prog. 1853-1856, p. 270, 1857; Can. Org. Rem., Dec. 4, p. 39, pl. 3, figs. 5 a-c, 1859.

Cupulocrinus latibranchiatus (by error) Twenhofel, Geol. Surv. Canada, Mem. 154, p. 137, 1928.

Early Sil. (Richmond-English Head, Vaurial, and Ellis Bay fm.): Charleton (Carleton) Point, etc., Anticosti.

Cupulocrinus minimus Springer.

— Springer, Geol. Surv. Canada, Mem. 15-P, p. 35, pl. 3, figs. 4a, b, 1911.

Cupulocrinus minimus Springer, Crin. Flexibilia, p. 88, pl. 75, figs. 6a, b, 1920.

Early Sil. (Richmond-Waynesville ls.): Waynesville, Ohio.

Cupulocrinus polydactylus (Shumard).

Homocrinus polydactylus Shumard, Trans. Acad. Sci. St. Louis, 1, p. 78, pl. 1, figs. 6a, b, 1857.

Poteriocrinus polydactylus Meek, Geol. Ohio, 1, p. 22, pl. 3, fig. 9, 1873.

Dendrocrinus polydactylus Cumings, 32d Rep. Geol. Nat. Res. Ind., p. 719, pl. 3, fig. 4, 1908.

Cupulocrinus polydactylus Springer, Geol. Surv. Canada, Mem. 15-P, p. 29, 1911.

Cyathocrinites conglobatus Troost, Amer. Jour. Sci., (2) 8, p. 419, 1849 (nom. nud.).

Early Sil. (Richmond): Richmond, Ind., Oxford, etc., Ohio (Whitewater fm.); Clinton Co., Ohio (Liberty ls.); Waynesville, etc., Ohio (Waynesville ls.).

Cyathocrinites Miller. Genotype: *C. planus* Miller.

Cyathocrinitidae (Inadunata-Fistulata). Sil.—Permian.

- Miller, Nat. Hist. Crin., p. 85, 1821.—Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 336, 1868; Geol. Surv. Ill., 5, p. 400, 1873.
- Atocrinus* McCoy, Syn. Char. Carb. Foss. Ireland, p. 183, 1844.—Zittel, Handb. Pal., 1, p. 366, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 57 (231), 1881.—Bather, Treatise Zool. (Lankester), pt. 3, p. 202, 1900. (Genotype: *A. milleri* McCoy.)
- Cyathocrinus* Agassiz, Mem. Soc. Neuchatel, 1, p. 197, 1834; Ann. Nat. Hist., 1, p. 447, 1838.—De Koninck, Animaux Foss., p. 48, 1842–1844.—Austin and Austin, Mon. Rec. and Foss. Crin., p. 58, 1845.—De Koninck and Lehon, Rech. Crin. Carb. Belg., p. 79, 1853.—Meek and Worthen, Geol. Surv. Ill., 5, p. 325, 1873.—Zittel, Handb. Pal., 1, p. 351, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 77 (300), 1880 (1879); pt. 3, pp. 191, 225 (115, 149), 1886.—Bather, Ann. Mag. Nat. Hist., (6) 5, p. 324, 1890; 9, p. 202, 1892; Königl. Sv. Vet. Akad. Handl., 25, no. 2, p. 126, 1893; Geol. Mag., (4) 6, p. 35, 1899.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 61, 1900.
- Saccosomopsis* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 25, 1870; Geol. Surv. Ill., 5, p. 490 (footnote), 1873. (Genotype: *Cyathocrinites? poterium* Meek and Worthen.)
- Cyathocrinites abbreviatus** Miller.
Miller, Nat. Hist. Crin., p. 114, pl. fig. 6, 1821.
Low. Carb. (Mt. Ls.): Mendip Hills, England.
- Cyathocrinites acinotubus** (Angelin).
Cyathocrinus acinotubus Angelin, Icon. Crin. Suec., p. 23, pl. 20, fig. 5, 1878.
Cyathocrinus alutaceus Angelin, Icon. Crin. Suec., p. 23, pl. 4, figs. 6, 6a (not pl. 23, figs. 10, 11), 1878.—Wachsmuth and Springer, N. Amer. Crin. Cam., pl. 3, figs. 6, 7, 1897.
Cyathocrinus mimus (Salter, Ms.) Bather, Ann. Mag. Nat. Hist., (6) 9, p. 215, pl. 13, figs. 3–5, 1892.
Cyathocrinus monile Salter, Cat. Coll. Cambr. and Silur. Foss., p. 123, 1873 (nom. nud.).
Cyathocrinus nodulosus (Salter, Ms.) Bather, Ann. Mag. Nat. Hist., (6) 9, p. 214, pl. 13, fig. 1, 1892.
Sil.: Follingbo, Klinteberg, Wisby, Island of Gotland (Gotlandian); Dudley, Eng. (Wenlock ls.).
- Cyathocrinites andersoni** (Miller and Gurley).
Cyathocrinus andersoni Miller and Gurley, Ill. St. Mus., Bull. 3, p. 30, pl. 3, figs. 2, 3, 1894.
Miss. (Keokuk ls.): Keokuk, Iowa.
- Cyathocrinites arboreus** (Meek and Worthen).
Cyathocrinus arboreus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 160, 1865; Geol. Surv. Ill., 3, p. 510, text fig., 1868.
Miss. (Keokuk ls.): Crawfordsville, Ind.
- Cyathocrinites barrisi** (Hall).
Poteriocrinus barrisi Hall, Jour. Boston Soc. Nat. Hist., 7, p. 303; Deser. N. Sp. Crin., p. 6, 1861.
Miss. (Low. Burlington ls.): Burlington, Iowa.
- Cyathocrinites barydactylus** (Wachsmuth and Springer).
Cyathocrinus barydactylus Wachsmuth and Springer, Proc. Acad. Nat. Sci. Phila., p. 257, pl. 2, fig. 5, 1878.
Miss. (Up. Burlington ls.): Burlington, Iowa.
- Cyathocrinites benedicti** (S. A. Miller).
Cyathocrinus benedicti S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 658, pl. 9, fig. 7, 1892 (adv. pub., 1891).
Miss. (Keokuk ls.): Crawfordsville, Ind. (Not Niagaran-Waldron shale, Harts-ville, Ind.)

Cyathocrinites boonvillensis (S. A. Miller).

Cyathocrinus boonvillensis S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 29, pl. 4, figs. 3, 4, 1891; N. Amer. Geol. Pal., 2d App., p. 741, fig. 1328, 1897.

Miss. (Warsaw ls.): Boonville, Mo.

Cyathocrinites brevisacculus (Wachsmuth and Springer).

Cyathocrinus brevisacculus Wachsmuth and Springer, Proc. Acad. Nat. Sci. Phila., p. 391, figs. 7, 9, 1890; N. Amer. Crin. Cam., pl. 3, fig. 2, pl. 7, figs. 12a, b, 1897.

Miss. (Keokuk ls.): Indian Creek, Montgomery Co., Ind.

Cyathocrinites brittsi (Miller and Gurley).

Cyathocrinus brittsi Miller and Gurley, Ill. St. Mus., Bull. 7, p. 70, pl. 4, figs. 35, 36, 1895.—Wood, U. S. Nat. Mus., Bull. 64, p. 81, pl. 15, figs. 2, 3, 1909.

Cyathocrinites tennesseae Troost, Amer. Jour. Sci., (2) 8, p. 419, 1849.

Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn. (Not Chouteau ls., Sedalia, Mo.)

Cyathocrinites bursa (Phillips).

Cyathocrinus bursa Phillips, Geol. Yorkshire, 2, p. 206, pl. 3, fig. 29, 1836.—Austin and Austin, Mon. Rec. Foss. Crin., p. 63, pl. 7, fig. 7a, 1845.

Low. Carb. (Mt. Ls.): Clitheroe, Bolland, and Yorkshire, England.

Cyathocrinites calcaratus (Phillips).

Cyathocrinus calcaratus Phillips, Geol. Yorkshire, 2, p. 206, pl. 3, fig. 35, 1836.—Austin and Austin, Mon. Rec. Foss. Crin., p. 63, pl. 8, figs. 2 a-c, 1845.

Low. Carb. (Mt. Ls.): Bolland, England.

Cyathocrinites capillaris Phillips = *Gissocrinus capillaris*.

Cyathocrinites catenatus (Trenkner).

Cyathocrinus catenatus Trenkner, Abhandl. Natur. Ges. Halle, 10, p. 10, pl. 5, fig. 20, 1868.

Low. Dev. (Coblentzian-Spirifer ss.): Schalke, Germany.

Cyathocrinites chouteauensis (Miller and Gurley).

Cyathocrinus chouteauensis Miller and Gurley, Ill. St. Mus., Bull. 7, p. 68, pl. 4, fig. 16; Bull. 9, p. 38, pl. 2, fig. 24, 1896.—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 103, pl. 31, figs. 12, 13, 1938.

Miss. (Chouteau ls.): Sedalia, Mo.

Cyathocrinites conglobatus Troost = *Cupulocrinus polydactylus*.

Cyathocrinites conicus (Phillips).

Cyathocrinus conicus Phillips, Geol. Yorkshire, 2, p. 206, pl. 3, fig. 27, 1836.—Austin and Austin, Mon. Rec. and Foss. Crin., p. 64, pl. 8, figs. 1a, b, 1845.—Wright, Geol. Mag., 72, no. 851, p. 199, pl. 7, fig. 12, 1935.

Low. Carb.: Bolland, England; Famignoul, Ireland (Mt. Ls.); Tournai, Belgium (Tournaisian).

Cyathocrinites corrugatus Troost = *Barycrinus hoveyi*.

Cyathocrinites crateriformis Troost = *Eupachycrinus boydii*.

Cyathocrinites decaphyllus Roemer.

Roemer, Verst. Harts., p. 8, pl. 3, fig. 2, 1843.—Richter, Beitr. Pal. Thuringen Waldes, p. 41, pl. 6, fig. 184, 1848.

Low. Dev. (Kahlenberg ss.): Thuringia, Germany.

Cyathocrinites decatur (Springer).

Cyathocrinus decatus Springer, Amer. Sil. Crin., p. 134, pl. 31, fig. 3, 1926.

Sil. (Niagaran-Beech River fm.): 2 miles north of Decaturville, Tenn.

Cyathocrinites depressus Troost = *Zeacrinites depressus*.

Cyathocrinites diana Bather.

Cyathocrinus diana Bather, K ngl. Sv. Vet. Akad. Handl., 25, p. 137, pl. 7, figs. 222, 223, 1893.

Sil. (Gotlandian): Slite, Island of Gotland.

Cyathocrinites distans (Phillips).

Cyathocrinus distans Phillips, Pal. Foss. Cornwall, Suppl., p. 135, pl. 58, fig. 49, 1841.
Dev.: Coddon Hill, North Devon, England.

Cyathocrinites distensus (Angelin).

Cyathocrinus distensus Angelin, Icon. Crin. Suec., p. 23, pl. 3, figs. 6, 6a, 1878.—
Bather, K ngl. Sv. Vet. Akad. Handl., 25, p. 141, pl. 7, figs. 230-235, 1893.

Sil. (Gotlandian): Far , Island of Gotland.

Cyathocrinites distortus (Gilbertson).

Cyathocrinus distortus Gilbertson in Phillips, Geol. Yorkshire, 2, p. 206, pl. 3, fig. 34, 1836.

Low. Carb. (Mt. Ls.): Bolland, England.

Cyathocrinites divaricatus (Hall).

Cyathocrinus divaricatus Hall, Geol. Surv. Iowa, 1, pt. 2, p. 554, pl. 9, fig. 5, 1858.
Miss. (Burlington ls.): Burlington, Iowa.

Cyathocrinites dubius (M nster).

Cyathocrinus dubius M nster, Beit. Petref., 3, pp. 104, 113, pl. 9, figs. 10 a-c, 1840.
Up. Dev. (Drift): Th ringer Wald, Schubelham, Germany.

Cyathocrinites elongatus (Knod).

Cyathocrinus elongatus Knod, Neues Jahrb. Min., Geol., Pal., 25, p. 571, pl. 29, figs. 6, 6a, 1908.

Dev.: Near Jachal, Argentina.

Cyathocrinites enormis (Meek and Worthen).

Poteriocrinus? enormis Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 137, 1861.

Cyathocrinus enormis Meek and Worthen, Geol. Surv. Ill., 3, p. 481, pl. 16, figs. 3a, b, 1868.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Cyathocrinites faberi (Miller and Gurley).

Cyathocrinus faberi Miller and Gurley, Ill. St. Mus., Bull. 10, p. 85, pl. 5, figs. 12-15, 1896.

Miss. (Burlington ls.): Burlington, Iowa.

Cyathocrinites farleyi (Meek and Worthen).

Cyathocrinus farleyi Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 252, 1866;
Geol. Surv. Ill. 3, p. 517, text figs., pl. 20, figs. 1a, b, 6c, 1868.

Miss. (Keokuk ls.): Warsaw, Ill.

Cyathocrinites fischeri (Spandel).

Cyathocrinus? fischeri Spandel, Abhandl. Ges. Nurnberg, 11, p. 30, pl. 12, 1899.

Low. Carb.: ?Germany.

Cyathocrinites formosus (Rowley).

Cyathocrinus formosus Rowley, Amer. Geol., 35, p. 301, pl. 21, fig., 1905.

Miss. (Low. Burlington ls.): Louisiana, Mo.

Cyathocrinites foveolatus (Eichwald).

Cyathocrinus foveolatus Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, p. 116, 1856;
Leth. Ross. Pal. Russie, 1, p. 595, pl. 30, figs. 54a, b, 1860.

Carb. (Moscovian): Mjatschkowa, Russia.

Cyathocrinites fragilis Meek and Worthen.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 337, 1868; Geol. Surv. Ill., 5, p. 401, pl. 2, fig. 14, 1873.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Cyathocrinites geometricus Goldfuss = *Sphaerocrinus geometricus*.

Cyathocrinites gilesi (Wachsmuth and Springer).

Cyathocrinus gilesi Wachsmuth and Springer, Proc. Acad. Nat. Sci. Phila., p. 259, pl. 2, figs. 6, 8, 1878; Rev. Pal., pt. 3, pl. 4, figs. 2, 3, 1886; N. Amer. Crin. Cam., pl. 3, figs. 1a, b, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Cyathocrinites glaber (Angelin).

Cyathocrinus glaber Angelin, Icon. Crin. Suec., p. 23, pl. 23, figs. 12, 13, 1878.—Bather, Königl. Sv. Vet. Akad. Handl., 25, p. 138, pl. 7, figs. 224–226, 1893.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Cyathocrinites globosus Troost.

Troost, Amer. Jour. Sci., (2) 8, p. 419, 1849 (nom. nud.).

Cyathocrinus globosus (Troost Ms.) Wood, U. S. Nat. Mus., Bull. 64, p. 82, pl. 5, figs. 17, 18, 1909.

Miss. (St. Louis ls.): Lawrence Co., Tenn.

Cyathocrinites goniodactylus Phillips = *Gissoocrinus goniodactylus*.

Cyathocrinites gorbyi (S. A. Miller).

Cyathocrinus gorbyi S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 298, pl. 5, figs. 6–8, 1894 (adv. pub., 1892). (Possibly = *C. harrodi*.)

Miss. (Keokuk ls.): Gosport, Ind. (probably Canton, Ind.)

Cyathocrinites gosae Roemer.

Cyathocrinus? gosae Roemer, in Dunker and von Meyer, Palaeontographica, 13, p. 807, pl. 33, fig. 13, 1866.

Dev. (Eifelian-Calceola beds): Rammelsberg, Germany.

Cyathocrinites gracilis Troost = *Phanocrinus maniformis*.

Cyathocrinites granulatus (Münster).

Cyathocrinus granulatus Münster, Beit. Petref., 1, p. 5, 1839.

Low. Carb. (Tournaisian): Tournai, Belgium.

Cyathocrinites granulosus (Rowley).

Cyathocrinus granulosus Rowley, Amer. Geol., 29, p. 305, pl. 18, figs. 9, 10, 1902.

Miss. (Keokuk ls.): Fox River, near Wayland, Clark Co., Mo.

Cyathocrinites gurleyi (S. A. Miller).

Cyathocrinus gurleyi S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 657, pl. 9, fig. 4, 1892 (adv. pub., 1891); N. Amer. Geol. Pal., First App., p. 676, fig. 1219, 1892.

Miss. (Keokuk ls.): Washington Co., Ind.

Cyathocrinites harrodi (Wachsmuth and Springer).

Cyathocrinus harrodi Wachsmuth and Springer, Rev. Pal., pt. 1, p. 87, 1880 (1879); Proc. Acad. Nat. Sci. Phila., pl. 10, fig. 1, 1890.

Miss.: Canton and Indian Creek, Ind. (Keokuk ls.); Boonville, Mo. (Warsaw ls.).

Cyathocrinites ignotus (Trenkner).

Cyathocrinus ignotus Trenkner, Abhandl. Natur. Ges. Halle, 10, p. 27, pl. 4, fig. 60a, b, 1867.

Up. Dev. (Frasnian-Iberg ls.): Winterberg, Germany.

Cyathocrinites indicus (Waagen).

Cyathocrinus indicus Waagen, Mem. Geol. Surv. India, 8 (Pal. Indica), p. 826, pl. 98, fig. 1, 1885.—Valette, Mem. Serv. Carte Geol. Tunisie, n.s. no. 1, p. 96, pl. figs. 8, 9, 1934 (stems only).

- Permian (Mid. *Productus* ls.): Salt Range, Nursingpohar, India; ?Tunis.
Cyathocrinites inflatus Troost=*Linocrinus cariniferous*.
- Cyathocrinites insperatus** (Lyon).
Cyathocrinus insperatus Lyon, Trans. Amer. Philos. Soc., 13, p. 457, pl. 27, fig. k (as *C. tenuibrachiatus*), 1869.
 Miss.: Crawfordsville and Indian Creek, Ind. (Keokuk ls.); Boonville, Mo. (Warsaw ls.).
- Cyathocrinites iowensis** (Owen and Shumard).
Cyathocrinus iowensis Owen and Shumard, Jour. Acad. Nat. Sci. Phila., (2), 2, pt. 1, p. 63, pl. 7, figs. 11 a-c, 1850; Geol. Surv. Iowa, Wisconsin, Minnesota, p. 591, pl. 5-A, figs. 11 a-c, 1852.—Keyes, Geol. Surv. Mo., 4, p. 207, pl. 25, fig. 11, 1894.
Cyathocrinus iowensis Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, pl. 5, figs. 7, 8, 1885.
 Miss.: Burlington, Iowa (Low. and Up. Burlington ls.); Lake Valley, N. Mex. (Lake Valley ls.).
- Cyathocrinites irregularis** (Trenkner).
Cyathocrinus irregularis Trenkner, Abhandl. Natur. Ges. Halle, 10, p. 27, pl. 4, figs. 64a, b, 1867.
 Up. Dev. (Frasnian-Iberg ls.): Winterberg, Germany.
- Cyathocrinites kattaensis** (Waagen).
Cyathocrinus kattaensis Waagen, Mem. Geol. Surv. India, 8, p. 828, pl. 96, fig. 2, 1885.—?Valette, Mem. Serv. Carte Geol. Tunisie, n.s., no. 1, p. 97, pl. fig. 19, 1934 (stems only).
 Permian (Mid. *Productus* ls.): Salt Range, Katta, India; ?Tunis.
- Cyathocrinites lamellosus** (White).
Cyathocrinus lamellosus White, Boston Jour. Nat. Hist., 7, p. 504, 1863.
 Miss. (Up. Burlington ls.): Burlington, Iowa.
- Cyathocrinites loganensis** (Müller).
Cyathocrinus loganensis Müller, Monatsber. K. Akad. Wiss., Berlin, p. 190; 1858.
 Low. Dev. (Coblentzian): Niederlahnstein, Germany.
- Cyathocrinites longimanus** (Angelin).
Cyathocrinus longimanus Angelin, Icon. Crin. Suec., p. 22, pl. 20, figs. 4, 6?, 7 (not pl. 26, figs. 4, 5 = *C. ramosus*), 1878.—Bather, Königl. Sv. Vet. Akad. Handl., 25, p. 142, pl. 7, figs. 234-242, 1893; Treatise Zool. (Lankester), pt. 3, p. 120, fig. 26-5, 1900.
Cyathocrinus ramosus Angelin, Icon. Crin. Suec., pl. 20, figs. 2, 3, (not 1), 1878.
 Sil.: Follingbo, Island of Gotland (Gotlandian); Dudley, England (Wenlock ls.).
- Cyathocrinites macadamsi** (Miller and Gurley).
Cyathocrinus macadamsi Miller and Gurley, Ill. St. Mus., Bull. 7, p. 69, pl. 4, figs. 31, 32, 1895.
 Miss. (St. Louis ls.): Alton, Ill.
- Cyathocrinites macrostylus** (Phillips).
 Phillips, Mem. Geol. Surv. Gt. Britain, 2, pt. 1, 1846-1848.
 Sil.: Malvern Hills, Worcestershire, England.
- Cyathocrinites malvaceus** (Hall).
Cyathocrinus malvaceus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 554, pl. 9, figs. 4 a, b, 1858.—Springer, Zittel-Eastman Textb. Pal., 1, p. 220, fig. 319-C, 1913.
 Miss. (Burlington ls.): Burlington, Iowa.
- Cyathocrinites mammillaris** (Phillips).
Cyathocrinus mammillaris Phillips, Geol. Yorkshire, 2, p. 206, pl. 3, fig. 28, 1836.—Austin and Austin, Mon. Rec. Foss. Crin., p. 64, pl. 7, figs. 8 a, b, 1845.—Bather, Ann. Mag. Nat. Hist., (6), 9, pp. 206, 211, text fig. 7, 1892; Königl.

- Sv. Vet. Akad. Handl., 25, no. 2, p. 127, text fig. 18-7, 1893; Treatise Zool. (Lankester), pt. 3, p. 127, fig. 39-2, 1900.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 122, p. 27, pl. 3, figs. 23 a, b, 1930.
- Low. Carb.: Bolland and Yorkshire, England (Mt. Ls.); Visé, Belgium; Near Altewasser, Germany (Viséan); Spain.
- Cyathocrinites marshallensis** (Worthen).
- Cyathocrinites? marshallensis* Worthen, Ill. St. Mus., Bull. 1, p. 33, 1882.
- Cyathocrinites marshallensis* Worthen, Geol. Surv. Ill., vol. 7, p. 310, pl. 30, fig. 4, 1883.
- Miss. (Kinderhook-Hampton fm.): Marshalltown, Iowa.
- Cyathocrinites milleri** (McCoy).
- Atocrinites milleri* McCoy, Syn. Char. Carb. Foss. Ireland, p. 183, pl. 25, fig. 20, 1844.—Roemer, in Bronn, Leth. Geog., 1, pt. 2, p. 246, pl. 4, figs. 12a, b, 1852-1854.—Bronn, Klass. Ord. Thierr., 2, pl. 28, fig. 6, 1860.
- Cyathocrinites milleri* Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 2, p. 226 (150), 1886.
- Low. Carb. (Mt. Ls.): Hook Head, Co. Wexford, Ireland.
- Cyathocrinites monilifer** (Angelin).
- Cyathocrinites monilifer* Angelin, Icon. Crin. Suec., p. 23, pl. 21, figs. 15, 15a, 1878.
- Cyathocrinites laevis* Angelin, Icon. Crin. Suec., p. 23, pl. 26, figs. 3, 3a, b (not 2, 2a = *C. ramosus*), 1878.—Wachsmuth and Springer, N. Amer. Crin. Camerata, pl. 3, fig. 8, 1897.
- Cyathocrinites visbycensis* Bather, Köngl. Sv. Vet. Akad. Handl., 25, no. 2, p. 130, pl. 7, figs. 199-206, p. 133, text fig. 19, 1893.
- Cyathocrinites visbycensis* var. *monilifer* Bather, Ann. Mag. Nat. Hist., (6) 9, p. 223, 1892; Köngl. Sv. Vet. Akad. Handl., 25, p. 147, 1893.
- Sil. (Gotlandian): Between Wisby and Weskinde, Snäckgårdet, Lickershamn, Island of Gotland.
- Cyathocrinites multibrachiatus** (Lyon and Casseday).
- Cyathocrinites multibrachiatus* Lyon and Casseday, Amer. Jour. Sci., 28, p. 245, 1859.—Hall, Nat. Hist. N. Y., Bull. 1, pl. 5, figs. 3, 5, 6, 1872.—Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, pl. 4, figs. 6, 7a, 7b, 1885; N. Amer. Crin. Cam., pp. 96, 114, pl. 3, fig. 4, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 174, text fig. 89-1, 2, 1900.
- Poteroocrinites carinobrachiatus* Quenstedt, Handb. Petref., ed. 3, p. 950, pl. 76, fig. 11, 1885.
- Miss. (Keokuk ls.): Crawfordsville, Ind.
- Cyathocrinites multibrachiatus squarrosa** (Hall).
- Cyathocrinites multibrachiatus* var. *squarrosa* Hall, N. Y. St. Mus., Bull. 1, pl. 5, fig. 4, 1872 (footnote to expl.).
- Miss. (Keokuk ls.): Crawfordsville, Ind.
- Cyathocrinites muticus** (Angelin).
- Cyathocrinites muticus* Angelin, Icon. Crin. Suec., p. 23, pl. 21, figs. 22, 23, 1878.—Bather, Köngl. Sv. Vet. Akad. Handl., 25, no. 2, p. 140, pl. 7, figs. 227-229, 1893.
- Sil. (Gotlandian): Follingbo, Island of Gotland.
- Cyathocrinites? nanus** (Grubb).
- Cyathocrinites? nanus* Grubb, Jour. Pal., 13, no. 6, p. 550, text fig. 2, pl. 61, figs. 31, 32, 35, 1939.
- Sil. (Niagaran-Racine dol.): Near Chicago, Ill.
- Cyathocrinites nodosus** (Wachsmuth and Springer).
- Cyathocrinites nodosus* Wachsmuth and Springer, Proc. Acad. Nat. Sci. Phila., pl. 9, fig. 8, 1890; N. Amer. Crin. Cam., pl. 3, fig. 3, pl. 7, figs. 11a, b, 1897.
- Miss. (Keokuk ls.): Indian Creek, Ind.; Hamilton, Ill.

Cyathocrinites obliquiseptatus (Trenkner).

Cyathocrinus obliquiseptatus Trenkner, Abhandl. Natur. Ges. Halle, 10, p. 10, pl. 6, fig. 5, 1868.

Low. Dev. (Coblenzian-Spirifer ss.): Schalke, Germany.

Cyathocrinites opimus (Miller and Gurley).

Cyathocrinus opimus Miller and Gurley, 16th Rep. Geol. Surv. Ind., p. 348, pl. 5, fig. 5, 1890 (authors' ed., p. 28).

Miss. (Keokuk ls.): Crawfordsville, Ind.

Cyathocrinites ornatus (Phillips).

Cyathocrinus ornatus Phillips, Geol. Yorkshire, 2, p. 206, pl. 3, figs. 36, 37, 1836.

Low. Carb. (Mt. Ls.): Bolland, Eng.; Ireland.

Cyathocrinites ovalis (Rowley).

Cyathocrinus? ovalis Rowley, Amer. Geol., 34, p. 271, pl. 16, figs. 13-16, 1904.

Sil. (Niagaran-Bainbridge ls.): Near St. Marys, Ste. Genevieve Co., Mo.

Cyathocrinites parvibrachiatus (Hall).

Cyathocrinus parvibrachiatus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 294; Prelim. Descr. New Crin., p. 6, 1861; N. Y. St. Mus., Bull. 1, pl. 5, figs. 1, 2, 1872.—Worthen, Geol. Surv. Ill., 7, p. 309, pl. 28, fig. 5, 1883.

Cyathocrinus hamiltonensis Worthen, Ill. St. Mus., Bull. 1, p. 32, 1882.

Miss. (Keokuk ls.): Keokuk and Bonaparte, Iowa; Indian Creek, Ind.; Hamilton, Ill.

Cyathocrinites patulosus (Wright).

Cyathocrinus patulosus Wright, Geol. Mag., 72, no. 851, p. 197, text figs. 5-8, pl. 7, figs. 9-11, 13-15, 1935.

Low. Carb. (Cl): Coplow Knoll, Clitheroe, Lancashire, England.

Cyathocrinites pentagonus Goldfuss.

Goldfuss, Petref. Germ., 1, p. 192, pl. 59, figs. 2 a-c, 1831 (stems only).

Dev.: Groningen, Germany.

Cyathocrinites pentasphericus Troost = *Barycrinus pentasphericus*.

Cyathocrinites pinnatus Goldfuss.

Goldfuss, Petref. Germ., 1, p. 190, pl. 58, fig. 7, 1831 (stems only).

Cyathocrinus pinnatus Phillips, Pal. Foss. Cornwall, p. 31, pl. 16, figs. 4, 5, 1841.

Cyathocrinus? pinnatus Austin and Austin, Mon. Rec. Foss. Crin., p. 62, pl. 7, figs. 6a, b, 1845.

Dev.: Eifel region, Germany.

Cyathocrinites planus Miller.

Miller, Nat. Hist. Crin., p. 85, pl. opp. p. 86, 1821.

Encrinites planus Schlotheim, Petrefact., 3, p. 98, pl. 26, fig. 6, 1823.

Cyathocrinus planus Austin and Austin, Mon. Rec. Foss. Crin., pp. 58, 88, pl. 7, figs. 4 a-e, 1845.—Rofe, Geol. Mag., 2, p. 251, pl. 8, fig. 4, 1865.—Bather, Königl. Sv. Vet. Akad. Handl., 25, no. 2, p. 127, text fig. 18-6, 1893; Treatise Zool. (Lankester), pt. 3, p. 127, fig. 39-1, 1900.

Low. Carb. (Mt. Ls.): Near Bristol, and Clevedon, England; Co. Fermanagh, Ireland.

Cyathocrinites? poterium Meek and Worthen.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., pp. 54, 25, 1870; Geol. Surv. Ill., 5, p. 489, pl. 12, fig. 4, 1873.

Miss. (Keokuk ls.): Crawfordsville, Ind.

Cyathocrinites pyriformis Phillips = *Ichthyocrinus pyriformis*.

Cyathocrinites quinquangularis Miller = *Parisocrinus quinquangularis*.

Cyathocrinites radiatus (Eichwald).

Apiocrinus radiatus Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, p. 115, 1856.

Cyathocrinus radiatus Eichwald, Leth. Ross. Pal. Russie, 1, p. 592, pl. 31, figs. 50 a-f, 1860.

Low. Carb.: Staritza, Russia.

Cyathocrinites radiatus (Trenkner).

Cyathocrinus radiatus Trenkner, Abhandl. Natur. Ges. Halle, 10, p. 9, pl. 5, fig. 16, 1868.

Low. Dev. (Coblentzian-Spirifer ss.): Schalke, Germany.

Cyathocrinites ramosus (Angelin).

Cyathocrinus ramosus Angelin, Icon. Crin. Suec., p. 22, pl. 20, fig. 1 (not figs. 2, 3 = *C. longimanus*), 1878.—Bather, Königl. Sv. Vet. Akad. Handl., 25, no. 2, pp. 146, 149, text fig. 20, pl. 8, figs. 248-260, 1893.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 31, text fig. 14, p. 41, fig. 30, 1900.—Bather, Treatise Zool. (Lankester), pt. 3, p. 128, fig. 43, 1900.

Cyathocrinus alutaceus Angelin (in part), Icon. Crin. Suec., pl. 23, figs. 10, 11 (not pl. 4, fig. 6a), 1878.

Cyathocrinus laevis Angelin (part), Icon. Crin. Suec., pl. 26, figs. 2, 2a (not figs. 3a, b), 1878.

Cyathocrinus longimanus Angelin (part), Icon. Crin. Suec., pl. 20, figs. 4, 5 (not pl. 26, figs. 4, 5), 1878.

Cyathocrinus zonatus Angelin, Icon. Crin. Suec., p. 22, pl. 6, fig. 5, 1878.

Sil. (Gotlandian): Follingbo and Wisby, Island of Gotland.

Cyathocrinites (?) ramosus (Schlotheim).

Encrinites ramosus Schlotheim, Beit. Natur. Vers. Geogn. Hinsicht, 4, p. 8, 1816-1817; Petref. auf. ihrem jetz. Standp., p. 530, 1820.

Cyathocrinus ramosus King, Mon. Perm. Foss. England, p. 50, pl. 6, figs. 15-20, 1850.—Geinitz, Carb. Dyas in Nebraska, p. 62, pl. 4, fig. 19, 1866.

Encrinites ramosus major Schlotheim, Petref. auf ihrem jetz. Standp., p. 331, 1820. Permian: Glucksbrunn, Pösneck, etc., Germany; Tunstall Hill, etc., England.

Cyathocrinites rarus (Lyon).

Cyathocrinus rarus Lyon, Trans. Amer. Philos. Soc., 13, p. 455, pl. 27, figs. i, i-1, 1869.

Dev. (Onondaga-Jeffersonville ls.): Falls of the Ohio, Clark Co., Ind.

Cyathocrinites rigidus (White).

Cyathocrinus rigidus White, Proc. Boston Soc. Nat. Hist., 9, p. 8, 1865 (adv. pub. 1862).

Miss. (Low. Burlington ls.): Burlington, Iowa.

Cyathocrinites robustus Troost = *Stemmatocrinus trautscholdi*.

Cyathocrinites rockfordensis (Thomas).

Cyathocrinus rockfordensis Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 477, pl. 44, figs. 11-16, 1924.

Up. Dev. (Lime Creek sh.): Rockford and Bird Hill, Iowa.

Cyathocrinites roemeri Troost = *Dinotocrinus roemeri*.

Cyathocrinites rotundatus (Hall).

Cyathocrinus rotundatus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 555, pl. 9, figs. 7a, b, 1858; Suppl., pl. 3, fig. 8, 1860.

Miss. (Up. and Low. Burlington ls.): Burlington, Iowa.

Cyathocrinites rugosus Miller = *Crotalocrinus rugosus*.

Cyathocrinites saffordi (Meek and Worthen).

Cyathocrinus saffordi Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 371, 1860; Geol. Surv. Ill. 2, p. 236, pl. 17, figs. 5a, b, text fig. 24, 1866.

Miss. (Ft. Payne ch.): Whites Creek Springs, Tenn.

Cyathocrinites sampsoni (S. A. Miller).

Cyathocrinus sampsoni S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 30, pl. 4, figs. 9, 10, 1891.

Miss. (Chouteau ls.): Sedalia, Mo.

Cyathocrinites scitulus (Meek and Worthen).

Cyathocrinus scitulus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 393, 1860.

Miss. (Burlington ls.): Burlington, Iowa.

Cyathocrinites scrobiculatus Hisinger = *Pycnosaccus scrobiculatus*.

Cyathocrinites sculptus Troost = *Chirocrinus angulatus*.

Cyathocrinites signatus (Miller and Gurley).

Cyathocrinus signatus Miller and Gurley, Ill. St. Mus., Bull. 3, p. 32, pl. 6, fig. 10, 1894.

Miss. (Keokuk ls.): Washington Co., Ind.

Cyathocrinites snivelyi (Rowley).

Cyathocrinus snivelyi Rowley, Amer. Geol., 29, p. 305, pl. 18, figs. 6-8, 1902.

Miss. (Keokuk ls.): Fox River, Clark Co., Mo.

Cyathocrinites sphaericus Steininger.

Steininger, (Schnur ms.) Verst. Uebergangs-gebirg. Eifel, p. 21, 1849.

Mid. Dev. (Eifelian): Gerolstein, Eifel, Germany.

Cyathocrinites stellatus Troost = *Barycrinus stellatus*.

Cyathocrinites striolatus (Angelin).

Cyathocrinus striolatus Angelin, Icon. Crin. Suec., p. 23, pl. 19, figs. 9, 9a, 1878.—

Bather, Königl. Sv. Vet. Akad. Handl., 25, p. 136, pl. 7, figs. 218-221, 1893.—

Springer, Amer. Sil. Crin., p. 134, pl. 31, figs. 4-7, 1926.

Sil.: Wisby, Island of Gotland (Gotlandian); St. Paul, Indiana (Laurel ls.).

Cyathocrinites subtuberculatus (Roemer).

Cyathocrinus subtuberculatus Roemer, Vers. Harz gebirges, Palaeontographica, 13, p. 227, 1866.

Dev. (Givetian-Stringocephalus ls.): Clausthal, Harz, Germany.

Cyathocrinites tennesseae Troost = *C. brittsi*.

Cyathocrinites tenuidactylus Meek and Worthen.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 337, 1868; Geol. Surv. Ill., 5, p. 403, pl. 2, fig. 15, 1873.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Cyathocrinites teres (Münster).

Cyathocrinus teres? Münster, Beitr. Petref., 3, p. 113, pl. 9, fig. 9, 1840.

Up. Dev. (Famennian-Clymenia ls.): Schübelhammer, Saxony.

Cyathocrinites tiaraeformis Troost = *Metichthyocrinus tiaraeformis*.

Cyathocrinites tricarinatus Roemer.

Roemer, Verst. Hartsgeb., p. 8, pl. 12, fig. 2, 1843.

Dev. (Frasnian-Iberg ls.): Near Grund, Harz, Germany.

Cyathocrinites tuberculatus (Roemer).

Cyathocrinus tuberculatus Roemer, Palaeontographica, 3, p. 23; pl. 4, fig. 5, 1850.

Dev. (Givetian-Stringocephalus ls.): Kehrzu, Harz, Germany.

Cyathocrinites tuberculatus Miller (part) = *Temnocrinus tuberculatus*; (part) = *Ichthyocrinus pyriformis*.

Cyathocrinites turbinatus (Weller).

Cyathocrinus turbinatus Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 65, pl. 14, fig. 15, 1900.

Sil. (Niagaran-Racine dol.): Chicago, Ill.

Cyathocrinites vallatus (Bather).

Cyathocrinus vallatus Bather, Ann. Mag. Nat. Hist., (6) 9, p. 221, pl. 13, figs. 14-18, 1892.

Sil. (Up. Wenlock ls.): Dudley, England.

Cyathocrinites variabilis (Phillips).

Cyathocrinus? variabilis Phillips, Pal. Foss. Cornwall, p. 32, pl. 16, fig. 48, 1841.

Low. Carb. (Pilton beds): Pilton, etc., North Devon, England; Co. Donegal, etc., Ireland.

Cyathocrinites viminalis (Hall).

Cyathocrinus viminalis Hall, Jour. Boston Soc. Nat. Hist., p. 299; Prelim. Descr. New Crin., p. 5, 1861.—Whitfield, Amer. Mus. Nat. Hist., Mem., 1, pt. 1, p. 28, pl. 3, fig. 7, 1893.

Miss. (Burlington ls.): Burlington, Iowa.

Cyathocrinites virgalensis (Waagen).

Cyathocrinus virgalensis Waagen, Mem. Geol. Surv. India, ser. 8, p. 825, pl. 96, figs. 13-15, 1885.—?Valette, Mem. Serv. Carte Geol. Tunisie, n. s., no. 1, p. 95, pl. figs. 4-7, 1934 (stems only).

Permian (Productus ls.): Salt Range, Virgal, India; ?Tunis.

Cyathocrinites wilsoni (Springer)

Cyathocrinus wilsoni Springer, Amer. Sil. Crin., p. 134, pl. 31, figs. 3, 3a, 1926.

Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Cyathocrinus of authors = *Cyathocrinites*.

Cyathocrinus (*Poteriocrinus*) *aemulus* Hall = ?*Homocrinus aemulus*.

Cyathocrinus alutaceus Angelin (part) = *Cyathocrinites acinotubus* (part) = *C. ramosus*.

Cyathocrinus angulatus Meek and Worthen = *Barycrinus angulatus*.

Cyathocrinus annulatus Couch.

Couch, Roy, Geol. Soc. Cornwall, 42d Rep., p. 241, 1855.—Collins, Trans. Geol. Soc. Cornwall, 12, p. 81, pl. 2, figs. 3, 4, 1896. (Columns only.)

Paleozoic: Yeolmbridge, Cornwall.

Cyathocrinus arboreus Salter = *Mastigocrinus loreus*.

Cyathocrinus arthriticus Salter = *Gissocrinus arthriticus*.

Cyathocrinus berkloffii Valette.

Valette, Mem. Serv. Carte Geol. Tunisie, n. s., no. 1, p. 98, pl. figs. 12 a-e, 1924. (Stems only.)

Permian: Djebel Tebaga, Tunis.

Cyathocrinus barumensis Whidborne = *Hydriocrinus barumensis*.

Cyathocrinus blairi Miller and Gurley = (part) *Mespilocrinus blairi*; (part) *M. konincki*.

Cyathocrinus brachydactylus Roemer = *Eutaxocrinus rhenanus*.

Cyathocrinus bulbosus Hall = *Arachnocrinus bulbosus*.

Cyathocrinus bullatus Hall = *Barycrinus bullatus*.

Cyathocrinus? carinatus Collins.

Collins, Trans. Geol. Soc. Cornwall, 12, p. 76, pl. D, figs. 6, 7, 1896. (Stems only.)
Dev.?: Van, near St. Austell, Crinnis, Cornwall, England.

Cyathocrinus cora Hall = *Crotalocrinites cora*.

Cyathocrinus cornutus Owen and Shumard = *Barycrinus cornutus*.

Cyathocrinus? corolliferus Hisinger = *Clonocrinus corolliferus*.

Cyathocrinus crassibrachiatus Hall = *Barycrinus crassibrachiatus*.

- Cyathocrinus?* *crassus* Meek and Worthen = *Ethelocrinus crassus*.
Cyathocrinus crawfordsvillensis S. A. Miller = *Parisocrinus?* *crawfordsvillensis*.
Cyathocrinus decadactylus Salter = *Dictenocrinus decadactylus*.
Cyathocrinus dekadactylus Lyon and Casseday = *Poteriocrinites decadactylus*.
Cyathocrinus ellipticus Phillips.
 Phillips, Pal. Foss. Cornwall, p. 29, pl. 16, fig. 49, 1841 (stems only).
 Up. Dev.: Petherwin, Cornwall, England.
- Cyathocrinus exilis* Eichwald.
 Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, p. 117, 1856; Leth. Ross., 1, p. 594, pl. 31, figs. 33 a-d, fig. 27 a-c, 1860 (calyx).
 Ord.?: Ficht, Island of Oesel; Pulkowa, Russia (*Orthoceras* ls.).
- Cyathocrinus fasciatus* Hall = *Macrostylocrinus fasciatus*.
Cyathocrinus florealis Yandell and Shumard = *Dasciocrinus florealis*.
Cyathocrinus glomeratus (Couch).
Encrinites glomeratus Couch, Trans. Roy. Geol. Soc. Cornwall, 42d Rep., p. 257, 1855.
Cyathocrinus glomeratus Collins, Trans. Geol. Soc. Cornwall, 12, p. 81, 1896 (stems only). Near Trelawny, Cornwall.
- Cyathocrinus goldbecki* Jaekel = *Follicrinus grebei*.
Cyathocrinus goliathus Waagen = *Ulocrinus?* *goliathus*.
Cyathocrinus gracilior Roemer = *Imitatoocrinus gracilior*.
Cyathocrinus granulatus Angelin = *Gissocrinus incurvatus*.
Cyathocrinus granuliferus Shumard.
 Shumard, in Marcy's Rep. on Expl. Red River of Louisiana, App. E, p. 186, 1854.
 (Not recognizable).
 Miss.: Washington Co., Ark; Summit of Muldrows Hill, Ky.
- Cyathocrinus grebei* Jaekel = *Follicrinus grebei*.
Cyathocrinus hamiltonensis Worthen = *Cyathocrinites parvibrachiatus*.
Cyathocrinus harrisi S. A. Miller = *Gonioocrinus harrisi*.
Cyathocrinus hexadactylus Lyon and Casseday = *Pellecrinus hexadactylus*.
Cyathocrinus hoveyi Hall = *Barycrinus hoveyi*.
Cyathocrinus ichthyocrinoides Salter.
 Salter, Cat. Camb. Sil. Foss., p. 125, 1873.
 Sil. (Wenlock ls.): Dudley, England.
- Cyathocrinus incipiens* Hall = *Gonioocrinus incipiens*.
Cyathocrinus incurvatus Angelin = *Gissocrinus incurvatus*.
Cyathocrinus inequidactylus McCoy = *Amblacrinus inequidactylus*.
Cyathocrinus inequidactylus Whitfield = *Anartioocrinus maxvillensis*.
Cyathocrinus inflexus Geinitz = *Paradelocrinus inflexus*.
Cyathocrinus interbrachiatus Angelin = *Meristocrinus interbrachiatus*.
Cyathocrinus intermedius Hall = *Parisocrinus intermedius*.
Cyathocrinus kelloggi White = *Barycrinus kelloggi*.
Cyathocrinus konincki Clarke = *Phialocrinus konincki*.
Cyathocrinus laevis Angelin = (part) *Cyathocrinites ramosus*; (part) *C. monilifer*.
Cyathocrinus latus Hall = *Barycrinus latus*.

Cyathocrinus? leptos Collins.

Collins, Trans. Geol. Soc. Cornwall, vol. 12, p. 78, pl. D, figs. 9a, b, 1896 (stems only).
Dev.: Crinnis, Polraun, Cornwall, England.

Cyathocrinus leviculus Lyon = *Poteriocrinites laeviculus*.

Cyathocrinus lineatus Eichwald = *Grammocrinus lineatus*.

Cyathocrinus longimanus Angelin (part) = *Cyathocrinites ramosus*.

Cyathocrinus lyoni Hall = *Pellecrinus hexadactylus*.

Cyathocrinus macrocheirus McCoy = *Pachylocrinus macrocheirus*.

Cyathocrinus? macrodactylus Phillips = *Taxocrinus macrodactylus*.

Cyathocrinus macropleurus Hall = *Poteriocrinites macropleurus*.

Cyathocrinus magister Hall = *Barycrinus magister*.

Cyathocrinus maniformis Yandell and Shumard = *Phanocrinus maniformis*.

Cyathocrinus maxvillensis Whitfield = *Anartiocrinus maxvillensis*.

Cyathocrinus? megastylus Phillips.

Phillips, Pal. Foss. Cornwall, p. 32, pl. 16, fig. 47, 1841 (stems only).
Dev.: Whitesand Bay, South Devon, England.

Cyathocrinus mimus Salter = *Cyathocrinites acinotubus*.

Cyathocrinus monile Salter = *Cyathocrinites acinotubus*.

Cyathocrinus municipalis Wood = *Rhopocrinus municipalis*.

Cyathocrinus? nodulosus Phillips.

Phillips, Pal. Foss. Cornwall, p. 32, pl. 16, fig. 46, 1841 (stems only).
Dev.: Torquay, South Devon, England.

Cyathocrinus nodulosus Salter = *Cyathocrinites acinotubus*.

Cyathocrinus nucleus Hall = *Botryocrinus nucleus*.

Cyathocrinus ornatissimus Hall = (part) *Hallocrinus ornatissimus*; (part) *Maragnicrinus portlandicus*.

Cyathocrinus penniger Eichwald = *Chirocrinus penniger*. (cystid.)

Cyathocrinus? pentalobus Hall = *Eupachycrinus pentalobus*.

Cyathocrinus permiensis Valette.

Valette, Mem. Serv. Carte Geo., Tunisie, n. s., no. 1, p. 91, pl. figs. 1 a-f, 1934 (stems only).

Permian: Djebel Tebaga, Tunis.

Cyathocrinus polyxo Hall = *Botryocrinus polyxo*.

Cyathocrinus protuberans Hall = *Barycrinus bullatus*.

Cyathocrinus pulcher Hisinger = *Crotalocrinus pulcher*.

Cyathocrinus pusillus Hall = *Lecanocrinus pusillus*.

Cyathocrinus pyriformis Hall = *Ichthyocrinus laevis*.

Cyathocrinus quindecimalis Salter = *Dictenocrinus decadactylus*.

Cyathocrinus quinquangularis Phillips = *Botryocrinus quinquelobus*.

Cyathocrinus quinquelobus Meek and Worthen = *Barycrinus stellatus*.

Cyathocrinus ramosus Angelin (part) = *Cyathocrinites longimanus*.

Cyathocrinus rhenanus Roemer = *Eutaxocrinus rhenanus*.

Cyathocrinus rugosus Goldfuss.

Goldfuss, Petref. Germ., 1, p. 192, pl. 59, fig. 4, 1842 (stems only).
Dev.: Eifel, Germany.

- Cyathocrinus rugosus annulata* Quenstedt = *Crotalocrinites rugosus*.
Cyathocrinus rugosus punctata Quenstedt = *Crotalocrinites rugosus*.
Cyathocrinus? *sangamonensis* Meek and Worthen = *Ulocrinus sangamonensis*.
Cyathocrinus scoparius Salter = *Gissocrinus scoparius*.
Cyathocrinus sculptilis Hall = *Barycrinus sculptilis*.
Cyathocrinus solidus Hall = *Barycrinus solidus*.
Cyathocrinus somersi Whitfield = *Delocrinus somersi*.
Cyathocrinus (*Barycrinus*) *spectabilis* Meek and Worthen = *Barycrinus spectabilis*.
Cyathocrinus spurius Hall = *Barycrinus spurius*.
Cyathocrinus stellatus Hall = *Barycrinus stellatus*.
Cyathocrinus stillativus White = *Stellarocrinus stillativus*.
Cyathocrinus squamiferus Salter = *Gissocrinus squamiferus*.
Cyathocrinus subtumidus Meek and Worthen = *Barycrinus subtumidus*.
Cyathocrinus tenuibrachiatus Lyon = *Cyathocrinites insperatus*.
Cyathocrinus tesseracontadactylus (Hisinger) Salter = *Carpocrinus simplex*.
Cyathocrinus thomae Hall = *Barycrinus thomae*.
Cyathocrinus tuberculatus Miller (part) = *Ichthyocrinus pyriformis*.
Cyathocrinus tumidulus Miller and Gurley = *Decadocrinus tumidulus*.
Cyathocrinus tumidus Hall = *Barycrinus tumidus*.
Cyathocrinus vanhornei S. A. Miller = *Crotalocrinites vanhornei*.
Cyathocrinus visbycensis Bather = *Cyathocrinites monilifer*.
Cyathocrinus visbycensis monilifer Bather = *Cyathocrinites monilifer*.
Cyathocrinus wachsmuthi Meek and Worthen = *Barycrinus wachsmuthi*.
Cyathocrinus waldronensis Miller and Dyer = *Dimerocrinus waldronensis*.
Cyathocrinus waukoma Hall = *Lecanocrinus waukoma*.
Cyathocrinus wortheni Lyon = *Poteriocrinites wortheni*.
Cyathocrinus zonatus Angelin = *Cyathocrinites ramosus*.
Cyclocrinites Eichwald, 1840. Formerly considered an echinoderm; now referred to the algae.
Cyclocrinus of authors. Same as *Cyclocrinites*.
Cydonocrinus Bather. Genotype: *C. parvulus* Bather.
 Hypocrinidae (Inadunata-Fistulata). Low. Carb.; Permian.
 Bather, *Ann. Mag. Nat. Hist.*, (8), 12, p. 391, 1913; 13, p. 252, 1914.—Springer, *Crin. Flexibilia*, p. 454, 1920.—Wanner, *Die Perm. Krin. Timor*, 2e *Nederl. Timor Exped. 1916*, p. 140, 1924; *Beitr. Geol. Nederl.-Ind.*, Abt. 4, pt. 2, p. 131, 1937.
Cydonocrinus parvulus Bather.
 Bather, *Ann. Mag. Nat. Hist.*, (8) 12, pp. 391, 392, text figs. 1-5, 1913.
 Low. Carb. (Up. Viséan-Up. *Dibunophyllum* zone): Above Manchester Pot, Nidderdale, Yorkshire, England.
Cydonocrinus turbinatus Wanner.
 Wanner, *Pal. Timor*, XI, Perm. Echin. Timor, 1 Teil, p. 109, pl. 102 (7), fig. 11, 1916; Perm. Krin. Timor, 2e *Nederl. Timor Exped. 1916*, p. 148, pl. 8, figs. 11, 12, 27-31, 1924; *Neue Beitr. kennt. Perm. Echin. Timor*, XI, pp. 131, 132, 133, text figs. 36, 37, pl. 14, figs. 19-23, 1937.
Cranocrinus turbinatus Wanner, *Neue Beitr. kennt. Perm. Echin. Timor*, p. 47, pl. 2, fig. 4, pl. 3, fig. 10, 1929.
 Permian: Basleo, Timor.

- Cydonocrinus turbinatus minor** (Wanner).
Cranocrinus turbinatus var. *minor* Wanner, Neue Beitr. kennt. Perm. Echin. Timor, p. 48, pl. 2, figs. 5, 6, 1929.
 Permian: Basleo, Timor.
- Cydrocrinus** Kirk. Genotype: *Poteriocrinus coxanus* Worthen.
 Poteriocrinitidae (Inadunata-Fistulata). Miss.
 Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 323, 1940.
- Cydrocrinus concinnus** (Meek and Worthen).
Poteriocrinites (*Zeacrinus*?) *concinnus* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 26, 1870; Geol. Surv. Ill., 5, p. 490, pl. 14, fig. 5, 1873.
Cydrocrinus concinnus Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 325, 1940.
 Miss. (Keokuk ls.): Crawfordsville and Indian Creek, Ind.
- Cydrocrinus coxanus** (Worthen).
Poteriocrinus coxanus Worthen, Ill. St. Mus., Bull. 1, p. 4, 1862; Geol. Surv. Ill., 7, p. 269, pl. 27, fig. 1, 1883.
Pachylocrinus coxanus Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 71, 1926.
Cydrocrinus coxanus Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 324, 1940.
 Miss. (Keokuk ls.): Crawfordsville, Ind.; Hamilton, Ill.
- Cydrocrinus subramulosus** (Worthen).
Poteriocrinus subramulosus Worthen, Ill. St. Mus., Bull. 1, p. 14, 1882; Geol. Surv. Ill., 7, p. 284, pl. 27, fig. 6, 1883.
Cydrocrinus subramulosus Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 324, 1940.
 Miss. (Keokuk ls.): Keokuk, Iowa.
- Cylicocrinus** Bather. See *Culicocrinus*.
- Cylicocrinus** S. A. Miller. Genotype: *C. canaliculatus* S. A. Miller.
 Carpoerinidae (Camerata). Sil.
 S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 285, 1894 (adv. pub., 1892, p. 31); N. Amer. Geol. Pal., 1st App., p. 676, 1892.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 485, 1897.—Springer, Amer. Sil. Crin., p. 43, 1926.
- Cylicocrinus canaliculatus** S. A. Miller.
 S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 285, pl. 5, figs. 13, 14, 1894 (adv. pub. 1892, p. 31).—Springer, Amer. Sil. Crin., p. 43, pl. 7, figs. 26–29, 1926.
 Sil. (Niagaran-Laurel ls.), St. Paul, Ind.
- Cylicocrinus?** *indianensis* Miller and Gurley.
 Miller and Gurley, Ill. St. Mus., Bull. 6, p. 31, pl. 4, figs. 20–22, 1895.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 741, figs. 1331, 1897.
 Sil. (Niagaran-Laurel ls.): St. Paul, Ind.
- Cylicocrinus spinosus** Springer.
 Springer, Amer. Sil. Crin., p. 44, pl. 7, figs. 30, 30a, 1926.
 Sil. (Niagaran-Laurel ls.): St. Paul, Ind.
- Cylicocrinus** Jaekel. Genotype: *Melocrinus?* *rigidus* Angelin.
 Botryocrinidae (Inadunata-Fistulata). Sil.
 Jaekel, Pal. Zeits., 3, p. 60, 1918.
- Cylicocrinus crotalurus* Jaekel = *C. scolopendra*.
- Cylicocrinus rigidus** (Angelin).
Melocrinus? *rigidus* Angelin, Icon. Crin. Suec., p. 20, pl. 21, fig. 3, 1878.
 Sil. (Gotlandian): Follingbo, Island of Gotland.
- Cylicocrinus scolopendra** (Bather).
Herpetocrinus scolopendra Bather, Königl. Sv. Vet. Akad. Handl., 25, pp. 53, 123, 175 pl. 2, figs. 78–82, 1893.
Streptocrinus crotalurus Bather, (not Angelin) Königl. Sv. Vet. Akad. Handl., 25, p. 123, pl. 2, figs. 78–82, pl. 6, figs. 194–198; also p. 176 (note), 1893.

- Cyliocrinus crotalurus* Jaekel, Pal. Zeits., 3, p. 60, 1918.
Sil. (Gotlandian): Follingbo, Island of Gotland.
- Cypellocrinites Steininger = Cupressocrinites.
- Cypellocrinus Bather = Cupressocrinites.
- Cyphocrinus** S. A. Miller. Genotype: *C. gorbyi* S. A. Miller.
Dimerocrinitidae (Camerata). Sil.
S. A. Miller, 18th Rep. Dep. Geol. Nat. Res. Ind., p. 304, 1894 (adv. pub., 1892, p. 50).—Bather, Treatise Zool. (Lankester), pt. 3, p. 199, 1900.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 75, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 187, 1913; Amer. Sil. Crin., p. 14, 1926.
- Hyptiocrinus* Wachsmuth and Springer, Amer. Geol., 10, p. 138, 1892; N. Amer. Crin. Cam., p. 200, 1897. (Genotype: *H. typus* Wachsmuth and Springer).
- Cyphocrinus chicagoensis** Weller.
Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 76, pl. 1, figs. 1-4, 1900
Sil. (Niagaran-Racine dol.): Bridgeport, Ill.
- Cyphocrinus gorbyi** S. A. Miller.
S. A. Miller, 18th Rep. Dep. Geol. Nat. Res. Ind., p. 305, pl. 7, figs. 14-16, 1894 (adv. pub. 1892, p. 51).—Springer, Amer. Sil. Crin., p. 15, pl. 1, figs. 15-18, 1926.
Hyptiocrinus typus Wachsmuth and Springer, Amer. Geol., 10, p. 138, 1892; N. Amer. Crin. Camerata, p. 201, pl. 19, figs. 6 a-c, 1897.
Sil. (Niagaran-Laurel ls.): St. Paul, Ind.
- Cypressocrinites Steininger = Cupressocrinites.
- Cypressocrinus Steininger = Cupressocrinites.
- Cyrtidocrinus Angelin = Lecanocrinus.
- Cystocrinus** Roemer. Genotype: *C. tennesseensis* Roemer.
Roemer, Sil. Fauna West Tenn., p. 56, 1860. (Uncertain; detached columns.)
- Cystocrinus tennesseensis* Roemer.
Roemer, Die Sil. Fauna West Tenn., p. 56, pl. 4, figs. 8 a-d, 1860.—S. A. Miller, N. Amer. Geol. Pal., p. 237, text fig. 279, 1889.—Bather, Geol. Mag., (4), 5, p. 327, text fig. 11, 1898; Treatise Zool. (Lankester), pt. 3, p. 133, fig. 50-2, 1900
Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.
- Cystoidosaccus** Faber. Genotype: *C. fultoni* Faber.
?Heterocrinidae (Inadunata-Fistulata). Early Sil.
Faber, Amer. Midland Nat., 11, no. 9, p. 481, 1929.
- Cystoidosaccus fultoni** Faber.
Faber, Amer. Midland Nat., 11, no. 9, p. 482, pl. 35, figs. 4, 5, 1929.
Early Sil. (Richmond-Up. Elkhorn fm.): Elkhorn Creek, near Richmond, Indiana.
- Cytocrinus** Roemer. Genotype: *C. laevis* Roemer.
Melocrinitidae (Camerata). Sil.
Roemer, Sil. Fauna W. Tenn., p. 46, 1860.—Zittel, Handb. Pal., 1, p. 368, 1879.—Springer, Zittel-Eastman Textb. Pal., 1, p. 190, 1913.
- Turbincrinites* Troost (Ms.) Wood, U. S. Nat. Mus., Bull. 64, p. 44, 1909. (Genotype: *T. verneuili* Troost Ms.)
- Turbincrinus* Wachsmuth and Springer, Rev. Pal., pt. 2, p. 237 (411), 1881.—Hall, 11th Rep. Ind. Geol. Surv. Nat. Res., p. 269, 1882.—Bather, Treatise Zool. (Lankester), pt. 3, p. 161, 1900.
- Cytocrinus laevis** Roemer.
Roemer, Sil. Fauna West Tenn., p. 46, pl. 4, figs. 2 a-c, 1860.—Springer, Amer. Sil. Crin., p. 28, pl. 5, figs. 7, 8, 1926.
Turbincrinites verneuili (Troost, Ms.) Wood, U. S. Nat. Mus., Bull. 64, p. 44, 1909.

- Melocrinus roemeri* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 201, pl. 22, figs. 11a, b, 1897.—Wood, U. S. Nat. Mus., Bull. 64, p. 44, pl. 10, figs. 11, 12, 1909.
- Sil. (Niagaran): Decatur Co., etc., Tenn. (Beech River fm.); Louisville, Ky. (Louisville, ls.).
- Cyttarocrinus** Goldring. Genotype: *Platycrinus eriensis* Hall.
Platycrinitidae (Adunata). Dev.
- Goldring, N. Y. St. Mus., Mem. 16, p. 265, 1923.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 45, 1934.
- Cyttarocrinus eriensis** (Hall).
Platycrinus eriensis Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 119, pl. 1, fig. 1, 1862.—Whitfield and Hovey, Bull. Amer. Mus. Nat. Hist., 2, pt. 3, p. 198, 1900.
Cyttarocrinus eriensis Goldring, N. Y. St. Mus., Mem. 16, p. 268, text fig. 49, pl. 36, figs. 1, 2, 1923.
Dev.: Near Hamburg, N. Y. (Tichenor ls.); 3 mi. s. Sherburne, N. Y. (Tully-Westbrook mem.).
- Cyttarocrinus jewetti** Goldring.
Cyttarocrinus? jewetti Goldring, N. Y. St. Mus., Mem. 16, p. 271, pl. 36, figs. 3-5, 1923.
Cyttarocrinus jewetti Goldring, Ann. Carnegie Mus., 24, p. 359, pl. 27, figs. 1, 2, 1935.
Platycrinus eboraceus (in error) Hall, N. Y. St. Mus., Bull. 1, pl. 1, figs. 16, 17, 1872.
Dev. (Hamilton-Low. Moscow): Bloomfield, and 2 mi. south of West Alden, N. Y.
- Cyttarocrinus rauffi** Schmidt.
Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, pp. 45, 46, text fig. 6, pl. 21, fig. 2, 1934.
Low. Dev. (Hunsrück sl): Gemunden, Germany.
- Dactylocrinus** Wachsmuth and Springer. See *Dactylocrinus* Sladen (Not Quenstedt).
- Dactylocrinus* Sladen = *Seytalocrinus*.
- Dactylocrinus** Quenstedt. Genotype: *Dimerocrinites oligoptilus* Pacht.
Ichthyocrinidae (Flexibilia). Dev.; Miss.
- Quenstedt, Petref. Deutschl., 4, p. 520, 1876.—Zittel, Handb. Pal., 1, p. 354, 1879.—Bather, Treatise Zool. (Lankester), pt. 3, p. 189, 1900.—Springer, Jour. Geol., 14, p. 518, 1906;—Zittel-Eastman Textb. Pal., 1, p. 205, 1913; Crinoidea Flexibilia, pp. 261, 304, 1920.—Thomas, Iowa Geol. Surv., 29, p. 460, 1924.
- Aristocrinus* Rowley, Amer. Geol., 16, p. 218, 1895.—Springer, Amer. Geol., 30, p. 95, 1902. (Genotype: *Taxocrinus concavus* Rowley.)
- Callawaycrinus* Rowley, Amer. Geol., 16, p. 219, 1895.
- Dimerocrinites* Pacht (not Phillips), Ver. Russ. Kais. Min. Gesell. St. Petersburg, p. 339, 1853 (sep., 1852). (Genotype: *D. oligoptilus* Pacht.)
- Dactylocrinus alpina** Springer.
Springer, Crin. Flexibilia, pp. 307, 312, pl. 41, figs. 10a, b, 1920.
Mid. Dev. (Traverse-Thunder Bay ls.): Near Alpena, Mich.
- Dactylocrinus beyrichi** (Dewalque).
Zeacrinus beyrichi Dewalque, in Fraipont, Ann. Soc. Geol. Belg., 11, p. 112, pl. 1, fig. 5, 1884.
Dactylocrinus beyrichi Springer, Crin. Flexibilia, pp. 307, 311, pl. 41, figs. 3, 4, 1920.
Up. Dev. (Frasnien): Senzeille, near Valcourt, Belgium.
- Dactylocrinus concavus** (Rowley).
Taxocrinus concavus Rowley, Amer. Geol., 12, p. 304, pl. 14, fig. 2, 1893; 13, p. 153, text figs. 3, 9, 10, 1894.
Aristocrinus concavus Rowley, Amer. Geol., 16, p. 218, 1895.

- Dactylocrinus concavus* Springer, Crin. Flexibilia, pp. 307, 309, pl. 41, figs. 7-9, 1920.—Branson and Wilson, Mo. Bur. Geol. and Mines, (2) 17, p. 67, pl. 7, figs. 4, 5, 1922.—Thomas, Iowa Geol. Surv., 29, pl. 44, figs. 6, 7, 1924.
Dev. (Snyder Creek sh.): Callaway Co., Mo.
- Dactylocrinus excavatus** (Schultze).
Zeacrinus excavatus Schultze, Denk. Kais. Akad. Wiss., Math. Naturw. Cl., 26, p. 151, text fig. 6, pl. 7, figs. 2, 2a, 1867 (adv. pub., 1866, p. 39).
Dactylocrinus excavatus Springer, Crin. Flexibilia, pp. 307, 308, pl. 41, figs. 5, 6, 1920.
Zeacrinus excavatus var. *interscapularis* Schultze, Denk. Kais. Akad. Wiss., Math. Naturw. Cl., 26, p. 152, pl. 7, figs. 3, 3a, b, 1867 (adv. pub. 1866).
Dev. (Eifelian): Kerpen and Steinfeldt, Germany.
- Dactylocrinus oligoptilus** (Pacht).
Dimerocrinites oligoptilus Pacht, Verh. Russ. Kais. Min. Gesell. St. Petersburg., p. 339, pls. 1-3, 1852.
Dimerocrinus (*Taxocrinus*?) *oligoptilus* Wenjukoff, Fauna Syst. Dev. Russl., p. 447, pl. 1, fig. 11, 1886.
Dactylocrinus oligoptilus Springer, Crin. Flexibilia, pp. 307, 310, pl. 41, figs. 1, 2, 1920.—Bekker, Arkiv. Naturk. Estlands, (1) 10, pt. 1, p. 45, pl. 5, figs. 8, 9, 1924.
Dev.: Pleskau, Iborsk, Novogorod, Russia.
- Dactylocrinus stellatimbasalis** Thomas.
Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 469, text fig. 73, pl. 44, figs. 1-5, 1924.
Dev. (Lime Creek beds): Cerro Gordo Co., Iowa.
- Dactylocrinus tardus** (Hall).
Forbesiocrinus lobatus var. *tardus* Hall, 17th Rep. N. Y. St. Cab. Nat. Hist. p. 56, 1864 (adv. pub., 1863).
Forbesiocrinus tardus Hall and Whitfield, Geol. Surv. Ohio, Pal., 2, p. 170, pl. 12, fig. 7, 1875.
Dactylocrinus tardus Springer, Crin. Flexibilia, pp. 307, 313, pl. 41, fig. 11, 1920.
Miss. (Waverlyan-Cuyahoga fm.): Richfield, Ohio.
- Daedalocrinus** Ulrich. Genotype: *D. kirki* Ulrich.
Homocrinidae (Inadunata-Fistulata). Ord.
Ulrich, in Foerste, Geol. Surv. Canada, Mem. 138, p. 97, 1924.
- Daedalocrinus bellevillensis** (W. R. Billings).
Heterocrinus bellevillensis W. R. Billings, Trans. Ottawa Field Nat. Club, no. 4, p. 49, pl. figs., 1883.—Wachsmuth and Springer, Proc. Acad. Nat. Sci. Phila., p. 392, pl. 10, fig. 8, 1890.—Bather, Geol. Mag., (4) 6, p. 33, text fig. 5, 1899; Treatise Zool. (Lankester), pt. 3, p. 146, text fig. 58-2, 1900.
Daedalocrinus bellevillensis Ulrich, in Foerste, Geol. Surv. Canada, Mem. 138, pp. 83, 97, 1924.
Ord. (Trenton-Hull ls.): Belleville, Kirkfield, and Ottawa, Ont., Can.
- Daedalocrinus kirki** Ulrich.
Ulrich, in Foerste, Geol. Surv. Canada, Mem. 138, pp. 97, 98, text fig. 13, 1924.
Ord. (Trenton-Hull ls.): Kirkfield, Ont., Canada.
- Daemenocrinites** Troost = **Talarocrinus**.
Daemenocrinus Bather = **Talarocrinus**.
- Dasciocrinus** Kirk. Genotype: *Cyathocrinus florealis* Yandell and Shumard.
Poteriocrinidae (Inadunata-Fistulata). Miss.
Kirk, Jour. Washington Acad. Sci., 29, no. 11, p. 472, 1939.
- Dasciocrinus cachensis** (Weller).
Pachylocrinus cachensis Weller, Geol. Surv. Ill., Bull. 41, p. 343, pl. 8, fig. 35, 1920.
Miss. (Chester-Paint Creek fm.): Cache River bluffs, Johnson Co., Ill.

Dasciocrinus florealis (Yandell and Shumard).

Cyathocrinus floralis Yandell and Shumard, Contr. Geol. Ky., p. 24, pl. fig. 1, 1847.

Pachyocrinus florealis Springer, U. S. Nat. Mus., Proc., 67, art. 9, pp. 65, 72, pl. 16, figs. 8-9a, 1926.

Dasciocrinus florealis Kirk, Jour. Washington Acad. Sci., 29, no. 11, p. 472, 1939.

Miss. (Chester-Glen Dean ls.): Grayson Co., Ky.

Dasciocrinus spinifer (Wetherby).

Scaphiocrinus spinifer Wetherby, Jour. Cincinnati Soc. Nat. Hist., 3, p. 157, pl. 5, fig. 5, 1880.

Dasciocrinus spinifer Kirk, Jour. Washington Acad. Sci., 29, no. 11, p. 472, 1939.

Miss. (Chester-Glen Dean ls.): Pulaski Co., Ky.

Dasciocrinus spinosus (Owen and Shumard).

Poteriocrinus spinosus Owen and Shumard, Jour. Acad. Nat. Sci. Phila., (2) 2, pt. 2, p. 91, pl. 11, figs. 3a, b, 1852; Rep. Geol. Surv. Wisconsin, Iowa, Minnesota, p. 598, pl. 5-B, fig. 4, 1852.

Dasciocrinus spinosus Kirk, Jour. Washington Acad. Sci., 29, no. 11, p. 472, 1939.

Miss. (Chester ls.): Kaskaskia, Ill.; Grayson Co., Ky.

Decadactylocrinites Owen. Genotype: *D. planus* Owen (nom. nud.).

Owen, Cat. Geol. Specs. Ohio Valley, 1843.—Shumard, Trans. Acad. Sci. St. Louis, 2, p. 365, 1866.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 230 (404), 1881.

Decadactylocrinus Bather, Treatise Zool. (Lankester), pt. 3, p. 202, 1900.

Decadocrinus Wachsmuth and Springer. Genotype: *Poteriocrinus* (*Scaphiocrinus*) *scalaris* Meek and Worthen.

Poteriocritinidae (Inadunata-Fistulata). Dev.—Penn.

Wachsmuth and Springer, Rev. Pal., pt. 1, p. 119 (342), 1880 (1879); pt. 3, p. 238 (162), 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 180, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 223, 1913.—Wanner, Perm. Krin. Timor, 2e

Nederl. Timor Exped. 1916, p. 178, 1924.

Decadocrinus aegina (Hall).

Poteriocrinus (*Scaphiocrinus*) *aegina* Hall, 17th Rep. Regents Univ. St. N. Y., p. 57, 1864. (Prelim. Not., 1863.)—Hall and Whitfield, Geol. Surv. Ohio, 2, pt. 2, Pal., p. 174, pl. 12, figs. 11, 12, 1875.

Decadocrinus aegina Wachsmuth and Springer, Rev. Pal., pt. 1, p. 119 (342), 1880 (1879).

Miss. (Waverlyan-Cuyahoga sh.): Richfield, Summit Co., Ohio.

Decadocrinus albersi (Miller and Gurley).

Poteriocrinus albersi Miller and Gurley, Ill. St. Mus., Bull. 9, p. 29, pl. 2, figs. 15-17, 1896.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 751, fig. 1381, 1897.

Decadocrinus albersi Ulrich, Rep. Geol. Surv. Ky., p. 181, 1917.

Miss. (Chester): Monroe Co., Ill. (Renault fm.): Huntsville, Ala. (Gasper fm.).

Decadocrinus baumgardeneri Laudon and Beane.

Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 258, pl. 18, fig. 10, 1937.

Miss. (Kinderhook-Hampton fm.): Legrand, Iowa.

Decadocrinus bayensis (Meek and Worthen).

Poteriocrinus (*Scaphiocrinus*) *bayensis* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 157, 1865; Geol. Surv. Ill., 5, p. 550, pl. 20, fig. 2, 1875.

Decadocrinus bayensis Wachsmuth and Springer, Rev. Pal., pt. 1, p. 119 (342), 1880 (1879).

Miss. (Chester-Glen Dean ls.): Bay City, Pope Co., Ill.

Decadocrinus columbiensis Wachsmuth and Springer = *Phacelocrinus columbiensis*.**Decadocrinus crassidactylus** Laudon.

Laudon, Jour. Pal., 10, p. 64, figs. 7, 8, 1936.

Up. Dev. (Cedar Valley ls.-Littleton mem.): Rapid Creek, Johnson Co., Iowa.

Decadocrinus decemnodosus Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 424, pl. 55, fig. 6, 1923.

Dev. (Portage fm.-Ithaca sh.): Three miles west of Morris, N. Y.

Decadocrinus depressus (Meek and Worthen).*Scaphiocrinus depressus* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 27, 1870.*Poteriocrinus (Scaphiocrinus) depressus* Meek and Worthen, Geol. Surv. Ill., 5, p. 492, pl. 14, fig. 8, 1873.*Decadocrinus depressus* Wachsmuth and Springer, Rev. Pal., pt. 1, p. 119 (342), 1880 (1879).

Miss. (Keokuk ls.): Crawfordsville and Indian Creek, Ind.

Decadocrinus douglassi Laudon = *Hypselocrinus douglassi*.**Decadocrinus fifensis** Wright.

Wright, Geol. Mag., 71, p. 247, text figs. 6-18, pl. 14, figs. 5, 7, 1934; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 39, pl. 8, figs. 11, 16, text figs. 46-58, 1939.

Low. Carb. (Low. Ls. gr.): Roscobie, Fife, and Inverteil, Scotland; Isle of Man.

Decadocrinus fountainensis (Worthen).*Poteriocrinus fountainensis* Worthen, Ill. St. Mus., Bull. 1, p. 17, 1882; Geol. Surv. Ill., 7, p. 286, pl. 30, fig. 11, 1883.*Decadocrinus fountainensis* Wachsmuth and Springer, Rev. Pal., pt. 3, p. 239 (163), 1886.

Miss. (Chester): Fountain Creek, Monroe Co., and Alton, Ill. (Renault fm.); Huntsville, Ala. (Gasper fm.).

Decadocrinus grandis Wachsmuth and Springer = *D. tumidulus*.**Decadocrinus grandis** Springer = *Histocrinus coreyi*.**Decadocrinus gregarius** (Williams).*Poteriocrinus (Decadocrinus) gregarius* Williams, Proc. Acad. Nat. Sci. Phila., p. 22, pl. 1, figs. 6-8, 1882.*Decadocrinus gregarius* Goldring, N. Y. St. Mus., Mem. 16, p. 421, pl. 54, figs. 16, 17, 1923.*Poteriocrinus (Decadocrinus) gregarius* var. *alpha* Williams, Proc. Acad. Nat. Sci. Phila., p. 24, 1882.*Decadocrinus gregarius* var. *alpha* Goldring, N. Y. St. Mus., Mem. 16, p. 423, 1923.*Poteriocrinus (Decadocrinus) gregarius* var. *beta* Williams, Proc. Acad. Nat. Sci. Phila., p. 24, 1882.*Decadocrinus gregarius* var. *beta* Goldring, N. Y. St. Mus., Mem. 16, p. 423, 1923.*Poteriocrinus (Decadocrinus) gregarius* var. *gamma* Williams, Proc. Acad. Nat. Sci. Phila., p. 25, 1882.*Decadocrinus gregarius* var. *gamma* Goldring, N. Y. St. Mus., Mem. 16, p. 423, 1923.

Dev. (Low. Chemung gr.): Ithaca, N. Y.

Decadocrinus gregarius vars. *alpha*, *beta*, *gamma*, Goldring = *D. gregarius*.**Decadocrinus halli** (Hall).*Scaphiocrinus halli* Hall, Jour. Boston Soc. Nat. Hist., 7, p. 308; Prelim. Descr. N. Sp. Crin., p. 7, 1861.*Decadocrinus halli* Springer, U. S. Nat. Mus., Proc., 67, art. 9, pp. 65, 91, pl. 17, figs. 4, 5, 1926.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Decadocrinus insolens Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 426, pl. 56, figs. 3-5, 1923.

Dev. (Genesee-West River sh.): Blacksmith Gulley, Bristol, N. Y.

Decadocrinus juvenis Wachsmuth and Springer = *Histocrinus juvenis*.

Decadocrinus killawogensis Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 428, pl. 54, figs. 18, 19, 1923.

Dev. (Portage): Killawog Creek, west of Killawog (Ithaca sh.); Parish Gulley, near Naples, N. Y. (Grimes ss.).

Decadocrinus lyriope (Hall).

Poteriocrinus (*Scaphiocrinus*) *lyriope* Hall, Prelim. Not. 17th Rep. Regents Univ. St. N. Y., p. 58, 1863.—Hall and Whitfield, Geol. Surv. Ohio, 2, pt. 2, p. 175, pl. 12, fig. 10, 1875.

Decadocrinus lyriope Wachsmuth and Springer, Rev. Pal., pt. 1, p. 119 (342), 1880 (1879).

Miss. (Waverlyan-Cuyahoga sh.): Richfield, Summit Co., Ohio.

Decadocrinus maniformis (S. A. Miller).

Scaphiocrinus maniformis S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 300, pl. 5, fig. 26, 1892.

Miss. (Keokuk ls.): Washington Co., and Canton, Ind.

Decadocrinus milleri (Wetherby).

Poteriocrinus milleri Wetherby, Jour. Cincinnati Soc. Nat. Hist., 3, p. 330, pl. 9, figs. 12, 13, 1881.

Decadocrinus milleri Wachsmuth and Springer, Rev. Pal., pt. 3, p. 239 (163), 1886.

Miss. (Chester-Glen Dean ls.): Pulaski and Hardin Cos., Ky.

Decadocrinus multinodosus Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 429, pl. 55, figs. 7-11, 1923.

Dev. (Hamilton-Moscow sh.): Cashong Creek, near Bellona, N. Y.

Decadocrinus multinodosus serratobrachiatus Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 431, pl. 56, figs. 1, 2, 1923.

Dev. (Hamilton-Moscow sh.): Cashong Creek, near Bellona, N. Y.

Decadocrinus nereus (Hall).

Poteriocrinus nereus Hall, 15th Ann. Rep. Regents Univ. St. N. Y., p. 121, 1862 (sep., p. 93).

Decadocrinus nereus Goldring, N. Y. St. Mus., Mem. 16, p. 419, pl. 54, figs. 11-15, 1923.

Dev. (Hamilton-Moscow sh.): Vincent, Ontario Co., N. Y.

Decadocrinus pachydactylus Laudon.

Laudon, Jour. Pal., 10, p. 64, fig. 9, 1936.

Dev. (Cedar Valley ls.-Littleton mem.): Brandon, Iowa.

Decadocrinus penicilliformis (Worthen).

Poteriocrinus penicilliformis Worthen, Ill. St. Mus., Bull. 1, p. 9, 1882; Geol. Surv. Ill., 7, p. 276, pl. 28, fig. 2, 1883.

Decadocrinus penicilliformis Wachsmuth and Springer, Rev. Pal., pt. 3, p. 239 (163), 1886.

Miss. (Keokuk ls.): Hamilton, Ill.; Bonaparte, Iowa; Indian Creek, Ind.

Decadocrinus pleias Wachsmuth and Springer = *Hypselocrinus pleias*.

Decadocrinus regularis Strimple

Strimple, Bull. Amer. Pal., 24, no. 87, p. 16 (276), pl. 2, figs. 20, 21, 1939.

Penn. (Stanton ls.): Just west of Bartlesville, Oklahoma.

Decadocrinus rugistriatus Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 432, pl. 55, figs. 1-5, 1923.

Dev. (Portage-West Hill fm.): Italy Hollow, near Naples, N. Y.

Decadocrinus scalaris (Meek and Worthen).

Poteriocrinites (*Graphiocrinus* *Scaphiocrinus*) *scalaris* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 145, 1869.

- Poteriocrinites (Scaphiocrinus) scalaris* Meek and Worthen, Geol. Surv. Ill., 5, p. 421, pl. 2, fig. 10, 1873.
- Decadocrinus scalaris* Wachsmuth and Springer, Rev. Pal. pt. 1, p. 120 (343), 1880 (1879).
- Miss. (Up. Burlington ls.): Burlington, Iowa.
- Decadocrinus spinobrachiatus** Goldring.
- Goldring, Bull. Amer. Pal., 24, no. 81, p. 15, pl. 2, figs. 1, 2, 1936.
- Dev.: Redknife River, Mackenzie River Basin, Northwest Terr., Canada.
- Decadocrinus spinulifer** Laudon.
- Laudon, Jour. Pal., 10, p. 65, figs. 10-12, 1936.
- Up. Dev. (Cedar Valley ls.-Littleton mem.): Linwood, Iowa.
- Decadocrinus subtortuosus** (Hall).
- Scaphiocrinus subtortuosus* Hall, Prelim. Not. 17th Rep. Regents Univ. St. N. Y., p. 58, 1863;—Hall and Whitfield, Geol. Surv. Ohio, 2, pt. 2, p. 177, pl. 12, figs. 15, 16, 1875.
- Decadocrinus subtortuosus* Wachsmuth and Springer, Rev. Pal., pt. 1, p. 120 (345), 1880 (1879).
- Miss. (Waverlyan-Cuyahoga sh.): Richfield, Summit Co., Ohio.
- Decadocrinus tumidulus** (Miller and Gurley).
- Cyathocrinus tumidulus* Miller and Gurley, Ill. St. Mus., Bull. 3, p. 31, pl. 3, fig. 7, 1894.
- Decadocrinus tumidulus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 138, pl. 7, figs. 4, 5, 1897. (Error as *D. grandis*).—Springer, Amer. Geol., 26, p. 139, pl. 16, figs. 5, 6, 1900; U. S. Nat. Mus., Proc., 67, art. 9, p. 92, pl. 17, fig. 6, 1926.
- Miss (Keokuk ls.): Indian Creek and Crawfordsville, Ind.
- Decadocrinus vintonensis** Thomas.
- Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 479, pl. 45, fig. 1, 1924.
- Dev. (Cedar Valley ls.): Near Vinton, Iowa.
- Delocrinus** Miller and Gurley. Genotype: *Poteriocrinus hemisphericus* Troost. Poteriocrinitidae (Inadunata-Fistulata). Penn.; Permian.
- Miller and Gurley, Jour. Cincinnati Soc. Nat. Hist., 13, pp. 9-12, 1890.—Bather, Geol. Mag., (4), 6, p. 32, 1899; Treatise Zool. (Lankester), pt. 3, p. 180, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 225, 1913.—Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 186, 1916.—Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 288, 1938; Univ. Texas Pub. No. 3945, p. 250, 1940.—Moore and Strimple, Denison Univ. Bull., Jour. Sci. Lab., 36, p. 1, 1941.
- Ceriocrinus* White, Contr. Invert. Pal., p. 6, 1880; 12th Rep. U. S. Geol. Surv. Terr., for 1878 (Hayden), p. 128, 1880; Final Rep. p. 128, 1883.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 253 (177), 1886.—Bather, Ann. Mag. Nat. Hist., (6), 5, p. 325, 1890.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, pp. 180, 237, 1924. (Genotype: *Erisocrinus planus* White.)
- Delocrinus abruptus** Moore and Plummer.
- Moore and Plummer, Univ. Texas Pub. No. 3945, p. 289, pl. 18, figs. 3, 4, text fig. 59, 1940.
- Low. Permian: Near Grand Summit, Cowley Co., Kansas (Beattie fm.): one mile northwest Pueblo, Callahan Co., Tex. (Moran fm.).
- Delocrinus allegheniensis* Burke = *Endelocrinus allegheniensis*.
- Delocrinus benthobatus** Moore and Plummer.
- Moore and Plummer, Univ. Texas Pub. No. 3945, p. 264, pl. 11, fig. 8, 1940.
- Penn. (Mineral Wells fm.): East end Barber Mtn., southwest of Mineral Wells, Palo Pinto Co., Texas.
- Delocrinus beyrichi** Wanner.
- Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 190, pl. 107 (12), fig. 1, 1916.
- Permian: Saokefi, near Baung, Timor.

Delocrinus beyrichi nustoiensis Wanner.

Wanner, Pal. Timor, XI, Perm. Rchin. Timor, 1 Teil, p. 191, pl. 107 (12), fig. 2, 1916.
Permian: Si near Nustoi, Timor.

Delocrinus bispinosus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 263, pl. 11, fig. 1, text fig. 56, 1940.

Penn. (Mineral Wells fm.): 5½ miles north-northwest Mineral Wells, Palo Pinto Co., Texas.

Delocrinus bullatus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 261, pl. 11, fig. 2, 1940.

Penn. (Millsap Lake fm.): 3 miles southeast Santo, Palo Pinto Co., Texas.

Delocrinus conicus Boos.

Boos, Jour. Pal., 3, no. 3, p. 245, pl. 27, figs. 1, 1a, 1b, 1d, 1929.

Permian (Luta ls.): Winfield, Kansas.

Delocrinus convexus Strimple.

Strimple, Bull. Amer. Pal., 29, no. 91, p. 95, pl. 8, figs. 13, 14, 1940.

Penn. (Morrow fm.): 6 miles southeast Fittstown, Okla.

Delocrinus craigii (Worthen).

Eupachycrinus craigii Worthen, Geol. Surv. Ill., 6, p. 527, pl. 32, fig. 1, 1875.

Delocrinus craigii Miller and Gurley, Jour. Cincinnati Soc. Nat. Hist., 13, p. 11, 1890.

Penn.: Vandalia, Ill.; Brazil, Ind.; Mills Co., Iowa; Santa Fe, N. Mex.

Delocrinus crassus (Wanner).

Cericrocinus crassus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 240, pl. 17, figs. 1-3, 1924.

Permian: Basleo, Timor.

Delocrinus depressus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 187, pl. 107 (12), fig. 4, pl. 108 (13), figs. 8-12, 1916.

Permian: Fatu Tonini, Basleo, Timor.

Delocrinus dubius Mather = *Paradelocrinus dubius*.

Delocrinus excavatissimus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 198, pl. 108 (13), figs. 6, 7, 1916.

Permian: Basleo, Timor.

Delocrinus excavatus Weller = *Perimestocrinus excavatus*.

Delocrinus expansus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 196, pl. 108 (13), fig. 5, 1916.

Permian: Basleo, Timor.

Delocrinus fayettensis Miller and Gurley = *Endelocrinus fayettensis*.

Delocrinus granulosis Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 265, pl. 11, figs. 5, 6, pl. 12, figs. 5, 6, 1940.—Moore and Strimple, Denison Univ. Bull., Jour. Sci. Lab., 36, p. 3, pl. 1, figs. 1-3, 1941.

Penn.: East end Barber Mtn., southwest of Mineral Wells, Palo Pinto Co., Texas (Mineral Wells fm.); Okmulgee, Okla. (Wewoka fm.): northeastern Oklahoma (Atoka-Coody ss.).

Delocrinus granulosis moniliformis Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 268, pl. 12, fig. 3, pl. 13, fig. 1, 1940.

Penn. (Mineral Wells fm.): East end Barber Mtn., southwest of Mineral Wells, Palo Pinto Co., Texas.

Delocrinus granulosis zonatus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 269, pl. 11, fig. 3, pl. 12, fig. 2, 1940.

Penn. (Mineral Wells fm.): East end Barber Mtn., southwest of Mineral Wells, Palo Pinto Co., Texas.

Delocrinus graphicus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 273, pl. 12, figs. 4, 11, 1940.

Penn. (Graford fm.): Northwest side Kyle Mtn., Palo Pinto Co., Texas.

Delocrinus harshbergeri (Beede).

Ceriocrinus harshbergeri Beede, Kansas Univ. Sci. Bull., 1, no. 6, p. 147, pl. 5, figs. 1 a-c, p. 170, 1902.

Penn.: (Osage City sh.): Topeka, Kansas.

Delocrinus hemisphericus Miller and Gurley (not Shumard) = *D. subhemisphericus*.

Delocrinus hemisphericus (Shumard).

Poteriocrinus hemisphericus Shumard, Trans. Acad. Sci. St. Louis, 1, p. 221, 1858.

Scaphiocrinus? hemisphericus Meek, Final Rep. Nebraska, p. 147, pl. 5, fig. 1, pl. 7, fig. 1, 1872.

Poteriocrinites (*Scaphiocrinus?*) *hemisphericus* Meek and Worthen, Geol. Surv. Ill., 5, p. 561, pl. 24, fig. 5, 1873.

Delocrinus hemisphericus Girty, U. S. Geol. Surv., Bull. 544, p. 34, pl. 3, figs. 9, 9a, 1913.

Delocrinus hemisphericus? Plummer and Moore, Univ. Texas Pub., no. 2132, p. 79, pl. 13, figs. 6, 7, 1921.

Delocrinus hemisphericus Boos, Jour. Pal., 3, no. 3, pl. 27, fig. 1c, 1929.

Penn.: Hinkston Creek, Boone and Lafayette Cos., Mo.; 9 miles south Council Grove, Kansas; Springfield and LaSalle, Ill.; Mills Co., Iowa; Young Co., Texas (Cisco fm.).

Delocrinus houkouensis (Tien).

Ceriocrinus houkouensis Tien, Bull. Geol. Surv. China, no. 6, p. 34, 1924 (listed).

Graphyocrinus? houkouensis Tien, Pal. Sinica, ser. B, vol. 5, p. 41, text fig. 7, pl. 2, figs. 5 a, b, pl. 3, figs. 3 a-c, 1926.

Carb. (Taiyuan ser.): Lin Cheng coal fields, S. Chihli, N. China.

Delocrinus inflexus Miller and Gurley = *Paradelocrinus inflexus*.

Delocrinus major Weller.

Weller, Jour. Geol., 17, p. 628, pl. 1, figs. 6, 7, 1909.—Moore and Plummer, Univ. Texas Pub. No. 3945, p. 292, pl. 15, fig. 10, text fig. 60, 1940.

Permian (Cibolo ls.): 3 miles north Shafter, Presidio Co., Texas.

Delocrinus? malaianus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 202, text fig. 53, pl. 107 (12), fig. 8, 1916.

Permian: Between Niki Niki and Noil Fatoe, Timor.

Delocrinus matheri Moore and Plummer.

Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 289, pl. 13, fig. 3; pl. 14, fig. 7a, 1938.

Penn. (Brentwood ls.): North of Ft. Gibson, Okla.

Delocrinus megalobrachiis (Beede).

Erisocrinus megalobrachiis Beede, Kansas Univ. Quart., 8, no. 3, p. 124, pl. 32, figs. 1a, b, 1899.

Delocrinus megalobrachiis Moore and Plummer, Univ. Texas Pub. No. 3945, p. 152, 1940.—Moore and Strimple, Denison Univ. Bull., Jour. Sci. Lab., 36, p. 5, pl. 1, figs. 5, 6, 1941.

Penn. (Osage-Howard ls.): Topeka, Kansas.

Delocrinus missouriensis Miller and Gurley.

Miller and Gurley, Jour. Cincinnati Soc. Nat. Hist., 13, p. 14, pl. 2, figs. 11-13;
16th Rep. Geol. Surv. Ind., p. 336, pl. 2, figs. 11-13, 1890.

Penn. (Missouri ser.-? Argentine ls.): Kansas City, Mo.

Delocrinus nodosarius Strimple.

Strimple, Bull. Amer. Pal., 24, no. 87, p. 8 (368), pl. 1, figs. 13, 14, 17, 1939.

Penn. (Stanton ls.): Just west of Bartlesville, Okla.

Delocrinus papulosus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 274, pl. 12, fig. 7, pl. 13, fig. 4,
1940.

Penn. (Graford fm.): Northwest side Kyle Mtn., Palo Pinto Co., Texas.

Delocrinus parinodosarius Strimple.

Strimple, Bull. Amer. Pal., 25, no. 92, p. 6 (104), pl. 1 (9), figs. 3, 5, 8, 1940.

Penn. (Wewoka fm.): Near Holdenville, Okla.

Delocrinus paucinodus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 276, pl. 13, fig. 2, 1940.

Penn. (Palo Pinto fm.): West side Martins Lake, Wise Co., Texas.

Delocrinus? pendens Moore and Plummer.

Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 292, text fig. 33,
1938.

Acantharthropterum pendens Moore and Plummer, Univ. Texas Pub., No. 3945,
p. 255, 1940.

Penn. (Brentwood ls.): North of Ft. Gibson, Okla.; Woolsey, Ark.

Delocrinus pentanodus Mather = *Utharocrinus pentanodus*.

Delocrinus? perexcavatus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 284, pl. 4, fig. 6, text fig. 58, 1940.

Penn. (Gaptank fm.): Wolf Camp, near Marathon, Brewster Co., Texas.

Delocrinus pictus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 270, pl. 12, fig. 1, pl. 13, fig. 5,
text fig. 56, 1940.

Penn. (Graford fm.): East end McKenzie (Long) Mtn., Palo Pinto Co., Texas.

Delocrinus priscus (Rowley).

Ceriocrinus? priscus Rowley, in Greene, Contr. Indiana Pal., 1, pt. 16, p. 161, pl. 47,
figs. 14-16, 26, 1903.

Miss. (Chester ls.): Newmans Ridge, E. Tenn.

Delocrinus puebloensis Moore and Plummer.

Moore and Plummer, Univ. Texas Pub., No. 3945, p. 288, pl. 15, fig. 7, 1940.

Low. Perm. (Putnam fm.): 3 miles north Putnam, Callahan Co., Texas.

Delocrinus quadratus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 294, pl. 14, fig. 8, pl. 15, fig. 8,
text fig. 61, 1940.

Low. Permian (Cibolo ls.): Sierra Alta Creek, Cibolo Ranch, 3 miles north Shafter,
Presidio Co., Texas.

Delocrinus rotundatus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 200, pl. 107 (12), fig. 3, pl.
108 (13), fig. 3, 1916.

Permian: Basleo, Timor.

Delocrinus rugosus (Shumard).

Poteriocrinus rugosus Shumard, Trans. Acad. Sci. St. Louis, 1, p. 223, 1858.

Delocrinus rugosus Moore and Plummer, Univ. Texas Pub. No. 3945, p. 255, 1940.

Low. Penn.: Putnam Co., Mo.

Delocrinus rugosus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 194, pl. 108 (13), fig. 4, 1916.

Ceriocrinus rugosus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 240, pl. 17, figs. 10, 11, 1924.

Permian: Basleo, Timor.

Delocrinus serratmarginatus (Yakovlev).

Ceriocrinus serratmarginatus Yakovlev, Bull. Geol. Prosp. Serv. USSR, 49, pp. 96, 102, pl. 1, figs. 7 a-c, 1930.

Permian: Krasnooufmsk, Russia.

Delocrinus somersi (Whitfield).

Cyathocrinus somersi Whitfield, Ann. N. Y. Acad. Sci., 2, p. 226, 1882; 5, p. 596, pl. 15, figs. 4, 5, 1891; Geol. Surv. Ohio, 3, pl. 11, figs. 4, 5, 1893.

Delocrinus somersi Moore and Plummer, Univ. Texas Pub. No. 3945, pp. 73, 255, 1940.

Penn. (Bogs ls.): Carbon Hill, Hocking Co., Ohio.

Delocrinus subcoronatus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 280, pl. 17, fig. 1, 1940.

Penn. (Mineral Wells fm.): $\frac{1}{4}$ mile northwest Union Hill School, Palo Pinto Co., Texas.

Delocrinus subhemisphericus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, pp. 253, 258, pl. 11, fig. 4, pl. 20, fig. 3, text figs. 56, 57, 1940.

Delocrinus hemisphericus Miller and Gurley (not Shumard), Jour. Cincinnati Soc. Nat. Hist., 13, p. 12, pl. 2, figs. 8-10; 16th Rep. Geol. Surv. Ind., p. 335, pl. 2, fig. 8, p. 370, pl. 10, fig. 5, 1890.

Ceriocrinus hemisphericus Keyes, Mo. Geol. Surv., 4, p. 220, pl. 28, figs. 2, 5, 1894.

Penn. (Missouri ser.-Lane sh.): Kansas City, Mo.

Delocrinus texanus Weller = *Endelocrinus texanus*.

Delocrinus tumidus Strimple = *Endelocrinus tumidus*.

Delocrinus verbeeki (Wanner).

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 192, pl. 107 (12), figs. 5, 6, 9, pl. 109 (14), fig. 7, 1916.

Ceriocrinus verbeeki Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 238, pl. 17, fig. 5, 1924.

Permian: Basleo, Timor.

Delocrinus verbeeki levis Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 194, 1916.

Permian: Basleo, Timor.

Delocrinus verbeeki pumila Wanner = *Apographiocrinus pumilus*.

Delocrinus verbeeki vermistriatus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 193, pl. 107 (12), fig. 7, 1916.

Permian: Basleo, Timor.

Delocrinus verus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 283, pl. 13, fig. 3, 1940.

Penn.: 3 miles northwest of Salesville, 3 miles southeast of Oran, Palo Pinto Co., Texas (Palo Pinto ls.); East of Bartlesville, Okla., and Cedar Hill, one mile north of Coffeyville, Kansas (Dennis ls.-Winterset ls. mem.).

Delocrinus vulgatus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 286, pl. 18, figs. 1, 2, 1940.

Penn.: Young Co., and 2 miles north of Breckenridge, Stephens Co., Texas (Harpersville fm.); 7 miles southwest of Strohm, Osage Co., Okla. (Brownville ls.).

Delocrinus waughi Moore and Strimple.

Moore and Strimple, Denison Univ. Bull., Jour. Sci. Lab., 36, p. 9, pl. 1, figs. 7, 1941.
Perm. (Foraker ls.-Hughes Creek sh.): 4 m. northeast Eskridge, Kans.

Delocrinus wewokaensis Strimple.

Strimple, Bull. Amer. Pal., 25, no. 92, p. 105, pl. 9, figs. 2, 4, 6, 1940.
Penn. (Wewoka fm.): Near Holdenville, Okla.

Delocrinus wolforum Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 278, pl. 12, fig. 9, 1940.
Penn (Graham fm.): $\frac{1}{2}$ mile south New Byrds Store, Brown Co., Texas.

Deltacrinus Ulrich. Genotype: *Cheirocrinus clarus* Hall.

Calceocrinidae (Inadunata-Fistulata). Sil.; Dev.

Ulrich, 14th Rep. Geol. Surv. Minn., p. 100, 1886.—Springer, Zittel-Eastman Textb. Pal., 1, p. 213, 1913; Amer. Sil. Crin., pp. 101-103, 1926.

Deltacrinus clarus (Hall).

Cheirocrinus clarus Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 116, pl. 1, fig. 17, 1862.

Deltacrinus clarus Ulrich, 14th Rep. Geol. Surv. Minn., p. 109, 1886.—Goldring, N. Y. St. Mus., Mem. 16, p. 334, text fig. 54, pl. 41, fig. 5, 1923.

Dev. (Hamilton-Moscow sh.): Canandaigua Lake, N. Y.

Deltacrinus contractus (Ringueberg).

Calceocrinus contractus Ringueberg, Ann. N. Y. Acad. Sci., 4, p. 404, pl. 10, figs. 12a, b, 1889.

Deltacrinus contractus Bassler, U. S. Nat. Mus., Bull. 92, p. 393, 1915.
Sil. (Niagaran-Gasport ls.): Lockport, N. Y.

Deltacrinus dactylus Springer = *Halysiocrinus dactylus*.

Deltacrinus nodosus Springer = *Halysiocrinus nodosus*.

Dendrocrinus Hall. Genotype: *D. longidactylus* Hall.

Dendrocrinidae (Inadunata-Fistulata). Ord.; Sil.

Hall, Nat. Hist. N. Y., Pal., 2, p. 193, 1852.—Billings, Geol. Surv. Canada, Can. Org. Rem., Dev. 4, p. 35, 1859.—Meek, Geol. Surv. Ohio, Pal., 1, p. 20, 1873.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 75 (298), 1880 (1879).—Zittel, Handb. Pal., 1, p. 361, 1879.—Bather, Ann. Mag. Nat. Hist., (6), 5, p. 324, 1890; Treatise Zool. (Lanckester), pt. 3, p. 179, 1900.—Cumings, 32d Rep. Dep. Geol. Nat. Res. Ind., p. 711, 1908.—Springer, Geol. Surv. Canada, Mem. 15-P, p. 29, 1911; Zittel-Eastman Textb. Pal., 1, p. 215, 1913.—Fritz, 32d Ann. Rep. Ontario Dep. Mines, 32, pt. 7, p. 16, 1925.

Dendrocrinus acutidactylus Billings.

Billings, Geol. Surv. Canada, Rep. Prog. 1853-1856, p. 266, 1857; Canadian Org. Rem., Dev. 4, p. 37, pl. 3, figs. 2 a, b, 1859.

Ord. (Trenton): Montreal and Hull, Quebec, and Ottawa, Ont., Canada (Hull ls.); Mercer Co., Ky. (Curdsville ls.).

Dendrocrinus alternatus (Hall).

Poteriocrinus alternatus Hall, Nat. Hist. N. Y., Pal., 1, p. 83, pl. 28, figs. 1 a-f, 1847.

Dendrocrinus alternatus Wachsmuth and Springer, Rev. Pal., pt. 1, p. 76 (299), 1880 (1879).—Ockerman, Trans. Wis. Acad. Sci., 22, p. 113, pl. 1, fig. 9, 1926.

Ord. (Up. Trenton ls.): Turin and Lowville, Lewis Co., and Middleville, Herkimer Co., N. Y.

Dendrocrinus ancilla Hall = *Homocrinus ancilla*.

Dendrocrinus angulatus Billings = *Palaeocrinus angulatus*.

Dendrocrinus angustatus (Meek and Worthen).

Homocrinus angustatus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 30, 1870.

Dendrocrinus angustatus Wachsmuth and Springer, Rev. Pal., pt. 1, p. 76¹(299), 1880 (1879).

Early Sil. (Richmond-Maquoketa sh.): Mount Carroll, Ill.

Dendrocrinus caduceus (Hall).

Poteriocrinus (*Dendrocrinus*) *caduceus* Hall, 24th Rep. N. Y. St. Cab. Nat. Hist., p. 208, pl. 5, figs. 7, 8, 1872 (adv. pubs. 1866, p. 3; 1871, pl. 1, figs. 7, 8).—Meek, Geol. Surv. Ohio, Pal., 1, p. 26, pl. 3, figs. 1 a-c, 1873.

Early Sil. (Richmond): Lebanon, Ohio, and Indiana (Waynesville ls.-Blanchester div.); Waynesville, Ohio (Arnheim sh.).

Dendrocrinus cambriensis Hicks.

Hicks, Quart. Jour. Geol. Soc. London, 29, p. 51, pl. 4, figs. 17-20, 1873.

Ord. (Lower Tremadoc slates): Ramsey Island and St. Davids, S. Wales.

Dendrocrinus casei Meek.

Meek, Amer. Jour. Sci., (3), 2, p. 295, 1871.

Poteriocrinites (*Dendrocrinus*) *casei* Meek, Geol. Surv. Ohio, 1, pt. 2, p. 28, pl. 3, figs. 2 a-c, 1873.

Dendrocrinus casei Wachsmuth and Springer, Proc. Acad. Nat. Sci. Phila., p. 392, pl. 9, fig. 12, 1890.—Bather, Geol. Mag., (4), 6, p. 35, text fig. 13, 1899; Treatise Zool. (Lankester), pt. 3, p. 120, text fig. 26-3, 1900.

Early Sil. (Richmond): Richmond, Ind. (Liberty or Whitewater fm.); Warren Co., etc., Ohio, and Indiana (Waynesville ls.).

Dendrocrinus celsus Ringueberg.

Ringueberg, Proc. Acad. Nat. Sci. Phila., p. 132, pl. 7, fig. 3, 1888.

Sil. (Niagaran-Rochester sh.): Lockport, N. Y.

Dendrocrinus cincinnatiensis (Meek).

Poteriocrinites (*Dendrocrinus*) *cincinnatiensis* Meek, Proc. Acad. Nat. Sci. Phila., p. 312, 1871; Geol. Surv. Ohio, 1, pt. 2, p. 20, pl. 3, figs. 5 a, b, 1873.

Dendrocrinus cincinnatiensis Wachsmuth and Springer, Rev. Pal., pt. 1, p. 76 (299), 1880 (1879).

Ord. (Maysville-Fairmount ls.): Cincinnati, Ohio.

Dendrocrinus conjugans Billings = *Cupuloerinus conjugans*.

Dendrocrinus? *curtus* Ulrich = *Merocrinus curtus*.

Dendrocrinus cylindricus Billings = *Cupuloerinus conjugans*.

Dendrocrinus dyeri (Meek).

Poteriocrinites (*Dendrocrinus*) *dyeri* Meek, Proc. Acad. Nat. Sci. Phila., p. 310, 1871; Geol. Surv. Ohio, 1, pt. 2, p. 24, pl. 3, figs. 3a, b, 1873.

Dendrocrinus dyeri Wachsmuth and Springer, Rev. Pal., pt. 1, p. 76 (299), 1880 (1879).

Ord. (Up. Trenton-Cynthiana fm.): Covington, Ky.

Dendrocrinus erraticus S. A. Miller.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 4, p. 316, pl. 8, figs. 1, 1a, 1881.

Early Sil. (Richmond-Waynesville ls.): Cincinnati, Ohio (drift).

Dendrocrinus gracilis (Hall).

Poteriocrinus gracilis Hall, Nat. Hist. N. Y., Pal., 1, p. 84, pl. 28, figs. 2 a-f, 1847.

Dendrocrinus gracilis Wachsmuth and Springer, Rev. Pal., pt. 1, p. 76 (299), 1880 (1879).

Ord.: Middleville, N. Y. (Trenton ls.); three miles west Green Bay, Wis. (Prosser ls.).

Dendrocrinus gregarius Billings.

Billings, Geol. Surv. Canada, Rep. Prog. 1853-1856, p. 265, 1857; Can. Org. Rem., dec. 4, p. 36, pl. 3, figs. 1 a-c, 1859.

Ord. (Up. Trenton): Ottawa, Ontario, Canada.

Dendrocrinus humilis Billings = *Cupulocrinus humilis*.

Dendrocrinus jewetti Billings = *Cupulocrinus jewetti*.

***Dendrocrinus kayi* Slocom.**

Slocom, Iowa Geol. Surv., 29, p. 335, pl. 29, figs. 1-4, 1924.—Thomas and Ladd, Univ. Iowa Studies, 11, pl. 3, fig. 221, 1926.

Early Sil. (Richmond-Up. Maquoketa, Brainard sh.): Pattersons Spring, near Brainard, Iowa.

Dendrocrinus latibrachiatus Billings = *Cupulocrinus latibrachiatus*.

***Dendrocrinus longidactylus* Hall.**

Hall, Nat. Hist. N. Y., Pal., 2, p. 193, pl. 43, figs. 1 a-k, pl. 42, figs. 7 a, b, 1852.—Bather, Treatise Zool. (Lankester), pt. 3, p. 120, text fig. 25-2, 1900.—Springer, Geol. Surv. Canada, Mem. 15-P, p. 29, text fig. 1, 1911.

Sil. (Niagaran-Rochester sh.): Lockport, N. Y.

***Dendrocrinus minutus* Springer.**

Springer, in Twenhofel, Geol. Surv. Canada, Mem. 154, p. 137, pl. 4, fig. 6, 1928.

Early Sil. (Richmond-English Head fm.): Carleton Point, Anticosti.

***Dendrocrinus modestus* Safford.**

Dendrocrinus modestus Safford, Geol. Tenn., p. 285, 1869. (Not defined.)

Ord. (Black River-Lebanon ls.): Central Basin, Tenn.

***Dendrocrinus navigiolum* S. A. Miller.**

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 3, p. 235, pl. 7, figs. 6, 6a, 1880.—Ehrenberg, Acta Zool., 3, pp. 275, 276, fig. 6, 1922.

Ord. (Eden-Fulton sh.): Cincinnati, Ohio.

***Dendrocrinus? nodobrachiatus* Ringueberg.**

Ringueberg, Ann. N. Y. Acad. Sci., 5, p. 303, pl. 3, fig. 6, 1890.

Sil. (Niagaran-Gasport ls.): Lockport, N. Y.

Dendrocrinus nucleus Hall = *Botryocrinus nucleus*.

***Dendrocrinus oswegoensis* Meek and Worthen.**

Meek and Worthen, Geol. Surv. Ill., 3, p. 333, pl. 4, fig. 4, text fig., 1868.—S. A. Miller, N. Amer. Geol. Pal., p. 238, fig. 284, 1889.

Early Sil. (Richmond-Maquoketa sh.): Oswego, Ill.

***Dendrocrinus posticus* (Hall).**

Poteriocrinus posticus Hall, 24th Rep. N. Y. St. Cab. Nat. Hist., p. 209, pl. 5, figs. 5, 6, 1872 (adv. pubs. 1866; 1871).

Poteriocrinites (Dendrocrinus) posticus Meek, Geol. Surv. Ohio, 1, pt. 2, p. 22, pl. 3, figs. 4 a-c, 1873.

Early Sil. (Richmond-Waynesville or Liberty ls.): Near Cincinnati, Ohio.

***Dendrocrinus proboscidiatus* Billings.**

Billings, Geol. Surv. Canada, Rep. Prog. 1853-1856, p. 267, 1857; Can. Org. Rem., dec. 4, p. 38, pl. 3, figs. 3 a-c, 1859.

Ord.: Montreal, Quebec, and Kirkfield, Ont., Canada (Hull ls.); Ottawa, Ont. (Up. Trenton ls.).

***Dendrocrinus retractilis* Walcott.**

Walcott, 35th Rep. N. Y. St. Mus. Nat. Hist., p. 211, pl. 17, fig. 4, 1884.

Ord. (Trenton ls.): Trenton Falls, N. Y.

***Dendrocrinus rusticus* Billings.**

Billings, Geol. Surv. Canada, Rep. Prog. 1853-1856, p. 270, 1857; Can. Org. Rem., dec. 4, p. 41, pl. 3, figs. 7a, b, 1859.

Ord. (Trenton-Hull ls.): Ottawa, Ontario, Canada.

***Dendrocrinus similis* Billings.**

Billings, Geol. Surv. Canada, Rep. Prog. 1853-1856, p. 267, 1857.

Ord. (Trenton-Hull ls.): Ottawa, Ontario, Canada.

Dendrocrinus tener Billings.

Billings, Cat. Foss. Anticosti, p. 9, 1866. (Not recognizable.)

Early Sil. (Richmond-Vaurial or English Head fm.): West End, Anticosti.

Deocrinus Hudson. Genotype: *Rhodocrinus asperatus* Billings.

Rhodocrinitidae (Camerata). Ord.

Hudson, N. Y. St. Mus., Bull. 107, p. 121, 1907.

Deocrinus asperatus (Billings).*Rhodocrinus asperatus* Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 4, p. 27, pl. 1, figs. 4 a-e, 1859.*Deocrinus asperatus* Hudson, N. Y. St. Mus., Bull. 107, p. 121, 1907.

Ord. (Chazyan-Aylmer fm.): Montreal, Canada.

Depaocrinus Wanner. Genotype: *D. ottowi* Wanner.

Poteriocrinidae (Inadunata-Fistulata). Permian.

Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 152, 1937.

Depaocrinus ottowi Wanner.

Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 152, text fig. 47, pl. 10, figs. 14, 15, 1937.

Permian: Basleo, Timor.

Desmidocrinus Angelin. Genotype: *D. pentadactylus* Angelin.

Carpocrinidae (Camerata). Sil.

Angelin, Icon. Crin. Suec., p. 5, 1878.—Zittel, Handb. Pal., 1, p. 367, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 108 (282), 1881.—Bather, Treatise Zool. (Lankester), pt. 3, p. 166, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 194, 1913; Amer. Sil. Crin., p. 43, 1926.

Desmidocrinus dubius Springer.

Springer, Amer. Sil. Crin., p. 43, pl. 7, fig. 25, 1926.

Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Desmidocrinus heterodactylus Angelin.

Angelin, Icon. Crin. Suec., p. 6, pl. 16, figs. 16, 16a, 1878.—Springer, Zittel-Eastman Textb. Pal., 1, p. 194, fig. 296, 1913.

Sil.: Follingbo, Island of Gotland (Gotlandian); Dudley, England (Wenlock ls.).

Desmidocrinus laurelianus Springer.

Springer, Amer. Sil. Crin., p. 43, pl. 7, figs. 24-24b, 1926.

Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Desmidocrinus macrodactylus Angelin.

Angelin, Icon. Crin. Suec., p. 6, pl. 16, figs. 20, 21, 1878.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Desmidocrinus pentadactylus Angelin.

Angelin, Icon. Crin. Suec., p. 5, pl. 16, figs. 15, 22, 1878.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Desmidocrinus tridactylus Angelin.

Angelin, Icon. Crin. Suec., p. 6, pl. 16, figs. 4, 4b, 1878.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Diabolocrinus Wachsmuth and Springer. Genotype: *D. perplexus* Wachsmuth and Springer.

Rhodocrinitidae (Camerata). Ord.

Wachsmuth and Springer, N. Amer. Crin. Cam., pp. 211, 249, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 200, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 188, 1913.

Diabolocrinus asperatus (Miller and Gurley).

Archaeocrinus asperatus Miller and Gurley, Ill. St. Mus., Bull. 5, p. 19, pl. 2, figs. 7-9, 1894.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 734, figs. 1296, 1297, 1897.

Diabolocrinus asperatus Bassler, U. S. Nat. Mus., Bull. 92, pt. 1, p. 403, 1915.

Diabolocrinus hieroglyphicus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 252, pl. 10, figs. 5 a-c, 1897.

Ord. (Chazyan-Heiskell sh.): Knox Co., Tenn.

Diabolocrinus hieroglyphicus Wachsmuth and Springer = *D. asperatus*.

Diabolocrinus perplexus Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 250, pl. 11, figs. 1a, b, d, 1897.

Ord. (Chazyan-Heiskell sh.): Near Knoxville, Tenn.

Diabolocrinus vespéralis (White).

Rhodocrinus vespéralis White, U. S. Nat. Mus., Proc., 2, p. 252, pl. 1, figs. 11, 12, 1880 (adv. pub., 1879); 12th Rep. U. S. Geol. Surv. Terr., p. 129, pl. 35, figs. 4a, b, 1880; Final Rep., 1883, p. 129.

Diabolocrinus vespéralis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 219, 251, pl. 11, figs. 1c, d, 1897.

Gilbertsocrinites americanus Troost, Amer. Jour. Sci. and Arts, (2), 8, p. 419, 1849 (nom. nud.).

Lyriocrinus sculptilis S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 5, p. 83, pl. 3, figs. 6, 6a, b; p. 117 (as *L. sculptus*), 1882.

Ord. (Chazyan-Heiskell sh.): Near Knoxville, Tenn. (Not Coal Measures near Humboldt, Kan., nor Helderbergian of Tenn.)

Diamenocrinus Oehlert. Genotype: *D. jouani* Oehlert.

Rhodocrinitidae (Camerata). Low. Dev.

Oehlert, Bull. Soc. Géol. France, 3, (19), p. 836, 1891.—Jaekel, Pal. Abhandl., 7, p. 2, 1895.—Bather, Treatise Zool. (Lankester), pt. 3, p. 200, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 189, 1913.—Ehrenberg, Acta Zool., 3, p. 276, 1922.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, pp. 121, 143, 1934.

Diamenocrinus gonatodes (Müller).

Rhodocrinus gonatodes Müller, in Zeiler and Wirtgen, Verh. Nat. ver. Jahrg., 12, p. 12, pl. 3, fig. 3, pl. 4, fig. 1, pl. 5, figs. 1-3, pl. 10, fig. 2 (not fig. 1), 1855.

Diamenocrinus gonatodes Jaekel, Pal. Abhandl., 7, p. 28, 1895.

Low. Dev. (Coblentzian): Niederlahnstein, Germany.

Diamenocrinus grandis Jaekel.

Jaekel, Pal. Abhandl., 7, p. 29, 1895.

Rhodocrinus gonatodes Müller, in Zeiler and Wirtgen, Verh. Nat. Jahrg., 12, p. 12, pl. 4, fig. 2, 1855.

Low. Dev. (Coblentzian): Silberschmelze, Ems, Germany.

Diamenocrinus jouani Oehlert.

Oehlert, Bull. Soc. Geol. France, (3), 19, p. 836, text fig. 2, pl. 18, figs. 2, 2a, 3, 4, 1891.—Kirk, U. S. Nat. Mus., Proc., 41, p. 57, 1911.—Ehrenberg, Acta Zool., 3, p. 277, fig. 8, 1922.

Dev.: Pont-aux-Bouchers, near Nehou (Manche), France.

Diamenocrinus opitzi Schmidt.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 121, pl. 33, p. 143, 1932.

Low. Dev. (Hunsrück sl.): Bundenbach, Germany.

Diamenocrinus pachydactylus Jaekel.

Jaekel, Pal. Abhandl., 7, p. 28, 1895.

- Rhodocrinus gonatodes* Müller in Zeiler and Wirtgen, Verh. Nat. ver. Jahrg., 12, p. 12, pl. 5, fig. 4, pl. 10, fig. 1, 1855.
Low. Dev. (Coblentzian): Near Coblenz, Germany.
- Diamenocrinus stellatus** Jaekel.
Jaekel, Pal. Abhandl., 7, p. 28, 1895.
Low. Dev.: Sieberg, Germany.
- Dichirocrinus* Jaekel.
Jaekel, Pal. Abhandl., 3, p. 88, 1918. (No species named.)
- Dichocrinites* Geinitz = *Dichocrinus*.
- Dichocrinus** Münster. Genotype: *D. radiatus* Münster.
Hexacrinitidae (Adunata). Low. Carb.
Münster, Beitr. Petref., 1, p. 2, 1839.—Austin and Austin, Mon. Rec. Foss. Crin., p. 45, 1843.—De Koninck and Lehon, Rech. Crin. Carb. Belg., p. 146, 1853.—Zittel, Handb. Pal., 1, p. 365, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 81 (255), 1881; N. Amer. Crin. Cam., p. 753, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 159, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 201, 1913.—Jaekel, Pal. Zeits., 3, p. 38, 1918.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 39, 1926.
Cotyledonocrinus Casseday and Lyon, Proc. Acad. Arts and Sci., 5, p. 26, 1862.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 77 (251), 1881. (Genotype: *C. pentalobus* Casseday and Lyon.)
Dichocrinites Geinitz, Grund. Verstein.-Kunde, p. 560, 1846.
- Dichocrinus angustus** White.
White, Proc. Boston Soc. Nat. Hist., 9, p. 19, 1865 (adv. pub., 1862).—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 768, pl. 76, fig. 11, 1897.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, pl. 11, fig. 7, 1926.—Ehrenberg, Palaeobiol., 3, p. 323, pl. 17, fig. 5, 1930.
Miss. (Up. Burlington ls.): Burlington, Iowa.
- Dichocrinus blairi** S. A. Miller.
S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 646, pl. 8 fig. 12, 1892 (adv. pub., 1891).—Keyes, Geol. Surv. Mo., 4, p. 205, pl. 25, fig. 7, 1894.—S. A. Miller, N. Amer. Geol. Pal., 2d. App., p. 741, fig. 1332, 1897.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 778, pl. 75, fig. 3, 1897.
Miss. (Warsaw ls.): Boonville, Mo.
- Dichocrinus blatchleyi** Beede.
Beede, 30th Rep. Geol. Nat. Res. Ind., p. 1259, pl. 17, figs. 2-2f, 1906.
Miss. (Spergen ls.): Paynters Hill, near Salem, Ind.
- Dichocrinus bozemanensis** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 12, p. 44, pl. 3, fig. 4, 1897.
Miss. (Madison ls.): Bridger Mts., near Bozeman, Mont.
- Dichocrinus bozemanensis* Laudon = *Platycrinites bozemanensis*.
- Dichocrinus campito** Laudon.
Laudon, Univ. Iowa Studies in Nat. Hist., 15, no. 2, p. 56, pl. 2, fig. 10, pl. 7, figs. 1, 2, 1933.
Miss. (Kinderhook-Gilmore City fm.): Gilmore City, Iowa.
- Dichocrinus cinctus** Miller and Gurley.
Miller and Gurley, Jour. Cincinnati Soc. Nat. Hist., 13, p. 21, pl. 4, figs. 10-12, 1890; Some new Gen. and Sp. Echin., p. 21, pl. 4, figs. 10-12, 1890; 16th Rep. Geol. Surv. Ind., p. 342, pl. 4, figs. 10, 11, 1890 (Imprint, 1889).—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 764, pl. 75, fig. 5, pl. 77, figs. 4 a-c, 1897.—Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 251, pl. 19, fig. 2, 1937.
Miss. (Kinderhook-Hampton fm.): Legrand, Iowa.

- Dichocrinus* (*Pterotocrinus*) *chesterensis* Meek and Worthen = *Pterotocrinus chesterensis*.
- Dichocrinus* (*Camptocrinus*) *cirriifer* Wachsmuth and Springer = (part) *Camptocrinus cirriifer*; (part) *C. multicirrus*.
- Dichocrinus constrictus* Meek and Worthen = *Talarocrinus constrictus*.
- Dichocrinus conus*** Meek and Worthen.
 Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 381, 1860; Geol. Surv. Ill., 2, p. 169, pl. 16, figs. 5a, b, 1866.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 770, pl. 75, fig. 6, 1897.
 Miss. (Burlington ls.): Cedar Cr., Warren Co., Ill.; Burlington, Iowa (Lower).
- Dichocrinus cornigerus* Shumard = *Talarocrinus cornigerus*.
- Dichocrinus coxanus*** Worthen.
 Worthen, Ill. St. Mus., Bull. 1, p. 35, 1882; Geol. Surv. Ill., 7, p. 313, pl. 27, fig. 7, 1893.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 763, pl. 76, fig. 9, 1897.
 Miss. (Keokuk ls.): Hamilton, Ill.
- Dichocrinus crassitestus*** White.
 White, Proc. Boston Soc. Nat. Hist., 9, p. 19, 1865 (adv. pub., 1862).—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 769, pl. 76, figs. 6 a-c, 1897.
 Miss. (Up. Burlington ls.): Burlington, Iowa.
- Dichocrinus* (*Pterotocrinus*) *crassus* Meek and Worthen = *Pterotocrinus crassus*.
- Dichocrinus delicatus*** Wachsmuth and Springer.
 Wachsmuth and Springer, N. Amer. Crin. Cam., p. 766, pl. 77, fig. 13, 1897.—Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 250, pl. 17, fig. 4, 1937.
 Miss.: Legrand, Marshall Co., Iowa (Kinderhook-Hampton fm.); Burlington, Iowa (Low. Burlington ls.).
- Dichocrinus dichotomus*** Hall.
 Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 85, pl. 1, fig. 5, 1860.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 777, 1897.
 Miss. (Warsaw ls.): Warsaw, Ill.
- Dichocrinus douglassi*** (Miller and Gurley).
Platycrinus douglassi Miller and Gurley, Ill. St. Mus., Bull. 10, p. 86, pl. 5, figs. 18, 19, 1896.
 Miss.: Bridger Mts., near Bozeman, Mont. (Madison ls.); Gilmore City, Iowa (Kinderhook-Gilmore City fm.).
- Dichocrinus elegans*** de Koninck and Lehon.
 De Koninck and Lehon, Rech. Crin. Carb. Belg., p. 153, pl. 4, figs. 13a, b, 1864.
 Low. Carb. (Tournaisian): Tournai, Belgium.
- Dichocrinus elegans* Casseday and Lyon = *Talarocrinus elegans*.
- Dichocrinus elongatus*** (Gilbertson).
Platycrinus elongatus Gilbertson in Phillips, Geol. Yorkshire, 2, p. 204, pl. 3, figs. 24, 26, 1836.—Austin and Austin, Mon. Rec. Foss. Crin., p. 25, pl. 2, figs. 9 h-i, 1843.
Dichocrinus elongatus Wachsmuth and Springer, Rev. Pal., pt. 2, p. 83 (257), 1881.
 Low. Carb. (Mtn. Ls.): Bolland, England.
- Dichocrinus expansus*** de Koninck and Lehon.
 De Koninck and Lehon, Rech. Crin. Carb. Belg., p. 151, pl. 4, fig. 10, 1854.
 Low. Carb.: Visé (Viséan) and Tournai (Tournaisian), Belgium; England.
- Dichocrinus expansus*** Meek and Worthen.
 Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 343, 1868; Geol. Surv. Ill., 5, p. 500, pl. 14, fig. 1, 1873.
 Miss. (Keokuk ls.): Crawfordsville, Ind.

Dichocrinus ficus Casseday and Lyon.

Casseday and Lyon, Proc. Amer. Acad. Arts and Sci., 5, p. 24, 1862.—Meek and Worthen, Geol. Surv. Ill., 5, p. 502, pl. 14, fig. 5, 1873; 6, p. 515, pl. 29, fig. 7, 1875.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 774, pl. 78, figs. 16a, b, 1897.

Miss.: Hardin Co., Ky. (Ft. Payne ch.); Crawfordsville, Ind., Keokuk, Iowa (Keokuk ls.); ?Spergen Hill, Ind. (Spergen ls.).

Dichocrinus fusiformis Austin and Austin.

Austin and Austin, Mon. Rec. Foss. Crin., p. 47, pl. 5, figs. 6 a-d, 1844.

Low. Carb.: Mendip Hills, England (Mtn. Ls.); Tournai, Belgium (Tournaisian).

Dichocrinus girtyi Weller.

Weller, Geol. Surv. Ill., Bull. 41, p. 334, pl. 5, figs. 5-12, 1920.

Miss. (Chester): Fairview Bluff, Hardin Co., Ill. (Shetlerville fm.); Prairie du Long Creek, St. Clair Co., Ill. (Paint Creek fm.).

Dichocrinus granulatus de Koninck and Lehon.

De Koninck and Lehon, Rech. Crin. Carb. Belg., p. 152, pl. 4, fig. 1, 1854.

Low. Carb. (Tournaisian): Tournai, Belgium.

Dichocrinus hamiltonensis Worthen.

Worthen, Ill. St. Mus., Bull. 1, p. 35, 1882; Geol. Surv. Ill., 7, p. 313, pl. 27, fig. 10, 1883.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 772, pl. 76, fig. 10, 1897.

Miss. (Keokuk ls.): Hamilton, Ill.

Dichocrinus hammondi Laudon and Beane.

Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 251, pl. 16, fig. 10, 1937.

Miss. (Kinderhook-Hampton fm.): Legrand, Iowa.

Dichocrinus hamburgi S. A. Miller.

S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 26, pl. 3, figs. 9, 10, 1891; 17th Rep. Geol. Surv. Ind., p. 646, pl. 6, fig. 38, 1892 (adv. pub. 1891).

Miss. (Warsaw ls.): Boonville, Mo.

Dichocrinus huntsvillae Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 773, pl. 75, fig. 4, 1897.

Platycrinus parvulus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 163, 1865.

Platycrinites parvulus Meek and Worthen, Geol. Surv. Ill., 5, p. 555, pl. 20, fig. 7, 1873.

Miss. (Chester ls.): Huntsville and Whitesburg, Ala. (Ste. Genevieve ls.); Pope Co., Ill.

Dichocrinus inornatus Wachsmuth and Springer.

Wachsmuth and Springer, Geol. Surv. Ill., 8, p. 190, pl. 16, figs. 1, 2, 1890; N. Amer. Crin. Cam., p. 770, pl. 77, figs. 12a, b, 1897.—Wilson, Jour. Geol., 24, p. 510, pl. 3, figs. 12, 13, 1916.—Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 250, pl. 16, fig. 9, 1937.

Miss. (Kinderhook-Hampton fm.): Legrand, Marshall Co., Iowa.

Dichocrinus insularis (Eichwald).

Platycrinus insularis Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, p. 117, 1856; Leth. Ross., 1, p. 602, pl. 31, figs. 53 a-c, 1860.

Dichocrinus insularis Wachsmuth and Springer, Rev. Pal., pt. 3, p. 314 (index), 1886.

Dev.: Ilpen, Island of Oesel.

Dichocrinus intermedius de Koninck and Lehon.

De Koninck and Lehon, Rech. Crin. Carb. Belg., p. 150, pl. 4, fig. 9, 1854.

Low. Carb. (Tournaisian): Tournai, Belgium.

Dichocrinus irregularis de Koninck and Lehon.

De Koninck and Lehon, Rech. Crin. Carb. Belg., p. 152, pl. 4, figs. 11a, b, 1854.

Low. Carb. (Tournaisian): Tournai, Belgium.

Dichocrinus lachrymosus Hall.

Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 84, text fig., 1860; N. Y. St. Mus., Bull. 1, pl. 11-A, fig. 11, 1872.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 754, pl. 77, figs. 2 a-c, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Dichocrinus laevis Hall.

Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 83, text fig., 1860.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 765, pl. 77, figs. 7 a-c, 1897.

Miss. (Low Burlington ls.): Burlington, Iowa.

Dichocrinus lineatus Meek and Worthen.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 69, 1869; Geol. Surv. Ill., 5, p. 440, pl. 3, fig. 1, 1873.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 761, pl. 76, figs. 4 a-c, 1897.

Miss. (Low Burlington ls.): Burlington, Iowa.

Dichocrinus liratus Hall.

Hall, Jour. Boston Soc. Nat. Hist., 7, p. 290, 1861; N. Y. St. Mus., Bull. 1, pl. 2-A, figs. 7, 8, 1872.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 759, pl. 77, figs. 3a, b, pl. 76, fig. 8, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Dichocrinus multiplex Laudon.

Laudon, Univ. Iowa Studies, 15, no. 2, p. 54, pl. 4, fig. 1, 1933.

Miss. (Kinderhook-Gilmore City fm.): Gilmore City, Iowa.

Dichocrinus (*Camptocrinus*) *myelodactylus* Wachsmuth and Springer = (part) *Camptocrinus myelodactylus*; (part) *C. crawfordsvillensis*.**Dichocrinus oblongus** Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 759, pl. 77, fig. 9, 1897.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 40, pl. 11, figs. 5, 6, 1926.

Miss. (Spergen ls.): Near Bloomington, and Spergen Hill, Ind.

Dichocrinus ornatus Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 762, pl. 77, fig. 6, 1897.

Dichocrinus sculptus Casseday and Lyon, Proc. Amer. Acad. Sci. and Arts, 5, p. 25, 1862.

Miss.: Hardin Co., Ky. (Ft. Payne ch.); Mt. Pleasant, Iowa (Keokuk ls.).

Dichocrinus ovatus Owen and Shumard.

Owen and Shumard, Jour. Acad. Nat. Sci. Phila., (2), 2, pt. 1, p. 61, pl. 7, figs. 9a, b, 1850; Geol. Surv. Iowa, Wis., Minn., p. 590, pl. 5-A, figs. 9a, b, 1852.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 760, pl. 76, fig. 7, pl. 77, figs. 8a, b, 1897.

Miss. (Low Burlington ls.): Burlington, Iowa.

Dichocrinus parvulus S. A. Miller.

S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 27, pl. 4, figs. 7, 8, 1891.

Miss. (Warsaw ls.): Boonville, Mo.

Dichocrinus pendens Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 774, pl. 78, fig. 15, 1897.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 39, pl. 11, figs. 1-4, 1926.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Dichocrinus pentalobus (Casseday and Lyon).

Cotyledonocrinus pentalobus Casseday and Lyon, Proc. Amer. Acad. Arts and Sci., 5, p. 26, 1862.

Dichocrinus pentalobus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 775, pl. 78, figs. 11 a-c, 1897.

Miss. (Chester-Glen Dean ls.): Grayson Springs, and Pulaski Co., Ky.

Dichocrinus pisum Meek and Worthen.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 69, 1869; Geol. Surv. Ill., 5, p. 441, pl. 3, fig. 2, 1873.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 763, pl. 76, fig. 5, pl. 77, fig. 10, 1897.

Miss.: Burlington, Iowa (Low. Burlington ls.): Lake Valley, N. Mex. (Lake Valley ls.).

Dichocrinus plicatus Hall.

Hall, Jour. Boston Soc. Nat. Hist., 7, p. 288, 1861; N. Y. St. Mus., Bull. 1, pl. 2-A, figs. 9, 10, 1872.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 758, pl. 77, figs. 5 a, b, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Dichocrinus pocillum Hall.

Hall, Jour. Boston Soc. Nat. Hist., 7, p. 291, 1861; N. Y. St. Mus., Bull. 1, pl. 2-A, figs. 14, 16, 17, 1872.

Miss. (Burlington ls.): Burlington, Iowa.

Dichocrinus polydactylus Casseday and Lyon = *Paradichocrinus polydactylus*.

Dichocrinus protuberans Hall = *Pterotocrinus protuberans*.

Dichocrinus radiatus Münster.

Münster, Beitr. Petref., 1, p. 2, pl. 1, figs. 3 a-d, 1839.—Austin and Austin, Mon. Rec. Foss. Crin., p. 45, pl. 5, figs. 5a-d, 1844.

Low. Carb. (Tournaisian): Tournai, Belgium; Bolland, Bristol, etc., England.

Dichocrinus scitulus Hall.

Hall, Jour. Boston Soc. Nat. Hist., 7, p. 289, 1861; N. Y. St. Mus., Bull. 1, pl. 2-A, figs. 12, 13, 1872.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 767, pl. 78, figs. 13 a, b, 14, 1897.

Miss. (Burlington ls.): Burlington, Iowa (Lower); Clarksville, Mo. (Upper).

Dichocrinus sculptus de Koninck and Lehon.

De Koninck and Lehon, Rech. Crin. Carb. Belg., p. 154, pl. 4, figs. 14 a-c, 1854.

Low. Carb. (Tournaisian): Tournai, Belgium.

Dichocrinus s ulptus Casseday and Lyon = *D. ornatus*.

Dichocrinus? *septosus* de Koninck.

De Koninck, Mem. Acad. Roy. Belg., p. 40, pl. E, figs. 7 a-c, 1842-1844.

Low. Carb. (Tournaisian): Tournai, Belgium.

Dichocrinus sexlobatus Shumard = *Talarocrinus sexlobatus*.

Dichocrinus simplex Shumard = *Talarocrinus simplex*.

Dichocrinus stelliformis Meek and Worthen.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 344, 1868.

Miss. (Keokuk ls.): Crawfordsville, Ind.

Dichocrinus striatus Owen and Shumard.

Owen and Shumard, Jour. Acad. Nat. Sci. Phila., (2) 2, pt. 1, p. 62, pl. 7, figs. 10 a, b, 1850; Geol. Surv. Wis., Iowa, Minn., p. 590, pl. 5-A, figs. 10 a, b, 1852.—Keyes, Geol. Surv. Mo., 4, p. 203, pl. 25, fig. 8, 1894.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 757, pl. 77, figs. 11 a, b, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa and Hannibal, Mo.

Dichocrinus superstes Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 766, pl. 76, fig. 12, 1897.

Miss. (Chester-Glen Dean ls.): Pulaski Co., Ky.; Huntsville, Ala.

Dichocrinus symmetricus Casseday and Lyon = *Talarocrinus symmetricus*.

Dichocrinus ulrichi Miller and Gurley.

Miller and Gurley, 16th Rep. Geol. Surv. Ind., p. 365, pl. 8, figs. 12, 13, 1890 (authors ed., p. 48).

Miss. (Keokuk ls.): Bono, Ind.

- Dichostreblocrinus** J. M. Weller. Genotype: *D. scrobiculus* J. M. Weller.
Hypocrinidae (Inadunata-Fistulata). Miss.—Permian.
J. M. Weller, St. Geol. Surv. Ill., Rep. Invest. no. 21, p. 36, 1930.
- Dichostreblocrinus minutus** Peck.
Peck, Jour. Pal., 10, p. 289, pl. 46, figs. 27–32, 1936.
Miss. (Fern Glen ls.): $\frac{1}{4}$ mile south of Kimmswick, Mo.
- Dichostreblocrinus scrobiculus** J. M. Weller.
J. M. Weller, St. Geol. Surv. Ill., Rep. Invest. no. 21, p. 37, text fig. 8, pl. 2, figs. 9 a-d, 1930.
Low Penn.: N. $\frac{1}{4}$ Sec. 35, T. 21 N., R.9 W., Warren Co., Ind.
- Dichostreblocrinus timorensis** Marez Oyens.
Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 327, pl. 3, fig. 13, text fig. 9, 1940.
Permian: Noko (Basleo), Timor.
- Dicirrocrinus** Schmidt. Genotype: *D. comtus* Schmidt.
?Botryocrinidae (Inadunata-Fistulata). Dev.
Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 87, 1934.
- Dicirrocrinus comtus** Schmidt.
Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 88, text fig. 19, pl. 11, fig. 1, pl. 21, fig. 2, pp. 141, 144, 147, 1934.
L. Dev. (Hunsrück sh.): Bundenbach, Germany.
- Dicromyocrinus Jaekel = Cromyocrinus.
- Dictenocrinus** Jaekel. Genotype: *Botryocrinus decadactylus* Bather.
Botryocrinidae (Inadunata-Fistulata). Sil.
Jaekel, Pal. Zeits., 3, p. 59, 1918.
- Dictenocrinus decadactylus** (Bather).
Botryocrinus decadactylus Bather, Ann. Mag. Nat. Hist., (6) 7, p. 395, pl. 13, figs. 5–15, 1891; Königl. Sv. Vet. Akad. Handl., 25, no. 2, p. 119, text fig. 17—1, 5, 6, 1893; Treatise Zool., (Lankester), pt. 3, p. 98, fig. 3, p. 113, fig. 21, 1900.—Haarmann, Jahrb. Preuss. Geol. Landesanst., 41, p. 8, text fig., p. 58, text fig. 4, 1921.
Dictenocrinus decadactylus Jaekel, Pal. Zeits., 3, p. 59, 1918.
Cyathocrinus decadactylus Salter, Cat. Camb. Sil. Foss., p. 123, 1873.
Cyathocrinus quindecimalis Salter, Cat. Camb. Sil. Foss., p. 124, 1873.
Sil. (Wenlock ls.): Dudley, England.
- Dictenocrinus pinnulatus** (Bather).
Botryocrinus pinnulatus Bather, Ann. Mag. Nat. Hist., (6) 7, p. 402, pl. 13, fig. 16, 1891.
Dictenocrinus pinnulatus Jaekel, Pal. Zeits., 3, p. 59, 1918.
Sil. (Wenlock ls.): Wrens Nest, Dudley, England.
- Dimerocrinites Pacht = Dactylocrinus.
- Dimerocrinites** Phillips. Genotype: *D. decadactylus* Phillips.
Dimerocrinitidae (Camerata). Sil.; Dev.
Phillips, Murchison's Sil. Syst., p. 674, 1839.
Dimerocrinus Müller, Monatsber. Berlin Acad., 1, p. 208, 1841.—Zittel, Handb. Pal., 1, p. 368, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, pp. 184, 197 (358, 371), 1881.—Bather, Treatise Zool. (Lankester), pt. 3, p. 198, 1900.—Springer, Mem. Mus. Comp. Zool., 25, p. 117, 1911; Zittel-Eastman Textb. Pal., 1, p. 187, 1913; Amer. Sil. Crin., p. 12, 1926.
Eucrinus Angelin (in part), Icon. Crin. Suec., p. 24, 1878.—Zittel, Handb. Pal., 1, p. 375, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 196 (370), 1881. (Genotype: *E. laevis* Angelin.)

- Glyptaster* Hall, Nat. Hist. N. Y., Pal., 2, pp. 187, 355, 1852; 28th Rep. N. Y. St. Cab. Nat. Hist., ed. 2, p. 133, 1879.—Zittel, Handb. Pal., 1, p. 375, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, pp. 184, 193 (358, 367), 1881. (Genotype: *G. brachiatus* Hall.)
- Thysanocrinus* Hall, Nat. Hist. N. Y., Pal., 2, pp. 188, 355, 1852.—Zittel, Handb. Pal., 1, p. 377, 1879.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 190, 1897.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 70, 1900.—Grabau, Bull. Buffalo Soc. Nat. Hist., 7, p. 155, 1901. (Genotype: *T. liliiformis* Hall.)
- Dimerocrinites aculeatus** (Hall).
Thysanocrinus aculeatus Hall, Nat. Hist. N. Y., Pal., 2, p. 190, pl. 42, figs. 3a-d, 1852. Sil. (Niagaran-Rochester sh.): Lockport, N. Y.
- Dimerocrinites arborescens** (Talbot).
Thysanocrinus arborescens Talbot, Amer. Jour. Sci., 20, p. 23, pl. 1, fig. 2, text fig., 1905.
Dimerocrinus arborescens Goldring, N. Y. St. Mus., Mem. 16, p. 83, pl. 1, fig. 1, 1923. Dev. (Helderbergian—Coeymans ls.): North Litchfield, N. Y.
- Dimerocrinites brachiatus** (Hall).
Glyptaster brachiatus Hall, Nat. Hist. N. Y., Pal., 2, p. 187, pl. 41, figs. 4 a, b, 1852.
Thysanocrinus brachiatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 195, pl. 18, fig. 7, 1897.
Sil. (Niagaran-Rochester sh.): Lockport, N. Y.
- Dimerocrinites campanulatus** (Slocum).
Thysanocrinus campanulatus Slocum, Field Columbian Mus., Geol. Ser., 2, no. 10, p. 299, pl. 85, figs. 20, 23, 1908.
Sil. (Niagaran-Racine dol.): Near Lemont, Ill.
- Dimerocrinites canaliculatus** (Hall).
Thysanocrinus canaliculatus Hall, Nat. Hist. N. Y., Pal., 2, p. 189, pl. 42, figs. 2 a-d, 1852.
Sil. (Niagaran-Rochester sh.): Lockport, N. Y.
- Dimerocrinites decadactylus** Phillips.
Phillips, in Murchison, Sil. Syst., p. 674, pl. 17, fig. 4, 1839.—Murchison, Siluria (ed. 3), p. 246, pl. 13, fig. 5, 1855.—Bather, Treatise Zool. (Lankester), pt. 3, p. 199, fig. 123, 1900.
Sil. (Wenlock ls.): Dudley, England.
- Dimerocrinites egani** (S. A. Miller).
Glyptaster egani S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 4, p. 261, pl. 6, figs. 4-4b, 1881.
Thysanocrinus egani Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 74, pl. 1, fig. 5, 1900.
Sil. (Niagaran-Racine dol.): Bridgeport, near Chicago, Ill.
- Dimerocrinites elegans** Springer.
Springer, in Twenhofel, Geol. Surv. Canada, Mem. 154, p. 136, pl. 4, fig. 3, 1928.
Sil. (Jupiter fm.): Iron River, Anticosti Island, Gulf of St. Lawrence.
- Dimerocrinites eugenius** (Ohern).
Thysanocrinus eugenius Ohern, Geol. Surv. Maryland, Low. Dev., p. 249, pl. 36, figs. 3-7, 1913.
Dev. (Oriskany-Ridgeley ss.): Cumberland, Md.
- Dimerocrinites halli** (Lyon).
Rhodocrinus halli Lyon, Proc. Acad. Nat. Sci. Phila., (2) 5, p. 412, pl. 4, figs. 5a, b, 1861.
Thysanocrinus halli Wachsmuth and Springer, N. Amer. Crin. Cam., p. 196, pl. 13, figs. 9 a, b, 1897.
Dimerocrinus halli Bassler, U. S. Nat. Mus., Bull. 92, p. 439, 1915.
Dev. (Hamilton-Sellersburg ls.): Beargrass Creek, Louisville, Ky.

Dimerocrinites icosidactylus Phillips.

Phillips, in Murchison, *Sil. Syst.*, p. 674, pl. 17, fig. 5, 1839.—Murchison, *Siluria*, ed. 3, p. 246, pl. 13, fig. 4, 1859.

Sil. (Wenlock ls.): Dudley, England.

Dimerocrinites inornatus (Hall).

Glyptaster inornatus Hall, *Not. N. Sp. Foss. Niagara Gr.*, *Adv. Pub.*, p. 11, 1863; 24th Rep. N. Y. St. Mus. Nat. Hist., p. 207, text fig. 3, 1872; 28th Rep. N. Y. St. Mus. Nat. Hist., p. 134, pl. 14, figs. 1-6, 1879; 11th Rep. Geol. Ind., p. 263, pl. 13, figs. 1-6, p. 261, text fig. 3, 1882.

Thysanocrinites inornatus Wachsmuth and Springer, *N. Amer. Crin. Cam.*, p. 193, pl. 18, figs. 6 a-d, pl. 19, fig. 5, 1897.

Dimerocrinites inornatus Springer, *Amer. Sil. Crin.*, p. 13, pl. 1, figs. 11, 11a, 12, 1926.

Sil. (Niagaran-Waldron sh.): Waldron and Hartsville, Ind.; Newsom, Tenn.

Dimerocrinites interradians (Angelin).

Eucrinus interradians Angelin, *Icon. Crin. Suec.*, p. 25, pl. 6, fig. 6, pl. 19, figs. 1, 7, 8, 1878.

Dimerocrinites interradians Springer, *Amer. Sil. Crin.*, p. 14, 1926.

Sil. (Gotlandian): Wisby, Island of Gotland.

Dimerocrinites laevis (Angelin).

Eucrinus laevis Angelin, *Icon. Crin. Suec.*, p. 25, pl. 6, figs. 8, 8a, 1878.

Dimerocrinites laevis Springer, *Amer. Sil. Crin.*, p. 14, 1926.

Sil. (Gotlandian): Wisby? Island of Gotland.

Dimerocrinites liliiformis (Hall).

Thysanocrinites liliiformis Hall, *Nat. Hist. N. Y.*, *Pal.*, 2, p. 188, pl. 42, figs. 1 a-f, 1852.—Wachsmuth and Springer, *N. Amer. Crin. Cam.*, p. 192, pl. 18, fig. 4, 1897.—Grabau, *Bull. Buffalo Soc. Nat. Hist.*, 7, p. 156, text fig. 50; *N. Y. St. Mus.*, 9, p. 158, text fig. 50, 1901.

Sil. (Niagaran-Rochester sh.): Lockport, N. Y.

Dimerocrinites lockportensis (Ringueberg).

Glyptaster (Eucrinus) lockportensis Ringueberg, *Ann. N. Y. Acad. Sci.*, p. 304, pl. 3, figs. 4, 4a, 1890.

Sil. (Niagaran—Lockport, Gasport ls.): Lockport, N. Y.

Dimerocrinites medius (Angelin).

Actinocrinites medius Angelin, *Icon. Crin. Suec.*, p. 6, pl. 18, fig. 9, 1878.

Sil.: Wisby, Island of Gotland (Gotlandian); Dudley, England (Wenlock ls.).

Dimerocrinites milliganae (Miller and Gurley).

Glyptaster milliganae Miller and Gurley, *Ill. St. Mus.*, *Bull.* 10, p. 87, pl. 5, figs. 7-9, 1896.

Dimerocrinites milliganae Springer, *Amer. Sil. Crin.*, p. 13, pl. 1, fig. 8, 1926.

Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.

Dimerocrinites nodobasis (Springer).

Dimerocrinites nodobasis Springer, *Amer. Sil. Crin.*, p. 13, pl. 1, figs. 9, 9a, 10, 1926.

Sil. (Niagaran-Beech River fm.): 2 miles north of Decaturville, Tenn.

Dimerocrinites nodulosus (Hall).

Rhodocrinites (Acanthocrinites) nodulosus Hall, 15th Rep. Regents Univ. St. N. Y., p. 126, 1862; *N. Y. St. Mus.*, *Bull.* 1, pl. 1-A, fig. 8, 1872.

Rhodocrinites nodulosus Wachsmuth and Springer, *N. Amer. Crin. Cam.*, p. 225, pl. 13, fig. 8, 1897.—Goldring, *N. Y. St. Mus.*, *Mem.* 16, p. 89, pl. 2, figs. 1, 3-5 (not fig. 2), 1923.

Dev. (Hamilton-Moscow sh.): Canandaigua Lake, Ontario Co., N. Y.

Dimerocrinites nodulosus pernodosus (Goldring).

Rhodocrinites nodulosus var. *pernodosus* Goldring, *N. Y. St. Mus.*, *Mem.* 16, p. 91, pl. 2, fig. 6, 1923.

Dev. (Hamilton-Moscow sh.): West shore of Canandaigua Lake, N. Y.

Dimerocrinites occidentalis (Hall).

Glyptaster occidentalis Hall, Trans. Albany Inst., 4, p. 204, 1864; 20th Rep. N. Y. St. Cab. Nat. Hist., p. 326, pl. 10, fig. 3, 1868 (adv. pub., 1865); 28th Rep. N. Y. St. Mus. Nat. Hist., Doc. ed., pl. 13, figs. 7-11, 1877; Mus. ed., 1879; 11th Rep. Ind. Dep. Geol. Nat. Res., p. 262, pl. 12, figs. 7-11, 1882.—Whitfield, Geol. Wis., 4, p. 281, pl. 16, figs. 3, 4, 1882.

Thysanocrinus occidentalis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 194, pl. 18, figs. 5 a-c, 1897.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 73, pl. 1, figs. 6, 7, 1900.

Glyptaster occidentalis var. *a*, Hall, Trans. Albany Inst., 4, p. 204, 1864 (adv. pub., 1863).

Glyptaster occidentalis var. *crebescens* Hall, 28th Rep. N. Y. St. Mus. p. 133, 1879.

Sil. (Niagaran): Waldron, Ind. (Waldron sh.); Racine, Wis. and Lemont, near Chicago, Ill. (Racine dol.).

Dimerocrinites ornatus (Angelin).

Eucrinus ornatus Angelin, Icon. Crin. Suec., p. 25, pl. 6, figs. 7, 7a, b, 1878.

Dimerocrinus ornatus Springer, Amer. Sil. Crin., p. 14, 1926.

Sil.: Wisby, Island of Gotland (Gotlandian); Dudley, England (Wenlock ls.).

Dimerocrinites pentangularis (Hall)

Glyptaster pentangularis Hall, 18th Rep. N. Y. St. Cab. Nat. Hist., p. 22, pl. fig. 4, Adv. pub., 1863; 20th Rep. N. Y. St. Cab. Nat. Hist., p. 326, pl. 10, fig. 4, 1867; Rev. ed., p. 369, 1870.

Thysanocrinus pentangularis Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 70, pl. 1, figs. 8-11, 1900.

Sil. (Niagaran-Racine dol.): Racine, Wis.

Dimerocrinites planus (Springer).

Dimerocrinus planus Springer, Amer. Sil. Crin., p. 13, pl. 1, figs. 1-7, 1926.

Sil. (Niagaran-Beech River fm.): 2 miles north Decaturville, Tenn.

Dimerocrinites quinquangularis (Angelin).

Eucrinus quinquangularis Angelin, Icon. Crin. Suec., p. 25, pl. 10, figs. 5-14, 1878.

Dimerocrinus quinquangularis Springer, Amer. Sil. Crin., p. 12, 1926.

Sil. (Gotlandian): Likkershamn, Island of Gotland.

Dimerocrinites roemeri (Troost).

Gilbertocrinites roemeri Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Dimerocrinus roemeri Wood, U. S. Nat. Mus., Bull. 64, p. 101, pl. 15, fig. 4, 1909.

Sil. (Niagaran-Beech River fm.): Decatur and Perry Counties, Tenn.

Dimerocrinites speciosus (Angelin).

Eucrinus speciosus Angelin, Icon. Crin. Suec., p. 25, pl. 19, figs. 2, 2a, pl. 23, figs. 7, 7a, 7b, pl. 26, figs. 26, 26a, pl. 27, fig. 2, 1878.

Dimerocrinus speciosus Springer, Amer. Sil. Crin., p. 14, 1926.

Sil.: Follingbo, Island of Gotland (Gotlandian); Dudley, England (Wenlock ls.).

Dimerocrinites spiniferus (Springer).

Dimerocrinus spiniferus Springer, Mem. Mus. Comp. Zool., 25, no. 3, p. 119, pl. 3, figs. 11 a-d, 1911.

Dev. (Hamilton-Sellersburg ls.): Charlestown, Clark Co., Ind.

Dimerocrinites (?) vagans (Foerste).

Dimerocrinus (?) vagans Foerste, Bull. Sci. Lab. Denison Univ., 19, pp. 13, 14, pl. 2, figs. 6 A-E, 1919.

Sil. (Brassfield ls.): 7 miles northwest Xenia; Dayton and Centerville, Ohio.

Dimerocrinites waldronensis (Miller and Dyer).

Cyathocrinus waldronensis Miller and Dyer, Contrib. Pal., no. 2, p. 6, pl. 4, fig. 9, 1878.—Miller and Gurley, Ill. St. Mus., Bull. 8, p. 49, pl. 3, figs. 19, 20, 1896.

- Dimerocrinus waldronensis* Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, p. 101 (323), 1885.
Sil. (Niagaran-Waldron sh.): Waldron, Ind.
- Dimerocrinites whitfieldi** (Goldring)
Dimerocrinus whitfieldi Goldring, N. Y. St. Mus., Mem. 16, p. 85, pl. 1, fig. 2, 1923.
Dev. (Hamilton-Moscow sh.): Jaycox's Run, between Geneseo and Avon, Livingston Co., N. Y.
- Dimerocrinus* Müller and authors = *Dimerocrinites*.
Dimerocrinus constrictus d'Orbigny = *Actinocrinites constrictus*.
Dimerocrinus multiplex Salter.
Salter, Cat. Camb. Sil. Foss., p. 120, 1873.
Sil. (Wenlock ls.): Dudley, England.
- Dimerocrinus uniformis* Salter.
Salter, Cat. Camb. Sil. Foss., p. 120, 1873.
Sil. (Wenlock ls.): Dudley, England.
- Dimorphicrinus** d'Orbigny. Genotype: *Platycrinites pentangularis* Miller.
Cyathocrinitidae (Inadunata-Fistulata). Low. Carb.
D'Orbigny, Prodr. Pal. Strat., 1, p. 155, 1849.
- Dimorphicrinus pentangularis** (Miller).
Platycrinites pentangularis Miller, Nat. Hist. Crin., p. 83, pl. fig. 1 (not 2, 6, 7 = blastoid, *Orophocrinus*), 1821.
Low. Carb. (Mtn. Ls.): Mendip Hills, (?Lancashire) England.
- Dinocrinus** Wanner. Genotype: *D. cornutus* Wanner.
Poteriocrinitidae (Inadunata-Fistulata). Permian.
Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 313, 1916; Die Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, pp. 180, 243, 1924; Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 182, 1937. Probably syn. of *Calceolispongia* Etheridge Jr.)
- Dinocrinus aculeatus** Wanner.
Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 248, pl. 14, figs. 18-21, 1924.
Permian: Basleo, Timor.
- Dinocrinus bifurcatus** Wanner.
Wanner, Neue Beitr. Kennt. Perm. Echin. Timor, XII, p. 183, text fig. 66, pl. 12, figs. 4-6, 1937.
Permian: Nipol Sumpek, Timor.
- Dinocrinus cornutus** Wanner.
Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 313, pl. 97 (2), fig. 11, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 247, pl. 14, fig. 10, pl. 15, figs. 6-8, 1924.
Permian: Noil Nalien, near Dorf, Tamien, and Nefotassi, Timor.
- Dinocrinus cornutus hindei* Gerth = *Calceolispongia hindei*.
- Dinocrinus elegans** Marez Oyens.
Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 335, pl. 4, fig. 4, 1940.
Permian: Basleo, Timor.
- Dinocrinus mammeatus** Wanner.
Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 244, pl. 13, figs. 3-5, pl. 14, figs. 11-17, pl. 15, figs. 1-5, 1924.
Permian: Toö, Timor.
- Dinotocrinus** Kirk. Genotype: *D. compactus* Kirk.
Poteriocrinitidae (Inadunata-Fistulata). Miss.
Kirk, U. S. Nat. Mus., Proc., 89, no. 3103, p. 513, 1941.

Dinotocrinus compactus Kirk.

Kirk, U. S. Nat. Mus., Proc., 89, no. 3103, p. 515, pl. 63, 1941.

Miss. (Chester—Ste. Genevieve ls.): 7 miles south Huntsville, Ala.

Dinotocrinus roemeri (Troost).*Cyathocrinites roemeri* Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.—Wood, U. S. Nat. Mus., Bull. 64, p. 86, pl. 6, fig. 11, 1909.*Dinotocrinus roemeri* Kirk, U. S. Nat. Mus., Proc., 89, no. 3103, p. 514, 1941.

Miss. (Chester-?Gasper fm.): Vicinity of Huntsville, Ala.

Dinotocrinus salteri (Worthen).*Poteriocrinus salteri* Worthen, Ill. St. Mus., Bull. 1, p. 21, 1882; Geol. Surv. Ill., 7, p. 291, pl. 29, fig. 18, 1883.*Scaphiocrinus salteri* Wachsmuth and Springer, Rev. Pal., pt. 3, p. 236 (160), 1886.*Dinotocrinus salteri* Kirk, U. S. Nat. Mus., Proc., 89, no. 3103, p. 514, 1941.

Miss. (Chester ls.): Chester, Ill.; Huntsville, Ala. (Ste. Genevieve ls.)

Diphuicrinus Moore and Plummer. Genotype: *D. croneisi* Moore and Plummer.

Poteriocrinitidae (Inadunata-Fistulata). Penn.

Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 307, 1938.

Diphuicrinus croneisi Moore and Plummer.

Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 308, pl. 14, fig. 6, pl. 16, figs. 3 a-c, 4 a-g, 10, text fig. 37, 1938.

Penn. (Brentwood ls.): North of Ft. Gibson, Okla.

Dizygocrinus Wachsmuth and Springer. Genotype: *Actinocrinus indianensis* Lyon and Casseday.

Batocrinidae (Camerata). Miss.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 413, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 168, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 196, 1913.

Dizygocrinus andrewsianus (McChesney).*Actinocrinus andrewsianus* McChesney, Trans. Chicago Acad. Sci., 1, p. 27, 1860; Illustr. N. Sp. Foss., p. 20, pl. 5, figs. 5 a, b, pl. 10, 1865; Trans. Chicago Acad. Sci., 1, p. 20, text fig., pl. 5, fig. 5, 1868.*Dizygocrinus andrewsianus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 433, pl. 29, figs. 2 a-d, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Dizygocrinus biturbinatus (Hall).*Actinocrinus biturbinatus* Hall, Geol. Rep. Iowa, 1, pt. 2, p. 616, pl. 16, figs. 5, 6 a-c, text fig. 95, 1858.*Dizygocrinus biturbinatus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 427, pl. 33, fig. 9, 1897.*Batocrinus lyonanus* Miller and Gurley, Ill. St. Mus., Bull. 3, p. 18, pl. 3, figs. 4, 5, 1894.

Miss.: Nauvoo, Warsaw, Hamilton, etc., Ill. (Keokuk ls.); near Salem, Ind. (Spergen ls.); Clark Co. and Boonville, Mo., Hardin Co., Ky. (Warsaw ls.).

Dizygocrinus cantonensis Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 423, pl. 33, figs. 8 a, b, 1897.

Miss. (Keokuk ls.): Canton and Edwardsville, Ind.

Dizygocrinus crawfordsvillensis (S. A. Miller).*Batocrinus crawfordsvillensis* S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 674, pl. 10, figs. 11, 12, 1892 (adv. pub., 1891).*Dizygocrinus crawfordsvillensis* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 417, 1897.

Miss. (Keokuk ls.): Crawfordsville, Ind.

Dizygocrinus decoris (S. A. Miller).

Batocrinus decoris S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 671, pl. 10, figs. 7, 8, 1892 (adv. pub., 1891).

Dizygocrinus decoris Wachsmuth and Springer, N. Amer. Crin. Cam., p. 420, pl. 35, fig. 6, 1897.—Beede, 30th Rep. Geol. Nat. Res. Ind., p. 1253, pl. 12, figs. 5-5a, pl. 16, fig. 4, 1906.

Miss.: Spergen Hill, Ind. (Spergen ls.); Barren Co., Ky. (Ft. Payne ch.); Colesburg, Ky. (Warsaw ls.).

Dizygocrinus dodecadactylus (Meek and Worthen).

Actinocrinus dodecadactylus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 131, 1861.

Actinocrinus (*Batocrinus*) *dodecadactylus* Meek and Worthen, Geol. Surv. Ill., 2, p. 205, text fig. 14, pl. 15, figs. 3 a-c, 1866.

Dizygocrinus dodecadactylus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 432, pl. 29, figs. 1 a-c, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa; Monmouth, Ill.

Dizygocrinus euconus (Meek and Worthen).

Actinocrinus (*Alloprosallocrinus*) *euconus* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 164, 1865.

Dizygocrinus euconus Wachsmuth and Springer, N. Amer. Crin. Cam., pp. 407, 430, pl. 35, figs. 7 a, b, 1897.—Beede, 30th Rep. Geol. Nat. Res. Ind., p. 1252, pl. 12, fig. 3, pl. 16, figs. 2, 2a, 1906.

Batocrinus subconicus Worthen, Ill. St. Mus., Bull. 2, p. 26, 1884; Geol. Surv. Ill., 8, p. 84, pl. 13, figs. 4, 4a, 1890.

Miss.: 6 miles south Anna, Ill. (?St. Louis ls.); Spergen Hill, Ind. (Spergen ls.); Boonville, Mo. (Warsaw); Clark Co., Mo., Montgomery Co., Ind., Taylor Co., Ky. (Keokuk ls.).

Dizygocrinus euconus abscissus (Rowley and Hare).

Batocrinus abscissus Rowley and Hare, Kansas City Sci., 5, p. 115, pl. 3, fig. 6, 1891.

Dizygocrinus euconus var. *abscissus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 431, pl. 46, fig. 9, 1897.

Batocrinus venustus S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 676, pl. 11, figs. 11, 12, 1892 (adv. pub., 1891).

Miss.: Near Curryville, Mo., and Keokuk, Iowa (Keokuk ls.); Boonville, Mo. and Taylor Co., Ky. (Warsaw ls.).

Dizygocrinus facetus (Miller and Gurley).

Batocrinus facetus Miller and Gurley, Descr. N. Gen. and Sp. Echin. p. 35, pl. 6, fig. 8, 1890; 16th Rep. Geol. Surv. Ind., p. 353, pl. 6, fig. 8, 1890 (1889).

Dizygocrinus facetus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 418, pl. 33, fig. 12, 1897.

Miss. (Keokuk ls.): Near Canton, Ind.

Dizygocrinus gorbyi (S. A. Miller).

Batocrinus gorbyi S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 673, pl. 10, fig. 10, 1892 (adv. pub., 1891).

?*Dizygocrinus gorbyi* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 426, 1897.

Miss. (Warsaw ls.): Boonville, Mo.

Dizygocrinus gurleyi (S. A. Miller).

Batocrinus gurleyi S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 676, pl. 11, figs. 9, 10, 1892 (adv. pub., 1891).

?*Dizygocrinus gurleyi* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 422, pl. 34, fig. 19, 1897.

Miss. (Warsaw ls.): Boonville, Mo.

Dizygocrinus indianensis (Lyon and Casseday).

Actinocrinus indianensis Lyon and Casseday, Amer. Jour. Sci. and Arts, 29, p. 75, 1860.

Dizygocrinus indianensis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 415, pl. 33, figs. 6 a, b, pl. 35, fig. 5, 1897.

Miss. (Keokuk ls.): Crawfordsville, etc., Montgomery Co., Ind.

Dizygocrinus indianensis simplex Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 416, pl. 33, fig. 7, 1897.

Miss. (Keokuk ls.): Crawfordsville, Ind.

Dizygocrinus montgomeryensis (Worthen).

Batocrinus montgomeryensis Worthen, Ill. St. Mus., Bull. 2, p. 25, 1884; Geol. Surv. Ill., 8, p. 83, pl. 12, figs. 2, 2a, 1890.

Dizygocrinus montgomeryensis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 428, pl. 33, figs. 3, 4, pl. 46, fig. 10, 1897.

Batocrinus gurleyi Rowley and Hare, Kansas City Sci., 5, p. 115, pl. 3, fig. 7, 1891.

Batocrinus sweeti Rowley and Hare, Kansas City Sci., 5, p. 116, pl. 3, fig. 8, 1891.

Miss. (Keokuk ls.): Montgomery Co., Ind.; Hamilton and Keokuk, Ill.

Dizygocrinus montgomeryensis unibrachiatus Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 429, pl. 33, figs. 5 a-c, 1897.

Miss. (Keokuk ls.): Keokuk, Iowa.

Dizygocrinus mutabilis Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 429, pl. 35, figs. 8-11, 1897.

Miss. (Keokuk ls.): Indian Creek, Montgomery Co., Ind.

Dizygocrinus originarius (Wachsmuth and Springer).

Dizygocrinus originarius Wachsmuth and Springer, N. Amer. Crin. Cam., p. 421, pl. 33, figs. 1 a, b, 1897.

Eretmocrinus varsoviensis Worthen, Ill. St. Mus., Bull. 1, p. 30, 1882; Geol. Surv. Ill., 7, p. 306, pl. 28, fig. 14, 1883.

Miss.: Bono, Lawrence Co., and Canton, Ind. (Keokuk ls.); Warsaw, Ill. and Boonville, Mo. (Warsaw ls.).

Dizygocrinus originarius adultus (Wachsmuth and Springer).

Eretmocrinus adultus Wachsmuth and Springer, Rev. Pal., pt. 2, p. 175 (349) 1881.

Dizygocrinus originarius var. *adultus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 422, pl. 35, figs. 14, 15, 1897.

Batocrinus mediocris S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 672, pl. 10, fig. 9, 1892 (adv. pub., 1891).

Batocrinus boonvillensis S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 675, pl. 10, fig. 13, 1892 (adv. pub., 1891).

Miss.: Canton, Bono, and Edwardsville, Ind.; Hamilton, Ill. (Keokuk ls.); Boonville, Mo. (Warsaw ls.).

Dizygocrinus parvus Rowley.

Rowley, in Greene, Cont. Ind. Pal., 2, pt. 2, p. 30, pl. 6, fig. 12, 1906.

Miss. (Spergen ls.): Georgetown, Ind.

Dizygocrinus persculptus Ulrich.

Ulrich, Ky. Geol. Surv., p. 246, pl. 2, figs. 24-26, 1917.—Weller, Geol. Surv. Ill., Bull. 41, p. 327, pl. 5, figs. 15-17, 1920.

Miss. (Chester-Ohara ls.): 2½ miles north Smithland, Ky.

Dizygocrinus rotundus (Yandell and Shumard).

Actinocrinus rotundus Yandell and Shumard, First and Second Ann. Rep. Geol. Surv. Mo., pt. 2, p. 191, pl. A, figs. 2 a, b, 1855.—Billings, Geol. Surv. Canada, Can. Org. Rem., Dec. 3, p. 30, fig. 16, 1858.—Hall, Geol. Repl. Iowa, Suppl., pl. 3, fig. 1, 1860.—Quenstedt, Petref. Deutsch., 4, p. 583, pl. 110, figs. 21, 22, 1876.

- Batocrinus rotundus* Keyes, Geol. Surv. Mo., 4, p. 182, pl. 23, figs. 6 a, b, 1894.
Dizygocrinus rotundus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 431, pl. 29, figs. a-g, 4, 1897.
Actinocrinus oblatulus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 38, text fig., 1860.
Batocrinus oblatulus Whitfield, Mem. Amer. Mus. Nat. Hist., 1, p. 12, pl. 1, figs. 21, 22, 1893.
 Miss. (Burlington ls.): Burlington, Iowa; Quincy and Oquawka, Ill.; Boone Co., Mo.
- Dizygocrinus sacculus** (Miller and Gurley).
Batocrinus sacculus Miller and Gurley, Ill. St. Mus., Bull. 5, p. 52, pl. 5, figs. 7-9, 1894.—Beede, 30th Rep. Geol. Nat. Res. Ind., p. 1246, pl. 12, figs. 7-7b, 1906.
Dizygocrinus sacculus Wood, U. S. Nat. Mus., Bull. 64, p. 72, pl. 5, figs. 1-6, 1909.
Actinocrinites fibula Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.
 Miss.: Washington Co., Ind. (Warsaw ls.); Stewart Co., Tenn. (Ft. Payne ch.)
- Dizygocrinus superstes** Ulrich.
 Ulrich, Kentucky Geol. Surv., p. 246, pl. 2, figs. 21-23, 1917.—Weller, Geol. Surv. Ill., Bull. 41, p. 329, pl. 5, figs. 13, 14, 1920.
 Miss. (Chester-Fredonia oolite): 2 miles east Princeton, Ky.
- Dizygocrinus unionensis** Wachsmuth and Springer.
 Wachsmuth and Springer, N. Amer. Crin. Cam., p. 424, pl. 35, figs. 16-20, 1897.—Beede, 30th Rep. Geol. Nat. Res. Ind., p. 1253, pl. 16, figs. 1-1d, 1906.
Batocrinus unionensis Worthen, Geol. Surv. Ill., 8, p. 84, pl. 13, fig. 3 (not pl. 12, figs. 5, 5a = *Globocrinus unionensis*), 1890.
Batocrinus davisii Rowley and Hare, Kansas City Sci., 5, p. 116, pl. 3, fig. 9, 1891.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 17, p. 171, pl. 51, figs. 7-9, 1904; 2, pt. 2, p. 29, pl. 6, figs. 9, 17, 18, 1906.—Beede, 30th Rep. Geol. Nat. Res. Ind., p. 1248, pl. 15, figs. 7-9, 1906.
Actinocrinus caroli Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 54, pl. 1, fig. 11, 1860.
Batocrinus pulchellus S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 678, pl. 11, figs. 13, 14, 1892 (adv. pub., 1891).
Actinocrinites mortoni Troost (part) Amer. Jour. Sci., (2) 8, p. 419, 1849—Wood, U. S. Nat. Mus., Bull. 64, p. 74, 1909.
 Miss.: Union Co., Ill.; near Huntsville, Ala. (Ste. Genevieve ls.); Boonville, Mo., and Warsaw, Ill. (Warsaw ls.).
- Dizygocrinus unionensis divalis** (S. A. Miller).
Batocrinus divalis S. A. Miller, 18th Rep. Geol. Nat. Res. Ind., p. 276, pl. 3, figs. 6, 7, 1894 (adv. pub., 1892).
Dizygocrinus unionensis var. *divalis* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 425, pl. 35, figs. 21-24, 1897.—Wood, U. S. Nat. Mus., Bull. 64, p. 74, pl. 5, fig. 16, 1909.
Actinocrinites mortoni Troost (part), Amer. Jour. Sci., (2) 8, p. 60, 1849.
 Miss.: Boonville, Mo., (Warsaw ls.); Huntsville, Ala. (Ste. Genevieve and Warsaw ls.); Bono, Ind. (Keokuk ls.).
- Dizygocrinus unionensis lanesvillensis** (Rowley).
Batocrinus davisii var. *lanesvillensis* Rowley, in Greene, Contr. Ind. Pal., 1, pt. 17 p. 172, pl. 51, figs. 13-15, 1904.—Beede, 30th Rep. Geol. Nat. Res. Ind., p. 1249, pl. 15, figs. 13-15, 1906.
 Miss. (Spergen ls.): Lanesville, Ind.
- Dizygocrinus unionensis sculptus** (Rowley).
Batocrinus davisii var. *sculptus* Rowley, in Greene, Cont. Ind. Pal., 1, pt. 17, p. 174, pl. 51, figs. 22, 23, 1904.—Beede, 30th Rep. Geol. Nat. Res. Ind., p. 1250, pl. 15, figs. 22, 23, 1906.
 Miss. (Spergen ls.): Lanesville, Ind.

Dizygocrinus whitei (Wachsmuth and Springer).

Batocrinus whitei Wachsmuth and Springer, Rev. Pal., pt. 2, p. 169 (343), 1881.

Dizygocrinus whitei Wachsmuth and Springer, N. Amer. Crin. Cam., p. 419, pl. 33, figs. 10 a, b, 11, 1897.—Beede, 30th Rep. Geol. Nat. Res. Ind., p. 1251, pl. 12, figs. 4, 4a, 1906.

Batocrinus spergenensis S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 670, pl. 10, figs. 5, 6, 1892 (adv. pub., 1891).—Rowley in Greene, Cont. Ind. Pal., 1, pt. 19, p. 188, pl. 57, figs. 3, 4, 1904.

Miss.: Bono, Canton, and Edwardsville, Ind.; Hamilton, Ill.; Keokuk, Iowa (Keokuk ls.); Barren Co., Ky. (Ft. Payne ch.); Spergen Hill, Ind. (Spergen ls.).

Dizygocrinus whitei didactylus Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 420, pl. 35, figs. 12, 13, 1897.

Miss. (Keokuk ls.): Keokuk, Iowa.

Dolatocrinus Lyon. Genotype: *D. lacus* Lyon.

Dolatocrinidae (Camerata). Dev.

Lyon, Geol. Surv. Ky., 3, p. 482, 1857.—Zittel, Handb. Pal., 1, p. 368, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 124 (298), 1881; N. Amer. Crin. Cam., p. 310, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 164, 1900.—Wood, Smiths. Misc. Coll., 47, p. 60, 1904.—Springer, Zittel-Eastman Textb. Pal., 1, p. 191, 1913; U. S. Nat. Mus., Bull. 115, p. 16, 1921.

Cacabocrinites Troost, Amer. Jour. Sci., (2) 8, p. 419, 1849.—Roemer, Sil. Fauna West Tenn., p. 31, 1860. (Genotype: *C. sculptus* Troost.)

Cacabocrinus Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 109, 1862.

Dolatocrinus amplus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 5, p. 45, pl. 4, figs. 6-8, 1894.—Rowley, in Greene, Cont. Ind. Pal., 1, pt. 15, p. 154, pl. 45, figs. 10-12, 1903.—Springer, U. S. Nat. Mus., Bull. 115, p. 47, pl. 11, figs. 11-17, pl. 12, figs. 14, 15, 1921.

Dolatocrinus vasculum Miller and Gurley, Ill. St. Mus., Bull. 6, p. 53, pl. 5, figs. 7-9, 1895.—Miller, N. Amer. Geol. Pal., 2d App., p. 743, figs. 1341, 1342, 1897.

Dolatocrinus peculiaris Miller and Gurley, Ill. St. Mus., Bull. 9, p. 56, pl. 3, figs. 28-30, 1896.

Dolatocrinus lyoni Wachsmuth and Springer, N. Amer. Crin. Cam., p. 314, pl. 30, figs. 6 a-d, 1897.

Dolatocrinus wachsmuthi Wood, Smiths. Misc. Coll., 47, p. 77, 1904.

Dolatocrinus pernodosus Rowley, in Greene, Cont. Ind. Pal., 1, pt. 12, p. 113, pl. 35, figs. 4-6, 1903.

Dev.: Near Charlestown, Ind., Louisville, Ky. (Hamilton-Sellersburg ls.); 4-Mile Dam, Michigan (Alpena ls.).

Dolatocrinus aplatus Miller and Gurley = *D. stellifer*.

Dolatocrinus approximatus Miller and Gurley = *D. lacus*.

Dolatocrinus argutus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 8, p. 41, pl. 3, figs. 4-6, 1896.—Springer, U. S. Nat. Mus., Bull. 115, p. 44, pl. 11, figs. 4, 5, 1921.

Dev. (Hamilton-Sellersburg ls.): Charlestown, Ind.

Dolatocrinus arrosus Miller and Gurley = *D. bellarugosus*.

Dolatocrinus arrosus cognatus Rowley = *D. bellarugosus*.

Dolatocrinus asper Miller and Gurley = *D. lineolatus*

Dolatocrinus asperatus (Miller and Gurley).

Dolatocrinus ornatus var. *asperatus* Miller and Gurley, Ill. St. Mus., Bull. 4, p. 16, pl. 2, figs. 4-6, 1894.

Dolatocrinus marshi var. *hamiltonensis* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 314, pl. 25, figs. 2 a, b, 1897.

- Dolatocrinus asperatus* Springer, U. S. Nat. Mus., Bull. 115, p. 41, pl. 6, figs. 5-12, 1921.
Dev. (Hamilton-Sellersburg ls.): Near Charlestown, Ind., and Louisville, Ky.
- Dolatocrinus aspratilis* Miller and Gurley = *D. bulbaceus*.
- Dolatocrinus asterias* Wood.**
Wood, Smiths. Misc. Coll., 47, p. 71, text figs. 5-7, pl. 16, figs. 1, 1a, 1904.—Springer, U. S. Nat. Mus., Bull. 115, p. 48, pl. 12, figs. 4-7, 1921.
Dev.: Alpena, Mich. (Alpena ls.); Partridge Point, Mich. (Thunder Bay ls.).
- Dolatocrinus aureatus* Miller and Gurley = *D. venustus*.
- Dolatocrinus basilicus* Miller and Gurley = *D. bellulus*.
- Dolatocrinus bellarugosus* Miller and Gurley.**
Miller and Gurley, Ill. St. Mus., Bull. 8, p. 43, pl. 3, figs. 7-9, 1896.—Springer, U. S. Nat. Mus., Bull. 115, p. 50, pl. 13, figs. 6-10, pl. 15, fig. 8 (*venustus*, by error), 1921.
Dolatocrinus arrosus Miller and Gurley, Ill. St. Mus., Bull. 9, p. 52, pl. 3, figs. 22-24, 1896.
Dolatocrinus arrosus var. *cognatus* Rowley, in Greene, Cont. Ind. Pal., 1, pt. 13, p. 137, pl. 39, figs. 12-14, 1903.
Dolatocrinus caelatus Miller and Gurley, Ill. St. Mus., Bull. 8, p. 46, pl. 3, figs. 13-15, 1896.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 16, p. 165, pl. 48, figs. 10-12, 1903.
Dev. (Hamilton-Sellersburg ls.): Near Charlestown, Ind.
- Dolatocrinus bellulus* Miller and Gurley.**
Miller and Gurley, Ill. St. Mus., Bull. 6, p. 57, pl. 5, figs. 16-18, 1895.—Springer, U. S. Nat. Mus., Bull. 115, p. 56, pl. 15, figs. 1-6, pl. 16, figs. 4-7 (?), 1921.
Dolatocrinus basilicus Miller and Gurley, Ill. St. Mus., Bull. 9, p. 43, pl. 3, figs. 1-3, 1896.—Miller, N. Amer. Geol. Pal., 2d. App., p. 742, fig. 1335, 1897.
Dolatocrinus noduliferus Rowley, in Greene, Cont. Ind. Pal., 1, pt. 14, p. 140, pl. 41, figs. 1-3, 1903.
Dev. (Hamilton-Sellersburg ls.): Near Charlestown, Ind., and Louisville, Ky.
- Dolatocrinus bulbaceus* Miller and Gurley.**
Miller and Gurley, Ill. St. Mus., Bull. 4, p. 22, pl. 2, figs. 13-15, 1894.—Rowley in Greene, Cont. Ind. Pal., 2, pt. 1, p. 9, pl. 3, figs. 9-13, 1908.—Springer, U. S. Nat. Mus., Bull. 115, p. 42, pl. 11, figs. 1-3, 1921.
Dolatocrinus aspratilis Miller and Gurley, Ill. St. Mus., Bull. 9, p. 49, pl. 3, figs. 16-18, 1896.—Miller, N. Amer. Geol. Pal., 2d App., p. 742, fig. 1334, 1897.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 11, p. 102, pl. 32, figs. 16-18, 1903.
Dolatocrinus pulchellus Miller and Gurley, Ill. St. Mus., Bull. 6, p. 55, pl. 5, figs. 13-15, 1895.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 11, p. 109, pl. 33, figs. 16-18, 1903.
Dolatocrinus subaculeatus Whiteaves, Cont. Canadian Pal., 1, pt. 5, p. 369, pl. 48, figs. 6-6b, 1898.
Dev. (Hamilton): Charlestown, Ind. and Louisville, Ky. (Sellersburg ls.); 2½ miles east Arkona, Ont. (Widder beds).
- Dolatocrinus caelatus* Miller and Gurley = *D. bellarugosus*.
- Dolatocrinus canadensis* Whiteaves.**
Whiteaves, Cont. Canadian Pal., 1, pt. 2, p. 99, pl. 12, figs. 3, 3a, 1889 (adv. pub., 1887).
Dev. (Hamilton-Widder beds): Near Thedford, and 2½ miles east of Arkona, Ontario.
- Dolatocrinus canadensis* Wachsmuth and Springer = *Clarkeocrinus troosti*.
- Dolatocrinus charlestownensis* Miller and Gurley = *D. lineolatus*.
- Dolatocrinus cistula* Miller and Gurley = *D. lineolatus*.
- Dolatocrinus corbuliformis* Rowley = *D. venustus*.

Dolatocrinus corporosus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 6, p. 50, pl. 5, figs. 1-3, 1895.—Miller, N. Amer. Geol. Pal., 2d App., p. 748, figs. 1337, 1338, 1897.—Springer, U. S. Nat. Mus., Bull. 115, p. 54, pl. 14, figs. 1, 2, pl. 16, figs. 1, 2, 1921.

Dolatocrinus corporosus var. *decoratus* Rowley, in Greene, Cont. Ind. Pal., 1, pt. 15, p. 149, pl. 44, figs. 7-9, 1903.

Dolatocrinus welleri Rowley, in Greene, Cont. Ind. Pal., 1, pt. 14, p. 143, pl. 41, fig. 14, 1903.

Dev. (Hamilton-Sellersburg ls.): Charlestown, Ind., and Louisville, Ky.

Dolatocrinus corporosus concinnus Rowley = *D. greeni*.

Dolatocrinus corporosus decoratus Rowley, 1903 = *D. corporosus*.

Dolatocrinus costatus Wood.

Wood, Smiths. Misc. Coll., 47, p. 70, pl. 16, figs. 6, 6a, 1904.—Springer, U. S. Nat. Mus., Bull. 115, p. 48, pl. 12, figs. 1-3, 1921.

Dev.: Alpena, Mich. (Alpena ls.); 4-Mile Dam, Mich. (Norway Pt. ls.).

Dolatocrinus currieri Rowley = *D. spinosus*.

Dolatocrinus depressus S. A. Miller.

S. A. Miller, in Greene, Cont. Ind. Pal., 1, pt. 1, p. 6, pl. 2, figs. 4-6, 1898.

Dev. (Hamilton-Sellersburg ls.): Near Charlestown, Ind.

Dolatocrinus dispar Miller and Gurley = *D. exornatus*.

Dolatocrinus dissimularis Miller and Gurley = *D. stellifer*.

Dolatocrinus elegantulus Rowley = *D. nodosus*.

Dolatocrinus excavatus Wachsmuth and Springer = *D. grandis*.

Dolatocrinus excavatus Rowley = (part) *D. insuetus*; (part) *D. grandis*.

Dolatocrinus excavatus incarinatus Rowley = *D. grandis*.

Dolatocrinus exornatus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 6, p. 54, pl. 5, figs. 10-12, 1895.—Miller, N. Amer. Geol. Pal., 2d App., p. 743, fig. 1340, 1897.—Springer, U. S. Nat. Mus., Bull. 115, p. 51, pl. 13, figs. 11, 12, 1921.

Dolatocrinus dispar Miller and Gurley, Ill. St. Mus., Bull. 9, p. 40, pl. 2, figs. 27-29, 1896.

Dev. (Hamilton-Sellersburg ls.): Charlestown, Ind.

Dolatocrinus exstans Springer.

Springer, U. S. Nat. Mus., Bull. 115, p. 37, pl. 10, figs. 8, 9, 1921.

Dev. (Onondaga-Jeffersonville ls.): Louisville, Ky.

Dolatocrinus fossatus Rowley = *D. grandis*.

Dolatocrinus fungiferus Rowley.

Rowley, in Greene, Cont. Ind. Pal., 1, pt. 13, p. 134, pl. 39, figs. 1-3, 1903.—Springer, U. S. Nat. Mus., Bull. 115, p. 57, pl. 15, figs. 12, 13, 1921.

Dev. (Hamilton-Sellersburg ls.): Falls of the Ohio, Louisville, Ky.

Dolatocrinus glyptus (Hall).

Cacabocrinus glyptus Hall, 15th Rep. Regents Univ. St. N. Y., p. 140, 1862.

Dolatocrinus glyptus Shumard, Trans. Acad. Sci. St. Louis, 2, p. 367, 1866.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 317, pl. 26, figs. 2a, b, 1897.—Springer, U. S. Nat. Mus., Bull. 115, p. 41, 1921.—Goldring, N. Y. St. Mus., Mem. 16, p. 155, pl. 18, figs. 4-7, 1923.

Dev.: Near Pavilion, Genesee Co., and York, N. Y. (Hamilton-Moscow sh.); Cazenovia and Canandaigua Lake, N. Y. (Tichenor ls.); Falls of the Ohio (Sellersburg ls.); Columbus, Ohio (Columbus ls.).

Dolatocrinus glyptus intermedius (Hall).

Cacabocrinus glyptus var. *intermedius*, Hall, 15th Rep. Regents. Univ. St. N. Y., p. 141, 1862.

Dolatocrinus glyptus var. *intermedius* Goldring, N. Y. St. Mus., Mem. 16, p. 167, pl. 18, fig. 8, 1923.

Dev. (Hamilton-Moscow sh.): York, N. Y.

Dolatocrinus grandis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 4, p. 14, pl. 3, figs. 1-3, 1894.—Springer, U. S. Nat. Mus., Bull. 115, p. 32, pl. 7, figs. 1-8, pl. 9, fig. 5, pl. 10, fig. 2, 1921.

Dolatocrinus excavatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 321, pl. 25, fig. 1, pl. 26, figs. 7, 8, 1897.—Rowley, in Greene, Cont. Ind. Pal., 1, pt. 13, p. 134, pl. 39, fig. 4; pt. 14, p. 145, pl. 42, fig. 7; pt. 19, p. 191, pl. 57, figs. 16, 18 (not fig. 17 = *D. insuetus*), 1904.

Dolatocrinus excavatus var. *incarinatus* Rowley, in Greene, Cont. Ind. Pal., 1, pt. 12, p. 112, pl. 35, figs. 1-3, 1903.

Dolatocrinus fossatus Rowley, in Greene, Cont. Ind. Pal., 2, pt. 1, p. 7, pl. 3, figs. 1-3, 1906.

Dolatocrinus marshi Miller and Gurley (not Lyon), Ill. St. Mus., Bull. 4, pl. 1, fig. 8, 1894.—Rowley, in Greene, Cont. Ind. Pal., 1, pt. 16, pl. 47, figs. 7, 8, 1903.

Cacabocrinites sculptus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849 (nom. nud.).

Dev. (Onondaga-Jeffersonville ls.): Falls of the Ohio, Louisville, Ky.

Dolatocrinus greenei Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 4, p. 28, pl. 3, figs. 10-12, 1894.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 16, p. 158, pl. 47, figs. 4-6, 25, 1903.—Springer, U. S. Nat. Mus., Bull. 115, p. 55, pl. 14, figs. 7-9, pl. 16, fig. 3, 1921.

Dolatocrinus corporosus var. *concinna* Rowley in Greene, Cont. Ind. Pal., 1, pt. 15, p. 148, pl. 44, figs. 4-6, 1903.

Dev. (Hamilton-Sellersburg ls.): Falls of the Ohio, Louisville; Ky.

Dolatocrinus hammelli Miller and Gurley = *D. stellifer*.

Dolatocrinus icosidactylus Wachsmuth and Springer = *D. lineolatus*.

Dolatocrinus incisus Springer.

Springer, U. S. Nat. Mus., Bull. 115, p. 49, pl. 12, figs. 8-13, 1921.

Dev. (Traverse-Alpena ls.): Alpena, Mich.

Dolatocrinus indianensis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 8, p. 40, pl. 3, figs. 1-3, 1896.—Springer, U. S. Nat. Mus., Bull. 115, p. 54, pl. 14, figs. 3-6, 1921.

Dolatocrinus preciosus Miller and Gurley, Ill. St. Mus., Bull. 9, p. 41, pl. 2, figs. 30-32, 1896.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 15, pp. 152, 153, pl. 45, figs. 1-6, 1903.

Dev. (Hamilton-Sellersburg ls.): Near Charlestown, Ind.

Dolatocrinus insignis Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 174, text fig. 39, pl. 19, figs. 3-6, 1923.

Dev. (Hamilton-Moscow sh.): Bellona, Canandaigua Lake, and Livonia Salt Shaft, N. Y.

Dolatocrinus insuetus Rowley.

Rowley in Greene, Cont. Ind. Pal., 2, pt. 1, p. 8, pl. 3, fig. 4, 1906.—Springer, U. S. Nat. Mus., Bull. 115, p. 36, pl. 8, fig. 6, 1921.

Dolatocrinus excavatus Rowley, in Greene, Cont. Ind. Pal., 1, pt. 19, p. 191, pl. 57, fig. 17 (not 16 and 18 = *D. grandis*), 1904.

Dev. (Onondaga-Jeffersonville ls.), Louisville, Ky. and vicinity.

Dolatocrinus lacus Lyon.

Lyon, Geol. Surv. Ky., 3, p. 482, pl. 4, figs. 2 a-c, 1857.—Miller and Gurley, Ill. St. Mus., Bull. 4, p. 9, pl. 1, figs. 6, 7, 1894.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 311, pl. 26, figs. 6 a-c, 1897.—Springer, U. S. Nat. Mus., Bull. 115, p. 28, pl. 5, figs. 6, 7, 1921.

Dolatocrinus approximatus Miller and Gurley, Ill. St. Mus., Bull. 4, p. 25, pl. 3, figs. 4-6, 1894.

Dev. Beargrass Creek, Jefferson Co., Ky. (Jeffersonville ls.); Columbus, Ohio (Columbus ls.)

Dolatocrinus laguncula Miller and Gurley = *D. stellifer*.

Dolatocrinus lamellosus (Hall).

Cacabocrinus lamellosus Hall, 15th Rep. Regents Univ. St. N. Y., p. 141, 1862.

Dolatocrinus lamellosus Springer, U. S. Nat. Mus., Bull. 115, p. 36, 1921.—Goldring, N. Y. St. Mus., Mem. 16, p. 164, p. 119, figs. 1, 2, 1923.

Dev. (Onondaga-Jeffersonville ls.): Louisville, Ky.

Dolatocrinus lineolatus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 4, p. 27, pl. 3, figs. 7-9, 1894—Springer, U. S. Nat. Mus., Bull. 115, p. 55, pl. 13, figs. 13-18, pl. 14, figs. 10, 11, pl. 15, fig. 7, pl. 16, fig. 8, 1921.

Dolatocrinus asper Miller and Gurley, Ill. St. Mus., Bull. 9, p. 47, pl. 3, figs. 10-12, 1896.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 742, fig. 1333, 1897.

Dolatocrinus charlestownensis Miller and Gurley, Ill. St. Mus., Bull. 8, p. 44, pl. 3, figs. 10-12, 1896.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 742, fig. 1336, 1897.—Rowley, in Greene, Cont. Ind. Pal., 1, pt. 15, p. 153, pl. 45, figs. 7-9, 1903.

Dolatocrinus cystula Miller and Gurley, Ill. St. Mus., Bull. 9, p. 46, pl. 3, figs. 7-9, 1896.

Dolatocrinus icosidactylus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 319, pl. 26, figs. 5 a-d, 1897.

Dolatocrinus sacculus Miller and Gurley, Ill. St. Mus., Bull. 7, p. 58, pl. 3, figs. 11, 12, 1895.

Dolatocrinus salebrosus Miller and Gurley, Ill. St. Mus., Bull. 7, p. 59, pl. 3, figs. 13-15, 1895.

Dolatocrinus springeri Rowley, in Greene, Cont. Ind. Pal., 1, pt. 13, p. 136, pl. 39, figs. 9, 10, 1903.

Dev. (Hamilton): Charlestown, Ind.; Falls of the Ohio (Sellersburg ls.); Thedford, Ont. (Widder beds).

Dolatocrinus liratus (Hall).

Cacabocrinus liratus Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 139, 1862.

Dolatocrinus liratus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 319, pl. 26, fig. 3, 1897.—Springer, U. S. Nat. Mus., Bull. 115, p. 41, pl. 10, figs. 10, 11, 1921.—Goldring, N. Y. St. Mus., Mem. 16, p. 158, pl. 17, figs. 1-13, pl. 18, figs. 1-3, 1923.

Cacabocrinus liratus var. *multilira* Hall, 15th Rep. Regents Univ. St. N. Y., p. 139, 1862.

Dev.: Kashong Creek, near Bellona, N. Y. (Moscow sh.); 3 miles south of Sherburne, N. Y. (Tully-Westbrook mem.); Canandaigua Lake, N. Y. (Ludlowville sh.-Deep Run mem.); Lebanon, Ky. (Sellersburg ls.).

Dolatocrinus liratus parvulus Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 164, pl. 17, fig. 14, 1923.

Dev. (Hamilton-Moscow sh.): Canandaigua Lake, N. Y.

Dolatocrinus lobatus Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 176, pl. 20, figs. 3-6, 1923.

Dev. (Onondaga ls.): Cherry Valley, N. Y.

Dolatocrinus lyoni Miller and Gurley = *D. venustus*.

Dolatocrinus lyoni Wachsmuth and Springer = *D. amplus*.

Dolatocrinus magnificus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 4, p. 5, pl. 1, figs. 1-3, 1894.—Springer, U. S. Nat. Mus., Bull. 115, p. 54, 1921.

Dev. (Hamilton-Sellersburg ls.): Falls of the Ohio.

Dolatocrinus major Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 322, pl. 25, fig. 5, 1897.—Springer, U. S. Nat. Mus., Bull. 115, p. 36, pl. 9, figs. 1, 2, 1921.

Dev. (Onondaga): Louisville, Ky. (Jeffersonville ls.); Columbus, Ohio (Columbus ls.).

Dolatocrinus marshi Lyon.

Lyon, Trans. Amer. Philos. Soc., 13, p. 461, pl. 27, figs. n, n-1, n-2, 1869.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 312, pl. 26, figs. 1 a-d, 1897.—Springer, U. S. Nat. Mus., Bull. 115, p. 31, pl. 5, fig. 14, 1921.

Dev. (Onondaga-Jeffersonville ls.): Louisville and Marion Co., Ky.

Dolatocrinus marshi Miller and Gurley (not Lyon) = *D. grandis*.

Dolatocrinus marshi glaber Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 173, pl. 20, figs. 1, 2, 1923.

Dev. (Onondaga ls.): Cherry Valley, N. Y.

Dolatocrinus marshi hamiltonensis Wachsmuth and Springer = *D. asperatus*.

Dolatocrinus multibrachiatus Rowley.

Rowley, in Greene, Cont. Ind. Pal., 1, pt. 14, p. 141, pl. 41, fig. 7, 1903.—Springer, U. S. Nat. Mus., Bull. 115, p. 38, pl. 9, figs. 3, 4, 1921.

Dev. (Onondaga-Jeffersonville ls.): Louisville, Ky. and vicinity.

Dolatocrinus multinodosus Rowley = *D. nodosus*.

Dolatocrinus neglectus Miller and Gurley = *D. stellifer*.

Dolatocrinus nodosus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 7, p. 56, pl. 3, figs. 1-3, 1896.—Rowley, in Greene, Cont. Ind. Pal., 1, pt. 16, p. 163, pl. 48, figs. 1-3, 1903.—Springer, U. S. Nat. Mus., Bull. 115, p. 56, pl. 15, figs. 9-11, 1921.

Dolatocrinus elegantulus Rowley, in Greene, Cont. Ind. Pal., 1, pt. 15, p. 150, pl. 44, figs. 10-12, 1903.

Dolatocrinus multinodosus Rowley, in Greene, Cont. Ind. Pal., 1, pt. 15, p. 147, pl. 44, figs. 1-3, 1903.

Dolatocrinus tuberculatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 324, pl. 25, fig. 3, 1897.

Dev. (Hamilton-Sellersburg ls.): Near Charlestown, Ind., and Louisville, Ky.

Dolatocrinus noduliferus Rowley = *D. bellulus*.

Dolatocrinus ornatus Meek.

Meek, Proc. Acad. Nat. Sci. Phila., (1), 23, p. 57, 1871.—Miller and Gurley, Ill. St. Mus., Bull. 4, p. 18, pl. 2, figs. 7-9, 1894.—Springer, U. S. Nat. Mus., Bull. 115, p. 29, pl. 6, figs. 1-4, 1921.—Goldring, N. Y. St. Mus., Mem. 16, p. 170, pl. 18, figs. 13, 14, 1923.

Dev. (Onondaga): Columbus, Ohio (Columbus ls.); Falls of the Ohio (Jeffersonville ls.); Cherry Valley and LeRoy, N. Y.

Dolatocrinus ornatus asperatus Miller and Gurley = *D. asperatus*.

Dolatocrinus peculiaris Miller and Gurley = *D. amplus*.

Dolatocrinus pernodosus Rowley = *D. amplus*.

Dolatocrinus preciosus Miller and Gurley = *D. indianensis*.

Dolatocrinus pulchellus Miller and Gurley = *D. bulbaceus*.

Dolatocrinus pyramidatus Springer.

Springer, U. S. Nat. Mus., Bull. 115, p. 29, pl. 5, figs. 8-11, 1921.

Dev. (Onondaga-Jeffersonville ls.): Louisville, Ky.

Dolatocrinus rotundus Springer.

Springer, U. S. Nat. Mus., Bull. 115, p. 30, pl. 5, figs. 12, 13, 1921.

Dev. (Onondaga-Jeffersonville ls.): Falls of the Ohio, Louisville, Ky.

Dolatocrinus sacculus Miller and Gurley = *D. lineolatus*.

Dolatocrinus salebrosus Miller and Gurley = *D. lineolatus*.

Dolatocrinus speciosus (Hall).

Cacabocrinus speciosus Hall, 15th Rep. Regents Univ. St. N. Y., p. 137, text fig., 1862.

Dolatocrinus speciosus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 323, pl. 25, figs. 4a, b, 1897.—Springer, U. S. Nat. Mus., Bull. 115, p. 30, 1921.—Goldring, N. Y. St. Mus., Mem. 16, p. 168, pl. 18, figs. 9-12, 1923.

Dev. (Onondaga ls.): Schoharie Co., and Cherry Valley, N. Y.

Dolatocrinus spinosus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 4, p. 8, pl. 1, figs. 4, 5, 1894.—Rowley, in Greene, Cont. Ind. Pal., 1, pt. 16, p. 164, pl. 48, fig. 4, 1903.—Springer, U. S. Nat. Mus., Bull. 115, p. 34, pl. 8, figs. 1-7, pl. 10, fig. 1, 1921.

Dolatocrinus currieri Rowley, in Greene, Cont. Ind. Pal., 1, pt. 14, p. 143, pl. 42, figs. 1-6, 1903.

Dev.: Charlestown, Ind. (Sellersburg ls.); Louisville, Ky. (Jeffersonville ls.).

Dolatocrinus springeri Goldring.

Goldring, Jour. Pal., 10, p. 18, pl. 7, figs. 3-5, 1936.

Dev. (Hamilton-Centerfield sh.): East Bethany, N. Y.

Dolatocrinus springeri Rowley = *D. lineolatus*.

Dolatocrinus stellifer Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 4, p. 20, pl. 2, figs. 10-12, 1894.—Springer, U. S. Nat. Mus., Bull. 115, p. 44, pl. 11, figs. 6-8, 1921.

Dolatocrinus aplatatus Miller and Gurley, Ill. St. Mus., Bull. 8, p. 48, pl. 3, figs. 16-18, 1896; Bull. 9, p. 49, pl. 3, figs. 13-15, 1896.—Rowley, in Greene, Cont. Ind. Pal., 1, pt. 13, p. 136, pl. 39, figs. 6-8, 1903.

Dolatocrinus dissimilaris Miller and Gurley, Ill. St. Mus., Bull. 9, p. 54, pl. 3, figs. 25-27, 1896.—Miller, N. Amer. Geol. Pal., 2d. App., p. 743, fig. 1339, 1897.

Dolatocrinus hammelli Miller and Gurley, Ill. St. Mus., Bull. 6, p. 52, pl. 5, figs. 4-6, 1895.

Dolatocrinus laguncula Miller and Gurley, Ill. St. Mus., Bull. 9, p. 51, pl. 3, figs. 19-21, 1896.

Dolatocrinus neglectus Miller and Gurley, Ill. St. Mus., Bull. 12, p. 37, pl. 2, figs. 27-29, 1897.

Dev. (Hamilton-Sellersburg ls.): Louisville, Ky.; Charlestown, Ind.

Dolatocrinus subaculeatus Whiteaves = *D. bulbaceus*.

Dolatocrinus tridactylus Barris.

Barris, Proc. Davenport Acad. Sci., 4, p. 100, pl. 2, figs. 5-7, 1886 (adv. pub., 1885).—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 316, pl. 26, figs. 4 a-d, 1897.—Springer, U. S. Nat. Mus., Bull. 115, p. 46, pl. 11, figs. 9, 10, 1921.

Dev. (Hamilton): Near Alpena, Mich. (Thunder Bay ls.); Arkona, Ont. (Widder beds); Falls of the Ohio (Sellersburg ls.).

Dolatocrinus tuberculosus Wachsmuth and Springer = *D. nodosus*.

Dolatocrinus vasculum Miller and Gurley = *D. amplus*.

Dolatocrinus venustus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 4, p. 23, pl. 2, figs. 16-18, 1894.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 16, p. 160, pl. 47, figs. 9, 10, 1903.—Springer, U. S. Nat. Mus., Bull. 115, p. 50, pl. 13, figs. 1-5, 1921.

Dolatocrinus aureatus Miller and Gurley, Ill. St. Mus., Bull. 4, p. 24, pl. 3, figs. 1, 2, 1894.

- Dolatocrinus corbuliformis* Rowley, in Greene, Cont. Ind. Pal., 1, pt. 15, p. 151, pl. 44, figs. 13-15, 1903.
- Dolatocrinus lyoni* Miller and Gurley, Ill. St. Mus., Bull. 9, p. 44, pl. 3, figs. 4-6, 1896.
- Dev. (Hamilton): Charlestown, Ind. (Sellersburg ls.); Alpena and 4-Mile Dam, Mich. (Alpena ls.).
- Dolatocrinus wachsmuthi* Wood = *D. amplus*.
- Dolatocrinus welleri* Rowley = *D. corporosus*.
- Doliolocrinites* Hall = *Talarocrinus*.
- Doliolocrinites ovalis* Troost = *Talarocrinus simplex*.
- Doliolocrinus* Wachsmuth and Springer = *Talarocrinus*.
- Donaciacrinites* Troost = *Synbathocrinus*.
- Donaciacrinites bipartitus* Troost = *Erisocrinus?* *bipartitus*.
- Donaciacrinus* Bather = *Synbathocrinus*.
- Dorycrinus** Roemer. Genotype: *D. mississippiensis* Roemer.
- Batocrinidae (Camerata). Dev.; Miss.
- Roemer, Archiv. Naturges., Jahrg. 19, Bd. 1, p. 207, 1854.—Meek and Worthen, Geol. Surv. Ill., 5, p. 379, 1873.—Zittel, Handb. Pal., 1, p. 370, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 176 (350), 1881; pt. 3, p. 105 (327), 1886; N. Amer. Crin. Cam., p. 454, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 167, 1900.—Springer, Mem. Mus. Comp. Zool., Harvard, 25, no. 3, p. 120, 1911; Zittel—Eastman Textb. Pal., 1, p. 196, 1913.
- Dorycrinus alabamensis** Miller and Gurley.
- Miller and Gurley, Ill. St. Mus., Bull. 10, p. 15, pl. 3, figs. 15-17, 1896.
- Miss. (Ft. Payne ch.): Chert Hill, Ala.
- Dorycrinus amoenus* Miller = *Aorocrinus parvus*.
- Dorycrinus canaliculatus* Meek and Worthen = *Aorocrinus canaliculatus*.
- Dorycrinus confragosus* Miller = *Eretmocrinus leucosia*.
- Dorycrinus cornigerus** (Hall).
- Actinocrinus cornigerus* Hall, Geol. Rept. Iowa., 1, pt. 2, p. 576, pl. 9, figs. 12 a-c, 1858; Suppl., pl. 3, fig. 4, 1860.
- Dorycrinus cornigerus* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., 20, p. 345, 1868.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 458, pl. 42, figs. 5, 6, pl. 43, fig. 5, pl. 44, figs. 6, 7, 1897.
- Actinocrinus decornis* Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 13, text fig., 1860.
- Actinocrinus divaricatus* Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., pp. 11, 12, text fig., 1860.
- Miss. (Up. Burlington ls.): Burlington, Iowa, and Sagetown, Ill.
- Dorycrinus devonicus* Springer = *Thamnocrinus devonicus*.
- Dorycrinus elegans* S. A. Miller = *Aorocrinus elegans*.
- Dorycrinus faberi** Miller and Gurley.
- Miller and Gurley, Ill. St. Mus., Bull. 10, p. 19, pl. 1, figs. 8-10, 1896.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 744, fig. 1345, 1897.
- Miss. (Burlington ls.): Burlington, Iowa.
- Dorycrinus gouldi** (Hall).
- Actinocrinus gouldi* Hall, Geol. Rep. Iowa, 1, pt. 2, p. 613, pl. 15, figs. 6a, b, text fig. 94, 1858.
- Dorycrinus gouldi* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., 20, p. 345, 1868.—Keyes, Geol. Surv. Mo., 4, p. 173, pl. 23, fig. 1, 1894.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 456, pl. 43, figs. 2, 3, pl. 44, figs. 4, 5, 1897.
- Miss.: Warsaw and Hamilton, Ill.; Keokuk, Iowa; Indian Creek and Canton, Ind. (Keokuk ls.); Allen and Barren Cos., Ky; Whites Creek Springs, etc., Tenn. (Ft. Payne ch.).

Dorycrinus greenei Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 5, p. 48, pl. 5, figs. 1-3, 1894.

Miss. (New Providence sh.): Button Mold Knob, Bullitt Co., Ky.

Dorycrinus immaturus Wachsmuth and Springer = *Aorocrinus immaturus*.

Dorycrinus inflatus Rowley and Hare.

Rowley and Hare, Kansas City Sci., 5, p. 114, pl. 3, fig. 4, 1891.

Miss. (Low. Burlington ls.): Louisiana, Mo.

Dorycrinus intermedius (Meek and Worthen)

Dorycrinus quinquelobus var. *intermedius* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 346, 1868; Geol. Surv. Ill., 5, p. 385, pl. 10, fig. 4, 1873.

Dorycrinus intermedius Wachsmuth and Springer, N. Amer. Crin. Cam., p. 461, pl. 44, fig. 1, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Dorycrinus kelloggi Worthen = *Aorocrinus spinulosus*.

Dorycrinus lineatus S. A. Miller = *D. unicornis*.

Dorycrinus mississippiensis Roemer.

Roemer, Archiv. Natur. Jahrg. 19, 1, p. 216, pl. 10, figs. 1-3, 1853.—Dujardin and Hupe, Hist. Nat. Zoophytes Echin., p. 143, pl. 3, figs. 1-3, 1862.—Worthen, Geol. Surv. Ill., 8, p. 100, pl. 12, fig. 4, 1890.—Wachsmuth and Springer, N. Amer. Crin. Cam., pl. 3, fig. 20, pl. 43, fig. 1, pl. 44, figs. 2, 3, 1897.

Actinocrinus (Dorycrinus) mississippiensis var. *spiniger* Hall. Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 53, text fig., 1860.

Miss.: Warsaw, Hamilton, and Nauvoo, Ill.; Keokuk, Iowa; Kahoka and Clark Co., Mo.; Indiana (Keokuk ls.); Kentucky; and Whites Creek Springs, Tenn. (Fort Payne ch).

Dorycrinus missouriensis (Shumard).

Actinocrinus missouriensis Shumard, 2d Rep. Geol. Surv. Mo., p. 190, pl. A, figs. 4 a-c, 1855.

Dorycrinus missouriensis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 463, pl. 43, fig. 6; pl. 45, figs. 13 a-c, 14, 1897.

Actinocrinus desideratus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 273; Prelim. Descr. New Crin., p. 2, 1861.

Miss. (Up. Burlington ls.): Near Palmyra, Mo.; Burlington, Iowa.

Dorycrinus parvibasis Wachsmuth and Springer = *Aorocrinus parvibasis*.

Dorycrinus pendens Whitfield = *D. unicornis*.

Dorycrinus pentalobus Rowley.

Rowley, Amer. Geol., 25, p. 72, pl. 2, figs. 21, 22, 1900.

Miss. (Up. Burlington ls.): Louisiana and White Ledge, Mo.

Dorycrinus quinquelobus (Hall).

Actinocrinus quinquelobus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 15, text fig., 1860, N. Y. St. Mus., Bull. 1, pl. III-A, figs. 18-20, 1872.

Dorycrinus quinquelobus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 460, pl. 42, figs. 7-9, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Dorycrinus quinquelobus intermedius Meek and Worthen = *D. intermedius*.

Dorycrinus radiatus Wachsmuth and Springer = *Aorocrinus radiatus*.

Dorycrinus roemeri Meek and Worthen.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 346, 1868; Geol. Surv. Ill., 5, p. 383, pl. 10, fig. 3, 1873.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 464, pl. 45, figs. 15a, b, 1897.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 34, text fig. 21, 1900.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Dorycrinus sampsoni Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 10, p. 17, pl. 3, figs. 20-22, 1896.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 744, fig. 1346, 1897.

Miss. (Chouteau ls.): Sedalia, Mo.

Dorycrinus suboviformis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 12, p. 30, pl. 2, figs. 7-9, 1897.

Miss. (Burlington ls.): Near Sharon, Mo.

Dorycrinus subturbinatus (Meek and Worthen).

Actinocrinus (Amphoracrinus) subturbinatus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 386, 1860.

Amphoracrinus subturbinatus Meek and Worthen, Geol. Surv. Ill., 2, p. 212, pl. 15, figs. 4a, b, text fig. 15, 1866.

Dorycrinus subturbinatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 466, pl. 42, figs. 10a, b, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa, and Ash Grove, Mo.

Dorycrinus tricornis Whitfield = *D. unicornis*.

Dorycrinus unicornis (Owen and Shumard).

Actinocrinus unicornis Owen and Shumard, Jour. Acad. Nat. Sci. Phila., (2) 2, pt. 1, p. 67, pl. 7, figs. 12a, b, 1850; Rep. Geol. Surv. Iowa, Wis., Minn., p. 593, pl. 5-A, figs. 12a, b, 1852.—Hall, Geol. Rep. Iowa, 1, pt. 2, p. 568, pl. 10, figs. 5 a-c, 1858.

Dorycrinus unicornis Meek and Worthen, Geol. Surv. Ill., 5, p. 383, pl. 6, fig. 2, 1873.—Keyes, Geol. Surv. Mo., 4, p. 169, pl. 23, fig. 2, 1894.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 468, pl. 45, figs. 8a-e, 9, 10, 1897.

Dorycrinus lineatus S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 4, p. 310, pl. 7, figs. 3, 3a, 1881.

Actinocrinus pendens Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 31, text fig., 1860.

Dorycrinus pendens Whitfield, Mem. Amer. Mus. Nat. Hist., p. 18, pl. 2, fig. 9, 1893.

Actinocrinus tricornis Hall, Geol. Rep. Iowa, 1, pt. 2, p. 569, 1858; Suppl., pl. 2, fig. 7, 1860.

Dorycrinus tricornis Whitfield, Mem. Amer. Mus. Nat. Hist., p. 19, pl. 2, figs. 6-8, 1893.

Miss.: Burlington and Augusta, Iowa, Marion Co., and Louisiana, Mo. (Low. Burlington ls.); Sedalia, Mo. (Chouteau ls.); Lake Valley, N. Mex. (Lake Valley ls.).

Dorycrinus unispinus (Hall).

Actinocrinus unispinus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 270; Prelim. Descr. N. Sp. Crin., p. 2, 1861.

Dorycrinus unispinus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 467, pl. 45, fig. 12, 1897.

Actinocrinus trinodus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 575, text fig. 83, 1858; Descr. N. Sp. Crin., Carb. Rocks Miss. Valley, pl. 5, fig. 7, 1872.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Drymocrinus Ulrich. Genotype: *Heterocrinus geniculatus* Ulrich.

Homocrinidae (Inadunata-Fistulata). Ord.

Ulrich, in Foerste, Geol. Surv. Canada, Mem. 138, p. 96, 1924.

Drymocrinus geniculatus (Ulrich).

Heterocrinus geniculatus Ulrich, Jour. Cincinnati Soc. Nat. Hist., 2, no. 1, p. 16, pl. 7, figs. 13, 13 a-c, 1879.

Drymocrinus geniculatus Ulrich, in Foerste, Geol. Surv. Canada, Mem. 138, p. 96, text fig. 12, 1924.

Ord. (Eden-Fulton sh.): Cincinnati, Ohio, and Ft. Thomas, Ky.

Drymocrinus manitoulinensis Foerste.

Foerste, Geol. Surv. Canada, Mem. 138, p. 101, pl. 7, figs. 1a-f, 1924.

Ord. (Eden-Sheguindah fm.): Northeast of Tamarack Pt., Manitoulin Island, Lake Huron.

Dystactocrinus Ulrich. Genotype: *Heterocrinus* (*Homocrinus*) *constrictus* Hall.
Heterocrinidae (Inadunata-Fistulata). Ord.

Ulrich, in Foerste, Geol. Surv. Canada, Mem. 138, p. 87, 1924.

Dystactocrinus compactus (Meek).

Heterocrinus constrictus var. *compactus* Meek, Geol. Surv. Ohio, 1, p. 4, pl. 1, fig. 11, 1873.

Ohioocrinus constrictus var. *compactus* Wachsmuth and Springer, Rev. Pal., pt. 3, p. 209 (133), 1886.

Ohioocrinus compactus S. A. Miller, N. Amer. Geol. Pal., p. 263, 1889.

Heterocrinus isodactylus S. A. Miller, Cincinnati Quart. Jour. Sci., 2, p. 279, fig. 21, 1875.

Ord. (Maysville-Corryville sh.), Cincinnati, Ohio.

Dystactocrinus constrictus (Hall).

Homocrinus constrictus Hall, 20th Rep. N. Y. St. Cab. Nat. Hist., p. 304, 1867.

Heterocrinus constrictus Hall, 24th Rep. N. Y. St. Cab. Nat. Hist., p. 210, pl. 5, figs. 13, 14, 1872 (adv. pub., 1871).—Meek, Geol. Surv. Ohio, Pal., 1, p. 3, pl. 1, figs. 10, 10a, b, 1873.—S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 7, p. 18, pl. 4, figs. 4, 4a, b, 18, 1884.

Dystactocrinus constrictus Ulrich, in Foerste, Geol. Surv. Canada, Mem. 138, p. 87, text fig. 6, 1924.

Heterocrinus vaupeli Wetherby, Jour. Cincinnati Soc. Nat. Hist., 4, p. 82, pl. 2, figs. 1, 1a, 1881.

Ord. (Maysville, Fairmount-Corryville sh.): Cincinnati, Ohio.

Ectenocrinus S. A. Miller. Genotype: *Heterocrinus simplex* Hall.

Homocrinidae (Inadunata-Fistulata). Ord. Early Sil.

S. A. Miller, N. Amer. Geol. Pal., p. 242, 1889.—Bather, Ann. Mag. Nat. Hist., (6) 5, p. 324, 1890; Treatise Zool. (Lankester), pt. 3, p. 146, 1900.—Cumings, 32d Ann. Rep. Geol. Nat. Res. Ind. for 1907, p. 712, 1908.—Springer, Geol. Surv. Canada, Mem. 15-P, p. 27, 1911; Zittel-Eastman Textb. Pal., 1, p. 212, 1913.—Ulrich, in Foerste, Geol. Surv. Canada, Mem. 138, p. 94, 1924.

Ectenocrinus canadensis (Billings).

Heterocrinus canadensis Billings, Geol. Surv. Canada, Rep. Prog. 1853-1856, p. 273, 1857; Can. Org. Rem., Dec. 4, p. 48, pl. 4, figs. 5a-d, 1859.

Ectenocrinus canadensis Wood, U. S. Nat. Mus., Bull. 64, p. 22, pl. 4, fig. 10, 1909.

Heterocrinites simplex Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Ord. (Trenton): Ottawa and Montreal, Canada (Hull ls.); Frankfort, Ky. (Cynthiana fm.); Escanaba River, Michigan.

Ectenocrinus elongatus Thomas and Ladd.

Thomas and Ladd, Univ. Iowa Studies, 11, no. 8, p. 12, pl. 2, figs. 3-8, pl. 5, figs. 3, 4, 1926.

Early Sil. (Richmond-Mid. Maquoketa, Ft. Atkinson ls.): Ft. Atkinson, Iowa.

Ectenocrinus grandis (Meek).

Heterocrinus simplex var. *grandis* Meek, Geol. Surv. Ohio, 1, Pal., pp. 9, 10, pl. 1, figs. 6, 7, 1873.

Ectenocrinus grandis Foerste, Jour. Cincinnati Soc. Nat. Hist., 21, p. 124, pl. 1, figs. 8 A-D, 1914.

Ord.: Cincinnati, Ohio (Eden sh. and Maysville-Fairmount ls.); Covington, Ky. (Trenton-Cynthiana fm.); Near Rogers Gap, Ky. (Rogers Gap. div.).

Ectenocrinus raymondi Slocum.

Slocum, Iowa Geol. Surv., 29, p. 337, pl. 29, figs. 5-9, 1924.—Thomas and Ladd, Univ. Iowa Studies, 11, no. 8, p. 14, pl. 2, fig. 2, 1926.

Early Sil: Clermont, Iowa (Low. Maquoketa-Elgin shaly ls.); Spring Valley, Minn. (Wykoff ls.):

Ectenocrinus simplex (Hall).

Heterocrinus simplex Hall, Nat. Hist. N. Y., 1, p. 280, pl. 76, figs. 2a-d, 1847; 24th Rep. N. Y. St. Cab. Nat. Hist., pl. 5, figs. 11, 12, 1872 (adv. pub., 1871); Geol. Surv. Ohio, Pal., 1, p. 7, pl. 1, figs. 4a-c, 5a, b, 6a, b, 1873.

Ectenocrinus simplex S. A. Miller, N. Amer. Geol. Pal., p. 242, 1889.—Ulrich, in Foerste, Geol. Surv. Canada, Mem. 138, p. 94, text fig. 11, 1924.

Ord.: Cincinnati, Ohio, and vicinity (Eden and Maysville-Fairmount ls.); Covington, Ky. (Trenton-Cynthiana fm.); Trenton Falls, N. Y. (Trenton ls.).

Edaphocrinus Wright. Genotype: *E. rugosus* Wright.

Cyathocrinidae (Inadunata-Fistulata). Low. Carb.

Wright, Geol. Mag., 72, p. 195, 1935 (as *Edapocrinus*, in error).—Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 127, 1937.

Edaphocrinus rugosus (Wright).

Edapocrinus rugosus Wright, Geol. Mag., 72, no. 851, p. 195, text figs. 1-4, pl. 7, figs. 1-8, 1935.

Low. Carb. (Avonian, C₁): Coplow Knoll, Clitheroe, Lancashire, England.

Edapocrinus Wright. See *Edaphocrinus*.

Edriocrinus Hall. Genotype: *E. pocilliformis* Hall.

Edriocrinidae (Camerata). Dev.

Hall, Amer. Jour. Sci., (2) 25, p. 278, 1858; Nat. Hist. N. Y., Pal., 3, pp. 119, 143, 1859.—Zittel, Handb. Pal., 1, p. 350, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 265 (189), 1886.—Bather, Treatise Zool. (Lanckester), pt. 3, p. 191, 1900.—Talbot, Amer. Jour. Sci., (4), 20, p. 22, 1905.—Springer, Zittel-Eastman Textb. Pal., 1, p. 206, 1913; Crin. Flexibilia, p. 443, 1920.—Goldring, N. Y. St. Mus., Mem. 16, p. 445, 1923.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 25, 1926.—Ehrenberg, Palaeobiol., 1, pp. 61-78, 1928; Biol. Generalis, 9, p. 85, 1933.

Edriocrinus adhaerens Springer = *E. adnascens*.

Edriocrinus adnascens Dunbar.

Dunbar, Geol. Surv. Tenn., Bull. 21, p. 52, pl. 2, fig. 10, 1919; Trans. Conn. Acad. Arts and Sci., 23, p. 120, pl. 2, fig. 3, 1920.

Edriocrinus adhaerens Springer, Crin. Flexibilia, pp. 446, 451, pl. 76, figs. 16-18, 1920.

Dev. (Helderbergian-Linden): Rockhouse, Tenn. (Rockhouse sh.); Perryville, etc., Tenn. (Birdsong sh.); Hardin and Benton Cos., Tenn.

Edriocrinus becraftensis J. M. Clarke.

Clarke, N. Y. St. Mus., Mem. 3, p. 62, pl. 9, figs. 12, 13, 1900.—Goldring, N. Y. St. Mus., Mem. 16, p. 453, pl. 58, fig. 18, 1923.—Ehrenberg, Palaeobiol., 1, p. 63, pl. 7, figs. 11, 12c, 1928.

Dev. (Oriskany ss.): Becraft Mts., Columbia Co., N. Y.

Edriocrinus dispansus Kirk.

Kirk, U. S. Nat. Mus., Proc., 41, p. 112, pl. 11, figs. 1, 2, 1911.—Springer, Crin. Flexibilia, pp. 446, 449, pl. 76, figs. 1-5, 1920.—Goldring, N. Y. St. Mus., Mem. 16, p. 453, pl. 58, figs. 19-21, text fig. 62, 1923.—Ehrenberg, Palaeobiol., 1, pp. 62-66, 70-75, pl. 6, fig. 7, 1928.

Dev. (Helderbergian-Linden): Benton Co., Tenn.

Edriocrinus explicatus Springer.

Springer, Crin. Flexibilia, pp. 445, 449, pl. 76, figs. 13-15, 1920.—Goldring, N. Y. St. Mus., Mem. 16, p. 445, text fig. 61-B, 1923.—Ehrenberg, Palaeobiol., 1, pp. 62-77, pl. 7, fig. 10, 1928.

Dev. (Helderbergian-Linden, Birdsong sh.): Perry Co., Tenn.

Edriocrinus holopoides Springer.

Springer, Crin. Flexibilia, pp. 447, 452, pl. 76, figs. 22a, b, 23, 1920.—Goldring, N. Y. St. Mus., Mem. 16, p. 455, text fig. 63, 1923.—Ehrenberg, Palaeobiol., 1, p. 63, pl. 6, fig. 4, 1928.

- Edriocrinus sacculus* Ohern (part), Geol. Surv. Md., Low. Dev., pl. 40, figs. 7-9 (not 10-12), 1913.
Dev. (Oriskany-Ridgeley ss.): Cumberland, Md.
- Edriocrinus occidentalis** Springer.
Springer, Crin. Flexibilia, pp. 445, 449, pl. 76, figs. 6-12, 1920.—Goldring, N. Y. St. Mus., Mem. 16, p. 445, text fig. 61-A, 1923.—Ehrenberg, Palaeobiol., 1, pp. 62-77, pl. 7, fig. 12, 1928.
Dev. (Helderbergian): Wells Creek Basin, Stewart Co., Tenn. (Linden); Covington, Va. (New Scotland ls.).
- Edriocrinus pocilliformis** Hall.
Hall, Nat. Hist. N. Y., Pal., 3, p. 121, pl. 5, figs. 8-12, 1859.—Meek and Worthen, Geol. Surv. Ill., 3, p. 370, pl. 7, figs. 5a, b, 1868.—Keyes, Geol. Surv. Mo., 4, p. 221, pl. 30, figs. 6, 7, 1894.—Talbot, Amer. Jour. Sci., (4) 20, p. 23, pl. 4, figs. 1-6, 1905.—Ohern, Md. Geol. Surv., Low. Dev., p. 257, pl. 40, figs. 13-15, 1913.—Springer, Crin. Flexibilia, p. 448, 1920.—Goldring, N. Y. St. Mus., Mem. 16, p. 447, pl. 58, figs. 9-15, 1923.—Ehrenberg, Palaeobiol., 1, pp. 62-78, pl. 7, figs. 9, 16, 1928.—Swartz, F. M., U. S. Geol. Surv., Prof. Paper 158-C, p. 52, pl. 8, fig. 15, 1929.
Dev. (Helderbergian): Helderberg Mts., Clarksville, and Schoharie, N. Y.; Cumberland, Md.; Cherry Run, W. Va.; Gala, Va. (New Scotland ls.); Decatur Co., Tenn. (Linden); Baileys Landing, Perry Co., Mo. (Bailey ls.).
- Edriocrinus pyriformis** Hall.
Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 116, pl. 1, figs. 23, 24, 1862.—Kirk, U. S. Nat. Mus., Proc., 41, p. 112, pl. 11, fig. 9, 1911.—Springer, Crin. Flexibilia, p. 451, pl. 76, figs. 19-21, 1920.—Goldring, N. Y. St. Mus., Mem. 16, p. 451, pl. 58, figs. 16, 17, 1923.—Ehrenberg, Palaeobiol., 1, pp. 62-74, pl. 6, figs. 1, 3, 1928.
Dev. (Onondaga ls.): South of Utica, and Williamsville, N. Y.
- Edriocrinus sacculus** Hall.
Hall, Nat. Hist. N. Y., Pal., 3, p. 143, pl. 87, figs. 1-22, 1859.—Kirk, U. S. Nat. Mus., Proc., 41, p. 112, pl. 11, figs. 14, 15, 1911.—Ohern, Md. Geol. Surv., Low. Dev., p. 256, pl. 40, figs. 10-12 (not 7-9), 1913.—Springer, Crin. Flexibilia, pp. 446, 450, 1920.—Goldring, N. Y. St. Mus., Mem. 16, p. 448, pl. 58, figs. 1-8, 1923.—Ehrenberg, Palaeobiol., 1, p. 63, pl. 7, figs. 8, 12b, 13-15, 17, 1928; Biol. Generalis, 9, pl. 7, figs. 1-3, 1933.
Dev. (Oriskany): Cumberland and east side Nicholas Mt., Md., and near Franklin, W. Va. (Ridgeley ss.); Gleneerie, N. Y. (Gleneerie ls.); Ste. Genevieve Co., Mo. (Little Saline ls.).
- Edriocrinus sacculus* Ohern (part) = *E. holopoides*.
Edwardsocrinus d'Orbigny = *Platycrinites*.
Edwardsocrinus d'Orbigny. See *Edwardsocrinus*.
- Eifelocrinus** Wanner. Genotype: *Ptilocrinus dohmi* Wanner.
Botryocrinidae (Inadunata-Fistulata). Dev.
Wanner, Zeits. Deutsch. Geol. Gesell., 68 (Monatsbericht Nr. 8/11), p. 200, 1916 (for *Ptilocrinus*, preoccupied).—Haarmann, Jahrb. Preuss. Geol. Landesanst., 41, p. 41, 1921.
Ptilocrinus Wanner, Zeits. Deutsch. Geol. Gesell., 68, Abh., Heft 3, pp. 343-359, 1916. (Genotype: *P. dohmi* Wanner.)
- Eifelocrinus bifurcatus** Haarmann.
Haarmann, Jahrb. Preuss. Geol. Landesanst., 41, p. 46, pl. 6, figs. 1a, b, 2, 1921.
Dev. (Coblentzian): Dorbachtals, near Coblenz, Germany.
- Eifelocrinus dohmi** (Wanner).
Ptilocrinus dohmi Wanner, Zeits. Deutsch. Geol. Gesell., 68, Abh., heft 3, p. 344, text figs. 1-3, pl. 28, figs. 1-7, 1916. (Monatsber. 8/11, p. 200, as *Eifelocrinus*.)
Eifelocrinus dohmi Haarmann, Jahrb. Preuss. Geol. Landesanst., 41, p. 42, pl. 3, figs. 4-8, text fig. 3, p. 59, text fig. 5, 1921.—Ehrenberg, Bull. Amer. Mus. Nat. Hist., 59, p. 29, fig. 19, 1929.
Dev. (Low. Coblentzian): Humerich, near Oberstadtfeld, Eifel, Germany.

- Elaeacrinidarum** Peetz. Genotype: *E. miljukovi* Peetz.
Position uncertain. Low. Carb.
Peetz, St. Petersb. Trans. Soc. Nat., Sec. Geol., 35, pp. 15-20.
- Elaeacrinidarum miljukovi** Peetz.
Peetz, St. Petersb. Trans. Soc. Nat., Sec. Geol., 35, pp. 15-20, pl. 1, figs. 4-6, 1916.
Low. Carb.: Kirghis Steppes, Russia.
- Elibatocrinus** Moore. Genotype: *E. leptocalyx* Moore.
Poteriocrinitidae (Inadunata-Fistulata). Penn.
Moore, Denison Univ. Bull., Jour. Sci. Lab., 35, p. 35, 1940.
- Elibatocrinus catactus** Moore.
Moore, Denison Univ. Bull., Jour. Sci. Lab., 35, p. 43, pl. 1, figs. 1a-c, 1940.
Penn. (Oread ls.): 3.5 miles east of Lecompton, Kansas (Plattsmouth ls. mem.); southwest of Lawrence, Kansas (Toronto ls. mem.).
- Elibatocrinus concinnulus** Moore.
Moore, Denison Univ. Bull., Jour. Sci. Lab., 35, p. 42, pl. 1, fig. 8, 1940.
Penn. (Stranger fm.-Vinland sh.): 4 miles northeast Baldwin, Kansas.
- Elibatocrinus leptocalyx** Moore.
Moore, Denison Univ. Bull., Jour. Sci. Lab., 35, p. 36, pl. 1, figs. 2-6, text figs. 1-3 1940.
Penn.: Fredonia, Ottawa, etc. Kansas (Stanton ls.); Iola, Kansas (Iola ls.); 2.5 miles west Neodesha, Kansas (Plattsburg ls.).
- Elibatocrinus notabilis** Moore.
Moore, Denison Univ. Bull., Jour. Sci. Lab., 35, p. 41, pl. 1, figs. 7a, b, text fig. 4a-c, 1940.
Penn. (Plattsburg ls.): 2.5 miles west of Neodesha, Kansas.
- Embryocrinus** Wanner. Genotype: *E. hanieli* Wanner.
Hypocrinidae (Inadunata-Fistulata). Permian.
Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 130, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 141, 1924; Neue Beitr. kennt. Perm. Echin. Timor, p. 30, 1929.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 94, 1926.
- Embryocrinus hanieli** Wanner.
Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 131, text. fig. 37, p. 138, text fig. 39, pl. 111 (16), figs. 13-16, 1916; Ueber armlose Krin. Jung. Pal., Verh. Mijnb. Genoots. Nederl. en Kolonien, p. 23, fig. 5, p. 24, fig. 14, p. 27, fig. 17, 1920; Neue Beitr. kennt. Perm. Echin. Timor, p. 66, pl. 3, figs. 17, 18; pl. 4, figs. 3-5, pl. 5, figs. 1, 2, text figs. 9-11, 1929; id., XI, p. 136, text fig. 38, 1937.
Permian: Basleo and Koeka, Timor.
- Embryocrinus sulcatus** Wanner = *Tenagocrinus sulcatus*.
- Embryocrinus** Hudson (not Wanner).
Hudson, N. Y. St. Mus., Bull. 196, p. 162, 1918.
Genotype: *E. problematicus* Hudson. (?Young *Dendrocrinus*)
- Embryocrinus problematicus** Hudson.
Hudson, N. Y. St. Mus., Bull. 196, p. 162, text figs. 1, 2, 1918.
Ord. (Trenton): Trenton Falls, N. Y.
- Emperocrinus** Miller and Gurley. Genotype: *E. indianensis* Miller and Gurley.
Rhodocrinitidae (Camerata). Sil.
Miller and Gurley, Ill. St. Mus., Bull. 6, p. 42, 1895.—Bather, Treatise Zool. (Lankester), pt. 3, p. 202, 1900.
- Emperocrinus indianensis** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 6, p. 43, pl. 4, figs. 16, 17, 1895.—Miller, S. A., N. Amer. Geol. Pal., 2d App., p. 744, figs. 1347, 1348, 1349, 1897.—Springer, Amer. Sil. Crin., p. 23, pl. 4, figs. 7, 7a, 1926.
Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Enallocrinus d'Orbigny. Genotype: *Apiocrinites scriptus* Hisinger.

Crotalocrinitidae (Inadunata-Fistulata). Sil.

D'Orbigny, Prod. Pal. Strat., 1, p. 46, 1849.—Zittel, Handb. Pal. 1, p. 356, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 150 (74), 1886.—Springer, Zittel-Eastman Textb. Pal., 1, p. 216, 1913.

Apiocrinites Hisinger (not Miller), Antek. Physik. Geog., 4, p. 217, 1828. (Genotype: *A. scriptus* Hisinger.)**Enallocrinus assulosus** Angelin.

Angelin, Icon. Crin. Suec., p. 26, pl. 15, figs. 1-4, 1878.

Sil. (Gotlandian): Klinteberg, Island of Gotland.

Enallocrinus punctatus (Hisinger). = *E. scriptus*.**Enallocrinus scriptus** (Hisinger).*Apiocrinites scriptus* Hisinger, Antek. Physik. och Geog., 4, p. 217, pl. 5, figs. 9, 10, 1828; Leth. Suec., 25, pp. 89, 118, pl. 25, fig. 1, 1837.*Millericrinus scriptus* d'Orbigny, Hist. Nat. Crin., p. 94, pl. 16, fig. 29, 1840.*Enallocrinus scriptus* d'Orbigny, Prodr. Pal. Strat., 1, p. 46, 1850.—Angelin, Icon. Crin. Suec., p. 25, pl. 7, figs. 1-3a, pl. 9, figs. 18, 19, pl. 25, figs. 1-7, pl. 27, figs. 17-20a, 1878.—Wachsmuth and Springer, Proc. Acad. Nat. Sci. Phila., p. 388, pl. 20, figs. 5, 6, 1888.—Bather, Treatise Zool. (Lankester), pt. 3, p. 176, text fig. 92-1, 2, 1900.—Wanner, Handwort Naturwiss., p. 504, fig. 54-1, 2, 1933.*Apiocrinites punctatus* Hisinger, Antek. Physik. och Geog., 4, p. 217, pl. 7, fig. 1, 1828; Leth. Suec., 25, pp. 89, 119, pl. 25, fig. 2, 1837.*Millericrinus punctatus* d'Orbigny, Hist. Nat. Crin., p. 94, pl. 16, fig. 30, 1840.*Enallocrinus punctatus* d'Orbigny, Prodr. Pal. Strat., p. 46, 1849.

Sil.: Klinteberg and Wisby, Island of Gotland (Gotlandian); Dudley, England (Wenlock ls.).

Encrinite Anthony = *Glyptocrinus decadactylus*.**Encrinite** Owen and Norwood = *Zeacrinites magnoliaeformis*.**Encrinites** of authors.

The citations here given under this name refer to undetermined fragments of various Paleozoic crinoids which have no relationship with the Mesozoic species characteristic of the genus. Bibliography of the genus is, therefore, omitted.

Encrinites anonymus Waagen and Jahn.Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 2, pp. 134, 186, pl. 70, figs. 1-6, 7-16, (p. 148 as *Entrochus anonymus*) 1899.

Sil.: Tachlovic, Bohemia.

Encrinites apiosus Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 37, 1930.

Permian: Sicily.

Encrinites armatus Schlotheim.

Schlotheim, Nacht. Petref., p. 98, pl. 26, fig. 7, 1823; Merk. Schlotheim's Expl. pls., p. 25, pl. 26, fig. 7, 1832.

Sil.: Dudley, England.

Encrinites artifex Waagen and Jahn.Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 183, pl. 77 (p. 140 as *Entrochus artifex*), 1899.

Sil.: Near Roztyly, Bohemia.

Encrinites betula Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 153, pl. 77, cases 21, 22, 1899.

Sil.: Lodenic, Bohemia.

Encrinites binarius Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 144, pl. 79, case 17, 1899.

Sil.: Zahorzan, Bohemia.

Encrinites disculus Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 37, pl. 13, figs. 24, 25, 1930.
Permian: Sicily.

Encrinites echidnoides Schlotheim.

Schlotheim, Petref. jetz. Standp., p. 333, pl. 3, fig. 98, 1820.
Sil.: Island of Gotland.

Encrinites echidnoides major Schlotheim.

Schlotheim, Petref. jetz. Standp., p. 333, 1820.
Sil.: Island of Gotland.

Encrinites echidnoides minor Schlotheim.

Schlotheim, Petref. jetz. Standp., p. 333, 1820.
Dev.: Eifel, Germany.

Encrinites epithonius Schlotheim.

Schlotheim, Petref. Standp., p. 337, 1820.
Dev.: Harz, etc., Germany.

Encrinites fenestratus Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, pp. 143, 185,
pl. 79, cases 2-4, 6-9, 1899.
Sil.: Lejskov, Königshof, Bohemia.

Encrinites flexilis Hisinger.

Hisinger, Physik. Geogn. Sver. och Norrige, Tredje Haftet, pp. 88, 89, pl. 3, 1823.
? Sil. of Sweden.

Encrinites gemmans Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 157, pl. 79,
case 19, figs. 1-8, 1899.
Sil.: Branik, Bohemia.

Encrinites glomeratus Couch = *Cyathocrinus glomeratus*.

Encrinites gotlandicus Wahlenberg.

Wahlenberg, Jour. Phys. Chimie, Hist. Nat. Arts, 91, pp. 24-38, 86-199, 1820.
Sil.: Island of Gotland.

Encrinites grafi Schlotheim.

Schlotheim, Merk. Verst. Petref., p. 26, pl. 28, figs. 7 a-e, 1832.
Dev.: Near Amberg, Germany.

Encrinites granulatus Schlotheim = *Platycrinites granulatus*.

Encrinites humilis Barrande (Ms.) = *Beyrichiocrinus humilis*.

Encrinites inexplicatus Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 132, pl. 59,
figs. 10-14, 1899.
Sil.: Koniepruss, Bohemia.

Encrinites inflatus Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 158, pl. 79,
case 22, 1899.
Sil.: Tetin, Bohemia.

Encrinites laso Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 195, pl. 77,
cases 14-19, 1899.
Sil.: Lodenic, Bohemia.

Encrinites medullus Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 148 (as
Entrochus medullus), pp. 158, 186, pl. 70, figs. 17-20, pl. 79, case 20, fig. 4, 1899.
Sil.: Karlstein, Bohemia.

Encrinites mirus Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 38, pl. 13, figs. 17, 18, 1930.

Permian: Sicily.

Encrinites moniliformis Fischer de Waldheim = *Synerocrinus incurvus*.*Encrinites nepos* Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 152, pl. 76, figs. 1-3, 1899.

Sil.: St. Ivan, Bohemia.

Encrinites nudus Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 156, pl. 79, case 10, figs. 1-3, 1899.

Sil.: Vavrovic, Bohemia.

Encrinites nudus Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 38, pl. 13, figs. 22, 23, 1930.

Permian: Sicily.

Encrinites orthoceratoides Schlotheim.

Schlotheim, Petref. jetz. Standp., p. 335, 1820; Nachtr. Petref. Abth. 2, p. 91, pl. 24, figs. 1 a-f, 1823; Merk. Schloth. Sammlung, Expl. pls. p. 23, pl. 24, figs. 1 a-f, 1832 (root of *Crotalocrinites*).

Sil.: Island of Gotland.

Encrinites patiens Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 38, pl. 13, figs. 14, 15, 1930.

Permian: Sicily.

Encrinites pentacrinoïdes Schlotheim = *Parisocrinus quinquangularis*.*Encrinites perminutus* Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 37, pl. 13, fig. 13, 1930.

Permian: Sicily.

Encrinites petasus Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 186, pl. 79, case 5, figs. 1-3, 1899.

Sil.: Königshof, Bohemia.

Encrinites planus Schlotheim = *Cyathocrinites planus*.*Encrinites polydactylus* Schlotheim = *Actinoocrinites polydactylus*.*Encrinites praecursor* Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 155, pl. 77, cases 8-10, 1899.

Sil.: Zahorzan, Bohemia.

Encrinites praedominans Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 36, pl. 13, figs. 1-5, 1930.

Permian: Sicily.

Encrinites praedominans alternatum Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 37, pl. 13, fig. 6, 1930.

Permian: Sicily.

Encrinites procerus Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, pp. 135, 148, 186, pl. 70, figs. 2-22, pl. 79, case 5, figs. 1-3, 1899.

Sil.: Dvorce, Bohemia.

Encrinites pulverens Waagen and Jahn = *Bohemicocrinus pulverens*.

Encrinites punctata Fischer de Waldheim.

Fischer de Waldheim, Not. sur foss. Gouv. Moscow, III, p. 22, pl. 1, fig. 1, 1811;
Oryct. Gouv. Moscow, pl. 40, figs. 1, 2, 1830.

Carb.: Russia.

Encrinites ramosus Schlotheim = *Cyathocrinites?* *ramosus*.

Encrinites regularis Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 37, pl. 13, fig. 19, 1930.

Permian: Sicily.

Encrinites rhodocrinites Schlotheim = *Rhodocrinites verus*.

Encrinites rotator Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 144, pl. 79,
cases 12, 13, 1899.

Sil.: Lodenic and Wraz, Bohemia.

Encrinites st. ivanensis Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 152, pl. 76,
figs. 4-25, 1899.

Sil.: St. Ivan, Bohemia.

Encrinites scopularum Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 118, pl. 77,
case 20, 1899.

Sil.: Lodenic, Bohemia.

Encrinites stoloniferus Fischer de Waldheim = *Synerocrinus incurvus*.

Encrinites stringens Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, pl. 79, case 11,
1899.

Sil.: Vavrovic, Bohemia.

Encrinites subpartitus Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 145, pl. 79,
case 18, 1899.

Sil.: Zahorzan, Bohemia.

Encrinites tenuis Schlotheim = *Scytalocrinus tenuis*.

Encrinites tesseratus Schlotheim.

Schlotheim, Petref. jetz. Standp., p. 339, 1820.

Dev.: Eifel.

Encrinites textus Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, pp. 132, 133,
pl. 65, figs. 16-21, 1899.

Sil.: Karlstein, Bohemia.

Encrinites tolomeus Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 37, pl. 13, fig. 26, 1930.

Permian: Sicily.

Encrinites turgidus Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 151, pl. 74,
figs. 32-36, 1899.

Sil.: Koniepruss, Bohemia.

Encrinites verrucosus and vars. *punctata* and *verrucosa* Schlotheim = *Crotalocrinites rugosus*.

Encrinites versatilis Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 156, pl. 79,
case 14, 1899.

Sil.: Srbsko, Bohemia.

Encrinus of authors.

Like *Encrinites*, citations listed under this name refer to undetermined fragments of various Paleozoic crinoids which have no relationship with the Mesozoic species characteristic of the genus. Bibliography of the genus is, therefore, omitted.

Encrinus curvatus Eaton.

Eaton, Geol. Textb. (2), p. 37, pl. 1, fig. 4, 1832.

Dev.: New York.

Encrinus dubius Schlotheim = *Actinocrinites laevis*.

Encrinus equicyclus Eaton.

Eaton, Geol. Textb. (2), pl. 1, fig. 7, 1832.

Dev.: New York.

Encrinus giganteus Eaton.

Eaton, Amer. Jour. Sci., 21, p. 135, 1832; Geol. Textb. (2), p. 37, pl. 1, fig. 8, 1832.

Dev.: New York.

Encrinus interruptus Eaton.

Eaton, Amer. Jour. Sci., 21, p. 135, 1832; Geol. Textb., (2), p. 37, pl. 1, fig. 9, 1832.

Dev.: New York.

Encrinus sp. Cumberland (part) = *Scaphiocrinus longidactylus*; *Poteriocrinites spissus*; *Scytalocrinus tenuis*; *Gilbertsocrinus stellaris*.

Encrinus sp. Capeller = *Abacocrinus capelleri*.

Encrinus sp. Ure = *Amphicrinus scoticus*.

Encrinus sp. Whitehurst = *Ichthyocrinus pyriformis*.

Encrinus teretiformis Eaton.

Eaton, Amer. Jour. Sci., 21, p. 135, 1832; Geol. Textb., (2), p. 37, pl. 1, fig. 12, 1832.

Dev.: New York.

Encrinus townsendi Koenig = *Cupressocrinites townsendi*.

Encrinus transversus Eaton.

Eaton, Amer. Jour. Sci., 21, p. 135, 1832; Geol. Textb., (2), pl. 1, fig. 5, 1832.

Dev.: New York.

Encrinus tricyclus Eaton.

Eaton, Geol. Textb. (2), p. 36, pl. 1, fig. 6, 1832.

Encrinites triciclas Goldring, N. Y. St. Mus., Mem. 16, p. 148, 1923.

Dev.: Owego, N. Y.

Endelocrinus Moore and Plummer. Genotype: *Eupachyrcrinus fayettensis* Worthen. Poteriocrinitidae (Inadunata-Fistulata). Penn.

Moore and Plummer, Univ. Texas Pub. No. 3945, pp. 257, 296, 1940.

Endelocrinus allegheniensis (Burke).

Delocrinus allegheniensis Burke, Ann. Carnegie Mus., 21, no. 2, p. 89, pl. 3, figs. 1-5b, 1932.

Endelocrinus allegheniensis Moore and Plummer, Univ. Texas Pub. No. 3945, p. 254, 1940.

Penn. (Conemaugh-Ames ls.): Painter Hollow, near Wellsburg, W. Va.; Schenley Park and Brilliant Cutoff, Pittsburgh, Pa.

Endelocrinus bifidus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 308, pl. 12, fig. 10, 1940.

Penn. (Graford fm.): Northwest side Kyle Mtn., Palo Pinto Co., Texas.

Endelocrinus fayettensis (Worthen).

Eupachyrcrinus fayettensis Worthen, in Meek and Worthen, Geol. Surv. Ill., 5, p. 565, pl. 24, fig. 10, 1873.

- Delocrinus fayettensis* Miller and Gurley, Jour. Cincinnati Soc. Nat. Hist., 13, p. 11, 1890.
- Endelocrinus fayettensis* Moore and Plummer, Univ. Texas Pub. No. 3945, pp. 254, 297, pl. 2, fig. 7, pl. 16, figs. 2, 3, text fig. 62, 1940.
Penn. (Missouri series): Hickory Creek, Fayette Co., Ill.
- Endelocrinus grafordensis** Moore and Plummer.
Moore and Plummer, Univ. Texas Pub. No. 3945, p. 306, pl. 14, fig. 11, 1940.
Penn.: West slope of Crawford (Wolf) Mt., Palo Pinto Co., Texas (Graford fm.); One mile west Wayside, Kansas (Stanton ls.).
- Endelocrinus mitis** Moore and Plummer.
Moore and Plummer, Univ. Texas Pub. No. 3945, p. 302, pl. 12, fig. 8, text fig. 63, 1940.
Penn. (Millsap Lake fm.): 3 miles southeast Santo, Palo Pinto Co., Texas.
- Endelocrinus parvus** Moore and Plummer.
Moore and Plummer, Univ. Texas Pub. No. 3945, p. 303, pl. 14, figs. 1, 2; text fig. 63, (1939), 1940.
Penn.: 2½ miles west of Brownwood, Brown Co., and ½ mile west Joplin, Jack Co., Tex. (Mineral Wells fm.); Wayside (Stanton ls.), and Coffyville (Dennis ls.) Kans.; Bartlesville and 2 miles west of Ramona, Okla. (Plattsburg ls.).
- Endelocrinus rectus** Moore and Plummer.
Moore and Plummer, Univ. Texas Pub. No. 3945, p. 300, pl. 14, figs. 3-5, text fig. 63, 1940.
Penn. (Millsap Lake fm.-Brannon Bridge ls.): 3 miles southeast of Brock, Parker Co., Texas.
- Endelocrinus texanus** (Weller).
Delocrinus texanus Weller, Jour. Geol., 17, pp. 627, 628, pl. 1, figs. 12, 13, 1909.
Endelocrinus texanus Moore and Plummer, Univ. Texas Pub. No. 3945, pp. 255, 310, pl. 14, fig. 12, text fig. 63, 1940.
Permian (Cibolo ls.): 3 miles north Shafter, Presidio Co., Texas.
- Endelocrinus tumidus** (Strimple).
Delocrinus tumidus Strimple, Bull. Amer. Pal., 24, no. 87, p. 8 (368), pl. 2, figs. 1-8, 1939.
Endelocrinus tumidus Moore and Plummer, Univ. Texas Pub. No. 3945, 255, 305, 307, 1940.
Penn. (Stanton ls.): Just west of Bartlesville, Okla.
- Entrochus Agricola**.
Bather, Treatise Zool. (Lankester), pt. 3, p. 202, 1900.
The species cited below refer to undetermined fragments whose generic position probably cannot be ascertained.
- Entrochus biarticulatus** Quenstedt.
Quenstedt, Petref. Deutsch., 4, p. 640, pl. 112, figs. 68-71, 1876.
Dev.: Eifel, Germany.
- Entrochus bulbosus** Waagen and Jahn.
Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 146, pl. 60, case 1, figs. 25, 26, 1899.
Sil.: Koniepruss, Bohemia.
- Entrochus cingulatus impares** Quenstedt.
Quenstedt, Petref. Deutsch., 4, p. 643, pl. 112, figs. 92-103, 1876.
Dev.: Eifel, Germany.
- Entrochus cingulatus pares** Quenstedt.
Quenstedt, Petref. Deutsch., 4, p. 647, pl. 112, figs. 112-117, 1876.
Dev.: Eifel, Germany.

- Entrochus compressus* Quenstedt.
 Quenstedt, Petref. Deutsch., 4, Atlas, pl. 111, fig. 43, 1876.
 Dev. (Eifel ls.): Gerolstein, Germany.
- Entrochus dentatus* Quenstedt.
 Quenstedt, Petref. Deutsch., 4, p. 649, pl. 112, fig. 132, 1876.
 Dev. (Eifel ls.): Germany.
- Entrochus doctus* Waagen and Jahn.
 Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 151, pl. 72, case 3, 1899.
 Sil.: Dvorce, Bohemia.
- Entrochus erectus* Quenstedt.
 Quenstedt, Petref. Deutsch., 4, p. 648, pl. 112, figs. 121-123, 1876.
 Dev. (Eifel ls.): Germany.
- Entrochus laceratus* Quenstedt.
Entrochites laceratus Quenstedt, Petref. Deutsch., 4, p. 585, pl. 110, fig. 22, p. 649, pl. 112, fig. 131, 1876.
 Miss. (Low. Burlington): N. Amer.
- Entrochus laetus* Waagen and Jahn.
 Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 142, pl. 79, case 1, 1899.
 Sil.: Königshof, Bohemia.
- Entrochus laevis cavus* Quenstedt.
 Quenstedt, Petref. Deutsch., 4, p. 641, pl. 112, figs. 80, 81, (as *concaui*), 1876.
 Dev. (Eifel ls.): Germany.
- Entrochus laevis compressus* Quenstedt.
 Quenstedt, Petref. Deutsch., 4, p. 641, pl. 112, fig. 79, 1876.
 Dev. (Eifel ls.): Germany.
- Entrochus laevis lineati* Quenstedt.
 Quenstedt, Petref. Deutsch., 4, p. 640, pl. 112, figs. 72-77, 1876.
 Dev. (Eifel ls.): Germany.
- Entrochus laevis sigillatus* Quenstedt.
 Quenstedt, Petref. Deutsch., 4, p. 641, pl. 112, fig. 78, 1876.
 Dev. (Eifel ls.): Germany.
- Entrochus ligatus* Quenstedt.
 Quenstedt, Petref. Deutsch., 4, p. 650, pl. 113, figs. 1-10, 1876.
 Dev. (Eifel ls.): Germany.
- Entrochus mammillati* Quenstedt.
 Quenstedt, Petref. Deutsch., 4, p. 639, pl. 112, figs. 64-67, 1876.
 Dev. (Eifel ls.): Germany.
- Entrochus margaritarum* Waagen and Jahn.
 Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 149, pl. 71, figs. 8-11, 1899.
 Sil.: Karlstein, Bohemia.
- Entrochus micropyle* Quenstedt.
 Quenstedt, Petref. Deutsch., 4, p. 648, pl. 112, figs. 119-120, 1876.
 Dev. (Eifel ls.): Germany.
- Entrochus milleporus* Waagen and Jahn.
 Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 142, pl. 70, case 11, 1899.
 Sil.: Mont Kosov, Bohemia.

Entrochus moniliferus Quenstedt.

Quenstedt, Petref. Deutsch., 4, p. 649, pl. 112, figs. 129, 130, 1876.
Dev. (Eifel ls.): Germany.

Entrochus nodulosus Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 145, pl. 60, case 1, figs. 18-22, 1899.
Sil.: Koniepruss, Bohemia.

Entrochus nympharum Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 150, pl. 71, figs. 17-24, 1899.
Sil.: Dvorce, Bohemia.

Entrochus pares Quenstedt.

Quenstedt, Petref. Deutsch., 4, p. 643, pl. 112, fig. 91, 1876.
Dev. (Eifel ls.): Germany.

Entrochus placidus Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, vol. 7, pt. 1, p. 149, pl. 71, figs. 12-16, 1899.
Sil.: Karlstein, Bohemia.

Entrochus primus Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 182, pl. 63, figs. 23-32, 1899.
Sil.: Wosek, Bohemia.

Entrochus quadrinus Quenstedt.

Quenstedt, Petref. Deutsch., 4, p. 655, pl. 113, figs. 34-36, 1876.
Ord. (Orthoceras ls.): Pulkowa, Russia.

Entrochus robustissimus Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 146, pl. 60, case 1, figs. 23, 24, 1899.
Sil.: Koniepruss, Bohemia.

Entrochus rosaceus Quenstedt.

Quenstedt (Schulze), Petref. Deutsch., 4, p. 651, pl. 113, figs. 11-15, 1876.
Dev. (Eifel ls.): Germany.

Entrochus runicus Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 150, pl. 72, cases 1, 2, 1899.
Sil.: Dvorce and Karlstein, Bohemia.

Entrochus senior Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 148, pl. 71, figs. 5-7, 1899.
Sil.: Karlstein, Bohemia.

Entrochus simplicior Waagen and Jahn.

Waagen and Jahn (Barrande Ms.), Syst. Sil. Centre Bohême, 7, pt. 1, p. 147, pl. 69, figs. 9-20, 1899.
Sil.: Dvorce and Karlstein, Bohemia.

Entrochus stellatus Quenstedt.

Quenstedt, Petref. Deutsch., 4, pp. 653, 654, pl. 113, figs. 21-28, 1876.
Dev. (Eifel ls.): Germany.

Entrochus tetradactylus (Pusch).

Entrochites tetradactylus Pusch, Polens Pal., etc., p. 8, pl. 2, figs. 8a-e, 1837.
Dev.: Near Kielce, Poland.

Entrochus tornati Quenstedt.

Quenstedt, Petref. Deutsch., 4, p. 641, pl. 112, figs. 82-90, 1876.

Dev. (Eifel ls.): Germany.

Eomyelodactylus Foerste = *Myelodactylus*.*Epactocrinus* Müller = *Gasterocoma*.**Eratocrinus** Kirk. Genotype: *Zeacrinus elegans* Hall.

Zeacrinidae (Inadunata-Fistulata). Miss.

Kirk, Jour. Washington Acad. Sci., 28, p. 165, 1938.

Eratocrinus blairi (Miller and Gurley).

Zeacrinus blairi Miller and Gurley, Ill. St. Mus., Bull. 7, p. 66, pl. 4, figs. 5, 6, 1895.

Miss. (Warsaw ls.): Boonville, Mo.

Eratocrinus commaticus (S. A. Miller).

Zeacrinus commaticus S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 36, pl. 5, figs. 10, 11, 1892; 17th Rep. Geol. Surv. Ind., p. 654, pl. 8, fig. 8, 1892.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, pp. 65, 80, pl. 22, figs. 1-3a, p. 83, text fig. 2, 1926.

Eratocrinus commaticus Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 165, 1938.

Miss. (Warsaw ls.): Boonville, Mo.

Eratocrinus coxanus (Worthen).

Zeacrinus coxanus Worthen, Ill. St. Mus., Bull. 1, p. 27, 1882; Geol. Surv. Ill., 7, p. 302, pl. 28, fig. 1, 1883.

Eratocrinus coxanus Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 165, 1938.

Miss. (Keokuk ls.): Hamilton and Biggsville, Ill.

Eratocrinus elegans (Hall).

Zeacrinus elegans Hall, Geol. Rep. Iowa, 1, pt. 2, p. 547, pl. 9, figs. 1, 2, text fig. 68, 1858.

Woodocrinus elegans Keyes, Geol. Surv. Mo., 4, p. 214, pl. 26, fig. 5, 1894.

Zeacrinus elegans Springer, U. S. Nat. Mus., Proc., 67, art. 9, pp. 65, 80, pl. 21, figs. 2-4, p. 83, text fig. 1, 1926.

Eratocrinus elegans Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 165, 1938.

Miss. (Up. and Low. Burlington ls.): Burlington, Iowa.

Eratocrinus faggi (Rowley and Hare).

Zeacrinus faggi Rowley and Hare, Kansas City Sci., 5, p. 103, pl. 2, fig. 20, 1891.

Eratocrinus faggi Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 165, 1938.

Miss. (Up. Burlington ls.): Spencer Creek, 2 miles north Curryville, Mo.

Eratocrinus orbicularis (Hall).

Scaphiocrinus orbicularis Hall, Jour. Boston Soc. Nat. Hist., 7, p. 311; Prelim. Descr. N. Sp. Crin., p. 7, 1861; N. Y. St. Mus. Nat. Hist., Bull. 1, pl. 5, figs. 7-9, 1872.

Eupachycrinus orbicularis Worthen, Geol. Surv. Ill., 8, p. 97, pl. 14, figs. 2, 2a, 1890.

Eratocrinus orbicularis Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 166, 1938.

Miss. (Keokuk ls.): Keokuk, Iowa.

Eratocrinus pikensis (Worthen).

Zeacrinus pikensis Worthen, Ill. St. Mus., Bull. 1, p. 29, 1882; Geol. Surv. Ill., 7, p. 304, pl. 30, fig. 3, 1883.

Eratocrinus pikensis Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 166, 1938.

Miss. (Low. Burlington ls.): Montezuma, Pike Co., Ill.

Eratocrinus ramosus (Hall).

Zeacrinus ramosus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 548, text fig. 69, pl. 9, fig. 3, 1858.

Eratocrinus ramosus Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 166, 1938.

Miss. (Up. Burlington ls.): Burlington, Iowa.

- Eratocrinus raymondi** (Laudon and Beane).
Pachylocrinus raymondi Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 255, pl. 18, fig. 4, 1937.
Eratocrinus raymondi Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 166, 1938.
 Miss. (Kinderhook-Hampton fm.): 2 miles west of Legrand, Iowa.
- Eratocrinus sacculus** (White).
Zeacrinus sacculus White, Proc. Boston Soc. Nat. Hist., 9, p. 12, 1865 (Adv. pub., 1862).
Eratocrinus sacculus Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 166, 1938.
Zeacrinus sacculus var. *concinus* White, Proc. Boston Soc. Nat. Hist., vol. 9, p. 12, 1865 (adv. pub., 1862).
 Miss. (Up. Burlington ls.): Burlington, Iowa.
- Eratocrinus salemensis** (Miller and Gurley).
Zeacrinus salemensis Miller and Gurley, Ill. St. Mus., Bull. 5, p. 37, pl. 3, fig. 17, 1894.
Eratocrinus salemensis Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 166, 1938.
 Miss. (Keokuk ls.): Salem and Canton, Ind.
- Eratocrinus scoparius** (Hall).
Zeacrinus scoparius Hall, Jour. Boston Soc. Nat. Hist., 7, p. 305; Prelim. Descr. N. Sp. Crin., p. 8, 1861.
Poteriocrinus (Zeacrinus) scoparius Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 1, p. 34, pl. 3, figs. 19, 20, 1893.
Eratocrinus scoparius Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 166, 1938.
 Miss. (Low. Burlington ls.): Burlington, Iowa.
- Eratocrinus serratus** (Meek and Worthen).
Poteriocrinites (Zeacrinus) serratus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 151, 1869; Geol. Surv. Ill., vol. 5, p. 428, pl. 1, fig. 8, 1873.
Eratocrinus serratus Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 166, 1938.
 Miss. (Up. Burlington ls.): Burlington, Iowa.
- Eratocrinus troostanus** (Meek and Worthen).
Zeacrinus troostanus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 390, 1860; Geol. Surv. Ill., 2, p. 186, pl. 16, fig. 2, text fig. 4, 1866.
Eratocrinus troostanus Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 166, 1938.
 Miss. (Up. Burlington ls.): Burlington, Iowa.
- Eretmocrinus** Lyon and Casseday. Genotype: *E. magnificus* Lyon and Casseday. Batocrinidae (Camerata). Miss.
 Lyon and Casseday, Amer. Jour. Sci. and Arts. (2), 28, p. 241, 1859.—Meek and Worthen, Geol. Surv. Ill., 5, p. 368, 1873.—Zittel, Handb. Pal., 1, p. 370, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 170 (344), 1881; N. Amer. Crin. Cam., p. 385, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 167, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 195, 1913.
- Eretmocrinus adultus* Wachsmuth and Springer = *Dizygocrinus originarius adultus*.
- Eretmocrinus attenuatus** (Hall).
Actinocrinus matuta var. *attenuata* Hall, Descr. N. Sp. Crin., Prelim. Not., p. 14, 1861.
Eretmocrinus attenuatus Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 1, p. 18, pl. 1, figs. 23, 24, 1893.
 Miss. (Burlington ls.): Burlington, Iowa.
- Eretmocrinus brevis** Rowley.
 Rowley, Amer. Geol., 29, p. 309, pl. 18, figs. 15, 16, 1902.
 Miss. (Up. Burlington ls.): White Ledge, Mo.

Eretmocrinus calyculoides (Hall).

Actinocrinus calyculoides Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 17, text fig.; N. Y. St. Mus. Nat. Hist., Bull. 1, pl. 3, figs. 2-5, 1872.

Eretmocrinus calyculoides Keyes, Geol. Surv. Mo., 4, p. 177, pl. 23, fig. 13, 1894.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 395, pl. 34, figs. 1a, b, 2-4, 1897.

Miss. (Low. and Up. Burlington ls.): Burlington, Iowa.

Eretmocrinus calyculoides nodosus Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 396, pl. 34, figs. 6-8, 1897.

Miss. (Up. Burlington ls.): Pleasant Grove and Burlington, Iowa.

Eretmocrinus cassedayanus Miller and Gurley = *E. remibrachiatus expansus*.**Eretmocrinus clio** (Hall).

Actinocrinus clio Hall, Jour. Boston Soc. Nat. Hist., 7, p. 262; Prelim. Not., p. 1, 1861.

Actinocrinus (Eretmocrinus) clio Hall, N. Y. St. Mus. Nat. Hist., Bull. 1, pl. 4, fig. 7, 1872.

Eretmocrinus clio Wachsmuth and Springer, N. Amer. Crin. Cam., p. 393, pl. 36, figs. 2a, b, pl. 37, figs. 9a, b, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Eretmocrinus cloelia (Hall).

Actinocrinus cloelia Hall, Jour. Boston Soc. Nat. Hist., 7, p. 267, 1861; Descr. N. Sp. Crin., Prelim. Not., p. 1, 1861.

Eretmocrinus cloelia Wachsmuth and Springer, N. Amer. Crin. Cam., p. 398, pl. 36, figs. 4a, b, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa; Hannibal, Mo.

Eretmocrinus commendabilis Miller and Gurley = *Batoerinus commendabilis*.**Eretmocrinus corbulis** (Hall).

Actinocrinus corbulis Hall, Jour. Boston Soc. Nat. Hist., 7, p. 265, 1861; Descr. N. Sp. Crin., Prelim. Not., p. 1, 1861.

Eretmocrinus corbulis Keyes, Geol. Surv. Mo., 4, p. 175, pl. 23, 1894; Wachsmuth and Springer, N. Amer. Crin. Cam., p. 399, pl. 36, figs. 5, 6, 1897.

Miss.: Burlington, Iowa, and Louisiana, Mo. (Low. Burlington ls.); Lake Valley, N. Mex. (Lake Valley ls.).

Eretmocrinus coronatus (Hall).

Actinocrinus coronatus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 28, 1860; N. Y. St. Mus., Bull. 1, pl. 4, figs. 1, 2, 1872.

Eretmocrinus coronatus Meek and Worthen, Geol. Surv. Ill., 5, pl. 10, figs. 8 a-c, 1873.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 403, pl. 3, fig. 13, pl. 37, figs. 7 a-c, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa, and Louisiana, Mo.

Eretmocrinus depressus Keyes.

Keyes, Geol. Surv. Mo., 4, pt. 1, p. 176, pl. 23, fig. 11, 1894.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 382, pl. 36, figs. 11a, b, 1897.

Miss.: Hannibal, Mo. (Low. Burlington ls.); Burlington, Iowa (Up. Burlington ls.); New Ross, Ind. (Keokuk ls.).

Eretmocrinus expansus Keyes.

Keyes, Geol. Surv. Mo., 4, pt. 1, p. 175, pl. 23, fig. 12, 1894.

Miss. (Low. Burlington ls.): Kinderhook, Ill.

Eretmocrinus granuliferus Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 390, pl. 34, figs. 5 a-c, 1897.

Miss. (Keokuk ls.): Indian Creek, Crawfordsville, and Canton, Ind.

Eretmocrinus intermedius Wachsmuth and Springer.

Wachsmuth and Springer, Rev. Pal., pt. 2, p. 174 (348), 1881; N. Amer. Crin. Cam., p. 404, pl. 33, figs. 2 a-c, 1897.

Miss. (Keokuk ls.): Bono, Lawrence Co., Ind.

Eretmocrinus leucosia (Hall).

Actinocrinus leucosia Hall, Jour. Boston Soc. Nat. Hist., 7, p. 261, 1861; Descr. N. Sp. Crin., Prelim. Not., p. 1, 1861.

Eretmocrinus leucosia Wachsmuth and Springer, N. Amer. Crin. Cam., p. 401, pl. 36, figs. 7 a-c, 1897.

Batocrinus blairi S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 39, pl. 6, figs. 7-10, 1894 (Adv. pub., 1892).

Dorycrinus confragosus S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 34, pl. 5, fig. 12, 1891.

Miss.: Burlington, Iowa, and Louisiana, Mo. (Low. Burlington ls.); Sedalia, Mo. (Chouteau ls.).

Eretmocrinus lyonanus S. A. Miller = *E. magnificus*.

Eretmocrinus magnificus Lyon and Casseday.

Lyon and Casseday, Amer. Jour. Sci. and Arts, (2) 28, p. 241, 1859.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 386, pl. 37, fig. 3, 1897.

Eretmocrinus lyonanus S. A. Miller, 17th Rep. Geol. Surv. Indiana, p. 669, pl. 10, figs. 3, 4, 1892 (adv. pub., 1891).

Miss. (Keokuk-Ft. Payne ch.): Clear Creek, Hardin Co., Ky., and Whites Creek Springs, Tenn.

Eretmocrinus matuta (Hall).

Actinocrinus matuta Hall, Prelim. Descr. N. Sp. Crin., p. 14, 1861.

Eretmocrinus matuta Wachsmuth and Springer, N. Amer. Crin. Cam., p. 396, pl. 37, figs. 6 a-c, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Eretmocrinus minor Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 391, pl. 36, figs. 10a, b, 1897.

Miss.: Burlington, Iowa (Up. Burlington ls.); Sedalia, Mo. (Chouteau ls.).

Eretmocrinus neglectus (Meek and Worthen).

Batocrinus (Eretmocrinus) neglectus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 355, 1868; Geol. Surv. Ill., 5, p. 377, pl. 5, fig. 3, 1873.

Eretmocrinus neglectus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 394, pl. 36, fig. 3, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Eretmocrinus nodosus Rowley.

Rowley, Amer. Geol., 25, p. 73, pl. 2, fig. 17, 1900; 35, p. 303, pl. 21, fig. 9, 1905.

Miss. (Up. Burlington ls.): Louisiana, Mo.

Eretmocrinus originarius Wachsmuth and Springer = *Dizygocrinus originarius*.

Eretmocrinus parvus Rowley.

Rowley, Amer. Geol., 29, p. 308, pl. 18, fig. 14, 1902.

Miss. (Low. Burlington ls.): Louisiana, Mo.

Eretmocrinus praegravis S. A. Miller.

S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 291, pl. 6, figs. 5, 6, 1894 (adv. pub., 1892).—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 405, pl. 34, figs. 9, 10, 1897.

Actinocrinites cornutus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.—Wood, U. S. Nat. Mus., Bull. 64, p. 66, 1909.

Miss.: Washington Co., Ind. (Keokuk ls.); Whites Creek Springs, Tenn., and Barren Co., Ky. (Ft. Payne ch.).

Eretmocrinus ramulosus (Hall).

Actinocrinus ramulosus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 615, pl. 15, fig. 7, 1858.

Eretmocrinus ramulosus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 387, pl. 37, figs. 4a, b, 5 a-d, 1897.

Actinocrinites agassizi Troost, Amer. Jour. Sci., and Arts, (2) 8, p. 419, 1849.—Wood, U. S. Nat. Mus., Bull. 64, p. 68, 1909.

Miss.: Burlington and Augusta, Iowa (Burlington-Keokuk transition bed); Nauvoo, Ill. (Keokuk ls.); Whites Creek Springs, Tenn. (Ft. Payne ch.).

Eretmocrinus ramulosus Wachsmuth and Springer, 1878 and 1881 (not Hall) = *E. remibrachiatus expansus*.

Eretmocrinus remibrachiatus (Hall).

Actinocrinus remibrachiatus Hall, Prelim. Descr. N. Sp. Crin., p. 11, 1861.

Actinocrinus (Eretmocrinus) remibrachiatus Hall, N. Y. St. Mus. Nat. Hist., Bull. 1, pl. 4, figs. 8, 9, 1872.

Eretmocrinus remibrachiatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 388, pl. 37, figs. 2a, b, 1897.

Miss. (Up. and Low. Burlington ls.): Burlington, Iowa.

Eretmocrinus remibrachiatus expansus Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 390, pl. 36, fig. 1, pl. 37, figs. 1a, b, pl. 44, fig. 9, 1897.

Eretmocrinus ramulosus Wachsmuth and Springer, Proc. Acad. Nat. Sci. Phila., p. 238, 1878; Rev. Pal., pt. 2, p. 173 (347), 1881.

Batocrinus (Eretmocrinus) remibrachiatus Meek and Worthen, Geol. Rep. Ill., 5, p. 370, pl. 10, fig. 5, 1878.

Eretmocrinus casedayanus Miller and Gurley, Ill. St. Mus., Bull. 3, p. 17, pl. 3, fig. 1 (as *lyonanus* by error), 1894.

Batocrinus superbis S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 739, 1897.

Miss. (Burlington-Keokuk transition bed): Burlington, Iowa, and Sagetown, Ill.

Eretmocrinus rugosus Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 402, pl. 36, figs. 9 a-c, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Eretmocrinus spinosus (Miller and Gurley).

Batocrinus spinosus Miller and Gurley, Ill. St. Mus., Bull. 6, p. 5, pl. 1, figs. 1-3, 1895.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 739, fig. 1319, 1897.

Actinocrinites marineri (Troost, Ms.) Wood, U. S. Nat. Mus., Bull. 64, p. 67, 1909.

Miss. (Ft. Payne ch.): Little Barren River, Ky.; Cannon Co., Tenn.

Eretmocrinus tentor Laudon.

Laudon, Univ. Iowa Studies, 15, no. 2, p. 47, pl. 2, figs. 3-6, 1933.

Miss. (Kinderhook-Gilmore City fm.): Gilmore City, Iowa.

Eretmocrinus varsoviensis Worthen = *Dizygoerinus originarius*.

Eretmocrinus yandelli (Shumard).

Actinocrinus yandelli Shumard, Trans. Acad. Sci. St. Louis, 1, p. 76, pl. 1, figs. 4a, 4b, 1857.

Lobocrinus yandelli Wachsmuth and Springer, N. Amer. Crin. Cam., p. 441, pl. 30, figs. 7a, b, 1897.

Miss. (New Providence sh.): Button Mold Knob, near Louisville, Ky.; Whites Creek Springs, Tenn.

Erisocrinus Meek and Worthen. Genotype: *E. typus* Meek and Worthen.

Poteroicrinidae (Inadunata-Fistulata). Miss.—Permian.

Meek and Worthen, Amer. Jour. Sci. and Arts, (2) 39, p. 174, 1865; p. 350 (as *Philoerinus*); Geol. Surv. Ill., 2, p. 315, 1866; 5, p. 445, 1873.—Zittel, Handb. Pal., 1, p. 359, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 139 (362), 1880 (1879).—Bather, Ann. Mag. Nat. Hist., (6) 5, p. 325, 1890; Treatise Zool. (Lankester), pt. 3, p. 181, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 225, 1913.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 181, 1924.—Moore and Plummer, Univ. Texas Pub. No. 3945, p. 149, 1940.

- Erisocrinus antiquus* Meek and Worthen. = *Graphiocrinus antiquus*.
- Erisocrinus araxensis*** Yakovlev.
Yakovlev, Bull. Akad. Leningrad, p. 975, pl. 1, figs. 3-5, 1933.
Permian: Transcaucasia.
- Erisocrinus?* *bipartitus*** (Troost).
Erisocrinus? *bipartitus* Wood (*Donacirinites bipartitus* Troost, Ms.) U. S. Nat. Mus., Bull. 64, p. 98, pl. 6, figs. 8, 9, 1909.
Miss.: Decatur Co., Tenn.
- Erisocrinus carlopsensis*** Wright.
Wright, Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 39, pl. 9, figs. 8, 9, 1939.
Low. Carb. (Low. Ls. gr.): Carlops, Peebleshire, Scotland.
- Erisocrinus cognatus* Wachsmuth and Springer = *Paradelocrinus planus*.
- Erisocrinus conoideus*** Meek and Worthen.
Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 150, 1865; Geol. Surv. Ill., 2, p. 318, text fig. 35, 1866.
Penn.: Springfield, Ill.]
- Erisocrinus elevatus*** Moore and Plummer.
Moore and Plummer, Univ. Texas Pub. No. 3945, p. 156, pl. 4, fig. 1, text fig. 26, 1940.
Penn. (Palo Pinto ls.): 3 miles southeast of Oran, Palo Pinto Co., Texas.
- Erisocrinus erectus*** Moore and Plummer.
Moore and Plummer, Univ. Texas Pub. No. 3945, p. 157, pl. 4, fig. 3, text fig. 26, 1940.
Penn. (Palo Pinto fm.): 1.5 miles south Bridgeport, west of Martins Lake, Wise Co., Texas.
- Erisocrinus granulatus*** Wanner.
Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 290, pl. 18, figs. 28-30, pl. 19, fig. 5, 1924.
Permian: Basleo, Timor.
- Erisocrinus* (*Cericrocinus*) *inflexus* White = *Paradelocrinus inflexus*.
- Erisocrinus loczyi*** Katzer.
Katzer, Grundzüge Geol. unteren Amazonasgeb., pp. 159, 263, and fig., 1903.
Up. Carb.: Lower Amazon, Brazil.
- Erisocrinus lutana* Boos = *Pachylocrinus lutanus*.
- Erisocrinus malaianus*** Wanner.
Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 291, pl. 18, figs. 22-27, 1924.
Permian: Basleo, Timor.
- Erisocrinus megalobranchius* Beede = *Delocrinus megalobranchius*.
- Erisocrinus nebrascensis* Meek and Worthen = *E. typus*.
- Erisocrinus obliquus*** Wanner.
Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 225, pl. 103 (8), fig. 10, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 288, text fig. 56, pl. 18, figs. 17-21, 1924.
Permian: Basleo, Timor.
- Erisocrinus pentangulatus*** Yakovlev.
Yakovlev, Pal. Italica, 38, p. 117, pl. 4, fig. 4, 1938.
Permian: Pietra di Salomone, Sicily.
- Erisocrinus planus* White = *Paradelocrinus planus*.

Erisocrinus propinquus Weller.

Weller, Jour. Geol., 17, p. 629, pl. 1, figs. 14, 15, 1909.—Moore and Plummer, Univ. Texas Pub. No. 3945, p. 158, pl. 4, fig. 2, text fig. 26, 1940.

Permian (Cibolo ls.): 3 miles north Shafter, Presidio Co., Texas.

Erisocrinus stefaninii Yakovlev.

Yakovlev, Palaeontographia Ital., 34, p. 279, pl. 20, figs. 1-4, 1934.

Permian: Sicily.

Erisocrinus toddanus Butts = *Paradelocrinus toddanus*.

Erisocrinus trinodus Weller = *Spaniocrinus?* *trinodus*.

Erisocrinus tuberculatus Meek and Worthen = *Ethelocrinus tuberculatus*.

Erisocrinus typus Meek and Worthen.

Meek and Worthen, Amer. Jour. Sci. and Arts, (2) 39, p. 174, 1865; Geol. Surv. Ill., 5, p. 561, pl. 24, fig. 6, 1873.—Strimple, Group Crinoids Pennsylvania North-eastern Okla., p. 6, pl. 1, figs. 14-17, pl. 2, figs. 2-5, 1938.—Moore and Plummer, Univ. Texas Pub. no. 3945, p. 152, pl. 2, fig. 5, pl. 4, figs. 4, 5, pl. 19, fig. 4, text figs. 24, 25, 1940.

Philocrinus pelvis Meek and Worthen, Amer. Jour. Sci. and Arts, (2) 39, p. 350, 1865.

Erisocrinus nebrascensis Meek and Worthen, Amer. Jour. Sci. and Arts, (2) 39, p. 174; p. 350 (as *Philocrinus nebrascensis*), 1865.

Penn.: Springfield, Ill.; Bellevue, Neb.; Junction Grand and Green rivers, Utah (Aubrey gr.).

Erisocrinus whitei Meek and Worthen = *Graphiocrinus whitei*.

Erisocrinus whitei Wachsmuth and Springer = *Paradelocrinus planus*.

Esthocrinus Jaekel. Genotype: *E. laevior* Jaekel.

Dendrocrinidae (Inadunata-Fistulata). Ord.

Jaekel, Pal. Zeits., 3, p. 52, 1918.

Esthocrinus compactus Jaekel.

Jaekel, Pal. Zeits., 3, p. 53, 1918.

Ord. (Jewe ls., D₁): Kawast, Estonia.

Esthocrinus laevior Jaekel.

Jaekel, Pal. Zeits., 3, p. 52, fig. 40, 1918.

Ord. (Jewe ls., D₁): Spitham, Estonia.

Ethelocrinus Kirk. Genotype: *Eupachyrcinus magister* Miller and Gurley.

Poteroocrinitidae (Inadunata-Fistulata). Penn.

Kirk, Jour. Pal., 11, p. 605, 1937.—Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 255; 1938; Univ. Texas Pub. No. 3945, pp. 371, 377, 1940.

Ethelocrinus bassetti (Worthen).

Eupachyrcinus bassetti Worthen, Geol. Surv. Ill., 6, p. 528, pl. 32, fig. 2, 1875.

Ethelocrinus bassetti Moore and Plummer, Univ. Texas Pub. No. 3945, p. 378, 1940.

Penn.: Vandalia, Ill.

Ethelocrinus convexus Strimple = *Ulocrinus convexus*.

Ethelocrinus costalis Moore and Plummer.

Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 261, pl. 15, figs. 2 a-h, text fig. 16, 1938.

Eupachyrcinus cf. *magister* Mather, Denison Univ. Sci. Lab. Bull., 18, p. 104, pl. 2, figs. 8, 77, 79, 1915.

Penn. (Brentwood ls.): 2 miles north, and Braggs Mt. 3 miles southeast of Ft. Gibson, Okla.; near Woolsey, Ark.

Ethelocrinus crassus (Meek and Worthen).

Cyathocrinus? *crassus* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 392, 1860.

- Zeacrinus? crassus* Worthen, Geol. Surv. Ill., 2, p. 314, pl. 26, figs. 2a, b, text fig. 32, 1866.
- Eupachyrcrinus crassus* Wachsmuth and Springer, Rev. Pal., pt. 1, p. 138 (361), 1880 (1879).
- Ethelocrinus crassus* Moore and Plummer, Univ. Texas Pub. No. 3945, pp. 74, 356, 1940. (*Parulocrinus crassus* on p. 76.)
Penn.: Ovan, Fulton Co., Ill.
- Ethelocrinus expansus** Strimple.
Strimple, A Group of Crinoids from the Pennsylvanian of Northeastern Okla., p. 11, pl. 2, figs. 8, 11, 1938.
Penn. (Plattsburg-Lansing fm.): Bartlesville, Okla.
- Ethelocrinus harii** (S. A. Miller).
Eupachyrcrinus harii S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 681, pl. 11, fig. 8, 1892 (adv. pub. 1891, p. 71); N. Amer. Geol. Pal., 1st App., p. 678, fig. 1229, 1892.
Eupachyrcrinus? harii Keyes, Geol. Surv. Mo., 4, p. 218, pl. 28, fig. 3, 1894.
Ethelocrinus harii Moore and Plummer, Univ. Texas Pub. No. 3945, pp. 74, 356, 378, 1940.
Penn. (Missouri ser.): Kansas City, Mo.
- Ethelocrinus hispidus** Moore and Plummer.
Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 263, pl. 15, figs. 4 a-g, text fig. 17, 1938.
Penn. (Brentwood ls.): North of Ft. Gibson, Okla.
- Ethelocrinus magister** (Miller and Gurley).
Eupachyrcrinus magister Miller and Gurley, Jour. Cincinnati Soc. Nat. Hist., 13, p. 4, pl. 1, figs. 1, 2, 1890.
Ethelocrinus magister Kirk, Jour. Pal., 11, no. 7, p. 606, 1937.
Penn. (Missouri ser.-Lane sh.): Kansas City, Mo.
- Ethelocrinus millsapensis** Moore and Plummer.
Moore and Plummer, Univ. Texas Pub. No. 3945, p. 383, pl. 21, fig. 6, 1940.
Penn. (Millsap Lake fm.): 3 miles southwest of Brock, Parker Co., Texas.
- Ethelocrinus monticulatus** (Beede).
Cerriocrinus monticulatus Beede, Kansas Univ. Quart., 8, no. 3, p. 123, pl. 32, fig. 2, 1899.
Ethelocrinus monticulatus Moore and Plummer, Univ. Texas Pub. No. 3945, pp. 255, 378, 1940.
Penn. (shales above Osage coal): Topeka, Kansas.
- Ethelocrinus oklahomensis** Moore and Plummer.
Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 256, pl. 13, figs. 1 a-e, pl. 15, figs. 3 a-h, text fig. 14, 1938.—Strimple, Bull. Amer. Pal., 25, no. 91, p. 94, pl. 8, 1940.—Moore and Plummer, Univ. Texas Pub. No. 3945, p. 382, 1940 (p. 364, listed as *Parulocrinus*).
Penn. (Brentwood ls.): 2 miles north, and Brags Mt., 3 miles southeast of Ft. Gibson, and 6 miles southeast of Fittstown, Okla.; opposite Woolsey, Arkansas.
- Ethelocrinus papulosus** Moore and Plummer.
Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 259, pl. 15, figs. 5 a-f, text fig. 15, 1938.
Penn. (Brentwood ls.): 2 miles north of Ft. Gibson, Okla.
- Ethelocrinus plattsburgensis* Strimple = *Parulocrinus plattsburgensis*.
- Ethelocrinus sphaeralis** (Miller and Gurley).
Eupachyrcrinus sphaeralis Miller and Gurley, Jour. Cincinnati Soc. Nat. Hist., 13, p. 5, pl. 1, figs. 3, 4; 16th Rep. Geol. Nat. Res. Ind., p. 329, pl. 1, figs. 3, 4, 1890.

- Ethelocrinus sphaeralis* Moore and Plummer, Univ. Texas Pub. No. 3945, p. 378, 1940.
Penn. (Missouri ser.-Lane sh.): Kansas City, Mo.
- Ethelocrinus subsinuatus** Moore and Plummer.
Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 264, pl. 15, figs. 1 a-g, text fig. 18, 1938.
Penn. (Brentwood ls.): 2 miles north of Ft. Gibson, Okla.
- Ethelocrinus texasensis** Moore and Plummer.
Moore and Plummer, Univ. Texas Pub. No. 3945, p. 379, pl. 20, fig. 6, 1940.
Penn. (Marble Falls ls.): 11.5 miles southwest San Saba, Texas.
- Ethelocrinus tuberculatus** (Meek and Worthen).
Erisocrinus tuberculatus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 150, 1865.
Eupachycrinus tuberculatus Meek and Worthen, Geol. Surv. Ill., 5, p. 566, pl. 29, fig. 9, 1873.
Ethelocrinus tuberculatus Moore and Plummer, Univ. Texas Pub. No. 3945, p. 152, 1940.
Penn.: Sugar Creek, Sangamon Co., La Salle and Jersey Co., Ill.; Mineral Wells, Tex. (Strawn fm.); Graham, Tex. (Cisco fm.).
- Eucalyptocrinites** Goldfuss. Genotype: *E. rosaceus* Goldfuss.
Eucalyptocrinitidae (Camerata). Sil.; Dev.
Goldfuss, Petref. Germ., p. 214, 1826.—Geinitz, Grund. Verstein. Kunda, p. 551, 1846 (as *Eucalyptocrinites*).
- Crinocystites* Hall, 20th Rep. N. Y. St. Cab. Nat. Hist., p. 317, 1868 (adv. pub. 1864).
—Foerste, Ohio Jour. Sci., 21, p. 67, 1920. (Genotype: *C. chrysalis* Hall)
(Based on anal tube.)
- Crinocystis* Haeckel, Amphor. Cystoid., p. 69, 1896.—Bather, Treatise Zool. (Lankester), pt. 3, p. 77, 1900.
- Eucalyptocrinus* Agassiz, Mem. Soc. Neuchatel, 1, p. 197, 1835.—Angelin, Icon. Crin. Suec., p. 16, 1878.—Zittel, Handb. Pal., 1, p. 379, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, p. 127 (349), 1885; N. Amer. Crin. Cam., p. 332, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 164, 1900.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 102, 1900.—Grabau, Bull. Buffalo Soc. Nat. Sci., 7, p. 157; N. Y. St. Mus., Bull., 9, p. 157, 1901.—Springer, Zittel-Eastman Textb. Pal., 1, p. 192, 1913; Amer. Sil. Crin., p. 35, 1926.
- Hypanthocrinites* Phillips, Murchison's Sil. Syst., p. 672, 1839. (Genotype: *H. decorus* Phillips.)
- Hypanthocrinus* Morris, Cat. Brit. Foss., p. 59, 1843.—Hall, Nat. Hist. N. Y., Pal., 3, p. 178, 1852.—Angelin, Icon. Crin. Suec., p. 17, 1878.—Zittel, Handb. Pal., 1, p. 380, 1879.
- Eucalyptocrinites asper** (Weller).
Eucalyptocrinus asper Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 110, pl. 5, figs. 4-7, 1900.
Sil. (Niagaran-Racine dol.): Bridgeport and Hawthorne, Ill.
- Eucalyptocrinites bordeni** (Roy).
Eucalyptocrinus bordeni Roy, Field Col. Mus. Pub., no. 254, p. 203, pl. 32, figs. 5, 6, 1929.
Sil. (Niagaran-Louisville ls.): Louisville, Ky.
- Eucalyptocrinites caelatus** (Hall).
Eucalyptocrinus caelatus Hall, Nat. Hist. N. Y., Geol. 4th Dist., 4, p. 113, text fig. 41-1, pl. 18, 1843; Nat. Hist. N. Y., pt. 6, Pal., 2, p. 210, pl. 47, figs. 4 a-e, 1852.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 336, pl. 83, figs. 5-7, 1897.
Eucalyptocrinus papulosus Hall, Nat. Hist. N. Y., pt. 6, Pal., 2, p. 211, pl. 47, figs. 5a, b, 1852.
- Sil. (Niagaran): Lockport, etc. N. Y. and Grimsby, Ont. (Rochester sh.); Louisville, Ky. (Louisville ls.); Waukesha, Wis. (Racine dol.).

Eucalyptocrinites caelatus levis (Grabau and Shimer).

Eucalyptocrinus caelatus var. *levis* Grabau and Shimer, N. Amer. Index Foss., 2, p. 558, figs. 1893, 1894, 1910.

Hypanthocrinites decorus Hall (not Phillips), Nat. Hist. N. Y., Geol. 4th Dist., 4, p. 133, figs. 2, 3, p. 144, pl. 18, fig. 2, 1843.

Eucalyptocrinus decorus Hall, Nat. Hist. N. Y., Pal., 2, p. 207, pl. 47, figs. 1, 2 a-h, 3 a-d, p. 352, pl. 85, fig. 7, 1852.—Grabau, Bull. N. Y. St. Mus., 45, pp. 157, 158, fig. 53; Bull. Buffalo Soc. Nat. Sci., 7, p. 157, fig. 53, 1901.

Hypanthocrinus decorus Marcou, Geol. Map. United States and Brit. Prov., etc., p. 27, pl. 2, fig. 8, 1853.

Sil. (Niagaran-Rochester sh.): Lockport and Rochester, N. Y.

Eucalyptocrinites chicagoensis (Winchell and Marcy).

Eucalyptocrinus chicagoensis Winchell and Marcy, Mem. Boston Soc. Nat. Hist., 1, p. 90, 1865.

Sil. (Niagaran-Racine dol.): Chicago, Ill.

Eucalyptocrinites chrysalis (Hall).

Crinocystites chrysalis Hall, Adv. Pub. 18th Ann. Rep. N. Y. St. Cab. Nat. Hist., p. 14, pl. 1, figs. 10, 11, 1864; 20th Ann. Rep. N. Y. St. Cab. Nat. Hist., Doc. ed., p. 318, pl. 12-A, figs. 10, 11, 1867; Rev. ed. p. 362, pl. 12-A, figs. 10, 11, 1870.—Foerste, Ohio Jour. Sci., 21, no. 2, p. 67, pl. 1, figs. 2a, b, 1920.

Sil. (Niagaran-Racine dol.): Racine, Wis.

Eucalyptocrinites conicus Troost = *E. milliganae*.

Eucalyptocrinites crassus (Hall).

Eucalyptocrinus crassus Hall, Adv. Not. N. Sp. Foss. Niagara Gr., p. 3, 1863; Adv. Pub. 18th Rep. N. Y. St. Cab. Nat. Hist., p. 19, pl. 2, figs. 2, 3, 1865.—Hall and Whitfield, Geol. Surv. Ohio, 2, pt. 2, p. 129, pl. 6, fig. 11, 1875.—Wetherby, Jour. Cincinnati Soc. Nat. Hist., 2, pl. 8, figs. 5-8, 1879.—Hall, 23th Rep. N. Y. St. Cab. Nat. Hist., p. 141, pl. 17, figs. 1-11, pl. 18, figs. 1-9, pl. 19, figs. 2, 4, 5, 1879.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 342, pl. 81, figs. 1-6, 14, 15, 1897.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 25, fig. 6, p. 105, pl. 5, figs. 1, 2, 1900.—Springer, Amer. Sil. Crin., p. 39, pl. 7, figs. 19, 20, 1926.

Eucalyptocrinus constrictus Hall, Prelim. Not. Trans. Albany Inst., 10, p. 10, 1874; 11th Ann. Rep. Geol. Nat. Hist. Ind., p. 273, pl. 15, fig. 1, 1882.

Sil. (Niagaran): Waldron, etc., Ind., and Newsom, Tenn. (Waldron sh.); Iowa (Gower dol.).

Eucalyptocrinites decoratus (Angelin).

Eucalyptocrinus decoratus Angelin, Icon. Crin. Suec., p. 17, pl. 5, figs. 4, 4a, 1878.

Sil. (Gotlandian): Wisby, Island of Gotland.

Eucalyptocrinites decorus (Phillips).

Hypanthocrinites decorus Phillips, in Murchison, Sil. Syst., p. 672, pl. 17, fig. 3, 1839.

Hypanthocrinus decorus Garner, Nat. Hist. Stafford, p. 458, pl. A, figs. 1-3, 1844.

Eucalyptocrinus decorus Phillips, in Murchison, Siluria (ed. 3), p. 246, pl. 14, fig. 2, 1859.

Sil. (Wenlock ls.): Dudley, England.

Eucalyptocrinites depressus (S. A. Miller).

Eucalyptocrinus depressus S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 3, p. 232, pl. 7, figs. 1, 1a, b, 1880.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 349, pl. 83, figs. 3, 4a, b, 1897.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 114, pl. 7, fig. 5-7, 1900.

Sil. (Niagaran-Racine dol.): Cicero and Bridgeport, near Chicago, Ill.

Eucalyptocrinites egani (S. A. Miller).

Eucalyptocrinus (*Hypanthocrinus*) *egani* S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 3, p. 140, pl. 4, fig. 1, 1880.

- Eucalyptocrinus egani* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 352, pl. 82, figs. 11, 12, 1897.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 108, pl. 7, fig. 4, 1900.
Sil. (Niagaran-Racine dol.): Chicago and Bridgeport, Ill.
- Eucalyptocrinites elegantissimus** (Angelin).
Eucalyptocrinus elegantissimus Angelin, Icon. Crin. Suec., p. 16, pl. 24, fig. 15, 1878.
Sil. (Gotlandian): Wisby, Island of Gotland.
- Eucalyptocrinites ellipticus** (S. A. Miller).
Eucalyptocrinus ellipticus S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 648, pl. 7, fig. 4, 1892 (adv. pub. 1891, p. 38).
Sil. (Niagaran-Waldron sh.): Hartsville, Ind.
- Eucalyptocrinites elrodi** (S. A. Miller).
Eucalyptocrinus elrodi S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 650, pl. 7, figs. 9, 10, 1892 (adv. pub. 1891, p. 40).—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 339, pl. 81, figs. 7-13, 1897.—Springer, Amer. Sil. Crin., p. 36, pl. 8, figs. 1, 2, 1926.
Eucalyptocrinus caelatus Hall, Trans. Albany Inst., 4, p. 226, 1863; 28th Rep. N. Y. St. Mus., p. 142, pl. 16, figs. 1-10, pl. 19, figs. 1, 3, 1879; 11th Rep. Geol. Nat. Hist. Ind., p. 274, pl. 15, fig. 1, pl. 16, figs. 1-10, pl. 19, figs. 1, 3, 1882.
Eucalyptocrinus subglobosus S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 647, pl. 7, fig. 3, 1892 (adv. pub. 1891, p. 37).
Sil. (Niagaran-Waldron sh.): Hartsville, Waldron, etc., Ind.; Newsom and Clifton, Tenn.
- Eucalyptocrinites excellentissimus** (Angelin).
Eucalyptocrinus excellentissimus Angelin, Icon. Crin. Suec., p. 16, pl. 5, fig. 5, 1878.
Sil. (Gotlandian): Island of Gotland.
- Eucalyptocrinites extensus** Troost.
Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.
Eucalyptocrinus extensus Wood, U. S. Nat. Mus., Bull. 64, p. 49, pl. 13, figs. 9, 10, 1909.
Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.
- Eucalyptocrinites floridus** Troost, Ms. = *E. milliganae*.
- Eucalyptocrinites gibbosus** Troost.
Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.
Eucalyptocrinus gibbosus Wood, U. S. Nat. Mus., Bull. 64, p. 54, pl. 10, figs. 3, 4, 1909.
Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.
- Eucalyptocrinites goldfussi** Troost.
Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.
Eucalyptocrinus goldfussi Wood, U. S. Nat. Mus., Bull. 64, p. 52, pl. 15, figs. 5, 6, 1909.
Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.
- Eucalyptocrinites granulatus** (Lewis).
Hypanthocrinus granulatus Lewis, London Geol. Jour., pt. 3, p. 99, pl. 21, figs. 1-5, 1847.—Angelin, Icon. Crin. Suec., p. 18, pl. 6, figs. 3, 4, pl. 24, figs. 10-12, pl. 29, figs. 69, 70, 74, 1878.
Eucalyptocrinus granulatus Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, p. 133 (355), 1885.
Sil.: Walsall, Dudley, England (Wenlock sh.): Wisby, Island of Gotland (Gotlandian).
- Eucalyptocrinites inonspectus** (Ringueberg).
Eucalyptocrinus inonspectus Ringueberg, Proc. Acad. Nat. Sci. Phila., p. 148, pl. 3, fig. 5, 1884.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 346, pl. 83, figs. 1, 2, 1897.
Sil. (Niagaran-Lockport, Gasport ls.): Lockport and Rochester, N. Y.

Eucalyptocrinites inornatus (Weller).

Eucalyptocrinites inornatus Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 115, pl. 6, figs. 3, 4, 1900.

Sil. (Niagaran-Racine dol.): Bridgeport and Hawthorne, Ill.

Eucalyptocrinites laevis Troost = *E. phillipsi*.

Eucalyptocrinites lindahli (Wachsmuth and Springer).

Eucalyptocrinites lindahli Wachsmuth and Springer, Amer. Geol., 10, p. 139, 1892; N. Amer. Crin. Cam., p. 347, pl. 82, fig. 9, 1897.—Wood, U. S. Nat. Mus., Bull. 64, p. 47, pl. 12, figs. 5, 6, 1909.—Springer, Amer. Sil. Crin., p. 36, pl. 8, figs. 4, 5, 1926.

Eucalyptocrinites splendidus Troost, Amer. Jour. Sci., (2) 8, p. 419, 1849.

Eucalyptocrinites wortheni Miller and Gurley, Ill. St. Mus., Bull. 3, p. 53, pl. 4, fig. 2, 1894.

Sil. (Niagaran-Beech River fm.): Wayne, Decatur, and Perry Cos., Tenn.

Eucalyptocrinites magnus (Worthen).

Eucalyptocrinites magnus Worthen, Geol. Surv. Ill., 6, p. 501, pl. 25, fig. 3, 1875.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 348, pl. 82, figs. 7, 8, 1897.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 116, pl. 6, fig. 7, 1900.—Springer, Amer. Sil. Crin., p. 36, pl. 8, fig. 3, 1926.

Eucalyptocrinites gorbyi S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 649, pl. 7, figs. 5, 6, 1892 (adv. pub. 1891, p. 39); N. Amer. Geol. Pal., 2d App., p. 745, fig. 1353, 1897.

Sil. (Niagaran-Waldron sh.): Wayne Co., Newsom, etc., Tenn.

Eucalyptocrinites milliganae (Miller and Gurley).

Eucalyptocrinites milliganae Miller and Gurley, Ill. St. Mus., Bull. 10, p. 88, pl. 5, figs. 4-6, 1895.—Wood, U. S. Nat. Mus., Bull. 64, p. 50, pl. 5, fig. 13, 1909.—Springer, Amer. Sil. Crin., p. 37, pl. 8, figs. 6-8, 1926.

Eucalyptocrinites conicus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Eucalyptocrinites floridus (Troost Ms.) Wood, U. S. Nat. Mus., Bull. 64, p. 50, 1909.

Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.

Eucalyptocrinites minor (Angelin).

Eucalyptocrinites minor Angelin, Icon. Crin. Suec., p. 17, pl. 6, figs. 1, 1a, pl. 24, figs. 9, 9a, b, 1878.

Sil. (Gotlandian): Island of Gotland.

Eucalyptocrinites nashvillae Troost.

Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Eucalyptocrinites nashvillae Wood, U. S. Nat. Mus., Bull. 64, p. 53, pl. 15, figs. 7, 8, 1909.

Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.

Eucalyptocrinites nodulosus (Weller).

Eucalyptocrinites nodulosus Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 109, pl. 7, figs. 1-3, 1900.

Eucalyptocrinites crassus Hall, 20th Rep. N. Y. St. Cab. Nat. Hist., Doc. ed., p. 323, pl. 10, figs. 2, 3, 1867; Rev. ed., p. 365, pl. 10, figs. 2, 3, 1870.

Sil. (Niagaran-Racine dol.): Bridgeport and Romeo, Ill.

Eucalyptocrinites obconicus (Hall).

Eucalyptocrinites obconicus Hall, Adv. Pub. 18th Rep. N. Y. St. Cab. Nat. Hist., p. 19, pl. 2, fig. 1, 1865; 20th Rep. N. Y. St. Cab. Nat. Hist., Doc. ed., p. 323, pl. 11, fig. 1, 1867; Rev. ed., p. 365, pl. 11, fig. 1, 1870.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 109, pl. 7, fig. 8, 1900.

Sil. (Niagaran-Racine dol.): Racine, Wis., and Chicago, Ill.

Eucalyptocrinites ornatus (Hall).

Eucalyptocrinites ornatus Hall, Rep. Supt. Geol. Surv. Wisconsin, p. 20, 1861. (Final Rep., 1862); Prelim. Not. 18th Rep. N. Y. St. Cab. Nat. Hist., p. 25, pl. 3, figs.

4, 5, 1865; 20th Rep. N. Y. St. Cab. Nat. Hist., Doc. ed., p. 329, pl. 11, figs. 4, 5, 1867, Rev. ed., p. 366, 1870.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 340, pl. 82, fig. 10, 1897.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 111, pl. 6, figs. 5, 6, 1900.

Sil. (Niagaran-Racine dol.): Racine, Wis.; Bridgeport and Romeo, Ill.

Eucalyptocrinites ovalis (Hall).

Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849. (nom. nud.).

Eucalyptocrinus ovatus (by error) Hall, 28th Rep. N. Y. St. Mus. Nat. Hist., Expl. pl. 17, figs. 12, 13, 1877; Mus. ed., p. 143, 1878 (as *E. ovalis*).

Eucalyptocrinus ovalis Hall, Ann. Rep. Geol. Nat. Res. Ind., p. 275, pl. 17, figs. 12, 13, 1882.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 344, pl. 82, figs. 1-6, 1897.

Eucalyptocrinites tennesseae Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849. (nom. nud.).

Sil. (Niagaran): Decatur and Perry Cos., Tenn. (Beech River fm.); Waldron, Ind. and Newsom, etc., Tenn. (Waldron sh.); Louisville, Ky. (Louisville ls.).

Eucalyptocrinites ovatus (Angelin).

Eucalyptocrinus ovatus Angelin, Icon. Crin. Suec., p. 17, pl. 5, figs. 1, 2, 2a, 1878.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Eucalyptocrinites pernodosus (Springer).

Eucalyptocrinus pernodosus Springer, Amer. Sil. Crin., p. 38, pl. 9, figs. 1-4, 1926.

Sil. (Niagaran-Decatur ls.): Perryville, Tenn.

Eucalyptocrinites phillipsi Troost.

Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Eucalyptocrinus phillipsi Wood, U. S. Nat. Mus., Bull. 64, p. 51, pl. 10, figs. 9, 10, pl. 13, figs. 2-4, 1909.

Eucalyptocrinites laevis Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.

Eucalyptocrinites plebejus (Angelin).

Eucalyptocrinus plebejus Angelin, Icon. Crin. Suec., p. 17, pl. 5, fig. 7, 1878.

Sil. (Gotlandian): Wisby, Island of Gotland.

Eucalyptocrinites praerosaceus (Yakovlev).

Eucalyptocrinus praerosaceus Yakovlev, Compt. Rend. (Doklady) Acad. Sci. URSS, 27, no. 2, p. 193, text fig., 1940.

Low. Dev.: Nijnil Serginsky, Ural, Russia.

Eucalyptocrinites proboscidualis (S. A. Miller).

Eucalyptocrinus proboscidualis S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 5, p. 224, pl. 9, fig. 2, 1882.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 352, pl. 82, fig. 14, 1897.—Foerste, Ohio Jour. Sci., 21, no. 2, p. 70, fig. 4, 1920.

Sil. (Niagaran-Cedarville ls.): Pontiac, Ohio.

Eucalyptocrinites rectus (Hall).

Crinocystites (?) *rectus* Hall, Adv. Pub. 18th Rep. N. Y. St. Cab. Nat. Hist., p. 14, pl. 1, fig. 2, 1864 (based on anal tube); 18th Rep., p. 318, pl. 10, fig. 2, 1867.

Rhodocrinus? *rectus* Hall, 20th Rep. N. Y. St. Cab. Nat. Hist., Doc. ed., p. 379, pl. 10, fig. 8, 1867; Rev. ed., 1870.

Sil. (Niagaran-Racine dol.): Racine, Wis.

Eucalyptocrinites regularis (Hisinger).

Actinocrinites regularis Hisinger, Leth. Suec., Supp. Ū, p. 6, pl. 39, fig. 6; Anteckning, etc., Sjunde Häftet, pp. 45, 65, 1840.

Eucalyptocrinus regularis Roemer in Bronn, Leth. Geogn., ed. 3, vol. 1, pt. 2, p. 260, 1852-1854.

Actinocrinus regularis Quenstedt, Petref. Deutsch., 4, p. 636, pl. 112, figs. 57, 58, 1876.

- Hypanthocrinus regularis* Angelin, Icon. Crin. Suec., p. 17, pl. 6, figs. 2, 2 a-c, pl. 24, fig. 11, 11 a-f, 20, pl. 29, figs. 35-64, 71, 1878.
Sil. (Gotlandian): Lickershamn, Island of Gotland.
- Eucalyptocrinites rigens** (Angelin).
Eucalyptocrinus rigens Angelin, Icon. Crin. Suec., p. 17, pl. 9, fig. 13, pl. 24, figs. 16-19b, 21, pl. 29, figs. 30, 31, 1878.
Sil. (Gotlandian): Follingbo, Island of Gotland.
- Eucalyptocrinites rosaceus** Goldfuss.
Goldfuss, Petref. Germ., 1, p. 214, pl. 64, fig. 7, 1831; Nova Acta Acad. Leop. Nat. Cur., 19, p. 335, pl. 30, figs. 6 a-i, 1839.
Eucalyptocrinus rosaceus Schultze, Denk. Kais. Acad. Wiss., Math. Naturw. Cl., Bd. 26, p. 202, pl. 11, figs. 1-14, 1867 (adv. pub. 1866, p. 90).
Dev. (Eifelian): Gerolstein and Pelm, Eifel, Germany.
- Eucalyptocrinites rotundus** (S. A. Miller).
Eucalyptocrinus rotundus S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 5, p. 82, pl. 3, figs. 4, 4a, 1882.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 113, pl. 5, fig. 3, 1900.
Sil. (Niagaran-Racine dol.): Chicago, Ill.
- Eucalyptocrinites sculptilis** (Springer).
Eucalyptocrinus sculptilis Springer, Amer. Sil. Crin., p. 38, pl. 9, figs. 5-6a, 1926.
Sil. (Niagaran-Decatur ls.): Perryville, Tenn.
- Eucalyptocrinites speciosus** (Angelin).
Eucalyptocrinus speciosus Angelin, Icon. Crin. Suec., p. 16, pl. 5, figs. 3, 3a, pl. 29, figs. 27-29, 32-34, 1878.
Sil. (Gotlandian): Farö, Island of Gotland.
- Eucalyptocrinites splendidus** (Hall and Whitfield).
Eucalyptocrinus splendidus Hall and Whitfield, Geol. Surv. Ohio, Pal., 2, pt. 2, p. 128, pl. 6, fig. 12, 1875.
Sil. (Niagaran-Cedarville ls.): Springfield, Ohio.
- Eucalyptocrinites splendidus* Troost = *E. lindahli*.
- Eucalyptocrinites springeri** (Foerste).
Eucalyptocrinus springeri Foerste, Bull. Sci. Lab. Denison Univ., 14, p. 99, pl. 4, fig. 73, 1909.
Sil. (Niagaran-Waldron sh.): Newsom, Tenn.
- Eucalyptocrinites tennesseae* Troost = *E. ovalis*.
- Eucalyptocrinites tuberculatus** (Miller and Dyer).
Eucalyptocrinus tuberculatus Miller and Dyer, Jour. Cincinnati Soc. Nat. Hist., 1, p. 36, pl. 2, figs. 9, 9a, 1878.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 537, pl. 83, figs. 8-10, 1897.
Eucalyptocrinus muralis Ringueberg, Ann. N. Y. Acad. Sci., 5, p. 305, pl. 3, fig. 3, 1890.
Sil. (Niagaran): Waldron, etc., Ind., Whites Creek, Tenn. (Waldron sh.); Racine, Wis. (Racine dol.); Lockport, N. Y. (Rochester sh.).
- Eucalyptocrinites turbinatus** (S. A. Miller).
Eucalyptocrinus turbinatus S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 5, p. 82, pl. 3, figs. 5, 5a, 1882.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 351, pl. 82, fig. 13, 1897.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 107, pl. 6, figs. 1, 2, 1900.
Sil. (Niagaran-Racine dol.): Chicago, Ill.
- Eucalyptocrinites ventricosus** (Wachsmuth and Springer).
Eucalyptocrinus ventricosus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 341, pl. 83, figs. 11, 12, 1897.—Springer, Amer. Sil. Crin., p. 37, pl. 8, figs. 9-12, 1926.

- Eucalyptocrinus coelatus* Roemer, Sil. Fauna West Tenn., p. 48, pl. 4, figs. 3 a-e, 1860.
- Eucalyptocrinites crenatus* (Troost, Ms.) Wood, U. S. Nat. Mus., Bull. 64, p. 54, 1909 (under *E. ventricosus*).
- Sil. (Niagaran-Beech River fm.): Decatur, Wayne, and Perry Cos., Tenn.
- Eucalyptocrinus* of authors = *Eucalyptocrinites*.
- Eucalyptocrinus?* *bohemicus* Waagen and Jahn.
- Waagen and Jahn, Syst. Sil. Centre Bohême, 7, pt. 1, p. 192, pls. 62, 79, 1899 (unrecognizable fragment).
- Sil. (E₁, E₂): Karlstein, Dvorce, Bohemia.
- Eucalyptocrinus caelatus* Hall = *Eucalyptocrinites elrodi*.
- Eucalyptocrinus coelatus* Roemer = *Eucalyptocrinites ventricosus*.
- Eucalyptocrinus constrictus* Hall = *Eucalyptocrinites crassus*.
- Eucalyptocrinus cornutus* Hall = *Callioocrinus cornutus*.
- Eucalyptocrinus cornutus excavatus* Hall = *Callioocrinus cornutus excavatus*.
- Eucalyptocrinus crassus* Hall (part) = *Eucalyptocrinites nodulosus*.
- Eucalyptocrinus crenatus* Wood = *Eucalyptocrinites ventricosus*.
- Eucalyptocrinus gorbyi* S. A. Miller = *Eucalyptocrinites magnus*.
- Eucalyptocrinus muralis* Ringueberg = *Eucalyptocrinites tuberculatus*.
- Eucalyptocrinus papulosus* Hall = *Eucalyptocrinites caelatus*.
- Eucalyptocrinus polydactylus* McCoy = *Clonoocrinus polydactylus*.
- Eucalyptocrinus ramifer* Roemer = *Gazaocrinus ramifer*.
- Eucalyptocrinus subglobosus* S. A. Miller = *Eucalyptocrinites elrodi*.
- Eucalyptocrinus wortheni* S. A. Miller = *Eucalyptocrinites lindahli*.
- Eucalyptocrinites* Geinitz. See *Eucalyptocrinites*.
- Eucatillocrinus** Springer. Genotype: *Catilloocrinus bradleyi* Meek and Worthen.
- Catilloocrinidae (Inadunata-Fistulata). Miss.
- Springer, Smiths. Misc. Coll., 76, no. 3, p. 19, 1923.—Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 111, 1937.—Moore, Denison Univ. Bull., 40, Jour. Sci. Lab., 35, p. 86, 1940.
- Eucatillocrinus bradleyi** (Meek and Worthen).
- Catilloocrinus bradleyi* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 343, 1868; Geol. Surv. Ill., 5, p. 504, pl. 14, figs. 10a, b, 1873.
- Eucatillocrinus bradleyi* Springer, Smiths. Misc. Coll., 76, no. 3, pp. 19, 27, pl. 3, figs. 14-17, 1923.
- Miss. (Keokuk ls.): Crawfordsville, Ind.
- Eucheiroocrinus** Meek and Worthen. Genotype: *Cheiroocrinus chrysalis* Hall.
- Calceocrinidae (Inadunata-Fistulata). Ord.; Sil.
- Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 73, 1869; Geol. Surv. Ill., 5, p. 443, 1873.—Springer, Amer. Sil. Crin., pp. 91, 101-104, 111, 1926.
- Cheiroocrinus* Hall (not Eichwald; not Salter), 13th Rep. N. Y. St. Cab. Nat. Hist., p. 122, 1860. (Genotype: *C. chrysalis* Hall.)
- Eucheiroocrinus* Bather, Kongl. Sv. Vet. Akad. Handl., 25, no. 2, pp. 61, 65, 1893; Treatise Zool. (Lankester), pt. 3, p. 148, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 213, 1913,—Jaekel, Pal. Zeits., 3, p. 88, 1918.
- Proclivoocrinus* Ringueberg, Ann. N. Y. Acad. Sci., 4, p. 396, 1889.—Bather, Ann. Mag. Nat. Hist., (6) 5, p. 332, 1890. (Genotype: *Calceocrinus radiculis* Ringueberg.)
- Eucheiroocrinus anglicus** Springer.
- Springer, Amer. Sil. Crin., p. 113, pl. 29, figs. 6, 6a, text fig. 3-c, 1926.
- Sil. (Wenlock ls.): Dudley, England.

Eucheirocrinus barrandii (Walcott).

Calceocrinus barrandii Walcott, 35th Rep. N. Y. St. Mus., p. 212, pl. 17, figs. 1, 2, 1883. (Author's ed., p. 6.)

Ord. (Trenton ls.): Trenton Falls, N. Y.

Eucheirocrinus chrysalis (Hall).

Cheirocrinus chrysalis Hall, 13th Rep. N. Y. St. Cab. Nat. Hist., p. 123, text fig. 1-5, 1860.

Calceocrinus chrysalis Hall, 28th Rep. N. Y. St. Mus. Nat. Hist., Mus. ed., p. 147, text fig. 2, 1879; 11th Rep. Ind. Geol. Nat. Res., p. 281, text fig. 2, 1882.

Proclivocrinus chrysalis Ringueberg, Ann. N. Y. Acad. Sci., 4, p. 399, pl. 10, figs. 7, 13, 1889.

Eucheirocrinus chrysalis Springer, Amer. Sil. Crin., p. 112, pl. 29, figs. 1, 1 a-c, 2, 3, text fig. 3a, 1926.

Calceocrinus radicululus Ringueberg, Jour. Cincinnati Soc. Nat. Hist., 5, p. 120, pl. 5, figs. 3, 3a, 1882.

Proclivocrinus radicululus Ringueberg, Ann. N. Y. Acad. Sci., 4, p. 397, pl. 10, fig. 6, 1889.

Sil. (Niagaran-Rochester sh.): Lockport, N. Y.

Eucheirocrinus indianensis (S. A. Miller).

Calceocrinus indianensis S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 645, pl. 6, fig. 37, 1892 (adv. pub. 1891, p. 35).

Eucheirocrinus indianensis Springer, Amer. Sil. Crin., p. 114, pl. 29, figs. 4, 4a, b, 1926.

Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Eucheirocrinus minor Springer.

Springer, Amer. Sil. Crin., p. 112, pl. 29, figs. 5, 5a, b, 1926.

Sil. (Niagaran-Beech River fm.): One mile north Decaturville, Tenn.

Eucheirocrinus ontario Springer.

Springer, Geol. Surv. Canada, Mem. 111, App. 2, p. 127, text fig. 6, 1919.

Sil. (Cataract fm.-Manitoulin beds): Stoney Creek, Ontario, Canada.

Euchoirocrinus Bather = **Eucheirocrinus**.**Eucladocrinus** Meek. Genotype: *E. montanaensis* Meek.

Platycrinidae (Aduata). Miss.

Meek, Prelim. Rep. U. S. Geol. Surv. Mont. and Adjacent Terr., p. 373, 1871; Amer. Jour. Sci., (3) 7, p. 191, 1874; Proc. Acad. Nat. Sci. Phila., p. 243, 1878.—Zittel, Handb. Pal., 1, p. 365, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 58 (232), 1881; N. Amer. Crin. Cam., p. 719, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 158, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 200, 1913.

Eucladocrinus millebrachiatus Wachsmuth and Springer.

Wachsmuth and Springer, Proc. Acad. Nat. Sci. Phila., p. 245, pl. 1, figs. 1-7, 1878; N. Amer. Crin. Cam., p. 720, pl. 73, fig. 1, pl. 74, figs. 2-9, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 158, text fig. 71-4, 1900.

Platycrinus (Eucladocrinus) millebrachiatus Wachsmuth and Springer, Rev. Pal., pt. 2, p. 77 (251), pl. 18, fig. 7, 1881.

Miss.: Near Burlington, Iowa (Burlington-Keokuk transition beds); Nauvoo, etc., Ill.; Keokuk, Iowa (Keokuk ls.).

Eucladocrinus millebrachiatus immaturus Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 722, pl. 75, figs. 2, 3, 1897.

Miss. (Burlington-Keokuk transition beds): Burlington, Iowa.

Eucladocrinus montanaensis (Meek).

Platycrinites (Eucladocrinus) montanaensis Meek, Prelim. Rep. U. S. Geol. Surv. Montana and Adjacent Terr., p. 373, 1872.

Eucladocrinus montanensis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 723, pl. 72, fig. 5, 1897.

Miss. (Madison ls.): Twin Springs, Dry Creek Valley, Mont.

- Eucladocrinus pleuroviminus** (White).
Platycrinus pleuroviminus White, Proc. Boston Soc. Nat. Hist., p. 17, 1862.
Eucladocrinus pleuroviminus Wachsmuth and Springer, N. Amer. Crin. Cam. p. 724, pl. 73, fig. 4, pl. 74, fig. 1, 1897.
Platycrinus discoideus Hall (not Owen and Shumard), Geol. Rep. Iowa, 1, pt. 2, p. 535, pl. 8, figs. 8a, b, 1858.
 Miss. (Up. Burlington ls.): Burlington, Iowa.
- Eucladocrinus praenuntius** (Wachsmuth and Springer).
Platycrinus praenuntius Wachsmuth and Springer, Proc. Acad. Nat. Sci. Phila., p. 249, pl. 2, figs. 1, 2, 1878.
Eucladocrinus praenuntius Wachsmuth and Springer, N. Amer. Crin. Cam., p. 726, pl. 73, fig. 5, 1897.
 Miss. (Up. Burlington ls.): Burlington, Iowa.
- Eucladocrinus tuberosus** (Hall).
Platycrinus tuberosus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 534, pl. 8, figs. 7a, b, 1858.
Eucladocrinus tuberosus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 728, pl. 72, figs. 3, 4 a-c, 1897.
 Miss. (Up. Burlington ls.): Burlington, Iowa.
- Eucrinus Angelin** = Dimerocrinites.
- Eucrinus minor** Angelin = Anthemocrinus minor.
- Eucrinus venustus** Angelin = Anthemocrinus venustus.
- Eudimerocrinus** Springer. Genotype: *E. multibrachiatus* Springer.
 Dimerocrinitidae (Camerata). Sil.
 Springer, Amer. Sil. Crin., p. 14, 1926.
- Eudimerocrinus multibrachiatus** Springer.
 Springer, Amer. Sil. Crin., p. 14, pl. 1, figs. 13, 13a, b, 14, 1926.
 Sil. (Niagaran-Beech River fm.): 2 miles north of Decaturville, Tenn.
- Euerisocrinus** Strimple = Graphiocrinus.
- Eugeniocrinites?** *costatus* Hisinger = Calliocrinus *costatus*.
- Eugeniocrinites?** *quaesitus* Gregorio.
 Gregorio, Ann. Geol. Pal., 52, Palermo, p. 36, pl. 13, figs. 20, 21, 1930.
 Permian: Sicily.
- Euonychocrinus** Strimple. Genotype: *E. dubius* Strimple.
 Ichthyocrinidae (Flexibilia). Penn.
 Strimple, Bull. Amer. Pal., 25, no. 92, p. 101, 1940.
- Euonychocrinus dubius** Strimple.
 Strimple, Bull. Amer. Pal., 25, no. 92, p. 102, pl. 9, figs. 11-13, 1940.
 Penn. (Stanton ls.): Near Wayside, Kansas.
- Eupachycrinus** Meek and Worthen. Genotype: *Graphiocrinus quatuor-decembrachialis* Lyon.
 Poteriocrinitidae (Inadunata-Fistulata). Carb.
 Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 159, 1865; Geol. Surv. Ill., 2, Pal., pp. 177, 178, 1886.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 133 (356), 1880 (1879); pt. 3, p. 246 (170), 1886.—Bather, Ann. Mag. Nat. Hist., (6) 6, pp. 332, 337, 1890; Treatise Zool. (Lankester), pt. 3, p. 181, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 224, 1913.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 170, 1924.—Kirk, Jour. Pal., 11, no. 7, p. 598, 1937.—Moore and Plummer, Univ. Texas Pub. No. 3945, pp. 351, 354, 1940.—Sutton and Winkler, Jour. Pal., 14, no. 6, p. 548, 1940.
- Intermediocrinus* Sutton and Winkler, Jour. Pal., 14, no. 6, p. 559, 1940. (Genotype: *Eupachycrinus asperatus* Worthen).
- Eupachycrinus ardressensis** Wright = *Phanocrinus ardressensis*.

Eupachyrcrinus asperatus Worthen.

Worthen, Ill. St. Mus., Bull. 1, p. 34, 1882; Geol. Surv. Ill., 7, p. 311, pl. 29, fig. 4, 1883.

Intermediacrinus asperatus Sutton and Winkler, Jour. Pal., 14, no. 6, p. 561, pl. 67, figs. 1, 2, 1940.

Miss. (Chester-Ste. Genevieve ls.): Monroe Co., Ill.

Eupachyrcrinus basseti Worthen = *Ethelocrinus basseti*.

Eupachyrcrinus boydii Meek and Worthen.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 30, 1870; Geol. Surv. Ill., 5, p. 554, pl. 21, fig. 6, 1873.—Wood, U. S. Nat. Mus., Bull. 64, p. 95, pl. 7, figs. 1-5, 1909.—Sutton and Winkler, Jour. Pal., 14, no. 6, p. 550, pl. 67, figs. 16, 17, 1940.

Cyathocrinites crateriformis Troost, Amer. Jour. Sci., (2), 8, p. 419, 1849.

Miss. (Chester-Glen Dean ls.): Chester, Ill.; Pulaski and Grayson Cos., Ky.

Eupachyrcrinus calyx Bather = *Phanocrinus calyx*.

Eupachyrcrinus craigii Worthen = *Delocrinus craigii*.

Eupachyrcrinus crassus Wachsmuth and Springer = *Ethelocrinus crassus*.

Eupachyrcrinus durabilis (Miller and Gurley).

Zeacrinus durabilis Miller and Gurley, Ill. St. Mus., Bull. 6, p. 48, pl. 4, figs. 14, 15, 1895.

Eupachyrcrinus durabilis Sutton and Winkler, Jour. Pal., 14, no. 6, p. 549, pl. 66, figs. 18-21, 1940.

Miss. (Chester-Glen Dean ls.): Pulaski Co., Ky.

Eupachyrcrinus fayettensis Worthen = *Endelocrinus fayettensis*.

Eupachyrcrinus geminatus Wachsmuth and Springer = *Cromyocrinus geminatus*.

Eupachyrcrinus germanus S. A. Miller.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 2, p. 40, pl. 8, fig. 3, 1879.—Sutton and Winkler, Jour. Pal., 14, no. 6, p. 551, pl. 66, figs. 16, 17, 1940.

Miss. (Chester-Glen Dean ls.): Pulaski Co., Ky.

Eupachyrcrinus harii S. A. Miller = *Ethelocrinus harii*.

Eupachyrcrinus? *impressus* Bather = *Zeacrinites konincki*.

Eupachyrcrinus irregularis Sutton and Winkler.

Sutton and Winkler, Jour. Pal., 14, no. 6, p. 551, pl. 66, figs. 8-10, 1940.

Miss.: (Chester-Glen Dean ls.): Pulaski Co., Ky.

Eupachyrcrinus linchengensis Tien.

Tien, Pal. Sinica, (B) 5, p. 40, pl. 3, figs. 4 a-e, 1926.

Carb. (Taiyuan ser.): Lin Cheng coal field, S. Chihli, North China.

Eupachyrcrinus magister Miller and Gurley = *Ethelocrinus magister*.

Eupachyrcrinus maniformis Keyes = *Phanocrinus maniformis*.

Eupachyrcrinus monroensis Worthen.

Worthen, Ill. St. Mus., Bull. 1, p. 34, 1882; Geol. Surv. Ill., 7, p. 312, pl. 29, fig. 16, 1883.

Miss. (Chester-Ste. Genevieve ls.): Monroe Co., Ill.

Eupachyrcrinus mooresi Weller = *Plaxocrinus mooresi*.

Eupachyrcrinus orbicularis Worthen = *Eratocrinus orbicularis*.

Eupachyrcrinus parvus Miller and Gurley = *Perimestocrinus parvus*.

Eupachyrcrinus pentalobus (Hall).

Cyathocrinus? *pentalobus* Hall, Geol. Rep. Iowa, 1, pt. 2, p. 687, pl. 25, figs. 5a, b, text fig. 11-b, 1858.

- Eupachyrcrinus pentalobus* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., 9, p. 159, 1865.
- Intermediacrinus pentalobus* Sutton and Winkler, Jour. Pal., 14, p. 562, pl. 68, figs. 11, 12, 1940.
- Miss. (Chester ls.): Pope Co., Ill.
- Eupachyrcrinus platybasis* White = *Sciadiocrinus platybasis*.
- Eupachyrcrinus pustulosus* Tien.**
- Tien, Bull. Geol. Surv. China, no. 6, p. 34, 1924; Pal. Indica, (B) 5, p. 29, text fig. 4, pl. 2, figs. 1 a-c, pl. 3, figs. 7 a-g, 1926.
- Carb. (Taiyuan ser.): Lin Cheng coal field, S. Chihli, North China.
- Eupachyrcrinus pustulosus contractus* Tien.**
- Tien, Bull. Geol. Surv. China, no. 6, p. 34, 1924; Pal. Sinica, (B) 5, p. 36, text fig. 6, pl. 2, figs. 4 a-c, pl. 3, figs. 2 a-d, 1926.
- Carb. (Taiyuan ser.): Lin Cheng coal field, S. Chihli, North China.
- Eupachyrcrinus pustulosus transversus* Tien.**
- Tien, Pal. Sinica, (B) 5, p. 32, text fig. 5, pl. 2, figs. 2-3, pl. 3, fig. 8, 1926.
- Carb. (Taiyuan ser.): Lin Cheng coal field, S. Chihli, North China.
- Eupachyrcrinus quatuor-decembrachialis* (Lyon).**
- Graphiocrinus 14-brachialis* Lyon, Geol. Rep. Ky., 3, p. 477, pl. 1, figs. 2, 2a, b, 1867.
- Eupachyrcrinus quatuor-decembrachialis* Springer, Mem. Mus. Comp. Zool., 25, pl. 4, fig. 17, 1911.—Kirk, Jour. Pal., 11, no. 7, p. 599, pl. 84, figs. 4-7, 1937.—Sutton and Winkler, Jour. Pal., 14, no. 6, p. 549, 1940.
- Miss. (Chester): Crittenden Co., Ky. (Ste. Genevieve-Ohara ls.); Pulaski Co., Ky. (Glen Dean ls.).
- Eupachyrcrinus? sancti-ludovici* Worthen = *Plaxocrinus? sanctiludovici*.
- Eupachyrcrinus spartarius* S. A. Miller.**
- S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 2, p. 38, pl. 8, fig. 2, 1879.—Kirk, Jour. Pal., 11, no. 7, p. 601, pl. 84, figs. 8-14, 1937.
- Intermediacrinus spartarius* Sutton and Winkler, Jour. Pal., 14, p. 561, pl. 66, figs. 3, 5, 1940.
- Miss. (Chester-Glen Dean ls.): Pulaski Co., Ky.
- Eupachyrcrinus sphaeralis* Miller and Gurley = *Ethelocrinus sphaeralis*.
- Eupachyrcrinus stellaris* Wright = *Phanocrinus stellaris*.
- Eupachyrcrinus subtumidus* (Meek and Worthen).**
- Poteriocrinus (Scaphiocrinus) subtumidus* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 159, 1865.
- Poteriocrinus (Zeacrinus) subtumidus* Meek and Worthen, Geol. Surv. Ill., 5, p. 548, pl. 21, fig. 1, 1873.
- Eupachyrcrinus subtumidus* Wachsmuth and Springer, Rev. Pal., pt. 1, p. 139, 1880 (1879).
- Ageneracrinus subtumidus* Sutton and Winkler, Jour. Pal., 14, p. 563, pl. 67, figs. 20, 21, 1940.
- Miss. (Chester ls.): Bay City and Pope Co., Ill.
- Eupachyrcrinus tuberculatus* Meek and Worthen = *Ethelocrinus tuberculatus*.
- Eupachyrcrinus tumidus* (Sutton and Winkler).**
- Intermediacrinus tumidus* Sutton and Winkler, Jour. Pal., 14, no. 6, p. 561, pl. 68, figs. 15, 16, 1940.
- Miss. (Chester-Renault ls.): 4¼ miles southwest Red Bud, Ill.
- Eupachyrcrinus tumulosus* S. A. Miller.**
- S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 680, pl. 9, figs. 9, 10, 1892 (adv. pub., 1891, p. 70); N. Amer. Geol. Pal., 1st App., p. 678, fig. 1230, 1892.

- Ageneracrinus tumulosus* Sutton and Winkler, Jour. Pal., 14, no. 6, p. 563, pl. 67, figs. 13, 19, 1940.
Miss. (Chester-Glen Dean ls.): Pulaski and Breckinridge Cos., Ky.
- Eupachycrinus variabilis** (Sutton and Winkler).
Intermediacrinus variabilis Sutton and Winkler, Jour. Pal., 14, no. 6, p. 562, pl. 67, fig. 11, 1940.
Miss. (Chester-Paint Creek fm.): Columbia, Ill.
- Eupachycrinus verrucosus* Keyes = *Parulocrinus verrucosus*.
- Euryalecrinus* Austin and Austin = *Taxocrinus*.
- Euryalocrinus* Delage and Herouard. See *Taxocrinus*.
- Euryocrinites* Austin and Austin = *Euryocrinus*.
- Euryocrinus** Phillips. Genotype: *E. concavus* Phillips.
Ichthyocrinidae (Flexibilia). Dev.; Low. Carb.
Phillips, Geol. Yorkshire, 2, p. 205, 1836.—Bather, Treatise Zool. (Lankester), pt. 3, p. 190, 1900.—Springer, Jour. Geol., 14, pp. 483, 518, 1906; Zittel-Eastman Textb. Pal., 1, p. 205, 1913; Crin. Flexibilia, pp. 261, 314, 1920.
- Euryocrinus barrisi** Springer.
Springer, Crin. Flexibilia, p. 516, pl. 40, figs. 1-3, 1920.—Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 467, pl. 44, fig. 8, 1924.
Dev.: 4 miles south Alpena, Mich. (Traverse-Thunder Bay ls.); Buffalo, Iowa (Cedar Valley beds).
- Euryocrinus concavus** Phillips.
Phillips, Geol. Yorkshire, 2, p. 205, pl. 4, figs. 14, 15, 1836.—Springer, Crin. Flexibilia, pp. 316, 317, pl. 40, figs. 4, 5, 1920.
Low. Carb. (Mtn. Ls.): Bolland, England.
- Euryocrinus concavus* Rofe (not Phillips) = *E. rofei*.
- Euryocrinus granulatus** (Phillips).
Poteriocrinus granulatus Phillips, Geol. Yorkshire, 2, p. 205, pl. 4, fig. 4 (as *P. granulatus*) (not figs. 2, 8-10), 1836.
Euryocrinus granulatus Springer, Crin. Flexibilia, p. 319, pl. 40, fig. 5, 1920.
Low. Carb. (Mtn. Ls.): Bolland and Yorkshire, England.
- Euryocrinus laddii** Stewart.
Stewart, Ohio Jour. Sci., 40, no. 2, p. 57, pl. 1, fig. 6, 1940.
Dev. (Silica sh.): Silica, Ohio.
- Euryocrinus rofei** Springer.
Springer (Bather and Gregory, Ms.), Crin. Flexibilia, p. 319, pl. 40, figs. 7, 7a, 1920.—Wright, Geol. Mag., 65, p. 246, text figs. 1, 2, 1928.
Euryocrinus concavus Rofe (not Phillips), Geol. Mag., (1), 10, p. 263, pl. 11, figs. 11, 11a, b, 1873.
Low. Carb. (Mtn. Ls.): Clitheroe, England.
- Euryocrinus tennesseensis** Springer.
Springer, Crin. Flexibilia, p. 318, pl. 40, figs. 6 a-c, 1920.
Miss. (New Providence sh.): Whites Creek Springs and Ridgetop, Tenn.; Button Mold Knob, Ky.; Clark and Washington Cos., Ind.
- Euspirocrinus** Angelin. Genotype: *E. spiralis* Angelin.
Carabocrinidae (Inadunata-Fistulata). Ord.; Sil.
Angelin, Icon. Crin. Succ., p. 24, 1878.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 143 (366), 1880 (1879).—Bather, Ann. Mag. Nat. Hist., (6), 5, pp. 319, 375, 1890; Königl. Sv. Vet. Akad. Handl., 25, p. 108, 1893; Treatise Zool. (Lankester), pt. 3, p. 173, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 218, 1913.
- Euspirocrinus obconicus** W. R. Billings.
W. R. Billings, Ottawa Field Nat. Club. no. 2, p. 249, pl. figs., 1885.
Ord. (Up. Trenton): Rochesterville, Ottawa, Ont.

Euspirocrinus spiralis Angelin.

Angelin, Icon. Crin. Suec., p. 24, pl. 4, figs. 7 a-e, 1878.—Bather, Königl. Sv. Vet. Akad. Handl., 25, no. 2, pp. 108, 111, text figs. 14, 15, pl. 5, figs. 148-157, 1893.
Sil. (Gotlandian): Follingbo, Wisby, etc., Island of Gotland.

Eustenocrinus Ulrich. Genotype: *E. springeri* Ulrich.

Eustenocrinidae (Inadunata-Fistulata). Ord.

Ulrich, in Foerste, Geol. Surv. Canada, Mem. 138, p. 99, 1924.

Eustenocrinus milleri (Wetherby).

Heterocrinus milleri Wetherby, Jour. Cincinnati Soc. Nat. Hist., 3, p. 153, pl. 5, fig. 3, 1880.

Eustenocrinus milleri Ulrich, in Foerste, Geol. Surv. Canada, Mem. 138, p. 100, 1924.

Ord. (Trenton-Curdsville ls.): Mercer Co., Ky.

Eustenocrinus springeri Ulrich.

Ulrich, in Foerste, Geol. Surv. Canada, Mem. 138, p. 99, text fig. 14, 1924.

Ord. (Trenton-Hull ls.): Kirkfield, Ontario, Canada.

Eutaxocrinus Springer. Genotype: *Taxocrinus affinis* Müller.

Taxocrinidae (Flexibilia). Sil.—Miss.

Springer, Jour. Geol., 14, pp. 493, 519, 1906; Zittel-Eastman Textb. Pal., p. 205, 1913; Crin. Flexibilia, pp. 342, 357, 1920.—Goldring, N. Y. St. Mus., Mem. 16, p. 309, 1923.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, pp. 111, 141, 144, 1934.

Eutaxocrinus affinis (Müller).

Taxocrinus affinis Müller, Monatsber. Preuss. Akad. Wiss., Berlin, p. 353, 1856.—Schultze, Denk, Kais. Akad. Wiss., Math. Naturw. Cl., 26, p. 146, pl. 4, fig. 2, 1867 (adv. pub. 1866, p. 34).

Eutaxocrinus affinis Springer, Jour. Geol., 14, p. 519, 1906; Crin. Flexibilia, pp. 359, 362, pl. 49, figs. 9, 10, 1920.

Dev. (Eifelian): Gerolstein, Germany.

Eutaxocrinus alfredi Goldring.

Goldring, Ann. Carnegie Mus., 24, p. 339, pl. 23, figs. 1, 2, 1935.

Dev. (Low. Chemung-Alfred sh.): Alfred Station, Allegany Co., N. Y.

Eutaxocrinus alpha (Williams).

Taxocrinus ithacensis var. *alpha* Williams, Proc. Acad. Nat. Sci. Phila., p. 29, 1882.

Eutaxocrinus alpha Springer, Crin. Flexibilia, pp. 358, 368, pl. 50, figs. 2, 4, 5, 1920.—Goldring, N. Y. St. Mus., Mem. 16, p. 311, pl. 39, figs. 5-13, 1923.

Dev. (Portage-Ithaca beds): Ithaca, N. Y.

Eutaxocrinus(?) amplus Springer.

Springer, Crin. Flexibilia, pp. 359, 370, pl. 50, fig. 10, 1920.—Goldring, N. Y. St. Mus., Mem. 16, p. 316, pl. 38, fig. 11, 1923.

Dev. (Up. Chemung fm.): Binghampton, N. Y.

Eutaxocrinus curtus (Williams).

Taxocrinus curtus Williams, Proc. Acad. Nat. Sci. Phila., p. 30, 1882.

Eutaxocrinus curtus Springer, Crin. Flexibilia, pp. 358, 369, pl. 50, figs. 2, 4, 5, 1920.—Goldring, N. Y. St. Mus., Mem. 16, p. 313, pl. 39, figs. 14-17, 1923.

Dev. (Portage-Ithaca beds): Ithaca, N. Y.

Eutaxocrinus dero Laudon.

Laudon, Univ. Iowa Studies Nat. Hist., 15, no. 2, p. 58, pl. 2, fig. 11, pl. 5, fig. 1, 1933.

Miss (Kinderhook-Gilmore City fm.): Gilmore City, Iowa.

Eutaxocrinus dumosus Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 317, pl. 38, fig. 12, 1923.

Dev. (Portage-Ithaca beds): De Ruyter, N. Y.

Eutaxocrinus eifelensis Springer.

Springer, Crin. Flexibilia, pp. 358, 364, pl. 49, fig. 13, 1920.

Dev. (Eifel ls. or Stringocephalus ls.): Peilm, Eifel, Germany.

Eutaxocrinus elli Goldring.

Goldring, Ann. Carnegie Mus., 24, p. 337, pl. 22, figs. 1-10, 1935.

Dev. (Low. Chemung-Alfred sh.): Alfred Station, Allegany Co., N. Y.

Eutaxocrinus fletcheri (Worthen).

Taxocrinus fletcheri Worthen, Ill. St. Mus., Bull. 1, p. 31, 1882; Geol. Surv. Ill., 7, p. 308, pl. 30, fig. 2, 1883.—Wachsmuth and Springer, Geol. Surv. Ill., 8, p. 197, pl. 15, figs. 6, 9, 1890.

Eutaxocrinus fletcheri Springer, Crin. Flexibilia, pp. 359, 371, pl. 50, figs. 11-19, 1920.—Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 253, pl. 17, figs. 7, 8, 1937.

Miss. (Kinderhook-Hampton fm.): Marshall Co., Iowa.

Eutaxocrinus gracilis (Meek and Worthen).

Taxocrinus gracilis Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 142, 1865; Geol. Surv. Ill., 3, p. 421, pl. 13, fig. 3, text fig., 1868.

Eutaxocrinus gracilis Springer, Crin. Flexibilia, pp. 359, 367, pl. 49, figs. 8, 8b, 1920.—Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 471, pl. 44, figs. 17, 18, 1924.—Laudon, Jour. Pal., 10, p. 61, fig. 3, 1936.

Dev.: Near Buffalo, Iowa (Cedar Valley ls.—Littleton mem.); Jackson Co., Ill. (St. Laurent ls.).

Eutaxocrinus ithacensis (Williams).

Taxocrinus ithacensis Williams, Proc. Acad. Nat. Sci. Phila., p. 28, pl. 1, fig. 10, 1882.

Eutaxocrinus ithacensis Springer, Crin. Flexibilia, pp. 358, 367, pl. 50, figs. 1, 3, 1920.—Goldring, N. Y. St. Mus., Mem. 16, p. 309, pl. 39, figs. 1-4, 1923.

Dev.: Ithaca, N. Y. (Ithaca beds); East of Otselic and Montour Falls, N. Y. (Sherburne ss.).

Eutaxocrinus juglandiformis (Schultze).

Taxocrinus juglandiformis Schultze, Denk. Kais. Akad. Wiss., Math. Natur. Cl., 26, p. 147, pl. 4, fig. 4, 1867 (adv. pub. 1866, p. 35).

Eutaxocrinus juglandiformis Springer, Crin. Flexibilia, pp. 358, 363, pl. 49, figs. 11, 12, 1920.

Cyathocrinites—Quenstedt, Handb. Petref., p. 617, pl. 54, fig. 23, 1852; Handb. Petref. p. 945, pl. 75, fig. 12, 1885.

Dev. (Eifelian): Gerolstein, Germany.

Eutaxocrinus montanensis Springer.

Springer, Crin. Flexibilia, pp. 359, 372, pl. 50, fig. 20, 1920.

Miss. (Madison ls.): Spring Canyon, Alder, Mont.

Eutaxocrinus oblongatus (Angelin).

Taxocrinus oblongatus Angelin, Icon. Crin. Suec., p. 8, pl. 22, fig. 17, 1878.

Eutaxocrinus oblongatus Springer, Crin. Flexibilia, pp. 358, 359, pl. 48, figs. 1-4, 1920.

Taxocrinus rigens Angelin, Icon. Crin. Suec., p. 9, pl. 18, figs. 7, 8, 1878.

Sil. (Gotlandian): Farö, Island of Gotland.

Eutaxocrinus? perplexus Springer.

Springer, Crin. Flexibilia, pp. 359, 365, pl. 47, figs. 18a, b, 1920.

Mid. Dev. (Givetian-Stringocephalus ls.): Verviers, Belgium.

Eutaxocrinus prognatus Schmidt.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 112, pl. 15, fig. 2, pp. 141, 144, 1934.

Low. Dev. (Hunsrück sl.): Bundenbach, Germany.

Eutaxocrinus(?) pulcher Springer.

Springer, Crin. Flexibilia, pp. 358, 369, pl. 75, fig. 10, 1920.—Goldring, N. Y. St. Mus., Mem. 16, p. 314, pl. 38, figs. 8-10, 1923.

Dev. (Low. Chemung): Belmont, near Ithaca, and Alfred Sta., N. Y.

Eutaxocrinus rhenanus (Roemer).

Cyathocrinus rhenanus Roemer, Foss. Fauna Dev. Geb. Rhein., p. 7, pl. 2, figs. 2 a-e, 1851.

Taxocrinus rhenanus Sandberger and Sandberger, Verst. Rhein. Schicht. Nassau, p. 393, text fig., pl. 35, figs. 17, 17a (not 17b, c), 1850-1856.

Eutaxocrinus rhenanus Springer, Crin. Flexibilia, pp. 358, 360, pl. 48, figs. 5-10, 1920.

Cyathocrinus brachydactylus Roemer, Palaeontographica, 13, p. 205, pl. 35, figs. 10a, b, 1866.

Dev. (Up. Coblenzian—*Spirifer* ss.): Near Coblenz, Germany.

Eutaxocrinus sincerus Schmidt.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 113, pl. 20, fig. 2, pp. 141, 144, 1932.

Taxocrinus sturtzii Opitz (not Follmann), Bilder Erdgeschichte. Nahe-Hunsrück-Landes Birkenfeld, p. 105, fig. 104, 1932.

Low Dev. (Hunsrück sl.): Bundenbach, Germany.

Eutaxocrinus sturtzii (Follmann).

Taxocrinus sturtzii Follmann, Verh. Nat. Hist. Preuss. Rheinl., 4, p. 118, pl. 1, fig. 3, 1887.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, pp. 114, 140, 144, 1934.

Eutaxocrinus sturtzii Springer, Crin. Flexibilia, pp. 358, 361, pl. 48, fig. 11 (not fig. 12 = *Eutaxocrinus* sp.) 1920.

Low. Dev. (Hunsrück sl.): Bundenbach, Germany.

Eutaxocrinus sturtzii spinifer (Schmidt).

Taxocrinus sturtzii var. *spinifer* Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 114, text fig. 26, pl. 15, fig. 1, pp. 141, 144, 1934.

Low. Dev. (Hunsrück sl.): Bundenbach, Germany.

Eutaxocrinus tenuiramosus Goldring.

Goldring, Ann. Carnegie Mus., 24, p. 340, pl. 23, figs. 3-7, 1935.

Dev. (Low. Chemung-Alfred sh.): Alfred Station, Allegany Co., N. Y.

Eutaxocrinus whiteavesi Springer.

Springer, Crinoidea Flexibilia, pp. 358, 366, pl. 49, figs. 1-7, 1920.

Taxocrinus lobatus var. *Whiteaves*, Cont. Canadian Pal., 1, pt. 2, p. 94, pl. 12, fig. 1, 1889 (adv. pub. 1887).

Dev.: Thedford, Ontario, Canada (Widder fm.); Springbrook, N. Y. (?Wanakah sh.).

Eutelecrinus Wanner. Genotype: *E. piriformis* Wanner.

Platyercinitidae (Adunata). Permian.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 23, 1916.

Eutelecrinus depressus Wanner = *E. poculiformis*.

Eutelecrinus elongatus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 27, pl. 98 (3), fig. 6, 1916-Permian: Basleo, Timor.

Eutelecrinus erectus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 28, pl. 98 (3), fig. 7, 1916-Permian: Basleo, Timor.

Eutelecrinus fritillus Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, VIII, p. 72, pl. 6, figs. 20-29, 1937.

Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 299, pl. 2, fig. 4, 1940.

Permian: Noko, Basleo, Timor.

Eutelecrinus inflatus Wanner = *E. poculiformis*.

Eutelecrinus mangostanus Wanner = *E. poculiformis*.

Eutelecrinus piriformis Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 25, pl. 98 (3), figs. 1-3, 1916; Neue Beitr. kennt. Perm. Echin. Timor, VIII, p. 69, pl. 5, figs. 22-26, pl. 6, fig. 1, 1937.—Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 299, pl. 2, fig. 3, 1940.

Permian: Basleo, Timor.

Eutelecrinus poculiformis Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 26, pl. 98 (3), figs. 4, 5, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 78, pl. 3, fig. 8, 1924; Neue Beitr. kennt. Perm. Echin. Timor, VIII, p. 69, pl. 6, figs. 2-19, 1937.

Eutelecrinus depressus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 80, pl. 2, figs. 11, 12, 1924.

Eutelecrinus inflatus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 30, pl. 98 (3), fig. 10, 1916.

Eutelecrinus mangostanus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 29, pl. 98 (3), figs. 8, 9, 1916.

Eutelecrinus subglobosus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 79, pl. 2, figs. 7, 8, 1924.

Permian: Basleo, Timor.

Eutelecrinus subglobosus Wanner = *E. poculiformis*.

Eutelecrinus subwelteri Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, VIII, p. 74, pl. 6, figs. 33-35, 1937.

Permian: Basleo, Timor.

Eutelecrinus welteri Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 30, pl. 98 (3), figs. 11, 12, 1916; Neue Beitr. kennt. Perm. Echin. Timor, VIII, p. 73, pl. 6, figs. 30-32, 1937.

Permian: Basleo, Timor.

Eutrochocrinus Wachsmuth and Springer. Genotype: *Actinocrinus christyi* Shumard.

Batocrinidae (Camerata). Miss.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 408, 1897.—Bather, Treatise Zool. (Lanckester), pt. 3, p. 167, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 196, 1913.

Eutrochocrinus christyi (Shumard).

Actinocrinus christyi Shumard, 2d Rep. Geol. Surv. Mo., p. 191, pl. A, fig. 3, 1855.

Batocrinus christyi Meek and Worthen, Geol. Surv. Ill., 5, pp. 367, 379, pl. 5, fig. 4, 1873.

Actinocrinus christyi Quenstedt, Handb. Petref., p. 742, pl. 71, fig. 17; Petref. Deutsch, 4, p. 581, pl. 11-A, figs. 15-18, 1876.

Eutrochocrinus christyi Wachsmuth and Springer, N. Amer. Crin. Cam., p. 409, pl. 29, fig. 6, pl. 32, figs. 1 a-c, pl. 3, fig. 21, pl. 4, figs. 7, 13, 16, pl. 5, fig. 10, 1897.

Batocrinus altiusculus Miller and Gurley, Ill. St. Mus., Bull. 3, p. 20, pl. 5, figs. 1-3, 1894.

- Batocrinus bisbrachiatus* Whitfield, Mem. Amer. Mus. Nat. Hist., 1, p. 13, pl. 2, figs. 4, 5, 1893.
Miss.: Palmyra, Rocheport, and Louisiana, Mo., Burlington, Iowa, and Sagetown, Ill. (Up. Burlington ls.); Sedalia, Mo. (Choteau ls.).
- Eutrochocrinus christyi trochiscus* Wachsmuth and Springer = *Eutrochocrinus trochiscus*.
- Eutrochocrinus lovei** (Wachsmuth and Springer).
Batocrinus lovei Wachsmuth and Springer, Rev. Pal., pt. 2, p. 168 (342), 1881.
Eutrochocrinus lovei Wachsmuth and Springer, N. Amer. Crin. Cam., p. 412, pl. 29, fig. 7, pl. 32, figs. 2a, b, 1897.
Miss. (Up. Burlington ls.): Burlington, Iowa.
- Eutrochocrinus planodiscus** (Hall).
Actinocrinus planodiscus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 45, text fig., 1860.
Eutrochocrinus planodiscus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 411, pl. 32, figs. 4a, b, 1897.
Miss. (Keokuk ls.): Nauvoo, Ill., and Montrose, Iowa.
- Eutrochocrinus trochiscus** (Meek and Worthen).
Batocrinus trochiscus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 354, 1868; Geol. Surv. Ill., 5, p. 372, pl. 5, fig. 6, 1873.—Keyes, Geol. Surv. Mo., 4, p. 181, pl. 23, fig. 5, 1894.
Eutrochocrinus christyi var. *trochiscus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 410, pl. 32, fig. 3, 1897.
Miss. (Up. Burlington ls. and Burlington-Keokuk transition beds): Burlington, etc., Iowa.
- Follicrinus** Schmidt. Genotype: *Taxocrinus grebei* Follmann.
Dendrocrinidae (Inadunata-Fistulata). Dev.
Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, pp. 74, 141, 144, 147, 1934.
- Follicrinus grebei** (Follmann).
? *Taxocrinus grebei* Follmann, Verh. Nat. Hist. Preuss. Rheinland, 4, p. 118, pl. 1, figs. 4, 4a, 1887.
Cyathocrinus grebei Jaekel, Pal. Abhandl., 7, p. 62, pl. 5, fig. 1, 1895.
Follicrinus grebei Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 75, text fig. 15, pp. 141, 145, 147, pl. 5, fig. 2, pl. 31, fig. 1, 1934.
Cyathocrinus goldbecki Jaekel, Pal. Abhandl., 7, p. 62, 1895.
Dev. (Hunsrück sl.): Bundenbach, Germany.
- Follicrinus kayseri** (Jaekel).
Homocrinus kayseri Jaekel, Pal. Abhandl., 7, p. 78, pl. 5, figs. 2-4, 1895.
Follicrinus kayseri Schmidt, Abhandl. Preuss. Geol. Landes., n.f., heft 163, pp. 75, 141, 145, 147, 1934.
Dev. (Hunsrück sl.): Wisperstein, near Lorch, and near Caub, Germany.
- Forbesiocrinus* Trautschold = *Synerocrinus*.
- Forbesiocrinus* Angelin = (part) *Cholocrinus*, (part) *Lithocrinus*.
- Forbesiocrinus** De Koninck and Lehon. Genotype: *F. nobilis* de Koninck and Lehon.
Sagenocrinitidae (Flexibilia). Low. Carb.
DeKoninck and Lehon, Rech. Crin. Carb. Belg., p. 118, 1854.—Meek and Worthen, Proc. Acad. Nat. Sci. Phila., 12, p. 387, 1860 (as *Forbesiocrinus*).—Zittel, Handb. Pal., 1, p. 353, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 51 (274), 1880 (1879).—Scudder, Nom. Zool., Suppl. List., p. 139, 1882 (as *Forbesocrinus*).—Springer, Amer. Geol., 30, p. 90, 1902; Jour. Geol., 14, p. 518, 1906; Zittel-Eastman Textb. Pal., 1, p. 204, 1913; Crin. Flexibilia, pp. 205, 225, 1920.
Proguettardocrinus Steinman, Geol. Grundl. Abst., p. 153, 1908. (Genotype: *Forbesiocrinus greenei* Miller and Gurley.)

Forbesiocrinus agassizi Hall.

Hall, Geol. Rep. Iowa, 1, pt. 2, p. 631, text fig., 1858; N. Y. St. Mus., Bull. 1, pl. 7, figs. 1, 2, 1872.—Keyes, Geol. Surv. Mo., 4, p. 224, pl. 30, fig. 3, 1894.—Springer, Crin. Flexibilia, pp. 245, 250, text fig. 35, pl. 21, fig. 2, pl. 25, figs. 1-5, pl. 26, figs. 1, 2, 1920.

Forbesiocrinus agassizi var. *giganteus* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 131, 1861.

Taxocrinus (*Forbesiocrinus*) *agassizi* var. *giganteus*, Meek and Worthen, Geol. Surv. Ill., 3, p. 495, pl. 18, fig. 3, 1868.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Forbesiocrinus agassizi giganteus Meek and Worthen = *F. agassizi*.

Forbesiocrinus asteriaeformis Hall = *Onychocrinus asteriaeformis*.

Forbesiocrinus burlingtonensis Springer.

Springer, Crin. Flexibilia, pp. 245, 253, pl. 26, figs. 3-5, 1920.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Forbesiocrinus cestriensis Hall = *Taxocrinus whitfieldi*.

Forbesiocrinus communis Hall.

Hall, Prelim. Not. 17th Rep. Regents Univ. St. N. Y., p. 6, 1863 (Final Rep. 1864, p. 55).—Hall and Whitfield, Geol. Surv. Ohio, 2, pt. 2, Pal., p. 169, pl. 12, figs. 4, 5 (not fig. 3 = *Taxocrinus communis* Springer), 1875.—Springer, Crin. Flexibilia, p. 245, pl. 20, figs. 4-8, 1920.

Miss. (Waverlyan-Cuyahoga sh.): Richfield, Summit Co., Ohio.

Forbesiocrinus communis Hall (part) = *Taxocrinus communis*.

Forbesiocrinus divaricatus Angelin = (part) *Cholocrinus obesus*; (part) *Lithocrinus divaricatus*.

Forbesiocrinus elegantulus S. A. Miller = *Taxocrinus giddingsi*.

Forbesiocrinus giddingsi Hall = *Taxocrinus giddingsi*.

Forbesiocrinus greenei Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 9, p. 57, pl. 4, figs. 1, 2, 1895.—Springer, Crin. Flexibilia, p. 258, pl. 30, figs. 1, 2, 1920.

Proguettardicrinus? greenei Steinmann, Geol. Grundl. Abst., p. 153, fig. 79, 1908.

Miss. (Keokuk ls.): Edwardsville, Ind.

Forbesiocrinus incurvus Trautschold = *Synerocrinus incurvus*.

Forbesiocrinus jerseyensis Miller and Gurley = *F. wortheni*.

Forbesiocrinus juvenis Hall = *Taxocrinus juvenis*.

Forbesiocrinus kelloggi Hall = *Taxocrinus kelloggi*.

Forbesiocrinus lobatus Hall = *Taxocrinus lobatus*.

Forbesiocrinus lobatus tardus Hall = *Dactylocrinus tardus*.

Forbesiocrinus macadamsi Miller and Gurley = *F. wortheni*.

Forbesiocrinus meeki Hall = *Parichthyocrinus meeki*.

Forbesiocrinus milleri Angelin = *Lithocrinus milleri*.

Forbesiocrinus monroensis Meek and Worthen = *Onychocrinus exsculptus*.

Forbesiocrinus multibrachiatus Lyon and Caseday.

Lyon and Caseday, Amer. Jour. Sci., (2) 23, p. 235, 1859.—Miller and Gurley, Ill. St. Mus., Bull. 8, p. 55, pl. 4, fig. 1, 1896.—Springer, Crin. Flexibilia, pp. 245, 255, pl. 28, figs. 1-19, pl. 29, figs. 4, 5, 1920.

Forbesiocrinus speciosus Miller and Gurley, 16th Rep. Geol. Surv. Ind., p. 347, pl. 5, figs. 8, 9 (authors' ed., p. 27), 1890.

Forbesiocrinus wortheni Meek and Worthen (not Hall), Geol. Surv. Ill., 5, p. 496, pl. 14, fig. 2, pl. 15, fig. 7, 1873.

Miss.: Indian Creek and Crawfordsville, Ind. (Keokuk ls.); Hardin Co., Ky. (Ft. Payne ch.).

Forbesiocrinus nobilis de Koninck and Lehon.

De Koninck and Lehon, Rech. Crin. Carb. Belg., p. 121, pl. 2, figs. 2a, b, 1854.—Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, pl. 5, figs. 3-5, 1885; N. Amer. Crin. Cam., p. 77, pl. 8, figs. 6 a-c, 1897.—Springer, Amer. Geol., 30, p. 90, 1902; Crin. Flexibilia, pp. 239, 245, figs. 29-31, p. 249, pl. 21, fig. 1, pl. 22, figs. 1-4, pl. 23, figs. 1-8, 10, pl. 24, figs. 1-27, 1920.

Low. Carb.: Tournai, Belgium (Tournaisian); England (Mtn. Ls.).

Forbesiocrinus? *norwoodi* Meek and Worthen = *Onychocrinus exsculptus*.

Forbesiocrinus nuntius Hall = *Synptocrinus nuntius*.

Forbesiocrinus obesus Angelin (part) = *Cholocrinus obesus*.

Forbesiocrinus parvus Wetherby = *Taxocrinus whitfieldi*.

Forbesiocrinus pratteni McChesney = *Scyphocrinus pratteni*.

Forbesiocrinus pyriformis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 3, p. 47, pl. 4, fig. 1, 1894.—Springer, Crin. Flexibilia, pp. 205, 257, pl. 29, figs. 6, 7, 1920.

Miss.: Muldrough's Hill, Hardin Co., Ky. (Keokuk ls.); Whites Creek Springs, Tenn. (Ft. Payne ch.).

Forbesiocrinus ramulosus Hall = *Taxocrinus ramulosus*.

Forbesiocrinus ramulosus Lyon and Casseday = *Onychocrinus ramulosus*.

Forbesiocrinus robustus Angelin = *Lithocrinus divaricatus*.

Forbesiocrinus saffordi Hall.

Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 87, 1860.—Springer, Crin. Flexibilia, pp. 205, 259, pl. 21, fig. 3, pl. 30, figs. 3-17, pl. 31, figs. 1-10, 1920.

Miss.: Whites Creek Springs, Tenn. (Ft. Payne ch.); Glasgow, Ky. (?Warsaw ls.); Salem and Spergen Hill, Ind. (?Spergen ls.).

Forbesiocrinus semiovatus Meek and Worthen = *Onychocrinus semiovatus*.

Forbesiocrinus shumardianus Hall = *Taxocrinus shumardianus*.

Forbesiocrinus? *siculus* Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 35, pl. 13, fig. 16, 1930.

Permian: Sicily.

Forbesiocrinus speciosus Miller and Gurley = *F. multibrachiatus*.

Forbesiocrinus spinifer Hall = *Wachsmuthicrinus spinifer*.

Forbesiocrinus subramulosus Shumard = *Taxocrinus ramulosus*.

Forbesiocrinus tardus Hall and Whitfield = *Dactylocrinus tardus*.

Forbesiocrinus thiemei Hall = *Wachsmuthicrinus thiemei*.

Forbesiocrinus washingtonensis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 8, p. 54, pl. 3, figs. 32, 33, 1896.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 746, figs. 1356, 1357, 1897.—Springer, Jour. Geol., 14, pl. 7, fig. 20, 1906; Crin. Flexibilia, pp. 205, 256, pl. 29, figs. 1-3, 1920.

Miss. (Keokuk ls.): Washington Co. and Canton, Ind.

Forbesiocrinus whitfieldi Hall = *Taxocrinus whitfieldi*.

Forbesiocrinus wortheni Hall.

Hall, Geol. Rep. Iowa, 1, pt. 2, p. 632, pl. 17, fig. 5, 1858; Suppl., pl. 3, fig. 7, 1860.—Springer, Crin. Flexibilia, p. 253, pl. 27, figs. 1-8, 1920.

Forbesiocrinus jerseyensis Miller and Gurley, Ill. St. Mus., Bull. 8, p. 58, pl. 4, figs. 2, 5, 1896.

Forbesiocrinus macadamsi Miller and Gurley, Ill. St. Mus., Bull. 9, p. 58, pl. 5, figs. 1, 2, 1896.

Miss. (Keokuk ls.): Keokuk, Iowa, Crawfordsville, Ind., Clark Co., Mo., Nauvoo, etc., Ill.

- Forbesiocrinus *wortheni* Meek and Worthen = *F. multibrachiatus*.
 Forbesocrinus Scudder. See Forbesiocrinus.
- Forbsiocrinus Meek and Worthen. See Forbesiocrinus.
- Galateacrinus** Moore. Genotype: *G. stevensi* Moore.
 Poteriocrinitidae (Inadunata-Fistulata). Penn.
 Moore, Denison Univ. Bull., Jour. Sci. Lab., 35, p. 45, 1940.
- Galateacrinus allisoni** Moore.
 Moore, Denison Univ. Bull., Jour. Sci. Lab., 35, p. 49, pl. 1, figs. 11 a-c, text figs. 5a, b, 1940.
 Penn. (Iola ls.): Iola, Kansas.
- Galateacrinus ewersi** Moore.
 Moore, Denison Univ. Bull., Jour. Sci. Lab., 35, p. 48, pl. 1, figs. 12 a-d, 1940.
 Penn. (Graford fm.): $\frac{1}{2}$ mile west Joplin, Jack Co., Texas.
- Galateacrinus ornatus** Moore.
 Moore, Denison Univ. Bull., Jour. Sci. Lab., 35, p. 51, pl. 1, figs. 13a, b, text figs. 9 a-c, 1940.
 Penn. (Shaly ls.—?Checkerboard): Coffeyville, Kansas.
- Galateacrinus stevensi** Moore.
 Moore, Denison Univ. Bull., Jour. Sci. Lab., 35, p. 46, pl. 1, figs. 9 a-d, 10, text figs. 6a, b, 7a, b, 8 a-d, 1940.
 Penn. (Oologah ls.): 7 miles northeast Tulsa, Okla.
- Gasterocoma** Goldfuss. Genotype: *G. antiqua* Goldfuss.
 Gasterocomidae (Inadunata-Fistulata). Dev.
- Goldfuss, Nova Acta Ac. Leop., 19, p. 350, 1839.—Schultze, Denk. Kais. Akad. Wiss., Math.-Naturw. Cl., 26, p. 207, 1867 (adv. pub. 1866, p. 95).—Beyrich, Monats. Akad. Wiss., Berlin, p. 50, 1871 (as *Gastrocoma*).—Zittel, Handb. Pal., 1, p. 363, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 182 (106), 1836.—Bather, Treatise Zool. (Lankester), pt. 3, p. 177, 1900.—Springer, Mem. Mus. Comp. Zool., Harvard, 25, no. 3, p. 127, 1911.
- Ceramocrinus* Müller, in Zeiler and Wirtgen, Verh. Nat. Verein. Rheinl., 12, p. 83, 1855. (Genotype: *C. eifelensis* Wirtgen and Zeiler.)
- Epactocrinus* Müller, in Zeiler and Wirtgen, Verh. Nat. Verein. Rheinl., 12, p. 84, 1855. (Genotype: *E. irregularis* Wirtgen and Zeiler.)
- Gasterocoma antiqua** Goldfuss.
 Goldfuss, Nova Acta Ac. Leop., 19, p. 350, pl. 32, figs. 5 a-c, 1839.—Schultze, Denk. Kais. Akad. Wiss., Math. Natur. Cl., 26, p. 208, pl. 12, fig. 1, 1867 (adv. pub. 1866, p. 96).—Springer, Mem. Mus. Comp. Zool., Harvard, 25, pl. 1, fig. 8, 1911.
Epactocrinus antiqua Quenstedt, Petref. Deutsch., 4, p. 530, pl. 32, figs. 5 a-c, 1876.
 Dev. (Eifelian): Gerolstein, etc., Eifel, Germany.
- Gasterocoma eifelensis** (Zeiler and Wirtgen).
Ceramocrinus eifelensis Zeiler and Wirtgen, Verh. Nat. Rheinl., 12, p. 83, pl. 12, figs. 1-4, 1855.
 Dev. (Eifelian): Gerolstein, Germany.
- Gasterocoma gibbosus** Schultze.
 Schultze, Denk. Kais. Akad. Wiss., Math. Natur. Cl., 26, p. 210, pl. 12, fig. 5, 1867 (adv. pub. 1866, p. 98).
 Dev. (Eifelian): Pelm and Gerolstein, Germany.
- Gasterocoma irregularis** (Zeiler and Wirtgen).
Epactocrinus irregularis Zeiler and Wirtgen, Verh. Natur. Ver. Rheinl., 12, p. 85, pl. 12, figs. 5-8, 1855.—Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 3, p. 33, text fig. 19, 1858.—Bronn, Klass. Ord. Thierr., 2, pl. 28, figs. 7 a-c, 1860.
 Dev. (Eifelian): Gerolstein, Germany.

Gasterocoma mülleri Schultze.

Schultze, Denk. Kais. Akad. Wiss., Math. Natur. Cl., 26, p. 211, pl. 12, fig. 2, 1867 (adv. pub. 1866, p. 99).

Dev. (Eifelian): Pelm, Gerolstein, Germany.

Gasterocoma reticularis Schultze.

Schultze, Denk. Kais. Akad. Wiss., Math. Natur. Cl., 26, p. 211, pl. 12, fig. 3, 1867 (adv. pub., 1866, p. 99).

Dev. (Eifelian): Pelm, Germany.

Gasterocoma stellaris Schultze.

Schultze, Denk. Kais. Akad. Wiss., Math. Natur. Cl., 26, p. 212, pl. 12, fig. 4, 1867 (adv. pub. 1866, p. 100).

Dev. (Eifelian): Prüm, Ahutte, Germany.

Gastrocoma Beyrich. See *Gasterocoma*.

Gastrocrinus Jaekel. Genotype: *Poteriocrinus patulus* Müller.

Botryocrinidae (Inadunata-Fistulata). Dev.

Jaekel, Pal. Abhandl., 7, p. 80, 1895.—Bather, Treatise Zool. (Lankester), pt. 3, 179, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 221, 1913.—Schmidt, Branca Festschrift, pp. 215, 225, 1914; Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 83, 1934.

Gastrocrinus brancai Schmidt.

Schmidt, Branca Festschrift, p. 220, pl. 4, fig. 6, 1914.

Dev. (Up. Coblenzian): Siechhaustales, near Coblenz, Germany.

Gastrocrinus? *drevermanni* Schmidt.

Schmidt, Branca Festschrift, p. 223, pl. 4, figs. 4, 5, pl. 4a, fig. 16, 1914.

Dev. (Siefen ls.): Siefen, Westerwald, Germany.

Gastrocrinus eupelmatus (Schmidt).

Arthroacantha eupelmatus Schmidt, Centralbl. Min., Geol., Pal., no. 4, p. 123, fig. 2, 1915.

Gastrocrinus eupelmatus Schmidt, Abhandl. Preuss. Geol. Landesant., n.f., heft 163, p. 87, text fig. 18 c, pp. 142, 144, 147, pl. 16, fig. 3, 1934.

Dev. (Hunsrück sl.): Bundenbach, Germany.

Gastrocrinus giganteus Schmidt.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 83, text figs. 18a, b, pp. 142, 144, 147, pl. 9, figs. 1, 2, pl. 10, figs. 1, 2, 1934.

Dev. (Hunsrück sl.): Bundenbach, Germany.

Gastrocrinus patulus (Müller).

Poteriocrinus patulus Müller, Monatsber. Akad. Wiss., p. 192, 1859.—Follmann, Ver. Nat. Hist. Ver. Preuss. Rheinl., 4, p. 120, pl. 2, fig. 5, 1887.

Gastrocrinus patulus Jaekel, Pal. Abhandl., 7, p. 60, fig. 25, 1895.—Schmidt, Branca Festschrift, p. 216, pl. 4, figs. 6, 7, 9, pl. 4a, figs. 18, 19, 1914.

Dev. (Up. Coblenzian): Coblenz, and near Güls, Germany.

Gastrocrinus patulus follmanni Schmidt.

Schmidt, Branca Festschrift, p. 218, pl. 4, figs. 1, 2, pl. 4a, fig. 14, 1914.

Poteriocrinus patulus Follmann, Verh. Nat. Ver. Rheinl., p. 120, pl. 1, fig. 5, 1887.

Dev. (Up. Coblenzian): Miellen, Lahntal, and near Güls, Germany.

Gastrocrinus rugosus Schmidt.

Schmidt, Branca Festschrift, p. 221, pl. 4, fig. 3, pl. 4a, fig. 17, 1914.

Dev. (Up. Coblenzian): Bienhorntales near Coblenz, Germany.

Gaurocrinus S. A. Miller. Genotype: *Glyptocrinus nealli* Hall.

Reteocrinidae (Camerata). Early Sil.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 6, p. 228, 1883.

Gaurocrinus magnificus S. A. Miller = *Reteocrinus magnificus*.

Gaurocrinus nealli (Hall).

Glyptocrinus nealli Hall, Adv. Pub. 20th Rep. N. Y. St. Cab. Nat. Hist., p. 2, 1866; 24th Rep. N. Y. St. Cab. Nat. Hist., p. 206, pl. 5, figs. 18, 19, text fig. 1872 (adv. pub. 1871, pl. 1, figs. 18, 19); 11th Rep. Indiana Geol. Nat. Hist., p. 260, text fig. 1, 1882.

Gaurocrinus nealli S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 6, p. 228, 1883.

Reteocrinus nealli Wachsmuth and Springer, N. Amer. Crin. Cam., p. 179, pl. 9, figs. 1 a-f, 1897.—Springer, Cleiocrinus, p. 114, pl. figs. 14-21, 1905; Crin. Flexibilia, p. 90, pl. 76, figs. 7, 8, 1920.—Rowley in Greene, Cont. Ind. Pal., 2, pt. 2, p. 29, pl. 6, fig. 8, 1906.

Glyptocrinus cognatus S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 4, p. 75, pl. 1, figs. 5, 5a, 1881.

Early Sil. (Richmond-Waynesville ls.): Near Lebanon, Morrow, Blanchester, etc., Ohio.

Gaurocrinus splendens S. A. Miller = *Ptychocrinus splendens*.

Gazacrinus S. A. Miller. Genotype: *G. inornatus* S. A. Miller.

Dimerocrinitidae (Camerata). Sil.; Dev.

S. A. Miller, 18th Rep. Dep. Geol. Nat. Res. Ind., p. 303, 1894 (adv. pub. 1892, p. 48); N. Amer. Geol. Pal., 1st App., p. 679, 1892.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 204, 1897.—Bather, Treatise Zool. (Lanckester), pt. 3, p. 188, 1900.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 78, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 187, 1913; Amer. Sil. Crin., p. 15, 1926.

Idiocrinus Wachsmuth and Springer, Amer. Geol., 10, p. 135, 1892; N. Amer. Crin. Cam., p. 202, 1897. (Genotype: *I. elongatus* Wachsmuth and Springer.)

Gazacrinus depressus Springer.

Springer, Amer. Sil. Crin., p. 17, pl. 2, figs. 13, 14, 1926.

Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Gazacrinus immaturus (Hall).

Thysanocrinus immaturus Hall, Nat. Hist. N. Y., Pal., 2, p. 191, pl. 42, figs. 4 a-f, 1852.

Idiocrinus immaturus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 206, pl. 18, figs. 10 a-c, 1897.

Sil. (Niagaran-Rochester sh.): Lockport, N. Y.

Gazacrinus inornatus S. A. Miller.

S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 303, pl. 5, figs. 9, 10, 15-17, 1894 (adv. pub. 1892).—Springer, Amer. Sil. Crin., p. 16, pl. 2, figs. 1-9, 1926.

Idiocrinus elongatus Wachsmuth and Springer, Amer. Geol., 10, p. 136, 1892; N. Amer. Crin. Cam., pl. 18, figs. 8 a-c, 1897.

Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Gazacrinus magnus Springer.

Springer, Amer. Sil. Crin., p. 17, pl. 2, figs. 10, 10a, 11, 12, 1926.

Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Gazacrinus major Weller.

Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 78, pl. 3, figs. 1, 2, 1900.

Sil. (Niagaran-Racine dol.): Hawthorne, Ill.

Gazacrinus milliganae (Miller and Gurley).

Thysanocrinus milliganae Miller and Gurley, Ill. St. Mus., Bull. 8, p. 51, pl. 3, figs. 23-25, 1896.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 754, fig. 1403, 1897.

Gazacrinus milliganae Springer, Amer. Sil. Crin., p. 18, pl. 2, figs. 22-24, 1926.

Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.

Gazacrinus minor Weller.

Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 80, pl. 3, figs. 3, 4, 1900.

Sil. (Niagaran-Racine dol.): Bridgeport and Hawthorne, Ill.

Gazacrinus ramifer (Roemer).

Eucalyptocrinus ramifer Roemer, Sil. Fauna West Tenn., p. 51, pl. 4, fig. 4, 1850.

Gazacrinus ramifer Springer, Amer. Sil. Crin., p. 18, pl. 2, figs. 17-21, 1926.

Sil. (Niagaran-Beech River fm.): Decatur and Wayne Cos., Tenn.

Gazacrinus stellatus Springer.

Springer, Amer. Sil. Crin., p. 19, pl. 2, figs. 25, 25 a-c, 1926.

Sil. (Niagaran-Decatur ls.): One mile east Hardin P.O., Hardin Co., Tenn.

Gazacrinus ventricosus (Wachsmuth and Springer).

Idiocrinus ventricosus Wachsmuth and Springer, Amer. Geol., 10, p. 137, 1892; N. Amer. Crin. Cam., p. 205, pl. 18, figs. 9 a, b, pl. 3, fig. 15, 1897.

Gazacrinus ventricosus Springer, Amer. Sil. Crin., p. 17, pl. 2, figs. 15-16a, 1926.

Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Gennaeocrinus Wachsmuth and Springer. Genotype: *Actinocrinus kentuckiensis* Shumard.

Periechocrinitidae (Camerata). Dev.

Wachsmuth and Springer, Rev. Pal., pt. 2, p. 160 (334), 1881; N. Amer. Crin. Cam., p. 547, 1897.—Grabau, Bull. Buffalo Acad. Sci., 6, p. 141, 1899.—Bather, Treatise Zool. (Lankester), pt. 3, p. 169, 1900—Springer, Zittel-Eastman Textb. Pal., 1, p. 195, 1913.

Gennaeocrinus arkonensis Whiteaves.

Whiteaves, Geol. Surv. Canada, Cont. Can. Pal., 1, pt. 5, p. 373, pl. 48, figs. 7, 7a, text fig., 1898.

Dev. (Hamilton-Arkona beds): Bartletts Mill, Thedford, Ontario, Can.

Gennaeocrinus carinatus Wood.

Wood, Amer. Jour. Sci., (4) 12, pp. 297-300, text fig., pl. 5, figs. a-c, 1901.—Goldring, N. Y. St. Mus., Mem. 16, p. 219, pl. 32, figs. 1-7, 1923.

Dev. (Hamilton): Charlestown, Ind. (Sellersburg ls.); Athol Springs, N. Y. (Ludlowville sh.); Canandaigua Lake, N. Y. (Moscow sh.).

Gennaeocrinus carinatus crassicosatus Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 222, pl. 32, fig. 8, 1923.

Dev. (Hamilton): Cashong Creek, near Bellona, N. Y. (Moscow sh.); Athol Springs, N. Y. (Wanakah sh.).

Gennaeocrinus comptus Rowley.

Rowley in Greene, Cont. Ind. Pal., 1, pt. 11, p. 105, pl. 33, figs. 1-3, 1903.

Dev. (Hamilton-Sellersburg ls.): Near Charlestown, Ind.

Gennaeocrinus comptus spiniferus Rowley.

Rowley in Greene, Cont. Ind. Pal., 1, pt. 11, p. 107, pl. 33, figs. 7-9, 1903.

Dev. (Hamilton-Sellersburg ls.): Near Charlestown, Ind.

Gennaeocrinus decorus Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 223, pl. 31, fig. 9, 1923.

Dev. (Hamilton): Worcester, Otsego Co., N. Y.

Gennaeocrinus eucharis (Hall).

Actinocrinus eucharis Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 150 (sep., p. 102), 1862.

Gennaeocrinus eucharis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 549, pl. 34, fig. 14, 1897.—Grabau, Bull. Buffalo Soc. Nat. Hist., 6, p. 142, text fig. 23 e-g, 1899.—Goldring, N. Y., St. Mus., Mem. 16, p. 212, pls. 27-30, 1923.

Dev. (Hamilton): Vincent, near Canandaigua, Cashong Creek etc. (Moscow sh.); 18 Mile Creek, Alden, etc. N. Y. (Tichenor ls.); Louisville, Ky. (Sellersburg ls.).

Gennaeocrinus facetus Rowley.

Rowley in Greene, Cont. Ind. Pal., 1, pt. 11, p. 99, pl. 32, figs. 1-6, 1903.
Dev. (Hamilton-Sellersburg ls.): Charlestown, Ind.

Gennaeocrinus goldringae Ehlers.

Ehlers, Cont. Mus. Geol. Univ. Michigan, 2, p. 101, pl. 1, figs. 3-6, 1925.
Dev. (Traverse-Alpena ls.): Near 4-Mile Dam, 4 miles west of Alpena, Mich.

Gennaeocrinus kentuckiensis (Shumard).

Actinocrinus kentuckiensis Shumard, Trans. Acad. Sci. St. Louis, 2, p. 345, 1866
Gennaeocrinus kentuckiensis Wachsmuth and Springer, Rev. Pal., pt. 2, p. 161 (335), 1881; N. Amer. Crin. Cam., p. 548, pl. 34, figs. 11-13, 1897.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 11, p. 108, pl. 33, figs. 10-12, 1903.—Goldring, N. Y. St. Mus., Mem. 16, p. 208, pl. 31, figs. 6-8, 1923.
Actinocrinus cornigerus Lyon and Casseday (not Hall, 1858), Amer. Jour. Sci., (2), 28, p. 238, 1859.
Dev. (Hamilton): Beargrass quarries, near Louisville, Ky., Clark Co., Ind., etc. (Sellersburg-Beechwood ls.); near Canandaigua, N. Y. (Moscow sh.); 3 miles south Sherburne, N. Y. (Tully ls.).

Gennaeocrinus mourantae Goldring.

Goldring, Bull. Buffalo Soc. Nat. Sci., 15, p. 188, pl. 2, figs. 1-3, 1934.
Dev. (Hamilton-Arkona beds): Rock Glen, near Arkona, Ontario, Canada.

Gennaeocrinus nyssa (Hall).

Actinocrinus nyssa Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 129 (sep. p. 101), 1862.
Gennaeocrinus nyssa Wachsmuth and Springer, Rev. Pal., pt. 2, p. 161 (335), 1881.—Grabau, Bull. Buffalo Soc. Nat. Sci., 6, pp. 141, 142, text fig. 23 a-d, 1899.—Goldring, N. Y. St. Mus., Mem. 16, p. 216, pl. 31, figs. 1-5, 1923.
Dev. (Hamilton): Fall Brook, near Geneseo, North Bristol, and Vincent, N. Y. (Moscow sh.); Clark Co., Ind. (Sellersburg ls.); 18 Mile Creek, N. Y. (Wanakah sh.).

Gennaeocrinus peculiaris Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 225, pl. 31, fig. 10, 1923.
Dev. (Hamilton-Moscow sh.): Near Moscow, N. Y.

Gennaeocrinus percarinatus Goldring.

Goldring, in Cooper and Williams, Bull. Geol. Soc. Amer., 46, p. 832, pl. 58, figs. 12, 15, 1935.
Dev. (Tully-Westbrook mem.): 3 miles south Sherburne, N. Y.

Gennaeocrinus sculptus Rowley.

Rowley in Greene, Cont. Ind. Pal., 1, pt. 11, p. 107, pl. 33, figs. 4-6, 1903.
Dev. (Hamilton-Sellersburg ls.): Near Charlestown, Ind.

Gennaeocrinus similis Goldring.

Goldring, Ann. Carnegie Mus., 24, p. 358, pl. 26, figs. 7, 8, 1935; N. Y. St. Mus., Bull. 315, p. 78, fig. 23 (1, 2), 1938.
Dev. (Hamilton): Two miles east of Alden, Genesee Co., N. Y. (?Low. Moscow sh.); Cazenovia Creek, Erie Co., N. Y. (Ludlowville sh.); Near Spring Brook, N. Y. (Wanakah sh.).

Gennaeocrinus simulans Rowley.

Rowley in Greene, Cont. Ind. Pal., 1, pt. 18, p. 183, pl. 54, figs. 9-11, 1904.
Dev. (Hamilton-Sellersburg ls.): Near Charlestown, Ind.

Geocrinus d'Orbigny = *Periechocrinites*.

Geraocrinus Ulrich. Genotype: *G. sculptus* Ulrich.

?Anomalocrinidae (Inadunata-Fistulata). Ord.

Ulrich in Foerste, Geol. Surv. Canada, Mem. 138, p. 92, 1924.

Geracrinus sculptus Ulrich.

Ulrich in Foerste, Geol. Surv. Canada, Mem. 133, p. 92, text fig. 9, 1924.

Ord. (Up. Chazyan-Ottosee sh.): Knoxville, Tenn.

Geroldicrinus Jaekel. Genotype: *Lecanocrinus roemeri* Schultze.

Lecanocrinidae (Flexibilia). Dev.

Jaekel, Pal. Zeits., 3, p. 80, 1918.

Geroldicrinus roemeri (Schultze).

Lecanocrinus roemeri Schultze, Denk. Kais. Akad. Wiss., Math. Naturw. Cl., 26, p. 153, pl. 3, figs. 8 a-g, 1867 (adv. pub. 1866, p. 41).—Springer, Crin. Flexibilia, p. 141, pl. 3, figs. 30-32, 1920.

Geroldicrinus roemeri Jaekel, Pal. Zeits., 3, p. 80, 1918.

Dev. (Eifelian): Eifel, Germany.

Gilbertsocrinites Troost. See Gilbertsocrinus.

Gilbertsocrinites americanus Troost = *Diabolocrinus vesperalis*.

Gilbertsocrinites? dubius Troost = *Periechocrinites dubius*.

Gilbertsocrinites roemeri Troost = *Dimerocrinites roemeri*.

Gilbertsocrinus Phillips. Genotype: *G. calcaratus* Phillips.

Rhodocrinitidae (Camerata). Dev.; Low. Carb.

Phillips, Geol. Yorkshire, 2, p. 257, 1836.—Troost, Amer. Jour. Sci., (2) 8, p. 419, 1849 (as *Gilbertsocrinites*).—Meek and Worthen, Geol. Surv. Ill., 2, p. 217, 1866.—Wachsmuth and Springer, N. Amer. Crin. Cam., pp. 233-236, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 201, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 188, 1913.—Goldring, Jour. Pal., 10, p. 15, 1936.

Goniasteroidocrinus Lyon and Casseday, Amer. Jour. Sci., (2) 28, p. 233, 1859.—Meek and Worthen, Geol. Surv. Ill., 2, p. 219, 1866.—Marschall, Nom. Zool., p. 400, 1873 (as *Goniastroidocrinus*). (Genotype: *G. tuberosus* Lyon and Casseday.)

Ollacrinus Cumberland, Reliquiae Conserv., App., 1826.—Zittel, Handb. Pal., 1, p. 375, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, pp. 184, 213 (358, 387), 1881. (No species defined.)

Ollacrinites Blainville, Manuel Actin., p. 659, 1834.

Trematocrinus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 70, 1860. (Genotype: *T. typus* Hall.)

Gilbertsocrinus abnormis McCoy = *Rhodocrinites abnormis*.

Gilbertsocrinus alpenensis Ehlers.

Ehlers, Cont. Mus. Geol. Univ. Michigan, 2, p. 99, pl. 1, figs. 1, 2, 1925.

Dev. (Hamilton): Near 4-Mile Dam, 4 miles west of Alpena, Mich. (Traverse-Alpena ls.); Lebanon, N. Y. (Ludlowville sh.).

Gilbertsocrinus bursa Phillips.

Phillips, Geol. Yorkshire, 2, p. 207, pl. 4, figs. 24, 25, 1836.—Meek and Worthen, Geol. Surv. Ill., 2, p. 217, fig. 17, 1866.

Low. Carb. (Mtn. Ls.): Bolland, Yorkshire, and Clitheroe, England.

Gilbertsocrinus calcaratus Phillips.

Phillips, Geol. Yorkshire, 2, p. 207, pl. 4, fig. 22, 1836.—Meek and Worthen, Geol. Surv. Ill., 2, p. 217, fig. 18, 1866.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 236, pl. 15, fig. 5, 1897.—Bather, Treatise on Zool. (Lankester), pt. 3, p. 201, text fig. 127-3, 1900.

Low. Carb. (Mtn. Ls.): Bolland and Yorkshire, Eng.

Gilbertsocrinus dispansus Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 240, pl. 15, figs. 2 a-d, 1897.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 38, pl. 10, fig. 1, 1926.

Miss. (Keokuk ls.): Indian Creek and Crawfordsville, Ind.

- Gilbertsocrinus faberi** (Miller and Gurley).
Goniasteroidocrinus faberi Miller and Gurley, Ill. St. Mus., Bull. 10, p. 84, pl. 5, figs. 2, 3, 1898.
 Miss. (Keokuk ls.): Joplin, Mo.
- Gilbertsocrinus fiscellus** (Meek and Worthen).
Trematocrinus fiscellus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 383, 1860.
Gilbertsocrinus (Goniasteroidocrinus) fiscellus Meek and Worthen, Geol. Surv. Ill., 2, p. 222, pl. 15, fig. 5, text fig. 20, 1866.
Gilbertsocrinus fiscellus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 245, pl. 17, figs. 2 a-d, 1897.
 Miss. (Low. Burlington ls.): Burlington, Iowa.
- Gilbertsocrinus greenei** Miller and Gurley.
 Miller and Gurley, Ill. St. Mus., Bull. 6, p. 35, pl. 3, figs. 13-15, 1895.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 746, fig. 1358, 1897.—Goldring, Bull. Buffalo Soc. Nat. Sci., 15, p. 185, pl. 1, figs. 1-4, (5-7, n. var.?) 1934.
 Dev. (Hamilton): Near Charlestown, Ind. (Sellersburg ls.); Bay View, N. Y. (Wanakah sh.).
- Gilbertsocrinus indianensis* Miller and Gurley = *G. spinigerus*.
- Gilbertsocrinus intersculptus** Goldring.
 Goldring, Jour. Pal., 10, p. 15, pl. 6, figs. 1-6, 1936.
 Dev. (Skaneateles sh.-Berwyn mem.): West Edmeston, Unadilla Valley, N. Y.
- Gilbertsocrinus koninckii** Grenfell.
 Grenfell, Proc. Bristol Nat. Soc. Sci., 1, p. 467, pl. 7, figs. 1-13, 1876.
 Low. Carb. (Low. Ls. sh.): Clitheroe, Lancashire, England.
- Gilbertsocrinus lyonanus** (Miller and Gurley).
Goniasteroidocrinus lyonanus Miller and Gurley, Ill. St. Mus., Bull. 3, p. 55, pl. 4, fig. 4, 1894.
Gilbertsocrinus lyonanus Bather, Treatise Zool. (Lankester), pt. 3, p. 201, fig. 127-1, 1900.
 Miss. (Keokuk ls.): Indian Creek, Ind.
- Gilbertsocrinus mammillaris** Phillips.
 Phillips, Geol. Yorkshire, 2, p. 207, pl. 4, fig. 23, 1836.
 Low. Carb. (Mtn. Ls.): Bolland and Yorkshire, England.
- Gilbertsocrinus multicalcaratus** Goldring.
 Goldring, Ann. Carnegie Mus., 24, p. 352, pl. 26, figs. 5, 6, 1935.
 Dev. (Hamilton-Moscow sh.): East Bethany, Genesee Co., and Moscow, N. Y.
- Gilbertsocrinus obovatus** (Meek and Worthen).
Gilbertsocrinus (Goniasteroidocrinus) obovatus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 76, 1869; Geol. Surv. Ill., 5, p. 391, pl. 4, fig. 6, 1873.
Gilbertsocrinus obovatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 241, pl. 17, figs. 4a, b, 1897.
 Miss. (Up. Burlington ls.): Burlington, Iowa, and Monmouth, Ill.
- Gilbertsocrinus ohioensis** Stewart.
 Stewart, Ohio Jour. Sci., 40, no. 2, p. 54, pl. 1, figs. 1-4, 1940.
 Dev. (Hamilton-Silica sh.): Silica, Ohio.
- Gilbertsocrinus rarispinus** Goldring.
 Goldring, Jour. Pal., 10, p. 17, pl. 6, fig. 11, 1936.
 Dev. (Hamilton-Moscow sh.): Georgetown, N. Y.
- Gilbertsocrinus reticulatus** (Hall).
Trematocrinus reticulatus Hall, Jour. Boston Soc. Nat. Hist., p. 325; Prelim. Descr. N. Sp. Crin., p. 9, 1861.

- Gilbertsocrinus reticulatus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 244, pl. 17, figs. 1a, b, 1897.
Miss. (Low. Burlington ls.): Burlington, Iowa.
- Gilbertsocrinus simplex** Portlock.
Portlock, Rep. Geol. Londonderry, p. 351, pl. 16, figs. 5a, b, 1843.
Low. Carb.: Fermanaugh, Ireland; Bolland, England.
- Gilbertsocrinus spinigerus** (Hall).
Trematocrinus spinigerus Hall, 15th Rep. Regents Univ. St. N. Y., p. 128, 1862.
Gilbertsocrinus (*Trematocrinus*) *spinigerus* Hall, N. Y. St. Mus., Bull. 1, pl. 1-A, fig. 9, 1872.
Gilbertsocrinus spinigerus Whitfield, Ann. N. Y. Acad. Sci., 5, p. 553, pl. 11, fig. 12, 1891.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 247, pl. 15, figs. 3 a-c, 1897.—Goldring, N. Y. St. Mus., Mem. 16, p. 96, pl. 3, figs. 1-6, 1923; N. Y. St. Mus., Bull. 315, p. 81, figs. 23-3, 4, 5, 1938 (as *G. spinigerus* var.).
Gilbertsocrinus indianensis Miller and Gurley, Ill. St. Mus., Bull. 6, p. 38, pl. 3, figs. 16-22, 1895.
Dev. (Hamilton): Ontario Co., N. Y. (Tichenor ls.); Near Springbrook and Athol Springs, Erie Co., N. Y. (Wanakah sh. and Tichenor ls.); Clark Co. and Speeds, Ind. (Sellersburg ls.); Vincent, N. Y. (Moscow sh.); Thedford, Ont. (Widder beds).
- Gilbertsocrinus spinodosus** Goldring.
Goldring, Ann. Carnegie Mus., 24, p. 350, pl. 26, figs. 2-4, 1935.
Dev. (Hamilton-Ludlowville-Tichenor ls.): Eighteen Mile Creek, N. Y.
- Gilbertsocrinus stellaris** (deKoninck and LeHon).
Encrinus Cumberland, Trans. Geol. Soc. London, 5, p. 91, pl. 4, figs. 8-11, 1819.
Rhodocrinus stellaris deKoninck and LeHon, Recherch. Crin. Carb. Belg., p. 109, pl. 1, figs. 14 a-c, 1854.
Gilbertsocrinus stellaris Wachsmuth and Springer, N. Amer. Crin. Cam., 20, pp. 220, 236, pl. 15, fig. 4, 1897.
Low. Carb.: Bristol, England (Mt. Ls.); Tournai, Belgium (Tournaisian).
- Gilbertsocrinus tenuiradiatus** (Meek and Worthen).
Gilbertsocrinus (*Goniasteroidocrinus*) *tenuiradiatus* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 75, 1869; Geol. Surv. Ill., 5, p. 389, pl. 11, fig. 1, 1873.
Gilbertsocrinus tenuiradiatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 246, pl. 17, fig. 3, 1897.
Miss. (Low. Burlington ls.): Burlington, Iowa.
- Gilbertsocrinus tuberculosus** (Hall).
Trematocrinus tuberculosus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 75, 1860.
Gilbertsocrinus tuberculosus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 243, pl. 17, figs. 5 a-e, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 201, fig. 127-2, 1900.
Miss. (Up. Burlington ls.): Burlington, Iowa; Pike Co., Mo.
- Gilbertsocrinus tuberosus** (Lyon and Casseday).
Goniasteroidocrinus tuberosus Lyon and Casseday, Amer. Jour. Sci., (2) 28, p. 233, 1859.—S. A. Miller, 17th Rep. Geol. Surv. Indiana, p. 661, pl. 9, fig. 11, 1892 (adv. pub., 1891, p. 51).
Gilbertsocrinus tuberosus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 239, pl. 15, figs. 1a, b, pl. 16, figs. 1-6, pl. 17, fig. 6, 1897.—Ehrenberg, Amer. Mus. Nat. Hist., Bull., 59, p. 30, fig. 20, 1929.
Trematocrinus robustus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 77, text fig., 1860.
Miss.: Crawfordsville, Canton, etc. Ind. and Keokuk, Iowa (Keokuk ls.); Clear Creek, Hardin Co., Ky. (Ft. Payne ch.)

Gilbertsocrinus typus (Hall).

Trematocrinus typus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 73, text fig., 1860.

Gilbertsocrinus (*Trematocrinus*) *typus* Hall, N. Y. St. Mus., Bull. 1, pl. 6, fig. 13, 1872.

Gilbertsocrinus typus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 242, pl. 14, figs. 1-3, pl. 17, figs. 7a, b, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 201, text fig. 127-4, 1900.

Trematocrinus papillatus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 76, 1860.

Miss. (Up. Burlington ls. and Burlington-Keokuk transition bed): Burlington, and Pleasant Grove, Iowa.

Gilmocrinus Laudon. Genotype: *G. iowensis* Laudon.

Poteriocrinitidae (Inadunata-Fistulata). Miss.

Laudon, Univ. Iowa Studies in Nat. Hist., 15, no. 2, p. 70, 1933.

Gilmocrinus arbiglandensis Wright.

Wright, Geol. Mag., 71, p. 250, text fig. 19, pl. 14, fig. 6, 1934; 73, p. 343, pl. 13, fig. 3, 1938; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 42, pl. 8, fig. 5, text. 59, 1939.

Low. Carb. (Calciferous ss. ser.): Arbigland shore, Solway, Firth, Kirkcudbrightshire, Scotland.

Gilmocrinus beggi (Wright).

Scyatlocrinus beggi Wright, Geol. Mag., 75, p. 285, pl. 11, fig. 12, 1938.

Gilmocrinus beggi Wright, Geol. Mag., 75, p. 343, pl. 13, fig. 2, 1938.

Low. Carb. (C₂): Cass-ny-hawn, Isle of Man.

Gilmocrinus bozemanensis (Miller and Gurley).

Poteriocrinus bozemanensis Miller and Gurley, Ill. St. Mus., Bull. 10, p. 82, pl. 5, figs. 10, 11, 1898.

Gilmocrinus bozemanensis Laudon, Univ. Iowa Studies, 15, no. 2, p. 70, 1933.

Miss. (Madison ls.): Bridger Mt., near Bozeman, Mont.

Gilmocrinus iowensis Laudon.

Laudon, Univ. Iowa Studies in Nat. Hist., 15, no. 2, pp. 70, 71, pl. 5, figs. 7-9, pl. 6, figs. 9, 10, pl. 7, figs. 3-6, 1933.

Miss. (Kinderhook-Gilmore City fm.): Gilmore City, Iowa.

Gilmocrinus o'neali Laudon and Beane.

Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 259, pl. 19, fig. 7, 1937.

Miss. (Kinderhook-Hampton fm.): Legrand, Iowa.

Girsocrinus Jaekel. See Gissocrinus.**Gissocrinus** Angelin. Genotype: *G. arthriticus* Angelin (part) = *G. typus* Bather.

Cyathocrinitidae (Inadunata-Fistulata). Sil.; Dev.

Angelin, Icon. Crin. Suec., p. 10, 1878.—Zittel, Handb. Pal., 1, p. 353, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 89 (312), 1880 (1879); pt. 3, pp. 191, 227 (115, 151), 1886.—Bather, Ann. Mag. Nat. Hist., (6) 5, p. 332, 1890; Königl. Sv. Vet. Akad. Handl., 25, no. 2, p. 152, 1893; Treatise Zool. (Lankester), pt. 3, p. 175, 1900.—Jaekel, Pal. Abhandl., 7, heft 1, p. 69, 1895 (as *Girsocrinus*).—Springer, Zittel-Eastman Textb. Pal., 1, p. 220, 1913; Amer. Sil. Crin., p. 135, 1926.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 68, 1934.

Gissocrinus arthriticus Angelin = (part) *G. typus*; (part) = *G. campanula*.

Gissocrinus arthriticus (Phillips).

Actinocrinites? arthriticus Phillips, in Murchison, Sil. Syst., p. 674, pl. 17, fig. 8, 1839.

Cyathocrinus arthriticus Salter, in Murchison, Siluria, ed. 3, p. 246, 535, pl. 14, fig. 7, 1859.

Gissocrinus arthriticus Wachsmuth and Springer, Rev. Pal., pt. 1, p. 98 (314), 1880 (1879).—Bather, Treatise Zool. (Lankester), pt. 3, p. 127, fig. 41 (diagram), 1900.

Sil. (Wenlock ls.): Dudley, England

Gissocrinus approximatus Springer.

Springer, Amer. Sil. Crin., p. 137, pl. 32, figs. 7-9, 1926.

Sil. (Laurel ls.): St. Paul, Ind.

Gissocrinus ? borealis Tschernyschew.

Tschernyschew, Bull. Comité, Géol., St. Petersb., 11, p. 123, 1892; Mem. Com. Geol., 4, pp. 94, 189, pl. 14, fig. 4, 1893.

Low. Dev.: East slope of Urals, Russia.

Gissocrinus campanula Bather.

Bather, Königl. Sv. Vet. Akad. Handl., 25, no. 2, p. 160, pl. 9, figs. 293-306, 1893.

Gissocrinus arthriticus Angelin (not Phillips) (part), Icon. Crin. Suec., p. 10, 1878.*Gissocrinus punctuosus* Angelin (part), Icon. Crin. Suec., p. 10, pl. 27, figs. 1, 1a, e, f, g, pl. 29, figs. 74, 74a, 1878.

Sil. (Gotlandian): Follingbo, etc., Island of Gotland.

Gissocrinus capillaris (Phillips).*Cyathocrinites capillaris* Phillips, in Murchison, Sil. Syst., p. 671, pl. 17, fig. 2, 1839; Murchison, Siluria, ed. 3, p. 247, pl. 15, fig. 2, 1859.*Gissocrinus capillaris* Bather, Ann. Mag. Nat. Hist., (6) 9, p. 207, 1892.

Sil. (Wenlock ls.): Dudley, England.

Gissocrinus delicatus Springer.

Springer, Amer. Sil. Crin., p. 136, pl. 32, fig. 2, 1926.

Sil. (Niagaran-Beech River fm.): 2 miles north of Decaturville, Tenn.

Gissocrinus elegans Angelin.

Angelin, Icon. Crin. Suec., p. 10, pl. 3, figs. 5, 5a, 1878.—Bather, Königl. Sv. Vet. Akad. Handl., 25, no. 2, p. 159, pl. 8, figs. 284-292, 1893.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Gissocrinus goniodactylus (Phillips).*Cyathocrinites goniodactylus* Phillips, in Murchison, Sil. Syst., p. 671, pl. 17, fig. 1, 1839; Siluria, ed. 3, p. 246, pl. 14, fig. 8, 1859.*Gissocrinus goniodactylus* Bather, Königl. Sv. Vet. Akad. Handl., 25, no. 2, p. 166, 1893; Treatise Zool. (Lankester), pt. 3, p. 101, fig. 8, 1900.*Gissocrinus goniodactylus* var. Bather, Königl. Sv. Vet. Akad. Handl., 25, no. 2, p. 167, pl. 9, figs. 326-334, 1893.

Sil.: Dudley, England (Wenlock ls.); Follingbo and Klinteberg, Island of Gotland (Gotlandian).

Gissocrinus incurvatus (Angelin).*Cyathocrinus incurvatus* Angelin, Icon. Crin. Suec., p. 23, pl. 26, fig. 1, 1878.*Gissocrinus incurvatus* Bather, Königl. Sv. Vet. Akad. Handl., 25, no. 2, pp. 128, 168, pl. 9, figs. 335, 336, pl. 10, figs. 337-351, 1893.*Cyathocrinus granulatus* Angelin, Icon. Crin. Suec., p. 23, pl. 16, figs. 1-3, 1878.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Gissocrinus lyoni Springer.

Springer, Amer. Sil. Crin., p. 135, pl. 32, figs. 1, 1a, 1926.

Sil. (Niagaran-Louisville ls.): Jefferson Co., Ky.

Gissocrinus macrodactylus Angelin.

Angelin, Icon. Crin. Suec., p. 10, pl. 18, fig. 1, 1878.—Bather, Königl. Sv. Vet. Akad. Handl., 25, no. 2, p. 165, pl. 9, figs. 316-325, 1893.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Gissocrinus magnibrachiatus Springer.

Springer, Amer. Sil. Crin., p. 136, pl. 32, figs. 3-6, 1926.

Sil. (Niagaran-Beech River fm.): 2 miles north of Decaturville, Tenn.

Gissocrinus nudus Angelin = *G. typus*.

Gissocrinus? problematicus Rowley.

Rowley, Amer. Geol., 34, p. 277, pl. 16, fig. 37-4, 1904.

Sil. (Up. Medinan-Edgewood ls.): 3 miles west Louisiana, Mo.

Gissocrinus punctuosus Angelin = (part) *G. campanula*; (part) *G. typus*.

Gissocrinus quadratus Springer.

Springer, Amer. Sil. Crin., p. 137, pl. 32, figs. 10, 11, 1926.

Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Gissocrinus scoparius (Salter).

Cyathocrinus scoparius Salter, Cat. Coll. Camb. Sil. Foss., p. 125, 1873.

Gissocrinus scoparius Bather, Ann. Mag. Nat. Hist., (6) 9, p. 207, 1892.

Sil. (Wenlock ls.): Dudley, England.

Gissocrinus squamiferus (Salter).

Cyathocrinus squamiferus Salter, Cat. Foss. Woodwardian Mus., p. 124, 1873.

Gissocrinus squamifer Bather, Königl. Sv. Vet. Akad. Handl., 25, pt. 2, p. 167, 1893;
Treatise Zool. (Lankester), pt. 3, p. 102, fig. 9, 1900.

Sil.: Dudley, England (Wenlock ls.); Island of Gotland (Gotlandian).

Gissocrinus tubulatus Angelin = *G. typus*.

Gissocrinus typus Bather.

Bather, Königl. Sv. Vet. Akad. Handl., 25, no. 2, p. 155, pl. 8, figs. 261-283, 1893.

Gissocrinus arthriticus Angelin (not Phillips) (part), Icon. Crin. Suec., p. 10, pl. 3,
fig. 2 (figs. 1 and 5b?), pl. 29, fig. 75, 1878.—Springer, Zittel-Eastman Textb.
Pal., 1, p. 220, fig. 317, 1913.

Gissocrinus nudus Angelin, Icon. Crin. Suec., p. 10, pl. 20, fig. 20, 1878.

Gissocrinus punctuosus Angelin, Icon. Crin. Suec., p. 10, pl. 27, figs. 1b, c, d, pl. 29,
figs. 75c, d, 76, 1878.

Gissocrinus tubulatus Angelin, Icon. Crin. Suec., p. 11, pl. 3, fig. 4, 1878.

Sil. (Gotlandian): Follingbo, Endre, etc., Island of Gotland.

Gissocrinus umbilicatus Angelin.

Angelin, Icon. Crin. Suec., p. 11, pl. 21, figs. 8-10, pl. 29, figs. 75a, b, 1878.—Bather,
Königl. Sv. Vet. Akad. Handl., 25, p. 163, pl. 9, figs. 307-315, 1893.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Gissocrinus verrucosus Bather.

Bather, Königl. Sv. Vet. Akad. Handl., 25, no. 2, p. 171, pl. 10, figs. 352-378, 1893.

Sil. (Gotlandian): Wisby, Island of Gotland.

Gissocrinus vertebrachialis Schmidt.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 68, text fig. 13, pl.
8, figs. 1-3, pp. 141, 144, 147, 1934.

Low. Dev. (Hunsrück sl.): Bundenbach, Germany.

Glaucoerinus Parks and Alcock. Genotype: *G. falconeri* Parks and Alcock.

Anomalocrinidae (Inadunata-Fistulata). Ord.

Parks and Alcock, Ottawa Nat., 26, p. 43, 1912.—Bassler, U. S. Nat. Mus., Bull.
92, p. 548, 1915.

Glaucoerinus falconeri Parks and Alcock.

Parks and Alcock, Ottawa Nat., 26, p. 43, pl. 4, figs. 2, 3, 1912.

Ord. (Trenton-Hull ls.): Kirkfield, Ont.

Globocrinus Weller. Genotype: *Batocrinus unionensis* Worthen (part).

Batocrinidae (Camerata). Miss.

Weller, Geol. Surv. Ill., Bull. 41, p. 330, 1920.

Globocrinus unionensis (Worthen).

Batocrinus unionensis Worthen (part), Geol. Surv. Ill., 8, p. 84, pl. 12, figs. 5-5a
(not pl. 13, fig. 3), 1890.

- Globocrinus unionensis* Weller, Geol. Surv. Ill., Bull. 41, p. 331, pl. 5, figs. 18-23, 1920.
Miss. (Chester): Near Anna, Union Co. (Ste. Genevieve ls.) and Fairview Bluff, Hardin Co., Ill. (Shetlerville fm.).
- Glossocrinus** Goldring. Genotype: *G. naplesensis* Goldring.
Glossocrinidae (Inadunata-Fistulata). Dev.
Goldring, N. Y. St. Mus., Mem. 16, p. 389, 1923.
- Glossocrinus cornellianus** (Williams).
Poteroocrinus cornellianus Williams, Proc. Acad. Nat. Sci. Phila., p. 18, pl. 1, figs. 1-3, 1882.
Glossocrinus cornellianus Goldring, N. Y. St. Mus., Mem. 16, p. 394, pl. 52, figs. 6, 7, 1923.
Dev. (Portage-Ithaca beds): Ithaca, N. Y.
- Glossocrinus naplesensis** Goldring.
Goldring, N. Y. St. Mus., Mem. 16, p. 390, pl. 52, figs. 1-5, text fig. 59, 1923.
Dev.: Italy Hollow, Naples, N. Y. (Portage-West Hill flags); Deyo Basin, 2 miles south of Naples, N. Y. (Portage-Grimes ss.); Chemung Narrows, N. Y. (Lower Chemung fm.).
- Glosterocrinus* Wachsmuth and Springer. See *Closterocrinus*.
Glyptaster Hall = *Dimerocrinites*.
Glyptocrinites Carpenter = *Glyptocrinus*.
- Glyptocrinus** Hall. Genotype: *G. decadactylus* Hall.
Glyptocrinidae (Camerata). Ord.; Sil.
Hall, Nat. Hist. N. Y., Pal., 1, p. 281, 1847.—Billings, Geol. Surv. Canada, Can. Org. Rem., Dec. 4, p. 55, 1859.—Meek, Geol. Surv. Ohio, Pal., 1, p. 30, 1873.—Zittel, Handb. Pal., 1, p. 374, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 185 (356), 1881; pt. 3, sec. 1, p. 102 (324), 1885; N. Amer. Crin. Cam., p. 267, 1897.—Cumings, 32d Ann. Rep. Geol. Nat. Res. Ind., p. 712, 1908.—Springer, Zittel-Eastman Textb. Pal. 1, p. 189, 1913.—Fritz, 32d Ann. Rep. Ontario Dep. Mines, 32, pt. 7, for 1923, p. 14, 1925.
Glyptocrinites Carpenter, Phil. Trans. Royal Soc. London, 174, p. 929, 1884.
Icosidactylocrinites Owen, Cat. Spec. Ohio Valley, 1843 (nom. nud.).
Icosidactylocrinus Shumard, Trans. Acad. Sci. St. Louis, 2, p. 372, 1866.
- Glyptocrinus angularis* Miller and Dyer = *Ptychocrinus parvus*.
Glyptocrinus argutus Walcott = *Stelidiocrinus argutus*.
Glyptocrinus? *armosus* (McChesney) = *Siphonocrinus armosus*.
Glyptocrinus baeri Meek = *Xenocrinus baeri*.
Glyptocrinus basalis McCoy = *Rhaphanocrinus basalis*.
Glyptocrinus basalis Morton (not McCoy) = (part) *Merocrinus salopae*; (part) unnamed species.
Glyptocrinus carleyi Hall = *Alisocrinus carleyi*.
- Glyptocrinus circumcarinatus** Parks and Alcock.
Parks and Alcock, Ottawa Nat., 26, p. 44, pl. 4, figs. 2, 3, 1912.
Ord. (Trenton-Hull ls.): Kirkfield, Ontario, Canada.
- Glyptocrinus cognatus* S. A. Miller = *Gaurocrinus onealli*.
- Glyptocrinus decadactylus** Hall.
Hall, Nat. Hist. N. Y., Pal., 1, p. 281, pl. 77, figs. 1 a-f, pl. 78, figs. 1 a-u, 1847.—Meek, Geol. Surv. Ohio, Pal., 1, p. 30, pl. 2, figs. 5a, b, 1873.—S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 6, p. 220, pl. 11, figs. 1-1c, 1883.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 270, pl. 6, fig. 12, pl. 20, figs. 4 a-e, pl. 21, figs. 4a, b, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 119, text fig. 25, 1900.—Rowley, in Greene, Cont. Ind. Pal., 2, pt. 2, p. 28, pl. 6, figs. 5-7, 16, 1906.—Wilson, Jour. Geol., 24, p. 508, pl. 2, fig. 1, 1916.—Fritz, 32d Ann. Rep. Ontario Dep. Mines, 32, pt. 7, p. 15, pl. 2, figs. 1-5, 1925.

- Fossil Encrinite Anthony, Amer. Jour. Sci. and Arts, 35, pp. 359, 360, text fig., 1839.
 Ord.: Cincinnati, etc., Ohio, northern Ky. and southeastern Ind. (Maysville-Fairmount ls.); Pulaski, Turin, Lorraine, Boonville, etc., N. Y. (Lorraine gr.)
- Glyptocrinus dyeri* Meek = *Pycnocrinus dyeri*.
Glyptocrinus dyeri subglobosus Meek = *Pycnocrinus subglobosus*.
Glyptocrinus expansus Phillips = *Sagenocrinus expansus*.
- Glyptocrinus fimbriatus*** Shumard.
 Shumard, Geol. Surv. Mo., 1, p. 194, pl. A, figs. 10a, b, 1855.
 Early Sil. (Medinan-Girardeau ls.): Cape Girardeau, Mo.
- Glyptocrinus flatheanus* Geinitz = *Trybliocrinus flatheanus*.
- Glyptocrinus fornshelli*** S. A. Miller.
 S. A. Miller, Cincinnati Quart. Jour. Sci., 1, p. 348, text fig. 41, 1874.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 276, pl. 20, fig. 3, pl. 21, fig. 5, 1897.
 Early Sil. (Richmond-Waynesville, ls. Blanchester div.): Todds Fork of Miami River, east of Morrow, Ohio.
- Glyptocrinus globularis* Nicholson and Etheridge = *Archaeocrinus globularis*.
Glyptocrinus harrisi S. A. Miller = *Compsocrinus harrisi*.
- Glyptocrinus insperatus*** Rowley.
 Rowley, Amer. Geol., 34, p. 275, pl. 16, figs. 34, 42, 43, 1904.
 Early Sil. (Up. Medinan-Edgewood ls.): Near Edgewood, Pike Co., Mo.
- Glyptocrinus insperatus carinatus*** Rowley.
 Rowley, Amer. Geol., 34, p. 278, pl. 16, fig. 56, 1904.
 Early Sil. (Up. Medinan-Edgewood ls.): Near Edgewood, Pike Co., Mo.
- Glyptocrinus insperatus pentagonus*** Rowley.
 Rowley, Amer. Geol., 34, p. 276, pl. 16, figs. 35, 36, 1904.
 Early Sil. (Up. Medinan-Edgewood ls.): Near Edgewood, Pike Co., Mo.
- Glyptocrinus lacunosa* Billings = *Archaeocrinus lacunosus*.
Glyptocrinus laevis Murchison = *Periechocrinus laevis*.
Glyptocrinus libanus Safford.
 Safford, Geol. Tennessee, p. 266, 1869 (nom. nud.)
 Ord. (Black River-Glade ls.): Central Basin, Tenn.
- Glyptocrinus marginatus* Billings = *Archaeocrinus marginatus*.
Glyptocrinus mercerensis Miller and Gurley = *Periglyptocrinus priscus mercerensis*.
Glyptocrinus miamiensis S. A. Miller = *Compsocrinus miamiensis*.
Glyptocrinus nealli (o'nealli) Hall = *Gaurocrinus nealli*.
Glyptocrinus nobilis Hall = *Siphonocrinus nobilis*.
Glyptocrinus ornatus Billings = *Pycnocrinus ornatus*.
Glyptocrinus parvus Hall = *Ptychocrinus parvus*.
Glyptocrinus pattersoni S. A. Miller = *Pycnocrinus pattersoni*.
- Glyptocrinus plumosus*** (Hall).
Actinocrinus? plumosus Hall, Nat. Hist. N. Y., 4, p. 72, woodcut 16, fig. 5, 1843.
Glyptocrinus plumosus Hall, Nat. Hist. N. Y., Pal., 2, p. 180, pl. 41, figs. 3 a-g, 1852.—Grabau, Bull. Buffalo Soc. Nat. Sci., 7, p. 157, text fig. 52; Bull. N. Y. St. Mus., 9, p. 157, text fig. 52, 1901.
 Sil. (Low. Clinton fm.): One mile south of Medina and one mile west Reynales Basin, N. Y.
- Glyptocrinus priscus* Billings = *Periglyptocrinus priscus*.

Glyptocrinus quinquepartitus Billings.

Billings, Geol. Surv. Canada, Can. Org. Rem., Dec. 4, pl. 8, figs. 2a, 2b (4a, b, by error), 1859.

Ord. (Trenton-Hull ls.): Ottawa, Canada.

Glyptocrinus ramulosus Billings.

Billings, Canadian Nat. Geol., 1, p. 48, text fig. 1, p. 54, fig. 3, p. 55, figs. 4-8, 1856; Geol. Surv. Canada, Can. Org. Rem., Dec. 4, p. 57, pl. 7, figs. 2 a-f, pl. 8, figs. 1 a-d, 1859.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 273, figs. 5a, b, 1897.

Ord. (Trenton): Ottawa and Kirkfield, Ontario; Hull, Quebec, Canada (Hull ls.); Glens Falls, and 4 miles west of Saratoga Springs, N. Y. (Glens Falls ls.).

Glyptocrinus retiarius Phillips = *Hapalocrinus retiarius*.

Glyptocrinus richardsoni Wetherby = *Canistrocrinus richardsoni*.

Glyptocrinus sculptus S. A. Miller = *Rhaphanocrinus sculptus*.

Glyptocrinus shafferi S. A. Miller = *Pycnocrinus shafferi*.

?*Glyptocrinus shafferi* Wachsmuth and Springer = *Pycnocrinus germanus*.

Glyptocrinus shafferi germanus S. A. Miller = *Pycnocrinus germanus*.

Glyptocrinus siphonatus Hall = *Siphonocrinus armosus*.

Glyptocrinus subnodosus Walcott = *Rhaphanocrinus subnodosus*.

Gnorimocrinus Wachsmuth and Springer. Genotype: *Taxocrinus expansus* Angelin. Taxocrinidae (Flexibilia). Sil.

Wachsmuth and Springer, Rev. Pal., pt. 1, p. 50 (388), 1880 (1879).—Bather, Rep. British Assoc., p. 922, 1899; Treatise Zool. (Lankester), pt. 3, p. 189, 1900.—Springer, Amer. Geol., 30, p. 95, 1902; Jour. Geol., 14, pp. 515, 519, 1906; Zittel-Eastman Textb. Pal., 1, p. 205, 1913; Crin. Flexibilia, p. 353, 1920; Amer. Sil. Crin., p. 70, 1926.

Gnorimocrinus cirrifer Springer.

Springer, Crin. Flexibilia, pp. 354, 355, pl. 47, figs. 7-12, 1920; Amer. Sil. Crin., p. 70, pl. 22, figs. 8-10, 1926.

Sil. (Niagaran-Beech River fm.): 2 miles north of Decaturville, Tenn.

Gnorimocrinus expansus (Angelin).

Taxocrinus expansus Angelin, Icon. Crin. Suec., p. 9, pl. 20, figs. 15, 16, 1878.

Gnorimocrinus expansus Wachsmuth and Springer, Rev. Pal., pt. 1, p. 50 (388), 1880 (1879).—Springer, Crin. Flexibilia, p. 354, pl. 47, figs. 1-6, 1920.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Gnorimocrinus loveni Wachsmuth and Springer = *Meristocrinus interbrachiatus*

Gnorimocrinus punctatus (Angelin).

Taxocrinus punctatus Angelin, Icon. Crin. Suec., p. 9, pl. 23, figs. 4, 5, 27, 1878.

Gnorimocrinus punctatus Springer, Crin. Flexibilia, p. 354, 1920.

Sil. (Gotlandian): Island of Gotland.

Gnorimocrinus varians Springer.

Springer, Crin. Flexibilia, pp. 354, 356, pl. 47, figs. 13-17, 1920; Amer. Sil. Crin., p. 70, pl. 22, figs. 11, 11a, 1926.

Sil. (Niagaran-Beech River fm.): 2 miles north of Decaturville, Tenn.

Goniocrinus Springer. See *Goniocrinus*.

Goniasteroidocrinus Lyon and Casseday = *Gilbertsocrinus*.

Goniastroidocrinus Marschall. See *Goniasteroidocrinus*.

Goniocrinus Miller and Gurley. Genotype: *G. sculptilis* Miller and Gurley.

Botryocrinidae (Inadunata-Fistulata). Miss.

Miller and Gurley, 16th Rep. Geol. Surv. Ind., p. 351, 1890.—Bather, Treatise Zool. (Lankester), pt. 3, p. 179, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 218, 1913 (as *Goniocrinus*).

Gonocrinus harrisi (S. A. Miller).

Cyathocrinus harrisi S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 2, p. 255, pl. 15, fig. 2, 1890.

Gonocrinus? *harrisi* Miller and Gurley, 16th Rep. Geol. Surv. Ind., p. 352, 1890.

Miss. (Keokuk ls.): Crawfordsville, Ind.

Gonocrinus incipiens (Hall).

Cyathocrinus incipiens Hall, Jour. Boston Soc. Nat. Hist., 7, p. 296, 1861; Prelim. Deser. New Pal. Crin., p. 5, 1861.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Gonocrinus maximus Laudon.

Laudon, Univ. Iowa Studies Nat. Hist., 15, no. 2, p. 61, pl. 7, fig. 6, 1933.

Miss. (Kinderhook-Gilmore City fm.): Gilmore City, Iowa.

Gonocrinus sculptilis Miller and Gurley.

Miller and Gurley, 16th Rep. Geol. Surv. Ind., p. 352, pl. 6, figs. 2-5, 1890 (authors ed., p. 33.).—S. A. Miller, N. Amer. Geol. Pal., 1st App., p. 679, figs. 1235, 1236, 1892.—Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 254, pl. 19, fig. 4, 1937.

Miss. (Kinderhook-Hampton fm.): LeGrand, Iowa.

Gothocrinus Bather. Genotype: *G. gracilis* Bather.

Botryocrinidae (Inadunata-Fistulata). Sil.

Bather, Königl. Sv. Vet. Akad. Handl., 25, p. 114, 1893; Treatise Zool. (Lankester), pt. 3, p. 179, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 215, 1913.—Jaekel, Pal. Zeits., 3, p. 59, 1918.

Gothocrinus gracilis Bather.

Bather, Königl. Sv. Vet. Akad. Handl., 25, no. 2, p. 115, text fig. 16, pl. 5, figs. 158, 159, 1893.

Sil. (Gotlandian): Kattlevik, Wamlingbo, Island of Gotland.

Grammocrinus Eichwald. Genotype: *Cyathocrinus lineatus* Eichwald.

Eichwald, Leth. Ross., 1, p. 597, 1860.

Grammocrinus clathratus Eichwald.

Eichwald, Leth. Ross., 1, p. 598, pl. 31, figs. 15a, b, 1860. (Columns only.)

"Calcaire a Coraux": Island of Oesel.

Grammocrinus lineatus (Eichwald).

Cyathocrinus lineatus Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, p. 116, 1856.

Grammocrinus lineatus Eichwald, Leth. Ross., 1, p. 597, pl. 31, figs. 10-14, 1860. (Stems only.)

Ord. (Orthoceras ls.): Pulkowa, Russia.

Graphiocrinus de Koninck and Lehon. Genotype: *G. encrinoides* de Koninck and Lehon.

Poteriocrinitidae (Inadunata-Fistulata). Miss.-Permian.

De Koninck and Lehon, Mem. Acad. Roy. Sci., 28, p. 115, 1854.—Zittel, Handb. Pal., 1, p. 359, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, pp. 62, 121 (235, 344), 1880 (1879); pt. 3, p. 252 (176), 1886.—Bather, Ann. Mag. Nat. Hist., (6) 5, p. 334, 1890; Treatise Zool. (Lankester), pt. 3, p. 180, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 225, 1913.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 180, 1924.—Tien, Pal. Sinica, (B) 5, p. 40, 1926 (as *Graphyocrinus*).—Moore and Plummer, Univ. Texas Pub. No. 3945, p. 312, 1940.

Euerisocrinus Strimple, Bull. Amer. Pal., 24, no. 87, p. 13 (373), 1939. Genotype: *E. waysidensis* Strimple.)

Missouricrinus S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 31, 1891. (Genotype: *M. admonitus* S. A. Miller.)

Scaphiocrinus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 550, 1858. (Genotype: *S. simplex* Hall.)

Graphiocrinus admonitus (S. A. Miller).

Missouricrinus admonitus S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 31, pl. 4, figs. 11, 12, 1891.

Miss. (Chouteau ls.): Sedalia, Mo.

Graphiocrinus amplior Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 233, pl. 15, figs. 11-13, 1924.

Permian: Basleo, Timor.

Graphiocrinus antiquus (Meek and Worthen).

Erisocrinus antiquus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 71, 1869; Geol. Surv. Ill., 5, p. 447, pl. 2, fig. 3, 1873.

Graphiocrinus antiquus Springer, Mem. Mus. Comp. Zool., Harvard, 25, no. 3, p. 143, 1911.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Graphiocrinus carbonarius Wachsmuth and Springer = *Apographiocrinus carbonarius*.

Graphiocrinus carbonarius Strimple = *Apographiocrinus typicalis*.

Graphiocrinus dactylus Hall = *Scytalocrinus dactylus*.

Graphiocrinus declivis Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, XII, p. 172, pl. 11, figs. 13-16, 1937.

Permian: Basleo, Timor.

Graphiocrinus delicatulus Moore.

Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 248, pl. 9, figs. 6 a-c, text fig. 22a, b, 1939.

Penn. (Brownville ls.): 7 miles west of Strohm, Osage Co., Okla.

Graphiocrinus elenae Yakovlev.

Yakovlev, Bull. Geol. Prosp. Serv. USSR, 49, pp. 97, 102, pl. 1, figs. 3 a-c, 1930.

Permian: Krasnooufimsk, Ural, Russia.

Graphiocrinus encrinoides de Koninck and Lehon.

De Koninck and Lehon, Mem. Acad. Roy. Sci., 28, p. 117, pl. 4, figs. 15, 15a, b, 1854.

Low. Carb.: Tournai, Belgium (Tournaisian); Bristol, England, Hook Head, Co. Wexford, Ireland (Mtn. Ls.).

Graphiocrinus exornatus Wanner = *Paragraphiocrinus exornatus*.

Graphiocrinus fossatotuberculatus Yakovlev.

Yakovlev, Palaeontographia Ital., 34, p. 277, pl. 19, fig. 13, 1934.

Permian: Sicily.

Graphiocrinus? *indicus* Wanner = *Synynphocrinus indicus*.

Graphiocrinus kingi Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. no. 3945, p. 315, pl. 3, fig. 8, 1940.

Penn. (Mineral Wells fm.): 6 miles north-northwest Mineral Wells, Texas.

Graphiocrinus longicirrifera Wachsmuth and Springer.

Wachsmuth and Springer, in Miller, N. Amer. Geol. Pal., p. 251, 1889; Geol. Surv.

Ill., 8, p. 193, pl. 15, fig. 12, pl. 17, fig. 14, 1890.—Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 260, pl. 19, fig. 8, pl. 18, figs. 8, 9, 1937.

Miss. (Kinderhook-Hampton fm.): Legrand, Iowa.

Graphiocrinus mcadamsi (Meek and Worthen).

Poteriocrinites (Scaphiocrinus) mcadamsi (Worthen, Ms.) Meek and Worthen, Geol. Surv. Ill., 5, p. 495, pl. 15, fig. 2, 1873.

Graphiocrinus mcadamsi Wachsmuth and Springer, Rev. Pal., pt. 1, p. 123, 1880 (1879).

Miss. (Keokuk ls.): Otter Creek, Jersey Co., Ill.; Crawfordsville, Ind.

Graphiocrinus notatus (Miller and Gurley).

Scaphiocrinus notatus Miller and Gurley, Ill. St. Mus., Bull. 9, p. 34, pl. 2, figs. 26, 27, 1896.

Philocrinus notatus Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 260, pl. 18, fig. 11, 1937.

Miss. (Kinderhook-Hampton fm.): Legrand, Iowa.

Graphiocrinus punctatus Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 235, pl. 15, figs. 20-22, 1924.

Permian: Basleo, Timor.

Graphiocrinus quinquelobus Wanner = *Apographiocrinus quinquelobus*.

Graphiocrinus rotundatus Yakovlev.

Yakovlev, Pal. Italica, 38, p. 116, pl. 4, fig. 3, 1938.

Permian: Pietra di Solomone, Sicily.

Graphiocrinus rudis (Meek and Worthen).

Poteriocrinites (*Graphiocrinus*, *Scaphiocrinus*) *rudis* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 139, 1869.

Poteriocrinites (*Scaphiocrinus*) *rudis* Meek and Worthen, Geol. Surv. Ill., 5, p. 412, pl. 1, fig. 1, 1873.

Graphiocrinus rudis Wachsmuth and Springer, Rev. Pal., pt. 1, p. 123, 1880 (1879).
Miss. (Up. Burlington ls.): Burlington, Iowa.

Graphiocrinus sampsoni Weller.

Weller, Bull. Geol. Soc. Amer., 20, p. 280, pl. 11, fig. 23, 1909.

Miss. (Fern Glen ls.): Fern Glen, Mo.

Graphiocrinus scrobiculatus (Wanner).

Basleocrinus scrobiculatus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 267, pl. 17, figs. 14, 15, 1924.

Graphiocrinus scrobiculatus Wanner, Neue Beitr. kennt. Perm. Echin. Timor, XII, p. 173, pl. 11, figs. 17, 18, 1937.

Permian: Basleo, Timor.

Graphiocrinus simplex (Hall).

Poteriocrinus (*Scaphiocrinus*) *simplex* Hall, Geol. Rep. Iowa, 1, pt. 2, p. 551, pl. 9, fig. 10, 1858.

Graphiocrinus simplex Wachsmuth and Springer, Rev. Pal., pt. 1, p. 123, 1880 (1879).
—Springer, Mem. Mus. Comp. Zool., Harvard, 25, no. 3, p. 145, 1911.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Graphiocrinus smythi Wright.

Wright, Geol. Mag., 71, p. 258, text fig. 28, pl. 15, fig. 8, 1934.

Carb. (Mtn. Ls.): Hook Head, Co. Wexford, Ireland.

Graphiocrinus spinobrachiatus Hall.

Hall, Jour. Boston Soc. Nat. Hist., 7, p. 306; Prelim. Descr. N. Sp. Crin., p. 8, 1861.

Miss. (Up. Burlington ls.): Burlington and Weaver, Lee Co., Iowa.

Graphiocrinus stantonensis Strimple.

Strimple, Bull. Amer. Pal., 24, no. 87, p. 12 (372), pl. 2, figs. 11, 12, 1939.

Penn. (Stanton ls.): Wayside, Kansas.

Graphiocrinus striatus (Meek and Worthen).

Poteriocrinites (*Graphiocrinus*, *Scaphiocrinus*) *striatus* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 142, 1869.

Poteriocrinites (*Scaphiocrinus*) *striatus* Meek and Worthen, Geol. Surv. Ill., 5, p. 418, pl. 2, fig. 11, 1873.

Graphiocrinus striatus Wachsmuth and Springer, Rev. Pal., pt. 1, p. 123, 1880 (1879).
Miss. (Low. Burlington ls.): Burlington, Iowa.

Graphiocrinus subimpressus (Meek and Worthen).

Poteriocrinus subimpressus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 138, 1861; Geol. Surv. Ill., 3, p. 485, pl. 18, figs. 1a, b, text fig., 1868.

Graphiocrinus subimpressus Springer, Mem. Mus. Comp. Zool., 25, p. 145, 1911.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Graphiocrinus timoricus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, pp. 166, 170, text figs. 46-50, pl. 106 (1), figs. 1-5, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped., 1916, p. 232, text figs. 39, 40, 1924.

Permian: Basleo and Noil Fatoe, Timor.

Graphiocrinus timoricus spinosus Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 233, pl. 15, figs. 9-10, 1924.

Permian: Basleo, Timor.

Graphiocrinus tortuosus (Hall).

Scaphiocrinus tortuosus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 309; Prelim. Descr. N. Sp. Crin., p. 7, 1861.

Graphiocrinus tortuosus Wachsmuth and Springer, Rev. Pal., pt. 1, p. 123, 1880 (1879).—Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 1, p. 32, pl. 3, figs. 15-17, 1893.

Miss. (Burlington ls.): Burlington, Iowa.

Graphiocrinus wachsmuthi (Meek and Worthen).

Poteriocrinus (Scaphiocrinus) wachsmuthi Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 141, 1861; Geol. Surv. Ill., 3, p. 488, pl. 16, figs. 7a, b, text fig., 1868.

Graphiocrinus wachsmuthi Wachsmuth and Springer, Rev. Pal., pt. 1, p. 123, 1880 (1879).

Miss. (Low. Burlington ls.): Burlington, Iowa.

Graphiocrinus waysidensis (Strimple).

Euerisocrinus waysidensis Strimple, Bull. Amer. Pal., 24, no. 87, p. 13 (373), pl. 2, figs. 14-16, 1939.

Penn. (Stanton ls.): Near Wayside, Kansas.

Graphiocrinus whitei (Meek and Worthen).

Erisocrinus whitei Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 72, 1869; Geol. Surv. Ill., 5, p. 448, pl. 2, fig. 2, 1873.

Graphiocrinus whitei Springer, Mem. Mus. Comp. Zool., Harvard, 25, p. 145, 1911.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Graphiocrinus yarkhunensis Reed.

Reed, Pal. Indica, Mem. Geol. Surv. India, n.s., 6, no. 4, p. 18, pl. 2, figs. 1, 1a, b, 27, 1925.

Up. Carb.: 2½ miles north Baroghil Ailak, Yarkhun River, Chitral, India.

Graphyocrinus Tien. See Graphiocrinus.

Habrocrinus Angelin = Carpoocrinus.

Habrocrinus benedicti Slocum = Saccocrinus benedicti.

Habrocrinus pentadactylus Grabau = Acacocrinus pentadactylus.

Hadrocrinus Lyon. Genotype: *H. discus* Lyon.

Dolaticrinidae (Camerata). Dev.

Lyon, Trans. Amer. Philos. Soc., 13, p. 445, 1869.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 222 (396), 1881; N. Amer. Crin. Cam., p. 327, 1897.—Springer, U. S. Nat. Mus., Bull. 115, p. 9, 1921.—Schmidt, Palaeontographica, 76, p. 5, 1931.

Hadrocrinus angularis Lyon = *H. pentagonus*.

Hadrocrinus discus Lyon.

Lyon, Trans. Amer. Philos. Soc., 13, p. 448, pl. 26, fig. a, 1869.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 323, pl. 24, fig. 1, 1897.—Springer, U. S. Nat. Mus., Bull. 115, p. 11, text fig. 4, 1921.

Dev. (Onondaga-Jeffersonville ls.): Falls of the Ohio, near Jeffersonville, Ind.

Hadrocrinus hispaniae Schmidt.

Schmidt, Palaeontographica, 76, p. 7, pls. 1-3, figs. 1-9, pl. 4, figs. 11 a-c, text figs. 3-9, 1931.

Dev. (Eifelian): Kap la Vela, Concha de Arnao, Spain.

Hadrocrinus pentagonus Lyon.

Lyon, Trans. Amer. Philos. Soc., 13, p. 450, pl. 26, fig. c, 1869. (*H. angularis* exp. pl.).

Dev. (Onondaga-Jeffersonville ls.): Falls of the Ohio, Jeffersonville, Ind.

Hadrocrinus plenissimus Lyon = *Himerocrinus plenissimus*.

Haeretocrinus Moore and Plummer. Genotype: *H. missouriensis* Moore and Plummer.

Poteroicrinitidae (Inadunata-Fistulata): Penn.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 109, 1940.

Haeretocrinus magnus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 113, pl. 21, fig. 4, 1940.

Penn. (Millsap Lake fm.): 3 miles southwest Brock, Parker Co., Tex.

Haeretocrinus missouriensis Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 110, pl. 21, fig. 1, text fig. 13, 1940.

Penn. (Missouri ser.-Lane sh.): Kansas City, Mo.

Hallocrinus Goldring. Genotype: *Cyathocrinus ornatissimus* Hall.

Botryocrinidae (Inadunata-Fistulata). Dev.; Low. Carb.

Goldring, N. Y. St. Mus., Mem. 16, p. 374, 1923.

Hallocrinus? *inagilis* Schmidt.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 122, p. 28, pl. 3, figs. 9-13b, 1930.

Low. Carb. (Visean): Herborn, Nassau, Germany.

Hallocrinus ornatissimus (Hall).

Cyathocrinus ornatissimus Hall., Geol. N. Y., Rep. 4th Dist., p. 247, fig. 108, 1843.

Hallocrinus ornatissimus Goldring, N. Y. St. Mus., Mem. 16, p. 374, pl. 49, figs. 4, 5, pls. 50, 51, 1923.

Dev. (Portage-Naples bed): Portland, Lake Erie shore, N. Y.

Halocrinites Steininger = *Cupressocrinites*.

Halocrinus d'Orbigny = *Cupressocrinites*.

Halysiocrinus Ulrich. Genotype: *Cheirocrinus dactylus* Hall.

Calceocrinidae (Inadunata-Fistulata). Dev.; Miss.

Ulrich, 14th Rep. Geol. Nat. Hist. Minn., p. 110, 1886.—Bather, Königl. Sv. Vet.

Akad. Handl., 25, no. 2, pp. 21, 61, 65, 1893; Treatise Zool. (Lankester), pt. 3, p. 148, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 214, 1913; Amer. Sil. Crin., p. 121, 1926.

Halysiocrinus barrisi (Worthen).

Calceocrinus barrisi Worthen, Geol. Surv. Ill., 6, p. 510, text fig., 1875.

Deltacrinus barrisi S. A. Miller, N. Amer. Geol. Pal., p. 238, 1889.—Thomas, Ann.

Rep. Iowa Geol. Surv., 29, p. 476, pl. 44, figs. 20, 21, 1924.

Halysiocrinus barrisi Laudon, Jour. Pal., 10, p. 65, fig. 13, 1936.

Dev.: Near Davenport, Iowa (Cedar Valley-Davenport beds); Linwood, Iowa (Cedar Valley-Littleton mem.); 4-Mile Dam, near Alpena, Mich. (Alpena ls.).

Halysiocrinus bradleyi (Meek and Worthen).

Calceocrinus? bradleyi Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 73, 1869; Geol. Surv. Ill., 5, p. 502, pl. 14, fig. 9, 1873.

Halysiocrinus? bradleyi Bather, Köngl. Sv. Vet. Akad. Handl., 25, p. 67, 1893. Miss. (Keokuk ls.): Crawfordsville, Ind.

Halysiocrinus carinatus Springer.

Springer, Amer. Sil. Crin., p. 122, pl. 29, figs. 24, 24a, 25, 26, 1926.

Dev.: 4-Mile Dam, Alpena, Mich. (Alpena ls.); New Buffalo, Iowa (Cedar Valley-Littleton mem.); Clark Co., Ind. (Sellersburg ls.).

Halysiocrinus dactylus (Hall).

Cheirocrinus dactylus Hall, 13th Rep. N. Y. St. Cab. Nat. Hist., p. 123, text figs. 1, 2, 1860.

Deltacrinus dactylus Springer, Smiths. Misc. Coll., 76, no. 3, p. 19, pl. 5, fig. 20, 1923.

Halysiocrinus dactylus Ulrich, 14th Rep. Geol. Nat. Hist. Minn., p. 110, 1886.—Springer, Amer. Sil. Crin., pp. 95, 123, pl. 30, figs. 1, 2, 2a, b, 3, 3a, 1926.

Cheirocrinus ventricosus Hall, 13th Rep. N. Y. St. Cab. Nat. Hist., p. 123, 1860. Miss.: (Upper Burlington ls.): Burlington, Iowa.

Halysiocrinus elephantinus Laudon.

Laudon, Jour. Pal., 10, p. 66, figs. 14, 15, 1936.

Dev. (Cedar Valley-Linwood mem.): Johnson Co., Iowa.

Halysiocrinus keyserensis Springer.

Springer, Amer. Sil. Crin., p. 121, pl. 29, fig. 22, 1926.

Dev. (Keyser fm.): Keyser, W. Va.

Halysiocrinus marylandicus (Ohern).

Calceocrinus marylandicus Ohern, Maryland Geol. Surv., Low. Dev., p. 253, pl. 40, figs. 1-3, 1913.

Halysiocrinus marylandensis (by error) Springer, Amer. Sil. Crin., p. 122, pl. 29, figs. 23, 23a, b, 1926.

Dev. (Oriskany-Ridgeley ss.): Opposite Keyser, W. Va.

Halysiocrinus nodosus (Hall).

Cheirocrinus nodosus Hall, 13th Rep. N. Y. St. Cab. Nat. Hist., p. 124, 1860.

Calceocrinus nodosus Hall, N. Y. St. Mus., Bull. 1, pl. 6, fig. 15, 1872.

Halysiocrinus nodosus Ulrich, Ann. Rep. Geol. Nat. Hist. Surv. Minn., 14, p. 113, 1886.—Springer, Amer. Sil. Crin., p. 103, p. 124, pl. 30, figs. 14-21, 1926.

Deltacrinus nodosus Springer, Smiths. Misc. Coll., 76, no. 3, p. 19, pl. 5, fig. 21, 1923. Miss. (Keokuk ls.): Indian Creek, Montgomery Co., Ind.; Keokuk, Iowa.

Halysiocrinus perplexus (Shumard).

Cheirocrinus (Calceocrinus) perplexus Shumard, Trans. Acad. Sci. St. Louis, 2, p. 358, 1866.

Halysiocrinus perplexus Springer, Amer. Sil. Crin., p. 123, pl. 30, figs. 4-13, 1926.

Miss. (New Providence sh.): Button Mold Knob, Ky.; Whites Creek Springs Tenn.; Clark Co., Ind.

Halysiocrinus robustus (Worthen).

Cheirocrinus robustus Worthen, Geol. Surv. Ill., 8, p. 92, pl. 12, fig. 7, 1890.

Halysiocrinus? robustus Bather, Köngl. Sv. Vet. Akad. Handl., 25, p. 67, 1893.

Miss. (Keokuk ls.): Hamilton, Ill.

Halysiocrinus secundus (Hall).

Calceocrinus (Cheirocrinus) secundus Hall, N. Y. St. Mus., Bull. 1, pl. 1A, figs. 13, 14, 1872.

Halysiocrinus secundus Goldring, N. Y. St. Mus., Mem. 16, p. 337, pl. 41, figs. 6-9, text figs. 55-57, 1923.

Dev.: Near Lima, N. Y. (Onondaga ls.); 3 miles south of Sherburne, N. Y. (Tully-Westbrook mem.).

Halysiocrinus (?) tuberculatus Yakovlev.

Yakovlev, Bull. Comité Geol., 46, p. 188, pl. 6, figs. 18, 18a, b, p. 191, 1927.
Permian: Krasnooufmsk, Russia.

Halysiocrinus tunicatus (Hall).

Cheirocrinus tunicatus Hall, 13th Rep. N. Y. St. Cab. Nat. Hist., p. 124, text fig., 1860.

Calceocrinus tunicatus Hall, 11th Rep. Geol. Nat. Hist. Ind., p. 281, text fig. 2, 1882.
—Worthen, Geol. Surv. Ill., 8, p. 93, pl. 12, fig. 6, 1890.—Keyes, Geol. Surv. Mo., 4, p. 222, pl. 30, fig. 4, 1894.

Halysiocrinus tunicatus Bather, Königl. Sv. Vet. Akad. Handl., 25, p. 67, 1893.

Miss.: Keokuk, Iowa, Niota and Warsaw, Ill., Crawfordsville, Ind. (Keokuk ls.); 5 miles south Louisville, Ky. (Ft. Payne ch.).

Halysiocrinus wachsmuthi (Meek and Worthen).

Calceocrinus? wachsmuthi Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 74, 1869; Geol. Surv. Ill., 5, p. 444, pl. 11, fig. 1, 1873.

Halysiocrinus wachsmuthi Ulrich, 14th Ann. Rep. Geol. Nat. Hist. Surv. Minn. p. 113, 1886.

Miss. (Up. and Low. Burlington ls.): Burlington, Iowa.

Hapalocrinus Jaekel. Genotype: *H. elegans* Jaekel.

Platycrinitidae (Adunata). Sil.; Dev.

Jaekel, Pal. Abhandl., 7, p. 95, 1895.—Bather, Geol. Mag., Dec. IV, 4, pp. 337, 343, 1897; Treatise Zool. (Lankester), pt. 3, p. 156, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 199, 1913; Amer. Sil. Crin., p. 52, 1926.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, pp. 31, 142, 1934.

Agriocrinus Jaekel, Pal. Abhandl., 7, p. 103, 1895. (Genotype: *A. frechi* Jaekel.)

Clematocrinus Jaekel, Zeits. Deutsch. Geol. Gesell., Verhandl., 49, p. 47, 1897; Pal. Zeits., 3, p. 91, 1918. (Genotype: *Actinocrinites retarius* Phillips.)

Hapalocrinus cirrifer Springer.

Springer, Amer. Sil. Crin., p. 52, pl. 12, figs. 1-4, 1926.

Sil. (Niagaran-Beech River fm.): 2 miles north Decaturville, Tenn.

Hapalocrinus devonicus Springer.

Springer, Amer. Sil. Crin., p. 53, pl. 12, fig. 6, 1926.

Dev. (Helderbergian-Keyser fm.): Keyser, W. Va.

Hapalocrinus elegans Jaekel.

Jaekel, Pal. Abhandl., 7, p. 96, text fig. 27, pl. 10, 1890.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, pp. 31, 32, text figs. 4b, c, pl. 16, fig. 1, pp. 143, 146, 1934.

Low. Dev. (Hunsrück sl.): Bundenbach, Germany.

Hapalocrinus elegans Opitz = *Thallocrinus hauchecornei*.

Hapalocrinus frechi (Jaekel).

Agriocrinus frechi Jaekel, Pal. Abhandl., 7, p. 103, text fig. 29, pl. 9, 1895.—Opitz, Natur. Mus., 61, heft 4, p. 164, fig. 1, p. 168, fig. 5, 1931.

Hapalocrinus frechi Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 35, text fig. 4a-a₂, pl. 24, pp. 143, 146, 1934.

Low. Dev. (Hunsrück sl.): Bundenbach, Germany.

Hapalocrinus frechi imbellis Schmidt.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, pp. 37, 143, 1934.

Low. Dev. (Hunsrück sl.): Bundenbach, Germany.

Hapalocrinus frechi nimisfurcata Schmidt.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, pp. 37, 143, pl. 3, fig. 1, 1934.

Low. Dev. (Hunsrück sl.): Bundenbach, Germany.

Hapalocrinus frechi rarefurcata Schmidt.

Schmidt, Abhandl. Preuss. Geol. Landes., n.f., heft 163, pp. 36, 143, 1934.
 Low. Dev. (Hunsrück sl.): Muhlenberg, near Bundenbach, Germany.

Hapalocrinus gracilis Springer.

Springer, Amer. Sil. Crin., p. 52, pl. 11, figs. 30-32, 1926.
 Sil. (Niagaran-Beech River fm.): 2 miles north of Decaturville, Tenn.

Hapalocrinus inermis (Jaekel).

Agriocrinus inermis Jaekel, Pal. Abhandl., 7, p. 105, pl. 8, fig. 2, 1895.
 Low. Dev. (Hunsrück sl.): Bundenbach, Germany.

Hapalocrinus innoxius Schmidt.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 38, pl. 3, fig. 2, pp. 143, 146, 1934.
 Low. Dev. (Hunsrück sl.): Bundenbach, Germany.

Hapalocrinus pinnulatus Springer.

Springer, Amer. Sil. Crin., p. 52, pl. 12, fig. 5, 1926.
 Sil. (Niagaran-Beech River fm.): $\frac{3}{4}$ mile north of Decaturville, Tenn.

Hapalocrinus retiarius (Phillips).

Actinocrinites? retiarius Phillips, in Murchison, Sil. Syst., p. 674, pl. 17, fig. 7, 1839.
Platycrinus (Actinocrinus) retiarius Phillips, in Murchison, Siluria, ed. 3, p. 247, pl. 14, fig. 9, 1859.
Clematocrinus retiarius Jaekel, Zeits. Deutsch. Geol. Gesell., 49, p. 47, 1897.
Hapalocrinus retiarius Bather, Treatise Zool. (Lankester), pt. 3, p. 156, text fig. 69, 1900.

Sil. (Wenlock ls.): Dudley, England.

Hapalocrinus tennesseensis Springer.

Springer, Amer. Sil. Crin., p. 53, pl. 12, fig. 7, 1926.
 Sil. (Niagaran-Beech River fm.): 2 miles north of Decaturville, Tenn.

Hapalocrinus tuberculatus Springer.

Springer, Amer. Sil. Crin., p. 53, pl. 12, fig. 6, 1926.
 Sil. (Niagaran-Beech River fm.): 2 miles north of Decaturville, Tenn.

Hapalocrinus victoriae Bather.

Bather, Geol. Mag., Dec. IV, 4, no. 398, p. 337, pl. 15, 1897.
 Sil.: Melbourne, Victoria, Australia.

Haplocrinites Steininger. Genotype: *H. sphaeroideus* Steininger = *H. mespiliformis* Goldfuss.

Haplocrinitidae (Inadunata-Fistulata). Sil.-Low. Carb.
 Steininger, Mem. Geol. Surv. France, 1, p. 232, 1834; Geog. Besch. Eifel, p. 36, 1853.—Sandberger and Sandberger, Verst. Schicht. Nassau, p. 398, 1856.
Aplocrinus d'Orbigny, Prodr. Pal. Strat., 1, p. 102, 1849.
Haplocrinus Roemer, Rhein. Ubergangs., p. 63, 1844.—Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, abth. 2, p. 215, 1867 (adv. pub. 1866).—Zittel, Handb. Pal., 1, p. 347, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 159 (83), 1886.—Bather, Königl. Sv. Vet. Akad. Handl., 25, no. 2, p. 20, 1893; Treatise Zool. (Lankester), pt. 3, p. 151, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 208, 1913.—Jaekel, Pal. Zeits., 3, p. 85, 1918.

Haplocrinites clio (Hall).

Haplocrinus clio Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 143, pl. 1, figs. 5-9, 1862.—Goldring, N. Y. St. Mus., Mem. 16, p. 326, pl. 40, figs. 10-14, 1923.
 Dev. (Marcellus sh.-Cherry Valley ls.): Onondaga Co., N. Y.

Haplocrinites decipiens (Whidborne).

Haplocrinus decipiens Whidborne, Geol. Mag., 6, p. 79, 1889; Mon. Dev. Fauna S. England, 2, p. 205, pl. 4, pl. 23, figs. 9, 9a, 1895.
 Dev.: Lummaton, England.

Haplocrinites granatus (de Koninck).

Haplocrinus granatum deKoninck, Bull. Acad. Roy. Belgique, (2) 28, p. 551, pl. 5, figs. 6-10, 1869.

Low. Carb. (Mtn. Ls.): Bolland, England.

Haplocrinites granulatus Troost.

Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Haplocrinus granulatus Wood, U. S. Nat. Mus., Bull. 64, p. 25, pl. 4, figs. 4, 5, 1909. Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.

Haplocrinites hemisphericus Troost = *Pisocrinus quinquelobus*.

Haplocrinites maximus Troost.

Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Haplocrinus maximus Wood, U. S. Nat. Mus., Bull. 64, p. 26, pl. 4, figs. 6-8, 1909. Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.

Haplocrinites mespiliformis (Goldfuss).

Eugeniocrinites mespiliformis Goldfuss, Petref. Germ., 1, p. 213, pl. 64, figs. 6 a-f, 1831.

Haplocrinus mespiliformis Roemer, in Bronn's Leth. Geogn., ed. 3, 1, pt. 2, p. 261, pl. 4, figs. 13 a-c, 1851-1854.—Schultze, Denk. Kais. Akad. Wiss., Math. Natur. Cl., 26, p. 216, pl. 12, figs. 10, 11, 1867 (adv. pub. 1866, p. 104).—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 162 (86), pl. 5, figs. 1-4, 1886; N. Amer. Crin. Cam., pl. 3, figs. 12, 12a, b, 1897.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 33, text figs. 19, 20, p. 40, text figs. 26, 27, 1900.—Bather, Treatise Zool. (Lankester), pt. 3, p. 125, fig. 35, 1900.—Springer, Amer. Sil. Crin., pp. 50, 81, pl. 25, figs. 28-29a, 1926.

Haplocrinites sphaeroideus Steininger, Mém. Soc. Géol. France, 1, p. 232, pl. 8, fig. 19, 1834; Bull. Soc. Geol. France, 8, p. 232, 1837.

Dev. (Eifelian): Eifel, Germany.

Haplocrinites ovalis Troost.

Troost, Amer. Jour. Sci. and Arts (2), 8, p. 419, 1849.

Haplocrinus ovalis Wood, U. S. Nat. Mus., Bull. 64, p. 25, pl. 4, fig. 3, 1909.

Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.

Haplocrinites sphaeroideus Steininger = *H. mespiliformis*.

Haplocrinites stellaris (Roemer).

Haplocrinus stellaris Roemer, Rhein. Uebergangs., p. 63, pl. 3, fig. 5, 1844.—Sandberger and Sandberger, Verst. Rhein. Schicht., p. 399, pl. 35, figs. 7-7b, 1850-1856.

Mid. Dev. (Eifelian): Bredelar and near Weiburg, Germany.

Haplocrinus Roemer and authors = *Haplocrinites*.

Haplocrinus annularis Eichwald.

Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, p. 119, 1856; Leth. Ross., 1, p. 582, pl. 31, figs. 1-3a-c, 57a-c, 1860. (Buttons only.)

Ord.: Pulkowa, Russia.

Haplocrinus cylindricus Eichwald = *Homocrinus cylindricus*.

Haplocrinus monile Eichwald.

Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, p. 119, 1856; Leth. Ross., 1, p. 580, pl. 31, figs. 4-9, 17-20, 29a-c, 1860. (Buttons only.)

Ord.: Pulkowa, Russia.

Harmoocrinus Angelin = *Stelidiocrinus*.

Helicocrinus Chapman. Genotype: *H. plumosus* Chapman.

Platycrinitidae (Adunata). Sil.

Chapman, Proc. Roy. Soc. Victoria, 15, pt. 2, p. 107, 1903.

Helicocrinus plumosus Chapman.

Chapman, Proc. Roy. Soc. Victoria, 15, pt. 2, p. 108, pl. 17, 18, figs. 1-5, 1903.
 Sil.: Brunswick, Victoria, Australia.

Helmintholithus entrochus verrucosus Linnaeus = *Crotalocrinites rugosus*.

Hemiindocrinus Yakovlev. Genotype: *H. fredericksi* Yakovlev.

?Poteriocrinitidae (Inadunata-Fistulata). Permian.

Yakovlev, Bull. Comité Géol., 45, p. 57, 1926.

Hemiindocrinus fredericksi Yakovlev.

Yakovlev, Bull. Comité Géol., 45, no. 2, p. 57, pl. 1, fig. 7, 1926.

Permian: Krasnooufmsk, Russia.

Hemimollocrinus Yakovlev. Genotype: *H. uralensis* Yakovlev.

?Poteriocrinitidae (Inadunata-Fistulata). Permian.

Yakovlev, Bull. Geol. Prosp. USSR, 49, pp. 97, 101, 1930.

Hemimollocrinus uralensis Yakovlev.

Yakovlev, Bull. Geol. Prosp. USSR, 49, pp. 97, 101, pl. 1, figs. 1a, b, 1930.

Permian: Krasnooufmsk, Russia.

Hemistrectacron Yakovlev. Genotype: *H. abrachiatum* Yakovlev.

Hypocrinidae (Inadunata-Fistulata). Permian.

Yakovlev, Bull. Comité Géol., 45, p. 52, 1926; vol. 46, pp. 186-189, 1927; Compt. Rend. Acad. Sci. USSR, pp. 313-315, 1928.—Wanner, Neue Beitr. kennt. Perm. Echin. Timor, pp. 39, 75, 1929.

Hemistrectacron abrachiatum Yakovlev.

Yakovlev, Bull. Comité Géol., 45, no. 2, p. 52, text figs. 2, 3, pl. 1, fig. 5, 1926.—
 Wanner, Neue Beitr. kennt. Perm. Echin. Timor, p. 77, pl. 6, figs. 7, 8, 1929.

Permian: Krasnooufmsk, Russia.

Hemistrectacron carinatum Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, p. 75, text figs. 13, 14, pl. 5, figs. 11, 12, pl. 6, figs. 3-6, 1929.

Permian: Basleo, Timor.

Hemistrectacron carinatum ornatum Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, p. 78, pl. 6, figs. 9, 10, 1929.—
 Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 327, pl. 3, fig. 12, text fig. 8, 1940.

Permian: Noko, Basleo, Timor.

Henanobasis coffeyvillensis Moore = *Paragassizocrinus coffeyvillensis*.

Hercocrinus Hudson. Genotype: *H. elegans* Hudson.

Rhodocrinitidae (Camerata). Ord.

Hudson, N. Y. St. Mus., Bull. 107, p. 125, 1907.—Grabau and Shimer, N. Amer. Index Foss., 2, p. 549, 1910.

Hercocrinus beecheri (Hudson).

Lyriocrinus? beecheri Hudson, Rep. N. Y. St. Pal. for 1903, p. 277, pl. 3, figs. 1-4, text figs. 4, 5, 1904.

Hercocrinus beecheri Hudson, N. Y. St. Mus., Bull. 107, p. 127, 1907.

Ord. (Chazyan-Valcour ls.): Valcour Island, Lake Champlain, N. Y.

Hercocrinus elegans Hudson.

Hudson, N. Y. St. Mus., Bull. 107, p. 125, pl. 9, fig. 6, 1907.

Ord. (Chazyan-Valcour ls.): Valcour Island, Lake Champlain, N. Y.

Hercocrinus ornatus Hudson.

Hudson, N. Y. St. Mus., Bull. 107, p. 127, pl. 10, fig. 7, 1907.

Ord. (Chazyan-Valcour ls.): Valcour Island, Lake Champlain, N. Y.

Herpetocrinus Salter = *Myelodactylus*.

Herpetocrinus scolopendra Bather = *Cyliocrinus scolopendra*.

Heterocrinites Troost.

Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849; Proc. Amer. Assoc. Adv. Sci., p. 60, 1850 (nom. nud.).

Heterocrinites simplex Troost = *Ectenocrinus canadensis*.

Heterocrinus Hall. Genotype: *H. heterodactylus* Hall.

Heterocrinidae (Inadunata-Fistulata). Ord.

Hall, Nat. Hist., N. Y., Pal., 1, p. 278, 1847.—Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 4, p. 48, 1859.—Hall, 24th Rep. N. Y. St. Cab. Nat. Hist., p. 210, 1872.—Meek, Geol. Surv. Ohio, Pal., 1, p. 358, 1879.—Zittel, Handb. Pal., 1, p. 358, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 68, 150 (291, 375); pt. 3, p. 205 (129), 1886.—Bather, Ann. Mag. Nat. Hist., (6), 5, p. 324, 1890; Köngl. Sv. Vet. Akad. Handl., 25, p. 25, 1893; Treatise Zool. (Lankester), pt. 3, p. 146, 1900.—Cumings, 32d Ann. Rep. Geol. Nat. Res. Ind., for 1907, p. 713, 1908.—Springer, Geol. Surv. Canada, Mem. 15-P, p. 27, 1911; Zittel-Eastman Textb. Pal., 1, p. 212, 1913.—Jaekel, Pal. Zeits., 3, p. 86, 1918.—Ulrich, in Foerste, Geol. Surv. Canada, Mem. 138, p. 83, 1924.—Fritz, 32d Ann. Rep. Ontario Dep. Mines, pt. 7, p. 10, 1925.—Springer, Amer. Sil. Crin., pp. 89, 91, 1926.

Heterocrinus articulatus Billings = *Cremacrinus articulatus*.

Heterocrinus bellevillensis Billings = *Daedalocrinus bellevillensis*.

Heterocrinus canadensis Billings = *Ectenocrinus canadensis*.

Heterocrinus constrictus Hall = *Dystactocrinus constrictus*.

Heterocrinus constrictus compactus Meek = *Dystactocrinus compactus*.

Heterocrinus crassus Meek and Worthen = *Iocrinus crassus*.

Heterocrinus decabrachius Quenstedt.

Quenstedt, Petref. Deutsch., 4, p. 592, pl. 110, fig. 39, 1876. (Unrecognizable.)

Ord. ("Hudson River Group"): Ohio.

Heterocrinus difficilis (Ulrich Ms.) Ruedemann.

Ruedemann, N. Y. St. Mus., Bull. 262, p. 70, 1925 (nom. nud.).

Heterocrinus exiguus Meek.

Meek, Proc. Acad. Nat. Sci. Phila., p. 308, 1872; Geol. Surv. Ohio, Pal., 1, p. 5, pl. 1, fig. 12, 1873.

Ord. (Eden, Economy-McMicken mem.): Cincinnati, Ohio, and Covington, Ky.

Heterocrinus exilis Hall.

Hall, Adv. Pub. 20th Rep. N. Y. St. Cab. Nat. Hist., p. 6, 1866; 24th Rep. N. Y. St. Cab. Nat. Hist., p. 213, pl. 5, fig. 16, 1872 (adv. pub. 1871).—Bather, Ann. Mag. Nat. Hist., (6) 5, p. 387, pl. 15, fig. 5a, 1890.

Ord. (Eden, Economy-McMicken mem.): Cincinnati, Ohio.

Heterocrinus geniculatus Ulrich = *Drymoocrinus geniculatus*.

Heterocrinus? *gracilis* Hall.

Hall, Nat. Hist. N. Y., Pal., 1, p. 280, pl. 76, figs. 3a, b, 1847.

Ord. (Trenton-Snake Hill sh.): Snake Hill, Saratoga Lake, N. Y.

Heterocrinus heterodactylus Hall.

Hall, Nat. Hist. N. Y., Pal., 1, p. 279, pl. 76, figs. 1 a-c, 1847.—Emmons, Amer. Geol., 1, pt. 2, pl. 17, fig. 20, 1858.—Meek, Geol. Surv. Ohio, Pal., 1, p. 12, pl. 1, figs. 1a, b, 1873.—Bassler, Maryland Geol. Surv., Camb.-Ord., p. 210, pl. 53, figs. 6, 7, 1919.—Ulrich, in Foerste, Geol. Surv. Canada, Mem. 138, p. 83, text fig. 3-A, 1924.—Ockerman, Trans. Wisconsin Acad. Sci., 22, p. 114, pl. 1, fig. 8, 1926.

Ord.: Boonville, Lorraine, etc., N. Y. (Lorraine sh.); Cincinnati, Ohio (Eden-Economy, Southgate mem.); West Covington, Ky. (Trenton-Cynthiana fm., Rogers Gap. div.).

Heterocrinus heterodactylus propinquus Meek = *H. propinquus*.

Heterocrinus inaequalis Billings = *Cremaerinus inaequalis*.

Heterocrinus ? *incurvus* Meek and Worthen = *Anomalocrinus incurvus*.

Heterocrinus isodactylus Miller = *Dystactocrinus compactus*.

***Heterocrinus juvenis* Hall.**

Hall, Adv. Pub. 20th Rep. N. Y. St. Cab. Nat. Hist., p. 4, 1866; 24th Rep. N. Y. St. Cab. Nat. Hist., pl. 5, figs. 9, 10, 1872 (adv. pub. 1871, pl. 1).—Meek, Geol. Surv. Ohio, Pal., 1, p. 10, pl. 1, figs. 3b, c (not 3a = *Atyphocrinus corryvillensis*).—Fritz, 32d Ann. Rep. Ontario Dep. Mines, pt. 7, p. 10, pl. 1, figs. 7, 11, 12, text figs. 2, 3, 1925.

Ord. (Maysville, Fairmount-Corryville sh.): Lebanon, etc., Ohio.

Heterocrinus juvenis Meek (part) = *Atyphocrinus corryvillensis*.

Heterocrinus laxus Hall = *Ohiocrinus laxus*.

Heterocrinus milleri Wetherby = *Eustenocrinus milleri*.

Heterocrinus (*Iocrinus*) *oehanus* Ulrich = *Ohiocrinus laxus*.

Heterocrinus pachydactylus Sandberger = *Nassoviocrinus pachydactylus*.

***Heterocrinus pentagonus* Ulrich.**

Ulrich, Jour. Cincinnati Soc. Nat. Hist., p. 176, pl. 5, figs. 10, 10a, 1882.—Oekerman, Trans. Wisconsin Acad. Sci., 22, p. 114, pl. 1, fig. 6, 1926.

Ord. (Maysville, Fairmount-Corryville sh.): Cincinnati, Ohio.

Heterocrinus? (*Iocrinus*) *polyxo* Hall = *Iocrinus subcrassus*.

***Heterocrinus propinquus* Meek.**

Heterocrinus propinquus or *H. heterodactylus* var. *propinquus* Meek, Geol. Surv. Ohio, Pal., 1, pt. 2, p. 14, pl. 1, figs. 2a, b, 1873.

Ord. (Eden, Economy-McMicken mem.): Cincinnati, Ohio.

Heterocrinus simplex Hall = *Ectenocrinus simplex*.

Heterocrinus simplex grandis Meek = *Ectenocrinus grandis*.

Heterocrinus subcrassus Meek and Worthen = *Iocrinus subcrassus*.

***Heterocrinus tenuis* Billings.**

Billings, Geol. Surv. Canada, Rep. Prog. 1853-1856, p. 273, 1857; Can. Org. Rem., Sec. 4, p. 50, pl. 4, figs. 6a, b, 1859.

Ottawacrinus tenuis Jaekel, Pal. Zeits., 3, p. 85, fig. 79, 1918.

Ord. (Trenton-Hull ls.): Ottawa and Kirkfield, Ontario; Montreal, Quebec, Can.

Heterocrinus vaupeli Wetherby = *Dystactocrinus constrictus*.

***Hexacrinites* Austin and Austin. Genotype: *Platycrinites interscapularis* Phillips. Hexacrinitidae (Adunata). Dev.**

Austin and Austin, Mon. Recent and Foss. Crin., p. 19, 1843.

Hexacrinus Austin and Austin, Mon. Recent and Foss. Crin., p. 48, 1844.—Sandberger and Sandberger, Verst. Rhein. Schicht. Nassau, p. 396, 1856.—Schultze, Denk. Kais. Akad. Wiss., Math. Natur. Cl., 26, p. 183, 1867 (adv. pub., 1866, p. 71).—Zittel, Handb. Pal., 1, p. 365, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 78 (252); N. Amer. Crin. Cam., p. 744, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 158, 1900.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 47, 1934.

Triplariocrinites Goldfuss (cat. name), Schultze, Denk. Kais. Akad. Wiss., Math. Natur. Cl., 26, p. 199, 1867 (adv. pub. 1866, p. 67). (Genotype: *T. exsculptus* Goldfuss = *Hexacrinites pateraeformis* Schultze.)

Triplariocrinus Zittel, Handb. Pal., 1, p. 365, 1879.—Bather, Treatise Zool. (Lankester), pt. 3, p. 204, 1900.

Hexacrinites aberrans (Whidborne).

Platycrinus aberrans Whidborne, Geol. Mag., 6, p. 79, 1889.

Hexacrinitus? aberrans Whidborne, Mon. Dev. Fauna S. England, 2, pt. 4, p. 199, pl. 23, fig. 3, pl. 25, figs. 2, 2c, 1895.

Dev.: Lummaton, England.

Hexacrinites anaglypticus (Goldfuss).

Platycrinites anaglypticus Goldfuss, Nova. Acta Acad. Leop. Carol. Nat. Cur., 19, p. 348, pl. 32, fig. 4, 1839.

Hexacrinitus anaglypticus Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 184, pl. 8, fig. 1, 1867 (adv. pub. 1866, p. 72).—Wilson, Jour. Geol., 24, p. 510, pl. 3, figs. 5, 6, 1916.

Mid. Dev. (Eifelian): Gerolstein, Eifel, Germany.

Hexacrinites anaglypticus frondosus (Schultze).

Hexacrinitus anaglypticus var. *frondosa* Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, pl. 8, fig. 1i, 1867 (adv. pub. 1866, p. 73).

Mid. Dev. (Eifelian): Gerolstein, Germany.

Hexacrinites anaglypticus granulosis (Schultze).

Hexacrinitus anaglypticus var. *granulosa* Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 185, pl. 8, fig. 1h, 1867 (adv. pub. 1866, p. 73).

Mid. Dev. (Eifelian): Kerpen, Germany.

Hexacrinites anaglypticus stellaris (Schultze).

Hexacrinitus anaglypticus var. *stellaris* Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 185, pl. 8, fig. 1c, 1867 (adv. pub. 1866, p. 73).

Mid. Dev. (Eifelian): Gerolstein, Germany.

Hexacrinites angulosus (von Koenen).

Hexacrinitus angulosus von Koenen, Neues Jahrb. Min. Geol. Pal., 1, p. 112, pl. 1, figs. 6a-d, 1886.

Up. Dev. (Frasnian-Cuboides zone): Near Stolberg, Germany.

Hexacrinites bacca (Schultze).

Hexacrinitus bacca Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 195, pl. 10, fig. 5, 1867 (adv. pub. 1866, p. 83).

Mid. Dev. (Eifelian): Pelm, Gerolstein, Germany.

Hexacrinites brevis (Goldfuss).

Platycrinites brevis Goldfuss, Nova Acta Acad. Leop., 19, p. 1, pl. 32, fig. 2, 1839.

Hexacrinitus brevis Sandberger and Sandberger, Vers. Rhein. Schicht. Nassau, p. 398, pl. 35, figs. 11, 11a, 1850-1856.—Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 191, pl. 10, fig. 7, 1867 (adv. pub. 1866, p. 79).

Mid. Dev. (Givetian-*Stringocephalus* ls.): Villmar and Gerolstein, Pelm, etc., Eifel, Germany.

Hexacrinites buchii (Roemer).

Platycrinus buchii Roemer, Verst. Hartzgeb., p. 9, pl. 12, fig. 13, 1843.

Dev. (Givetian-*Stringocephalus* ls.): Hartenberg, Eifel, Germany.

Hexacrinites callosus (Schultze).

Hexacrinitus callosus Schultze, Denk. Kais. Akad. Wiss., Math. Natur. Cl., 26, p. 195, pl. 9, figs. 3, 1867 (adv. pub. 1866, p. 83).

Mid. Dev. (Eifelian): Pelm, Germany.

Hexacrinites costatus (Müller).

Hexacrinitus costatus Müller, Monatsber. Berlin Akad. Wiss., for 1858, p. 354, 1858.

Mid. Dev. (Eifelian): Gerolstein, Germany.

Hexacrinites crispus (Quenstedt).

Hexacrinitus crispus Quenstedt, Epoch. Natur., p. 327, woodcut, 1861; Petref. Deutsch., 4, p. 562, pl. 109, fig. 58, 1876; Handb. Petref., ed. 3, p. 952, text fig. 357, 1885.

Mid. Dev. (Eifelian): Eifel, Germany.

Hexacrinites depressus (Austin and Austin).

Hexacrinites depressus Austin and Austin, Mon. Recent and Foss. Crin., p. 49, pl. 6, figs. 2 a-e, 1845.

Mid. Dev.: Newton Bushel, England.

Hexacrinites echinatus (Sandberger and Sandberger).

Hexacrinites echinatus Sandberger and Sandberger, Verst. Rheinl. Schicht. Nassau, p. 398, pl. 35, figs. 10 a-c, 1855. (Made syn. of *H. ornatus* Goldfuss by Schultze, 1867.)

Mid. Dev.: Villmar (Givetian-*Stringocephalus* ls.); Gerolstein and Kerpen, (Eifelian), Germany.

Hexacrinites elongatus (Goldfuss).

Platycrinites elongatus Goldfuss, Nova. Acta Acad. Leop., 19, p. 345, pl. 32, figs. 1 a-c, 1839.

Hexacrinites elongatus Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 186, pl. 9, fig. 4, 1867 (adv. pub. 1866, p. 74).—Wilson, Jour. Geol., 24, p. 510, pl. 3, fig. 4, 1916.

Mid. Dev. (Eifelian): Eifel and Gerolstein, Germany.

Hexacrinites exsculptus (Goldfuss).

Platycrinites exsculptus Goldfuss, Nova Acta Acad. Leop., 19, p. 347, pl. 32, figs. 3 a-c, 1839.

Hexacrinites exsculptus Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 189, pl. 9, fig. 2, 1867 (adv. pub. 1866, p. 77).

Dev. (Givetian-*Stringocephalus* ls.): Eifel, Germany.

Hexacrinites granifer (Roemer).

Platycrinites granifer Roemer, Ver. Nat. Hist. Preuss. Rheinl., 9, p. 281, pl. 2, figs. 1 a-c, 1852. (Made syn. for *H. interscapularis* Phillips by Schultze, 1867.)

Dev. (Lenne beds): Gummersbach, Westphalia, between Iserlohn and Hagen, Germany.

Hexacrinites granuliferus (Roemer).

Platycrinites granuliferus Roemer, Rhein. Uebergangsggeb., p. 63, pl. 3, fig. 4, 1843.

Hexacrinites granulifer Sandberger and Sandberger Verst. Rhein. Schicht. Nassau, p. 397, pl. 35, fig. 9, 1850-1856.

Mid. Dev.: Lahnstein near Weilburg, and Eifel, (Eifelian); Villmar (Givetian-*Stringocephalus* ls.) Germany.

Hexacrinites hieroglyphicus (Quenstedt).

Hexacrinites hieroglyphicus Quenstedt, Petref. Deutsch., 4, p. 565, pl. 109, fig. 68 1876.

Dev. (Eifelian): Eifel, Germany.

Hexacrinites humei (Springer).

Hexacrinites humei Springer, Geol. Surv. Canada, Bull. 42, p. 132, pl. 24, figs. 18, 19, 1926.

Up. Dev.: Root River, Northwest Terr., Canada.

Hexacrinites infundibulum (von Koenen).

Hexacrinites infundibulum von Koenen, Neues Jahrb. Min. Geol., Pal., 1, p. 112, pl. 1, figs. 3 a-e, 1886.

Up. Dev. (Frasnian-*Cuboides* zone): near Stolberg, Germany.

Hexacrinites inhospitalis (Schmidt).

Hexacrinites inhospitalis Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 48, text figs. 7a, a₁, pl. 4, fig. 2, pp. 143, 146, 1934.

Low. Dev. (Hunsrück sl.): Gemunden, Germany.

Hexacrinites interscapularis (Phillips).

Platycrinites interscapularis Phillips, Pal. Foss. Cornwall, p. 28, pl. 14, fig. 39, 1841.

Hexacrinites interscapularis Austin and Austin, Mon. Recent and Foss. Crin., p. 19, 1843.

Hexacrinus interscapularis Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 191, pl. 8, fig. 5, 1867 (adv. pub. 1866, p. 79).

Hexacrinus melo Austin and Austin, Mon. Recent and Foss. Crin. p. 48, pl. 6, figs. 1 a-e, 1844.

Mid. Dev.: South Devon, Newton, Plymouth, etc., England.

Hexacrinites iowensis (Thomas).

Hexacrinus iowensis Thomas, Ann. Rep. Geol. Surv. Iowa, 29, p. 462, pl. 42, figs. 10-13, 1924.

Dev. (Shell Rock ls.): East side Shell Rock River, Floyd Co., Iowa.

Hexacrinites (?Platyhexacrinus) leai (Lyon).

Platyacrinus leai Lyon, Trans. Amer. Philos. Soc., 13, p. 459, pl. 26, figs. g, g-1, 1869.

Hexacrinus leai Wachsmuth and Springer, N. Amer. Crin. Cam., p. 746, pl. 78, fig. 12, 1897.

Dev.: Beargrass Quarries, Jefferson Co., Ky. (Jeffersonville ls.); near LeRoy, N. Y. (Onondaga ls.); $2\frac{1}{2}$ miles south of Sylvania, Ohio (Silica sh.).

Hexacrinites limbatus (Müller).

Hexacrinus limbatus Müller, Monatsber. Akad. Wiss. Berlin, p. 354, 1856; Abhandl. Akad. Wiss., Berlin, p. 248, pl. 1, figs. 5-9, pl. 2, fig. 1, 1856.—Schultze, Denk. Kais. Akad. Wiss., Math. Natur. Cl., 26, p. 190, pl. 9, fig. 1, 1867 (adv. pub. 1866, p. 78).

Dev. (Eifelian): Gerolstein, Prüm, Eifel, Germany.

Hexacrinites lobatus (Müller).

Hexacrinus lobatus Müller, Monatsber. Akad. Wiss. Berlin, p. 354; Abhandl. Akad. Wiss., Berlin, p. 248, pl. 1, figs. 10-12, 1856.—Schultze, Denk. Kais. Akad. Wiss., Math. Natur. Cl., 26, p. 196, pl. 10, fig. 6, 1867 (adv. pub. 1866, p. 84).

Dev. (Eifelian): Prüm, Germany.

Hexacrinites macrotatus Austin and Austin.

Hexacrinus macrotatus Austin and Austin, Mon. Recent and Foss. Crin., p. 50, pl. 6, figs. 3a-d, 1845.

Mid. Dev., Newton Bushel, South Devon, and Wolborough, England.

Hexacrinites magnificus (Quenstedt).

Hexacrinus magnificus (Quenstedt), Handb. Petref., p. 740, 1867. Ed. 3, p. 953, text fig. 67, 1885; Petref. Deutsch., 4, p. 565, pl. 109, fig. 67, 1876.

Dev. (Eifelian): Gerolstein, Germany.

Hexacrinites microglyphicus (Whidborne).

Hexacrinus microglyphicus Whidborne, Geol. Mag., 6, p. 79, 1889; Mon. Dev. Fauna S. Eng., 2, pt. 4, p. 196, pl. 23, figs. 1, 2, 1895.

Mid. Dev.: Wolborough, S. England.

Hexacrinites minor (Dewalque).

Hexacrinus minor Dewalque, in Fraipont, Ext. Ann. Geol. Soc. Belgique, 11, p. 110, pl. 1, figs. 4a, 4b, 1884.

Up. Dev. (Frasnian): Senzeille, near Valcourt, Belgium.

Hexacrinites nodifer (Schultze).

Hexacrinus nodifer Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 196, pl. 10, fig. 3, 1867 (adv. pub. 1866, p. 84).

Dev. (Eifelian): Kerpen, near Hillesheim, Germany.

Hexacrinites occidentalis (Wachsmuth and Springer).

Hexacrinus occidentalis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 745, pl. 78, fig. 10, 1897.—Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 459, pl. 42, fig. 1, 1924.

Up. Dev. (Cedar Valley ls.-Davenport beds): Near Davenport, Iowa.

Hexacrinites ornatus (Goldfuss).

Platycrinites ornatus Goldfuss, Nova Acta. Acad. Leop., 19, pt. 1, p. 347, 1839.

Hexacrinites ornatus Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 194, pl. 8, fig. 4, pl. 10, fig. 9, 1867 (adv. pub. 1866, p. 82).—Beyer, Verh. Nat. Ver. Preuss. Rheinl. Westphalia, 53, p. 89, pl. 3, fig. 73, 1896.

Dev. (Eifelian): Eifel, Germany.

Hexacrinites ornatus marginatus (Schultze).

Hexacrinites ornatus var. *marginata* Schultze, Denk. Kais. Akad. Wiss., Math. Natur. Cl., 26, p. 194, 1867 (adv. pub. 1866, p. 82).

Dev. (Eifelian): Eifel, Germany.

Hexacrinites pateraeformis (Schultze).

Hexacrinites pateraeformis Schultze, Denk. Kais. Akad. Wiss., Math. Natur. Cl., 26, p. 199, pl. 10, fig. 4, 1867 (adv. pub. 1866, p. 87).—Bather, Treatise Zool. (Lankester), pt. 3, p. 159, fig. 72, 1900.—Yakovlev, Bull. Acad. Sci. URSS, p. 907, pl. 1, figs. 1a, b, 1930.

Dev. (Eifelian): Gerolstein and Kerpen, Germany.

Hexacrinites pentangularis (Austin and Austin).

Hexacrinites? pentangularis Austin and Austin, Mon. Recent and Foss. Crin., p. 51, pl. 7, figs. 1 a-c, 1845.

Hexacrinites quintangulus Whidborne, Geol. Mag., 6, p. 79, 1889; Mon. Dev. Fauna S. Eng., 2, pt. 4, p. 193, pl. 23, figs. 6, 7, 1895.

Mid. Dev.: Newton Bushel, Wolborough, Lummaton, England.

Hexacrinites perarmatus (Whidborne).

Hexacrinites perarmatus Whidborne, Geol. Mag. 6, p. 79, 1889; Mon. Dev. Fauna S. Eng., 2, pt. 4, p. 194, pl. 22, figs. 9, 10, 1895.

Mid. Dev.: Wolborough, Newton Bushel, and Lummaton, England.

Hexacrinites piriformis (Schultze).

Hexacrinites piriformis Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 188, pl. 10, figs. 1, 1a-c, 1867 (adv. pub. 1866, p. 76).

Dev. (Eifelian): Gerolstein, Germany.

Hexacrinites spinosus Müller, Monatsber. Akad. Wiss. Berlin, p. 354, 1856; Abhandl.

K. Akad. Wiss. Berlin, p. 247, pl. 1, figs. 13, 14, 1856.

Dev. (Eifelian): Prüm, Germany.

Hexacrinites springeri (Thomas).

Hexacrinites springeri Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 461, text fig. 72, pl. 42, figs. 2-9, pl. 43, figs. 1-9, 1924.

Dev. (Shell Rock ls.): Left bank Shell Rock River, Floyd Co., Iowa.

Hexacrinites stellaris (Roemer).

Platycrinus stellaris Roemer, Verh. Nat. Hist. ver. Preuss. Rhein. 8, p. 362, pl. 1, figs. 2 a-c, 1851.

Hexacrinites stellaris Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 193, pl. 8, fig. 3, 1867 (adv. pub. 1866, p. 81).

Dev. (Eifelian): Eifel, Germany.

Hexacrinites symmetricus (Quenstedt).

Hexacrinites symmetricus Quenstedt, Handb. Petref., ed. 2, pl. 71, fig. 5, 1876; ed. 3, p. 953, pl. 76, fig. 20, 1885; Petref. Deutsch., 4, p. 563, pl. 109, fig. 64, 1876.

Dev. (Eifelian): Eifel, Germany.

Hexacrinites triradiatus (Schultze).

Hexacrinites triradiatus Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 193, pl. 9, fig. 5, 1867 (adv. pub. 1866, p. 86).

Dev. (Eifelian): Kerpen, Germany.

Hexacrinites tuberculatus (von Koenen).

Hexacrinites tuberculatus von Koenen, Neues Jahrb. Min., Geol. Pal., 1, p. 115, pl. 1, figs. 4 a-d, 1886.

Up. Dev. (Frasnian-Cuboides zone): Near Stolberg, Germany.

Hexacrinites ventricosus (Goldfuss).

Platycrinites ventricosus Goldfuss, Petref. Germ., 1, p. 189, pl. 53, figs. 4 a-c, 1831.

Hexacrinus ventricosus Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 197, pl. 10, fig. 2, 1867 (adv. pub. 1866, p. 85).

Dev. (Eifelian): Eifel and Pelm, Germany.

Hexacrinites verrucosus (Dewalque).

Hexacrinus verrucosus Dewalque in Fraipont, Ann. Soc. Geol. Belgique, 40, p. 108, pl. 1, fig. 3, 1884.—Von Koenen, Neues Jahrb. Min. Geol. Pal., 1, p. 113, pl. 1, figs. 2 a-c, 5, 1886.

Up. Dev. (Frasnian): Senzeille, near Valcourt, Belgium, and near Stolberg, Germany.

Hexacrinites vicarii (Whidborne).

Hexacrinus vicarii Whidborne, Geol. Mag., 6, p. 79, 1889; Mon. Dev. Fauna S. Eng., vol. 2, pt. 4, p. 197, pl. 23, figs. 4, 5, 1895.

Mid. Dev.: Wolborough and Newton Bushel, England.

Hexacrinites wachsmuthi (Oehlert).

Hexacrinus wachsmuthi Oehlert, Bull. Soc. Géol. France, (3) 10, p. 355, pl. 8, fig. 3, 1882.

Low. Dev.: Sable, France.

Hexacrinus of authors = Hexacrinites.

Hexacrinus melo Austin = *H. interscapularis*.

Hexacrinus mosquensis Ivanov.

Ivanov, Bull. Soc. Nat. Moscou, sec. geol., 34, p. 176, 1926 (nom. nud.).

Carbonif.: Gov. Moscow, Russia.

Hexacrinus nodiger (Eichwald).

Actinocrinus nodiger Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, p. 118, 1856.

Hexacrinus nodiger Eichwald, Leth. Ross., 1, p. 604, pl. 31, figs. 28 a-c, 1860. (Stems only).

Dev.: Ilpen, Island of Oesel.

Hexacrinus perdubius Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 41, pl. 15, figs. 20, 21, 1930. (Unrecognizable).

Permian: Sicily.

Hexacrinus quintangulus Whidborne = *Hexacrinites pentangularis*.

Hexacrinus spinosus Opitz = *Ctenocrinus malcontractus*.

Himerocrinus Springer. Genotype: *Hadrocrinus plenissimus* Lyon.

Dolatocrinidae (Camerata). Dev.

Springer, U. S. Nat. Mus., Bull. 115, p. 12, 1921.—Goldring, N. Y. St. Mus., Mem. 16, p. 198, 1923. (See *Coronocrinus* Hall.)

Himerocrinus plenissimus (Lyon).

Hadrocrinus plenissimus Lyon, Trans. Amer. Philos. Soc., 13, p. 445, pl. 26, fig. B 1-3, 1869.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 328, pl. 24, figs. 2a, b, 1897.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 16, p. 165, pl. 48, figs. 5, 6, 1903.

Himerocrinus plenissimus Springer, U. S. Nat. Mus., Bull. 115, p. 12, pl. 2, fig. 2, p. 3, figs. 1-4, pl. 4, figs. 1-4, 1921.

Dev. (Onondaga-Jeffersonville ls.): Jeffersonville, Ind.

Himerocrinus? polydactylus Goldring = *Coronocrinus polydactylus*.

Histocrinus Kirk. Genotype: *Poteriocrinus (Scytalocrinus) grandis* Wachsmuth and Springer = *H. coreyi* (Worthen).

Poteriocrinitidae (Inadunata-Fistulata). Miss.

Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 327, 1940.

Histocrinus coreyi (Worthen).

Poteriocrinus coreyi Worthen (not *Poteriocrinites* (*Scaphiocrinus*) *coreyi* Meek and Worthen, 1869), Geol. Surv. Ill., 6, p. 516, pl. 29, figs. 2, 3, 1875.

Poteriocrinus (*Scytalocrinus*) *grandis* Wachsmuth and Springer, Rev. Pal., pt. 1, p. 118 (341), 1880 (1879).

Decadocrinus grandis Springer, Amer. Geol., 26, p. 144, pl. 16, fig. 17, 1900.

Histocrinus grandis Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 328, 1940.

Miss. (Keokuk ls.): Crawfordsville and Indian Creek, Ind.

Histocrinus grandis Kirk = *Histocrinus coreyi*.

Histocrinus graphicus (Miller and Gurley).

Scaphiocrinus graphicus Miller and Gurley, 16th Rep. Geol. Nat. Res. Ind., p. 366, pl. 10, fig. 4, 1890 (authors' ed. p. 50).

Histocrinus graphicus Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 328, 1940.

Miss. (Keokuk ls.): Crawfordsville, Ind.

Histocrinus juvenis (Meek and Worthen).

Poteriocrinites (*Graphiocrinus*, *Scaphiocrinus*) *juvenis* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 146, 1869; Geol. Surv. Ill., 5, p. 419, pl. 2, fig. 8, 1875.

Decadocrinus juvenis Wachsmuth and Springer, Rev. Pal., pt. 1, p. 119 (342), 1880 (1879).

Histocrinus juvenis Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 328, 1940.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Homalocrinus Angelin. Genotype: *H. parabasalis* Angelin.

Lecanocrinidae (Flexibilia). Sil.

Angelin, Icon. Crin. Suec., p. 11, 1878.—Zittel, Handb. Pal., 1, p. 355, 1879; Grundz. Pal., p. 138, 1895.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 35 (258), 1880 (1879).—Bather, Treatise Zool. (Lankester), pt. 3, p. 189, 1900.—Springer, Jour. Geol. 14, p. 482, 1906; Zittel-Eastman Textb. Pal., 1, p. 203, 1913; Crin. Flexibilia, p. 144, 1920.

Leiocrinus Springer, (not d'Orbigny), Amer. Geol., 30, p. 95, 1902. (Genotype: *Calpiocrinus ovatus* Angelin.)

Homalocrinus dudleyensis Springer = *H. parabasalis*.

Homalocrinus Iljevalli Springer.

Springer, Crin. Flexibilia, p. 155, pl. 6, figs. 13-15, 1920.

Sil. (Gotlandian): Wisby, Island of Gotland.

Homalocrinus parabasalis Angelin.

Angelin, Icon. Crin. Suec., p. 11, pl. 16, figs. 29, 30, 1878.—Springer, Jour. Geol., 14, no. 6, p. 482, pl. 7, fig. 9, 1906; Crin. Flexibilia, p. 154, pl. 6, figs. 1-12, 1920.

Homalocrinus dudleyensis Springer, Jour. Geol., 14, no. 6, p. 482, pl. 7, figs. 12, 13, 1906.

Taxocrinus nanus Salter, Cat. Coll. Camb. Sil. Foss., p. 126, 1873.

Sil.: Wisby, Island of Gotland (Gotlandian); Dudley, England (Wenlock ls.)

Homalocrinus? peculiaris Springer.

Springer, Crin. Flexibilia, p. 159, pl. 7, figs. 6 a-c, 1920.

Sil. (Gotlandian): Wisby, Island of Gotland.

Homocrinus Hall. Genotype: *H. parvus* Hall.

Homocrinidae (Inadunata-Fistulata). Sil.; Dev.

Hall, Nat. Hist. N. Y., Pal., 2, p. 185, 1852; vol. 3, p. 102, 1859 (1861).—Zittel, Handb. Pal., 1, p. 361, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 77 (300), 1880 (1879); pt. 3, p. 220 (144), 1886.—Bather, Ann. Mag. Nat. Hist., (6) 5, p. 324, 1890; Treatise Zool. (Lankester), pt. 3, p. 179, 1900.—Kirk, U. S. Nat. Mus., Proc., 46, no. 2038, p. 473, 1914.—Ulrich in Foerste, Geol. Surv. Canada, Mem. 138, p. 93, 1924.

(*Homocrinus* of Hall, 1859 (1861), Wachsmuth and Springer, 1880, 1886; Bather, 1893, refers mainly to *Lasiocrinus* Kirk.)

Homocrinus? aemulus (Hall).

Cyathocrinus (*Poteroicrinus*) *aemulus* Hall, Trans. Albany Inst., 10, p. 10, 1882 (Prelim. Not., 1879); 11th Rep. Geol. Nat. Hist. Ind., p. 266, 1882.

Homocrinus? aemulus Wachsmuth and Springer, Rev. Pal., pt. 3, p. 234 (158), 1886. Sil. (Niagaran-Waldron sh.): Waldron, Ind.

Homocrinus ancilla (Hall).

Dendrocrinus ancilla Hall, Trans. Albany Inst., 10, p. 65, 1882 (Prelim. Not., 1879); 11th Ann. Rep. Geol. Nat. Hist. Ind., p. 271, pl. 15, fig. 18, 1882.

Homocrinus ancilla Wachsmuth and Springer, Rev. Pal., pt. 3, p. 220 (144), 1886. Sil. (Niagaran): Waldron, Ind. (Waldron sh.); near Lemont, Ill. (Racine dol.).

Homocrinus angustatus Meek and Worthen = *Dendrocrinus angustatus*.

Homocrinus constrictus Hall = *Dystactocrinus constrictus*.

Homocrinus crassus Whiteaves = *Botryocrinus crassus*.

Homocrinus cylindricus Hall.

Hall, Nat. Hist. N. Y., Pal., 2, p. 186, pl. 41, figs. 2 a-e, 3 a-c, 1852.

Sil. (Niagaran): Lockport, N. Y., Grimsby, Ont. (Rochester sh.); Lemont, Ill. (Racine dol.).

Homocrinus dipentus Eichwald = *Hoplocrinus dipentus*.

Homocrinus hartleyi Ohern.

Ohern, Maryland Geol. Surv., Low. Dev., p. 255, pl. 40, fig. 6, 1913.

Dev. (Oriskany-Ridgeley ss.): Cumberland, Md.

Homocrinus kayseri Jaekel = *Follicrinus kayseri*.

Homocrinus laxus Hall = *Ohioocrinus laxus*

Homocrinus parvus Hall.

Hall, Nat. Hist. N. Y., Pal., 2, p. 185, pl. 41, figs. 10 a-f, 1852.—Kirk, U. S. Nat. Mus., Proc., 46, p. 474, pl. 42, figs. 1-8, 1914.—Springer, Crin. Flexibilia, p. 177, pl. 4, fig. 22, 1920.—Ulrich in Foerste, Geol. Surv. Canada, Mem. 138, p. 93, text fig. 10 A, A' (A and B by error), 1924.

Sil. (Niagaran-Rochester sh.): Lockport, N. Y.

Homocrinus polydactylus Shumard = *Cupulocrinus polydactylus*.

Homocrinus proboscidalis Hall.

Hall, Nat. Hist. N. Y., Pal., 3, p. 138, pl. 35, figs. 24, 25, 1859.—Ohern, Maryland Geol. Surv., Low. Dev., p. 255, pl. 40, figs. 4, 5, 1913.

Dev. (Oriskany-Ridgeley ss.): Cumberland, Md.

Homocrinus rhenanus Jaekel.

Jaekel, Pal. Zeits., 3, p. 54, fig. 43, 1918.

Low. Dev. (Coblenzian ss.): Bornich near St. Goarshausen, Germany.

Homocrinus scoparius Hall = *Lasiocrinus scoparius*

Homocrinus tenuis Bather = *Antihomocrinus tenuis*.

Hoplocrinus Grewingk. Genotype: *Apiocrinus dipentus* Leuchtenberg.

Hybocrinidae (Inadunata-Fistulata). Ord.

Grewingk, Kais. Min. Gesells. St. Petersburg., p. 9, 1867; Arch. Natur. Kiev., Esthland und Kurlands, (1) 4, p. 110, 1867.—Schmidt, Mem. Acad. Imp. Sci. St. Petersburg., (7) 21, no. 11, p. 7, 1874.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 197 (121), 1886.—Bather, Ann. Mag. Nat. Hist., (6) 5, p. 324, 1890; Treatise Zool. (Lanckester), pt. 3, p. 145, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 211, 1913.—Opik, Pub. Geol. Inst. Univ. Tartu, A VIII, p. 17, 1926; *ibid.* no. 43, pp. 1-6, 1935.

Hoplocrinus dipentus (Leuchtenberg).

Apiocrinus dipentus Leuchtenberg, Besch. Neuen Thier, Urwelt v. Zarskoje Selo, 17, pl. 2, figs. 9-12, 1843.

Homocrinus dipentus Eichwald, Leth. Ross., 5, p. 583, pl. 31, figs. 44 a-c, 1859.

Hoplocrinus dipentus Grewingk, Kais. Min. Gesell., p. 10, figs. 1 a-f, 1867.

Hybocrinus dipentus Schmidt, Mem. Acad. Imp. Sci. St. Petersburg., (7) 21, p. 3, pl. 1, figs. 1-6, 1874.

Hoplocrinus dipentus Bather, Ann. Mag. Nat. Hist., (6) 5, p. 333, pl. 14, fig. 2, 1890; Treatise Zool. (Lankester), pt. 3, p. 145, fig. 57, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 211, fig. 312, 1913.—Öpik, Pub. Geol. Inst. Univ. Tartu, Acta Comm. Univ. Dorpat, A VIII, 5, p. 17, pl. 2, figs. 12, 13, 1925; Pub. Geol. Inst. Univ. Tartu, no. 43, p. 7, text fig. 1d, 1e, 2, 1935.

Ord. (Duboviki fm., C₁): Pulkowa and Zarskoje Selo, Russia.

Hoplocrinus estonus Öpik.

Öpik, Pub. Geol. Inst. Univ. Tartu, no. 43, p. 9, text figs. 1c, 3, pl. 1, figs. 1-4, 1935.

Ord. (Jewe beds, D1): Tallinn, Estonia.

Hoplocrinus grewingki Öpik.

Öpik, Pub. Geol. Inst. Univ. Tartu, Acta Comm. Univ. Dorpat, A VIII, 5, p. 17, pl. 2, figs. 14, 15, 1925; Pub. Geol. Inst. Univ. Tartu, no. 43, p. 11, pl. 2, figs. 1-3, 1935.

Ord. (Kuckers sh. and Itfer beds, C₂, C₃): Tallinn (Reval), Estonia.

Hoplocrinus pseudodicyclius Öpik.

Öpik, Pub. Geol. Inst. Univ. Tartu, no. 43, p. 12, pl. 1, fig. 5, text fig. 4, 1935.

Ord. (Kuckers sh. C₂): Sojamagi, near Tallinn, Estonia.

Hoplocrinus tallinnensis Öpik.

Öpik, Pub. Geol. Inst. Univ. Tartu, no. 43, p. 11, pl. 2, fig. 4, 1935.

Ord. (Kuckers sh. C₂): Near Tallinn, Estonia.

Hormocrinus Springer. Genotype: *Centrocrinus tennesseensis* Worthen.

Lecanocrinidae (Flexibilia): Sil.

Springer, Crin. Flexibilia, p. 166, 1920; Amer. Sil. Crin., p. 66, 1926.—Bassler, U. S. Nat. Mus., Bull. 92, 2, p. 885 (as *Ormocrinus*), 1915.

Hormocrinus anglicus Springer.

Springer, Crin. Flexibilia, p. 168, pl. 14, figs. 6, 7, 1920.

Sil. (Wenlock ls.): Dudley, England.

Hormocrinus gotlandicus Springer.

Springer, Crin. Flexibilia, p. 169, pl. 14, figs. 8 a-d, 1920.

Sil. (Gotlandian): Alskag, Island of Gotland.

Hormocrinus tennesseensis (Worthen).

Centrocrinus tennesseensis Worthen, Geol. Surv. Ill., 8, p. 95, pl. 14, fig. 1, 1890.

?*Idiocrinus tennesseensis* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 206, pl. 18, fig. 11, 1897.

Hormocrinus tennesseensis Springer, Crin. Flexibilia, p. 167, pl. 14, figs. 1-5, 1920; Amer. Sil. Crin., p. 66, pl. 22, figs. 1-3b, 1926.

Sil. (Niagaran-Beech River fm.): Near Clifton, Wayne Co., Tenn.

Hybochilocrinus J. M. Weller. Genotype: *Allagecrinus americanus* Rowley.

Allagecrinidae (Inadunata-Larviformia). Miss.

J. M. Weller, State Geol. Surv. Ill., Rep. Invest. no. 21, p. 12, 1930.—Moore, Denison Univ. Bull., 40, Jour. Sci. Lab., 35, p. 77, 1940.

Hybochilocrinus americanus (Rowley).

Allagecrinus americanus Rowley, Amer. Geol., 16, p. 219, figs. 3-10, 1895; Missouri Bur. Geol. Mines, 8, p. 67, pl. 16, figs. 39-41, 1908.—Peck, Jour. Geol., 43, no. 7, p. 766, text fig. 1, 1935.

Hybochilocrinus americanus J. M. Weller, State Geol. Surv. Ill., Rep. Invest. no. 21, pp. 12, 13, text fig. 1, pl. 1, figs. 1 a-c, 1930.

Miss. (Kinderhook gr.-Louisiana ls.): Louisiana, Mo.

Hybochilocrinus rowleyi (Peck).

Allagecrinus rowleyi Peck, Jour. Pal., 10, p. 284, pl. 47, figs. 15-20, 23, 24, 27, 28, 1936.

Hybochilocrinus rowleyi Moore, Denison Univ. Bull. 40, Jour. Sci. Lab. 35, p. 78, 1940.

Miss. (Chouteau ls.): Just south of Providence and 3 miles northwest Browns Sta., Boone Co., Mo.

Hybocrinus Billings. Genotype: *H. conicus* Billings.

Hybocrinidae (Inadunata-Fistulata). Ord.

Billings, Geol. Surv. Canada, Rep. Prog. for 1853-1856, p. 275, 1857; Can. Org. Rem., Dec. 4, p. 23, 1859.—Zittel, Handb. Pal., 1, p. 350, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 74, 1880 (1879); pt. 3, p. 198 (297), 1886.—Bather, Ann. Mag. Nat. Hist., (6) 5, p. 324, 1890; Treatise Zool. (Lankester), pt. 3, p. 145, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 211, 1913.

Indianocrinus Miller and Gurley, Ill. St. Mus. Nat. Hist., Bull. 7, p. 83, 1895. (Genotype: *I. punctatus* Miller and Gurley.)

Hybocrinus conicus Billings.

Billings, Geol. Surv. Canada, Rep. Prof. for 1853-1856, p. 274, 1857; Can. Org. Rem., Dec. 4, p. 29, pl. 2, figs. 2a, b, 1859.—S. A. Miller, N. Amer. Geol. Pal., p. 255, fig. 341, 1889.—Bather, Treatise Zool. (Lankester), pt. 3, p. 125, fig. 36, 1900.—Springer, Geol. Surv. Canada, Mem. 15-P, pl. 5, fig. 6, 1911.

Ord. (Trenton): Ottawa Canada (Hull ls.); Mercer Co., Ky. (Curdsville ls.).

Hybocrinus? (*Anomalocrinus*) *incurvus* Meek and Worthen = *Anomalocrinus incurvus*.

Hybocrinus pristinus Billings.

Billings, Geol. Surv. Canada, Can. Org. Rem., Dec. 3, p. 25, figs. 4, 5, 1858; Dec. 4, p. 23, pl. 1, fig. 2a, 1859.

Ord. (Chazyan-Aylmer fm.): Montreal, Caughnawago, Jesus, and Bizard, Canada.

Hybocrinus punctatus (Miller and Gurley).

Indianocrinus punctatus Miller and Gurley, Ill. St. Mus., Bull. 7, p. 83, pl. 5, figs. 8-13, 1895.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 748, fig. 1362, 1897.

Silurian: St. Paul, Ind. (Probably an error for Ord.—Black River of Central Tenn. E. Kirk.)

Hybocrinus tumidus Billings.

Billings, Geol. Surv. Canada, Rep. Prog. for 1853-1856, p. 275; Can. Org. Rem., Dec. 4, p. 28, pl. 2, figs. 1a-1e, 1859.

Ord. (Trenton): Ottawa, Ontario, Canada (Hull ls.); Mercer Co., Ky. (Curdsville ls.).

Hybocystis Bather = Hybocystites.

Hybocystis problematicus Parks (not Wetherby) = Hybocystites eldonensis.

Hybocystites Wetherby. Genotype: *H. problematicus* Wetherby.

Hybocrinidae (Inadunata-Fistulata). Ord.

Wetherby, Jour. Cincinnati Soc. Nat. Hist., 3, p. 150, 1880.—Carpenter, Quart. Jour. Geol. Soc. London, 38, p. 308, 1882.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 199 (123), 1886.—Jaekel, Pal. Zeits., 3, p. 90, 1918.

Hybocystis Bather, Ann. Mag. Nat. Hist., (6) 3, p. 324, 1890; Treatise Zool. (Lankester), pt. 3, p. 145, 1900.—Springer, Geol. Surv. Canada, Mem. 15-P, p. 13, 1911; Zittel-Eastman Textb. Pal., 1, p. 211, 1913. (Substituted for *Hybocystites*.)

Hybocystites eldonensis (Parks).

Hybocystis eldonensis Parks, Ottawa Nat., 21, p. 234, pl. 2, fig. 4, 1908.—Springer, Geol. Surv. Canada, Mem. 15-P, p. 13, pl. 2, figs. 1-10, 1911.

- Hybocystis problematicus* Parks (not Wetherby), Ottawa Nat., 21, p. 232, pl. 2, figs. 1-3, 5, 1908.
Ord. (Trenton): Eldon township, Victoria Co., and Kirkfield, Ont. (Hull ls.); Mercer Co., Ky. (Curdsville ls.).
- Hybocystites problematicus** Wetherby.
Wetherby, Jour. Cincinnati Soc. Nat. Hist., 3, p. 150, pl. 5, figs. 1a-c, 1880.—Carpenter, Quart. Jour. Geol. Soc. London, 38, p. 307, pl. 11, figs. 6-24, 1882.—S. A. Miller, N. Amer. Geol. Pal., p. 256, fig. 342, 1889.
Hybocystis problematicus Bather, Treatise Zool. (Lankester), pt. 3, p. 95, fig. 1, 1900.
Ord. (Trenton): Mercer Co., Ky. (Curdsville ls.); Kirkfield, Ont. (Hull ls.).
- Hydreionocrinus** de Koninck. Genotype: *H. woodianus* de Koninck.
Poteriocrinitidae (Inadunata-Fistulata). Miss., Penn.
De Koninck, Bull. Acad. Roy. Bruxelles, (2) 4, p. 93, 1858.—Marschall, Nomen. Zool., p. 450, 1873 (as *Hydreionocrinus*).—Zittel, Handb. Pal., 1, p. 361, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 129 (352), 1880 (1879); pt. 3, p. 245 (169), 1886.—Bather, Trans. Edinburgh Geol. Soc., 10, pp. 61-76, 1912.—Springer, Zittel-Eastman Textb. Pal., 1, p. 223, 1913.—Wanner, Perm. Echin. Timor, p. 150, 1916.—Wright, Trans. Geol. Soc. Glasgow, 16, pp. 364-383, 1917-1918.—Wanner, Die Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 178, 1924.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, pp. 65, 88, 1926.—Wright, Geol. Mag., vol. 64, p. 368, 1927.—Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 33, p. 268, 1938.
- Hydreionocrinus acanthophorus* Keyes = *Sciadiocrinus acanthophorus*.
Hydreionocrinus amarassicus Wanner = *Cadocrinus amarassicus*.
Hydreionocrinus armiger Wachsmuth and Springer and Wetherby (part) = *Tholocrinus armiger*.
Hydreionocrinus crassidiscus Miller and Gurley = *Plaxocrinus crassidiscus*.
Hydreionocrinus daileyi Strimple = *Lasanocrinus daileyi*.
Hydreionocrinus depressus Wetherby = *Tholocrinus spinosus*.
Hydreionocrinus depressus Wood = *Zeacrinites depressus*.
- Hydreionocrinus deweyensis** Strimple.
Strimple, Bull. Amer. Pal., 24, no. 87, p. 15 (375), pl. 2, figs. 13, 17, 1939.
Penn. (Dewey ls.): Dewey, Oklahoma.
- Hydreionocrinus formosus** Wright.
Wright, Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 37, pl. 4, figs. 6, 10-13, 1939.
Carb. (Low. Ls. gr.): West end shore, St. Monance, Fife, Scotland.
- Hydreionocrinus? globularis* de Koninck = *Ulocrinus bockshi*.
Hydreionocrinus granuliferus Miller and Gurley = *Perimestocrinus granuliferus*.
Hydreionocrinus kansasensis Weller = *Neozeacrinus kansasensis*.
Hydreionocrinus mucrospinus Plummer and Moore = *Aatocrinus mucrospinus*.
Hydreionocrinus noduliferus Miller and Gurley = *Perimestocrinus noduliferus*.
Hydreionocrinus patulus Girty = *Aatocrinus patulus*.
Hydreionocrinus pentagonus Miller and Gurley = *Adinocrinus pentagonus*.
- Hydreionocrinus phillipsianus** (de Koninck and Lehon).
Poteriocrinus phillipsianus de Koninck and Lehon, Rec. Crin. Carb. Belg., p. 88, pl. 1, figs. 5a, b, 1854.
Hydreionocrinus phillipsianus de Koninck, Bull. Acad. Roy. Belg., (2) 4, p. 96, 1858.—Bather, Trans. Edinburgh Geol. Soc., 10, p. 69, text fig. 6, 1913.

- Poteriocrinus granulosis* Phillips, Geol. Yorkshire, 2, p. 205, pl. 4, fig. 2 (not figs. 4, 5, 9, 10), 1836.—Austin and Austin, Mon. Rec. Foss. Crin., p. 77, pl. 9, figs. 2a-f, 1846.
- Low. Carb.: Bolland and Clitheroe, England (Mtn. Ls.); Visé (Viséan) and Tournai (Tournaisian), Belgium.
- Hydreionocrinus sanctiludovici* Miller and Gurley = *Plaxocrinus*?? *sanctiludovici*.
- Hydreionocrinus scoticus* de Koninck = *Phanocrinus calyx*.
- Hydreionocrinus spinosus* Wood = *Tholocrinus spinosus*.
- Hydreionocrinus subsinuatus* Miller and Gurley = *Laudonocrinus subsinuatus*.
- Hydreionocrinus uddeni* Weller = *Neozeacrinus uddeni*.
- Hydreionocrinus variabilis* Wanner = *Cadocrinus variabilis*.
- Hydreionocrinus*? *verrucosus* White and St. John = *Parulocrinus verrucosus*.
- Hydreionocrinus verrucosus** Bather.
- Bather, Trans. Geol. Soc. Glasgow, 16, pt. 2, pp. 203-206, text figs. 1-5, 1917.
- Carb. (Poolvash ls.): Poolvash Bay, Isle of Man.
- Hydreionocrinus wetherbyi* Wachsmuth and Springer = *Tholocrinus wetherbyi*.
- Hydreionocrinus woodianus** de Koninck.
- De Koninck, Bull. Acad. Roy. Belg., (2) 4, p. 97, pl. 2, figs. 5, 5a, 1858.—Bather, Trans. Edinburgh Geol. Soc., 10, p. 61, text figs. 1-3, 5, 1912.—Wright, Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 35, pl. 2, figs. 1, 5, pl. 4, figs. 1-5, 7, 9, text figs. 41, 42, 1939.
- Low. Carb.: Richmond, Yorkshire, England; Roscobie, Inveriel, etc., Scotland (Low. Ls. gr.).
- Hydriocrinus** Trautschold. Genotype: *H. pusillus* (Trautschold).
- Poteriocrinittidae (Inadunata-Fistulata). Carb.
- Trautschold, Bull. Soc. Imp. Nat. Moscou, 40, no. 3, p. 16, 1867; Kalkbruche v. Mjatschkowa, p. 115, 1879.—Schmidt, Abhandl. Preuss. Geol. Landesanst. n.f., heft 122, p. 53, 1930.—Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 237, 1938.
- Hydriocrinus barumensis** (Whidborne).
- Cyathocrinus barumensis* Whidborne, Proc. Geol. Assoc., 14, p. 377, 1896.
- Poteriocrinus barumensis* Whidborne, Mon. Dev. Fauna S. England, 3, pt. 3, p. 227, pl. 34, fig. 6, pl. 35, fig. 3, 1899.
- Hydriocrinus barumensis* Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 122, pp. 57, 87, 1930.
- Low. Carb.: Barnstaple, Fremington, England.
- Hydriocrinus mjassoedowae** Yakovlev.
- Yakovlev, Ann. Soc. Pal. Russie, 4, p. 30, text fig. 1, 1926; Centralbl. Min. Geol. Pal., Abt. B, no. 9, p. 378, 1930.
- Carb.: Mt. Jegouli, Russia.
- Hydriocrinus mundus** (Whidborne).
- Mariocrinus*? *mundus* Whidborne, Mon. Dev. Fauna S. England, 3, pt. 3, p. 219, pl. 34, fig. 5?, pl. 37, figs. 6, 7, 1899.
- Hydriocrinus mundus* Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 122, p. 87, 1930.
- Low. Carb. (Marwood beds): Croyde Rocks, Braunton, England.
- Hydriocrinus plumifer** (Whidborne).
- Scaphiocrinus*? *plumifer* Whidborne, Mon. Dev. Fauna S. England, 3, pt. 3, p. 228, pls. 31, 33, 36, 38, 1899.
- Hydriocrinus plumifer* Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 122, p. 57, 1930.
- Low. Carb. (Pilton and Marwood beds): Barnstaple, Braunton, Pilton, England.

Hydriocrinus pusillus Trautschold.

Trautschold, Bull. Soc. Imp. Nat. Moscou, 40, pt. 2, p. 16, pl. 2, fig. 9, text fig., 1867; Kalkbruche Mjatschkowa, p. 116, pl. 14, fig. 4, pl. 15, fig. 2, 1879.

Carb. (Moscovian): Mjatschkowa, Moscow, Russia.

Hydriocrinus pusillus rotundatus Ivanov.

Ivanov, Bull. Soc. Nat. Moscou, 34, p. 176 (nom. nud.).

Carb.: Gov. Moscow, Russia.

Hydriocrinus ratingensis Schmidt.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 122, p. 53, text fig. 10, pl. 3, figs. 21 a-c, 1930.

Poteriocrinus barumensis Drevermann, Zeits. Deutsch. Geol. Gesell., 54, p. 518, 1903.

Low. Carb. (Viséan): Ratingen, Germany.

Hydriocrinus? rosei Moore and Plummer.

Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 239, pl. 14, figs. 8 a-d, pl. 16, fig. 9, text fig. 6, 1938.

Penn. (Brentwood ls.): 2 miles north of Fort Gibson, Oklahoma.

Hydriocrinus salebrosus (Whidborne).

Scaphiocrinus salebrosus Whidborne, Mon. Dev. Fauna S. England, 3, pt. 3, p. 232, pl. 37, fig. 13, 1899.

Hydriocrinus salebrosus Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 122, p. 87, 1930.

Low. Carb. (Pilton beds): Pilton, Barnstaple, Upcott, England.

Hydriocrinus tensus (Whidborne).

Poteriocrinus tensus Whidborne, Proc. Geol. Assoc., 14, p. 377, 1896; Mon. Dev. Fauna S. England, 3, pt. 3, p. 226, pl. 35, figs. 1, 2, pl. 38, fig. 1, 1899.

Hydriocrinus tensus Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 122, p. 87, 1930.

Low. Carb. (Pilton and Marwood beds): Barnstaple, Pilton, England.

Hydriocrinus transcisus (Whidborne).

Scaphiocrinus transcisus Whidborne, Mon. Dev. Fauna S. England, 3, pt. 3, p. 230, pl. 38, fig. 3, 1899.

Hydriocrinus transcisus Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 122, pp. 57, 87, 1930.

Low. Carb. (Pilton beds): Barnstaple, Pilton, England.

Hylodecrinus Kirk. Genotype: *H. sculptus* Kirk.

Pachylocrinidae (Inadunata-Fistulata). Miss.

Kirk, Jour. Pal., 15, no. 1, p. 85, 1941.

Hylodecrinus asper Kirk.

Kirk, Jour. Pal., 15, no. 1, p. 86, pl. 17, figs. 5, 6, 1941.

Miss. (Keokuk ls.): Indian Creek, Indiana.

Hylodecrinus sculptus Kirk.

Kirk, Jour. Pal., 15, no. 1, p. 86, pl. 17, figs. 3, 4, 7, 1941.

Miss. (Keokuk ls.): Indian Creek, Indiana.

Hypanthocrinites Phillips = Eucalyptocrinites.

Hypanthocrinus of authors = Eucalyptocrinites.

Hyperocrinus Bather = Uperocrinus.

Hypocrinus Beyrich. Genotype: *H. schneideri* Beyrich.

Hypocrinidae (Inadunata-Fistulata). Permian.

Beyrich, Zeits. Deutsch. Geol. Gesell., 14, p. 537, 1862.—Zittel, Handb. Pal., 1, p. 413, 1879.—Bather, Treatise Zool. (Lankester), pt. 3, p. 178, 1900; Proc. Zool. Soc. London, p. 894, 1913.—Springer, Zittel-Eastman Textb. Pal., 1, pp. 157, 219, 1913.—Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 94, 1916; Neue Beitr. kennt. Perm. Echin. Timor, p. 36, 1929.

Hypocrinus mülleri Rothpletz = *H. schneideri*.

Hypocrinus piriformis Rothpletz = *Metasyocrinus piriformis*.

***Hypocrinus schneideri* Beyrich.**

Beyrich, Zeits. Deutsch. Geol. Gesell., 14, p. 537, 1862; Abhandl. Akad. Wiss. Berlin, pp. 83, 84, pl. 2, figs. 16 a-c, 1865.—Bather, Proc. Zool. Soc. London, p. 900, pl. 90, figs. 1-6, 1913.—Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 94, text fig. 23, pl. 102 (7), figs. 1-3, 1916; Ueber armlose krin. Jung. Pal., Verh. Geol. Mijnb. Genoots. Nederl. Kolonien, p. 23, text fig. 3, p. 24, text fig. 9, 1920; Neue Beitr. kennt. Perm. Echin. Timor, p. 40, pl. 1, figs. 1-3, 1929; *ib.*, III, p. 11, text figs. 5-7, pl. 2, figs. 1, 2, 1930.

Hypocrinus mülleri Rothpletz, Palaeontographica, 39, p. 74, 1892.

Permian: Kupang, Basleo, Timor.

***Hypselocrinus* Kirk. Genotype: *Poteriocrinus hoveyi* Worthen.**

Poteriocrinitidae (Inadunata-Fistulata). Miss.

Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 326, 1940.

***Hypselocrinus arcanus* (Miller and Gurley).**

Poteriocrinus arcanus Miller and Gurley, 16th Rep. Geol. Surv. Ind., p. 348, pl. 5, fig. 4, 1890 (authors' ed. p. 29).

Hypselocrinus arcanus Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 326, 1940.

Miss.: Washington Co., Ind. (Keokuk ls.); Boonville, Mo. (Warsaw ls.).

***Hypselocrinus boonvillensis* (S. A. Miller).**

Poteriocrinus boonvillensis S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 652, pl. 8, figs. 3, 4, 1892 (adv. pub. 1891, p. 42).

Hypselocrinus boonvillensis Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 326, 1940.

Miss. (Warsaw ls.): Boonville, Mo.

***Hypselocrinus calyculus* (Hall).**

Poteriocrinus calyculus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 443, pl. 9, figs. 6 a-c, 1858; Suppl., pl. 2, fig. 11, 1860.

Scaphiocrinus calyculus Hall, N. Y. St. Mus., Bull. 1, pl. 6, fig. 1, 1872.

Miss. (Burlington ls.): Burlington, Iowa.

***Hypselocrinus douglassi* (Miller and Gurley).**

Poteriocrinus douglassi Miller and Gurley, Ill. St. Mus., Bull. 10, p. 83, pl. 5, figs. 16, 17, 1896.

Decadocrinus douglassi Laudon, Univ. Iowa Studies, 15, no. 2, p. 68, pl. 5, fig. 6, pl. 7, fig. 7, 1933.

Hypselocrinus douglassi Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 326, 1940.

Miss.: Bridger Mts., Bozeman, Mont. (Madison ls.); Gilmore City, Iowa (Kinderhook-Gilmore City ls.).

***Hypselocrinus fusiformis* (Hall).**

Poteriocrinus fusiformis Hall, Jour. Boston Soc. Nat. Hist., 7, p. 302, 1861; Prelim. Descr. New Crin., p. 6, 1861.

Hypselocrinus fusiformis Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 327, 1940.

Miss. (Burlington ls.): Burlington, Iowa.

***Hypselocrinus hoveyi* (Worthen).**

Poteriocrinus hoveyi Worthen, Geol. Surv. Ill., 6, p. 516, pl. 29, fig. 6, 1875.

Scytalocrinus hoveyi Springer, Amer. Geol., 26, p. 145, pl. 16, fig. 8, 1900.

Hypselocrinus hoveyi Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 326, 1940.

Miss. (Keokuk ls.): Crawfordsville, Indian Creek, and Canton, Ind.

***Hypselocrinus maccabei* (Miller and Gurley).**

Poteriocrinus maccabei Miller and Gurley, Ill. St. Mus., Bull. 5, p. 34, pl. 3, figs. 3-6, 1894.

Scytalocrinus maccabei Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 258 pl. 17, fig. 13, pl. 18, figs. 6, 7, pl. 19, fig. 6, 1937.

- Hypslocrinus maccabei* Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 326, 1940.
Poteroicrinus hammondi Miller and Gurley, Ill. St. Mus., Bull. 5, p. 35, pl. 3, figs. 7, 8, 1894.
Poteroicrinus maccabei var. *decrepitus* Miller and Gurley, Ill. St. Mus., Bull. 5, p. 36, pl. 3, figs. 9-12, 1894.
 Miss. (Kinderhook-Hampton fm.): Legrand, Marshall Co., Iowa.
- Hypslocrinus macrodactylus** (Meek and Worthen).
Poteroicrinites (*Graphiocrinus*; *Scaphiocrinus*) *macrodactylus* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 140, 1869.
Poteroicrinites (*Scaphiocrinus*) *macrodactylus* Meek and Worthen, Geol. Surv. Ill., 5, p. 415, pl. 2, fig. 9, 1873.
Poteroicrinus (*Scytalocrinus*) *macrodactylus* Wachsmuth and Springer, Rev. Pal., pt. 1, p. 117 (340), 1880 (1879).
Hypslocrinus macrodactylus Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 326, 1940.
 Miss. (Low. and Up. Burlington ls.): Burlington, Iowa.
- Hypslocrinus neglectus** (Miller and Gurley).
Poteroicrinus neglectus Miller and Gurley, Ill. St. Mus., Bull. 9, p. 31, pl. 4, figs. 3-5, 1896.
Hypslocrinus neglectus Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 326, 1940.
 Miss. (Warsaw ls.): Boonville, Mo.
- Hypslocrinus pleias** (Hall).
Poteroicrinus pleias Hall, Prelim. Not., 17th Rep. Regents Univ. St. N. Y., p. 57, 1863.—Hall and Whitfield, Geol. Surv. Ohio, 2, pt. 2, Pal., p. 175, pl. 12, fig. 8, 1875.
Decadocrinus pleias Wachsmuth and Springer, Rev. Pal., pt. 1, p. 119 (342), 1880 (1879).
Hypslocrinus pleias Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 327, 1940.
 Miss. (Waverlyan.-Cuyahoga fm.): Richfield, Summit Co., Ohio.
- Hypslocrinus tethys** (Meek and Worthen).
Poteroicrinus (*Graphiocrinus*; *Scaphiocrinus*) *tethys* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 143, 1869.
Poteroicrinus (*Scaphiocrinus*) *tethys* Meek and Worthen, Geol. Surv. Ill., 5, p. 419, pl. 2, fig. 13, 1873.
Hypslocrinus tethys Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 327, 1940.
 Miss. (Up. and Low. Burlington ls.): Burlington, Iowa.
- Hypsoicrinus** Springer and Slocum. Genotype: *H. fieldi* Springer and Slocum.
 Pisocrinidae (Inadunata-Larviformia). Dev.
 Springer and Slocum, Field Col. Mus. Pub. 114, Geol. Ser. 2, p. 267, 1906.—Springer, Zittel-Eastman Textb. Pal., 1, p. 208, 1913.
- Hypsoicrinus fieldi** Springer and Slocum.
 Springer and Slocum, Field Col. Mus. Pub. 114, Geol. Ser. 2, p. 269, pl. 81, figs. 1-6, 1906.—Goldring, N. Y. St. Mus., Mem. 16, p. 322, pl. 40, figs. 1-5, 1923; Jour. Pal., 10, p. 21, fig. 1, 1936.
 Dev. (Hamilton-Centerfield sh.): Near East Bethany, N. Y.
- Hypsiocrinus* Wachsmuth and Springer = *Cyphocrinus*.
Hystriocrinus Hinde = *Arthroacantha*.
- Ichthyocrinus** Conrad. Genotype: *I. laevis* Conrad.
 Ichthyocrinidae (Flexibilia). Sil.; Dev.
 Conrad, Jour. Acad. Nat. Sci. Phila., 8, p. 279, 1842 (as *Ichthyocrinus*).—Hall, Nat. Hist. N. Y., Pal., 2, pp. 195, 355, 1852.—Angelin, Icon. Crin. Suec., p. 13, 1878.—Zittel, Handb. Pal., 1, p. 355, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, pp. 35, 150 (256, 373), 1880 (1879).—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 145, 1900.—Bather, Treatise Zool. (Lan-

kester), pt. 3, p. 188, 1900.—Grabau, Bull. Buffalo Soc. Nat. Sci., 7, p. 159, 1901; N. Y. St. Mus., Bull. 9, p. 159, 1901.—Springer, Amer. Geol., 30, p. 94, 1902; Jour. Geol., 14, p. 516, 1906; Zittel-Eastman Textb. Pal., 1, p. 204, 1913.—Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 251, 1916.—Springer, Crin. Flexibilia, pp. 261, 264, 1920; Amer. Sil. Crin., p. 68, 1926.

Ichthyocrinus bacchus Salter = *Lecanocrinus bacchus*.

Ichthyocrinus bohemicus Waagen and Jahn.

Waagen and Jahn, Syst. Sil. Centre Bohême, 7, pt. 2, p. 29, fig. 8, pl. 60, figs. 11-13, pl. 61, figs. 6-9, 1899.—Springer, Crin. Flexibilia, pp. 272, 291, pl. 36, fig. 15, 1920.

Low. Dev. (F-2): Koniepruss, Bohemia.

Ichthyocrinus burlingtonensis Hall = *Metichthyocrinus burlingtonensis*.

Ichthyocrinus clarkensis Miller and Gurley = *Metichthyocrinus clarkensis*.

Ichthyocrinus clintonensis Hall.

Hall, Geol. Rep. N. Y., 2, p. 181, pl. 41, figs. 6 a-c, 1852.

Sil. (Niagaran-Clinton fm.): Reynales Basin, Niagara Co., N. Y.

Ichthyocrinus conoideus Ringeberg.

Ringeberg, Ann. N. Y. Acad. Sci., 5, p. 305, pl. 3, fig. 5, 1890.—Springer, Crin. Flexibilia, pp. 272, 283, pl. 36, figs. 8-12, 1920.

Sil. (Niagaran-Lockport, Gasport ls.): Lockport, N. Y.

Ichthyocrinus corbis Winchell and Marcy.

Winchell and Marcy, Mem. Boston Soc. Nat. Hist., 1, pp. 89, 108, 1865.—S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 4, p. 175, pl. 4, fig. 5, 1881; N. Amer. Geol. Pal., p. 256, fig. 343, 1889.—Springer, Crin. Flexibilia, pp. 272, 285, pl. 36, figs. 1-7, 1920.

Sil. (Niagaran-Racine dol.): Chicago and Cicero, Ill.

Ichthyocrinus devonicus Springer.

Springer, Crin. Flexibilia, pp. 272, 290, pl. 35, figs. 17 a-c, 1920.

Dev. (Helderbergian-Linden fm., Birdsong sh.): Birdsong Creek, Benton Co., Tenn.

Ichthyocrinus gotlandicus Wachsmuth and Springer.

Wachsmuth and Springer, Rev. Pal., pt. 1, p. 34 (257), 1880 (1879).—Springer, Jour. Geol., 14, no. 6, pl. 6, fig. 6, 1906; Crin. Flexibilia, pp. 202, 275, pl. 35, figs. 1-16, 1920.

Ichthyocrinus laevis Angelin (part), Icon. Crin. Suec., p. 13, pl. 22, figs. 20, 21 (not pl. 9, figs. 17 a-c), 1878.

Sil. (Gotlandian): Farö, Lickershamn, etc., Island of Gotland.

Ichthyocrinus greenei S. A. Miller = ?*Clidochirus greenei*.

Ichthyocrinus intermedius Angelin.

Angelin, Icon. Crin. Suec., p. 13, pl. 17, fig. 7, 1878.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, p. 43, fig. 32, 1900.—Springer, Jour. Geol., 14, no. 6, pl. 6, fig. 5, 1906; Crin. Flexibilia, pp. 272, 282, pl. 34, figs. 11-14, 1920.

Sil.: Farö, Island of Gotland (Gotlandian); Dudley, England (Wenlock ls.).

Ichthyocrinus laevis Conrad.

Conrad, Jour. Acad. Nat. Sci. Phila., 13, p. 279, pl. 15, fig. 16, 1842.—Hall, Nat. Hist. N. Y., Pal., 2, p. 193, pl. 43, fig. 2, 1852.—Billings, Canadian Nat. Geol., 1, p. 59, pl. fig. 4, 1856.—Pictet, Traité Pal., p. 319, pl. 100, fig. 17, 1857.—Quenstedt, Petref. Deutsch., 4, p. 515, pl. 108, fig. 24-B, 1876; Handb. petref., p. 947, pl. 76, fig. 2, 1885.—S. A. Miller, N. Amer. Geol. Pal., p. 256, fig. 344, 1889.—Grabau, Bull. Buffalo Soc. Nat. Hist., 7, p. 159, text fig. 54; Bull. N. Y. St. Mus. Nat. Hist., 9, p. 159, text fig. 54, 1901.—Springer, Jour. Geol., 14, p. 477, pl. 6, fig. 1, 1906; Crin. Flexibilia, pp. 272, 277, pl. 33, figs. 1-13, 1920.

Cyathocrinus pyriformis Hall, Nat. Hist. N. Y., Geol. 4th Dist., p. 111, text fig. 3, p. 112, Tab. Org. Rem., fig. 2, 1843.

Lecanocrinus simplex Hall, Nat. Hist. N. Y., Pal., 2, p. 202, pl. 46, figs. 2a-3, 1852.

Sil. (Clinton-Rochester sh.): Lockport, N. Y.; Grimsby, Ont.

- Ichthyocrinus laevis* Angelin (part) = *I. gotlandicus*; (part) = *I. pyriformis*.
Ichthyocrinus mccoynianus Salter.
 Salter, Cat. Camb. Sil. Foss., p. 163, 1872.
 Sil. (Lower Ludlow): Light Beck, Underbarrow, England.
- Ichthyocrinus magnaradialis* Weller = *Lecanocrinus magnaradialis*.
Ichthyocrinus nobilis Wachsmuth and Springer = *Parichthyocrinus nobilis*.
Ichthyocrinus phillipsianus Springer.
 Springer, Crin. Flexibilia, pp. 272, 284, pl. 36, figs. 13, 14, 1920.
 Sil. (Wenlock ls.): Dudley, England.
- Ichthyocrinus pyriformis** (Phillips).
Cyathocrinites pyriformis Phillips, in Murchison, Sil. Syst., p. 672, pl. 17, fig. 6, 1839.—Quenstedt, Petref. Deutsch., 4, p. 501, pl. 107, fig. 141, 1876.
Ichthyocrinus pyriformis McCoy, Brit. Pal. Foss., p. 54, 1854.—Phillips, in Murchison, Siluria, ed. 3, p. 246, pl. 14, fig. 8, 1859.—Pictet, Traité Pal., p. 319, pl. 100, fig. 17, 1857.—Angelin, Icon. Crin. Suec., p. 13, pl. 9, figs. 17 a-c, pl. 22, fig. 22 (not pl. 17, fig. 6), 1878.—Springer, Crin. Flexibilia, pp. 272, 273, pl. 32, figs. 1-13, 1920.
- Encrinurus* Whitehurst, An Enquiry into the Origin, State, and Formation of the Earth, p. 235, pl. 7, fig. 1, 1786.
Pentacrinite Parkinson, Org. Remains of a Former World, pp. 258, 270, 271, 274, pl. 19, fig. 2, 1808.
Cyathocrinus tuberculatus Miller, Nat. Hist. Crin., p. 88, pl. fig. 2 (not other figs.), 1821.
Ichthyocrinus laevis Angelin, Icon. Crin. Suec., p. 13, pl. 9, figs. 17 a-e, 1878.
 Sil.: Dudley, England (Wenlock ls.); Wisby, Island of Gotland (Gotlandian).
- Ichthyocrinus pyriformis* Angelin (part) = *Clidochirus pyrum*.
Ichthyocrinus schucherti Talbot = *Clidochirus schucherti*.
Ichthyocrinus spinulosus Miller and Gurley = *Wachsmuthicrinus spinulosus*.
Ichthyocrinus subangularis Hall.
 Hall, Not. N. Sp. Foss. Niagara Group, p. 7, 1863; 20th Rep. N. Y. St. Cab. Nat. Hist., Doc. ed., p. 325, pl. 11, figs. 15, 16, 1867; Rev. ed. pp. 367, 429, 1870; 28th Rep. N. Y. St. Mus. Nat. Hist., Mus. ed., p. 137, pl. 16, figs. 11-13, 1879; 11th Rep. Geol. Nat. Res. Ind., p. 268, pl. 15, figs. 12, 13, pl. 16, figs. 11-13, 1882.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 146, pl. 15, figs. 3-5, 1900.—Springer, Jour. Geol., 14, p. 477, pl. 6, fig. 2, 1906; Crin. Flexibilia, pp. 272, 281, pl. 34, figs. 1-10, 1920; Amer. Sil. Crin., p. 69, pl. 22, figs. 12, 13, 1926.
 Sil. (Niagaran): Waldron, Ind. (Waldron sh.); Chicago, Bridgeport and Romeo, Ill. (Racine dol.); Lockport, N. Y. (Rochester sh.).
- Ichthyocrinus tiareformis* Hall = *Metichthyocrinus tiaraeformis*.
Icosidactylocrinites Owen = *Glyptocrinus*.
Icosidactylocrinites reticulatus Owen.
 Owen, Cat. Geol. Spec. Ohio Valley, 1893.
Icosidactylocrinus Shumard = *Glyptocrinus*.
Ichthyocrinus Conrad. See *Ichthyocrinus*.
Idiocrinus Wachsmuth and Springer = *Gazaecrinus*.
Idiocrinus? tennesseensis Wachsmuth and Springer = *Hormocrinus tennesseensis*.
Idromecrinus Gregorio. Genotype: *I. genistus* Gregorio.
 Gregorio, Ann. Geol. Pal., 52, Palermo, p. 41, 1930. (Unrecognizable fragments.)
Idromecrinus floreatus Gregorio.
 Gregorio, Ann. Geol. Pal., 52, Palermo, p. 41, pl. 15, figs. 18, 19, 1930.
 Permian: Sicily.

***Idromecrinus genistus* Gregorio.**

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 41, pl. 15, figs. 12, 13, 1930.
Permian: Sicily.

***Idromecrinus genistus laratus* Gregorio.**

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 41, pl. 15, figs. 14-17, 1930.
Permian: Sicily.

***Imitacrinus* Schmidt. Genotype: *Cyathocrinus gracilior* Roemer.**

Botryocrinidae (Inadunata-Fistulata). Dev.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 104, 1934.

***Imitacrinus gracilior* (Roemer).**

Cyathocrinus gracilior Roemer, Palaeontographica, Beit. Naturg. Vorwelt, 9, no. 4, p. 149, pl. 29, fig. 1, pl. 25, figs. 8, 10, 1863.

Agriocrinus gracilior Opitz, Bilder Erdges. Nahe-Hunsrück-Landes, p. 105, fig. 103, 1932.

Imitacrinus gracilior Schmidt, Abhandl. Preuss. Geol. Landes., n.f., heft 163, p. 105, text fig. 25, pl. 19, figs. 1-3, pl. 20, fig. 1, pl. 26, fig. 2, 1934.

Agriocrinus frechi Opitz, Bilder Erdges. Nahe Hunsrück-Landes, p. 104, text fig. 102, 1932.

Low. Dev. (Hunsrück sl.): Bundenbach, near Birkenfeld, Harz, Germany.

***Imperatorio* Gregorio. Genotype: *I. marconii* Gregorio.**

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 39, 1930.

***Imperatoria? anomala* Gregorio.**

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 40, pl. 14, figs. 17, 18, 1930.
Permian: Sicily.

***Imperatoria marconii* Gregorio.**

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 39, pl. 14, figs. 9-16, 1930.
Permian: Sicily. (Doubtful crinoid column.)

Indianocrinus* Miller and Gurley = *Hybocrinus*.**Indocrinus* Wanner. Genotype: *I. elegans* Wanner.**

Poteriocrinidae (Inadunata-Fistulata). Permian.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 74, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, pp. 179, 211, 1924; Neue Beitr. kennt. Perm. Echin. Timor, V, Poteriocrinidae, p. 4, 1931.

***Indocrinus angulosus* Wanner.**

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, V, Poteriocrinidae, pp. 7, 13, pl. 2, figs. 9-12, 1931.

Permian: Basleo, Timor.

***Indocrinus brevijugatus* Wanner.**

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, V, Poteriocrinidae, pp. 7, 10, pl. 1, figs. 12-14, 1931.

Permian: Basleo, Timor.

***Indocrinus contignatus* Wanner.**

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, V, Poteriocrinidae, pp. 7, 11, pl. 2, figs. 1-3, 1931.

Permian: Basleo, Timor.

***Indocrinus crassus* Wanner.**

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 81, text figs. 16, 19, 20, pl. 103 (8), figs. 4-6 (not fig. 7), 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 213, pl. 19, figs. 17-19, 1924.

Permian: Basleo, Timor.

Indocrinus crassus Wanner (part) = *I. turgidus*.

Indocrinus elegans Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 78, text figs. 13-15, 18, pl. 103 (8), figs. 1, 3, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 212, pl. 9, figs. 16, 25, pl. 10, figs. 4-6, 1924.

Permian: Basleo, Timor.

Indocrinus nodosus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 85, pl. 103, fig. 8, text fig. 21, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 213, text fig. 32, pl. 10, figs. 1-3, 1924.

Permian: Basleo, Timor.

Indocrinus piszowi Yakovlev = *Proindocrinus piszowi*.

Indocrinus pumilus Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, V, Poteriocrinidae, pp. 7, 12, text fig. 2, pl. 2, figs. 4-8, 1931.

Permian: Basleo, Timor.

Indocrinus rimosus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 86, text fig. 22, pl. 103, fig. 9, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 216, pl. 9, figs. 26-28, 1924; Neue Beitr. kennt. Perm. Echin. Timor, V, Poteriocrinidae, pp. 7, 10, pl. 1, fig. 10, 1931.

Permian: Basleo, Timor.

Indocrinus rimosus pachycephalus Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, V, Poteriocrinidae, p. 10, pl. 1, fig. 11, 1931.

Permian: Basleo, Timor.

Indocrinus turgidus Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, V, Poteriocrinidae, pp. 7, 8, pl. 1, figs. 6-9, 1931.

Indocrinus crassus Wanner (part), Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 84, pl. 8, fig. 7 (not figs. 4-6), 1916.

Permian: Basleo, Timor.

Intermediacrinus Sutton and Winkler = *Eupachyrcrinus*.

Iocrinus Hall. Genotype: *Heterocrinus crassus* Meek and Worthen.

Heterocrinidae (Inadunata-Fistulata). Ord.; Early Sil.

Hall, 24th Rep. N. Y. St. Cab. Nat. Hist., p. 212, 1872 (adv. ext., 1866, p. 5).—Wachsmuth and Springer, Rev. Pal., pt. 1, pp. 62, 70 (285, 293), 1880 (1879); pt. 3, p. 203 (127), 1886.—Bather, Ann. Mag. Nat. Hist., (6) 5, pp. 180, 324, 487, 1890; Geol. Mag., dec. 4, 6, p. 42 (footnote), 1899; Treatise Zool. (Lankester), pt. 3, p. 145, 1900.—Cumings, 32d Ann. Rep. Dep. Geol. Nat. Res. Ind. for 1907, p. 713, 1908.—Springer, Zittel-Eastman Textb. Pal., 1, p. 212, 1913.—Jaekel, Pal. Zeits., 3, p. 37, 1918 (*Jocrinus*).—Fritz, 32d Ann. Rep. Ont. Dep. Mines, 32, pt. 7, 1923, p. 12, 1925.—Ulrich in Foerste, Geol. Surv. Canada, Mem. 138, p. 82, 1924.

Iocrinus crassus (Meek and Worthen).

Heterocrinus crassus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 147, 1865; Geol. Surv. Ill., 3, p. 324, pl. 4, figs. 1 a-c, 1868; Geol. Surv. Ill., 6, p. 493, pl. 23, fig. 1, 1875.

Iocrinus crassus Wachsmuth and Springer, Rev. Pal., pt. 1, p. 72 (295), 1880 (1879).

Early Sil. (Richmond-Maquoketa sh.): Oswego, Kendall Co., Ill.

Iocrinus ("Caleidocrinus") *multiramus* Springer = *Caleidocrinus multiramus*.

Iocrinus subcrassus (Meek and Worthen).

Heterocrinus subcrassus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 148, 1865; Geol. Surv. Ill., 3, p. 325, pl. 4, figs. 5 a-d, 1868.

- Heterocrinus* (*Iocrinus*) *subcrassus* Meek and Worthen, Geol. Surv. Ohio, 1, pt. 2, p. 15, pl. 1, figs. 9a, b, 1873.
- Iocrinus subcrassus* Wachsmuth and Springer, Rev. Pal., pt. 1, p. 72 (295), 1880 (1879).—Bather, Geol. Mag., (4) 6, p. 35, text fig. 11, 1899; Treatise Zool. (Lan-kester), pt. 3, p. 120, text fig. 26-1, 1900.
- Heterocrinus?* (*Iocrinus*) *polyzo* Hall, Descr. N. Sp. Crin., p. 5, 1866; 24th Rep. N. Y. St. Cab. Nat. Hist., p. 212, pl. 5, figs. 1-4, 1872.
- Ord.: Cincinnati and vicinity, Ohio. (Mt. Hope to Corryville sh.); Rome, N. Y. (Lorraine sh.); 3 miles south of Little Current, Manitoulin Island (Eden).
Early Sil. (Richmond): Morrow, etc., Ohio (Arnheim sh.); Clarksville, etc., Ohio (Waynesville and Liberty ls.).
- Iocrinus subcrassus torontoensis* Fritz.**
Fritz, 32d Ann. Rep. Ontario Dep. Mines, 32, pt. 7, p. 13, pl. 1, fig. 5, 1923.
Ord. (Cincinnati-Dundas fm.): Toronto, Ontario.
- Iocrinus trentonensis* Walcott.**
Walcott, 35th Rep. N. Y. St. Mus. Nat. Hist., p. 210, pls. 17, 18, 1884 (adv. pub. 1883, p. 4, pl. 17, figs. 7, 8).
Ord. (Trenton ls.): Trenton, N. Y.
- Isocatillocrinus* Wanner. Genotype: *I. indicus* Wanner.**
Catillocrinidae (Inadunata-Fistulata). Permian.
Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, pp. 109, 111, 1937.—Moore, Deni-son Univ. Bull., 40, Jour. Sci. Lab., 35, p. 91, 1940.
- Isocatillocrinus indicus* Wanner.**
Wanner, Beitr. Geol. Niederl.-Ind., Abt., 4, pt. 2, p. 112, text fig. 30, pl. 14, figs. 1-9, 1937.—Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 316, pl. 3, fig. 6, 1940.
Permian: Nifoe Moeti, Basleo, Timor.
- Isocrinus* Phillips (not von Meyer) = *Taxocrinus*.
- Isocrinus egertoni* Phillips = *Onychocrinus egertoni*.
- Isotomocrinus* Ulrich. Genotype: *I. typus* Ulrich.**
Heterocrinidae (Inadunata-Fistulata). Ord.
Ulrich in Foerste, Geol. Surv. Canada, Mem. 138, p. 86, 1924.
- Isotomocrinus typus* Ulrich.**
Ulrich in Foerste, Geol. Surv. Canada, Mem. 138, p. 86, text fig. 5, 1924.
Ord. (Trenton-Hull ls.): Kirkfield, Ont.
- Iteacrinus* Goldring. Genotype: *I. flagellum* Goldring.**
Carabocrinidae (Inadunata-Fistulata). Dev.
Goldring, N. Y. St. Mus., Mem. 16, p. 344, 1923.
- Iteacrinus flagellum* Goldring.**
Goldring, N. Y. St. Mus., Mem. 16, p. 345, pl. 42, fig. 2, 1923.
Dev. (Lower Chemung): Cotton Hill, one mile north of Avoca, Steuben Co., N. Y.
- Iteacrinus robustus* Goldring.**
Goldring, N. Y. St. Mus., Mem. 16, p. 347, pl. 42, fig. 3, 1923.
Dev. (Lower Chemung): Cotton Hill, one mile north of Avoca, Steuben Co., N. Y.
- Jahnocrinus* Jaekel. Genotype: *J. minutus* Jaekel.**
Homocrinidae (Inadunata-Fistulata). Dev.
Jaekel, Pal. Zeits., 3, p. 63, 1918.
- Jahnocrinus minutus* Jaekel.**
Jaekel, Pal. Zeits., 3, p. 54, fig. 45, 1918.
Mid. Dev. (H₁): Hlubocep, Bohemia.
- Jocrinus* Jaekel. See *Iocrinus*.

Jonkerocrinus Wanner. Genotype: *J. spinosus* Wanner.

Poteriocrinidae (Inadunata-Fistulata). Permian.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 279, 1924.

Jonkerocrinus? *conicus* Marez Oyens.

Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 341, pl. 4, fig. 7, 1940.

Permian: Oi Faoeh, Timor.

Jonkerocrinus spinosus Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 280, pl. 12, figs. 1-3, 1924.

Permian: Basleo, Timor.

Kaleidocrinus Jaekel. See Caleidocrinus.

Kallimorphocrinus J. M. Weller. Genotype: *K. astrus* J. M. Weller.

Allagecrinidae (Inadunata-Larviformia). Low. Carb.—Permian.

J. M. Weller, State Geol. Surv. Ill., Rep. Invest. no. 21, p. 15, 1930.—Peck, Jour. Pal., 10, no. 4, p. 287, 1936 (as *Callimorphocrinus*).—Moore, Denison Univ. Bull., 40, Jour. Sci. Lab., 35, p. 72, 1940 (as *Callimorphocrinus*).*Aidemocrinus* J. M. Weller, State Geol. Surv. Ill., Rep. Invest. no. 21, p. 23, 1930.—Moore, Denison Univ. Bull., 40, Jour. Sci. Lab., 35, p. 79, 1940. (Genotype: *A. odiosus* J. M. Weller.)**Kallimorphocrinus acutus** (Wanner).*Allagecrinus acutus* Wanner, Neue Beitr. kennt. Perm. Echin. Timor, pp. 4, 14, 19, pl. 2, figs. 1-6, 1929.*Kallimorphocrinus acutus* Wright, Geol. Mag., 70, p. 204, 1933.

Permian: Basleo, Timor.

Kallimorphocrinus astrus J. M. Weller.

J. M. Weller, State Geol. Surv. Ill., Rep. Invest. no. 21, pp. 16, 17, fig. 2, 1930.

Kallimorphocrinus astrus typicus J. M. Weller, St. Geol. Surv. Ill., Rep. Invest. no. 21, p. 17, pl. 1, figs. 2 a-c, 1930.Penn. (Des Moines gr.): N. $\frac{1}{2}$ Sec. 35, T. 21 N., R. 9 W., Warren Co., Ind.**Kallimorphocrinus astrus intermedius** J. M. Weller.

J. M. Weller, State Geol. Surv. Ill., Rep. Invest. no. 21, p. 18, pl. 1, figs. 3 a-c, 1930.

Penn. (Des Moines gr.): N. $\frac{1}{2}$ Sec. 35, T. 21 N., R. 9 W., Warren Co., Ind.**Kallimorphocrinus astrus pyramidalis** J. M. Weller.

J. M. Weller, State Geol. Surv. Ill., Rep. Invest. no. 21, p. 18, pl. 1, figs. 4 a-c, 1930.

Penn. (Des Moines gr.): N. $\frac{1}{2}$ Sec. 35, T. 21 N., R. 9 W., Warren Co., Ind.Kallimorphocrinus astrus typicus J. M. Weller = *K. astrus*.**Kallimorphocrinus donetzensis** (Yakovlev).*Allagecrinus donetzensis* Yakovlev, Bull. Acad. Sci. URSS, p. 910, pl. 1, fig. 4, 1930.*Kallimorphocrinus donetzensis* Wright, Geol. Mag., 70, pp. 204, 205, 1933.

Carb.: Lissitchansk, Donetz Basin, Russia.

Kallimorphocrinus elongatus (Wright).*Allagecrinus elongatus* Wright, Geol. Mag., 69, p. 352, text figs. 26-35, pl. 23, figs. 18-34, p. 359, 1932.*Kallimorphocrinus elongatus* Wright, Geol. Mag., 70, p. 204, 1933.*Callimorphocrinus elongatus* Wright, Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 52, pl. 10, figs. 9-12, 1939.*Allagecrinus austini* Carpenter and Etheridge, Ann. Mag. Nat. Hist., pl. 16, figs. 1, ?3, 10, 1881.

Low. Carb. (Low. Ls. gr.-Seafield Tower ls.): Howood and Invertiel, Scotland.

Kallimorphocrinus excavatus (Wanner).*Allagecrinus excavatus* Wanner, Neue Beitr. kennt. Perm. Echin. Timor, pp. 4, 15, 24, pl. 4, figs. 7-9, 1929.

- Kallimorphocrinus excavatus* Wright, Geol. Mag., 70, p. 204, 1933.
Permian: Basleo, Timor.
- Kallimorphocrinus expansus** J. M. Weller.
J. M. Weller, State Geol. Surv. Ill., Rep. Invest. no. 21, p. 27, pl. 1, figs. 10a, b, 1930.
Penn. (Des Moines gr., just under Piasa ls.): NE $\frac{1}{4}$ Sec. 25, T. 8 N., R. 10 W., Jersey Co., Ill.
- Kallimorphocrinus illinoisensis** J. M. Weller.
J. M. Weller, St. Geol. Surv. Ill., Rep. Invest. no. 21, p. 25, pl. 2, figs. 2 a-3b, 1930.
Penn. (Des Moines gr.—just under Piasa ls.): NE $\frac{1}{4}$ Sec. 25, T. 8 N., R. 10 W., Jersey Co., Ill.; $\frac{3}{4}$ mi. north of Stratman, St. Louis Co., Mo.
- Kallimorphocrinus indianensis** J. M. Weller.
J. M. Weller, State Geol. Surv. Ill., Rep. Invest. no. 21, p. 20, pl. 1, figs. 9a, b, 1930.
Low. Penn. (Des Moines gr.): N. $\frac{1}{4}$ Sec. 35, T. 21 N., R. 9 W., Warren Co., Ind.
- Kallimorphocrinus indoaustralicus** (Wanner).
Allagecrinus indoaustralicus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 308, text fig. 61, pl. 20, figs. 33-35, 1924; Neue Beitr. kennt. Perm. Echin. Timor, pp. 15, 23, pl. 1, fig. 13, pl. 3, figs. 1-5, 1929.
Kallimorphocrinus indoaustralicus Wright, Geol. Mag., 70, p. 204, 1933.
Permian: Basleo, Timor.
- Kallimorphocrinus infacetus** J. M. Weller.
J. M. Weller, State Geol. Surv. Ill., Rep. Invest. no. 21, p. 22, pl. 2, figs. 4a, b, 1930.
Low. Penn. (Des Moines gr.): N. $\frac{1}{4}$ Sec. 35, T. 21 N., R. 9 W., Warren Co., Ind.
- Kallimorphocrinus inflatus** (Wanner).
Allagecrinus inflatus Wanner, Neue Beitr. kennt. Perm. Echin. Timor, pp. 4, 14, 18, pl. 1, figs. 10-12, 1929.
Kallimorphocrinus inflatus Wright, Geol. Mag., 70, p. 204, 1933.
Permian: Basleo, Timor.
- Kallimorphocrinus jakovlevi* (Wanner) = *Wrightocrinus jakovlevi*
- Kallimorphocrinus knighti** J. M. Weller.
J. M. Weller, State Geol. Surv. Ill., Rep. Invest. no. 21, p. 26, pl. 1, figs. 7a, b, 1930.
Penn. (Des Moines gr.—ls. over Belleville coal): Cheltenham District, St. Louis, Mo.
- Kallimorphocrinus lilius** J. M. Weller.
J. M. Weller, State Geol. Surv., Rep. Invest. no. 21, p. 19, pl. 1, figs. 8a, b, 1930.
Penn. (Des Moines gr.—just below Piasa ls.): $\frac{3}{4}$ mile north of Stratman, St. Louis Co., Mo.
- Kallimorphocrinus multibrachiatus** (Yakovlev).
Allagecrinus multibrachiatus Yakovlev, Bull. Comité Géol., 46, p. 185, pl. 6, figs. 8, 8a, b, p. 191.
Kallimorphocrinus multibrachiatus Wright, Geol. Mag., 70, pp. 204, 205, 1933.
Permian.: Krasnooufimsk, Russia.
- Kallimorphocrinus odiosus** (J. M. Weller).
Aidemocrinus odiosus J. M. Weller, State Geol. Surv. Ill., Rep. Invest. no. 21, p. 28, pl. 2, figs. 5a, b, 1930.
Low. Penn. (Des Moines gr.): N. $\frac{1}{4}$ Sec. 35, T. 21 N., R. 9 W., Warren Co., Ind.
- Kallimorphocrinus ornatus** (Wanner).
Allagecrinus ornatus Wanner, Neue Beitr. kennt. Perm. Echin. Timor, pp. 4, 15, 26, pl. 4, figs. 10-12, 1929.
Kallimorphocrinus ornatus Wright, Geol. Mag., 70, p. 204, 1933.
Permian: Basleo, Timor.

Kallimorphocrinus piasaensis J. M. Weller.

J. M. Weller, State Geol. Surv. Rep. Invest. no. 21, p. 18, pl. 1, figs. 5 a-b, 1930.
Penn. (Des Moines gr.—just below Piasa ls.): NE $\frac{1}{4}$ Sec. 25, T. 8 N., R. 10 W.;
Jersey Co., Ill.

Kallimorphocrinus pocillus J. M. Weller.

J. M. Weller, State Geol. Surv., Rep. Invest. no. 21, p. 24, pl. 2, figs. 1 a-d, 1930.
Low. Penn. (Des Moines gr.): N. $\frac{1}{4}$ Sec. 35, T. 21 N., R. 9 W., Warren Co., Ind.

Kallimorphocrinus pristinus (Peck).

Callimorphocrinus pristinus Peck, Jour. Pal., 10, p. 287, pl. 46, figs. 16-22, 1936.
Miss. (Fern Glen ls.): $\frac{3}{4}$ mile south Kimmswick, Ste. Genevieve Co., Mo.

Kallimorphocrinus procerus (Wanner).

Allagecrinus procerus Wanner, Neue Beitr. kennt. Perm. Echin. Timor, pp. 4, 14,
21, pl. 2, figs. 7-9, 1929.
Kallimorphocrinus procerus Wright, Geol. Mag., 70, p. 204, 1933.
Permian: Basleo, Timor.

Kallimorphocrinus puteatus (Peck).

Callimorphocrinus puteatus Peck, Jour. Pal., 10, p. 288, pl. 46, figs. 1, 2, 1936.
Miss. (Fern Glen ls.): $\frac{3}{4}$ mile south Kimmswick, Ste. Genevieve Co., Mo.

Kallimorphocrinus quinquebrachiatus (Wanner).

Allagecrinus quinquebrachiatus Wanner, Neue Beitr. kennt. Perm. Echin. Timor
pp. 4, 15, 25, pl. 3, figs. 8-12, pl. 4, figs. 1-6, 1929.
Callimorphocrinus quinquebrachiatus Wanner, Palaeontographica, Bd. 4, Suppl.,
p. 203, pl. 13, figs. 28, 29, 1937.—Marez Oyens, Geol. Exped. Lesser Sunda
Islands, 1, p. 344, pl. 4, fig. 10, 1940.
Permian: Basleo, Toeboe, Lopo, etc., Timor.

Kallimorphocrinus quinquelobus (Wanner).

Allagecrinus quinquelobus Wanner, Neue Beitr. kennt. Perm. Echin. Timor, pp. 4,
15, 21, pl. 2, figs. 10-15, 1929.
Kallimorphocrinus quinquelobus Wright, Geol. Mag., 70, p. 204, 1933.
Permian: Basleo, Timor.

Kallimorphocrinus scoticus (Wright).

Allagecrinus scoticus Wright, Geol. Mag., 69, p. 349, text fig. 16-25, pl. 23, figs.
1-17, p. 357, 1932.
Kallimorphocrinus scoticus Wright, Geol. Mag., 70, p. 204, 1933; Trans. Roy. Soc.
Edinburgh, 60, pt. 1, p. 51, pl. 10, figs. 1-3, 5, 6, pl. 12, fig. 3, 1939; Geol. Mag.,
78, no. 4, p. 302, pl. 7, figs. 8, 11, 1941.
Allagecrinus austinii Carpenter and Etheridge, Ann. Mag. Nat. Hist., pl. 16, figs.
2, 4-7, 1881.
Low. Carb. (Low. Ls. gr.): Invertiel, Carlops, etc., Scotland.

Kallimorphocrinus scoticus contractus Wright.

Wright, Geol. Mag., 70, p. 206, pl. 14, fig. 1, 1933.
Callimorphocrinus scoticus var. *contractus* Wright, Trans. Roy. Soc. Edinburgh,
60, pt. 1, p. 51, pl. 10, fig. 4, 1939.
Low. Carb. (Low. Ls. gr.): Invertiel, Scotland.

Kallimorphocrinus uralensis (Yakovlev).

Allagecrinus uralensis Yakovlev, Bull. Comité Géol., 46, pp. 184, 185, text fig. 1,
pl. 6, figs. 9, 9a, b, 17, 17a, 1927.—Wanner, Neue Beitr. kennt. Perm. Echin.
Timor, p. 23, pl. 3, figs. 6, 7, 1929.
Kallimorphocrinus uralensis Wright, Geol. Mag., 70, p. 205, 1933.
Permian: Krasnooufimsk, Russia.

Kallimorphocrinus uralensis nodocarinatus (Yakovlev).

Allagecrinus uralensis var. *nodocarinatus* Yakovlev, Bull. Comité Géol., 46, p. 185,
pl. 6, fig. 10, 1927.

- Kallimorphocrinus uralensis* var. *nodocarinatus* Wright, Geol. Mag., 70, pp. 204, 205, 1933.
Permian: Krasnooufinsk, Russia.
- Kallimorphocrinus vanpelti** J. M. Weller.
J. M. Weller, State Geol. Surv. Ill., Rep. Invest. no. 21, p. 21, pl. 1, figs. 6a, b, 1930.
Penn. (Des Moines gr.—just below Piasa ls.): NE $\frac{1}{4}$ Sec. 25, T. 8 N., R. 10 W., Jersey Co., Ill.
- Kallimorphocrinus yakovlevi* Wright = *Wrightocrinus yakovlevi*.
Katarocrinus (Waagen and Jahn) Jaekel.
Jaekel, Pal. Zeits., 3, p. 32, 1918. (Nom. nud.)
- Lagarocrinus* Jaekel = *Cicerocrinus*.
Lageniocrinus de Koninck and Lehon. Genotype: *L. seminulum* de Koninck and Lehon.
Hypocrinidae (Inadunata-Fistulata). Low. Carb., Permian.
De Koninck and Lehon, Rec. Crin. Carb. Belg., p. 187, 1854.—Zittel, Handb. Pal., 1, p. 350, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 175 (99), 1886.—Wanner, Neue Beitr. kennt. Perm. Echin. Timor, p. 40, 1929.—J. M. Weller, State Geol. Surv. Ill., Rep. Invest. no. 21, p. 31, 1930.
- Lageniocrinus cassidus** J. M. Weller.
J. M. Weller, State Geol. Surv. Ill., Rep. Invest. no. 21, p. 32, text fig. 5, pl. 2, figs. 6a, b, 1930.
Low. Penn.: N. $\frac{1}{4}$ Sec. 35, T. 21 N., R. 9 W., Warren Co., Ind.
- Lageniocrinus seminulum** de Koninck and Lehon.
De Koninck and Lehon, Rec. Crin. Carb. Belg., p. 189, pl. 6, figs. 1 a-e, 1854.
Low. Carb. (Viséan): Visé, Belgium.
- Lageniocrinus seminulum timorensis* Wanner = *L. timorensis*.
Lageniocrinus timorensis (Wanner).
Lageniocrinus seminulum var. *timorensis* Wanner, Ueber armlose krin. Jung. Pal., Verh. Geol. Mijnb. Genoots. etc., p. 23, text fig. 4, p. 26, text fig. 2, 1920.
Lageniocrinus timorensis Wanner, Neue Beitr. kennt. Perm. Echin. Timor, III, pp. 13, 14, text fig. 8, pl. 1, figs. 19, 20, 1930.
Permian: Basleo, Timor.
- Lahuseniocrinus** Tschernyschew. Genotype: *L. tirlensis* Tschernyschew.
Rhodocrinitidae (Camerata). Dev.
Tschernyschew, Bull. Com. Geol. St. Petersb., 11, p. 123, 1892.—Bather, Treatise Zool. (Lankester), pt. 3, p. 200, 1900.
- Lahuseniocrinus tirlensis** Tschernyschew.
Tschernyschew, Bull. Com. Geol. St. Petersb., 11, p. 123, 1892; Mem., 4, pp. 82, 187, pl. 14, fig. 2, 1893.
Low. Dev.: East slope of Urals, Russia.
- Lampteroocrinus** Roemer. Genotype: *L. tennesseensis* Roemer.
Dimerocrinitidae (Camerata). Sil.
Roemer, Sil. Fauna West Tenn., p. 37, 1860.—Hall, 20th Rep. N. Y. St. Cab. Nat. Hist., p. 238, 1868.—Zittel, Handb. Pal., 1, p. 375, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, pp. 184, 199 (358, 373), 1881; N. Amer. Crin. Cam., p. 207, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 199, 1900.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 80, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 187, 1913.—Wood, U. S. Nat. Mus., Bull. 64, p. 102, 1909.—Springer, Amer. Sil. Crin., p. 19, 1926.
Balanocrinites Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849. (Genotype: *B. sculptus* Troost.) (Nom. nud.)
Balanocrinus Hall, Rep. Geol. Surv. Wisconsin, p. 22, 1861.—Bather, Treatise Zool. (Lankester), pt. 3, p. 202, 1900.

Lampterocrinus? comptus Rowley.

Rowley, Amer. Geol., 24, p. 279, pl. 18, figs. 57, 58, 1904.

Sil. (Up. Medinan-Edgewood ls.): 3 miles west Louisiana, Mo.

Lampterocrinus? dubius Weller.

Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 84, pl. 2, figs. 6, 7, 1900.

Sil. (Niagaran-Racine dol.): Lemont and Joliet, Ill.

Lampterocrinus inflatus (Hall).

Balanocrinus inflatus Hall, Geol. Surv. Wisconsin, p. 22, 1861.

Lampterocrinus inflatus Hall, Prelim. Not. 18th Rep. N. Y. St. Cab. Nat. Hist., p. 24, pl. 1, fig. 6, 1865; 20th Rep., doc. ed., p. 328, pl. 10, fig. 6, 1867; rev. ed., p. 374, 1870.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 81, pl. 2, figs. 2, 3, 1900.

Sil. (Niagaran-Racine dol.): Racine, Wis.

Lampterocrinus inflatus minor Foerste.

Foerste, Ohio Jour. Sci., 17, no. 7, p. 239, pl. 10, figs. 2a, b, 1917.

Sil. (Niagaran-Durbin fm, Euphemia dol.): Near Covington, Ohio.

Lampterocrinus parvus Hall.

Hall, Trans. Albany Inst., 10, p. 65, 1882 (adv. pub., 1879, p. 9); 11th Rep. Geol. Nat. Hist. Ind., p. 272, pl. 15, fig. 6, 1882.

Sil. (Niagaran-Waldron sh.): Waldron, Ind.

Lampterocrinus robustus Weller.

Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 82, pl. 2, figs. 4, 5, 1900.

Sil. (Niagaran-Racine dol.): Romeo, Lemont, and Joliet, Ill.

Lampterocrinus roemeri Springer.

Springer, Amer. Sil. Crin., p. 21, pl. 3, figs. 9-14, 1926.

Sil. (Niagaran-Beech River fm.): 2 mi. n. Decaturville, Tenn.

Lampterocrinus sculptus Springer.

Springer, Amer. Sil. Crin., p. 21, pl. 3, figs. 7, 8, 1926.

Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.

Lampterocrinus? subglobosus Weller.

Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 83, pl. 3, fig. 5, 1900.

Sil. (Niagaran-Racine dol.): Bridgeport and Hawthorne, Ill.

Lampterocrinus tennesseensis Roemer.

Roemer, Sil. Fauna West Tenn., p. 37, pl. 4, figs. 1a, b, 1860.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 208, pl. 13, figs. 10 a-d, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 199, fig. 125, 1900.—Springer, Amer. Sil. Crin., p. 20, pl. 3, figs. 1-6, 1926.

Balanocrinites sculptus Troost, Amer. Jour. Sci., (2) 8, p. 419, 1849.

Sil. (Niagaran-Beech River fm.): Decatur, Perry, and Wayne Cos., Tenn.

Lasanocrinus Moore and Plummer. Genotype: *Hydreionocrinus daileyi* Strimple.

Poteriocrinitidae (Inadunata-Fistulata). Penn.

Moore and Plummer, Univ. Texas Pub. no. 3945, p. 181, 1940.

Lasanocrinus cornutus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. no. 3945, p. 184, pl. 7, fig. 4, text fig. 35, 1940.

Penn. (Marble Falls ls.): Rough Creek, 11 miles southeast San Saba, Tex.

Lasanocrinus daileyi (Strimple).

Hydreionocrinus daileyi Strimple, Bull. Amer. Pal., 25, no. 91, p. 5 (93), pl. 1 (8), figs. 4-6, 1940.

- Lasanocrinus daileyi* Moore and Plummer, Univ. Texas Pub. no. 3945, p. 183, pl. 7, figs. 5, 6, text fig. 34, 1940.
Penn.: 6 miles southeast Fittstown, Okla. (Morrow fm.); 1½ miles north Ft. Gibson, south of Hulbert, Okla. (Brentwood ls.).
- Lasiocrinus** Kirk. Genotype: *Homocrinus scoparius* Hall.
Homocrinidae (Inadunata-Fistulata). Dev.; Miss.
Kirk, U. S. Nat. Mus., Proc., 46, p. 482, 1914.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, pp. 81, 144, 1934.
- Lasiocrinus expressus** Laudon.
Laudon, Univ. Iowa Studies, 15, no. 2, p. 60, pl. 6, figs. 7, 8, 1933.
Miss. (Kinderhook-Gilmore City fm.): Gilmore City, Iowa.
- Lasiocrinus? schohariensis** Goldring.
Goldring, N. Y. St. Mus., Mem. 16, p. 343, pl. 43, fig. 9, 1923.
Dev. (Ulsterian-Schoharie grit): Pine Hill, near Highland Hills, N. Y.
- Lasiocrinus scoparius** (Hall).
Homocrinus scoparius Hall, Nat. Hist. N. Y. Pal., 3, p. 102, pl. 1, figs. 1-9, 1859.—Talbot, Amer. Jour. Sci., 20, p. 19, pl. 3, fig. 3, 1903.—Ehrenberg, Acta Zool., 3, pp. 279, 281, fig. 12, 1922.
Lasiocrinus scoparius Kirk, U. S. Nat. Mus., Proc., 46, pp. 474-482, pl. 42, figs. 10-12, 1914.—Goldring, N. Y. St. Mus., Mem. 16, p. 340, pl. 42, figs. 4-10, pl. 43, figs. 1-7, 1923.
Dev. (Helderbergian): Schoharie, Jerusalem Hill and Wheelocks Hill, Litchfield, Herkimer Co., N. Y. (Coeymans ls.); Helderberg and Schoharie, N. Y. (Manlius-Tentaculite ls.).
- Lasiocrinus subramulosus** Schmidt.
Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 81, text fig. 17, pl. 7, fig. 3, pp. 141, 145, 147, 1934.
Low. Dev. (Hunsrück sl.): Muhlenberg near Bundenbach, Germany.
- Lasiocrinus tenuis* Goldring = *Antihomocrinus tenuis*.
- Laubeocrinus** Waagen and Jahn. Genotype: *L. barrandei* Waagen and Jahn.
Actinocrinitidae (Camerata). Sil.
Waagen and Jahn, Jahr. Reichsanst., 42, p. 416, 1893; Syst. Sil. Centre Bohême, 7, pp. 31-34, 1899.—Bather, Treatise Zool. (Lankester), pt. 3, p. 170, 1900; Ann. Mag. Nat. Hist., (7) 6, p. 108, 1900.
- Laubeocrinus barrandei** Waagen and Jahn.
Waagen and Jahn, Syst. Sil. Centre Bohême, 7, pt. 1, p. 34, pls. 59, 60, 1899.
Sil. (Div. E2): Lochkov, Bohemia.
- Laudonocrinus** Moore and Plummer. Genotype: *Hydreionocrinus subsinuatus* Miller and Gurley.
Poteriocrinitidae (Inadunata-Fistulata). Penn.
Moore and Plummer, Univ. Texas Pub. no. 3945, p. 174, 1940.
- Laudonocrinus arrectus** Moore and Plummer.
Moore and Plummer, Univ. Texas Pub. no. 3945, p. 180, pl. 5, fig. 7, 1940.
Penn. (Mineral Wells sh.): East end Barber Mtn., southwest Mineral Wells, Palo Pinto Co., Tex.
- Laudonocrinus catillus** Moore and Plummer.
Moore and Plummer, Univ. Texas Pub. no. 3945, p. 178, pl. 6, fig. 5, text fig. 33, 1940.
Penn.: Potato Knob, Palo Pinto Co., Texas (Millsap Lake fm.); 7 miles northeast Tulsa, Okla. (Oologah ls.).
- Laudonocrinus cucullus** Moore and Plummer.
Moore and Plummer, Univ. Texas Pub. No. 3945, p. 176, pl. 6, fig. 4, 1940.
Penn. (Mineral Wells sh.): East end Barber Mtn., southwest Mineral Wells, Palo Pinto Co., Texas.

- Laudonocrinus subsinuatus** (Miller and Gurley).
Hydreionocrinus subsinuatus Miller and Gurley, Ill. St. Mus., Bull. 3, p. 40, pl. 6, figs. 11-14, 1894.
Plaxocrinus subsinuatus Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 279, 1938 (gen. ref.).
Laudonocrinus subsinuatus Moore and Plummer, Univ. Texas Pub. no. 3945, p. 176, 1940.
 Penn. (Missouri ser.): Kansas City, Mo.
- Laurelocrinus** Springer. Genotype: *L. paulensis* Springer.
 Clonocrinidae (Camerata). Sil.
 Springer, Amer. Sil. Crin., p. 32, 1926.
- Laurelocrinus gibbosus** Springer.
 Springer, Amer. Sil. Crin., p. 33, pl. 7, figs. 14-16, 1926.
 Sil. (Niagaran-Laurel ls.): St. Paul, Ind.
- Laurelocrinus paulensis** Springer.
 Springer, Amer. Sil. Crin., p. 33, pl. 7, figs. 1-8, 1926.
 Sil. (Niagaran-Laurel ls.): St. Paul, Ind.
- Laurelocrinus spinoradialis** Springer.
 Springer, Amer. Sil. Crin., p. 34, pl. 7, figs. 17, 17b, 1926.
 Sil. (Niagaran-Laurel ls.): St. Paul, Ind.
- Laurelocrinus wilsoni** Springer.
 Springer, Amer. Sil. Crin., p. 33, pl. 7, figs. 9-13a, 1926.
 Sil. (Niagaran-Laurel ls.): St. Paul, Ind.
- Lebetocrinus** Kirk. Genotype: *L. grandis* Kirk.
 Poteriocrinitidae (Inadunata-Fistulata). Miss.
 Kirk, Jour. Pal., 14, no. 1, p. 74, 1939 (1940).
- Lebetocrinus grandis** Kirk.
 Kirk, Jour. Pal., 14, nol 1, p. 75, pl. 11, figs. 1-5, 1939 (1940).
 Miss. (Keokuk ls.): Indian Creek and Crawfordsville, Montgomery Co., Indiana.
- Lecanocrinus** Billings (not Hall) = *Protaxocrinus*.
- Lecanocrinus** Hall. Genotype: *L. macropetalus* Hall.
 Lecanocrinidae (Flexibilia). Sil.; Dev.
 Hall, Nat. Hist. N. Y., Pal., 2, p. 199, 1852.—Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, Abth. 2, p. 152, 1867 (adv. pub. 1866, p. 40).—Angelin, Icon. Crin. Suec., p. 11, 1873.—Zittel, Handb. Pal., 1, p. 355, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 30 (282), 1880 (1879).—Bather, Treatise Zool. (Lankester) pt. 3, p. 188, 1900.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 147, 1900.—Grabau, Bull. N. Y. St. Mus., 9, p. 160, 1901; Bull. Buffalo Soc. Nat. Sci., 7, p. 160, 1901.—Springer, Amer. Geol., 30, p. 94, 1902; Jour. Geol., 14, no. 6, pp. 491, 501, 517, 1906; Zittel-Eastman Textb. Pal., 1, p. 203, 1913; Crin. Flexibilia, p. 125, 1920; Amer. Sil. Crin., p. 65, 1926.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 88, 1924.
Cyrtidocrinus Angelin, Icon. Crin. Suec., p. 20, 1873.—Wachsmuth and Springer Rev. Pal., pt. 1, p. 145 (368), 1880 (1879); pt. 3, pp. 141, 144 (65, 68), 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 188, 1900. (Genotype: *C. facietatus* Angelin.)
- Lecanocrinus angulatus** Springer.
 Springer, Crin. Flexibilia, p. 139, pl. 2, figs. 24 a-c, 1920.
 Sil. (Gotlandian): Dalheim, Island of Gotland.
- Lecanocrinus bacchus** (Salter).
Ichthyocrinus bacchus Salter, Cat. Coll. Cambr. Sil. Foss., p. 126, 1873.
Lecanocrinus bacchus Springer, Crin. Flexibilia, p. 138, pl. 2, figs. 25-28, 1920.
 Sil. (Wenlock ls.): Dudley, England.

Lecanocrinus billingsi Angelin.

Angelin, Icon. Crin. Suec., p. 12, pl. 22, fig. 25a, 1878.—Springer, Crin. Flexibilia, p. 132, pl. 2, figs. 1-15, 1920.

Sil. (Gotlandian): Wisby, Island of Gotland.

Lecanocrinus breviarticulatus Chapman.

Chapman, Roy. Soc. Victoria, Proc., n.s., 47, pt. 1, p. 190, pl. 10, figs. 1-6, 1934.

Sil.: Yass, New South Wales, Australia.

Lecanocrinus caliculus Hall = *Pycnosaccus calyculus*.

Lecanocrinus elegans Billings = *Protaxocrinus elegans*.

Lecanocrinus elongatus Springer.

Springer, Amer. Sil. Crin., p. 65, pl. 20, figs. 13, 14, 1926.

Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Lecanocrinus excavatus Ringueberg = *Asaphocrinus excavatus*.

Lecanocrinus facietatus (Angelin).

Cyrtidocrinus facietatus Angelin, Icon. Crin. Suec., p. 20, pl. 21, figs. 13-14a, 1878.

Lecanocrinus facietatus Springer, Crin. Flexibilia, p. 133, pl. 2, figs. 16-21, 1920.

Sil. (Gotlandian): Island of Gotland.

Lecanocrinus greenei Miller and Gurley = *Anisocrinus greenei*.

Lecanocrinus hemisphericus Rowley = *L. pisiformis*.

Lecanocrinus incisus Ringueberg = *Asaphocrinus incisus*.

Lecanocrinus laevis Billings = *Protaxocrinus laevis*.

Lecanocrinus lindströmi Springer.

Springer, Crin. Flexibilia, p. 134, pl. 2, figs. 22, 23, 1920.

Sil. (Gotlandian): Hoberg, Island of Gotland.

Lecanocrinus macropetalus Hall.

Hall, Nat. Hist. N. Y., Pal., 2, p. 199, pl. 45, figs. 1 a-h, 1852.—Quenstedt, Petref. Deutsch., 4, p. 516, pl. 108, fig. 26, 1876.—S. A. Miller, N. Amer. Geol. Pal., p. 257, fig. 348, 1889.—Grabau, Bull. N. Y. St. Mus., 9, p. 160, text fig. 55; Bull. Buffalo Soc. Nat. Sci., 7, text fig. 55, 1901.—Springer, Jour. Geol., 14, no. 6, pl. 6, figs. 13, 14, 1906; Crin. Flexibilia, p. 129, pl. 3, figs. 1-18, 1920.

Lecanocrinus puteolus Ringueberg, Bull. Buffalo Soc. Nat. Sci., 5, p. 11, pl. 1, fig. 8, 1886.

Sil. (Niagaran): Lockport, etc. N. Y., and Grimsby, Ontario (Rochester sh.); Louisville, Ky. (Louisville ls.).

Lecanocrinus macropetalus Angelin = *Anisocrinus angelini*.

Lecanocrinus magniradialis (Weller).

Ichthyocrinus magniradialis Weller, Geol. Surv. N. J., pp. 86, 299, pl. 33, fig. 5, 1905.

Lecanocrinus magniradialis Springer, Crin. Flexibilia, p. 143, pl. 3, figs. 26 a-c, 1920.

Dev. (Helderbergian-New Scotland ls.): Nearpass quarry, Delaware Valley, N. J.

Lecanocrinus meniscus Springer.

Springer, Crin. Flexibilia, p. 140, pl. 1, figs. 37 a-c, 1920; Amer. Sil. Crin., p. 65, pl. 20, figs. 15-15b, 1926.

Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.

Lecanocrinus nitidus Ringueberg = *Asaphocrinus ornatus*.

Lecanocrinus ornatus Hall = *Asaphocrinus ornatus*.

Lecanocrinus oswegoensis Miller and Gurley = *Anisocrinus oswegoensis*.

Lecanocrinus pisiformis (Roemer).

Poteriocrinus pisiformis Roemer, Sil. Fauna W. Tenn., p. 54, pl. 4, fig. 7, 1860.

- Lecanocrinus pisiformis* Springer, Crin. Flexibilia, p. 135, pl. 1, figs. 14-36, 1920; Amer. Sil. Crin., p. 65, pl. 20, figs. 6-12, 1926.
- Lecanocrinus hemisphericus* Rowley, Amer. Geol., 34, p. 271, pl. 14, figs. 17-19, 1904.
- Sil. (Niagaran): Decatur, Perry and Wayne Cos., Tenn. (Beech River fm.); Lockport, N. Y. (Rochester sh.); Racine, Wis. (Racine dol.); near St. Marys, Mo. (Bainbridge ls.); near Linden, Tenn. (Lobelville sh.); Newsom, Tenn. (Waldron sh.); Louisville, Ky. (Louisville ls.); St. Paul, Ind. (Laurel ls.).
- Lecanocrinus pusillus** (Hall).
- Cyathocrinus pusillus* Hall, Some N. Sp. Foss. from Niagara Group, p. 6, 1863; 20th Rep. N. Y. St. Cab. Nat. Hist., doc. ed. p. 324, 1867; rev. ed., p. 366, 1870.
- Lecanocrinus pusillus* Hall, 28th Rep. N. Y. St. Mus. Nat. Hist., p. 136, pl. 15, figs. 1-6, 1879; 11th Rep. Geol. Nat. Hist. Ind., p. 267, pl. 14, figs. 1-6, pl. 15, fig. 7, 1882.—Springer, Crin. Flexibilia, p. 131, pl. 1, figs. 1-13, 1920; Amer. Sil. Crin., p. 65, pl. 20, figs. 1-5, 1926.
- Lecanocrinus tennesseensis* S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 651, pl. 7, figs. 7, 8, 1892 (adv. pub. 1891, p. 41).
- Sil. (Niagaran): Waldron, Ind., Newsom, etc., Tenn. (Waldron sh.); Racine, Wis. (Racine dol.).
- Lecanocrinus pusillus* Winchell and Marcy = *L. waukoma*.
- Lecanocrinus puteolus* Ringueberg = *L. macropetalus*.
- Lecanocrinus roemeri* Schultze = *Geroldicrinus roemeri*.
- Lecanocrinus simplex* Hall = *Ichthyocrinus laevis*.
- Lecanocrinus solidus** Ringueberg.
- Ringueberg, Bull. Buffalo Soc. Nat. Sci., 5, p. 8, pl. 1, fig. 4, 1886.—Springer, Crin. Flexibilia, p. 130, pl. 3, fig. 19, 1920.
- Sil. (Niagaran-Rochester sh.): Lockport, N. Y.
- Lecanocrinus soyei** Oehlert.
- Oehlert, Bull. Soc. Géol. France, (3) 10, p. 354, pl. 8, fig. 2, 1882.—Springer, Crin. Flexibilia, p. 142, pl. 3, figs. 27-29, 1920.
- Dev.: Sable, Sarthe, France.
- Lecanocrinus tennesseensis* S. A. Miller = *L. pusillus*.
- Lecanocrinus waukoma** (Hall).
- Cyathocrinus waukoma* Hall, Adv. Pub. 18th Rep. N. Y. St. Cab. Nat. Hist., p. 20, pl. 2, figs. 11, 12, 1865; 20th Rep. N. Y. St. Cab. Nat. Hist., doc. ed., p. 324, pl. 11, figs. 11, 12, 1867; rev. ed., p. 367, 1870.
- Lecanocrinus waukoma* Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 148, pl. 15, figs. 6-10 (not fig. 11), 1900.—Springer, Crin. Flexibilia, p. 140, pl. 3, figs. 20-25, 1920.
- Lecanocrinus pusillus* Winchell and Marcy, Mem. Boston Soc. Nat. Hist., 1, no. 1, p. 90, 1865.
- Sil. (Niagaran-Racine dol.): Racine and Waukesha, Wis.; Bridgeport etc., near Chicago, Ill.
- Lecanocrinus waukoma* Weller (part) = *Pycnosaccus calyculus*.
- Lecythiocrinus** White. Genotype: *L. olliculaeformis* White.
- Hypocrinidae (Inadunata-Fistulata). Penn.
- White, U. S. Nat. Mus., Proc., 2, p. 256, 1880 (adv. pub., 1879).—Wachsmuth and Springer, Rev. Pal., pt. 3, pp. 191, 228 (115, 152), 1886.—Springer, Zittel-Eastman Textb. Pal., 1, p. 221, 1913.—Kirk, U. S. Nat. Mus., Proc., 83, no. 2972, p. 4, 1934.
- Menocrinus* S. A. Miller, N. Amer. Geol. Pal., p. 262, 1889. (Proposed to replace *Lecythiocrinus* White believing it preoccupied by *Lecythocrinus* Müller.)
- Lecythiocrinus adamsi** Worthen.
- Worthen, Ill. St. Mus., Bull. 1, p. 37, 1882; Geol. Surv. Ill., 7, p. 317, pl. 30, fig. 8, 1883.—Strimple, Bull. Amer. Pal., 24, no. 87, p. 19 (379), pl. 3, figs. 8-10, 1939.
- Penn.: Elmore, Peoria Co., Ill.; Dewey, Okla. (Dewey ls.).

Lecythiocrinus olliculaeformis White.

White, U. S. Nat. Mus., Proc., 2, p. 256, pl. 1, figs. 4, 5, 1880 (adv. pub. 1879); 12th Ann. Rep. U. S. Geol. Surv. Terr., Hayden, Extr., p. 124, pl. 35, figs. 2a, b, 1880 (Final rep. 1883).—Keyes, Geol. Surv. Mo., 4, p. 208, pl. 25, fig. 13, 1894.—Strimple, Bull. Amer. Pal., 24, no. 87, p. 18 (378), pl. 3, figs. 5-7, 1939. Penn.: Near Humboldt and Garnet, Kansas; Dewey, Okla. (Dewey ls.).

Lecythiocrinus problematicus Springer.

Springer, Amer. Sil. Crin., p. 133, pl. 31, figs. 11, 11a, b, 1926. Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Lecythiocrinus urnaeformis Strimple.

Strimple, Bull. Amer. Pal., 24, no. 87, p. 19 (379), pl. 3, figs. 11-13, 1939. Penn. (Stanton ls.): Near Wayside, Kansas.

Lecythocrinus Müller. Genotype: *L. eifelensis* Müller.

Lecythocrinidae (Inadunata-Fistulata). Dev.

Müller, Monatsber. Berlin Acad., p. 96, 1858.—Zittel, Handb. Pal., 1, p. 354, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, pp. 62, 88 (255, 311), 1880 (1879).—Bather, Treatise Zool. (Lankester), pt. 3, p. 175, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 221, 1913.

Lecythocrinus briareus (Schultze).

Taxocrinus briareus Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 148, pl. 4, fig. 1, 1867 (adv. pub. 1866, p. 36).

Lecythocrinus briareus Springer, Crin. Flexibilia, p. 383, 1920.

Dev. (Eifelian): Gerolstein, Germany.

Lecythocrinus eifelianus Müller.

Müller, Monatsber. Berlin Acad., p. 196, 1858.—Springer, Zittel-Eastman Textb. Pal., 1, p. 177, fig. 273, 1913.

Dev. (Eifelian): Eifel, Germany.

Leiocrinus Springer (not d'Orbigny) = *Homalocrinus*.

Lenneocrinus Schmidt. Genotype: *L. cirratus* Jaekel.

Actinocrinitidae (Camerata). Low. Dev.

Schmidt (Jaekel Ms.), Jahr. ver. Elberfeld., 12, p. 46, 1909.—Jaekel, Pal. Zeits., 3, p. 35, 1918.

Lenneocrinus cirratus Jaekel.

Jaekel, Pal. Zeits., 3, p. 35, fig. 25, 1918.

Low. Dev. (Coblentzian): Elberfeld, Germany.

Leptocrinus Angelin = *Carpocrinus*.

Leseus Gregorio. Genotype: *L. palazzensis* Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 38, 1930. (Bead-shaped crinoid columnals.)

Leseus palazzensis Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 38, pl. 14, figs. 5, 6, 1930.

Permian: Sicily.

Leseus palazzensis inaequalis Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 39, pl. 14, fig. 7, 1930.

Permian: Sicily.

Lichenocrinus Hall. Genotype: *L. dyeri* Hall.

Heterocrinidae (Inadunata-Fistulata). Ord.; Early Sil.

Hall, Rep. N. Y. St. Cab. Nat. Hist., Adv. Pub., p. 9, 1866.—Meek, Geol. Surv. Ohio, Pal., 1, pp. 44-51, 1866.—Zittel, Handb. Pal., p. 424, 1879.—Cumings, 32d Rep. Geol. Nat. Res. Ind., p. 214, 1908.—Ehrenberg, Bull. Amer. Mus. Nat. Hist., 59, p. 46, 1929.—Faber, Amer. Midland Nat., 11, no. 9, p. 491, 1929.—Fenton, M. A., Amer. Midland Nat., 11, no. 9, pp. 491, 492, pl. 36, 1929.

Lichenocrinus affinis S. A. Miller = *L. crateriformis*.

Lichenocrinus ashmanni Faber.

Faber, Amer. Midland Nat., 11, no. 9, p. 468, pl. 34, figs. 5, 6, 1929.

Ord. (Maysville-Mt. Hope sh.): Cincinnati, Ohio.

Lichenocrinus austini M. A. Fenton.

M. A. Fenton, Amer. Midland Nat., 11, no. 9, p. 495, pl. 37, fig. 4, 1929.

Ord. (Black River-Decorah sh., Spechts Ferry mem.): St. Paul, Minn.

Lichenocrinus crateriformis Hall.

Hall, Adv. Pub. N. Y. St. Cab. Nat. Hist., p. 9, 1866; 24th Rep. N. Y. St. Cab. Nat. Hist., p. 217, pl. 7, fig. 7, 1872 (adv. pub. 1871, pl. 3, fig. 7).—Meek, Geol. Surv. Ohio, 1, p. 51, pl. 3, figs. 1 a-t, 1873.—Cumings, 32d Rep. Geol. Nat. Res. Ind., p. 728, pl. 4, figs. 12-12b, pl. 3, fig. 2, 1908.—Ehrenberg, Bull. Amer. Mus. Nat. Hist., 59, p. 48, fig. 32, 1929.—Faber, Amer. Midland Nat., 11, no. 9, p. 470, pl. 32, figs. 5-12, 1929.

Lichenocrinus affinis S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 5, p. 229, pl. 9, figs. 7, 7a, 1882.—Foerste, Bull. Sci. Lab. Denison Univ., 17, pl. 2, fig. 5, 1914.

Early Sil. (Richmond): Oxford, Ohio (Waynesville ls.); Richmond, etc., Ind. (Whitewater fm.); Ohio and Indiana (Elkhorn fm.); 16 miles west Dubuque, Iowa (Maquoketa fm.).

Lichenocrinus dubius S. A. Miller.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 3, p. 234, pl. 7, figs. 5, 5a, 1880.—Faber, Amer. Midland Nat., 11, no. 9, p. 464, pl. 29, figs. 2, 9, pl. 30, figs. 1-3, 1929.

Ord. (Eden, Fulton-Southgate mem.): Cincinnati, Ohio.

Lichenocrinus dyeri Hall.

Hall, Adv. Pub. Rep. N. Y. St. Cab. Nat. Hist., p. 9, 1866; 24th Rep. N. Y. St. Cab. Nat. Hist., p. 216, pl. 7, figs. 1-6, 1872 (adv. pub. 1871, pl. 3, figs. 1-6).—Meek, Geol. Surv. Ohio, Pal., 1, p. 51, pl. 3, fig. 2, 1873.—Faber, Amer. Midland Nat., 11, no. 9, p. 469, pl. 27, fig. 5, pl. 34, figs. 7-12, 1929.—Ehrenberg, Bull. Amer. Mus. Nat. Hist., 59, p. 51, fig. 33, 1929.

Ord.: Cincinnati, Ohio, and Madison, Ind. (Maysville-Corryville sh.); West Covington, Ky. (Trenton-Cynthiana fm., Rogers Gap div.).

Lichenocrinus fentonae Faber.

Faber, Amer. Midland Nat., 11, no. 9, p. 462, pl. 29, fig. 1, pl. 30, figs. 7, 8, 1929.

Ord. (Eden-Southgate mem.): Cincinnati, Ohio.

Lichenocrinus irregularis Faber.

Faber, Amer. Midland Nat., 11, no. 9, p. 473, pl. 32, fig. 13, 1929.

Early Sil. (Richmond-Whitewater fm.): Dodge Creek, near Oxford, Ohio.

Lichenocrinus kemperi Faber.

Faber, Amer. Midland Nat., 11, no. 9, p. 473, pl. 32, figs. 1-4, 1929.

Early Sil. (Richmond-Elkhorn fm.): Seven-Mile Creek, 2½ miles south Eaton, Ohio.

Lichenocrinus milleri Faber.

Faber, Amer. Midland Nat., 11, no. 9, p. 476, pl. 33, figs. 3-9, 1929.

Early Sil. (Richmond-Elkhorn fm.): Near Versailles, 3 miles south of Osgood, and near Richmond, Ind.; near Lebanon, Ohio.

Lichenocrinus minutus Foerste.

Foerste, Iowa Geol. Surv., 29, p. 353, pl. 30, figs. 18, 19, 1924.

Early Sil. (Richmond-Low. Maquoketa, Elgin sh.): Clermont, Iowa.

Lichenocrinus nodosus Faber.

Faber, Amer. Midland Nat., 11, no. 9, p. 477, pl. 33, figs. 10-12, 1929.

Early Sil. (Richmond-Waynesville and Elkhorn fm.): Near Weisburg, and 3 miles south of Osgood, Ind.

Lichenocrinus nodosus minnesotensis M. A. Fenton.

M. A. Fenton, Amer. Midland Nat., 11, no. 9, p. 494, pl. 37, fig. 1, 1929.

Ord. (Black River-Decorah sh., Spechts Ferry mem.): St. Paul, Minn.

Lichenocrinus obliquus Foerste.

Foerste, Geol. Surv. Canada, Mem. 138, p. 102, pl. 6, fig. 2, 1924.

Ord. (Eden-Sheguindah beds): $\frac{1}{2}$ mile south of Clay Cliffs, Manitoulin Island, Lake Huron.

Lichenocrinus ornatus M. A. Fenton.

M. A. Fenton, Amer. Midland Nat., 11, no. 9, p. 496, pl. 37, fig. 9, 1929.

Ord. (Trenton-Hull ls.): Kirkfield, Ontario, Canada.

Lichenocrinus pattersoni S. A. Miller.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 2, p. 118, pl. 10, figs. 6, 6a, 1879.—Cumings, 32d Rep. Geol. Nat. Res. Ind., p. 729, pl. 4, figs. 4, 4a, 1908.—Faber, Amer. Midland Nat., 11, no. 9, p. 461, pl. 30, fig. 6, 1929.

Ord. (Trenton-Cynthiana fm., Rogers Gap div.): West Covington, Ky.

Lichenocrinus schlemmeri Faber.

Faber, Amer. Midland Nat., 11, no. 9, p. 466, pl. 31, figs. 1-3, 1929.

Ord. (Eden-Southgate mem.): Near Cincinnati, Ohio.

Lichenocrinus shideleri Faber.

Faber, Amer. Midland Nat., 11, no. 9, p. 478, pl. 28, fig. 9, pl. 34, figs. 3, 4, 1929.

Early Sil. (Richmond-Whitewater fm., Saluda ls.): Near Mixerville, Ind.

Lichenocrinus shideleri regularis Faber.

Faber, Amer. Midland Nat., 11, no. 9, p. 479, pl. 28, fig. 8, pl. 34, figs. 1, 2, 1929.

Early Sil. (Richmond-Elkhorn fm.): Near Richmond and south of Osgood, Ind.

Lichenocrinus stetteri Faber.

Faber, Amer. Midland Nat., 11, no. 9, p. 466, pl. 30, figs. 4, 5, 1929.

Ord. (Eden-Southgate mem.): Near Cincinnati, Ohio.

Lichenocrinus subaequalis Foerste.

Foerste, Jour. Cincinnati Soc. Nat. Hist., 21, p. 125, pl. 1, fig. 10, 1914; Bull. Sci. Lab. Denison Univ., 17, pl. 2, fig. 6, 1914.

Ord. (Trenton-Cynthiana fm., Rogers Gap div.): Near Rogers Gap, Ky.

Lichenocrinus tuberculatus S. A. Miller.

S. A. Miller, Cincinnati Quart. Jour., 1, p. 346, fig. 33, 1874; Jour. Cincinnati Soc. Nat. Hist., 5, p. 229, pl. 9, figs. 6, 6a, 1882.—Cumings, 32d Rep. Geol. Nat. Res. Ind., p. 730, pl. 4, fig. 3, 1908.—Foerste, Ottawa Nat., 31, p. 99, pl. 4, fig. 3, 1918.—Faber, Amer. Midland Nat., 11, no. 9, p. 474, pl. 33, figs. 1, 2, pl. 28, figs. 1, 2, 6, 10, 11, 14, pl. 29, figs. 6-8, 1929.—Ehrenberg, Bull. Amer. Mus. Nat. Hist., 59, p. 47, fig. 31, 1929.

Early Sil. (Richmond): Richmond, Ind., Clarksville, Eaton, etc., Ohio (Whitewater fm.); Near Richmond, etc., Ind., near Dayton, etc., Ohio (Elkhorn fm.); Stonington, Mich.

Lichenocrinus twitchelli Faber.

Faber, Amer. Midland Nat., 11, no. 9, p. 463, pl. 31, figs. 6-10, 1929.

Ord. (Eden-Southgate mem.): Cincinnati, Ohio.

Lichenocrinus vaupeli Faber.

Faber, Amer. Midland Nat., 11, no. 9, p. 467, pl. 31, figs. 4, 5, 1929.

Ord. (Eden-Southgate mem.): Near Cincinnati, Ohio.

Lindstroemiocrinus Jaekel. Genotype: *Trochocrinites gotlandicus* Pander.

Periechocrinitidae (Camerata). Sil.

Jaekel, Pal. Zeits., 3, p. 31, 1918.

Lindstroemiocrinus gotlandicus (Pander).

Trochocrinites gotlandicus Pander, in Helmersson, Geol. Bemerk. Reise in Schweden und Norwegen, p. 20, pl. 3, figs. a, b, d, e, (not c), 1858.

Periechocrinus gotlandicus Angelin, Icon. Crin. Suec., p. 7, pl. 10, figs. 3, 4, 1878.

Lindstroemiocrinus gotlandicus Jaekel, Pal. Zeits., 3, p. 31, fig. 22, 1918.

Sil. (Gotlandian): Busvik, Island of Gotland.

- Linobrachiocrinus** Goldring. Genotype: *L. kindlei* Goldring.
 Poteriocrinitidae (Inadunata-Fistulata). Dev.
 Goldring, Jour. Pal., 15, no. 3, p. 354, 1939.
Linocrinus Goldring (not Kirk), Bull. Amer. Pal., 24, no. 81, p. 19, 1938.
- Linobrachiocrinus kindlei** (Goldring);
Linocrinus kindlei Goldring, Bull. Amer. Pal., 24, no. 81, p. 21, pl. 2, figs. 5, 6, 1938.
 Up. Dev.: Bouvier River, Mackenzie River Basin, Northwest Terr., Canada.
- Linocrinus* Goldring = *Linobrachiocrinus*.
- Linocrinus** Kirk. Genotype: *L. wachsmuthi* Kirk.
 Poteriocrinitidae (Inadunata-Fistulata). Miss.
 Kirk, Jour. Washington Acad. Sci., 28, p. 168, 1938.
- Linocrinus arboreus** (Worthen).
Poteriocrinus (Zeacrinus) arboreus Worthen, in Meek and Worthen, Geol. Surv. Ill., 5, p. 534, pl. 20, fig. 6, 1873.
Scaphiocrinus arboreus Springer, Amer. Geol., 26, p. 147, pl. 16, figs. 18-23, 1900.
Pachylocrinus arboreus Springer, U. S. Nat. Mus., Proc., 67, art. 9, pp. 65, 67, 71, pl. 16, figs. 3, 7 (not 4-6) 1926.
Linocrinus arboreus Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 168, 1938.
 Miss. (Chester-Gasper fm.): Monte Sano, east of Huntsville, Ala.
- Linocrinus asper** (Meek and Worthen).
Poteriocrinites (Zeacrinus) asper Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 150, 1869.
Zeacrinus asper Meek and Worthen, Geol. Surv. Ill., 5, p. 430, pl. 1, fig. 7, 1873.
Pachylocrinus asper Springer, Mem. Mus. Comp. Zool., 25, p. 147, 1911.
Linocrinus asper Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 168, 1938.
 Miss. (Low. Burlington ls.): Burlington, Iowa.
- Linocrinus cariniferous** (Worthen).
Poteriocrinites (Zeacrinus) cariniferous Worthen, in Meek and Worthen, Geol. Surv. Ill., 5, p. 535, pl. 20, fig. 4, 1873.
Linocrinus cariniferous Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 168, 1938.
Cyathocrinites inflatus Troost, Amer. Jour. Sci. and Arts. (2) 8, p. 419, 1849.
Coelocrinus cariniferous Weller, U. S. Geol. Surv., Bull. 153, p. 185, 1898.
 Miss. (Chester-Ste. Genevieve or Gasper fm.): Monte Sano, east of Huntsville, Ala.
- Linocrinus compactus** (Laudon).
Zeacrinus compactus Laudon, Univ. Iowa Studies, 15, no. 2, p. 66, pl. 5, figs. 4, 5, 1933.
Linocrinus compactus Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 168, 1938.
 Miss. (Kinderhook-Gilmore City fm.): Gilmore City, Iowa.
- Linocrinus floweri** Laudon.
 Laudon, Jour. Pal., 15, no. 4, p. 386, pl. 56, fig. 4, 1941.
 Miss. (Chester-Pitkin ls.): 4½ m. northeast of Ft. Gibson, Okla.
- Linocrinus lautus** (Miller and Gurley).
Poteriocrinus lautus Miller and Gurley, Ill. St. Mus., Bull. 9, p. 30, pl. 2, figs. 18, 19, 1896.—Miller, N. Amer. Geol. Pal., 2d App., p. 752, fig. 1388, 1897.
Linocrinus lautus Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 168, 1938.
 Miss. (Warsaw ls.): Boonville, Mo.
- Linocrinus penicillus** (Meek and Worthen).
Poteriocrinites (Scaphiocrinus) penicillus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 142, 1869; Geol. Surv. Ill., 5, p. 414, pl. 2, fig. 7, 1873.
Linocrinus penicillus Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 169, 1938.
 Miss. (Up. and Low. Burlington ls.): Burlington, Iowa.

Linocrinus perangulatus (White).

Zeacrinus perangulatus White, Proc. Boston Soc. Nat. Hist., 9, p. 11, 1865 (adv. pub., 1862).

Linocrinus perangulatus Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 169, 1938. Miss. (Up. Burlington ls.): Burlington, Iowa.

Linocrinus praemorsus (Miller and Gurley).

Scaphiocrinus praemorsus Miller and Gurley, 16th Rep. Geol. Surv. Ind., p. 364, pl. 8, fig. 11 (authors' ed. p. 48), 1890.

Linocrinus praemorsus Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 169, 1938. Miss. (Keokuk ls.): Washington Co., Ind.

Linocrinus scobina (Meek and Worthen).

Poteriocrinites (Zeacrinus) scobina Meek and Worthen Proc. Acad. Nat. Sci. Phila., p. 140, 1869; Geol. Surv. Ill., 5, p. 426, pl. 1, fig. 2, 1873.

Linocrinus scobina Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 169, 1938. Miss. (Up. Burlington ls.): Burlington, Iowa.

Linocrinus spinuliferus (Worthen).

Poteriocrinus spinuliferus Worthen, Ill. St. Mus., Bull. 2, p. 27, 1884; Geol. Surv. Ill., 8, p. 86, pl. 14, fig. 3, p. 90, pl. 17, figs. 1, 1a, 1890.

Linocrinus spinuliferus Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 169, 1938. Miss. (Chester-Renault or Paint Creek fm.): Near Columbia, Monroe Co., Ill.

Linocrinus wachsmuthi Kirk.

Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 169, 1938.

Pachylocrinus arboreus Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 65, pl. 16, figs. 4-6 (not 3, 7), 1926.

Miss. (Chester-Ste. Genevieve ls.): 7 miles south of Huntsville, Ala.

Liparocrinus Goldring. Genotype: *L. batheri* Goldring.

Glossocrinidae (Inadunata-Fistulata). Dev.

Goldring, N. Y. St. Mus., Mem. 16, p. 397, 1923.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 70, 1926.

Liparocrinus batheri Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 397, pl. 52, fig. 8, 1923.

Dev. (Low. Chemung fm.): Brown Hill, Cohocton, N. Y.

Liparocrinus halli Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 400, pl. 52, figs. 9-11, 1923.

Dev. (Chemung fm.): Near Tracy Creek, Broome Co., N. Y.

Lithocrinus Wachsmuth and Springer. Genotype: *Forbesiocrinus divaricatus* Angelin.

Sagenocrinitidae (Flexibilia). Sil.

Wachsmuth and Springer, Rev. Pal., pt. 1, p. 52, (275), 1880 (1879).—Bather, Treatise Zool. (Lankester), pt. 3, p. 189, 1900.—Springer, Amer. Geol., 30, p. 95, 1902 as (*Lithocrinus*); Zittel-Eastman Textb. Pal., 1, p. 204, 1913; Jour. Geol., 14, pp. 515, 518, 1906; Crin. Flexibilia, pp. 205, 222, 1920.

Lithocrinus divaricatus (Angelin).

Forbesiocrinus divaricatus Angelin, Icon. Crin. Suec., p. 9, pl. 21, fig. 21, pl. 28, fig. 3 (not pl. 26, figs. 6, 6a), 1878.

Lithocrinus divaricatus Wachsmuth and Springer, Rev. Pal., pt. 1, p. 51, 1880 (1879); —Springer, Crin. Flexibilia, p. 223, pl. 20, figs. 1-3e, 1920.

Forbesiocrinus robustus Angelin, Icon. Crin. Suec., p. 9, pl. 21, figs. 11, 12, 1878.

Sil. (Gotlandian): Wisby, Island of Gotland.

Lithocrinus milleri (Angelin).

Forbesiocrinus milleri Angelin, Icon. Crin. Suec., p. 9, pl. 21, fig. 16, pl. 28, fig. 1, 1878.

- Lithocrinus milleri* Wachsmuth and Springer, Rev. Pal., pt. 1, p. 53 (276), 1880 (1879).
Sil. (Gotlandian): Island of Gotland.
- Lithocrinus obesus* Wachsmuth and Springer = *Cholocrinus obesus*.
Lithocrinus Springer. See *Lithocrinus*.
- Lobocrinus* Wachsmuth and Springer. = *Uperocrinus*.
Lobolithes Zittel. See *Lobolithus*.
Lobolithus Waagen and Jahn = *Scyphocrinites*.
- Lodanella** Kayser. Genotype: *L. mira* Kayser.
Edriocrinidae (Camerata). Low. Dev.
Kayser, Zeits. Deutsch. Geol. Gesell., 37, p. 207, 1885 (described as a sponge).—
Jaekel, Pal. Zeits., 1, p. 382, 1914.
- Lodanella mira** Kayser.
Kayser, Zeits. Deutsch. Geol. Gesell., 37, p. 207, 1885.—Jaekel, Pal. Zeits., 1, pp. 382-385, text fig., 1914.
Low. Dev. (Coblentzian): Hunzel, near Singhofen on the Lahn, Nassau, Germany.
- Logocrinus** Goldring. Genotype: *L. geniculatus* Goldring.
Poteriocrinitidae (Inadunata-Fistulata). Dev.
Goldring, N. Y. St. Mus., Mem. 16, p. 437, 1923.
- Logocrinus geniculatus** Goldring.
Goldring, N. Y. St. Mus., Mem. 16, p. 438, pl. 57, figs. 1-6, 1923; Jour. Pal., 10, p. 22, pl. 7, fig. 13, 1936.
Dev. (Hamilton): Kashong Creek, near Bellona, and Monteith's Point, Canandaigua Lake, N. Y. (Moscow sh.); Georgetown, N. Y. (Windom sh.).
- Logocrinus infundibuliformis** Goldring.
Goldring, N. Y. St. Mus., Mem. 16, p. 440, pl. 57, figs. 7-11, 1923.
Dev. (Low. Chemung fm.): Chemung Narrows, Chemung Co., N. Y.
- Lopadiocrinus** Wanner. Genotype: *L. granulatus* Wanner.
Poteriocrinitidae (Inadunata-Fistulata). Permian.
Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 227, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, pp. 181, 294, 1924.
- Lopadiocrinus angustecavatus** Wanner.
Wanner, Neue Beitr. kennt. Perm. Echin. Timor, XII, p. 200, pl. 13, figs. 22-24, 1937.
Permian: Basleo, Timor.
- Lopadiocrinus brouweri** Wanner.
Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 231, pl. 109 (14), fig. 6, 1916.
Permian: Basleo, Timor.
- Lopadiocrinus brouweri vermistriatus** Wanner.
Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped., 1916, p. 296, pl. 18, figs. 15, 16, 1924.
Permian: Basleo, Timor.
- Lopadiocrinus granulatus** Wanner.
Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 228, text figs. 62, 63, pl. 109 (14), figs. 3, 4, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 294, text figs. 57-60, 1924.—Yakovlev, Centralbl. Min., Geol. Pal., Abt. B, no. 9, p. 377, figs. 4, 6, 1930.
Permian: Basleo, Timor.

Lopadiocrinus granulatus labiosus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 231, pl. 109 (14), fig. 5, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 295, pl. 18, figs. 12-14, 1924.

Permian: Basleo, Timor.

Lopadiocrinus mammillaris Wanner = *Paraplasocrinus transitorius*.

Lopadiocrinus tuberculatus Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, XII, p. 199, pl. 13, figs. 17-21, 1937.

Permian: Basleo, Timor.

Lophocrinus von Meyer. Genotype: *L. speciosus* von Meyer = *L. minutus* Roemer. Cyathocrinitidae (Inadunata-Fistulata). Low. Carb.

Von Meyer, Neues Jahrb. Min., Geol. Pal., p. 59, 1858; Palaeontographica, 7, p. 111, 1860.—Zittel, Handb. Pal., 1, p. 361, 1879.—Jaekel, Pal. Abhandl., 7, p. 90, 1895.

—Bather, Treatise Zool. (Lankester), pt. 3, p. 179, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 221, 1913.—Haarmann, Jahrb. Preuss. Geol. Landesanst., 41, p. 34, 1920.

Carduocrinus von Koenen, Neues Jahrb. Min., Geol. Pal., 2, p. 210, 1895. (Genotype: *C. jaekeli* von Koenen.)

Lophocrinus minutus (Roemer).

Poteroocrinus minutus Roemer, in Dunker, Palaeontographica, 3, p. 47, pl. 8, figs. 1 a-d, 1850.

Lophocrinus minutus Jaekel, Pal. Abhandl., 7, p. 92, pl. 7, 1895.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 122, pp. 31, 33, text fig. 6, pl. 2, figs. 13-15, pl. 3, figs. 1a, b, 1930.

Lophocrinus speciosus von Meyer, Neues Jahrb. Min., Geol. Pal., p. 59, 1858; Palaeontographica, 7, p. 111, pl. 14, figs. 1-3, pl. 15, figs. 1-4, 1860.

Carduocrinus jaekeli von Koenen, Neues Jahrb. Min. Geol. Pal., 2, p. 210, 1895.

Low. Carb. (Visean): Lautenthal, Waldeck and Harz, and near Herborn, Nassau, Germany; Spain.

Lophocrinus speciosus von Meyer = *L. minutus*.

Loveniocrinus Jaekel. Genotype: *L. gotlandicus* Jaekel.

Patelloocrinidae (Camerata). Sil.

Jaekel, Pal. Zeits., 3, p. 37, 1918.

Loveniocrinus gotlandicus Jaekel.

Jaekel, Pal. Zeits., 3, p. 36, fig. 27, 1918.

Sil. (Gotlandian): Island of Gotland.

Loxocrinus Wanner. Genotype: *L. globulus* Wanner.

Lecanocrinidae (Flexibilia). Permian.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, pp. 250, 251, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 89, 1924.

Loxocrinus booni Marez Oyens.

Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 305, pl. 2, fig. 5, 1940.

Permian: Kioemoko, Timor.

Loxocrinus dilatatus (Wanner).

Loxocrinus globulus var. *dilatata* Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 256, pl. 110 (15), fig. 3, 1916.

Loxocrinus dilatatus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 91, pl. 3, fig. 12, pl. 4, figs. 2-6, 1924; Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia, pp. 12, 13, figs. 1, 2, 1930.

Permian: Basleo, Timor.

Loxocrinus globulus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 252, text fig. 64, p. 254, pl. 110 (15), figs. 1, 2, 1916.

Permian: Basleo, Timor.

Loxocrinus globulus dilatata Wanner = *L. dilatatus*.

Lyonicrinus Springer. Genotype: *Coccocrinus bacca* Roemer.

Platycrinitidae (Adunata). Sil.

Springer, Amer. Sil. Crin., p. 48, 1926.

Lyonicrinus bacca (Roemer).

Coccocrinus bacca Roemer, Sil. Fauna W. Tenn., p. 51, pl. 4, figs. 5 a-c, 1860.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 739, pl. 75, fig. 15, 1897.—Wood, U. S. Nat. Mus., Bull. 64, p. 29, pl. 4, fig. 9, 1909.

Lyonicrinus bacca Springer, Amer. Sil. Crin., p. 51, pl. 11, figs. 6-23, 1926.

Platycrinites ann dixonii Troost; Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849 (nom nud)

Sil. (Niagaran-Beech River fm.): Decatur and Perry Cos., Tenn.

Lyriocrinus Hall. Genotype: *Marsupiocrinites? dactylus* Hall.

Rhodocrinitidae (Camerata). Sil.

Hall, Nat. Hist. N. Y., Pal., 2, pp. 197, 355, 1852.—Zittel, Handb. Pal., 1, p. 378, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, pp. 184, 203 (358, 377), 1881; N. Amer. Crin. Cam., p. 261, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 200, 1900.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 90, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 189, 1913.

Lyriocrinus? beecheri Hudson = *Hercocrinus beecheri*.

Lyriocrinus dactylus (Hall).

Marsupiocrinites? dactylus Hall, Nat. Hist. N. Y., Geol., pt. 4, p. 114, text fig. 41, pl. 18, fig. 4, 1843.

Lyriocrinus dactylus Hall, Nat. Hist., N. Y., Pal., 2, p. 197, pl. 44, figs. 1 a-g, 1852.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 262, pl. 11, figs. 5 a-c, 1897.—Grabau, Bull. Buffalo Soc. Nat. Sci., 7, p. 156, text fig. 51; Bull. N. Y. St. Mus., 9, p. 156, text fig. 51, 1901.

Sil. (Niagaran-Rochester sh.): Lockport, N. Y.; Grimsby, Ontario.

Lyriocrinus melissa (Hall).

Rhodocrinus melissa Hall, Adv. Not. Some N. Sp. Foss., Niagara Gr., p. 4, 1863.

Rhodocrinus (Lyriocrinus) melissa Hall, 28th Rep. N. Y. St. Mus. Nat. Hist., p. 139, pl. 15, figs. 18-27, 1879.

Lyriocrinus melissa Hall, 11th Rep. Geol. Nat. Hist. Ind., p. 269, pl. 14, figs. 18-27, pl. 15, fig. 11, 1882.—Keyes, Geol. Surv. Mo., 4, p. 21, fig. 6, 1894.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 263, pl. 11, figs. 4 a-f, 1897.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 91, pl. 3, figs. 6-8, 1900.

Sil. (Niagaran): Waldron, etc., Ind., Newsom, etc., Tenn. (Waldron sh.); Racine, Wis., Bridgeport, etc., Ill. (Racine dol.).

Lyriocrinus sculptilis (Hall).

Rhodocrinus (Lyriocrinus) sculptilis Hall, 18th Rep. N. Y. St. Cab. Nat. Hist., p. 21, 1865.

Sil. (Niagaran-Racine dol.): Waukesha, Wis.

Lyriocrinus sculptilis (or *sculptus*) Miller = *Diaboloocrinus vesperalis*.

Macarocrinus Jaekel. Genotype: *M. springeri* Jaekel.

Carpocrinidae (Camerata). Dev.

Jaekel, Pal. Abhandl., 7, p. 36, 1895.—Bather, Treatise Zool., (Lankester), pt. 3, p. 166, 1900.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 123, 1934.

Macarocrinus semelfurcatus Schmidt.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 126, text fig. 28c, pl. 18, fig. 2, pp. 143, 146, 1934.

Dev. (Hunsrück sl.): Bundenbach, Germany.

Macarocrinus springeri Jaekel.

Jaekel, Pal. Abhandl., 7, p. 37, pl. 2, fig. 1, 1895.—Bather, Treatise Zool. (Lankester), pt. 3, p. 166, text fig. 79-1, 1900.—Opitz, Bild. Erdgesch. Nahe-Hunsrück-Landes Birkenfeld, p. 98, fig. 95, 1932.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 124, text fig. 28-a, pl. 29, fig. 2, pp. 143, 146, 1934.

Dev. (Hunsrück sl.): Bundenbach, Germany.

Macarocrinus terfurcatus Schmidt.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 126, text fig. 28-b, pl. 11, fig. 3, pp. 143, 146, 1934 (as *terfurcatus*).

Dev. (Hunsrück sl.): Bundenbach, Germany.

Macrocrinus Wachsmuth and Springer. Genotype: *Actinocrinus konincki* Shumard. Batocrinidae (Camerata). Miss.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 446, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 168, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 195, 1913.

Macrocrinus carica (Hall).

Actinocrinus carica Hall, Prelim. Descr. N. Sp. Crin., p. 10, 1861; N. Y. St. Mus., Bull. 1, pl. 4, fig. 12, 1872.

Macrocrinus carica Wachsmuth and Springer, N. Amer. Crin. Cam., p. 448, pl. 27, fig. 8, 1897.

Miss.: Burlington, Iowa (Low. Burlington ls.); Sedalia, Mo. (Chouteau ls.).

Macrocrinus gemmiformis (Hall).

Actinocrinus gemmiformis Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 23, text fig., 1860; N. Y. St. Mus., Bull. 1, pl. 3-A, fig. 6, 1872.

Macrocrinus gemmiformis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 449, pl. 36, fig. 8, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Macrocrinus jucundus (Miller and Gurley).

Batocrinus jucundus Miller and Gurley, Jour. Cincinnati Soc. Nat. Hist., 15, p. 19, pl. 4, figs. 5, 6, 1890; 16th Rep. Geol. Surv. Ind., p. 341, pl. 4, figs. 5, 6 (authors' ed., p. 20), 1890.

Macrocrinus jucundus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 451, pl. 4, fig. 15, pl. 30, figs. 13, 14, 1897.

Batocrinus agnatus S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 663, pl. 8, figs. 1, 2, 1892 (adv. pub., 1891).

Miss. (Keokuk ls.): Indian Creek and Crawfordsville, Ind.

Macrocrinus konincki (Shumard).

Actinocrinus konincki Shumard, Geol. Surv. Mo., 2d Rep., p. 194, pl. A, figs. 8 a-c, 1855.—Billings, Geol. Surv. Canada, Can. Org. Rem., Dec. 3, p. 30, fig. 17, 1858.

Macrocrinus konincki Wachsmuth and Springer, N. Amer. Crin. Cam., p. 447, pl. 35, figs. 1-3, 1897.

Actinocrinus urnaeformis McChesney, Descr. N. Sp. Foss. Pal. Rocks Western States, p. 23, 1860.

Miss. (Up. Burlington ls.): Rocheport, Boone Co., or near Palmyra, Marion Co., Mo.; Burlington, Iowa; Honey Creek, Ill.

Macrocrinus lagunculus (Hall).

Actinocrinus lagunculus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 41, 1860.

Macrocrinus lagunculus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 453, pl. 35, fig. 4, 1897.—Van Tuyl, Geol. Surv. Iowa, 30, pl. 5, fig. 3, 1925.

Miss. (Keokuk ls.): Warsaw, Ill., and Keokuk, Iowa.

Macrocrinus verneuillianus (Shumard).

Actinocrinus verneuillianus Shumard, Geol. Surv. Mo., 2d Rep., p. 193, pl. A, figs. 1a, b, 1855.—Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 3, p. 30, fig. 18, 1858.

Batocrinus verneuillianus Meek and Worthen, Geol. Surv. Ill., 5, pp. 328, 379, pl. 4, figs. 3, 4, 1873.

Eretmocrinus verneuillianus Keyes, Mo. Geol. Surv., 4, p. 177, pl. 23, fig. 9, 1894.

Macrocrinus verneuillianus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 450, pl. 5, figs. 7, 8, pl. 30, figs. 15–18, 1897.—Van Tuyl, Geol. Surv. Iowa, 30, pl. 4, figs. 7, 8, 1925.

Miss. (Up. Burlington ls.): Rocheport, Boone Co., Marion Co., and Louisiana, Pike Co., Mo.; Iowa; Henderson Co., Ill.

Macrostylocrinus Hall. Genotype: *M. ornatus* Hall.

Patelloocrinidae (Camerata). Sil.; Dev.

Hall, Nat. Hist. N. Y., Pal., 2, p. 203, 1852.—Zittel, Handb. Pal., 1, p. 368, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, pp. 96, 102 (270, 276), 1881; N. Amer. Crin. Cam., p. 285, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 162, 1900.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 92, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 191, 1913; Amer. Sil. Crin., p. 25, 1926.

Macrostylocrinus anglicus Jaekel.

Jaekel, Pal. Zeits., 3, p. 36, fig. 26, 1918.

Sil. (Wenlock ls.): Dudley, England.

Macrostylocrinus fasciatus (Hall).

Cyathocrinus fasciatus Hall, 28th Rep. N. Y. St. Mus., Nat. Hist., doc. ed., Expl. pl. 13, figs. 5, 6, 1877; Mus. ed., p. 130, pl. 13, figs. 5, 6, 1879.

Macrostylocrinus fasciatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 288, pl. 22, fig. 13, 1897.—Springer, Amer. Sil. Crin., p. 25, pl. 4, figs. 9–9b, 1926.

Sil. (Niagaran): Waldron etc., Ind., Newsom, Tenn. (Waldron sh.); Decatur Co., Tenn. (Beech River fm.).

Macrostylocrinus fusibrachiatus Ringuenberg.

Ringuenberg, Jour. Cincinnati Soc. Nat. Hist., 5, p. 119, pl. 5, fig. 4, 1882.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 291, pl. 23, figs. 9, 10, 1897.

Sil. (Niagaran-Rochester sh.): Lockport, etc., N. Y.

Macrostylocrinus granulosis (Hall).

Macrostylocrinus striatus var. *granulosus* Hall, 28th Rep. N. Y. St. Mus. Nat. Hist., Mus. ed., p. 129, 1879; 11th Rep. Geol. Nat. Hist. Ind., p. 258, pl. 12, figs. 5, 6, 1882.

Macrostylocrinus granulosis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 289, pl. 22, figs. 15a, b, 1897.—Springer, Amer. Sil. Crin., p. 26, pl. 4, figs. 10–13, 1926.

Sil. (Niagaran-Waldron sh.): Waldron, etc., Indiana; Newsom, Tenn.

Macrostylocrinus indianensis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 6, p. 53, pl. 3, fig. 23, 1895.

Patelloocrinus? indianensis Springer, Amer. Sil. Crin., p. 32, 1926.

Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Macrostylocrinus laevis Springer.

Springer, Amer. Sil. Crin., p. 26, pl. 4, figs. 14–19, 1926.

Sil. (Niagaran-Beech River fm.): 2 miles north Decaturville, and Perry Co., Tenn.

Macrostylocrinus meeki (Lyon).

Actinocrinus meeki Lyon, Proc. Acad. Nat. Sci. Phila., (2) 5, p. 411, pl. 4, figs. 4a, b, 1861.

Macrostylocrinus meeki Wachsmuth and Springer, N. Amer. Crin. Cam., p. 290, pl. 22, figs. 16a, b, 1897.—Springer, Amer. Sil. Crin., p. 26, pl. 4, figs. 20–22, 1926.

Sil. (Niagaran): Jefferson Co., Ky. (Louisville ls.); Decatur and Perry Cos., Tenn. (Beech River fm.).

Macrostylocrinus obconicus Weller.

Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 95, pl. 4, figs. 6, 7, 1900.
Sil. (Niagaran-Racine dol.): Bridgeport, Ill.

Macrostylocrinus ornatus Hall.

Hall, Nat. Hist. N. Y., Pal., 2, p. 204, pl. 46, figs. 4 a-g, 1852.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 286, pl. 23, figs. 8 a-c, 1897.—Springer, Amer. Sil. Crin., pl. 4, fig. 24, 1926.
Sil. (Niagaran-Rochester sh.): Lockport, N. Y.

Macrostylocrinus? pustulosus Springer.

Springer, Amer. Sil. Crin., p. 26, pl. 4, figs. 25, 25a, 1926.
Sil. (Niagaran-Beech River fm.): 2 miles north Decaturville, Tenn.

Macrostylocrinus recumbens Springer.

Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 35, pl. 9, figs. 1-4, 1926.
Dev. (Oriskany-Ridgeley ss.): Cumberland, Md.

Macrostylocrinus semiradiatus (Hall).

Actinocrinus (*Saccocrinus*) *semiradiatus* Hall, 20th Rep. N. Y. St. Cab. Nat. Hist., Add., p. 379, pl. 10, fig. 1, 1867; Rev. ed., p. 370, 1870.
? *Macrostylocrinus semiradiatus* Wachsmuth and Springer, N. Amer. Crin. Cam., pp. 289, 521, 1897.
Macrostylocrinus semiradiatus Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 94, pl. 4, fig. 9, 1900.
Sil. (Niagaran-Racine dol.): Racine, Wis.

Macrostylocrinus striatus Hall.

Hall, Trans. Albany Inst., 4, p. 207, 1864 (adv. pub. 1863, p. 13); Prelim. Not. 18th Rep. N. Y. St. Mus. Nat. Hist., p. 23, pl. 1, figs. 7, 8, 1865; 20th Rep. N. Y. St. Cab. Nat. Hist., doc. ed., p. 327, pl. 10, figs. 7, 8, 1867; (rev. ed., 1870, p. 371); 28th Rep. N. Y. St. Mus. Nat. Hist., p. 129, pl. 13, figs. 1-4, 1879; 11th Rep. Geol. Nat. Hist. Ind., pl. 12, figs. 1-4, 1882.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 287, pl. 22, figs. 14 a-c, 1897.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 93, pl. 4, figs. 10, 11, 1900.
Sil. (Niagaran): Waldron, etc., Ind.; Iron City, Tenn. (Waldron sh.); Bridgeport, Ill. (Racine dol.).

Macrostylocrinus striatus granulosus Hall = *M. granulosus*.

Macrostylocrinus subglobosus Weller.

Weller, Chicago Acad. Sci., Nat. Hist., Surv., Bull. 4, pt. 1, p. 96, pl. 4, fig. 8, 1900.
Sil. (Niagaran-Racine dol.): Bridgeport, Ill., Racine, Wis.

Malaiocrinus Wanner. Genotype: *Zeacrinus? sundaicus* Wanner.

Poteriocrinitidae (Inadunata-Fistulata). Penn., Permian.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, pp. 177, 183, 1924.—Moore and Plummer, Univ. Texas Pub. no. 3945, p. 98, 1940.

Malaiocrinus crassitesta Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 184, pl. 9, figs. 1-3, 1924.
Permian: Basleo, Timor.

Malaiocrinus parviusculus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. no. 3945, p. 100, pl. 14, fig. 6, 1940.
Penn.: $\frac{1}{4}$ mile below Kickapoo Falls, Kickapoo Creek, Hood Co., Texas (Millsap Lake fm.); 7 miles northeast Tulsa, Okla. (Oologah ls.).

Malaiocrinus pusillus Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, XII, p. 142, text fig. 40, pl. 9, figs. 35, 36, pl. 10, fig. 1, 1937.
Permian: Basleo, Timor.

Malaiocrinus sundaicus (Wanner).

Zeacrinus? sundaicus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 147, pl. 101 (6), fig. 12, 1916.

Malaiocrinus sundaicus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 183, 1924.—Moore and Plummer, Univ. Texas Pub. no. 3945, p. 99, text fig. 11, 1940.

Permian: Basleo, Timor.

Maquoketocrinus Slocum. Genotype: *M. ornatus* Slocum.

Rhodocrinitidae (Camerata). Early Sil.

Slocum, Iowa Geol. Surv., 20, pp. 328, 330, 1924.

Maquoketocrinus ornatus Slocum.

Slocum, Iowa Geol. Surv., 29, p. 330, pl. 30, figs. 12, 13, 1924.

Early Sil. (Richmond-Lower Maquoketa, Elgin sh.): Clermont, Iowa.

Maragnicrinus Whitfield. Genotype: *M. portlandicus* Whitfield.

Botryocrinidae (Inadunata-Fistulata). Dev.

Whitfield, Bull. Amer. Mus. Nat. Hist., 21, art. 2, p. 17, 1905.—Springer, Zittel-Eastman Textb. Pal., 1, p. 222, 1913.—Goldring, N. Y. St. Mus., Mem. 16, p. 384, 1923.

Maragnicrinus portlandicus Whitfield.

Whitfield, Bull. Amer. Mus. Nat. Hist., 21, art. 2, p. 18, pls. 1-4, 1905.—Goldring, N. Y. St. Mus., Mem. 16, p. 384, pl. 48; pl. 49, figs. 1-3, 1923.

Cyathocrinus ornatus Hall (part), Nat. Hist. N. Y., Geology, pt. 4, p. 247, 1843.

Scytalocrinus ornatus Clarke, N. Y. St. Mus., Mem. 6, p. 348, pl. F, 1903.

Dev. (Portage-Naples bed): Portland, N. Y.

Marathonocrinus Moore and Plummer. Genotype: *M. bakeri* Moore and Plummer.

Poteroocrinidae (Inadunata-Fistulata). Penn.

Moore and Plummer, Univ. Texas Pub. no. 3945, p. 240, 1940.

Marathonocrinus bakeri Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. no. 3945, p. 242, pl. 21, fig. 2, text fig. 54, 1940.

Penn. (Haymond fm.): Vicinity of Marathon, Brewster Co., Texas.

Mariacrinus Hall = *Ctenocrinus*.

Mariacrinus (*Technocrinus*) *andrewsi* Hall = *Technocrinus andrewsi*.

Mariacrinus aureatus S. A. Miller = *Alisocrinus aureatus*.

Mariacrinus beecheri Talbot = *Ctenocrinus nobilissimus*.

Mariacrinus carleyi Hall = *Alisocrinus carleyi*.

Mariacrinus carleyi Springer = *Alisocrinus laevis*.

Mariacrinus flabellatus Salter.

Salter, Cat. Camb. Sil. Foss., p. 122, 1873 (nom. nud.).

Sil. (Wenlock ls.): Dudley, England.

Mariacrinus granulatus S. A. Miller = *Ctenocrinus granulatus*.

Mariacrinus? insuetus (Raymond).

Mariacrinus? insuetus Raymond, Ottawa Nat., 26, p. 79, figs. 1, 2, 1912.

Dev. (Three Forks sh.): Logan, Mont.

Mariacrinus macropetalus Hall = *Clonocrinus? macropetalus*.

Mariacrinus (*Mariocrinus*) *mundus* Whidborne = *Hydriocrinus mundus*.

Mariacrinus plumosus Hall = *Ctenocrinus pachydaetylus*.

Mariacrinus ramosus Hall = *Ctenocrinus nobilissimus*.

Mariacrinus (??) **rotundus** Springer.

Springer, Amer. Sil. Crin., p. 29, pl. 5, figs. 12, 12a, 1926.—Kirk, Amer. Jour. Sci., 18, p. 345, 1929.

Sil. (Niagaran-Decatur ls.): Tennessee River below Grandview, Perry Co., Tenn.

Mariacrinus (*Technocrinus*) *sculptus* Hall = *Technocrinus sculptus*.

Mariacrinus (*Technocrinus*) *spinulosus* Hall = *Technocrinus spinulosus*.

Mariacrinus (*Technocrinus*) *striatus* Hall = *Technocrinus striatus*.

Mariacrinus warreni Ringueberg = *Alisocrinus warreni*.

Marsipocrinus Bather = *Marsupiocrinus*.

Marsupiocrinites Phillips = *Marsupiocrinus*.

Marsupiocrinites? *dactylus* Hall = *Lyriocrinus dactylus*.

Marsupiocrinus Morris. Genotype: *Marsupiocrinites coelatus* Phillips.

Platycrinitidae (Adunata). Sil.; Low. Dev.

Morris, Cat. British Foss., ed. 1, p. 54, 1843.—McCoy, Brit. Pal. Foss., p. 54, 1854.—Zittel, Handb. Pal., 1, p. 365, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 62 (236), 1881; N. Amer. Crin. Cam., p. 730, 1897.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 137, 1900.—Springer, Amer. Sil. Crin., p. 55, 1926.

Cupellaecrinites Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.—Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 161, 1865; Geol. Surv. Ill., 2, p. 172, 1866 (as *Cupellaecrinus*).—Wood, U. S. Nat. Mus., Bull. 64, p. 30, 1909. (Genotype: *C. buchi* Troost.)

Cupellaecrinus Shumard, Trans. Acad. Sci. St. Louis, 2, p. 387, 1866.—Zittel, Handb. Pal., 1, p. 365, 1879.

Marsupiocrinites Phillips, (Not De Blainville, 1830) Murchison's Sil. Syst., p. 672, 1839.—Meek and Worthen, Geol. Surv. Ill., 2, p. 172, 1866. (Genotype: *M. coelatus* Phillips.)

Marsipocrinus Bather, Quart. Jour. Geol. Soc. London, 45, p. 173, 1889; Treatise Zool. (Lanckester), pt. 3, p. 156, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 179, 1913; Amer. Sil. Crin., p. 55, 1926.

Marsupiocrinus chicagoensis Weller.

Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 138, pl. 14, figs. 2, 3, 1900.

Sil. (Niagaran-Racine dol.): Chicago, Ill.

Marsupiocrinus coelatus (Phillips).

Marsupiocrinites coelatus Phillips, in Murchison's Sil. Syst., p. 672, pl. 18, fig. 3, 1839; ed 3, p. 246, pl. 14, fig. 1, 1859.

Marsipocrinus coelatus Springer, Amer. Sil. Crin., p. 62, pl. 19, figs. 2-7, 1926.

Sil. (Wenlock ls.): Dudley, England.

Marsupiocrinus concavus (Springer).

Marsipocrinus concavus Springer, Amer. Sil. Crin., p. 60, pl. 16, fig. 8, 1926.

Sil. (Niagaran-Beech River fm.): 2 miles north Decaturville, Tenn.

Marsupiocrinus corrugatus (Troost).

Cupellaecrinites corrugatus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Marsipocrinus corrugatus Wood, U. S. Nat. Mus., Bull. 64, p. 35, pl. 10, fig. 8, 1909.

Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.

Marsupiocrinus depressus Angelin.

Angelin, Icon. Crin. Suec., p. 3, pl. 10, figs. 15-17a, 1878.—Wachsmuth and Springer, N. Amer. Crin. Cam., pl. 3, fig. 23, 1897.

Sil. (Gotlandian): Island of Gotland (Klinteberg?).

Marsupiocrinus dubius Angelin.

Angelin, Icon. Crin. Suec., p. 2, pl. 26, figs. 24-24b, 1878.

Sil. (Gotlandian): Island of Gotland.

Marsupiocrinus excavatus (Springer).

Marsupiocrinus excavatus Springer, Amer. Sil. Crin., p. 60, pl. 16, figs. 7-7b, 1926.
Sil. (Niagaran-Beech River fm.): 2 miles north Decaturville, Tenn.

Marsupiocrinus inflatus (Troost).

Cupellaecrinites inflatus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 420, 1849.
Marsupiocrinus inflatus Springer, Amer. Sil. Crin., p. 58, pl. 15, figs. 1-8, 1926.
Cupellaecrinites striatus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.
Marsupiocrinus striatus Wachsmuth and Springer, N. Amer. Crin. Cam., pl. 75, fig. 17 (not fig. 18), 1897.—Springer, The Crinoid Genus *Scyphocrinus*, pl. 9, fig. 6, 1917.
Sil. (Niagaran-Beech River fm.): Decatur Co., 2 miles north of Decaturville, etc., Tenn.

Marsupiocrinus magnificus (Troost).

Cupellaecrinites magnificus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.
Marsupiocrinus magnificus Wood, U. S. Nat. Mus., Bull. 64, p. 34, pl. 10, figs. 5-7, 1909.—Springer, Amer. Sil. Crin., p. 61, pl. 19, figs. 1-1b, 1926.
Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.

Marsupiocrinus pentagonalis (Troost).

Cupellaecrinites pentagonalis Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.
Marsupiocrinus pentagonalis Wood, U. S. Nat. Mus., Bull. 64, p. 37, 1909.
Sil. (Niagaran-Beech River fm.): Perry and Decatur Cos., Tenn.

Marsupiocrinus praematurus (Hall and Whitfield).

Platycrinus praematurus Hall and Whitfield, Geol. Surv. Ohio, 2, pt. 2, p. 124, pl. 6, figs. 3-6, 1875.
Marsupiocrinus praematurus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 734, pl. 72, fig. 11, 1897.
Sil. (Niagaran-Cedarville fm.): 4½ miles east Greenville, Drake Co., and Greene Co., Ohio.

Marsupiocrinus pulcher Angelin.

Angelin, Icon. Crin. Suec., p. 3, pl. 22, figs. 27, 28, pl. 27, figs. 4, 4a, 1878.
Sil. (Gotlandian): Follingbo, Island of Gotland.

Marsupiocrinus radiatus Angelin.

Angelin, Icon. Crin. Suec., p. 2, pl. 10, figs. 18-21, 21a, 1878.
Sil. (Gotlandian): Klinteberg, Island of Gotland.

Marsupiocrinus rosaeformis (Troost).

Cupellaecrinites rosaeformis Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.
Marsupiocrinus rosaeformis Wood, U. S. Nat. Mus., Bull. 64, p. 37, pl. 13, figs. 5, 6, 1909.—Springer, Amer. Sil. Crin., p. 57, pl. 13, figs. 1-8, pl. 15, figs. 9, 9a, 1926.
Marsupiocrinus tennesseensis Springer, The Genus *Scyphocrinus*, pl. 9, figs. 5a, b, 1917; U. S. Nat. Mus., Bull. 115, pl. 2, figs. 5, 6, 1921.
Sil. (Niagaran-Beech River fm.): Perry Co. and 2 miles north Decaturville, Tenn.

Marsupiocrinus rugulosus Angelin.

Angelin, Icon. Crin. Suec., p. 2, pl. 22, fig. 1, 1878.
Sil. (Gotlandian): Follingbo, Island of Gotland.

Marsupiocrinus stellatus (Troost).

Cupellaecrinites stellatus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.
Marsupiocrinus stellatus Wood, U. S. Nat. Mus., Bull. 64, p. 36, pl. 10, figs. 1, 2, 1909.—Springer, Amer. Sil. Crin., p. 60, pl. 17, figs. 1-10, 1926.
Sil. (Niagaran-Beech River fm.): Perry or Decatur Co., Tenn.

Marsupiocrinus striatissimus (Springer).

Marsupiocrinus striatissimus Springer, Amer. Sil. Crin., p. 61, pl. 18, figs. 1-7, 1926.
Sil. (Niagaran-Beech River fm.): 2 miles north Decaturville, Tenn.

Marsupiocrinus striatus Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 732, pl. 75, fig. 18 (not fig. 17), 1897.

Marsupiocrinus striatus Springer, Amer. Sil. Crin., p. 58, pl. 14, figs. 7-13, 1926.

Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.

Marsupiocrinus striatus Wachsmuth and Springer (part) = *M. inflatus*.

Marsupiocrinus tennesseensis (Roemer).

Platycrinus tennesseensis Roemer, Sil. Fauna W. Tenn., p. 35, pl. 3, figs. 4a-f, 1860.

Marsupiocrinus tennesseensis Wachsmuth and Springer, Proc. Acad. Nat. Sci. Phila., p. 375, pl. 19, fig. 7, 1888; N. Amer. Crin. Cam., p. 731, pl. 75, figs. 16a, b, 1897.

Marsupiocrinus tennesseensis Wood, U. S. Nat. Mus., Bull. 64, p. 30, pl. 9, figs. 5, 6, 1909.—Springer, Amer. Sil. Crin., p. 57, pl. 14, figs. 1-6a, 1926.

Cupellaecrinites buchii Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Cupellaecrinites laevis Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Sil. (Niagaran-Beech River fm.): Decatur and Wayne Cos., Tenn.

Marsupiocrinus tentaculatus (Hall).

Platycrinus tentaculatus Hall, Nat. Hist. N. Y., Pal., 3, p. 116, pl. 5, figs. 1-4, 1859.

Marsupiocrinus tentaculatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 733, pl. 75, figs. 19a, b, 1897.

Marsupiocrinus tentaculatus Goldring, N. Y. St. Mus., Mem. 16, p. 277, pl. 36, fig. 13, text fig. 50, 1923.

Dev. (Helderbergian-New Scotland ls.): Schoharie, N. Y.

Marsupiocrinus turbinatus (Springer).

Marsupiocrinus turbinatus Springer, Amer. Sil. Crin., p. 62, pl. 17, figs. 11-14, 1926.

Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Marsupiocrinus verneuili (Troost).

Cupellaecrinites verneuili Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Marsupiocrinus verneuili Wood, U. S. Nat. Mus., Bull. 64, p. 32, pl. 9, figs. 10-12, 1909.—Springer, Amer. Sil. Crin., p. 59, pl. 16, figs. 1-6, 1926.

Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.

Mastigocrinus Bather. Genotype: *M. loreus* Bather.

Botryocrinidae (Inadunata-Fistulata). Sil.

Bather, Ann. Mag. Nat. Hist., (6) 9, p. 194, 1892; Treatise Zool. (Lankester), pt. 3, p. 179, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 220, 1913.—Jaekel, Pal. Zeits., 3, p. 55, 1918.

Mastigocrinus loreus Bather.

Bather, Ann. Mag. Nat. Hist. (6) 9, p. 196, text figs. 1-10, pl. 11, fig. 3, pl. 12, figs. 1-3, 1892; Treatise Zool. (Lankester), pt. 3, p. 131, fig. 48, 1900.

Cyathocrinus arboreus Salter, Cat. Coll. Cambrian and Silurian Foss., p. 125, 1873. (Nom. nud.)

Sil. (Up. Wenlock ls.): Dudley, England.

Medusacrinus Austin = *Platycrinites*.

Megistocrinus Owen and Shumard. Genotype: *M. evansii* Owen and Shumard.

Periechocritinidae (Camerata). Dev.; Miss.

Owen and Shumard, Rep. Geol. Surv. Iowa, Wis., Minn., p. 594, 1852.—Zittel, Handb. Pal., 1, p. 371, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, pp. 96, 135, 233 (270, 309, 407), 1881; N. Amer. Crin. Cam., p. 532, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 168, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 195, 1913.

Tylocrinus Wood, Smiths. Misc. Coll., 47, p. 66, 1904. (Genotype: *T. novus* Wood.)

Megistocrinus abnormis (Lyon).

Actinocrinus abnormis Lyon, Geol. Surv. Ky., 3, p. 479, pl. 4, figs. 1a, b, 1857.

?*Megistocrinus abnormis* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 546, pl. 49, figs. 1 a-c, 1897.

- Megistocrinus abnormis* Wood, Smiths. Misc. Coll., 47, p. 63, pl. 15, fig. 5, 1904.
Dev. (Hamilton-Sellersburg ls.): Bear Grass Creek, Louisville, and Marion Co., Ky.; Speeds, etc., Ind.
- Megistocrinus? bifrons** Schmidt.
Schmidt, Palaeontographica, 76, p. 23, pl. 4, figs. 8 a-c, 1931.
Low. Dev.: Landzunge El Mugaron, Concha de Arnao, Spain.
- Megistocrinus brevicornis* Keyes = *M. evansii*.
- Megistocrinus broadheadi** Branson and Wilson.
Branson and Wilson, Missouri Bur. Geol. Mines, 2d ser., 17, p. 65, pl. 8, figs. 5-7, 1922.
Mid. Dev. (Mineola ls.): 4 miles south of Montgomery City, Mo.
- Megistocrinus circulus** Rowley.
Rowley in Greene, Cont. Ind. Pal., 1, pt. 18, p. 181, pl. 54, figs. 2-4, 1904.
Dev. (Hamilton-Sellersburg ls.): Near Charlestown, Ind.
- Megistocrinus clarkei** Thomas.
Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 449, text fig. 70, pl. 40, figs. 1-8, pl. 46, fig. 9, 1924.
Up. Dev. (Cedar Valley ls.): Waterloo, Iowa.
- Megistocrinus concavus** Wachsmuth.
Wachsmuth, Proc. Davenport Acad. Sci., 4, p. 96, 1886 (adv. pub. 1885, p. 20).—
Wachsmuth and Springer, N. Amer. Crin. Cam., p. 543, pl. 48, figs. 5 a-c, 1897.—
Thomas, Ann. Rep. Iowa Geol. Surv., 29, pl. 39, fig. 8, 1924.
Dev. (Traverse-Thunder Bay ls.): 4 miles south of Alpena, Mich.
- Megistocrinus corniger** Rowley.
Rowley in Greene, Cont. Ind. Pal., 1, pt. 8, p. 71, pl. 24, figs. 1-4, 1901; pt. 14, p. 145, pl. 42, figs. 8, 10-12, 1903.
Dev. (Hamilton-Sellersburg ls.): Near Charlestown, Ind.
- Megistocrinus crassus* White = *M. evansii crassus*.
- Megistocrinus depressus** (Hall).
Actinocrinus (Megistocrinus) depressus Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 134, 1862.
Megistocrinus depressus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 540, pl. 49, figs. 2-4d, 1897.—Goldring, N. Y. St. Mus., Mem. 16, p. 226, pl. 33, 1923.
Actinocrinus pocillum Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 134, 1862.
Dev.: Canandaigua Lake, N. Y. (Moscow sh.); 3 miles south Sherburne, N. Y. (Tully ls.); Cazenovia, etc., N. Y. (Tichenor ls.); Western N. Y. (Wanakah sh.); Marsh's Mill, near Arkona, Ont. (Widder sh.); Falls of the Ohio and Clark Co., Ind. (Sellersburg ls.); Columbus, Ohio (Columbus ls.).
- Megistocrinus evansii** (Owen and Shumard).
Actinocrinus evansii Owen and Shumard, Jour. Acad. Nat. Sci. Phila., (2) 2, pt. 1, p. 68, pl. 7, figs. 3a, b, 1850.
Megistocrinus evansii Owen and Shumard, Rep. Geol. Surv. Iowa, Wis., Minn., p. 594, pl. 5a, figs. 3a, b, 1852.—Keyes, Geol. Surv. Mo., 4, p. 167, pl. 22, fig. 5, 1893.—
Wachsmuth and Springer, N. Amer. Crin. Cam., p. 533, pl. 2, figs. 14, 20, pl. 47, figs. 1-5c, 1897.
Actinocrinus brevicornis Hall, Geol. Rep. Iowa, 1, pt. 2, p. 571, pl. 10, figs. 4a, b, text fig. 81, 1858.
Actinocrinus minor Hall, Geol. Rep. Iowa, 1, pt. 2, p. 573, 1858.
Actinocrinus superlatus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 572, text fig. 82, 1858.
Megistocrinus parvirostris Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 165, 1869; Geol. Surv. Ill., 5, p. 396, pl. 6, fig. 7, 1873.

- Megistocrinus plenus* White, Proc. Boston Soc. Nat. Hist., 9, p. 16, 1865 (adv. pub. 1862).
Miss.: Burlington, Iowa (Low. Burlington ls.); Lake Valley, N. Mex. (Lake Valley ls.).
- Megistocrinus evansii crassus** (White).
Megistocrinus crassus White, Proc. Boston Soc. Nat. Hist., 9, p. 17, 1865 (adv. pub. 1862).
Megistocrinus evansii var. *crassus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 536, 1897.
Miss. (Low. Burlington ls.): Burlington, Iowa.
- Megistocrinus expansus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 4, p. 35, pl. 3, figs. 18-21, 1894.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 8, p. 74, pl. 24, figs. 14-16, 1901; pt. 16, p. 160, pl. 47, figs. 11-13, p. 166, pl. 48, figs. 7-9, 13-15, 1903.
Dev. (Hamilton): Louisville, Ky., Clark Co., Ind. etc. (Sellersburg ls.): Alpena, Mich. (Alpena ls.).
- Megistocrinus expansus inflatus** Rowley.
Rowley in Greene, Cont. Ind. Pal., 1, pt. 8, p. 72, pl. 24, figs. 5-7, 1901.
Dev. (Hamilton-Sellersburg ls.): Near Charlestown, Ind.
- Megistocrinus expansus magniventrus** Rowley.
Rowley in Greene, Cont. Ind. Pal., 1, pt. 11, p. 103, pl. 32, figs. 19-21; pt. 14, p. 141, pl. 41, figs. 4-6, 1903.
Dev. (Hamilton-Sellersburg ls.): Near Charlestown, Ind.
- Megistocrinus farnsworthi* Wachsmuth and Springer (not White) = *M. robustus*.
- Megistocrinus farnsworthi** White.
White, Proc. Acad. Nat. Sci. Phila., 28, p. 29, 1877 (adv. pub. 1876, p. 22).—Thomas, Ann. Rep. Geol. Surv. Iowa, 29, p. 444, text fig. 69, pl. 38, figs. 6-12, 1924.
Dev. (Cedar Valley ls.): Near Iowa City, Iowa.
- Megistocrinus fitzpatricki** Thomas.
Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 448, pl. 39, figs. 6, 7, pl. 46; figs. 10, 11, 1924.
Dev. (Cedar Valley ls.): 2 miles north of Iowa City, Iowa.
- Megistocrinus globosus** (Phillips).
Actinocrinus globosus Phillips, Geol. Yorkshire, 2, p. 206, pl. 4, figs. 26, 29, 1836.
Megistocrinus globosus Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, p. 112 (386), 1885.
Low. Carb. (Mtn. Ls.): Bolland, England.
- Megistocrinus hemisphericus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 7, p. 44, pl. 2, figs. 18-20, 1895.—Rowley in Greene, Cont. Ind. Pal., pt. 14, p. 145, pl. 42, fig. 9, 1903.
Dev. (Hamilton-Sellersburg ls.): Clark Co., Ind.
- Megistocrinus indianensis** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 8, p. 27, pl. 2, figs. 1-3, 1896.
Dev. (Hamilton-Sellersburg ls.): Near Charlestown, etc., Ind., and Louisville, Ky.
- Megistocrinus infelix* Winchell and Marcy = *Periechocrinites infelix*.
- Megistocrinus knappi** Lyon.
Lyon, Proc. Acad. Nat. Sci. Phila., (2) 5, p. 412, pl. 4, figs. 6a, b, 1861.
Dev. (Onondaga-Jeffersonville ls.): Clark Co., Ind.
- Megistocrinus latus** (Hall).
Actinocrinus (*Megistocrinus*) *latus* Hall, Geol. Rep. Iowa, 1 pt. 2, p. 480, pl. 1, figs. 1a, b, text fig. 53, 1858.

- Megistocrinus latus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 538, pl. 48, figs. 3a, b, 1897.—Thomas, Ann. Rep. Geol. Surv. Iowa, 29, p. 452, pl. 41, fig. 1, pl. 45, fig. 3, 1924.
Dev.: Near Buffalo and near Iowa City, Iowa (Cedar Valley ls.); Petoskey, Mich. (Alpena ls.).
- Megistocrinus marcouanus* Winchell and Marcy = *Periechocrinites marcouanus*.
- Megistocrinus merrilli** Thomas.
Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 455, pl. 45, fig. 7, 1924.
Dev. (Cedar Valley ls.): 1½ miles southwest of Brandon, Iowa.
- Megistocrinus mineolaensis** Branson and Wilson.
Branson and Wilson, Mo. Bur. Geol. Mines, 2d ser., 17, p. 66, pl. 6, figs. 2-4, 1922.
Mid. Dev. (Mineola ls.): Ralls Co., Mo.
- Megistocrinus missouriensis** Branson and Wilson.
Branson and Wilson, Mo. Bur. Geol. Mines, 2d ser., 17, p. 66, pl. 6, fig. 1, pl. 8, figs. 1, 2, 1922.
Mid. Dev. (Mineola ls.): 4 miles south of Montgomery City, Mo.
- Megistocrinus multidecoratus** (Barris).
Megistocrinus nodosus var. *multidecoratus* Barris, Proc. Davenport Acad. Sci., 4, p. 99, pl. 2, figs. 3, 4, 1886 (adv. pub. 1885, p. 24).
Megistocrinus multidecoratus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 542, pl. 49, fig. 6, 1897.
Dev. (Traverse-Thunder Bay ls.): 4 miles south of Alpena, Mich.
- Megistocrinus necis* Winchell and Marcy = *Periechocrinites necis*.
- Megistocrinus nobilis** Wachsmuth and Springer.
Wachsmuth and Springer, in Miller, N. Amer. Geol. Pal., p. 260, 1889; Geol. Surv. Ill., 8, p. 169, pl. 16, figs. 6, 7, 1890; N. Amer. Crin. Cam., p. 537, pl. 47, figs. 6, 7, 8a, b, pl. 51, fig. 8, 1897.—Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 246, pl. 16, fig. 1, 1937.
Miss. (Kinderhook-Hampton fm.): Legrand, Iowa.
- Megistocrinus nodosus** Barris.
Barris, Proc. Davenport Acad. Sci., 2, p. 285, pl. 11, fig. 4, 1878; 4, p. 98, pl. 1, fig. 8, pl. 2, fig. 2, 1886 (Adv. pub. 1885, p. 23).—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 541, pl. 49, figs. 5a, b, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 128, fig. 42, 1900.—Thomas, Ann. Rep. Geol. Surv. Iowa, 29, p. 454, pl. 41, figs. 2-4, 1924.
Dev.: Davenport, Iowa (Cedar Valley ls.); 4 miles south of Alpena, Mich. (Thunder Bay ls.).
- Megistocrinus nodosus multidecoratus* Barris = *M. multidecoratus*.
- Megistocrinus novus** (Wood).
Tylocrinus novus Wood, Smiths. Misc. Coll., 47, p. 60, text fig. 4, pl. 16, figs. 5, 5a, 1904.
Dev. (Traverse-Thunder Bay ls.): Partridge Point, 4 miles south of Alpena, Mich.
- Megistocrinus ontario** (Hall).
Actinocrinus (Megistocrinus) ontario Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 136, 1862.
Megistocrinus ontario Goldring, N. Y. St. Mus., Mem. 16, p. 234, pl. 34, 1923.
Dev.: Dresden, Yates Co., Canandaigua Lake, etc. N. Y. (Moscow sh.); Bullis Bridge, N. Y. (Tichenor ls.).
- Megistocrinus oppelti** Rowley.
Rowley in Greene, Cont. Ind. Pal., 1, pt. 13, p. 135, pl. 39, fig. 5, 1903.
Dev. (Onondaga-Jeffersonville ls.): Falls of the Ohio.
- Megistocrinus ornatus** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 7, p. 42, pl. 2, figs. 15-17, 1895.
Dev. (Hamilton-Sellersburg ls.): Clark Co., etc., Indiana.

Megistocrinus parvirostris Meek and Worthen = *M. evansii*.

Megistocrinus parvus Wachsmuth and Springer.

Wachsmuth and Springer, in Miller, N. Amer. Geol. Pal., p. 260, 1899; Geol. Surv. Ill., 8, p. 171, pl. 15, fig. 7, 1890.—Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 246, pl. 17, fig. 2, 1937.

Miss. (Kinderhook-Hampton fm.): Legrand, Iowa.

Megistocrinus pernodosus Thomas.

Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 456, text fig. 71, pl. 41, figs. 5-23, 1924.—Laudon, Jour. Pal., 10, p. 61, figs. 1, 2, 1936.

Dev. (Cedar Valley ls.): Lime Creek, Buchanan Co., and south of Brandon, Iowa.

Megistocrinus pileatus S. A. Miller = *M. spinosulus*.

Megistocrinus plenus White = *M. evansii*.

Megistocrinus regularis Wood.

Wood, Smiths. Misc. Coll., 47, p. 59, pl. 15, figs. 4, 4a, 1904.

Dev. (Traverse-Alpena ls.): Alpena, Mich.

Megistocrinus robustus Thomas.

Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 446, pl. 39, figs. 1-5, 1924.

Megistocrinus farnsworthi Wachsmuth and Springer, N. Amer. Crin. Cam., p. 539, pl. 48, figs. 4a, b, 1897.

Dev. (Cedar Valley ls.): Near Solon, Iowa.

Megistocrinus rugosus Lyon and Casseday.

Lyon and Casseday, Amer. Jour. Sci. and Arts, (2) 28, p. 243, 1859.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 542, pl. 48, figs. 6 a-c, 1897.—Rowley, in Greene, Cont. Ind. Pal., 1, no. 13, p. 131, pl. 38, figs. 1-6, 11, 1903.—Kirk, U. S. Nat. Mus., Proc., 41, pl. 9, fig. 12, 1911.

Dev.: Bear Grass Creek, near Louisville, Ky., and Silver Creek, Clark Co., Ind. (Sellersburg ls.); 4-Mile Dam, Alpena, Mich. (Alpena ls.); Thedford, Ontario (Widder sh.); Columbus, Ohio (Columbus ls.).

Megistocrinus rugosus spinuliferus Rowley.

Rowley, in Greene, Cont. Ind. Pal., 1, no. 11, p. 102, pl. 32, figs. 13-15, 1903.

Dev. (Hamilton-Sellersburg ls.): Near Charlestown, Ind.

Megistocrinus sphaeralis Wood.

Wood, Smiths. Misc. Coll., 47, p. 60, text figs. 2, 3, pl. 15, figs. 1a, b, 1904.

Dev. (Traverse-Alpena ls.): Alpena, Mich.

Megistocrinus spinosulus Lyon.

Lyon, Proc. Acad. Nat. Sci. Phila., 5, p. 413, pl. 4, figs. 7a, b, 1861.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 544, pl. 48, figs. 1 a-c, 2, 1897.—Rowley, in Greene, Cont. Ind. Pal., 1, no. 18, p. 182, pl. 54, fig. 56, 1904.

Megistocrinus pileatus S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 2, p. 114, pl. 10, figs. 1-1b, 1879.

Dev. (Onondaga): Falls of the Ohio (Jeffersonville ls.); Columbus, Ohio (Columbus ls.).

Megistocrinus tuberatus Wood.

Wood, Smiths. Misc. Coll., 47, p. 57, text fig. 1, pl. 15, figs. 2 a-c, pl. 16, fig. 3, 1904.

Dev. (Traverse-Thunder Bay ls.): Partridge Point, 4 miles south of Alpena, Mich.

Megistocrinus unicornis Rowley.

Rowley in Greene, Cont. Ind. Pal., 1, pt. 8, p. 73, pl. 24, figs. 11-13, 1901.

Dev. (Hamilton-Sellersburg ls.): Near Charlestown, Ind.

Megistocrinus waliszewski Oehlert.

Oehlert, Bull. Soc. Geol. France, (3) 24, p. 818, text fig. 1, pl. 26, figs. 1-4, 1897; Bol. Com. Map. Geol. Espana, 26, p. 86, text fig. 1, pl. 3, figs. 1-4, 1902.

Dev. (Calcaire de Arnao): Santa Lucia, Concha de Arnao, Spain.

- Megistocrinus whitei* Meek and Worthen = *Periechocrinites whitei*.
- Melbacrinus** Strimple. Genotype: *M. americanus* Strimple.
 Poteriocrinitidae (Inadunata-Fistulata). Penn.
 Strimple, Bull. Amer. Pal., 24, no. 87, p. 16 (376), 1939.
- Melbacrinus americanus** Strimple.
 Strimple, Bull. Amer. Pal., 24, no. 87, p. 17 (377), 1939.
 Penn. (Stanton ls.): Mound just west of Bartlesville, Okla.
- Melocrinites** Goldfuss. Genotype: *M. hieroglyphicus* Goldfuss.
 Melocrinitidae (Camerata). Sil.-Miss.
 Goldfuss, Petref. Germ., 1, p. 197, 1826.
Castanocrinus Roemer, Leth. Geog., ed 3, 2, pp. 228, 252, 1855. (Genotype: *M. gibbosus* Goldfuss).
Clonocrinus Oehlert, Bull. Soc. Geol. France, (3) 7, p. 3, 1879.—Bather, Treatise Zool. (Lankester), pt. 3, p. 161, 1900. (Genotype: *C. bigsbyi* Oehlert.)
Melocrinus Agassiz, Mem. Soc. Neuchatel, 1, p. 197, 1835; Ann. Nat. Hist., p. 447, 1838.—Angelin, Icon. Crin. Suec., p. 19, 1878.—Zittel, Handb. Pal., p. 371, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 118 (292), 1881; pt. 3, p. 104 (326), 1885; N. Amer. Crin. Cam., p. 292, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 161, 1900.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 97, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 190, 1913.—Goldring, N. Y. St. Mus. Nat. Hist., Mem. 16, p. 108, 1923.—Springer, Amer. Sil. Crin., p. 27, 1926.
- Melocrinites aequalis** (S. A. Miller).
Melocrinus aequalis S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 302, pl. 5, figs. 11, 12, 1894 (adv. pub. 1892, p. 48).
Melocrinus parvus Wachsmuth and Springer, Amer. Geol., 10, p. 143, 1892; N. Amer. Crin. Cam., p. 303, pl. 22, fig. 8, 1897.
 Sil. (Niagaran-Laurel ls.): St. Paul, Ind.
- Melocrinites amphora* Goldfuss = *Amphoracrinus gilbertsoni*.
- Melocrinites angustatus** (Angelin).
Melocrinus angustatus Angelin, Icon. Crin. Suec., p. 20, pl. 26, fig. 22, 1878.
 Sil. (Gotlandian): Island of Gotland.
- Melocrinites bainbridgensis** (Hall and Whitfield).
Melocrinus (Ctenocrinus) bainbridgensis Hall and Whitfield, Geol. Surv. Ohio, 2, pt. 2, Pal., p. 158, pl. 13, figs. 2, 3, 1875.
Melocrinus bainbridgensis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 297, pl. 22, figs. 4 a-c (not pl. 24, fig. 5), 1897.—Goldring, N. Y. St. Mus., Mem. 16, p. 130, pl. 12, figs. 5-9, 1923.
 Up. Dev. (Huron sh.): Bainbridge, Ross Co., Ohio.
- Melocrinites belanskii** (Thomas).
Melocrinus belanskii Thomas, Ann. Rep. Geol. Surv. Iowa, 29, p. 440, pl. 37, figs. 11-16, 1924.
 Dev. (Hackberry sh.-Lime Creek fm.): Near Bird Hill, Iowa.
- Melocrinites benedeni** (Fraipont).
Melocrinus benedeni (Dewalque Ms.) Fraipont, Ann. Soc. Géol. Belg., 10, p. 60, pl. 4, fig. 9, 1883.
 Up. Dev. (Frasnian): Senzeille, Belgium.
- Melocrinites bigsbyi** (Oehlert).
Clonocrinus bigsbyi Oehlert, Bull. Soc. Géol. France, (3) 7, p. 4, pl. 2, figs. 2-4, 1879.
 Low. Dev.: St. Germain, France.

Melocrinites borealis (Springer).

Melocrinus borealis Springer, Canada Dept. Mines, Geol. Surv. Canada, Bull. 33, p. 16, pl. 1, figs. 1, 2, 1921.

Up. Dev.: Hay River, 9 miles below Alexandra Falls, N. W. Terr., Canada.

Melocrinites breviradiatus (Hall).

Melocrinus breviradiatus Hall, N. Y. St. Mus., Bull. 1, pl. 1-A, figs. 18, 19, 1872.—Goldring, N. Y. St. Mus., Mem. 16, p. 127, pl. 13, figs. 1, 2, 1923.

Dev. (Hamilton-Wanakah sh.): Eighteen Mile Creek, N. Y.

Melocrinites calvini (Wachsmuth and Springer).

Melocrinus calvini Wachsmuth and Springer, N. Amer. Crin. Cam., p. 300, pl. 22, fig. 1897.—Wilson, Jour. Geol., 24, p. 508, pl. 2, figs. 3, 4, 1916.—Thomas, Ann. Rep. Geol. Surv. Iowa, 29, p. 438, text fig. 67, pl. 37, figs. 6-8, 1924.

Dev. (Hackberry sh.-Lime Creek fm.): Johnson Co., Iowa.

Melocrinites canadensis (Springer).

Melocrinus canadensis Springer, Canada Dept. Mines, Geol. Surv. Canada, Bull. 33, p. 17, pl. 1, fig. 3, 1921.

Up. Dev.: Hay River, 7½ miles above Alexandra Falls, Northwest Territory, Canada.

Melocrinites chapuisi (Fraipont.)

Melocrinus chapuisi (Dewalque Ms.) Fraipont, Ann. Géol. Belg. 10, p. 65, pl. 5, figs. 5-7, 1883.—Von Koenen, Neues Jahrb., 1, p. 108, pl. 2, figs. 3a, b, 1886.

Up. Dev. (Frasnian): Senzeille, Belgium.

Melocrinites clarkei (Williams).

Melocrinus clarkei (Hall Ms.) Williams, Proc. Acad. Nat. Sci. Phila., p. 31, 1882.—Goldring, N. Y. St. Mus., Mem. 16, p. 132, pl. 13, figs. 3-5, pl. 14, 1923.

Melocrinus bainbridgensis Wachsmuth and Springer (part), N. Amer. Crin. Cam., p. 297, pl. 24, fig. 5 (not pl. 22, figs. 4 a-c), 1897.

Dev.: Bells Gully, Canandaigua Lake, Ontario Co., etc. N. Y. (Genesee-West River sh.); Naples, etc. N. Y. (Portage-Cashaqua sh.); Angola, N. Y. (Portage-Angola sh.).

Melocrinites dewalquei (von Koenen).

Melocrinus dewalquei von Koenen, Neues Jahrb. Min., Geol., Pal., 1, p. 109, pl. 2, figs. 4 a-c, 1886.

Melocrinus hieroglyphicus Fraipont, Ann. Soc. Géol. Belg., 10, pp. 45-68, pls. 2, 3, pl. 4, figs. 1-5, 1883.

Up. Dev. (Frasnian): North Germany; Near Stolley, Germany; Senzeille, Belgium.

Melocrinites dordoloti (Maillieux).

Melocrinus dordoloti Maillieux, Bull. Soc. Belg. Géol. Pal., 22, Proc.-Verb., p. 253, figs. a, b, 1908.

Dev. (Frasnian): Boussu En Faque, Belgium.

Melocrinites fornicatus Goldfuss.

Goldfuss, Nova Acta Acad. Leop. Carol. Nat. Cur., 19, p. 340, pl. 31, fig. 2, 1839.

Dev. (Eifelian): Eifel, Germany.

Melocrinites fraiponti (von Koenen).

Melocrinus fraiponti von Koenen, Neues Jahrb. Min., Geol. Pal., 1, p. 105, 1886.

Up. Dev.: North Germany.

Melocrinites gerolsteinensis Steininger.

Steininger, Verst. Uebergangsgebirge Eifel, p. 20, 1849.

Dev. (Eifelian): Gerolstein, Germany.

Melocrinites gibbosus Goldfuss.

Goldfuss, Petref. Germ., 1, p. 211, pl. 64, figs. 2 a-d, 1831.

Melocrinus gibbosus Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 176, pl. 6, fig. 1, 1867 (adv. pub., 1866, p. 64).—Von Koenen, Neues Jahrb., 1, p. 101, pl. 2, figs. 1, 2a, b, 1886.

Dev. (Eifelian): Gerolstein, Germany.

Melocrinites gibbosus aculeatus (Schultze).

Melocrinus gibbosus var. *aculeata* Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 176, pl. 6, fig. 1b, 1867 (adv. pub. 1866, p. 64).

Dev. (Eifelian): Gerolstein, Germany.

Melocrinites gibbosus gracilis (Schultze).

Melocrinus gibbosus var. *gracilis* Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 176, pl. 6, fig. 1k, 1867 (adv. pub. 1866, p. 64).

Dev. (Eifelian): Gerolstein, Germany.

Melocrinites gibbosus granosus (Schultze).

Melocrinus gibbosus var. *granosa* Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 176, pl. 6, fig. 1-i, 1867 (adv. pub. 1866, p. 64).

Dev. (Eifelian): Gerolstein, Germany.

Melocrinites globosus (Fraipont).

Melocrinus globosus (Dewalque, Ms.) Fraipont, Ann. Soc. Géol. Belg., 10, p. 61, pl. 5, figs. 1-4, 1883.

Up. Dev. (Frasnian): Senzeille, Belgium.

Melocrinites gracilis (Wachsmuth and Springer).

Melocrinus gracilis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 298, pl. 22, fig. 5, 1897.—Goldring, N. Y. St. Mus., Mem. 16, p. 136, pl. 13, fig. 6, 1923; Ann. Carnegie Mus., 24, p. 353, pl. 25, fig. 2, 1935.

Dev. (Hamilton): Canandaigua Lake, N. Y. (Moscow sh.); East Bethany, Genesee Co., N. Y. (Moscow-Kashong mem.).

Melocrinites (?) **granulatus** (Angelin).

Melocrinus granulatus Angelin, Icon. Crin. Suec., p. 20, pl. 26, figs. 21, 21a, 1878.

Sil. (Gotlandian): Wisby, Island of Gotland.

Melocrinites gregeri (Rowley).

Melocrinus gregeri Rowley, Amer. Geol., 12, p. 303, pl. 14, fig. 1, 1893.—Branson, Missouri Bur. Geol. Mines, (2) 17, p. 59, pl. 7, figs. 11, 12, 1923.

Up. Dev. (Snyder Creek sh.): Callaway Co., Mo.

Melocrinites hieroglyphicus Goldfuss.

Goldfuss, Petref. Germ., 1, p. 197, pl. 60, figs. 1 A-Ca, 1831.

Melocrinus hieroglyphicus Bronn, Leth. Geogn., 1, p. 63, pl. 6, figs. 10 a-c, 1839.—Clarke, Neues Jahrb., 3, p. 402, pl. 6, fig. 20, 1884.—Von Koenen, Neues Jahrb., 1, p. 103, pl. 1, figs. 1 a-g, 1886.

Actinocrinus rugosus Trenkner, Abhandl. Naturf. Ges., Halle, 10, p. 28, pl. 4, figs. 62a, b, 1867.

Up. Dev.: Senzeille, Belgium, and near Stolberg, Germany (Frasnian); Lummaton, England.

Melocrinites humei (Goldring).

Melocrinus humei Goldring, Bull. Amer. Pal., 24, no. 81, p. 11, pl. 1, figs. 7, 8, 1938.

Dev.: Upper falls Redknife River, Mackenzie River Basin, Northwest Territory, Canada.

Melocrinites inornatus (Fraipont).

Melocrinus inornatus (Dewalque Ms.) Fraipont, Ann. Soc. Géol. Belg., 11, p. 105, pl. 1, fig. 1, 1884.

Up. Dev. (Frasnian): Senzeille and Boussu En Faque, Belgium.

Melocrinites kindlei (Springer).

Melocrinus kindlei Springer, Geol. Surv. Canada, Bull. 42, p. 130, pl. 24, figs. 1-9, 1926.

Up. Dev.: Root River, Northwest Territory, Canada.

Melocrinites konincki (Fraipont).

Melocrinus konincki (Dewalque, Ms.), Fraipont, Ann. Soc. Géol. Belg., 10, p. 58, pl. 4, figs. 6-8, 1883.

Up. Dev. (Frasnian): Senzeille, etc., Belgium.

Melocrinites laevis Goldfuss.

Goldfuss, Petref. Germ., 1, p. 197, pl. 60, figs. 2a, b, 1831.

Melocrinus laevis (gracilis) Quenstedt, Petref. Deutsch., 4, p. 613, pl. 111, figs. 37, 38, 1876.

Melocrinus laevis Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 122, p. 19, 1930.

Low. Carb. (Viséan): Regnitzlosau, Germany.

Melocrinites? linderi (Thomas).

Melocrinus? linderi Thomas, Ann. Rep. Geol. Surv. Iowa, 29, p. 439, pl. 37, figs. 9, 10, 1924.

Dev. (Cedar Valley ls.): Indian Hollow, Penn township, Johnson Co., Iowa.

Melocrinites lylii (Rowley).

Melocrinus lylii Rowley, Amer. Geol., 13, p. 152, text fig. 2, 1894.—Branson, Mo. Bur. Geol. Mines, 17, 2d ser., p. 59, pl. 5, fig. 7, 8, 1922.

Dev. (Snyder Creek sh.): Callaway Co., Mo.

Melocrinites mackenzie (Springer).

Melocrinus mackenzie Springer, Geol. Surv. Canada, Bull. 42, p. 131, pl. 24, figs. 10-13, 1926.

Up. Dev.: Root River, Northwest Territory, Canada.

Melocrinites mespiliformis (Fraipont).

Melocrinus mespiliformis (Dewalque Ms.) Fraipont, Ann. Soc. Géol. Belg., 10, p. 63, pl. 5, figs. 8-10, 1883.

Melocrinus hieroglyphicus var. *mespiliformis* Jaekel, Verh. Int. Zool. Congress, Berlin, p. 1069, fig. 12, 1902.

Up. Dev. (Frasnian): Frasnés, Senzeille, Belgium.

Melocrinites milwaukensis (Weller).

Melocrinus milwaukensis Weller, Ann. N. Y. Acad. Sci., 11, p. 121, pl. 14, fig. 7, 1898.—Cleland, Wisconsin Geol. Nat. Hist. Surv., Bull. 21, p. 40, pl. 3, fig. 9, 1911.

Dev. (Milwaukee fm.-Lindwurm mem.): Milwaukee, Wis.

Melocrinites milwaukensis rotundus (Weller).

Melocrinus milwaukensis var. *rotundus* Weller, Ann. N. Y. Acad. Sci., 11, p. 122, pl. 14, fig. 4, 1898.—Cleland, Wisconsin Geol. Nat. Hist. Surv., Bull. 21, p. 41, pl. 3, fig. 8, 1911.

Dev. (Milwaukee fm.-Lindwurm mem.): Milwaukee, Wis.

Melocrinites minutus (Trenkner).

Melocrinus minutus Trenkner, Abhandl. Nat. Ges. Halle, 10, p. 27, pl. 4, figs. 61 a-c, 1867.—Clarke, Neues Jahrb., 3, p. 403, pl. 6, figs. 18, 19, 1884.

Up. Dev. (Frasnian-Iberg ls.): Ohnenannsbrink, Germany.

Melocrinites naplesensis (Goldring).

Melocrinus naplesensis Goldring, N. Y. St. Mus., Mem. 16, p. 140, pl. 15, figs. 3, 4, 5(?), 1923.

Dev. (Portage-West Hill flags): Italy Hollow, near Naples, N. Y.

Melocrinites nodosus Hall.

Hall, Rep. Prog. Geol. Surv. Wis., p. 19, 1861.

Melocrinus nodosus Whitfield, Amer. Mus. Nat. Hist., Mem. 1, p. 48, pl. 5, fig. 14, 1895.—Weller, Ann. N. Y. Acad. Sci., 11, no. 7, p. 118, pl. 14, fig. 6, 1898.—Cleland, Wis. Geol. Nat. Hist. Surv., Bull. 21, p. 38, pl. 3, fig. 4, 1911.—Goldring, N. Y. St. Mus., Mem. 16, p. 125, pl. 12, figs. 2-4, 1923.—Thomas, Ann. Rep. Geol. Surv. Iowa, 29, p. 435, pl. 37, fig. 1, 1924.

Dev. (Hamilton): Near Milwaukee, Wis. (Milwaukee fm.-Lindwurm mem.); Western N. Y.

Melocrinites nodosus irregularis (Thomas).

Melocrinus nodosus irregularis Thomas, Ann. Rep. Geol. Surv. Iowa, 29, p. 437, text fig. 66, pl. 37, figs. 2-4, 1924.

Dev. (Cedar Valley ls.): Brandon, Iowa.

Melocrinites nodosus spinosus (Weller).

Melocrinus nodosus var. *spinosus* Weller, Ann. N. Y. Acad. Sci., 11, p. 119, pl. 14, fig. 6, 1898.—Cleland, Wis. Geol. Nat. Hist. Surv., Bull. 21, p. 39, pl. 3, fig. 5, 1911.

Dev. (Milwaukee fm.-Lindwurm mem.): Milwaukee, Wis.

Melocrinites obconicus (Hall).

Melocrinus obconicus Hall, Not. N. Sp. Foss. from Niagara Group, p. 12, 1863; 28th Rep. N. Y. St. Mus. Nat. Hist., Mus. ed., p. 138, pl. 14, figs. 11-14, 1879; 11th Rep. Ind. Geol. Nat. Hist., p. 269, pl. 13, figs. 11-14, 1882.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 302, pl. 22, figs. 10 a-c, 1897.

Sil. (Niagaran): Waldron, etc., Ind., Newsom, Tenn. (Waldron sh.); Louisville, Ky. (Louisville ls.); Chicago area, Ill. (Racine dol.).

Melocrinites oblongus (Wachsmuth and Springer).

Melocrinus oblongus Wachsmuth and Springer, Amer. Geol., 10, p. 143, 1892; N. Amer. Crin. Cam., p. 300, pl. 22, figs. 9, 12, 1897.—Springer, Amer. Sil. Crin., p. 28, pl. 5, figs. 5, 6, 1926.

Sil. (Niagaran): Louisville, Ky. (Louisville ls.); St. Paul, Ind. (Laurel ls.); Decatur Co., Tenn. (Bob ls.).

Melocrinites obpyramidalis (Winchell and Marcy).

Actinocrinus obpyramidalis Winchell and Marcy, Mem. Boston Soc. Nat. Hist., 1, p. 87, pl. 2, fig. 4, 1865.

Melocrinus obpyramidalis Hall, 20th Rep. N. Y. St. Cab. Nat. Hist., p. 390, 1867 (adv. pub. 1865).—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 97, pl. 3, figs. 11, 12, 1900.

Sil. (Niagaran-Racine dol.): Chicago, Ill.

Melocrinites obscurus (Fraipont).

Melocrinus obscurus (Dewalque Ms.) Fraipont, Ann. Soc. Géol. Belg., p. 107, pl. 1, fig. 2, 1884.

Up. Dev. (Frasnian): Chaudfontaine, Belgium.

Melocrinites occidentalis (Oehlert).

Melocrinus occidentalis Oehlert, Bull. Soc. Géol. France, (3) 10, p. 358, text fig., pl. 8, fig. 4, 1882.

Low. Dev.: Sable (Sarthe), Finestre, France.

Melocrinites oehlerti (Wachsmuth and Springer).

Melocrinus oehlerti Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, p. 105 (327), 1885.

Melocrinus verneuili Oehlert, Bull. Soc. Géol. France, (3) 10, p. 358, pl. 8, fig. 5, 1882.

Low. Dev.: Near Nehou (Manche), France.

Melocrinites onondaga (Springer).

Melocrinus onondaga Springer, Amer. Sil. Crin., p. 28, pl. 5, fig. 4, 1926.

Dev. (Onondaga ls.): 2½ miles southwest Sylvania, Ohio.

Melocrinites ornatus (Goldring).

Melocrinus ornatus Goldring, Jour. Pal., 10, p. 17, pl. 7, fig. 1, 1936.

Dev. (Hamilton-Skaneateles sh, Berwyn mem.): Palmers Ravine, West Edmeston, Unadilla Valley, N. Y.

Melocrinites pentangularis (Cleland).

Melocrinus pentangularis Cleland, Wis. Geol. Nat. Hist. Surv., Bull. 21, p. 41, pl. 3, fig. 10, 1911.

Dev. (Milwaukee fm.-Lindwurm mem.): Milwaukee, Wis.

Melocrinites powelli (Goldring).

Melocrinus powelli Goldring, N. Y. St. Mus., Mem. 16, p. 142, pl. 15, fig. 6, 1923; Ann. Carnegie Mus., 24, p. 365, pl. 25, figs. 3, 4, pl. 26, fig. 1, 1935.

Dev. (Hamilton-Moscow sh.): Cashong Creek, Bellona, and Bowen Creek, Genesee Co., N. Y.

Melocrinites pulcher (Priestersbach).

Melocrinus pulcher Priestersbach, Jahrb. König. Preuss. Geol. Landes., 38, Teil 1, p. 440, text figs. 1-3, pl. 24, figs. 1-7, pl. 25, figs. 1-7, 1919.

Mid. Dev.: Near Meinerzhagen, Germany.

Melocrinites pulcher anulifera (Spreistersbach).

Melocrinus pulcher var. *anulifera* Spreistersbach, Jahrb. König. Preuss. Geol. Landes., 38, Teil 1, p. 447, pl. 25, fig. 8, 1919.

Mid. Dev.: Near Meinerzhagen, Germany.

Melocrinites pyramidalis Goldfuss.

Goldfuss, Nova Acta Acad. Leop., 19, p. 339, pl. 31, fig. 1, 1839.

Melocrinus pyramidalis Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 178, pl. 6, fig. 5, 1867 (adv. pub. 1866, p. 66).

Dev.: Eifel, Germany (Eifelian); Chimay, Belgium (Frasnian).

Melocrinites reticularis (Olsson).

Melocrinus reticularis Olsson, Bull. Amer. Pal., 5, p. 31, pl. 7, fig. 1, 1912.—Goldring, N. Y. St. Mus., Mem. 16, p. 137, pl. 15, fig. 1, 1923.

Dev. (Ithaca beds): Ithaca, N. Y.

Melocrinites rigidus (Angelin).

Melocrinus rigidus Angelin, Icon. Crin. Suec., p. 20, pl. 21, fig. 3, 1878.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Melocrinites rotundatus (Schultze).

Melocrinus rotundatus Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 179, pl. 6, fig. 2, 1867 (adv. pub. 1866, p. 67).

Dev. (Eifelian): Kerpen, Germany.

Melocrinites sculptus Hall.

Hall, Nat. Hist. N. Y., Pal., 2, p. 228, pl. 49-A, figs. 2 a-d, 1852.

Sil. (Niagaran-Rochester sh.): Lockport, N. Y.

Melocrinites spectabilis (Angelin).

Melocrinus spectabilis Angelin, Icon. Crin. Suec., p. 20, pl. 21, figs. 1, 2, 1878.

Melocrinus? spectabilis Springer, Amer. Sil. Crin., p. 27, pl. 5, figs. 2, 3, 1926.

Sil.: Island of Gotland (Gotlandian); Dudley, England (Wenlock ls.).

Melocrinites splendens (Goldring).

Melocrinus splendens Goldring, N. Y. St. Mus., Mem. 16, p. 144, pl. 16, fig. 1, 1923.

Dev. (Up. Chemung fm.): Binghampton, N. Y.

Melocrinites stellaris (Roemer).

Ctenocrinus stellaris Roemer, Verh. Nat. Hist. Preuss. Rhein., 9, p. 283, pl. 2, figs. 2 a-c, 1852; Bronn, Leth. Geog., ed. 3, 1, p. 254, pl. 4, figs. 19a, b, 1855.

Melocrinus stellaris Schultze, Denk. Kais. Akad. Wiss., Math. Natur. Cl., 26, p. 177, pl. 6, fig. 3, 1867 (adv. pub. 1866, p. 65).

Dev.: Ludenscheid, Kerpen, Gerolstein, Germany (Eifelian); Torquay, England.

Melocrinites striatus (Münster).

Actinocrinus striatus Münster, Beitr. Petref., 3, p. 113, pl. 9, fig. 11, 1840.

Melocrinus striatus d'Orbigny, Prod. Pal. Strat., 1, p. 104, 1849.

Up. Dev. (Frasnian): Thuringia; near Hof, Bavaria.

Melocrinites subglobosus (Weller).

Melocrinus subglobosus Weller, Ann. N. Y. Acad. Sci., 11, p. 120, pl. 14, fig. 1, 1898.—Cleland, Wis. Geol. Nat. Hist. Surv., Bull. 21, p. 39, pl. 3, figs. 6, 7, 1911.

Dev. (Milwaukee fm.-Lindwurm mem.): Milwaukee, Wis.

Melocrinites subtilistriatus (Goldring).

Melocrinus subtilistriatus Goldring, Bull. Amer. Pal., 24, no. 81, p. 8, pl. 1, figs. 1-5, 1938.

Dev.: Upper falls, Redknife River, Northwest Territory, Canada.

Melocrinites sulcosutra (Goldring).

Melocrinus sulcosutra Goldring, Bull. Amer. Pal., 24, no. 81, p. 9, pl. 1, fig. 6, 1938.

Dev.: Upper falls, Redknife River, Northwest Territory, Canada.

Melocrinites tennesseensis (Springer).

Melocrinus tennesseensis Springer, Amer. Sil. Crin., p. 27, pl. 5, fig. 1, 1926.

Sil. (Niagaran-Beech River fm.): 2 miles north Decaturville, Tenn.

Melocrinites tersus (Rowley).

Melocrinus tersus Rowley, Amer. Geol., 13, p. 151, text fig. 1, 1894.—Branson, Mo. Bur. Geol. Mines, 2d ser., 17, p. 60, pl. 7, figs. 9, 10, 1922.

Dev. (Snyder Creek sh.): Callaway Co., Mo.

Melocrinites tiffanyi Wachsmuth and Springer).

Melocrinus tiffanyi Wachsmuth and Springer, N. Amer. Crin. Cam., p. 299, pl. 22, figs. 7a, b, 1897.—Thomas, Ann. Rep. Geol. Surv. Iowa, 29, p. 437, pl. 37, fig. 5, 1924.

Dev. (Cedar Valley ls.): Buffalo, Iowa.

Melocrinites verneuili (Troost).

Actinocrinites verneuili Troost, Amer. Jour. Sci., (2) 8, p. 419, 1849.

Melocrinus verneuili Hall, Adv. Pub. 18th Rep. N. Y. St. Cab. Nat. Hist., p. 23, pl. 1, fig. 5, 1865; 20th Rep. N. Y. St. Cab. Nat. Hist., doc. ed., pp. 327, 390, pl. 10, fig. 5, 1867; rev. ed. p. 372, 1870.

Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.

Melocrinites verrucosus Goldfuss.

Goldfuss, Nova Acta Acad. Leop., 19, p. 339, pl. 31, fig. 3, 1839.

Melocrinus verrucosus Schultze, Denk. Kais. Akad. Wiss., Math. Natur. Cl., 26, p. 177, pl. 6, fig. 4, 1867 (adv. pub. 1866, p. 65).—Barrois, Ann. Soc. Geol. Nord., 13, p. 196, pl. 4, fig. 7, 1886.

Dev. (Eifelian): Pelm, Eifel, Germany.

Melocrinites volborthi (Angelin).

Melocrinus volborthi Angelin, Icon. Crin. Suec., p. 20, pl. 7, figs. 8-11, pl. 23, figs. 16, 30-32, pl. 26, fig. 23, 1878.

Sil. (Gotlandian): Island of Gotland.

Melocrinites whittakeri (Springer).

Melocrinus whittakeri Springer, Geol. Surv. Canada, Bull. 42, p. 131, pl. 24, figs. 14-17, 1926.

Up. Dev.: Trout River, Northwest Territory, Canada.

Melocrinites willetensis (Goldring).

Melocrinus willetensis Goldring, N. Y. St. Mus., Mem. 16, p. 146, pl. 16, fig. 2, 1923.

Dev. (Low. Chemung fm.): Near Willett, N. Y.

Melocrinites willetensis perstriatus (Goldring).

Melocrinus willetensis var. *perstriatus* Goldring, N. Y. St. Mus., Mem. 16, p. 147, pl. 16, figs. 3-5, 1923.

Dev.: Willet, N. Y. (Low. Chemung fm.); ?Greene, Chenango Co., N. Y. (Ithaca beds).

Melocrinites williamsi (Olsson).

Melocrinus williamsi Olsson, Bull. Amer. Pal., 5, p. 30, pl. 6, fig. 3, 1912.—Goldring, N. Y. St. Mus., Mem. 16, p. 138, pl. 15, fig. 2, 1923.

Dev. (Ithaca fm.): Near Cortland, N. Y.

Melocrinites wittenbergensis (Rowley).

Melocrinus wittenbergensis Rowley, Amer. Geol., 34, p. 274, pl. 16, fig. 27, 1904.
Dev. (Helderbergian-Bailey ls.): Near Wittenberg, Mo.

Melocrinus of authors = Melocrinites.

Melocrinus bainbridgensis Wachsmuth and Springer (part) = *Melocrinites clarkei*.

Melocrinus cingulatus d'Orbigny = *Actinocrinites cingulatus*.

Melocrinus (*Trichocrinus*) *harrisi* Olsson = *Trichocrinus harrisi*.

Melocrinus hieroglyphicus Fraipont = *Melocrinites dewalquei*.

Melocrinus hieroglyphicus mespiliformis Fraipont = *Mespilocrinites mespiliformis*.

Melocrinus lamellosus Eichwald = *Ctenocrinus lamellosus*.

Melocrinus (*Trichocrinus*?) *lutheri* Goldring = *Trichocrinus? lutheri*.

Melocrinus moniliferus d'Orbigny = *Actinocrinites moniliferus*.

Melocrinus pachydactylus Wachsmuth and Springer = *Ctenocrinus pachydactylus*.

Melocrinus parvus Wachsmuth and Springer = *Melocrinites aequalis*.

Melocrinus paucidactylus Goldring = *Ctenocrinus paucidactylus*.

Melocrinus pratteni McChesney = *Scyphocrinites pratteni*.

Melocrinus roemeri Wachsmuth and Springer = *Cytocrinus laevis*.

Melocrinus sampsoni Miller and Gurley = *Actinocrinites milleri*.

Melocrinus (*Ctenocrinus*) *typus* Goldring = *Ctenocrinus typus*.

Melocrinus verneuili Oehlert = *Melocrinites oehlerti*.

Menocrinus S. A. Miller = *Lecythiocrinus*.

Meristocrinus Springer. Genotype: *Taxocrinus* (*Gnorimocrinus*) *loveni* Wachsmuth and Springer = *M.* (*Cyathocrinus*) *interbrachiatus* Angelin.

Sagenocrinitidae (Flexibilia). Sil.

Springer, Jour. Geol., 14, pp. 515, 519; Zittel-Eastman Textb. Pal., 1, p. 204, 1913;
Crin. Flexibilia, pp. 205, 211, 1920.

Meristocrinus anceps Springer.

Springer, Crin. Flexibilia, p. 214, pl. 17, figs. 4, 5, 1920.

Sil. (Gotlandian): Wisby, Island of Gotland.

Meristocrinus interbrachiatus (Angelin).

Cyathocrinus interbrachiatus Angelin, Icon. Crin. Suec., p. 23, pl. 23, figs. 2, 2a, pl. 29, fig. 78, 1878.

Meristocrinus interbrachiatus Springer, Crin. Flexibilia, p. 212, pl. 17, figs. 1-3, 1920.

Taxocrinus (*Gnorimocrinus*) *loveni* Wachsmuth and Springer, Rev. Pal., pt. 1 p. 50 (273), 1880 (1879).

Sil. (Gotlandian): Farö, Island of Gotland.

Meristocrinus minor Springer.

Springer, Crin. Flexibilia, p. 213, pl. 17, figs. 8, 9, 1920.

Sil. (Wenlock ls.): Dudley, England.

Meristocrinus orbignyi (McCoy).

Taxocrinus? orbignyi McCoy, Ann. Mag. Nat. Hist., (2) 6, p. 289, 1850; Brit. Pal. Foss., p. 53, pl. 1-D, fig. 1, 1854.

Meristocrinus orbignii Springer, Crin. Flexibilia, p. 213, pl. 17, fig. 7, 1920.

Sil. (Up. Ludlow): High Thorne and Kendel, Westmoreland, England.

Meristocrinus tuberosus Springer.

Springer, Crin. Flexibilia, p. 214, pl. 17, fig. 6, 1920.

Sil. (Gotlandian): Wisby, Island of Gotland.

Merocrinus Walcott. Genotype: *M. typus* Walcott.

Dendrocrinidae (Inadunata-Fistulata). Ord.

Walcott, 35th Rep. N. Y. St. Mus. Nat. Hist., p. 208, 1884 (adv. pub. 1883, p. 2).—Wachsmuth and Springer, Rev. Pal., pt. 3, pp. 191, 215 (115, 139), 1886.—Faber, Jour. Cincinnati Soc. Nat. Hist., 9, p. 19, 1886.—Bather, Ann. Mag. Nat. Hist., (6) 5, pp. 317, 332, 1890; Geol. Mag., (4) 6, p. 33, 1899; Canadian Dep. Mines, Victoria Mem. Mus., Bull. 1, pp. 11–15, 1913.—Springer, Zittel-Eastman Textb. Pal., 1, p. 215, 1913.—Jaekel, Pal. Zeits., 3, p. 57, 1918.

Merocrinus corroboratus Walcott.

Walcott, 35th Rep. N. Y. St. Mus. Nat. Hist., p. 210, pl. 17, fig. 6, 1884 (adv. pub. 1883, p. 4).

Ord. (Trenton ls.): Trenton Falls, N. Y.

Merocrinus curtus (Ulrich).

Dendrocrinus? *curtus* Ulrich, Jour. Cincinnati Soc. Nat. Hist., 2, p. 18, pl. 7, fig. 14, 1879.

Merocrinus curtus Faber, Jour. Cincinnati Soc. Nat. Hist., 9, p. 19, pl. 1, fig. 2, 1886.

Ord. (Eden-Fulton sh.): Cincinnati, Ohio; Ft. Thomas, Ky.

Merocrinus salopae Bather.

Bather, Geol. Mag., n. s., (4) 3, pp. 71, 74, fig. A, 1896.

Glyptocrinus basalis Morton, The Geologist, 4, p. 35, 1861.

Mid. Ord.: West Shropshire, England.

Merocrinus typus Walcott.

Walcott, 35th Rep. N. Y. St. Mus. Nat. Hist., p. 208, pl. 17, fig. 3, 1884 (adv. pub. 1883, p. 2).

Ord. (Trenton ls.): Trenton Falls, N. Y.

Mespilocrinus de Koninck and Lehon. Genotype: *M. forbesianus* de Koninck and Lehon.

Lecanocrinidae (Flexibilia). Low. Carb.

De Koninck and Lehon, Mem. Acad. Roy. Soc. Belg., 28, p. 111, 1854 (adv. pub. 1853).—Zittel, Handb. Pal., 1, p. 355, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 41 (264), 1879.—Bather, Treatise Zool. (Lanckester), pt. 3, p. 188, 1900.—Springer, Amer. Geol., 30, p. 94, 1902; Jour. Geol., 14, p. 517, 1906.—Zittel-Eastman Textb. Pal., 1, p. 203, 1913; Crin. Flexibilia, p. 190, 1920.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 88, 1924.

Mespilocrinus arenosus de Koninck and Lehon = *M. granifer*.

Mespilocrinus blairi (Miller and Gurley).

Cyathocrinus blairi Miller and Gurley, Ill. St. Mus., Bull. 7, p. 67, pl. 4, figs. 11, 12 (not figs. 13–15), 1895; Bull. 8, p. 50, pl. 3, figs. 21, 22; Bull. 9, p. 39, 1896.

Mespilocrinus blairi Springer, Crin. Flexibilia, p. 196, pl. 5, figs. 16–19, 1920.—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 102, pl. 27, figs. 6–9, 1938.

Miss. (Chouteau ls.): Sedalia, Mo.

Mespilocrinus bordeni Springer.

Springer, Crin. Flexibilia, p. 197, pl. 5, figs. 23 a–c, 1920.

Miss. (New Providence sh.): Clark Co., Ind.

Mespilocrinus chapmani Springer.

Springer, Crin. Flexibilia, p. 199, pl. 5, figs. 24a, b, 1920.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Mespilocrinus depressus Wright.

Wright, Geol. Mag., 73, p. 409, pl. 10, figs. 2, 6, text figs. 36, 37, 1936; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 62, pl. 5, figs. 13, 15, text figs. 61, 62, 1939.

Low. Carb. (Low. ls. gr.): Shore west of Kirkaldy, and east of St. Monance, Scotland.

Mespilocrinus forbesianus de Koninck and Lehon.

De Koninck and Lehon, Mem. Acad. Roy. Soc. Belg., 28, p. 112, pl. 2, figs. 1a-e, 1854 (adv. pub. 1853).—Pictet, Traité Pal., 4, p. 320, pl. 100, fig. 19, 1857.—Quenstedt, Petref. Deutsch., 4, p. 516, pl. 108, fig. 28, 1876.—Springer, Crin. Flexibilia, p. 193, pl. 5, figs. 1-3, 1920.

Low. Carb.: Yorkshire, England (Mtn. Ls.); Tournai, Belgium (Tournaisian).

Mespilocrinus granifer de Koninck and Lehon.

De Koninck and Lehon, Mem. Acad. Roy. Soc. Belg., 28, p. 114, pl. 2, figs. 6 a-c, 1854 (as *M. arenosus* in error).—Pictet, Traité Pal., 4, p. 320, pl. 100, fig. 20, 1857.

Low. Carb.: Visé (Viséan) and Tournai (Tournaisian), Belgium.

Mespilocrinus konincki Hall.

Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 69, text fig., 1860; N. Y. St. Mus., Bull. 1, pl. 6, fig. 9, 1872.—Springer, Crin. Flexibilia, p. 194, pl. 5, figs. 4-15, 1920.—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 101, pl. 31, figs. 14, 15, 1938.

Mespilocrinus cf. *konincki* Wright, Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 60, pl. 5, figs. 12, 14, 16, 17, text figs. 78-80, 83, 84, 1939.

Mespilocrinus scitulus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 321, 1861; Deser. N. Sp. Crin., Prelim. Not., p. 9, 1861; N. Y. St. Mus., Bull. 1, pl. 6, figs. 7, 8, 1872.

Cyathocrinus blairi Miller and Gurley, (part), Ill. St. Mus., Bull. 7, p. 67, pl. 4, figs. 13-15 (not figs. 11, 12), 1895.

Miss.: Burlington, Iowa (Low. Burlington ls.); Sedalia, Mo. (Chouteau ls.);? Kirkaldy, St. Monance, Inveriel, etc., Scotland (Low Ls. gr.).

Mespilocrinus romingeri Springer.

Springer, Crin. Flexibilia, p. 196, pl. 5, figs. 21 a-d, 22, 1920.

Miss. (New Providence sh.): Button Mold Knob, south of Louisville, Kentucky.

Mespilocrinus scitulus Hall = *M. konincki*.

Mespilocrinus thiemei Springer.

Springer, Crin. Flexibilia, p. 198, pl. 5, figs. 20a, b, 1920.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Mespilocystis Bather = *Mespilocystites*.

Mespilocystites Barrande. Genotype: *M. bohemicus* Barrande.

Stephanocrinidae (Inadunata-Larviformia). Ord.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 162, 1887.—Jaekel, Arkiv. Zool. 19-A, no. 4, p. 4, 1897.

Mespilocystis Bather, Nature, 40, p. 269, 1889; Treatise Zool. (Lankester), pt. 3, p. 77, 1900 (substituted for *Mespilocystites*).

Mespilocystites bohemicus Barrande.

Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 163, pl. 38, figs. 1-10, 1887.

Ord.: Zahorzan (D4); Trubsko, Bohemia (D2).

Mespilocystites bussacensis Delgado.

Delgado, Mem. Comm. Serv. Geol. Portugal, p. 62, 1908 (nom. nud.).

Ord.: Bussaco, Portugal.

Metabolocrinus Jaekel. Genotype: *M. rossicus* Jaekel.

?Heterocrinidae (Inadunata-Fistulata). Ord.

Jaekel, Verh. Int. Zool. Congress, Berlin, p. 1100, 1902.

Metabolocrinus rossicus Jaekel.

Jaekel, Verh. Int. Zool. Congress, Berlin, p. 1102, fig. 28-G, 1902; Pal. Zeits., 3, p. 84, fig. 78, 1918.

Ord. (Wassalem beds): Near Reval, Estonia.

- Metascocrinus** Wanner. Genotype: *Hypocrinus?* *piriformis* Rothpletz.
Hypocrinidae (Inadunata-Fistulata). Permian.
Wanner, Minjb. Gen. Nederl., Geol. ser., 5, p. 21, 1920; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 141, 1924; Neue Beitr. kennt. Perm. Echin. Timor, p. 39, 1929.
- Metascocrinus piriformis** (Rothpletz).
Hypocrinus? *piriformis* Rothpletz, Palaeontographica, 39, p. 75, pl. 10, fig. 23, 1892.
?Hypocrinus piriformis Bather, Proc. Zool. Soc. London, p. 905, pl. 90, figs. 7-10, text fig. 160, 1913.
Sycocrinus piriformis Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 97, text figs. 25-27, pl. 102 (7), figs. 4, 5, 1916.
Metascocrinus piriformis Wanner, Verh. Geol. Mijnb. Gen. Nederl. en Kolon., p. 23, text fig. 2, p. 24, text fig. 11, 1920; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 150, text fig. 11, 1924.
Permian: South of Kupang, Basleo, Timor.
- Methabocrinus** Jaekel. Genotype: *M. erraticus* Jaekel.
Botryocrinidae (Inadunata-Fistulata). Sil.
Jaekel, Pal. Zeits., 3, p. 37, 1918.
- Methabocrinus erraticus** Jaekel.
Jaekel, Pal. Zeits. 3, p. 37, fig. 28, 1918.
Sil. (Drift): Nörenberg near Stargard, Germany.
- Metichthyocrinus** Springer. Genotype: *Cyathocrinus tiaraeformis* (Troost) Hall.
Ichthyocrinidae (Flexibilia). Miss.
Springer, Jour. Geol., 14, no. 6, pp. 479, 517, 1906; Zittel-Eastman Textb. Pal., 1, p. 205, 1913; Crin. Flexibilia, pp. 261, 320, text fig. 42, 1920.
- Metichthyocrinus burlingtonensis** (Hall).
Ichthyocrinus burlingtonensis Hall, Geol. Rep. Iowa, 1, pt. 2, p. 557, text fig. 75, 1858.—Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 1, p. 35, pl. 3, fig. 24, 1893.
Metichthyocrinus burlingtonensis Springer, Crin. Flexibilia, pp. 321, 322, pl. 39, figs. 1-7, 1920.
Miss. (Low. Burlington ls.): Burlington, Iowa.
- Metichthyocrinus clarkensis** (Miller and Gurley).
Ichthyocrinus clarkensis Miller and Gurley, Ill. St. Mus., Bull. 5, p. 43, pl. 4, fig. 5, 1894; Beede, 30th Rep. Geol. Nat. Res. Ind., p. 1257, pl. 14, fig. 4, 1906.
Metichthyocrinus clarkensis Springer, Crin. Flexibilia, pp. 321, 323, pl. 39, figs. 8-18, 1920.
Miss. (New Providence sh.-Keokuk?): Clark Co., Ind.; Whites Creek Springs, Tenn.; Button Mold Knob, Ky.
- Metichthyocrinus tiaraeformis** (Troost).
Cyathocrinites tiaraeformis Troost, Amer. Jour. Sci., and Arts, (2) 8, p. 419, 1849.
Ichthyocrinus tiaraeformis Hall, Geol. Rep. Iowa, 1, pt. 2, p. 558, text fig. 74, 1858.—Wood, U. S. Nat. Mus., Bull. 64, p. 99, pl. 7, figs. 15-17, 1909.
Metichthyocrinus tiaraeformis Springer, Crin. Flexibilia, pp. 321, 325, pl. 39, figs. 19-21, 1920.
Miss. (New Providence sh.): Whites Creek Springs, Davidson Co., Tenn.; Button Mold Knob, Ky.
- Microcrinus** Bolkhovitinova and Markoff.
Bolkhovitinova and Markoff, Trans. Inst. Econ. Min. and Metal., no. 20, p. 40, 1926. (No species named.)
- Microcrinus** Ivanov. Genotype: *M. elementaris* Ivanov. (nom. nud.).
Ivanov, Bull. Soc. Nat. Moscou, Sec. Geol., 34, p. 176, 1926.
Carb.: Gov. Moscow, Russia.

- Mitocrinus** Goldring. Genotype: *M. robustus* Goldring.
Gasterocomidae (Inadunata-Fistulata). Dev.
Goldring, N. Y. St. Mus., Mem. 16, p. 361, 1923.
- Mitocrinus robustus** Goldring.
Goldring, N. Y. St. Mus., Mem. 16, p. 362, pl. 60, figs. 4, 5, text fig. 58, 1923.
Dev. (Onondaga ls.): Clarence, near Buffalo, N. Y.
- Millericrinus punctatus** d'Orbigny = *Enallocrinus scriptus*.
Millericrinus scriptus d'Orbigny = *Enallocrinus scriptus*.
- Mirmus** Gregorio. Genotype: *M. ruptus* Gregorio.
Gregorio, Ann. Geol. Pal., 52, Palermo, p. 40, 1930.
- Mirmus ruptus** Gregorio.
Gregorio, Ann. Geol. Pal., 52, Palermo, p. 40, pl. 15, figs. 5, 6, 1930. (Unrecognizable fragment.)
Permian. Sicily.
- Missouricrinus** S. A. Miller = *Graphiocrinus*.
- Mitocrinus** Miller and Gurley. Genotype: *M. wetherbyi* Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 5, p. 22, 1894.—Bather, Treatise Zool. (Lankester), pt. 3, p. 203, 1900.
- Mitocrinus wetherbyi** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 5, p. 22, pl. 2, figs. 4-6, 1894. (Based on 6-rayed individual, probably abnormal periechocrinid or carpocrinid. F. A. Bather.)
Ord. (Chazyan-Heiskell sh.): Knox Co., Tenn.
- Mollocrinus** Wanner. Genotype: *M. poculum* Wanner.
Poteriocrinidae (Inadunata-Fistulata). Permian.
Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 67, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 177, 186, 1924.
- Mollocrinus ornatissimus** Wanner.
Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 70, pl. 101 (6), fig. 8, 1916.
Permian: Basleo, Timor.
- Mollocrinus paucituberculatus** Wanner.
Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 188, pl. 9, figs. 14, 15, 1924.
Permian: Basleo, Timor.
- Mollocrinus poculum** Wanner.
Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 68, text figs. 9-11, pl. 101 (6), figs. 6, 7, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 186, text figs. 15-18, pl. 9, figs. 4-7, 1924.—Yakovlev, Centralbl. Min. Geol. Pal., Abt. B, no. 9, p. 377, fig. 7, 1930.—Wanner, Neue Beitr. kennt. Perm. Echin. Timor, V, Poteriocrinidae, p. 1, pl. 1, figs. 1-5, 1931.—Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 329, pl. 3, fig. 14, 1940.
Permian: Noko, Basleo, and Dorf Sabau, Timor.
- Monobrachiocrinus** Wanner. Genotype: *M. ficiformis* Wanner.
Hypocrinidae (Inadunata-Fistulata). Permian.
Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 103, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 141, 1924.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 95, 1926; Amer. Sil. Crin., p. 98, 1926.—Wanner, Neue Beitr. kennt. Perm. Echin. Timor, p. 39, 1929.
- Monobrachiocrinus ficiformis** Wanner.
Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 104, text fig. 28, pl. 102 (7), figs. 6-9, 1916; Neue Beitr. kennt. Perm. Echin. Timor, p. 60, text fig. 7, pl. 4, figs. 1, 2, 1929.
Permian: Noil Tonini and Basleo, Timor.

Monobrachiocrinus ficiformis carinatus Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, p. 62, pl. 3, figs. 11, 12, 1929.
Permian: Basleo, Timor.

Monobrachiocrinus ficiformis elongatus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 108, pl. 102 (7), fig. 10,
1916; Neue Beitr. kennt. Perm. Echin. Timor, p. 61, 1929.
Permian: Basleo, Timor.

Monobrachiocrinus ficiformis granulatus Wanner.

Monobrachiocrinus granulatus Wanner, Verh. Mijnb. Gen. Nederl. en Kolonien,
p. 23, text fig. 8, p. 24, fig. 10, p. 27, fig. 17, 1920; Perm. Krin. Timor, 2e Nederl.
Timor Exped. 1916, p. 151, pl. 8, figs. 13-15, 1924.

Monobrachiocrinus ficiformis var. *granulata* Wanner, Neue Beitr. kennt. Perm.
Echin. Timor, p. 62, 1929.

Permian: Basleo, Timor.

Monobrachiocrinus granulatus Wanner = *M. ficiformis granulatus*.

Monobrachiocrinus oviformis Yakovlev.

Yakovlev, Bull. Comité Géol., 45, no. 2, pp. 51, 52, text fig. 1, 1926; Bull. Geol.
Prosp. Serv. USSR, 49, pp. 98, 102, pl. 1, figs. 2a, b, 1930.

Permian: Mont Divia, Krasnooufinsk, Russia.

Monobrachiocrinus siciliensis Yakovlev.

Yakovlev, Bull. Acad. Sci. URSS, p. 909, pl. 1, fig. 2, 1930; Palaeontographia Ital.,
34, p. 275, pl. 19, fig. 15, 1934.

Permian: Sicily.

Monobrachiocrinus waitzi Marez Oyens.

Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 124, pl. 3, fig. 10, text fig. 7,
1940.

Permian: Noko, Basleo, Timor.

Morrowcrinus Moore and Plummer. Genotype: *M. fosteri* Moore and Plummer.

Poteriocrinitidae (Inadunata-Fistulata). Penn.

Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 242, 1938.

Morrowcrinus fosteri Moore and Plummer.

Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 245, pl. 13, figs.
4 a-d, pl. 16, fig. 11, text fig. 8, 1938.

Penn. (Brentwood ls.): 2 miles north of Ft. Gibson, Oklahoma.

Moscovicrinus Jaekel. Genotype: *Poteriocrinus multiplex* Trautschold.

Poteriocrinitidae (Inadunata-Fistulata). Low. Carb.

Jaekel, Pal. Zeits., 3, p. 62, 1918.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor
Exped. 1916, p. 178, 1924.

Moscovicrinus multiplex (Trautschold).

Poteriocrinus multiplex Trautschold, Bull. Soc. Imp. Nat. Moscou, 40, p. 6, pl. 2,
figs. 1-3, text fig., 1867; Kalkbr. Mjatsch., p. 112, pl. 14, fig. 2, pl. 15, fig. 1,
1879.

Moscovicrinus multiplex Jaekel, Pal. Zeits., 3, p. 62, 1918.

Carb. (Moscovian): Mjatschkowa, Russia.

Moundocrinus Strimple = *Aesiocrinus*.**Mycocrinus** Schultze. Genotype: *M. boletus* Schultze.

Catillocrinidae (Inadunata-Fistulata). Dev.

Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 222, 1867 (adv. pub. 1866,
p. 110).—Wachsmuth and Springer, Rev. Pal., pt. 3, pp. 192, 272 (116, 193),
1886.—Bather, Ann. Mag. Nat. Hist., (6) 5, pp. 332, 387, 1895.—Jaekel, Pal.
Abhandl., 7, p. 45, 1895.—Bather, Treatise Zool. (Lankester), pt. 3, pp. 149,
150, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 214, 1913; Smiths. Misc.
Coll., 76, no. 3, p. 5, 24, 1923.—Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4,
pt. 2, p. 110, 1937.—Moore, Denison Univ. Bull., 40, Jour. Sci. Lab., 35, p. 85,
1940.

Mycocrinus boletus Schultze.

Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 222, pl. 7, fig. 4, 1867 (adv. pub. 1866, p. 110).—Springer, Smiths. Misc. Coll., 76, no. 3, p. 24, pl. 1, figs. 1–10, 1923.

Dev. (Eifelian): Nollenbach, Eifel, Germany.

Mycocrinus conicus Springer.

Springer, Smiths. Misc. Coll., 76, no. 3, p. 25, pl. 1, figs. 11–13, 1923.

Dev. (Eifelian): Nollenbach, Eifel, Germany.

Mycocrinus granulatus Jaekel.

Jaekel, Pal. Abhandl., 7, p. 55, pl. 4, figs. 4 a–c, 1895.—Springer, Smiths. Misc. Coll., 76, no. 3, p. 24, 1923.

Dev. (Eifelian): Prüm, Eifel, Germany.

Myelodactylus Hall. Genotype: *M. convolutus* Hall.

Heterocrinidae (Inadunata-Fistulata). Sil.; Low. Dev.

Hall, Nat. Hist. N. Y., Pal., 2, p. 191, 1852.—Angelin, Icon. Crin. Suec., p. 11, 1878.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 146 (369), 1880 (1879).—Zittel, Handb. Pal., 1, p. 354, 1879.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, pp. 45, 68, 1900.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 6, 1926; Amer. Sil. Crin., pp. 85, 98, 1926.

Brachiocrinus Hall, Amer. Jour. Sci. and Arts, (2) 25, p. 278, 1858; Nat. Hist. N. Y., Pal., 3, p. 118, 1859. (Genotype: *B. nodosarius* Hall.)

Eomyelodactylus Foerste, Bull. Sci. Lab. Denison Univ., 19, pp. 19–21, 1919. (Genotype: *Myelodactylus (Eomyelodactylus) rotundatus* Foerste.)

Herpetocrinus Salter, Cat. Camb. Sil. Foss., p. 118, 1873.—Bather, Königl. Sv. Vet. Akad. Handl., 25, no. 2, pp. 21, 36, 1893; Amer. Geol., 16, p. 214, 1895; Nat. Sci., 12, p. 339, 1898; Treatise Zool. (Lankester), pt. 3, p. 146, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 212, 1913.—Thomas, Proc. Iowa Acad. Sci., 26, p. 481, 1919.—Ehrenberg, Acta Zool., 3, p. 280, 1922; Pal. Zeits., 5, heft 2, pp. 182–324, 1922.—Springer, Amer. Sil. Crin., p. 85, 1926.—Ehrenberg, Palaeobiol., 3, pp. 260–324, 1930. (Genotype: *H. fletcheri* Salter.)

Ophiocrinus Charlesworth, The Reader, 6, pt. 35, no. 152, p. 604, 1865.—Bather, Königl. Sv. Vet. Akad. Handl., 25, p. 36, 1893. (No species named.)

Myelodactylus ammonis (Bather).

Herpetocrinus ammonis Bather, Königl. Sv. Vet. Akad. Handl., 25, p. 49, pl. 2, figs. 54–63, p. 41, text figs. 6–8, p. 151, 1893.—Ehrenberg, Pal. Zeits., 5, heft 2, p. 188, figs. 7, 14, 16, 1922.

Myelodactylus ammonis Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 10, pl. 2, figs. 1–9; Amer. Sil. Crin., p. 86, pl. 27, figs. 1–5a, 1926.

Herpetocrinus (Myelodactylus) ammonis Ehrenberg, Pal. Zeits., 7, heft 4, p. 256, fig. 3, 1926; Palaeobiol., 3, p. 322, pl. 16, fig. 5, 1930.

Sil.: Follingbo, Island of Gotland (Gotlandian); Dudley, England (Wenlock sh.); Decatur Co., Tenn. (Beech River fm.); Newsom, Tenn. (Waldron sh.); St. Paul, Ind. (Laurel ls.).

Myelodactylus ammonis alternicirrus (Bather).

Herpetocrinus ammonis var. *alternicirrus* Bather, Königl. Sv. Vet. Akad. Handl., 25, p. 50, pl. 2, figs. 61–63, 1893.

Myelodactylus ammonis var. *alternicirrus* Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 12, pl. 2, figs. 1b, 4a, b, 6b, 7, 7a, 1926.

Herpetocrinus (Myelodactylus) ammonis var. *alternicirrus* Ehrenberg, Palaeobiol., 3, p. 322, pl. 16, fig. 4, 1930.

Sil.: Follingbo, Island of Gotland (Gotlandian); Dudley, England (Wenlock ls.); Decatur Co. (Beech River fm.) and Newsom (Waldron sh.), Tenn.

Myelodactylus ammonis bijugicirrus (Bather).

Herpetocrinus ammonis var. *bijugicirrus* Bather, Königl. Sv. Vet. Akad. Handl., 25, p. 50, pl. 2, figs. 54–60, 1893.

Myelodactylus ammonis var. *bijugicirrus* Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 12, pl. 2, figs. 2b, 3c, 5, 8, 1926.

- Herpetocrinus (Myelodactylus) ammonis* var. *bijugicirrus* Ehrenberg, *Palaeobiol.*, 3, p. 322, pl. 16, fig. 3, 1930.
 Sil.: Follingbo, Island of Gotland (Gotlandian); Dudley, England (Wenlock ls.); Decatur Co., Tenn. (Beech River fm.); Newsom, Tenn. (Waldron sh.).
- Myelodactylus brachiatus** Hall.
 Hall, *Nat. Hist. N. Y., Pal.*, 2, p. 232, pl. 45, figs. 7 a-e, 1852.—Springer, *U. S. Nat. Mus., Proc.*, 67, art. 9, p. 16, pl. 4, figs. 1-10, 1926; *Amer. Sil. Crin.*, p. 87, pl. 27, fig. 19, 1926.
Herpetocrinus (Myelodactylus) brachiatus Ehrenberg, *Pal. Zeits.*, 12, p. 172, 1930; *Palaeobiol.*, 3, p. 322, pl. 15, figs. 1-4, 1930.
 Sil. (Niagaran-Rochester sh.): Near Lockport, N. Y.
- Myelodactylus brevis** Springer.
 Springer, *U. S. Nat. Mus., Proc.*, 67, art. 9, p. 10, pl. 1, figs. 9, 9a, 1926; *Amer. Sil. Crin.*, p. 86, pl. 27, figs. 9, 9a, 1926.
 Sil. (Niagaran-Beech River fm.): One mile west Brownsport Landing, Decatur Co., Tenn.
- Myelodactylus bridgeportensis** S. A. Miller.
 S. A. Miller, *Jour. Cincinnati Soc. Nat. Hist.*, 3, p. 141, pl. 4, figs. 2 a-c, 1880.—Weller, *Chicago Acad. Sci., Nat. Hist. Surv., Bull.* 4, pt. 1, p. 69, pl. 15, figs. 1, 2, 1900.
 Sil. (Niagaran-Racine dol.): Bridgeport, Ill.
- Myelodactylus convolutus** Hall.
 Hall, *Nat. Hist. N. Y., Pal.*, 2, p. 191, pl. 42, figs. 5a, b, 6 a-h, 1852.
Herpetocrinus convolutus Bather, *Köngl. Sv. Vet. Akad. Handl.*, 25, p. 48, pl. 2, figs. 50-53, 1893.—Ehrenberg, *Pal. Zeits.*, 5, heft 2, p. 197, fig. 15, 1922.
Myelodactylus convolutus Springer, *U. S. Nat. Mus., Proc.*, 67, art. 9, p. 8, pl. 1, figs. 1-8, 1926; *Amer. Sil. Crin.*, p. 86, pl. 27, figs. 6-8, 1926.
Herpetocrinus (Myelodactylus) convolutus Ehrenberg, *Palaeobiol.*, 3, p. 322, pl. 16, fig. 1, 1930.
 Sil.: Lockport, N. Y. (Rochester sh.); St. Paul, Ind. (Laurel ls.); Newsom, Tenn. (Waldron sh.); Tofta, Island of Gotland (Gotlandian).
- Myelodactylus dicirrocirrus** (Ehrenberg).
Herpetocrinus (Myelodactylus) dicirrocirrus Ehrenberg, *Palaeobiol.*, 3, pp. 263, 267, 277, pl. 15, fig. 5, 1930.
 Dev. (Eifelian): Daun, Eifel, Germany.
- Myelodactylus extensus** Springer.
 Springer, *U. S. Nat. Mus., Proc.*, 67, art. 9, p. 14, pl. 3, figs. 1-13a, 1926; *Amer. Sil. Crin.*, p. 87, pl. 27, figs. 11-18, 1926.
Herpetocrinus (Myelodactylus) extensus Ehrenberg, *Palaeobiol.*, 3, p. 322, pl. 16, fig. 2, 1930.
 Sil.: Two miles north of Decaturville, Tenn. (Beech River fm.); Dudley, England (Wenlock ls.).
- Myelodactylus extensus alternicirrus** Springer.
 Springer, *U. S. Nat. Mus., Proc.*, 67, art. 9, pl. 3, figs. 1a, 4a, 6, 9-11, 1926.
 Sil. (Niagaran-Beech River fm.): Two miles north of Decaturville, Tenn.
- Myelodactylus extensus bijugicirrus** Springer.
 Springer, *U. S. Nat. Mus., Proc.*, 67, art. 9, pl. 3, figs. 2a, 3a, 5-8a, 13a, 1926.
 Sil. (Niagaran-Beech River fm.): 2 miles north Decaturville, Tenn.
- Myelodactylus flabellcirrus** (Bather).
Herpetocrinus flabellcirrus Bather, *Köngl. Sv. Vet. Akad. Handl.*, 25, p. 51, pl. 2, figs. 64-77, 1893.—Ehrenberg, *Acta Zool.*, 3, p. 283, fig. 14; *Pal. Zeits.*, 5, p. 189, figs. 9, 11-13, 17, 19, 1922.
Myelodactylus flabellcirrus Springer, *U. S. Nat. Mus., Proc.*, 67, art. 9, pp. 18, 29, 1926.

- Herpetocrinus (Myelodactylus) flabelliformis* Ehrenberg, Pal. Zeits., 7, heft 4, p. 257, fig. 4, 1926; Palaeobiol., 3, p. 323, pl. 16, figs. 12, 13, 1930.
Sil. (Gotlandian): Follingbo and Wisby, Island of Gotland.
- Myelodactylus fletcheri** (Salter).
Herpetocrinus fletcheri Salter, Cat. Camb. Sil. Foss., p. 118, 1873.—Bather, Köngl. Sv. Vet. Akad. Handl., 25, p. 41, text figs. 1-5, p. 46, pl. 1, figs. 24-49, 1893.—Ehrenberg, Pal. Zeits., 5, heft 2, p. 184, figs. 1-5, 8; Acta Zool., 3, p. 282, fig. 13, 1922.
Myelodactylus fletcheri Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 10, pl. 1, figs. 10-12c, 1926; Amer. Sil. Crin., p. 86, pl. 27, figs. 10, 10a, b, 1926.
Herpetocrinus (Myelodactylus) fletcheri Ehrenberg, Pal. Zeits., 7, heft 4, p. 255, text fig. 2, 1926; Palaeobiol., 3, p. 323, pl. 16, figs. 10, 11, 1930.
Myelodactylus heterocrinus Angelin, Icon. Crin. Suec., p. 11, pl. 10, figs. 24, 25, 1878. Sil.: Dudley, England (Wenlock ls.); Follingbo, etc., Island of Gotland (Gotlandian).
- Myelodactylus gorbyi** S. A. Miller.
S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 682, pl. 11, figs. 6, 7, 1892 (adv. pub. 1891, p. 72); N. Amer. Geol. Pal., 2d App., p. 749, fig. 1365, 1897.
Sil. (Niagaran-Waldrone sh.): Near Nashville (Newsom), Tenn.
- Myelodactylus gracilis** Angelin.
Angelin, Icon. Crin. Suec., p. 11, pl. 10, fig. 28, 1878.
Sil. (Gotlandian): Wisby, Island of Gotland.
- Myelodactylus (?) interradialis** Angelin.
Angelin, Icon. Crin. Suec., p. 11, pl. 10, figs. 26, 27, 1878.—Bather, Köngl. Sv. Vet. Akad. Handl., 25, p. 40, 1893.
Sil. (Gotlandian): Petesvik, Island of Gotland.
- Myelodactylus keyserensis** Springer.
Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 19, pl. 6, figs. 1-3, 1926; Amer. Sil. Crin., p. 87, pl. 27, figs. 20, 20a, 1926.
Herpetocrinus (Myelodactylus) keyserensis Ehrenberg, Palaeobiol., 3, p. 323, pl. 16, figs. 7-9, 1930.
Dev. (Helderbergian-Keyser fm.): Keyser, W. Va.
- Myelodactylus nodosarius** (Hall).
Brachiocrinus nodosarius Hall, Nat. Hist. N. Y., Pal., 3, p. 118, pl. 5, figs. 5-7, pl. 6, figs. 1-3, 1859.—Kirk, U. S. Nat. Mus., Proc., 41, p. 48, pl. 5, fig. 8, 1911.—Goldring, N. Y. St. Mus., Mem. 16, p. 332, pl. 41, figs. 1-4, 1923.
Brachiocrinus (Myelodactylus) nodosarius Talbot, Amer. Jour. Sci., (4) 20, p. 32, pl. 4, figs. 7, 8, 1905.
Myelodactylus nodosarius Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 20, pl. 5, figs. 1-8; Amer. Sil. Crin., p. 87, pl. 27, figs. 22-24, 1926.
Herpetocrinus (Myelodactylus) nodosarius Ehrenberg, Palaeobiol., 3, p. 322, pl. 15, figs. 6-9, 1930.
Dev. (Helderbergian): east of Clarksville; Schoharie, Helderberg Mts., Albany Co., N. Y. (New Scotland ls.); Schoharie, N. Y. (Coeymans ls.).
- Myelodactylus rotundatus** (Foerste).
Myelodactylus (Eomyelodactylus) rotundatus Foerste, Bull. Sci. Lab. Denison Univ., 19, pp. 19-21, pl. 1, fig. 8, pl. 2, fig. 3, 1919.
Myelodactylus rotundatus Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 16, 1926.
Sil. (Medinan-Brassfield fm.): Caesars Creek, 4½ miles southeast of Xenia, Ohio.
- Myelodactylus schucherti** Springer.
Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 21, pl. 5, figs. 9-9c; Amer. Sil. Crin., p. 87, pl. 27, fig. 21, 1926.
Herpetocrinus (Myelodactylus) schucherti Ehrenberg, Palaeobiol., 3, p. 322, pl. 16; fig. 6, 1930.
Dev. (Helderbergian-Linden, Birdsong sh.); Northeast of Holladay, Benton Co., Tenn.

- Myrtillocrinus Sandberger and Sandberger.** Genotype: *M. elongatus* Sandberger and Sandberger.
Gasterocomidae (Inadunata-Fistulata). Dev.
Sandberger and Sandberger, Verst. Rhein. Schicht. Nassau, p. 388, 1856.—Zittel, Handb. Pal., 1, p. 364, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 185 (109), 1886.—Bather, Treatise Zool., (Lankester), pt. 3, p. 177, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 219, 1913.—Wanner, Handwort Naturwiss., p. 499, fig. 38, 1932.
Tripleurocrinus Wood, Smiths. Misc. Coll., 47, p. 56, 1904. (Genotype: *T. levis* Wood.)
- Myrtillocrinus americanus Hall.**
Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 142, pl. 1, figs. 2-4, 1862.—Wachsmuth and Springer, N. Amer. Crin. Cam., pl. 3, fig. 13, 1897.—Springer, Mem. Mus. Comp. Zool., 25, pl. 3, fig. 8, 1911.—Goldring, N. Y. St. Mus., Mem. 16, p. 358, pl. 44, figs. 11-13, 1923.—Springer, Amer. Sil. Crin., p. 49, pl. 11, figs. 5, 5a, 1926.
Dev. (Onondaga ls.): Near Caledonia, N. Y.
- Myrtillocrinus ? curtus Schmidt.**
Schmidt, Jahrb. Preuss. Geol. Landesanst., 30, Th. 2, p. 300, pl. 22, fig. 1, 1913.
Mid. Dev. (Eifelian-*Orthocrinus* beds): Rosenberg, near Billstein, Germany.
- Myrtillocrinus elongatus Sandberger and Sandberger.**
Sandberger and Sandberger, Verst. Rhein Schichtensyst. Nassau, p. 389, pl. 35, fig. 6, 1855.
Dev. (Givetian): Villmar, Nassau, Germany.
- Myrtillocrinus levis (Wood).**
Tripleurocrinus levis Wood, Smiths. Misc. Coll., 47, p. 57, pl. 16, figs. 2, 2a, 1904.
Myrtillocrinus? levis Springer, Mem. Mus. Comp. Zool., 25, pl. 3, figs. 10a, b, 1911.—Goldring, N. Y. St. Mus., Mem. 16, p. 360, pl. 44, figs. 14, 15, 1923.
Dev. (Onondaga ls.): LeRoy, N. Y.
- Mysticoocrinus Springer.** Genotype: *M. wilsoni* Springer.
Pisocrinidae (Inadunata-Larviformia). Sil.
Springer, Amer. Jour. Sci., 46, pp. 666-668, 1918.—Bather, Geol. Mag., (6) 6, p. 182, 1919.—Springer, Amer. Sil. Crin., p. 83, 1926.
- Mysticoocrinus wilsoni Springer.**
Springer, Amer. Jour. Sci., 46, pp. 666-668, pl. 2, 1918; Amer. Sil. Crin., p. 84, pl. 26, figs. 1 a-g, 1926.
Sil. (Niagaran-Laurel ls.): St. Paul, Ind.
- Nanocrinus Müller.** Genotype: *N. paradoxus* Müller.
Gasterocomidae (Inadunata-Fistulata). Dev.
Müller, Monats. Berlin Akad. Sci., p. 355; Abhandl. Denk. Kais. Akad. Wiss. Berlin, p. 240, 1856.—Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 214, 1867 (adv. pub. 1866, p. 102).—Wachsmuth and Springer, Rev. Pal., pt. 3, pp. 182, 184 (106, 108), 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 177, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 219, 1913.
- Nanocrinus paradoxus Müller.**
Müller, Monatsber. Berlin Akad. p. 355; Abhandl. Denk. Kais. Akad. Wiss., Berlin, p. 240, pl. 2, figs. 18-21, 1856.—Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 214, pl. 12, fig. 7, 1867 (adv. pub. 1866, p. 102).
Dev. (Eifelian): Eifel, Germany.
- Nassoviocrinus Jaekel.** Genotype: *Heterocrinus pachydactylus* Sandberger and Sandberger.
Homocrinidae (Inadunata-Fistulata). Dev.
Jaekel, Pal. Zeits., 3, pp. 53, 54, 1918.
- Nassoviocrinus goldringae Belanski.**
Belanski, Amer. Midland Nat., 11, no. 5, p. 179, pl. 13, figs. 38, 39, 1928.
Dev. (Shellrock ls.): Nora Springs, Iowa.

- Nassoviocrinus pachydactylus** (Sandberger and Sandberger).
 ?*Heterocrinus pachydactylus* Sandberger and Sandberger, Verst. Rhein. Ges. Nassau, p. 402, pl. 35, figs. 16, 16a, 1855.
Nassoviocrinus pachydactylus Jaekel, Pal. Zeits., 3, p. 53, fig. 42, 1918.
Botryocrinus pachydactylus Haarmann, Jahrb. Preuss. Geol. Landesanst., 41, p. 21, pl. 2, figs. 5a, b, 1921.
 Dev. (Coblentzian-*Spirifer* ss.): Near Hachenburg von Grandjean, Germany.
- Nebraskacrinus** Moore. Genotype: *N. tourteloti* Moore.
 Poteriocrinitidae (Inadunata-Fistulata). Permian.
 Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 198, 1939.
- Nebraskacrinus tourteloti** Moore.
 Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 199, pl. 5, figs. 1 a-d, text fig. 4, 1939.
 Permian (Winfield ls.): N. W. corner S. W. $\frac{1}{4}$ Sec. 20, T 1 N, R 6 E, Neb.; one mile east of Bala, Riley Co., Kansas.
- Nematocrinus** Meek and Worthen = **Catilloocrinus**.
- Neocatilloocrinus** Wanner. Genotype: *N. incissus* Wanner.
 Catilloocrinitidae (Inadunata-Fistulata). Permian.
 Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, pp. 109, 117, 1937.—Moore, Denison Univ. Bull., 40, Jour. Sci. Lab., 35, p. 90, 1940.
- Neocatilloocrinus incissus** Wanner.
 Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 112, text fig. 28, p. 117, pl. 14, figs. 10-13, 1937.—Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 317, pl. 3, fig. 7, 1940.—Moore, Denison Univ. Bull., 40, Jour. Sci. Lab., 35, p. 106, text fig. 8, 1940.
 Permian: Basleo, Toeboe Lopo, Timor.
- Neodichocrinus** Wanner. Genotype: *N. nanus* Wanner.
 Hexacrinitidae (Adunata). Permian.
 Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 84, 1937.
- Neodichocrinus nanus** Wanner.
 Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 84, pl. 7, figs. 8-10, 1937.
 Permian: Basleo, Timor.
- Neoplatycrinus** Wanner. Genotype: *N. dilatatus* Wanner.
 Platycrinitidae (Adunata). Permian.
 Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 32, 1916.
- Neoplatycrinus dilatatus** Wanner.
 Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 33, pl. 98 (3), figs. 13-23, 1916; Neue Beitr. kennt. Perm. Echin. Timor, VIII, p. 76, pl. 6, figs. 39-47, pl. 7, fig. 1, pl. 8, fig. 15, pp. 78, 79, text figs. 1-12, 1937.
 Permian: Basleo and Noil Tonini, Timor.
- Neoplatycrinus major** Wanner.
 Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 39, pl. 99 (4), figs. 1-5, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 77, pl. 2, figs. 9, 10, pl. 3, fig. 1, 1924.
 Permian: Basleo and Noil Fatoe, Timor.
- Neoplatycrinus somoholensis** Wanner.
 Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 42, pl. 99 (4), fig. 6, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 77, pl. 3, figs. 2-6, 1924.
 Permian: Somohole, near Soefa, Timor.
- Neoplatycrinus transitorius** Wanner.
 Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 43, pl. 99 (4), fig. 7, 1916.
 Permian: Fatu Tonini, Timor.

Neozeacrinus Wanner. Genotype: *N. peramplus* Wanner.

Zeacrinitidae (Inadunata-Fistulata). Penn.; Permian.

Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 144, 1937.—Moore and Plummer, Univ. Texas Pub. No. 3945, p. 161, 1940.

Neozeacrinus kansasensis (Weller).*Hydreionocrinus kansasensis* Weller, Trans. N. Y. Acad. Sci., 16, p. 372, pl. 36, 1898.*Neozeacrinus kansasensis* Moore and Plummer, Univ. Texas Pub. no. 3945, p. 162, 1940.

Penn.: Neal, Greenwood Co., Kansas.

Neozeacrinus peramplus Wanner.

Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 144, text figs. 41–43, pl. 10, figs. 2–5, 1937.—Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 330, text fig. 10, 1940.

Permian: Soempheh, Basleo, Timor.

Neozeacrinus praecursor Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. no. 3945, p. 165, pl. 5, figs. 5, 8, pl. 6, fig. 7, pl. 20, fig. 5, pl. 21, fig. 7, text fig. 29, 1940.

Penn. (Millsap Lake fm.): 3 miles southwest of Brock, Parker Co., Texas.

Neozeacrinus? springeri Wanner.

Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 149, pl. 10, figs. 6–8, 1937.—Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 331, pl. 4, fig. 1, 1940.

Permian: Soempheh-Safneo, Toenioen, Timor.

Neozeacrinus uddeni (Weller).*Hydreionocrinus uddeni* Weller, Jour. Geol., 17, p. 624, pl. 1, figs. 1–5, 1909.*Neozeacrinus uddeni* Moore and Plummer, Univ. Texas Pub. no. 3945, p. 162, pl. 6, fig. 8, text fig. 28, 1940.

Permian (Cibolo ls.): 3 miles north of Shafter, Presidio Co., Texas.

Nereocrinus Wanner. Genotype: *N. antiquus* Wanner.

Hypocrinidae (Inadunata-Fistulata). Permian.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 127, 1924; Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 124, 1937.

Oceanocrinus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 131, 1924; Neue Beitr. kennt. Perm. Echin. Timor, III, p. 8, 1930. (Genotype: *O. granulatus* Wanner.)**Nereocrinus antiquus** Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 129, text fig. 8, pl. 7, figs. 12–15, 1924; Perm. Blastoiden von Timor, p. 227, pl. 4, figs. 13, 14, 1924;

Neue Beitr. kennt. Perm. Echin. Timor, III, pp. 6, 7, 9, text figs. 2–4, pl. 1, figs. 8–10, 1930; Beitr. Geol. Niederl.-Ind., Abt. 4, p. 125, text fig. 33, 1937.

Permian: Basleo, Timor.

Nereocrinus granulatus (Wanner).*Oceanocrinus granulatus* Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 131, text fig. 9, pl. 7, figs. 9–11, 1924; Neue Beitr. kennt. Perm. Echin. Timor, III, p. 8, pl. 1, figs. 11–16, 1930.

Permian: Basleo, Timor.

Nereocrinus jameljantzevi Yakovlev.

Yakovlev, Soc. Pal. Russie, Ann., 11, p. 7, pl. 1, fig. 1, 1937.

Permian: Krasnooufimsk, Russia.

Nipterocrinus Wachsmuth. Genotype: *N. wachsmuthi* Meek and Worthen.

Lecanocrinidae; (Flexibilia). Miss.

- Wachsmuth in Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 341, 1868.—Meek and Worthen, Geol. Surv. Ill., 5, p. 434, 1873.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 55 (272), 1880 (1879).—Bather, Treatise Zool. (Lankester), pt. 3, p. 188, 1900.—Springer, Amer. Geol., 30, p. 95, 1902; Jour. Geol., 14, p. 519, 1906; Zittel-Eastman Textb. Pal., 1, p. 204, 1913; Crin. Flexibilia, p. 201, text fig. 21, 1920.
- Nipterocrinus arboreus** Worthen.
Worthen, in Meek and Worthen, Geol. Surv. Ill., 5, p. 436, pl. 4, fig. 8, 1873.—Springer, Crin. Flexibilia, p. 203, pl. 15, figs. 9, 10, 1920.
Miss. (Low. Burlington ls.): Burlington, Iowa.
- Nipterocrinus wachsmuthi** Meek and Worthen.
Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 342, 1868; Geol. Surv. Ill., 5, p. 435, pl. 2, fig. 4, 1873.—Springer, Jour. Geol., 14, pl. 6, fig. 18, 1906; Crin. Flexibilia, p. 203, pl. 15, figs. 1-8, 1920.
Miss. (Low. Burlington ls.): Burlington, Iowa.
- Notiocrinus** Wanner. Genotype: *N. timoricus* Wanner.
Poteriocrinitidae (Inadunata-Fistulata). Permian.
Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, pp. 181, 281, 1924.
- Notiocrinus ekadensis** Wanner.
Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 283, text fig. 54, pl. 12, figs. 15-17, 1924.
Permian: Noil Ekad, Timor.
- Notiocrinus timoricus** Wanner.
Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 282, text fig. 53, pl. 12, figs. 18-20, 1924.—Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 342, pl. 4, fig. 8, 1940.
Permian: Basleo, Timor.
- Nyctocrinus** Springer. Genotype: *N. magnitubus* Springer.
Platycrinitidae (Adunata). Sil.
Springer, Amer. Sil. Crin., p. 54, 1926.
- Nyctocrinus magnitubus** Springer.
Springer, Amer. Sil. Crin., p. 54, pl. 12, figs. 16-21, 1926.
Sil. (Niagaran-Beech River fm.): 2 miles north of Decaturville, Tenn.
- Oceanocrinus** Wanner = *Nereocrinus*.
- Octocrinus** Peck. Genotype: *O. inconsuetus* Peck.
Peck, Jour. Pal., 10, p. 291, 1936. (Position uncertain.)
- Octocrinus inconsuetus** Peck.
Peck, Jour. Pal., 10, p. 291, pl. 46, figs. 3-10, 1936.
Miss. (Fern Glen fm.): $\frac{3}{4}$ mile south of Kimmswick, Ste. Genevieve Co., Mo.
- Ohioocrinus** Wachsmuth and Springer. Genotype: *Homocrinus laxus* Hall.
Heterocrinidae (Inadunata-Fistulata). Ord.
Wachsmuth and Springer, Rev. Pal., pt. 3, p. 208 (132), 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 146, 1900.—Springer, Geol. Surv. Canada, Mem. 15-P, p. 27, 1911; Zittel-Eastman Textb. Pal., 1, p. 212, 1913.—Ulrich in Foerste, Geol. Surv. Canada, Mem. 138, p. 90, 1924.
- Ohioocrinus brauni** Ulrich.
Ulrich in Foerste, Geol. Surv. Canada, Mem. 138, p. 90, text figs. 7 B, C, 1924.
Ord. (Maysville-Fairmount ls.): Madison, Ind.
- Ohioocrinus compactus** S. A. Miller = *Dystactocrinus compactus*.
- Ohioocrinus exilis** Foerste.
Foerste, Jour. Cincinnati Soc. Nat. Hist., 21, p. 125, pl. 1, fig. 7, 1914.
Ord. (Trenton-Cynthiana, Rogers Gap beds): Near Rogers Gap, Ky.

Ohioocrinus laxus (Hall).

Homocrinus laxus Hall, 20th Rep. N. Y. St. Cab. Nat. Hist., p. 304, 1867.

Heterocrinus laxus Hall, 24th Rep. N. Y. St. Cab. Nat. Hist., p. 211, pl. 5, fig. 15, 1872 (adv. pub. 1871, pl. 1, fig. 15).—Meek, Geol. Surv. Ohio, Pal., 1, p. 14, pl. 1, figs. 8a, b, 1873.

Ohioocrinus laxus Wachsmuth and Springer, Rev. Pal., pt. 3, p. 209 (133), 1886.—Ulrich in Foerste, Geol. Surv. Canada, Mem. 138, p. 90, text fig. 7-A, 1924.

Heterocrinus (Iocrinus) oehanus Ulrich, Jour. Cincinnati Soc. Nat. Hist., 5, p. 175, pl. 5, fig. 9, 1882.

Ord. (Maysville-Fairmount ls.): Cincinnati and Lebanon, Ohio.

Oklahomacrinus Moore. Genotype: *O. supinus* Moore.

Poteriocrinitidae (Inadunata-Fistulata). Penn.

Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 255, 1939.

Oklahomacrinus bowsheri Moore.

Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 265, pl. 9, figs. 4a, b, text figs. 27a, b, 33 a-e, 36 a-c, 1939.

Penn. (Nelagoney fm.): NW $\frac{1}{4}$ Sec. 21, T. 22 N; R. 10 E., Osage Co., and 15 miles west of Skiatook, Okla.

Oklahomacrinus loeblichii Moore.

Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 261, pl. 9, figs. 2a, b, text figs. 25, 29 a-d, 30 a-c, 31 a, b, 34 a-e, 35 a-e, 37 a-c, 1939.

Penn. (Francis sh.): Sec. 4, T. 3N., R. 6E., South of Ada, Okla.

Oklahomacrinus stevensi Moore.

Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 266, pl. 9, figs. 3 a-c, text figs. 26a, b, 32a-d, 1939.

Penn. (Nelagoney fm.): NW $\frac{1}{4}$ Sec. 21, T. 22 N., R. 10 E., Osage Co., and 15 miles west of Skiatook, Okla.

Oklahomacrinus supinus Moore.

Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 258, pl. 9, figs. 5 a-d, text figs. 24a, b, 28 a-d, 1939.

Penn. (Brownville ls.): 5 miles west of Strohm, Okla.

Oligocrinus Springer = Onychocrinus.

Ollacrinites Blainville = Gilbertsocrinus.

Ollacrinus Cumberland = Gilbertsocrinus.

Oncocrinus Bather = Pycnosaccus.

Ontariocrinus Jaekel. Genotype: *O. deviatu*s Jaekel.

Jaekel, Pal. Zeits., 3, p. 83, 1918. (Abnormal inadunate.)

Ontariocrinus deviatus Jaekel.

Jaekel, Pal. Zeits., 3, p. 83, fig. 77, 1918.

Ord. (Trenton-Hull ls.): Kirkfield, Ontario, Canada.

Onychocrinus Lyon and Casseday. Genotype: *O. exsculptu*s Lyon and Casseday.

Taxocrinidae (Flexibilia). Miss.

Lyon and Casseday, Amer. Jour. Sci. and Arts, 29, p. 77, 1860.—Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 255, 1866; Geol. Surv. Ill., 2, p. 242, 1866.—Zittel, Handb. Pal., 1, p. 353, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 145 (69), 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 190, 1900.—Springer, Amer. Geol., 30, p. 95, 1902; Jour., Geol., 14, p. 40, 1906; Zittel-Eastman Textb. Pal., 1, p. 206, 1913; Crin. Flexibilia, pp. 342, 417, 1920.

Oligocrinus Springer, Amer. Geol., 30, pp. 95, 96; Jour. Geol., 14, p. 159, 1906.—Jaekel, Pal. Zeits., 3, p. 78, 1918 (as *Origocrinus*). (Genotype: *Forbesiocrinus asteriaeformis* Hall.)

Onychocrinus asteriaeformis (Hall).

Forbesiocrinus asteriaeformis Hall, Jour. Boston Soc. Nat. Hist., 7, p. 320, 1861; Descr. N. Sp. Crin., Prelim. Not., p. 9, 1861; N. Y. St. Mus., Bull. 1, pl. 6, figs. 10, 11, 1872.

Oligocrinus asteriaeformis Springer, Jour. Geol., 14, pl. 6, fig. 16, 1906.

Onychocrinus asteriaeformis Springer, Crin. Flexibilia, pp. 421, 422, pl. 64, figs. 1-10, 1920.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Onychocrinus cantonensis Miller and Gurley = *O. ulrichi*.

Onychocrinus distensus Worthen.

Worthen, Ill. St. Mus., Bull. 1, p. 31, 1882; Geol. Surv. Ill., 7, p. 307, pl. 29, fig. 5, 1883.—Springer, Crin. Flexibilia, pp. 421, 436, pl. 73, figs. 5-8, 1920.

Miss. (Chester): Monroe Co., Ill. (Renault fm.); Huntsville, Ala. (Gasper fm.).

Onychocrinus diversus Meek and Worthen.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 256, 1866; Geol. Surv. Ill., 3, p. 492, pl. 17, figs. 5a, b, text fig., 1868.—Springer, Crin. Flexibilia, pp. 421, 423, pl. 65, figs. 1-7, pl. 67, figs. 11a, b, 1920.

Miss.: (Up. Burlington ls.; Burlington-Keokuk transition beds): Burlington, Iowa.

Onychocrinus exsculptus Lyon and Casseday.

Onychocrinus exsculptus Lyon and Casseday, Amer. Jour. Sci. and Arts, (2) 29, p. 78, 1860.—Meek and Worthen, Geol. Surv. Ill., 5, p. 498, pl. 14, fig. 4, 1873.

Onychocrinus exsculptus Wachsmuth and Springer, Rev. Pal., pt. 1, p. 55, 1880 (1879).—White, 11th Rep. Geol. Surv. Ind., p. 365, pl. 40, fig. 1, 1882.—Quenstedt, Handb. Petref., 4, p. 947, pl. 75, fig. 27, 1885.—Springer, Crin. Flexibilia, pp. 421, 430, pl. 67, fig. 6, pl. 69, figs. 1-9, pl. 70, figs. 1-7, pl. 71, figs. 1, 2, 1920.

Forbesiocrinus monroensis Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 130, 1861.

Onychocrinus monroensis Meek and Worthen, Geol. Surv. Ill., 2, p. 244, pl. 17, fig. 7, 1866.—Keyes, Geol. Surv. Mo., 4, p. 224, pl. 30, fig. 2, 1894.

Forbesiocrinus? norwoodi Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 389, 1860.

Onychocrinus norwoodi Meek and Worthen, Geol. Surv. Ill., 2, p. 245, pl. 17, fig. 3, text fig. 26, 1866.

Miss. (Keokuk ls.): Hardin Co., Ky. (Ft. Payne ch.); Crawfordsville, Montgomery Co., Ind.; Nauvoo and Monroe Co., Ill.; Keokuk and Nashville, Iowa.

Onychocrinus hibernicus Wright.

Wright, Geol. Mag., 71, p. 261, text figs. 29, 30, 32, 33, pl. 15, figs. 1-4, 6, 1934.

Low. Carb. (Mtn. Ls.): Hook Head, Co. Wexford, Ireland.

Onychocrinus magnus Worthen.

Worthen, Geol. Surv. Ill., 6, p. 520, pl. 31, fig. 5, 1875.—Springer, Crin. Flexibilia, pp. 421, 435, pl. 73, figs. 1-4, 1920.

Miss. (St. Louis ls.): Monroe Co., Ill.

Onychocrinus monroensis Meek and Worthen = *O. exsculptus*.

Onychocrinus norwoodi Meek and Worthen = *O. exsculptus*.

Onychocrinus parvus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 3, p. 52, pl. 4, fig. 5, 1894.

Miss. (Chester-Glen Dean ls.): Martin Co., Ind.

Onychocrinus polydactylus (McCoy).

Tazocrinus polydactylus McCoy, Syn. Char. Carb. Foss. Ireland, p. 178, pl. 26, fig. 7, 1844 (on plate as *Cladocrinus*).

Onychocrinus? polydactylus Springer, Crin. Flexibilia, pp. 421, 439, pl. 64, figs. 11-14, 1920.

- Onychocrinus polydactylus* Wright, Geol. Mag., 71, p. 260, text fig. 31, pl. 15, fig. 5, 1934.
- Poteroicrinus? egertoni* Phillips, Geol. Yorkshire, 2, p. 205, pl. 3, fig. 39, 1836.
Low. Carb.: Ballinrillick, Co. Donegal; Hook Head, Co. Wexford, Ireland; Germany.
- Onychocrinus pulaskiensis** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 6, p. 40, pl. 4, figs. 1, 2, 1895.—Springer, Crin. Flexibilia, pp. 421, 437, pl. 74, figs. 1-10, pl. 75, figs. 15a, b, 1920.—Wright, Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 60, pl. 5, fig. 6, 1939.
Miss. (Chester-Glen Dean ls.): Pulaski, Breckinridge, and Grayson Cos., Ky.
Low. Carb. (Low. Ls. gr.): Penton Linns, Liddesdale, Roxburgshire, Scotland.
- Onychocrinus* near *pulaskiensis* Wright = *O. wrighti*.
- Onychocrinus ramulosus** (Lyon and Casseday).
Forbestocrinus ramulosus Lyon and Casseday, Amer. Jour. Sci. and Arts, (2) 28, p. 237, 1859.—Quenstedt, Handb. Petref., p. 947, pl. 75, fig. 26, 1835.
Onychocrinus ramulosus White, 11th Rep. Geol. Surv. Ind., p. 366, pl. 39, figs. 2, 3, 1882.—Springer, Crin. Flexibilia, pp. 421, 433, pl. 72, figs. 1-12, 1920.
Miss.: Crawfordsville, Ind. (Keokuk ls.); Hardin and Barren Cos., Ky. (Ft. Payne ch.).
- Onychocrinus semiovatus** (Meek and Worthen).
Forbestocrinus? semiovatus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 389, 1860.
Onychocrinus semiovatus Springer, Crin. Flexibilia, p. 436, pl. 72, fig. 7, 1920.
Miss. (Ste. Genevieve-Fredonia oolite): Hardin Co., Ill.; also Western Ky.
- Onychocrinus ulrichi** Miller and Gurley.
Miller and Gurley, Jour. Cincinnati Soc. Nat. Hist., 13, p. 17, pl. 3, figs. 2, 3; 16th Rep. Geol. Surv. Ind., p. 339, pl. 3, figs. 2, 3, 1890.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 123, pl. 6, fig. 20, 1897.—Springer, Jour. Geol., 14, p. 469, pl. 4, figs. 1-5, 1906; Crin. Flexibilia, p. 51, fig. 8, pp. 421, 425, pl. 21, fig. 5, pl. 66, figs. 1-10, pl. 67, figs. 1-10, pl. 68, figs. 1-6, 1920.
Onychocrinus cantonensis Miller and Gurley, Descr. N. Gen. and Sp. Echin., p. 41, pl. 7, fig. 9; 16th Rep. Geol. Surv. Ind., p. 359, pl. 7, fig. 9, 1890.
Miss. (Keokuk ls.): Crawfordsville, Indian Creek, and Canton, Ind.
- Onychocrinus whitfieldi* Meek and Worthen = *Taxocrinus whitfieldi*.
- Onychocrinus wrighti** Springer.
Springer, Crin. Flexibilia, pp. 421, 438, pl. 75, fig. 14, 1920.—Wright, Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 59, pl. 5, fig. 18, pl. 7, fig. 7, 1939.
Onychocrinus near *pulaskiensis* Wright, Geol. Mag., 61, p. 275, pl. 16, fig. 1, 1924; Trans. Edinburgh Geol. Soc., 11, pt. 3, pl. 29, fig. 1, 1925.
Low. Carb. (Low. Ls. gr.): Invertiel and Kirkcaldy, Fife, Scotland.
- Ophiocrinus* Angelin = *Streptocrinus*.
- Ophiocrinus* Charlesworth = *Myelodactylus*.
- Ophiocrinus** Sharpe and Salter. Genotype: *O. stangeri* Sharpe and Salter.
Rhodocritidae (Camerata). Dev.
Sharpe and Salter, Trans. Geol. London, (2) 7, p. 223, 1856.—Bather, Treatise Zool. (Lankester), pt. 3, p. 201, 1900.
- Ophiocrinus stangeri** Sharpe and Salter.
Sharpe and Salter, Trans. Geol. Soc. London, 7, p. 223, pl. 25, fig. 20, 1856.
Dev.: Warm Bokkeveld and Kokmans Kloof, South Africa.
- Ophiurocrinus** Jaekel. Genotype: *Poteroicrinus originarius* Trautschold.
Poteroicritidae (Inadunata-Fistulata). Up. Carb.
Jaekel, Pal. Zeits., 3, p. 62, 1918.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 178, 1924;

Ophiurocrinus originarius (Trautschold).

Poteriocrinus originarius Trautschold, Bull. Soc. Imp. Nat. Moscou, 40, p. 2, pl. 1, fig. 1, text fig., 1867; Kalkbr. Mjatschkowa, p. 110, pl. 14, fig. 1, 1879.

Ophiurocrinus originarius Jaekel, Pal. Zeits., 3, p. 62, 1918.

Carb.: Near Kalomna, and Mjatschkowa, near Moscow, Russia.

Origocrinus Jaekel. See *Oligocrinus* = *Onychocrinus*.

Ormocrinus Bassler = *Hormocrinus*.

Orthocrinus Jaekel. Genotype: *O. simplex* Jaekel.

Dimerocrinitidae (Camerata). Dev.

Jaekel, Pal. Abhandl., 7, p. 29, 1895.—Bather, Treatise Zool. (Lankester), pt. 3, p. 198, 1900.—Schmidt, Jahrb. Preuss. Geol. Landesanst., Bergakad., 30, p. 305, 1913.—Springer, Zittel-Eastman Textb. Pal., 1, p. 187, 1913.

Orthocrinus planus Schmidt.

Schmidt, Palaeontographica, 76, p. 29, pl. 4, fig. 1, text fig. 11, 1931.

Dev.: Landzunge El Mugaron, Concha de Arnao, Spain.

Orthocrinus simplex Jaekel.

Jaekel, Pal. Abhandl., 7, p. 30, text fig. 6, 1895.

Poteriocrinus rhenanus Müller, in Wirtgen and Zeiler (part), Verh. Nat. Ver. Preuss. Rheinl. and Westfalens, 12, p. 20, pl. 7, fig. 1 (not figs. 2, 3), 1855.

Low. Dev. (Coblentzian): Mesenich and Niederlahnstein, Germany.

Orthocrinus tuberculatus Schmidt.

Schmidt, Jahrb. Preuss. Geol. Landesanst., Bergakad., 30, p. 307, pl. 22, figs. 8-14, 1913.

Mid. Dev. (Eifelian *Orthocrinus* beds): Ober. Veischede, near Olpe, etc. S. Sauerland, Germany.

Ottawacrinus W. R. Billings. Genotype: *O. typus* W. R. Billings.

Dendrocrinidae (Inadunata-Fistulata). Ord.

W. R. Billings, Ottawa Nat., Trans. Ottawa Nat. Field Club, 1, no. 4, p. 49, 1887.—Bather, Ann. Mag. Nat. Hist., (6) 5, pp. 329, 332, 1890; Treatise Zool. (Lankester), pt. 3, p. 178, 1900; Geol. Surv. Canada, Victoria Mem. Mus., Bull. no. 1, pp. 1-14, 1913.—Springer, Geol. Surv. Canada, Mem. 15-P, p. 39, 1911.

Ottawacrinus billingsi Springer.

Springer, Geol. Surv. Canada, Mem. 15-P, p. 40, pl. 4, figs. 1-4, 1911.

Ord. (Trenton-Hull ls.): Kirkfield, Ontario, Canada.

Ottawacrinus tenuis Jaekel = *Heterocrinus tenuis*.

Ottawacrinus typus W. R. Billings.

W. R. Billings, Ottawa Nat., 1, no. 4, p. 49, pl. figs., 1887.—Springer, Geol. Surv. Canada, Mem. 15-P, p. 37, pl. 4, figs. 5-7, 1911.—Bather, Geol. Surv. Canada, Victoria Mem. Mus., Bull. 1, p. 12, pl. 1, figs. 1-9, 1913.

Ord. (Trenton-Hull ls.): Hull, Quebec, and Kirkfield, Ontario.

Pachyrcrinites Eichwald. Genotype: *P. compressus* Eichwald.

Eichwald, Bull. Acad. Sci. St. Petersb., 7, p. 78, 1840.—Zittel, Handb. Pal., 1, p. 351, 1879. (Columnals only.)

Pachyrcrinus Eichwald, Leth. Ross., 1, pt. 1, p. 584, 1860.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 150 (373), 1880 (1879).—Bather, Treatise Zool. (Lankester), pt. 3, p. 203, 1900.

Pachyrcrinites compressus Eichwald.

Eichwald, Bull. Sci. Acad. Sci. St. Petersb., 7, p. 78, 1840.

Pachyrcrinus compressus Eichwald, Leth. Ross., p. 584, pl. 31, figs. 59a, b, 1860.

Low. Carb.: Novgorod, Borowirschi, Russia.

Pachyrcrinites notatus (Eichwald).

Pachyrcrinus notatus Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, no. 1, p. 121, 1856; Leth. Ross., 1, p. 585, pl. 31, figs. 52, 53 a-c, 1860. (Columnals only.)

Carb. (Moscovian): Mjatschkowa, near Moscow, Russia.

Pachyrcrinites planus Eichwald.

Eichwald, Bull. Sci. Acad. Sci., 7, p. 73, 1840.

Carb.: Novgorod, Russia.

Pachyrcrinus Eichwald = *Pachyrcrinites*.

Pachyrcrinus Scudder. See *Pachyocrinus*.

Pachylocrinus Wachsmuth and Springer. Genotype: *Scaphiocrinus aequalis* Hall.

Pachylocrinidae (Inadunata-Fistulata). Miss.—Permian.

Wachsmuth and Springer, Rev. Pal., pt. 1, p. 115 (338), 1880 (1879).—Bather, Treatise Zool. (Lankester), pt. 3, p. 180, 1900.—Springer, Mem. Mus. Comp. Zool., Harvard, 25, no. 3, p. 145, 1911; Zittel-Eastman Textb. Pal., 1, p. 222, 1913.—Jaekel, Pal. Zeits., 3, p. 62, 1918.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 177, 1924.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 70, 1926.—Wright, Geol. Mag., 73, p. 398, 1936.—Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 203, 1939.—Moore and Plummer, Univ. Texas Pub., No. 3945, p. 135, 1940.

Scaphiocrinus Meek and Worthen, Geol. Surv. Ill., 2, pp. 181, 237, 1866.—Zittel, Handb. Pal., 1, p. 360, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 112 (335), 1880 (1879); pt. 3, pp. 191, 232 (115, 156), 1886.—Bather, Ann. Mag. Nat. Hist., (6), 5, p. 374, 1890; Treatise Zool. (Lankester), pt. 3, p. 180, 1900.—Springer, Mem. Mus. Zool., Harvard, 25, no. 3, p. 144, 1911.

Pachylocrinus aequalis (Hall).

Scaphiocrinus aequalis Hall, Jour. Boston Soc. Nat. Hist., p. 316; Descr. N. Sp. Crin., Prelim. Not., p. 8, 1861; N. Y. St. Mus., Bull. 1, pl. 5, fig. 10, 1872.

Poteriocrinus (*Scaphiocrinus*) *aequalis* Meek and Worthen, Geol. Surv. Ill., 5, p. 494, pl. 15, fig. 6, 1873.

Pachylocrinus aequalis Springer, Zittel-Eastman Textb. Pal., 1, p. 222, fig. 323, 1913; U. S. Nat. Mus., Proc., 67, art. 9, p. 71, pl. 16, fig. 1, 1926.—Moore and Plummer, Univ. Texas Pub. No. 3945, p. 137, text fig. 19, 1940.

Poteriocrinus (*Pachylocrinus*) *subaequalis* Wachsmuth and Springer, Rev. Pal., pt. 1, p. 339 (116), 1880 (1879).

Miss. (Keokuk ls.): Crawfordsville, Ind.

Pachylocrinus aequalis Springer = *Pelecoerinus aequalis*.

Pachylocrinus arboreus Springer = (part) *Linocrinus arboreus*; (part) = *Linocrinus wachsmuthi*.

Pachylocrinus arrosus (Miller and Gurley).

Scaphiocrinus arrosus Miller and Gurley, Ill. St. Mus., Bull. 3, p. 30, pl. 6, fig. 5, 1894.

Miss. (Keokuk ls.): Washington Co., Ind.

Pachylocrinus asperatus (Worthen).

Poteriocrinus asperatus Worthen, Ill. St. Mus., Bull. 1, p. 12, 1882; Geol. Surv. Ill., 7, p. 280, pl. 28, fig. 2, 1883.

Pachylocrinus asperatus Springer, Mem. Mus. Comp. Zool., 25, p. 147, 1911.

Miss. (Keokuk ls.): One mile below Keokuk, Iowa; Biggsville, Ill.

Pachylocrinus bellirugosus Moore.

Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 215, pl. 7, figs. 5 a-c, text figs. 6 a-c, 1939.

Penn. (Wabaunsee): Near Emporia, Kansas.

Pachylocrinus bellus (Miller and Gurley).

Scaphiocrinus bellus Miller and Gurley, 16th Rep. Geol. Surv. Ind., p. 363, pl. 8, figs. 5-7 (authors' ed. p. 46), 1890.

Miss. (Keokuk ls.): Bono, Ind.

Pachylocrinus bonoensis (Miller and Gurley).

Scaphiocrinus bonoensis Miller and Gurley, 16th Rep. Geol. Surv. Ind., p. 349, pl. 5, figs. 6, 7 (authors' ed. p. 29), 1890.

Miss. (Keokuk ls.): Bono, Indian Creek, and Canton, Ind.

Pachylocrinus boonvillensis (S. A. Miller).

Scaphiocrinus boonvillensis S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 37, pl. 5, figs. 1, 2, 1891.

Miss.: Boonville, Mo. (Warsaw ls.); Crawfordsville and Indian Creek, Ind. (Keokuk ls.).

Pachylocrinus brevidactylus (Austin and Austin).

Cladocrinites brevidactylus Austin and Austin, Ann. Mag. Nat. Hist., 8, p. 198, 1843.

Pachylocrinus brevidactylus Wright, Geol. Mag., 71, p. 257, pl. 15, fig. 7, 1934.

Poteriocrinus abbreviatus Austin and Austin, Mon. Rec. and Foss. Crin. p. 89, pl. 11, fig. 4a, 1845.—Springer, Crin. Flexibilia, p. 383, 1920.

Low. Carb. (Mtn. Ls.): Hook Head, Co. Wexford, Ireland.

Pachylocrinus briareus (Worthen).

Poteriocrinus briareus Worthen, Ill. St. Mus., Bull. 1, p. 12, 1882; Geol. Surv. Ill., 7, p. 270, pl. 27, fig. 4, 1883.

Scaphiocrinus briareus Wachsmuth and Springer, Rev. Pal., pt. 3, p. 237 (161), 1886.

Miss.: Keokuk, Iowa, and Bono, Ind. (Keokuk ls.); Boonville, Mo. (Warsaw ls.).

Pachylocrinus burkети (Worthen).

Poteriocrinus burkети Worthen, Ill. St. Mus., Bull. 1, p. 5, 1882; Geol. Surv. Ill., 7, p. 270, pl. 28, fig. 8, 1883.

Miss. (Keokuk ls.): Hamilton, Ill.

Pachylocrinus cachensis Weller = *Dasciocrinus cachensis*.

Pachylocrinus carinatus (Hall).

Scaphiocrinus carinatus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 310; Prelim. Descr. N. Sp. Crin., p. 8, 1861.

Poteriocrinus (Scaphiocrinus) carinatus Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 1, p. 31, pl. 3, figs. 13, 14, 1893.

Miss. (Up. and Low. Burlington ls.): Burlington, Iowa.

Pachylocrinus cirrifer Laudon = *Cercidocrinus cirrifer*.

Pachylocrinus clavatus Wright.

Wright, Geol. Mag., 74, p. 405, pl. 15, fig. 16; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 21, pl. 8, fig. 13, 1939.

Low. Carb. (Low. Ls. gr.): Roscobie, Scotland.

Pachylocrinus clio (Meek and Worthen).

Poteriocrinites (Graphiocrinus; Scaphiocrinus) clio Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 144, 1869.

Poteriocrinites (Scaphiocrinus) clio Meek and Worthen, Geol. Surv. Ill., 5, p. 408, pl. 1, fig. 10, 1873.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Pachylocrinus colubrosus Moore.

Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 220, pl. 6, figs. 5 a-c, pl. 7, figs. 6 a-c, text figs. 8 a-d, 1939.

?Low. Perm. (?Ft. Riley ls.): Vicinity of Augusta, Butler Co., Kansas.

Pachylocrinus concinnus Wachsmuth and Springer = *Cydrocrinus concinnus*.

Pachylocrinus constrictus (S. A. Miller).

Scaphiocrinus constrictus S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 38, pl. 5, figs. 3, 4, 1891.

Miss. (Warsaw ls.): Boonville, Mo.

Pachylocrinus coreyi (Meek and Worthen).

Poteriocrinites (*Graphiocrinus*; *Scaphiocrinus*) *coreyi* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 148, 1869.

Poteriocrinites (*Scaphiocrinus*) *coreyi* Meek and Worthen, Geol. Surv. Ill., 5, p. 494, pl. 15, fig. 1, 1873.

Scaphiocrinus lyoni S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 299, pl. 5, fig. 25, 1894 (adv. pub. 1892).

Zeacrinus stimpsoni Lyon, Trans. Amer. Philos. Soc., 13, p. 465, pl. 27, figs. m, m-1, 1869.

Miss. (Keokuk ls.): Crawfordsville, Ind.

Pachylocrinus corycia (Hall).

Poteriocrinus corycia Hall, 17th Rep. Regents Univ. St. N. Y., p. 57, 1864 (adv. pub., 1863).

Poteriocrinus (*Scaphiocrinus*) *corycia* Hall and Whitfield, Geol. Surv. Ohio, vol. 2, pt. 2, Pal., p. 173, pl. 12, fig. 9, 1875.

Miss. (Waverlyan-Cuyahoga sh.): Richfield, Summit Co., Ohio.

Pachylocrinus coxanus Springer = *Cydrocrinus coxanus*.

Pachylocrinus dichotomus (Hall).

Poteriocrinus (*Scaphiocrinus*) *dichotomus* Hall, Geol. Rep. Iowa, 1, pt. 2, p. 553, text fig. 72, 1858.

Miss. (Burlington ls.): Quincy, Ill.

Pachylocrinus disparilis (Miller and Gurley).

Scaphiocrinus disparilis Miller and Gurley, 16th Rep. Geol. Surv. Ind., p. 367, pl. 9, fig. 1, pl. 10, fig. 2, 1890 (authors' ed. p. 52).

Miss. (Keokuk ls.): Crawfordsville, Ind.

Pachylocrinus divaricatus (Hall).

Poteriocrinus (*Scaphiocrinus*) *divaricatus* Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 65, pl. 1, fig. 10, pl. 3, fig. 6, 1860.

Miss. (Warsaw ls.): Warsaw, Ill.

Pachylocrinus dunlopi Wright.

Wright, Geol. Mag., 73, p. 401, text figs. 25, 26, pl. 8, fig. 2, 1936; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 20, pl. 7, figs. 1-9, text fig. 12, 1939.

Low. Carb. (Low. Ls. gr.): Penton Linns, Liddesdale, Scotland.

Pachylocrinus extensus (Wachsmuth and Springer).

Scaphiocrinus extensus Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 2, p. 237 (161), 1886.

Poteriocrinus asper Worthen, Ill. St. Mus., Bull. 1, p. 11, 1882; Geol. Surv. Ill., 7, p. 278, pl. 27, fig. 8, 1883.

Miss. (Keokuk ls.): One mile below Keokuk, Iowa.

Pachylocrinus fimbria Laudon = *Cercidocrinus fimbria*.

Pachylocrinus florealis Springer = *Dasciocrinus florealis*.

Pachylocrinus gibsoni (White).

Scaphiocrinus gibsoni White, Proc. Acad. Nat. Sci. Phila., 30, p. 31, 1878; 11th Ann. Rep. U. S. Geol. Surv. Terr., p. 161, pl. 40, fig. 4a, 1880 (Final Rep. 1883); 2d Ann. Rep. Stat. and Geol. Indiana, p. 507, pl. 7, fig. 7, 1881.

Miss. (Keokuk ls.): Crawfordsville and Bono, Ind.

Pachylocrinus globosus (Wachsmuth and Springer).

Scaphiocrinus globosus Wachsmuth and Springer, in Miller, N. Amer. Geol. Pal., p. 279; 1889; Geol. Surv. Ill., 8, p. 196, pl. 17, fig. 8, 1890.

Pachylocrinus globosus Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 256, pl. 17, fig. 10, 1937.

Miss. (Kinderhook-Hampton fm.): Legrand, Iowa.

Pachylocrinus gorbyi (S. A. Miller).

Scaphiocrinus gorbyi S. A. Miller, 17th Rep. Geol. Surv. Indiana, p. 46, pl. 12, fig. 15, 1892 (adv. pub. 1891); N. Amer. Geol. Pal., 1st App., p. 681, fig. 1245, 1892. Miss. (Warsaw ls.): Boonville, Mo.

Pachylocrinus granuliferus (Miller and Gurley).

Scaphiocrinus granuliferus Miller and Gurley, 16th Rep. Geol. Surv. Indiana, p. 367, pl. 10, fig. 3, 1890 (authors' ed., p. 51). Miss. (Keokuk ls.): Crawfordsville, Ind.

Pachylocrinus gurleyi (White).

Scaphiocrinus gurleyi White, Proc. Acad. Nat. Sci. Phila., 30, p. 32, 1878; 12th Ann. Rep. U. S. Geol. Surv. Terr., p. 162, pl. 40, fig. 3a, 1880 (Final Rep. 1883); 2d Ann. Rep. Dep. Stat. and Geol. Indiana, p. 509, pl. 7, fig. 8, 1881. Miss. (Keokuk ls.): Crawfordsville, Ind.

Pachylocrinus isacobus (Austin and Austin).

Poteriocrinites isacobus Austin and Austin, Ann. Mag. Nat. Hist., (1) 11, p. 195, 1843 (substituted for *P. minimus*, nom. nud.)

Poteriocrinus isacobus Austin and Austin, Mon. Rec. and Foss. Crin., p. 74, pl. 8, figs. 4a, b, 1846.

Low. Carb. (Mtn. Ls.): Hook Head, Co. Wexford, Ireland; Bristol, England.

Pachylocrinus jesupi Springer = *Blothrocrinus jesupi*.

Pachylocrinus kirkianus (Girty).

Scaphiocrinus kirkianus Girty, U. S. Geol. Surv., Prof. Paper 150, p. 112, pl. 22, figs. 1, 2, 1928.

Miss. (Pocono fm.): West side Shoups Run, 1½ miles southeast of Saxton, Pa.

Pachylocrinus lacunosus (Miller and Gurley).

Scaphiocrinus lacunosus Miller and Gurley, 16th Rep. Geol. Surv. Indiana, p. 563, pl. 8, figs. 8-10, 1890 (authors' ed., p. 47).

Miss. (Keokuk ls.): Bono, Indiana.

Pachylocrinus latidactylus (Worthen).

Poteriocrinus latidactylus Worthen, Ill. St. Mus., Bull. 1, p. 8, 1882; Geol. Surv. Ill., 7, p. 275, pl. 28, fig. 6, 1883.

Miss. (Keokuk ls.): Hamilton, Ill.

Pachylocrinus latifrons (Austin and Austin).

Poteriocrinus latifrons Austin and Austin, Mon. Rec. Foss. Crin., p. 82, pl. 10, fig. 4, 1847.

Poteriocrinus (Pachylocrinus) latifrons Wachsmuth and Springer, Rev. Pal., pt. 1, p. 116 (339), 1880 (1879).

Pachylocrinus latifrons Wright, Geol. Mag., 71, p. 256, pl. 15, figs. 9, 10, 16, 1934.

Low. Carb. (Mtn. Ls.): Mendip Hills, Somersetshire, England; Hook Head, Co. Wexford, Ireland.

Pachylocrinus legrandensis Laudon and Beane = *Cosmetocrinus elegantulus*.

Pachylocrinus liliiformis (Meek and Worthen).

Poteriocrinites (Scaphiocrinus) liliiformis Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 138, 1869.

Poteriocrinus (Pachylocrinus) liliiformis Wachsmuth and Springer, Rev. Pal., pt. 1, p. 116 (339), 1880 (1879).

Poteriocrinus carinatus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 139, 1861; Geol. Surv. Ill., 3, p. 486, pl. 17, fig. 1, text fig., 1868.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Pachylocrinus longidactylus (Austin and Austin).

Poteriocrinus longidactylus Austin and Austin, Mon. Rec. Foss. Crin., p. 88, pl. 11, figs. 3, 9, 1847.

- Encrinus* Cumberland, Trans. Geol. Soc., 5, pt. 1, p. 90, pl. 3, fig. 1, 1819.
Low. Carb.: Clevedon Bay, near Walton Castle, Somersetshire, England.
- Pachylocrinus longitentaculatus** (Rowley).
Scaphiocrinus? *longitentaculatus* Rowley in Greene, Cont. Ind. Pal., 1, pt. 7, p. 61, pl. 21, fig. 27, 1901.
Miss. (Chester-Glen Dean ls.): White River, Martin Co., Ind.
- Pachylocrinus lutanus** (Boos).
Erisocrinus lutana Boos, Jour. Pal., 3, p. 245, pl. 27, figs. 2-2d, 1939.
Pachylocrinus lutanus Moore and Plummer, Univ. Texas Pub. No. 3945, p. 152, 1940.
Permian (Luta ls.): Winfield, Kansas.
- Pachylocrinus macrocheirus** (McCoy)
Cyathocrinus macrocheirus McCoy, Syn. Char. Carb. Foss. Ireland, p. 179, pl. 25, figs. 8-10, 1844.
Poteriocrinus (*Scaphiocrinus*) *macrocheirus* Wachsmuth and Springer, Rev. Pal., pt. 3, p. 237 (161), 1886.
Low. Carb. (Mtn. Ls.): Co. Donegal, Ireland.
- Pachylocrinus manus** (Miller and Gurley).
Scaphiocrinus manus Miller and Gurley, 18th Rep. Geol. Surv. Ind., p. 645, pl. 4, fig. 13, 1890 (authors' ed. p. 24).
Miss. (Keokuk ls.): Crawfordsville, Ind.
- Pachylocrinus martinensis** (Miller and Gurley).
Scaphiocrinus martinensis Miller and Gurley, Ill. St. Mus., Bull. 3, p. 38, pl. 4, fig. 9, 1894.
Miss. (Chester-Glen Dean ls.): Martin Co., Ind.
- Pachylocrinus mcguirei** Moore.
Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 205, pl. 6, figs. 6-16, text figs. 5 a-m, 1939.
Penn. (Brownville ls.): 5 miles west of Strohm, Oklahoma.
- Pachylocrinus monensis** Wright.
Wright, Geol. Mag., 75, p. 284, pl. 11, fig. 3, 1938.
Carb. (C-2): Cass-ny-hawn, Isle of Man.
- Pachylocrinus montanensis** (Meek).
Poteriocrinus montanensis Meek, 6th Rep. U. S. Geol. Surv. Mont., Idaho, Utah, p. 469, p. 1873.
Scaphiocrinus montanensis Wachsmuth and Springer, Rev. Pal., pt. 3, p. 237 (161), 1886.
Miss. (Madison ls.): Old Baldy, near Virginia City, Mont.
- Pachylocrinus nauvoensis** (Worthen).
Poteriocrinus nauvoensis Worthen, Ill. St. Mus., Bull. 1, p. 13, 1882; Geol. Surv. Ill., 7, p. 282, pl. 28, fig. 10, 1883.
Scaphiocrinus nauvoensis Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 2, p. 237 (161), 1886.
Miss. (Keokuk ls.): Nauvoo, Ill.
- Pachylocrinus nodobasalis** (Worthen).
Poteriocrinus nodobasalis Worthen, in Miller, N. Amer. Geol. Pal., p. 274, 1889; Geol. Surv. Ill., 8, p. 89, pl. 12, figs. 3, 3a, pl. 13, fig. 6, 1890.
Miss. (Ste. Genevieve ls.): Monroe Co., Ill.
- Pachylocrinus norwoodi** (Meek and Worthen).
Poteriocrinus (*Scaphiocrinus*)? *norwoodi* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 158, 1865.
Miss. (St. Louis ls.): Hancock Co., Ill.

- Pachylocrinus obscurus** (Wachsmuth and Springer).
Scaphiocrinus obscurus Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 2, p. 236 (160), 1886.
Poteriocrinus tenuidactylus Worthen, Ill. St. Mus., Bull. 1, p. 6, (not p. 10), 1882; Geol. Surv. Ill., 7, p. 271, pl. 28, fig. 13, 1883.
 Miss. (Keokuk ls.): One mile below Keokuk, Iowa.
- Pachylocrinus ogarai** Moore and Plummer.
 Moore and Plummer, Univ. Texas Pub. No. 3945, p. 140, pl. 4, fig. 7, pl. 19, fig. 3, text figs. 20, 21, 1940.
 Penn. (Graford fm.): West slope Kyle Mtn., Palo Pinto Co., Texas.
- Pachylocrinus okawensis** (Worthen).
Poteriocrinus okawensis Worthen, Ill. St. Mus., Bull. 1, p. 24, 1882; Geol. Surv. Ill., vol. 7, p. 296, pl. 29, fig. 2, 1883.
Poteriocrinus (Scaphiocrinus) okawensis Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 2, p. 236 (160), 1886.
 Miss. (Chester ls.): Bluffs of Okaw River, above Chester, Randolph Co., Ill.
- Pachylocrinus popensis** (Worthen).
Poteriocrinus popensis Worthen, Ill. St. Mus., Bull. 1, p. 23, 1882; Geol. Surv. Ill., 7, p. 296, pl. 29, fig. 12, 1883.
Scaphiocrinus popensis Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 2, p. 236 (160), 1886.
 Miss. (Chester ls.): Pope Co., Ill.
- Pachylocrinus porrectus** (S. A. Miller).
Scaphiocrinus porrectus S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 652, pl. 7, fig. 2, 1892 (adv. pub. 1891, p. 42).
 Miss. (Keokuk ls.): Crawfordsville, Ind.
- Pachylocrinus propinquus** (Worthen).
Poteriocrinus propinquus Worthen, Ill. St. Mus., Bull. 1, p. 26, 1882; Geol. Surv. Ill., 7, p. 299, pl. 29, fig. 9, 1883.
Scaphiocrinus propinquus Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 2, p. 236 (160), 1886.
 Miss. (Chester ls.): Monroe Co., Ill. (Ste. Genevieve ls.): Pulaski Co., Ky. (Glen Dean ls.).
- Pachylocrinus ramulosus** (Hall).
Scaphiocrinus ramulosus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 307, 1861; Descr. N. Sp. Crin., p. 7, 1861.
 Miss. (Burlington ls.): Burlington, Iowa.
- Pachylocrinus randolphensis** (Worthen).
Poteriocrinites (Scaphiocrinus) randolphensis Worthen, in Meek and Worthen, Geol. Surv. Ill., 5, p. 551, pl. 21, fig. 14, 1873.
 Miss.: Chester, Ill. (Chester ls.); Pulaski Co., Ky. (Glen Dean ls.).
- Pachylocrinus raymondi* Laudon and Beane = *Eratocrinus raymondi*.
- Pachylocrinus repertus** (Miller and Gurley).
Scaphiocrinus repertus Miller and Gurley, 16th Rep. Geol. Surv. Ind., p. 362, pl. 8, figs. 1, 2, (authors' ed. p. 45), 1890.
 Miss. (Keokuk ls.): Bono, Ind.
- Pachylocrinus sampsoni** (S. A. Miller).
Scaphiocrinus sampsoni S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 656, pl. 9, fig. 12, 1892 (adv. Pub., 1891, p. 46).
Pachylocrinus sampsoni Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 107, pl. 31, fig. 19, 1938.
 Miss. (Chouteau ls.): Pettis Co., Mo.

Pachylocrinus scoparius (Hall).

Scaphiocrinus scoparius Hall, Geol. Rep. Iowa, 1, pt. 2, p. 680, pl. 25, figs. 3a, b, text fig. 108, 1858.

Pachylocrinus scoparius Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 67, pl. 16, fig. 2, 1926.

Miss. (Chester ls.): Chester, Ill.

Pachylocrinus spartarius Springer = *Blothrocrinus spartarius*.

Pachylocrinus spinobrachiatus (Worthen).

Poteriocrinus spinobrachiatus Worthen, Ill. St. Mus., Bull. 1, p. 20, 1882; Geol. Surv. Ill., 7, p. 290, pl. 29, fig. 1, 1883.

Scaphiocrinus spinobrachiatus Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 2, p. 236 (160), 1886.

Miss. (Ste. Genevieve ls.): Monroe Co., Ill.

Pachylocrinus subcarinatus (Hall).

Scaphiocrinus subcarinatus Hall, 17th Rep. Regents Univ. St. N. Y., p. 58, 1864.—Hall and Whitfield, Geol. Surv. Ohio, 2, pt. 2, Pal., p. 176, pl. 12, figs. 13, 14, 1875.

Miss. (Waverlyan-Cuyahoga sh.): Richfield, Summit Co., Ohio.

Pachylocrinus tielensis Wright.

Wright, Geol. Mag., 73, p. 399, text figs. 22-24, pl. 9, fig. 4, 1936; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 19, pl. 7, figs. 2-4, text fig. 11, 1939.

Low. Carb. (Low. Ls. gr.): Invertiel, Roscobie, etc., Scotland.

Pachylocrinus twenhofeli Moore.

Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 217, pl. 6, figs. 1-4, text figs. 7a, b, 1939.

Low. Permian (Barnestown fm.-Ft. Riley ls.): Near Walsburg, Riley Co., Kansas.

Pachylocrinus tyriensis Wright.

Wright, Geol. Mag., 74, p. 406, pl. 16, figs. 2, 5, 6, text figs. 11, 12, 1937; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 21, pl. 8, fig. 1, pl. 9, fig. 7, pl. 12, figs. 25, 27, text figs. 13, 14, 1939.

Low. Carb. (Low. Ls. gr.): Invertiel and Roscobie, Scotland.

Pachylocrinus uddeni Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 138, pl. 4, fig. 8, text fig. 20, 1940.

Penn. (Mineral Wells fm.-Keechi Creek sh.): 5½ miles north-northwest Mineral Wells, Palo Pinto Co., Texas.

Pachylocrinus varsoviensis (Worthen).

Poteriocrinus varsoviensis Worthen, Ill. St. Mus., Bull. 1, p. 19, 1882; Geol. Surv. Ill., 7, p. 290, pl. 28, fig. 15, 1883.

Scaphiocrinus varsoviensis Wachsmuth and Springer, Rev. Pal., pt. 3, p. 236 (160), 1886.

Miss. (Warsaw ls.): Warsaw, Ill.

Pachylocrinus venustus (Worthen).

Poteriocrinus venustus Worthen, Ill. St. Mus., Bull. 1, p. 24, 1882; Geol. Surv. Ill., 7, p. 297, pl. 29, fig. 13, 1883.

Scaphiocrinus venustus Wachsmuth and Springer, Rev. Pal., pt. 3, p. 236 (160), 1886.

Miss. (Chester): Monroe Co., Ill. (Renault fm.); Huntsville, Ala. (Gasper ls.); Pulaski Co., Ky. (Glen Dean ls.).

Pachylocrinus? washburni (Beede).

Scaphiocrinus? washburni Beede, Kansas Univ. Quart., 9, ser. A, p. 21, pl. 5, figs. 2, 2a, 1900.

Penn. (Osage coal zone): Topeka, Kansas.

- Pachyocrinus* Billings. Genotype: *P. crassibasalis* Billings.
 Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 4, p. 22, 1859.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 145 (368), 1879.—Scudder, Nomen. Zool. Suppl. List, p. 243, 1882 (as *Pachyocrinus*).—Bather, Treatise Zool. (Lankester), pt. 3, p. 203, 1900.
- Pachyocrinus crassibasalis* Billings.
 Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 4, p. 22, pl. 1, figs. 3a, b, 1859.
 (Base with no diagnostic features.)
 Ord. (Chazyan-Aylmer fm.): Montreal, Canada.
- Pageocrinus* Kirk. Genotype: *P. gracilis* Kirk.
 Botryocrinidae (Inadunata-Fistulata). Dev.
 Kirk, U. S. Nat. Mus., Proc., 75, art. 22, pp. 1-4, 1929.
- Pageocrinus gracilis* Kirk.
 Kirk, U. S. Nat. Mus., Proc. 75, art. 22, p. 1, pl. 1, figs. 1-7, 1929.
 Dev. (Onondaga-Jeffersonville ls.): Near St. Paul, Ind.
- Palaeochinus paradoxus* Eichwald = *Platyocrinus paradoxus*.
- Palaeocrinus* Billings. Genotype: *P. striatus* Billings.
 Palaeocrinidae (Inadunata-Fistulata). Ord.
 Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 4, p. 24, 1859.—Zittel, Handb. Pal., 1, p. 352, 1879.—Bather, Treatise Zool. (Lankester), pt. 3, p. 172, 1900.
- Palaeocrinus angulatus* (Billings).
Dendrocrinus angulatus Billings, Geol. Surv. Canada, Rep. Prog. 1853-1856, p. 269, 1857.
Palaeocrinus angulatus Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 4, p. 45, pl. 3, figs. 6a, b, 1859.
 Ord. (Trenton): Ottawa and Kirkfield, Ontario, (Hull ls.); Mercer Co., Ky. (Curds-ville ls.).
- Palaeocrinus chapmani* (Billings).
Palaeocystites chapmani Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 3, p. 71, 1858.
Palaeocrinus chapmani Hudson, N. Y. St. Mus., Bull. 149, p. 244, fig. 20, 1911.
 Ord. (Chazy ls.): Lot 26, Fort Concession of Clarence, Canada.
- Palaeocrinus pulchellus* Billings.
 Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 4, p. 46, 1859.
 Ord. (Trenton-Hull ls.): Ottawa, Ontario.
- Palaeocrinus rhombiferus* Billings.
 Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 4, p. 45, 1859.
 Ord. (Trenton): Ottawa, Ontario, (Hull ls.); Wykoff, Minn. (Prosser ls.).
- Palaeocrinus striatus* Billings.
 Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 4, p. 25, pl. 1, figs. 5a, b, 1859.
 Ord. (Chazyan-Aylmer fm.): Caughnawaga and Isle of Montreal, Canada.
- Palaeocrinus sulcatus* Safford.
 Safford, Geol. Tenn., p. 286, 1869 (nom. nud.).
 Ord. (Stones River-Pierce ls.): Central Basin, Tenn.
- Palaeoholopus* Wanner. Genotype: *P. pretiosus* Wanner.
 Lecanocrinidae (Flexibilia). Permian.
 Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, pp. 251, 279, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 80, 1924.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 95, 1926.—Wanner, Pal. Zeits., 11, p. 321, 1929.

Palaeoholopus pretiosus Wanner.

Wanner, Pal. Timor, XI. Perm. Echin. Timor, 1 Teil, p. 279, pl. 111 (16), fig. 11, 1916; Pal. Zeits., 11, pp. 319, 320, text fig. 1, pl. 8, figs. 4, 5, 1929; Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia, p. 48, text fig. 30, 1930.

Permian: Iknin near Baung, Timor.

Palermocrinus Jaekel. Genotype: *P. jaekeli* Gislen.

Jaekel, Pal. Zeits., Bd. 3, p. 67, 1918.—Gislen, Zool. Bidrag Uppsala, 9, p. 197, 1924.

Palermocrinus jaekeli Gislen.

Gislen, Zool. Bidrag Uppsala, 9, p. 197, figs. 270–273. 1924. Yakovlev, Palaeontographia Ital., 34, p. 281, pl. 20, figs. 5–14, 1934. (Stems only).

Permian: Palazzo Adriano, Sicily.

Pandoracrinus Jaekel. Genotype: *P. pinnulatus* Jaekel.

Dendrocrinidae (Inadunata-Fistulata). Ord.

Jaekel, Pal. Zeits., 3, pp. 56, 57, 1918.

Pandoracrinus pinnulatus Jaekel.

Jaekel, Pal. Zeits., 3, p. 56, fig. 48, 1918.

Ord. (Div. D1): Vosek, Bohemia.

Parabursacrinus Wanner. Genotype: *Bursacrinus procerus* Wanner.

Zeacrinitidae (Inadunata-Fistulata). Permian.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, pp. 180, 221, 1924.

Parabursacrinus compressus Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 226, text fig. 36, pl. 12, figs. 9–11, 1924.

Permian: Basleo, Timor.

Parabursacrinus conus Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 228, text fig. 37, pl. 12, figs. 7, 8, 1924.

Permian: Basleo, Timor.

Parabursacrinus magnificus (Wanner).

Bursacrinus magnificus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 177, pl. 106 (11), fig. 6, 1916.

Parabursacrinus magnificus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 232, 1924.

Permian: Basleo, Timor.

Parabursacrinus nefotassiensis Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 224, text fig. 35, pl. 12, figs. 5, 6, 1924.

Permian: Nefotassi, Timor.

Parabursacrinus procerus (Wanner).

Bursacrinus procerus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 181, text fig. 52, pl. 106 (11), fig. 7, 1916.

Parabursacrinus procerus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 223, text fig. 34, pl. 12, fig. 14, 1924.

Permian: Basleo, Timor.

Parabursacrinus pyramidatus (Wanner).

Bursacrinus pyramidatus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 184, pl. 106 (11), fig. 8, 1916.

Parabursacrinus pyramidatus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 230, 1924.—Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 333, pl. 4, fig. 3, 1940.

Permian: Basleo, Timor.

Parabursacrinus pyramidatus granulatus Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 230, text fig. 38, pl. 12, figs. 12-13, 1924.

Permian: Basleo, Timor.

Paracatillocrinus Wanner. Genotype: *P. granulatus* Wanner.

Catillocrinidae (Inadunata-Fistulata). Permian.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 6, 1916.—Springer, Smiths. Misc. Coll., 76, no. 3, p. 28, 1923.—Wanner, Neue Beitr. kennt. Perm. Echin. Timor, III, p. 14, 1930.—Moore, Denison Univ. Bull., 40, Jour. Sci. Lab., 35, p. 86, 1940.

Paracatillocrinus ellipticus Wanner = *P. granulatus*.

Paracatillocrinus granulatus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 10, text fig. 1, pl. 96 (1), figs. 1, 2, 1916.—Springer, Smiths. Misc. Coll., 76, no. 3, p. 29, pl. 5, fig. 22, 1923.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 125, pl. 20, figs. 1, 2, 1924; Neue Beitr. kennt. Perm. Echin. Timor, III, p. 15, 21, text fig. 9, pl. 2, figs. 3-9, 1930; *ibid.* X, p. 112, text fig. 29, 1937.

Paracatillocrinus ellipticus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 14, pl. 96 (1), fig. 4, 1916.—Springer, Smiths. Misc. Coll., 76, no. 3, p. 29, pl. 5, figs. 23, 24, 1923.

Permian: Basleo, Timor.

Paracatillocrinus spinosus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 12, pl. 96 (1), fig. 3, text fig. 2, 1916.—Springer, Smiths. Misc. Coll., 76, no. 3, p. 29, 1923.

Permian: Dorf Apna, Timor.

Paractocrinus Jaekel. Genotype: *P. tuberculatus* Jaekel.

Jaekel, Pal. Zeits., 3, pp. 22, 25, 1918.

Paractocrinus laevis Jaekel.

Jaekel, Pal. Zeits., 3, p. 22, fig. 16, 1918.

Ord.: Near Petrograd, Russia.

Paractocrinus tuberculatus Jaekel.

Jaekel, Pal. Zeits., 3, p. 22, fig. 15, 1918. (Possibly abnormal growth.)

Ord.: Near Petrograd, Russia.

Paradelocrinus Moore and Plummer. Genotype: *P. aequabilis* Moore and Plummer.

Poteroocrinitidae (Inadunata-Fistulata). Penn.

Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 294, 1938.

Paradelocrinus aequabilis Moore and Plummer.

Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 295, pl. 114, fig. 4 a-e, text fig. 35, 1938.

Penn. (Brentwood ls.): U. S. Highway 71, opposite Woolsey, Ark.; Ft. Gibson, Okla.

Paradelocrinus brachiatus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 318, pl. 15, fig. 6, pl. 16, fig. 1, pl. 17, fig. 3, text fig. 64, 1940.

Penn. (Millsap Lake fm.): $\frac{1}{2}$ mile below falls on Kickapoo Creek, southwest of Dennis, Hood Co., Texas.

Paradelocrinus dubius (Mather).

Delocrinus dubius Mather, Bull. Sci. Lab. Denison Univ., 18, p. 105, pl. 3, figs. 7-7b, text fig. 2. (?Crinoid plates, p. 109, pl. 2, figs. 4, 4a), 1915.

Paradelocrinus dubius Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 297, pl. 13, figs. 2 a-c, text fig. 36, 1938.

Penn.: Near Fayetteville, Ark. (Brentwood ls.) near Ft. Gibson, Okla. (Morrow fm.).

Paradelocrinus inflexus (Geinitz).

Cyathocrinus inflexus Geinitz, Carb. und Dyas in Nebraska, p. 62, pl. 4, figs. 20-24, 1866.

Erisocrinus (*Ceriocrinus*) *inflexus* White, Extr. 12th Ann. Rep. U. S. Geol. Surv. Terr., p. 128, pl. 34, figs. 9a, b, 1880 (Final Rep. 1883).

Delocrinus inflexus Miller and Gurley, Jour. Cincinnati Soc. Nat. Hist., 13, p. 335, 1890.

Paradelocrinus inflexus Moore and Plummer, Univ. Texas Pub. No. 3945, p. 152, 1940.

Penn.: Nebraska City, Neb.; Mills Co., Iowa.

Paradelocrinus obovatus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 326, pl. 15, fig. 9, pl. 20, fig. 4, text fig. 66, 1940.

Penn. (Graford fm.): Northwest side Kyle Mtn., Palo Pinto Co., Texas.

Paradelocrinus planus (White).

Erisocrinus planus White, U. S. Nat. Mus., Proc., 2, p. 257, figs. 6, 7, 1880 (adv. pub. 1879); 12th Rep. U. S. Geol. Surv. Terr., p. 127, pl. 35, figs. 5 a-c, 1880 (Final Rep. 1883).

Ceriocrinus planus Wachsmuth and Springer, Rev. Pal., pt. 3, p. 254 (178), 1886.

Paradelocrinus planus Moore and Plummer, Univ. Texas Pub. No. 3945, p. 152 (as *Delocrinus*), p. 255, 1940.

Erisocrinus whitei Wachsmuth and Springer, Rev. Pal., pt. 3, p. 255, 1886.

Erisocrinus cognatus Wachsmuth and Springer, Rev. Pal., pt. 3, p. 255, 1886.

Penn.: West Humboldt, Kansas.

Paradelocrinus protensus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 324, pl. 16, fig. 6, text fig. 66, 1940.

Penn. (Graford fm.): 5 miles west-northwest Lone Camp, Palo Pinto Co., Texas.

Paradelocrinus ? sinus Moore and Plummer.

Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 302, pl. 16, figs. 7 a-l, 1938.

Penn. (Brentwood ls.): Near Ft. Gibson, Okla, and near Fayetteville and Brentwood, Ark.

Paradelocrinus subplanus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 321, pl. 16, figs. 4, 5, text fig. 65, 1940.

Penn.: 4½ miles east-northeast Lipan, Hood Co., Tex. (Millsap Lake fm.); 3 miles southwest Brock, Parker Co., Tex. (Brannon Bridge ls.); Llano River, 1 mile west Camp Walton, Kimble Co., Tex. (Mineral Wells sh.); ¼ miles east of Mercury, McCulloch Co., Tex. (Graford fm.); 7 miles northeast of Tulsa, Okla. (Oologah ls.).

Paradelocrinus toddanus (Butts).

Erisocrinus toddanus Butts, Trans. Acad. Sci. Kansas, 1, p. 14, and plate, 1898.

Paradelocrinus toddanus Moore and Plummer, Univ. Texas Pub. No. 3945, p. 152, 1940.

Penn.: (Missouri ser.-Lane sh.): Kansas City, Mo.

Paradichocrinus Springer. Genotype: *Dichocrinus polydactylus* Casseday and Lyon. Hexacrinitidae (Adunata). Miss.

Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 51, 1926.

Paradichocrinus planus Springer.

Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 51, pl. 10, figs. 2-4, 1926.

Miss. (Keokuk ls.): Indian Creek, Ind.

Paradichocrinus polydactylus (Casseday and Lyon).

Dichocrinus polydactylus Casseday and Lyon, Proc. Amer. Acad. Arts and Sci., 5, p. 18, 1862.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 756, pl. 77, figs. 1a, b, 1897.

Paradichocrinus polydactylus Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 51, pl. 10, figs. 5, 6, 1926.

Miss. (Keokuk ls.): Crawfordsville, Ind.

Paradoxocrinus Wanner. Genotype: *P. patella* Wanner.

Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 205, 1937.

Paradoxocrinus patella Wanner.

Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 205, text figs. 71-80, pl. 13, figs. 33, 34, 1937.—Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 301, pl. 1, fig. 4, pl. 2, figs. 1, 2, text figs. 3, 4, 1940. (Uncertain crinoid).

Permian: Basleo and Tae Lina, Timor.

Paragaricocrinus Yakovlev. Genotype: *P. mediterraneus* Yakovlev.

Batocrinidae (Camerata). Permian.

Yakovlev, Palaeontographia Ital., 34, pp. 271-274, 1934.

Paragaricocrinus mediterraneus Yakovlev.

Yakovlev, Palaeontographia Ital., 34, p. 272, text figs. 1, 2, pl. 19, figs. 1-6, 1934.

Permian: Sicily.

Paragassizocrinus Moore and Plummer. Genotype: *Agassizocrinus tarri* Strimple.

Poteriocrinitidae (Inadunata-Fistulata). Penn.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 340, 1940.

Paragassizocrinus ? carbonarius (Worthen).

Agassizocrinus carbonarius Worthen, in Meek and Worthen, Geol. Surv. Ill., 5, p. 566, pl. 24, fig. 4, 1873.

Paragassizocrinus ? carbonarius Moore and Plummer, Univ. Texas Pub. No. 3945, p. 342, 1940.

Penn.: Shelby, Ill.

Paragassizocrinus ? coffeyvillensis (Moore).

Henanobasis coffeyvillensis Moore, Denison Univ. Bull., Jour. Sci. Lab., 33, p. 206, pl. 2, figs. 3 a-c, pl. 3, fig. 11, 1939.

Paragassizocrinus coffeyvillensis Moore and Plummer, Univ. Texas Pub. No. 3945, p. 343 (footnote), 1940.

Penn. (Ochelata—near base of Coffeyville sh.): Coffeyville, Kansas.

Paragassizocrinus ? mcguirei (Strimple).

Agassizocrinus mcguirei Strimple, Bull. Amer. Pal., 24, no. 87, p. 18 (378), pl. 2, figs. 9, 10, 1939.

Paragassizocrinus mcguirei Moore and Plummer, Univ. Texas Pub. No. 3945, p. 343 (footnote), 1940.

Penn. (Nellie Bly fm.): North of Ramona, Okla.

Paragassizocrinus tarri (Strimple).

Agassizocrinus tarri Strimple, A Group of Crinoids from the Penn. of Northeastern Okla., p. 10, pl. 2, figs. 7, 10, 13, 1939.

Petschoracrinus tarri Yakovlev, Compt. Rend. (Doklady) Acad. Sci., URSS, 24, no. 8, p. 832, 1939.

Paragassizocrinus tarri Moore and Plummer, Univ. Texas Pub. No. 3945, p. 345, pl. 1, fig. 6, pl. 16, fig. 9, text fig. 68, 1940.

Penn.: Washington Co., Okla. (Ochelata sh.); 2.5 miles east of Wayside, Kansas (Stanton ls.—Eudora sh.).

Paragazacrinus Springer. Genotype: *P. rotundus* Springer.

Rhodocrinitidae (Camerata). Sil.

Springer, Amer. Sil. Crin., p. 22, 1926.

Paragazacrinus rotundus Springer.

Springer, Amer. Sil. Crin., p. 22, pl. 4, figs. 1-4, 1926.

Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Paragraphiocrinus Wanner. Genotype: *Graphiocrinus exornatus* Wanner.

Poteroicrinittidae (Inadunata-Fistulata). Permian.

Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 173, 1937.

Paragraphiocrinus exornatus (Wanner).

Graphiocrinus exornatus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 172, pl. 104 (9), figs. 15-17, 1916; Perm. Irin. Timor, 2e Nederl. Timor Exped. 1916, p. 236, text fig. 41, pl. 15, figs. 14-19, 1924.

Paragraphiocrinus exornatus Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 174, pl. 11, fig. 10, 1937.

Permian: Between Niki Niki and Noil Fatoe, and Basleo, Timor.

Paraplasocrinus Moore and Plummer. Genotype: *Cibolocrinus transitorius* Wanner.

Poteroicrinittidae (Inadunata-Fistulata). Permian.

Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 306, 1938.

Paraplasocrinus transitorius (Wanner).

Cibolocrinus transitorius Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 208, text figs. 54-56, pl. 103 (8), figs. 11, 12, pl. 107 (12), figs. 11, 14, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 254, text figs. 44-50, pl. 17, figs. 19, 20, pl. 18, figs. 1, 2, 1924.—Yakovlev, Centralbl. Min., Geol. Pal., Abt. B, no. 9, p. 377, fig. 3, 1930.

Paraplasocrinus transitorius Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 306, 1938.

Lopadiocrinus mammillaris Wanner, Pal. Timor, Perm. Echin. Timor, 1 Teil, p. 232, pl. 107 (12), fig. 15, 1916.

Permian: Basleo, Timor.

Parastephanocrinus Springer. Genotype: *P. typus* Springer.

Springer, Amer. Sil. Crin., p. 130, 1926.

Parastephanocrinus typus Springer.

Springer, Amer. Sil. Crin., p. 139, pl. 31, figs. 12-12c, (as *P. intermedius*) 1926.
(Possibly young *Gazacrinus*.)

Sil. (Niagaran-Lobelville ls.): 1¼ miles east of Bob, Decatur Co., Tenn.

Parasyocrinus Marez Oyens. Genotype: *P. fastigate-plicatus* Marez Oyens.

Hypocrinidae (Inadunata-Fistulata). Permian.

Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 321, 1940.

Parasyocrinus fastigate-plicatus Marez Oyens.

Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 322, pl. 3, fig. 9, text fig. 6, 1940.

Permian: Tae Wei, Timor.

Parichthyocrinus Springer. Genotype: *Ichthyocrinus nobilis* Wachsmuth and Springer.

Taxocrinidae (Flexibilia). Miss.

Springer, Amer. Geol., 30, pp. 94, 96, 1902; Jour. Geol., 14, p. 519, 1906; Zittel-Eastman Textb. Pal., 1, p. 206, 1913; Crin. Flexibilia, pp. 342, 410, 1920.

Parichthyocrinus crawfordsvillensis (Miller and Gurley).

Taxocrinus crawfordsvillensis Miller and Gurley, Ill. St. Mus., Bull. 3, p. 49, pl. 4, fig. 3, 1894.

Parichthyocrinus crawfordsvillensis Springer, Crin. Flexibilia, pp. 411, 415, pl. 63, figs. 5, 6, 1920.

Miss. (Keokuk ls.): Crawfordsville, Ind.

Parichthyocrinus meeki (Hall).

Forbesiocrinus meeki Hall, Geol. Rep. Iowa, 1, pt. 2, p. 631, pl. 17, fig. 3, 1858.

Parichthyocrinus meeki Springer, Crin. Flexibilia, pp. 411, 414, pl. 62, figs. 1-3, 1920.

Miss. (Keokuk ls.): Warsaw and Nauvoo, Ill.; Crawfordsville, Ind.

Parichthyocrinus nobilis (Wachsmuth and Springer).

Ichthyocrinus nobilis Wachsmuth and Springer, Proc. Acad. Nat. Sci. Phila., p. 254, pl. 2, fig. 7, 1878.

Parichthyocrinus nobilis Springer, Amer. Geol., 30, p. 96, 1902; Jour. Geol., 14, p. 522, pl. 6, fig. 17, 1906; Crin. Flexibilia, pp. 411, 412, pl. 61, figs. 1-16, 1920.

Miss.: Burlington, Iowa (Up. Burlington ls.); Nashville, Lee Co., Iowa (Keokuk transition beds).

Parichthyocrinus subovatus (Miller and Gurley).

Taxocrinus subovatus Miller and Gurley, 16th Rep. Geol. Surv. Ind., p. 347, pl. 5, fig. 3 (authors' ed. p. 26), 1890.

Parichthyocrinus subovatus Springer, Crin. Flexibilia, pp. 411, 415, pl. 21, fig. 6, pl. 62, figs. 4-17, pl. 63, figs. 1-4, 1920.

Miss. (Keokuk ls.): Near Canton, and Indian Creek, Indiana.

Parindocrinus Wanner. Genotype: *P. oyensi* Wanner.

Poteriocrinidae (Inadunata-Fistulata). Permian.

Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 165, 1937.

Parindocrinus oyensi Wanner.

Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 167, text fig. 60, pl. 10, figs. 35-38, pl. 11, figs. 1-6, 1937.

Permian: Basleo, Timor.

Parisangulocrinus Schmidt. Genotype: *Poteriocrinus zaeiformis* Schultze.

Carabocrinidae (Inadunata-Fistulata). Dev.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 59, 1934.

Parisangulocrinus furcaxialis Schmidt.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 64, text fig. 11, pl. 6, fig. 3, pp. 142, 145, 147, 1934.

Low. Dev. (Hunsrück sl.): Bundenbach, Germany.

Parisangulocrinus minax Schmidt.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 65, text fig. 12, pl. 12, fig. 1, pl. 28, pp. 142, 145, 147, 1934.

Low. Dev. (Hunsrück sl.): Bundenbach, Germany.

Parisangulocrinus zaeiformis (Schultze).

Poteriocrinus zaeiformis Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., Bd. 26, p. 155, 1867 (adv. pub. 1866, p. 43).—Follmann, Ver. Nat. Hist. Verpreuss. Rheinl., 4, p. 122, pl. 1, figs. 6a, b, 1887.

Parisocrinus zaeiformis Jaekel, Pal. Abhandl., 7, p. 64, pl. 4, figs. 2, 3, 1895.

Parisangulocrinus zaeiformis Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, pp. 60, 61, text figs. 10 a-c, pl. 4, fig. 3, pp. 142, 145, 147, pl. 20, fig. 3, 1934.

Low. Dev. (Hunsrück sl.): Near Caub, and Bundenbach, Germany.

Parisocrinus Wachsmuth and Springer. Genotype: *Poteriocrinites perplexus* Meek and Worthen.

Cyathocrinidae (Inadunata-Fistulata). Sil.—Low. Carb.

Wachsmuth and Springer, Rev. Pal., pt. 1, p. 115 (338), 1880 (1879); pt. 3, p. 221 (145), 1886.—Bather, Ann. Mag. Nat. Hist., (6) 5, p. 332, 1890; Geol. Mag., (4) 6, p. 35, 1899; Treatise Zool. (Lankester), pt. 3, pp. 120, 173, 1900.—Jaekel, Pal. Abhandl., 7, p. 64, 1895.—Springer, Zittel-Eastman Textb. Pal., 1, pp. 218, 222, 1913.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 144, 1934.

Parisocrinus? crawfordsvillensis (S. A. Miller).

Cyathocrinus crawfordsvillensis S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 5, p. 79, pl. 3, fig. 1, 1882.

Parisocrinus? crawfordsvillensis Wachsmuth and Springer, Rev. Pal., pt. 3, p. 312, 1886.

Miss. (Keokuk ls.): Crawfordsville, Ind.

Parisocrinus curtus (Müller).

Poteriocrinus curtus Müller, in Zeiler and Wirtgen, Verh. Nat. Hist. Preuss. Rhein., 12, p. 80, pl. 10, figs. 2, 5, 1855; Abhandl. Akad. Wiss., Berlin, p. 250, pl. 2, fig. 3, 1857—Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 158, pl. 5, fig. 5, 1867 (adv. pub. 1866, p. 48).

Parisocrinus curtus Wachsmuth and Springer, Rev. Pal., pt. 1, p. 115 (338), 1880 (1879).—Bather, Königl. Sv. Vet. Akad. Handl., 25, p. 103, 1893.—Springer, Zittel-Eastman Textb. Pal., 1, p. 218, fig. 315, 1913.

Dev. (Eifelian): Pelm and Prüm, Germany.

Parisocrinus intermedius (Hall).

Cyathocrinus intermedius Hall, Geol. Rep. Iowa, 1, pt. 2, p. 627, pl. 18, fig. 10, 1858.

Parisocrinus intermedius Wachsmuth and Springer, Rev. Pal., pt. 1, p. 115 (338), 1880 (1879); pt. 3, p. 221 (145), 1886.

Miss. (Keokuk ls.): Warsaw, Ill., and Keokuk, Iowa.

Parisocrinus perplexus (Meek and Worthen).

Poteriocrinites? perplexus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 138, 1869; Geol. Surv. Ill., vol. 5, p. 405, pl. 2, fig. 12, 1873.

Parisocrinus perplexus Wachsmuth and Springer, Rev. Pal., pt. 1, p. 115 (338), 1880 (1879); pt. 3, p. 221 (145), 1886.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Parisocrinus? pocilliformis Goldring.

Goldring, in Cooper and Williams, Bull. Geol. Soc. Amer., 46, p. 836, pl. 58, figs. 6, 7, 1935.

Dev. (Tully-West Brook mem.): 3 miles south of Sherburne, N. Y.

Parisocrinus quinquangularis (Miller).

Cyathocrinites quinquangularis Miller, Nat. Hist. Crin., p. 92, pl. opposite, 1821.—Phillips, Geol. Yorkshire, 2, p. 206, pl. 3, figs. 30–32, 1836.

Parisocrinus quinquangularis Wachsmuth and Springer, Rev. Pal., pt. 1, p. 115 (338), 1880 (1879); pt. 3, p. 221 (145), 1886.

Low. Carb. (Mtn. ls.): Clevedon, Black Rock, near Avon River, and Bolland, England.

Parisocrinus radiatus (Austin and Austin).

Poteriocrinites radiatus Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 108, 1842; vol. 11, p. 196, 1843.

Poteriocrinus radiatus Austin and Austin, Mon. Rec. Foss. Crin., p. 79, pl. 10, figs. 1a, b, 1846.—De Koninck and Lehon, Rec. Crin. Terr. Carb. Belg., p. 101, pl. 1, figs. 12a, b, 1854.

Parisocrinus radiatus Wachsmuth and Springer, Rev. Pal., pt. 1, p. 115 (338), 1880 (1879); pt. 3, p. 221 (145), 1886.—Bather, Ann. Mag. Nat. Hist., (6) 5, p. 388, pl. 15, fig. 8, 1890.

Low. Carb.: Co. Wexford, Ireland; Yorkshire, England (Mtn. ls.); Tournai, Belgium (Tournaisian).

Parisocrinus salignoideus (White).

Poteriocrinus salignoideus White, Proc. Boston Soc. Nat. Hist., 9, p. 10, 1865 (adv. pub. 1862).

Parisocrinus salignoideus Wachsmuth and Springer, Rev. Pal., pt. 1, p. 115 (338), 1880 (1879); pt. 3, p. 221 (145), 1886.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Parisocrinus siluricus Springer.

Springer, Amer. Sil. Crin., p. 136, pl. 31, figs. 8, 8a, 1926.

Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Parisocrinus stellaris Jaekel = *Vasocrinus stellaris*.

Parisocrinus subramosus (Miller and Gurley).

Poteriocrinus subramosus Miller and Gurley, 16th Rep. Geol. Surv. Ind., p. 365, pl. 10, fig. 1, 1890 (authors' ed., p. 49).

Parisocrinus subramosus Springer, Amer. Geol., 26, p. 145, pl. 16, figs. 1-4, 1900; Mem. Mus. Comp. Zool., 25, p. 157, pl. 4, fig. 18, 1911.

Miss. (Keokuk ls.): Crawfordsville and Indian Creek, Indiana.

Parisocrinus tenuibrachiatus (Meek and Worthen).

Poteriocrinus tenuibrachiatus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 138, 1861; Geol. Surv. Ill., 3, p. 484, pl. 16, fig. 1, text fig., 1868.

Parisocrinus tenuibrachiatus Wachsmuth and Springer, Rev. Pal., pt. 1, p. 115 (338), 1880 (1879).

Miss. (Up. Burlington ls.): Burlington, Iowa.

Parisocrinus zaeiformis Jaekel = *Parisangulocrinus zaeiformis*.

Parorthocrinus Jaekel. Genotype: *P. liber* Jaekel.

Jaekel, Pal. Zeits., 3, p. 25, 1918.

Parorthocrinus liber Jaekel.

Jaekel, Pal. Zeits., 3, p. 26, fig. 18, 1918. (Possibly abnormal.)

Ord.: St. Petersburg, Russia.

Parulocrinus Moore and Plummer. Genotype: *Ulocrinus blairi* Miller and Gurley. Poteriocrinitidae (Inadunata-Fistulata). Penn.

Moore and Plummer, Univ. Texas Pub. No. 3945, pp. 351, 360, 1940.

Parulocrinus beedei Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 367, pl. 14, fig. 9, text fig. 72, 1940.

Penn. (Palo Pinto ls.): 3.5 miles west of Strawn, Palo Pinto Co., Texas.

Parulocrinus blairi (Miller and Gurley).

Ulocrinus blairi Miller and Gurley, Ill. St. Mus., Bull. 3, p. 57, pl. 5, figs. 16-18, 1894.

"*Ulocrinus*" *blairi* Bather, Treatise Zool. (Lankester), pt. 3, p. 121, text fig. 29-1, 1900.

Parulocrinus blairi Moore and Plummer, Univ. Texas Pub. No. 3945, p. 361, 1940.

Penn. (Missouri ser.—Argentine ls.): Weston, southwest of Sedalia, Mo.

Parulocrinus compactus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 369, pl. 18, figs. 5, 6, text fig. 73, 1940.

Penn.: 1.3 miles east of Pickwick, Palo Pinto Co., Tex. (Brad fm.); Cedar Bluff and 6 miles north of Coffeyville, Kansas (Winterset ls.); Iola, Kansas (Iola ls.).

Parulocrinus marquisi Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 374, pl. 17, fig. 4, text fig. 75, 1940.

Penn. (Probably Canyon gr.): Llano River, above Mason, Mason Co., Texas.

Parulocrinus plattsburgensis (Strimple).

Ethelocrinus plattsburgensis Strimple, A Group of Crinoids from the Penn. of Northeastern Okla., p. 11, pl. 2, figs. 6, 9, 12; 1933.

Parulocrinus plattsburgensis Moore and Plummer, Univ. Texas Pub., No. 3945, p. 379, 1940.

Penn. (Plattsburg-Lansing fm.): Bartlesville, Okla.

Parulocrinus pustulosus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 372, pl. 18, fig. 7, text fig. 74, 1940.

Penn. (Mineral Wells fm.): Brownwood, Brown Co., Texas.

Parulocrinus verrucosus (White and St. John).

Hydreionocrinus? verrucosus White and St. John, Trans. Chicago Acad. Sci., 1, p. 117, text fig. 1, 1868.

Eupachyrcinus verrucosus Keyes, Geol. Surv. Mo., 4, p. 217, pl. 27, fig. 2, 1894.—Girty, U. S. Geol. Surv., Bull. 544, p. 32, pl. 3, fig. 12, 1915.

Parulocrinus verrucosus Moore and Plummer, Univ. Texas Pub. No. 3945, pp. 356, 363, 1940.

Penn. (Virgil ser.): Western Iowa; Mills Co., Iowa (?), Kansas City, Mo. (?), Plattsmouth, Neb.

Passalocrinus Peck. Genotype: *P. triangularis* Peck.

Peck, Jour. Pal., 10, p. 292, 1936.

Passalocrinus triangularis Peck.

Peck, Jour. Pal., 10, p. 292, pl. 47, figs. 1-9, 1936. (Possibly young inadunate.)

Miss. (Fern Glen ls.): $\frac{1}{2}$ mile south of Kimmswick, and at Brickeye, Ste. Genevieve Co., Mo.

Patelloocrinus Angelin. Genotype: *P. pachydactylus* Angelin.

Patelloocrinidae (Camerata). Sil.

Angelin, Icon. Crin. Suec., p. 1, 1878.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 100 (274), 1881.—Bather, Treatise Zool. (Lankester), pt. 3, p. 162, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 191, 1913; Amer. Sil. Crin., p. 31, 1926.

Patelloocrinus chiasmactylus Angelin.

Angelin, Icon. Crin. Suec., p. 1, pl. 19, fig. 12, 1878.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Patelloocrinus duplicatus Angelin.

Angelin, Icon. Crin. Suec., p. 1, pl. 19, fig. 5, 1878.

Sil.: Island of Gotland (Gotlandian); Dudley, England (Wenlock ls.).

Patelloocrinus fulminatus Angelin.

Angelin, Icon. Crin. Suec., p. 2, pl. 26, figs. 14, 14a, b, 1878.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Patelloocrinus? indianensis Springer = *Macrostylocrinus indianensis*.**Patelloocrinus interradiatus** Angelin.

Angelin, Icon. Crin. Suec., p. 2, pl. 23, fig. 10, 1878.

Sil. (Gotlandian): Island of Gotland.

Patelloocrinus laevis Springer.

Springer, Amer. Sil. Crin., p. 32, pl. 6, figs. 19, 20, 1926.

Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Patelloocrinus leptodactylus Angelin.

Angelin, Icon. Crin. Suec., p. 2, pl. 16, figs. 26, 31, 1878.

Sil. (Gotlandian): Island of Gotland.

Patelloocrinus ornatus Springer.

Springer, Amer. Sil. Crin., p. 31, pl. 6, figs. 13-15a, 1926.

Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Patelloocrinus pachydactylus Angelin.

Angelin, Icon. Crin. Suec., p. 1, pl. 16, figs. 24, 25, 1878.—Bather, Treatise Zool. (Lankester), pt. 3, p. 162, text fig. 75-3, 1900.

Sil. (Gotlandian): Follingbo, Island of Gotland.

- Patelliocrinus pinnulatus** Angelin.
 Angelin, Icon. Crin. Suec., p. 2, pl. 24, fig. 5, pl. 26, fig. 18, 1878.
 Sil. (Gotlandian): Slite, Island of Gotland.
- Patelliocrinus plumulosus** Angelin.
 Angelin, Icon. Crin. Suec., p. 2, pl. 22, figs. 8, 9, 1878.
 Sil. (Gotlandian): Follingbo, Island of Gotland.
- Patelliocrinus punctuosus** Angelin.
 Angelin, Icon. Crin. Suec., p. 2, pl. 23, fig. 26, 1878.
 Sil. (Gotlandian): Island of Gotland.
- Patelliocrinus rugosus** Springer.
 Springer, Amer. Sil. Crin., p. 32, pl. 6, figs. 16-18, 1926.
 Sil. (Niagaran-Laurel ls.): St. Paul, Ind.
- Patinocrinus** Jaekel = **Stelidiocrinus**.
- Paulocrinus** Springer. Genotype: *P. biturbinatus* Springer.
 Rhodocrinitidae (Camerata). Sil.
 Springer, Amer. Sil. Crin., p. 22, 1926.
- Paulocrinus biturbinatus** Springer.
 Springer, Amer. Sil. Crin., p. 22, pl. 4, figs. 5, 5 a-c, 1926.
 Sil. (Niagaran-Laurel ls.): St. Paul, Ind.
- Pegmacrinus** de Loriol.
 De Loriol, Arch. Mus. Lyon, 6, p. 2, 1895. (Probably not an echinoderm.)
- Pegocrinus** Kirk. Genotype: *Poteriocrinus bijugis* Trautschold.
 Poteriocrinitidae (Inadunata-Fistulata). Carb.
 Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 331, 1940.
- Pegocrinus bijugis** (Trautschold).
Poteriocrinus bijugis Trautschold, Bull. Soc. Imp. Nat. Moscou, p. 14, pl. 4, figs. 1-3, 1867; Kalkbr. Mjatschkowa, p. 114, pl. 14, fig. 3, 1879.—Jaekel, Pal. Zeits., 3, p. 64, fig. 54-a, 1918.—Yakovlev, Centralbl. Min., Geol. Pal., Abt. B, no. 9, p. 377, fig. 1, 1930.
Pegocrinus bijugis Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 331, 1940.
 Carb. (Moscovian): Mjatschkowa, near Moscow, Russia.
- Pelecocrinus** Kirk. Genotype: *P. insignis* Kirk.
 Pelecocrinidae (Inadunata-Fistulata). Miss.
 Kirk, Jour. Pal., 15, no. 1, p. 82, 1941.—Laudon, id., 15, no. 4, p. 384, 1941.
- Pelecocrinus aqualis** (Hall).
Poteriocrinus aqualis Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 63, text fig., 1860.
Pachylocrinus aqualis Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 71, pl. 16, fig. 10, 1926.
Pelecocrinus aqualis Kirk, Jour. Pal., 15, no. 1, p. 83, 1941.
 Miss. (Burlington ls.): Burlington, Iowa.
- Pelecocrinus fiscellus** (Meek and Worthen).
Poteriocrinites (*Graphiocrinus*; *Scaphiocrinus*) *fiscellus* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 146, 1869.
Poteriocrinites (*Scaphiocrinus*) *fiscellus* Meek and Worthen, Geol. Surv. Ill., 5, p. 424, pl. 1, fig. 5, 1873.
Poteriocrinus (*Decadocrinus*) *fiscellus* Wachsmuth and Springer, Rev. Pal., pt. 1, p. 119 (342), 1880 (1879).
Pelecocrinus fiscellus Kirk, Jour. Pal., 15, no. 1, p. 84, 1941.
 Miss. (Low. Burlington ls.): Burlington, Iowa.

Pelecocrinus insignis Kirk.

Kirk, Jour. Pal., 15, no. 1, p. 83, pl. 18, figs. 1-3, 5, 1941.

Miss. (Burlington-Keokuk transition bed.): Burlington, Iowa.

Pelecocrinus lepidus (Hall).

Poteriocrinus lepidus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 304, 1861.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 120, 1880 (1879).

Pelecocrinus lepidus Kirk, Jour. Pal., 15, no. 1, p. 84, 1941.

Miss. (Burlington ls.): Burlington, Iowa.

Pelecocrinus parviglyptus (Laudon and Beane).

Abrotocrinus parviglyptus Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 257, pl. 17, figs. 14, 15, pl. 18, fig. 5, 1937.

Pelecocrinus parviglyptus Kirk, Jour. Pal., 15, no. 1, p. 84, 1941.

Miss. (Kinderhook-Hampton fm.): Legrand, Iowa.

Pelecocrinus solidus (Meek and Worthen).

Poteriocrinus (Scaphiocrinus) solidus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 140, 1861.

Pelecocrinus solidus Kirk, Jour. Pal., 15, no. 1, p. 84, 1941.

Poteriocrinus (Scaphiocrinus) aequalis Wachsmuth and Springer, Rev. Pal., pt. 1, p. 112 (335), 1880 (1879).

Miss. (Low. Burlington ls.): Burlington, Iowa.

Pelecocrinus stereosoma Laudon.

Laudon, Jour. Pal., 15, no. 4, p. 385, pl. 56, figs. 1, 2, 1941.

Miss. (Chester-Pitkin ls.): $\frac{1}{2}$ m. southeast of Hulbert, Okla.

Pelecocrinus tenuidactylus (Meek and Worthen).

Poteriocrinus (Scaphiocrinus) tenuidactylus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 156, 1865; Geol. Surv. Ill., 3, p. 490, pl. 18, fig. 10, text fig. 1868.

Pelecocrinus tenuidactylus Kirk, Jour. Pal., 15, no. 1, p. 84, 1941.

Poteriocrinus (Scaphiocrinus) aequalis Wachsmuth and Springer (part), Rev. Pal., pt. 1, p. 112 (335), 1880 (1879).

Miss. (Burlington ls.): Burlington, Iowa.

Pellecrinus Kirk. Genotype: *Cyathocrinus hexadactylus* Lyon and Casseday.

Botryocrinidae (Inadunata-Fistulata). Miss.

Kirk, U. S. Nat. Mus., Proc., 74, art. 15, p. 15, 1929.

Vasocrinus Wachsmuth and Springer (not Lyon), Rev. Pal., pt. 1, pp. 62, 94 (285, 317), 1880 (1879).—Bather, Treatise Zool. (Lankester), pt. 3, p. 179, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 219, 1913.

Pellecrinus hexadactylus (Lyon and Casseday).

Cyathocrinus hexadactylus Lyon and Casseday, Amer. Jour. Sci. and Arts, (2) 29, p. 74, 1860.

Pellecrinus hexadactylus Kirk, U. S. Nat. Mus., Proc., 74, art. 15, p. 15, 1926.

Cyathocrinus lyoni Hall, Jour. Boston Soc. Nat. Hist., 7, p. 298, 1861; Prelim. Not. N. Sp. Crin., p. 5, 1861; N. Y. St. Mus. Nat. Hist., Bull. 1, pl. 5, figs. 12, 13, 1872.

Miss.: Clear Creek, Hardin Co., Ky. (Ft. Payne ch.); Crawfordsville, Ind. (Keokuk ls.).

Pendulocrinus Salter. = Calceocrinus.

Pentadelocrinus Strimple = Aesiocrinus.

Pentadia Dana. Genotype *P. spatangus* Dana.

Dana, Amer. Jour. Sci. and Arts, (2) 4, p. 152, 1847; Wilkes Expl. Exped., 10, p. 712, 1849.—Etheridge, Mem. Geol. Surv. N. S. W., p. 98, 1892 (= *Phialocrinus*).

The genotype *P. spatangus* Dana is not recognizable. Other species are: *P. corona*, *P. reniformis*, *P. trigona*, all from the Permian at Illawarra, New South Wales.

Pentagonites Rafinesque.

Rafinesque, Jour. Phys. Chem. Hist., 88, p. 429, 1819.—Bather, Treatise Zool. (Lankester) pt. 3, p. 203, 1900. (Pentagonal column).

Pentamerocrinus Jaekel. Genotype: *P. praematurus* Jaekel.

Jaekel, Pal. Zeits., 3, p. 79, 1918.

Pentamerocrinus praematurus Jaekel.

Jaekel, Pal. Zeits., 3, p. 79, fig. 75, 1918. (Undetermined Flexibilia.)

Ord.: St. Petersburg, Russia.

Pentaramicrinus Sutton and Winkler = *Phanocrinus* (fide E. Kirk.)*Periechocrinites* Austin and Austin. Genotype: *P. costatus* Austin and Austin (= *Actinocrinites moniliformis* Phillips.)

Periechocrinitidae (Camerata). Sil.; ?Dev.; ?Carb.

Austin and Austin, Ann. Mag. Nat. Hist., 10, p. 110, 1842 (as *Periechocrinites*, by error); 11, p. 203, 1843.

Crumenaecrinites Troost, Amer. Jour. Sci. and Arts. (2), 8, p. 420, 1849.—Wood, U. S. Nat. Mus., Bull. 64, p. 77, 1909. (Genotype: *C. ovalis* Troost, nom. nud.)

Geocrinus d'Orbigny, Prodr. Pal. Strat., 1, p. 46, 1849; Cours Element. Pal. Geol., 2, p. 141, 1851. (Genotype: *Actinocrinites moniliformis* Phillips.)

Periechocrinus Morris, Cat. British Foss., p. 56, 1843.—McCoy, British Pal. Foss., p. 56, 1855.—Zittel, Handb. Pal., 1, p. 368, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 127 (301), 1881; N. Amer. Crin. Cam., p. 519, 1897.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, p. 1, pp. 36, 129, 1900.—Bather, Treatise Zool. (Lankester), pt. 3, pp. 166, 168, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 194, 1913; Amer. Sil. Crin., p. 44, 1926.

Pradocrinus de Verneuil, Bull. Soc. Geol. France, (2) 7, p. 184, 1850. (Genotype: *P. baylii* Verneuil.)

Pyxidocrinus Müller, in Zeiler and Wirtgen, Ver. Nat. Ver. Rheinl., 12, p. 82, 1855. (Genotype: *Actinocrinus prümienensis* Wirtgen and Zeiler.)

Trochocrinites Portlock, Geol. Londonderry, p. 345, 1843. (Genotype: *T. laevis* Portlock.)

Trochocrinus Bather, Treatise Zool. (Lankester), pt. 3, p. 168, 1900.

Periechocrinites annulatus Angelin.

Angelin, Icon. Crin. Suec., p. 7, pl. 19, figs. 10, 10a, 1878.

Sil. (Gotlandian): Lickershamn, Island of Gotland.

Periechocrinites articulatus Austin and Austin.

Austin and Austin, Ann. Mag. Nat. Hist., 10, p. 110, 1842; 11, p. 204, 1843.

Sil. (Wenlock ls.): Dudley, England.

Periechocrinites baylii (Verneuil).

Pradocrinus baylii Verneuil, Bull. Soc. Geol. France, (11) 7, p. 184, pl. 4, figs. 11 a-c, 1850.

Dev. (Calcaire d'Arnao): Calle, near Sabero, Spain.

Periechocrinites brevimanus (Angelin).

Actinocrinus brevimanus Angelin, Icon. Carin. Suec., p. 6, pl. 18, fig. 12, 1878.

Periechocrinus brevimanus Wachsmuth and Springer, Rev. Pal., pt. 2, p. 131 (305), 1881.

Sil. (Gotlandian): Island of Gotland.

Periechocrinites chicagoensis (Weller).

Periechocrinus chicagoensis Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 131, pl. 13, figs. 7, 8, 1900.

Sil. (Niagaran-Racine dol.): Bridgeport and Joliet, Ill.

Periechocrinites costatus Austin and Austin = *P. moniliformis*.

Periechocrinites cylindricus (Foerste).

Periechocrinus cylindricus Foerste, Ohio Jour. Sci., 17, no. 7, p. 244, pl. 10, figs. 1 A, B, 1917; 21, no. 2, p. 73, pl. 3, fig. 4, 1920.

Sil. (Niagaran-Cedarville dol.): Near Springfield, Ohio.

Periechocrinites dubius (Troost).

Gilbertocrinites (?) *dubius* Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Periechocrinus dubius Wood, U. S. Nat. Mus., Bull. 64, p. 77, 1909.

Saccocrinus speciosus Roemer (not Hall), Sil. Fauna West Tenn., p. 42, pl. 3, figs. 3 a-c, 1860.

Sil. (Niagaran-Beech River fm.): Decatur and Perry Cos., Tenn.

Periechocrinites egani (S. A. Miller).

Saccocrinus egani S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 4, p. 173, pl. 4, figs. 4, 4a, 1881.

Periechocrinus egani Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 136, pl. 13, fig. 9, 1900.

Sil. (Niagaran-Racine dol.): Cicero, Ill.

Periechocrinites geometricus (Angelin).

Periechocrinus geometricus Angelin, Icon. Crin. Suec., p. 7, pl. 10, fig. 29, 1878.

Sil. (Gotlandian): Klinteberg, Island of Gotland.

Periechocrinites globosus Austin and Austin.

Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 110, 1842 (nom. nud.); 11, p. 204, 1843 (remark only).

Horizon and locality not given.

Periechocrinites gorbyi (S. A. Miller).

Saccocrinus gorbyi S. A. Miller, 17th Rep. Indiana Dep. Geol. Nat. Res., p. 667, pl. 9, figs. 2, 3, 1892 (adv. pub. 1891, p. 57).

Periechocrinus gorbyi Bassler, U. S. Nat. Mus., Bull. 92, p. 954, 1915.

Sil. (Niagaran-Beech River fm.): Adams, Decatur Co., Tenn.

Periechocrinites grandiscutatus (Angelin.)

Periechocrinus grandiscutatus Angelin, Icon. Crin. Suec., p. 7, pl. 26, fig. 25, 1878.

Sil. (Gotlandian): Island of Gotland.

Periechocrinites howardi (S. A. Miller).

Saccocrinus howardi S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 284, pl. 5, figs. 3-5, 1894 (adv. pub. 1892, p. 30).

Periechocrinus howardi Wachsmuth and Springer, N. Amer. Crin. Camerata, p. 529, 1897.

Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Periechocrinites indicator (Etheridge).

Periechocrinus indicator Etheridge, Mem. Geol. Surv. New South Wales, no. 5, p. 78, pl. 22, fig. 4, 1892.

Carb.: Chalky Gully, Wollumba River, Co. Gloucester, Australia.

Periechocrinites infelix (Winchell and Marcy).

Megistocrinus infelix Winchell and Marcy, Mem. Boston Soc. Nat. Hist., 1, p. 110, pl. 2, fig. 7, 1865.

Saccocrinus infelix S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 4, pp. 167, 260, pl. 6, fig. 2, 1881.

Periechocrinus infelix Wachsmuth and Springer, N. Amer. Crin. Cam., p. 525, pl. 50, figs. 2 a-d, 1897.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pl. 1, p. 134, pl. 13, figs. 1, 2, 1900.

Sil. (Niagaran-Racine dol.): Chicago, etc., Ill.

Periechocrinites interradiatus (Angelin).

Periechocrinus interradiatus Angelin, Icon. Crin. Suec., pl. 10, fig. 15, 1878.

Sil. (Wenlock ls.): Dudley, England.

Periechocrinites laevis (Angelin).

Periechocrinus laevis Angelin, Icon. Crin. Suec., p. 7, pl. 18, fig. 11, 1878.

Periechocrinus minor Wachsmuth and Springer, Rev. Pal., pt. 2, p. 132 (306), 1881.
Sil. (Gotlandian): Island of Gotland.

Periechocrinites laevis (Portlock).

Trochocrinites laevis Portlock, Geol. Londonderry, p. 345, pl. 15, fig. 1, 1843.

Glyptocrinus laevis Murchison, Siluria, ed. 3, p. 535, pl. 10, fig. 1, 1859.

Periechocrinus laevis Wachsmuth and Springer, Rev. Pal., pt. 2, p. 132 (306), 1881.
Ord. (Caradocian-Desertcreat sch.): Tyrone, Ireland.

Periechocrinites latus (Springer).

Periechocrinus latus Springer, in Twenhofel, Geol. Surv. Canada, Mem. 154, p. 138,
pl. 4, figs. 4, 5, 1928.

Sil. (Chicotte fm.): Southwest Point, Anticosti Island, Quebec.

Periechocrinites lindströmi (Wachsmuth and Springer).

Periechocrinus lindströmi Wachsmuth and Springer, Rev. Pal., pt. 2, p. 132 (306),
1881.

Actinocrinus interradiatus Angelin, Icon. Crin. Suec., p. 6, pl. 26, fig. 15, 1878.

Sil. (Gotlandian): Island of Gotland.

Periechocrinites longidigitatus (Angelin).

Actinocrinus longidigitatus Angelin, Icon. Crin. Suec., p. 6, pl. 26, figs. 19, 19a, 1878.

Periechocrinus longidigitatus Wachsmuth and Springer, Rev. Pal., pt. 2, p. 132 (306),
1881.

Sil. (Gotlandian): När, Island of Gotland.

Periechocrinites longimanus (Angelin).

Actinocrinus longimanus Angelin, Icon. Crin. Suec., p. 6, pl. 15, fig. 17, pl. 26, fig. 16,
pl. 28, figs. 5, 5a, 6, 1878.

Periechocrinus longimanus Wachsmuth and Springer, Rev. Pal., pt. 2, p. 132 (306),
1881.

Sil. (Gotlandian): Farö, Island of Gotland.

Periechocrinites marcouanus (Winchell and Marcy).

Megistocrinus marcouanus Winchell and Marcy, Mem. Boston Soc. Nat. Hist., 1,
p. 87, pl. 2, fig. 5, text fig., 1865.

Saccocrinus marcouanus S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 4, p. 167,
pl. 4, figs. 1, 1a, 1881.

Periechocrinus marcouanus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 523,
pl. 50, figs. 7a, b, pl. 51, fig. 5, 1897.—Weller, Chicago Acad. Sci., Nat. Hist.
Surv., Bull. 4, pt. 1, pp. 1, 130, 131, pl. 12, figs. 2-4, 1900.

Sil. (Niagaran): Chicago, etc., Ill. (Racine dol.); Waldron, Ind. (?Waldron sh.).

Periechocrinites moniliformis (Miller).

Actinocrinites moniliformis Miller, Nat. Hist. Crin., p. 116, pl. opp. p. 114, fig. 9,
1821.—Phillips, in Murchison, Sil. Syst., p. 673, pl. 18, fig. 4, 1839.

Periechocrinus moniliformis McCoy, British Pal. Foss., p. 56, 1854.—Wachsmuth
and Springer, Rev. Pal., pt. 2, pp. 128, 132 (306), 1881.

Periechocrinites costatus Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 110,
1842; 11, p. 204, 1843.

Sil. (Wenlock ls.): Dudley, England.

Periechocrinites multicostatus (Angelin).

Periechocrinus multicostatus Angelin, Icon. Crin. Suec., p. 7, pl. 18, figs. 15 a-e,
1878.

Sil. (Gotlandian): Bursvik, Island of Gotland.

Periechocrinites necis (Winchell and Marcy).

Megistocrinus necis Winchell and Marcy, Mem. Boston Soc. Nat. Hist., vol. 1, p.
110, pl. 2, fig. 6, 1865.

- Saccocrinus necis* S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 4, p. 172, pl. 4, fig. 3, 1881.
- Periechocrinus necis* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 524, pl. 50, figs. 1a, b, 1897.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, pp. 130, 133, pl. 13, figs. 5, 6, 1900.
- Sil. (Niagaran-Racine dol.): Chicago, etc., Ill.
- Periechocrinites nubilis** (Angelin).
- Actinocrinus nubilis* Angelin, Icon. Crin. Suec., p. 6, pl. 18, fig. 14, 1878.
- Periechocrinus nubilis* Wachsmuth and Springer, Rev. Pal., pt. 2, p. 132 (306), 1881.
- Sil. (Gotlandian): Island of Gotland.
- Periechocrinites ornatus** (Hall and Whitfield).
- Saccocrinus ornatus* Hall and Whitfield, Geol. Surv. Ohio, 2, pt. 2, p. 126, pl. 6, figs. 7-9, 1875.
- Periechocrinus ornatus* Wachsmuth and Springer, Rev. Pal., pt. 2, p. 132 (306), 1881; N. Amer. Crin. Cam., p. 527, pl. 50, figs. 3a, b (not pl. 51, fig. 7), 1897.
- Sil. (Niagaran): Yellow Springs, Ohio (Cedarville ls.); St. Paul, Ind. (Laurel ls.).
- Periechocrinites? prümienensis** (Zeiler and Wirtgen).
- Actinocrinus prümienensis* Zeiler and Wirtgen, Verh. Nat. Hist. ver. Rheinh., 12, p. 81, pl. 11, figs. 1-5; p. 82 as *Pyzidocrinus prümienensis*, 1855.—Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 172, pl. 6, fig. 6, 1867 (adv. pub., p. 60).
- Aorocrinus prumiensis* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 470, 1897.
- Dev. (Eifelian): Prüm, Eifel, Germany.
- Periechocrinites? prümienensis geometricus** (Schultze).
- Actinocrinus prümienensis* var. *geometrica* Schultze, Senk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 173, pl. 6, figs. 6e, f, 1867 (adv. pub. 1866, p. 61).
- Dev. (Eifelian): Gerolstein, Prüm, Germany.
- Periechocrinites pulcher** (McCoy).
- Actinocrinus pulcher* McCoy, British Pal. Foss., p. 55, pl. 1-D, fig. 3, 1854.
- Periechocrinus pulcher* Wachsmuth and Springer, Rev. Pal., pt. 2, p. 132 (306), 1881.
- Sil.: South of Llangollen, Wales (Wenlock ls.); Kendal, Westmoreland, England (Upper Ludlow).
- Periechocrinites radiatus** (Angelin).
- Periechocrinus radiatus* Angelin, Icon. Crin. Suec., p. 7, pl. 10, figs. 1, 2, pl. 23, fig. 3, pl. 27, figs. 6, 7, 1878.
- Sil.: Island of Gotland (Gotlandian); Near Llangollen, Wales (Wenlock ls.).
- Periechocrinites sanmigueli** (Astre).
- Periechocrinus sanmigueli* Astre, Bol. Real Soc. Espanola Hist. Nat., 25, p. 211, text figs. 1, 2, pl. 13, figs. 1-4, 1925.
- Sil. or Dev. (Drift): Burgos, Spain.
- Periechocrinites scanicus** (Angelin).
- Periechocrinus scanicus* Angelin, Icon. Crin. Suec., p. 7, pl. 19, figs. 16, 16a, 1878.
- Sil. (Gotlandian): Klinteberg, Island of Gotland.
- Periechocrinites schultzianus** (Angelin).
- Actinocrinus schultzianus* Angelin, Icon. Crin. Suec., p. 6, pl. 18, fig. 13, 1878.
- Periechocrinus schultzianus* Wachsmuth and Springer, Rev. Pal., pt. 2, p. 133 (307), 1881.
- Sil. (Gotlandian): Island of Gotland.
- Periechocrinites tennesseensis** (Hall and Whitfield).
- Saccocrinus tennesseensis* Hall and Whitfield, Geol. Rep. Ohio, 2, Pal., p. 125, pl. 6, fig. 10, 1875.

- Periechocrinus tennesseensis* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 528, 1897.—Wood, U. S. Nat. Mus., Bull. 64, p. 76, pl. 6, fig. 10, 1909.—Foerste, Ohio Jour. Sci., 17, no. 7, p. 244, pl. 10, fig. 3, 1917.—Springer, Amer. Sil. Crin., p. 45, pl. 10, figs. 1-4, 1926.
- Crumenaecrinites ovalis* Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.
- Sil. (Niagaran): Decatur, Perry, and Wayne Cos., Tenn. (Beech River fm.); Cedarville and Yellow Springs, Ohio (Cedarville ls.); Louisville, Ky. (Louisville ls.).
- Periechocrinites tenuidiscus** (Hall).
- Actinocrinus? tenuidiscus* Hall, Prelim. Descr. N. Sp. Crin., p. 14, 1861.
- Periechocrinus tenuidiscus* Wachsmuth and Springer, N. Amer. Crin. Cam., pp. 520, 531, pl. 46, fig. 4, pl. 51, fig. 6, 1897.
- Miss. (Low. Burlington ls.): Burlington, Iowa.
- Periechocrinites umbrosus** (Miller and Gurley).
- Saccocrinus umbrosus* Miller and Gurley, Ill. St. Mus., Bull. 6, p. 24, pl. 2, figs. 13, 14, 1895.
- Periechocrinus umbrosus* Bassler, U. S. Nat. Mus., Bull. 92, p. 956, 1915.
- Sil. (Niagaran-Laurel ls.): St. Paul, Ind.
- Periechocrinites undulatus** (Angelin).
- Periechocrinus undulatus* Angelin, Icon. Crin. Suec., p. 7, pl. 26, fig. 20, 1878.
- Sil. (Gotlandian): Island of Gotland.
- Periechocrinites urniformis** (S. A. Miller).
- Saccocrinus urniformis* S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 4, p. 170, pl. 4, figs. 2, 2a, 1881.
- Periechocrinus urniformis* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 526, pl. 50, figs. 5a, b, 1897.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 135, pl. 12, fig. 1, pl. 13, figs. 3, 4, 1900.
- Saccocrinus pyriformis* S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 5, p. 81, pl. 3, figs. 3, 3a, 1882.
- Sil. (Niagaran-Racine dol.): Bridgeport, Cicero, and Chicago, Ill.
- Periechocrinites? whitei** (Hall).
- Actinocrinus (Megistocrinus) whitei* Hall, Jour. Boston Soc. Nat. Hist., 7, p. 271, 1861; N. Y. St. Mus., Bull. 1, pl. 4, figs. 4, 5, (not fig. 6), 1872.
- Megistocrinus (Saccocrinus) whitei* Meek and Worthen, Geol. Surv. Ill., vol. 5, p. 397, pl. 6, fig. 1, 1875.
- Periechocrinus whitei* Wachsmuth and Springer, Rev. Pal., pt. 2, p. 133 (307), 1881.—Whitfield, Mem. Amer. Mus. Nat. Hist., 1, p. 27, pl. 2, fig. 29, 1893.
- Periechocrinus? whitei* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 530, pl. 2, fig. 21, pl. 46, figs. 1-5, pl. 51, figs. 9, 10, 1897.
- Actinocrinus (Pradocrinus) amplus* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 133, 1861.
- Actinocrinus (Megistocrinus) olliculus* Hall, Prelim. Descr. N. Crin., p. 2, 1861.
- Miss. Burlington, Iowa (Low. and Up. Burlington ls. and Burlington-Keokuk transition bed); Legrand, Iowa (Hampton fm).
- Periechocrinites whitfieldi** (Hall).
- Actinocrinus (Saccocrinus) whitfieldi* Hall, Adv. sheets 18th Rep. N. Y. St. Cab. Nat. Hist., p. 22, 1865; 20th Rep. Doc. ed., p. 326, 1867 (Rev. ed., pp. 370, 430, 1870).
- Periechocrinus whitfieldi* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 522, pl. 51, figs. 1, 2a, b, 3, 4, 1897.
- Actinocrinus christyi* Hall (not Shumard), Adv. Not. N. Sp. Foss. Niagara Gr., p. 2, 1865.
- Saccocrinus christyi* Meek and Worthen, Geol. Surv. Ill., 3, p. 347, pl. 5, fig. 1, 1868.—Hall, 28th Rep. N. Y. St. Mus. Nat. Hist., pl. 13, figs. 12-20, 1877; Final Rep. p. 127, pl. 13, figs. 12-20, 1879; 11th Rep. Geol. Nat. Hist. Ind., p. 254, pl. 12, figs. 12-20, pl. 15, figs. 3, 4, 1882.

- Actinocrinus waldronensis* Shumard, Trans. Acad. Sci. St. Louis, 2, p. 350, 1866.
- Saccocrinus sacculus* Meek and Worthen, Geol. Surv. Ill., 3, p. 349, 1868. (Proposed for Racine specimens.)
- Sil.: Waldron, etc. Ind., and Newsom, Tenn. (Waldron sh.); Racine and Waukesha, Wis., Chicago, Ill. (Racine dol.).
- Periechocrinus* of authors = *Periechocrinites*.
- Periechocrinus gotlandicus* Angelin = *Lindstroemicrinus gotlandicus*.
- Periechocrinus limonium* Salter.
Salter, Cat. Camb. Sil. Foss., p. 121, 1873.
Sil. (Wenlock ls.): Dudley, England.
- Periechocrinus minor* Wachsmuth and Springer = *Periechocrinites laevis*.
- Periechocrinus ornatus* Wachsmuth and Springer (part) = *Saccocrinus benedicti*.
- Periechocrinus simplex* Salter.
Salter, Cat. Camb. Sil. Foss., p. 121, text fig., 1873.
Sil. (Wenlock ls.): Dudley, England.
- Periechocrinus speciosus* Wachsmuth and Springer = *Saccocrinus speciosus*.
- Periglyptocrinus** Wachsmuth and Springer. Genotype: *P. billingsi* Wachsmuth and Springer.
Glyptocrinidae (Camerata). Ord.
Wachsmuth and Springer, N. Amer. Crin. Cam., p. 277, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 161, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 190, 1913.
- Periglyptocrinus billingsi** Wachsmuth and Springer.
Wachsmuth and Springer, N. Amer. Crin. Cam., p. 277, pl. 21, figs. 1a, b, 1897.
Ord. (Trenton-Hull ls.): Ottawa and Kirkfield, Ont., Hull, Quebec, Can.
- Periglyptocrinus priscus** (Billings).
Glyptocrinus priscus Billings, Geol. Surv. Canada, Rep. Prog. 1853-56, p. 257, 1857; Can. Org. Rem., dec. 4, p. 56, pl. 7, figs. 1 a-f, 1859.
Periglyptocrinus priscus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 278, pl. 21, fig. 2, 1897.
Glyptocrinus mercerensis Miller and Gurley, Ill. St. Mus., Bull. 5, p. 28, pl. 2, fig. 23, 1894.
Ord. (Trenton): Ottawa, Renfrew Co., and Kirkfield, Ont., and Hull, Quebec, Canada (Hull ls.); Mercer Co., Ky. (Curdsville ls.).
- Perimestocrinus** Moore and Plummer. Genotype: *Hydreionocrinus noduliferus* Miller and Gurley.
Poteriocrinitidae (Inadunata-Fistulata). Penn. Permian.
Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 281, 1938.—Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 234, 1939.—Moore and Plummer, Univ. Texas Pub. No. 3945, p. 202, 1940.
- Perimestocrinus calyculus** Moore and Plummer.
Moore and Plummer, Univ. Texas Pub. No. 3945, p. 207, pl. 10, fig. 2, text fig. 43, 1940.
Penn. (Mineral Wells sh.): East end Barber Mtn., southwest of Mineral Wells, Palo Pinto Co., Texas.
- Perimestocrinus excavatus** (Weller).
Delocrinus excavatus Weller, Jour. Geol., 17, p. 628, pl. 1, figs. 16, 17, 1909.
Perimestocrinus excavatus Moore and Plummer, Univ. Texas Pub. No. 3945, p. 210, pl. 10, fig. 7, text fig. 44, 1940.
Permian (Cibolo ls.): 3 miles north of Shafter, Presidio Co., Texas.

Perimestocrinus formosus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 203, pl. 7, fig. 7, pl. 10, fig. 1, text fig. 41, 1940.

Penn. (Palo Pinto fm.-Martins Lake ls.): West of Mineral Wells, Palo Pinto Co., Texas.

Perimestocrinus granuliferus (Miller and Gurley).

Hydreionocrinus granuliferus Miller and Gurley, Ill. St. Mus., Bull. 3, p. 44, pl. 6, figs. 20, 21, 1894.

Perimestocrinus granulifer Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 281, 1938.

Penn. (Missouri ser.-?Argentine ls.): Kansas City, Mo.

Perimestocrinus impressus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 206, pl. 10, figs. 3, 4, text fig. 42, 1940.

Penn. (Mineral Wells fm.): 5 miles north-northwest Mineral Wells, Palo Pinto Co., Texas (Keechi Creek sh. mem.); east end Barber Mtn., southwest of Mineral Wells (East Mtn. sh. mem.).

Perimestocrinus noduliferus (Miller and Gurley).

Hydreionocrinus noduliferus Miller and Gurley, Ill. St. Mus., Bull. 3, p. 41, pl. 6, figs. 15-17, 1894.

Perimestocrinus nodulifer Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 281, text fig. 28, 1938.

Penn. (Missouri ser.-?Argentine ls.): Kansas City, Mo.

Perimestocrinus parvus (Miller and Gurley).

Eupachyrcrinus parvus Miller and Gurley, Ill. St. Mus., Bull. 3, p. 60, pl. 6, figs. 22, 23, 1894.

Perimestocrinus parvus Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 281, 1938.

Penn. (Missouri ser.-?Argentine ls.): Kansas City, Mo.

Perimestocrinus pumilis Moore and Plummer.

Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 281, pl. 14, figs. 10 a-c, text fig. 29, 1938.

Penn. (Brentwood ls.): Braggs Mtn., 3 miles southeast Ft. Gibson, Okla.

Perimestocrinus subtilis Moore.

Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 235, pl. 7, figs. 4 a-c, text figs. 17 a-c, 1939.

Penn. (Brownville ls.): 5 miles west of Strohm, Osage Co., Okla.

Perimestocrinus teneris Moore and Plummer.

Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 284, pl. 14, figs. 5 a-c, text fig. 30, 1938.

Penn. (Brentwood ls.): U. S. Highway 71, opposite Woolsey, Ark.

Peripterocrinus Wanner. Genotype: *Thalassocrinus gracilis* Wanner.

Wanner, Zeits. der Deutsch. Geol. Gesell., Mon. Ber., 68, p. 200, 1916.

Thalassocrinus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 311, 1916. (Genotype: *T. gracilis* Wanner).

Peripterocrinus gracilis (Wanner).

Thalassocrinus gracilis Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 311, text fig. 88, pl. 111 (16), fig. 12, 1916.

Peripterocrinus gracilis Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 318, 1924.

Permian: Basleo, Timor.

Perischodomus magnus Tornquist = *Adelocrinus hystrix*.

- Perissocrinus** Goldring. Genotype: *P. papillatus* Goldring.
Pisocrinidae (Inadunata-Larviformia). Dev.
Goldring, Jour. Pal., 10, p. 20, 1936.
- Perissocrinus papillatus** Goldring.
Goldring, Jour. Pal., 10, p. 21, text fig., pl. 7, fig. 6, 1936.
Dev. (Ludlowville-Centerfield ls.): Dean Creek, top of Goulds Falls, Aurora, N. Y.
- Perittocrinus** Jaekel. Genotype: *Porocrinus radiatus* Beyrich.
Palaeocrinidae (Inadunata-Fistulata). Ord.
Jaekel, Verh. Int. Zool. Congress, Berlin, p. 1092, 1902; Pal. Zeits., 3, pp. 21, 50, 1918.—Yakovlev, Ann. Soc. Pal. Russia, 2, p. 26, 1918.
- Perittocrinus radiatus** (Beyrich).
Porocrinus radiatus Beyrich, Sitzb. Gess. Naturf. Freunde, p. 61, text fig., 1879.
Perittocrinus radiatus Jaekel, Verh. Ins. Zool. Congress, Berlin, p. 1004, text fig. 27, 1902; Pal. Zeits., 3, p. 47, fig. 36, 1918.
Ord. (Kunda fm. B₂): St. Petersburg or Pavlovsk, Russia.
- Perittocrinus transitor** Jaekel.
Jaekel, Pal. Zeits., 3, p. 49, fig. 37, 1918.
Ord. (Kunda fm., B₂): Near St. Petersburg, Russia.
- Petalocrinus** Weller and Davidson. Genotype: *P. mirabilis* Weller and Davidson.
Crotalocrinidae (Inadunata-Fistulata). Sil.
Weller and Davidson, Jour. Geol., 4, pp. 166, 167, 1896.—Weller, Jour. Geol., 6, p. 700, 1898.—Bather, Geol. Mag., (4) 5, p. 284, 1898; Quart. Jour. Geol. Soc. London, 54, pp. 401, 1898; Treatise Zool. (Lankester), pt. 3, p. 175, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 217, 1913.—Thomas, Proc. Iowa Acad. Sci., p. 289, 1916.—Springer, Amer. Sil. Crin., p. 126, 1926.
- Petalocrinus angustus** Bather.
Bather, Quart. Jour. Geol. Soc. London, 54, p. 425, pl. 25, figs. 26-32, 1898.
Sil. (Gotlandian): Wisby, Island of Gotland.
- Petalocrinus expansus** Bather.
Bather, Quart. Jour. Geol. Soc. London, 54, p. 434, pl. 25, figs. 33-36, text figs. 13, 14, 1898.
Sil. (Gotlandian): Wisby, Island of Gotland.
- Petalocrinus inferior** Bather.
Bather, Quart. Jour. Geol. Soc. London, 54, p. 426, pl. 26, fig. 57, text fig. 10, 1898.—Springer, Amer. Sil. Crin., p. 127, pl. 26, figs. 15, 16, 1926.
Sil. (Niagaran): Near Monticello, Iowa (Hopkinton dol.); St. Paul, Ind. (Laurel ls.); Cedarville, Ohio (Cedarville ls.).
- Petalocrinus longus** Bather.
Bather, Quart. Jour. Geol. Soc. London, 54, p. 431, pl. 26, figs. 58-65, text figs. 11, 12, 1898.
Sil. (Niagaran-Laurel ls.): St. Paul, Ind.
- Petalocrinus (?) major** Weller.
Weller, Jour. Geol., 4, p. 170, pl. 6, fig. 1, 1896. (A coral, *Omphyma*, according to Weller.)
Sil. (Niagaran): Jones Co., Iowa.
- Petalocrinus mirabilis** Weller and Davidson.
Weller and Davidson, Jour. Geol., 4, p. 167, pl. 6, figs. 2-5, text fig., 1896.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 19, fig. 4, 1900.—Thomas, Iowa Acad. Sci., Proc., 22, pp. 289, 290, pl. 32, figs. 28-30, 1916.—Springer, Amer. Sil. Crin., p. 126, pl. 26, figs. 12-14, 1926.
Sil. (Niagaran-Hopkinton dol.): Jones Co., Iowa.

Petalocrinus visbycensis Bather.

Bather, Quart. Jour. Geol. Soc. London, 54, p. 421, pl. 25, figs. 1-25, text figs. 4, 6, 9, 1898.

Sil. (Gotlandian): Wisby, Island of Gotland.

Petinocrinus Hall.

Bather, Treatise Zool. (Lankester), pt. 3, p. 203, 1900. (Cited by error).

Petrocrinus Wanner. Genotype: *P. beyrichi* Wanner.

Lecanocrinidae (Flexibilia). Permian.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 92, 1924.

Petrocrinus beyrichi Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 93, text fig. 1, pl. 4, fig. 1, 1924; Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia, p. 13, pl. 1, figs. 1-5, p. 15, fig. 3, 1930; id., p. 92, pl. 8, figs. 16-24, 1937.

Permian: Basleo, Timor.

Petrocrinus boschi Marez Oyens.

Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 306, pl. 2, fig. 6, text fig. 5, 1940.

Permian: Basleo, Timor.

Petschoracrinus Yakovlev. Genotype: *P. variabilis* Yakovlev.

Poteroicrinidae (Inadunata-Fistulata). Permocarb.

Yakovlev, Trav. Mus. Geol. Leningrad., 3, p. 5, 1928; Compt. Rend. Acad. Sci. USSR, pp. 27-29, 1930; Soc. Pal. Russie Ann. t. 11, p. 129, 1937.

Petschoracrinus variabilis Yakovlev.

Yakovlev, Trav. Mus. Geol. Leningrad, 3, p. 5, pl. 2, figs. 4-6, 1928.

Permian: Riviere Kojim, Russia.

Petschoracrinus tarri Yakovlev = *Paragassizocrinus tarri*.

Phacelocrinus Kirk. Genotype: *Poteroicrinus wetherbyi* S. A. Miller.

Poteroicrinidae (Inadunata-Fistulata). Miss.

Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 329, 1940.

Phacelocrinus bisselli (Worthen).

Poteroicrinites bisselli Worthen, in Meek and Worthen, Geol. Surv. Ill., 5, p. 546, pl. 21, fig. 4, 1873.

Poteroicrinus (Scytalocrinus) bisselli Wachsmuth and Springer, Rev. Pal., pt. 1, p. 117 (340), 1880 (1879).

Phacelocrinus bisselli Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 329, 1940.

Miss. (Chester): Chester, Ill.

Phacelocrinus columbiensis (Worthen).

Poteroicrinus columbiensis Worthen, Ill. St. Mus., Bull. 1, p. 221, 1882; Geol. Surv. Ill., 7, p. 293, pl. 29, fig. 6, 1883.

Decadocrinus columbiensis Wachsmuth and Springer, Rev. Pal., pt. 3, p. 239 (165), 1886.

Phacelocrinus columbiensis Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 329, 1940.

Miss. (Chester-Paint Creek ls.): Near Columbia, etc., Monroe Co., Ill.

Phacelocrinus dactyliiformis (Hall).

Poteroicrinus (Scaphiocrinus) dactyliiformis Hall, Geol. Iowa, 1, pt. 2, p. 670, text fig. 105, pl. 17, fig. 6, 1858.

Scaphiocrinus dactyliiformis Keyes, Geol. Surv. Mo., 4, p. 211, pl. 26, fig. 2, 1894.

Phacelocrinus dactyliiformis Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 329, 1940.

Miss. (St. Louis ls.): St. Louis, Mo.

Phacelocrinus decabrachiatus (Hall).

Poteriocrinus (*Scaphiocrinus*) *decabrachiatus* Hall, Geol. Rep. Iowa, 1, pt. 2, p. 679, pl. 25, fig. 1, 1858.

Poteriocrinus (*Scytalocrinus*) *decabrachiatus* Wachsmuth and Springer, Rev. Pal., pt. 1, p. 117 (340), 1880 (1879).

Phacelocrinus decabrachiatus Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 330, 1940.

Miss. (Chester): Kaskaskia, Ill., Marion, Ky. (Glen Dean ls.); Huntsville, Ala. (Gasper fm. and Ste. Genevieve ls.); Monroe Co., Ill. (Renault fm.).

Phacelocrinus gracilis (Troost).

Agassizocrinites gracilis Troost, Amer. Jour. Sci. and Arts, 8, p. 419, 1849.

Scytalocrinus? *gracilis* Wood, U. S. Nat. Mus., Bull. 64, p. 88, pl. 11, fig. 9, 1909.

Phacelocrinus gracilis Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 330, 1940.

Miss. (Chester-Ste. Genevieve ls.): Huntsville, Ala.

Phacelocrinus internodius (Hall).

Poteriocrinus (*Scaphiocrinus*) *internodius* Hall, Geol. Rep. Iowa, 1, pt. 2, p. 679, pl. 25, fig. 2, text fig. 107, 1858.

Phacelocrinus internodius Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 330, 1940.

Miss. (Chester-?Ste. Genevieve ls.): Chester, Ill.

Phacelocrinus longidactylus (McChesney).

Scaphiocrinus longidactylus McChesney, Descr. N. Sp. Foss. Pal. Rocks, p. 7, 1860; Illustr. N. Sp. Foss., pl. 4, fig. 4, 1865; Trans. Chicago Acad. Sci., 1, p. 4, pl. 4, figs. 4, 5, 1868.

Phacelocrinus longidactylus Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 330, 1940.

Miss. (Chester ls.): Kaskaskia, Ill.

Phacelocrinus vanhornei (Worthen).

Poteriocrinus vanhornei Worthen, Geol. Surv. Ill., 6, p. 517, pl. 31, figs. 2, 3, 1875.

Poteriocrinus (*Scytalocrinus*) *vanhornei* Wachsmuth and Springer, Rev. Pal., pt. 1, p. 118 (341), 1880 (1879).

Scytalocrinus vanhornei Keyes, Geol. Surv. Mo., 4, p. 213, pl. 26, fig. 3, 1894.

Phacelocrinus vanhornei Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 330, 1940.

Miss. (Ste. Genevieve ls.): Alton, Ill.

Phacelocrinus wachsmuthi (Wetherby).

Scytalocrinus wachsmuthi Wetherby, Jour. Cincinnati Soc. Nat. Hist., 3, p. 155, pl. 5, fig. 4, 1880.

Phacelocrinus wachsmuthi Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 330, 1940.

Miss. (Chester-Glen Dean ls.): Pulaski Co., Ky.

Phacelocrinus wetherbyi (S. A. Miller).

Poteriocrinus wetherbyi S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 2, p. 36, pl. 8, figs. 1a, b, 1879.

Poteriocrinus (*Scytalocrinus*) *wetherbyi* Wachsmuth and Springer, Rev. Pal., pt. 1, p. 118 (341), 1880 (1879).

Phacelocrinus wetherbyi Kirk, Jour. Washington Acad. Sci., 30, no. 8, p. 330, 1940.

Miss. (Chester-Glen Dean ls.): Pulaski Co., Ky.

Phanocrinus Kirk. Genotype: *Zeacrinus formosus* Worthen.

Poteriocrinitidae (Inadunata-Fistulata). Low Carb.

Kirk, Jour. Pal., 11, no. 7, p. 602, 1937.—Sutton and Winkler, Jour. Pal., 14, no. 6, p. 551, 1940.

Pentaramicrinus Sutton and Winkler, Jour. Pal., 14, no. 6, p. 558, 1940. (Genotype: *Cromyocrinus gracilis* Wetherby.)

Phanocrinus ardrossensis (Wright).

Eupachyrcrinus ardrossensis Wright, Geol. Mag., 71, p. 245, text figs. 4, 5, pl. 13, figs. 9, 10, pl. 14, figs. 2, 8, 9, 1934.

Phanocrinus ardrossensis Wright, Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 24, pl. 5, figs. 7, 8, text figs. 16, 17, 1939.

Low. Carb. (Calif. ss. ser.): Ardross, near Elie, Fife (Ardross ls.); Peters Crook, near Penton, Liddesdale, Roxburghshire, Scotland.

Phanocrinus bellulus (Miller and Gurley).

Zeacrinus bellulus Miller and Gurley, Ill. St. Mus., Bull. 3, p. 34, pl. 3, fig. 8, 1894.

Scytalocrinus? bellulus Sutton and Hagan, Jour. Pal., 13, no. 1, p. 83, 1939.

Phanocrinus bellulus Sutton and Winkler, Jour. Pal., 14, no. 6, p. 554, pl. 66, figs. 6, 7, 1940.

Miss. (Chester—probably Glen Dean ls.): Near Shoals, Martin Co., Ind.

Phanocrinus calyx (McCoy).

Cupressocrinus calyx McCoy, Ann. Mag. Nat. Hist., (2) 3, p. 244, 1849.

Poteriocrinus calyx de Koninck and Lehon, Rech. Crin. Terr. Belg., p. 90, pl. 1, figs. 6 a-d, 1854.

Eupachyrcrinus? calyx Bather, Trans. Edinburgh Geol. Soc., 10, p. 69, text fig. 13, 1913.—Wright, Geol. Mag., 61, p. 276, pl. 16, fig. 4, 1924; Trans. Edinburgh Geol. Soc., 11, pt. 3, pl. 29, fig. 4, 1925.

Eupachyrcrinus calyx Wright, Geol. Mag., 63, pp. 145-164, figs. 1-59, pl. 15, p. 163, fig. 90, pl. 17, figs. 4, 5, 1926.

Phanocrinus calyx Wright, Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 22, pl. 15, figs. 1-4, 1939.

Hydreionocrinus scoticus de Koninck, Bull. Acad. Roy. Belg., 4, pt. 2, p. 99, pl. 2, figs. 6, 7, 1858.

Low. Carb.: Derbyshire, England; Invertiel, etc., Scotland (Low. Ls. gr.).

Phanocrinus compactus Sutton and Winkler.

Sutton and Winkler, Jour. Pal., 14, no. 6, p. 555, pl. 67, figs. 7, 8, 1940.

Miss. (Chester-Golconda ls.): Near Golconda, Ill.

Phanocrinus cooksoni Laudon.

Laudon, Jour. Pal., 15, no. 4, p. 389, pl. 56, figs. 6, 7, 1941.

Miss. (Chester-Pitkin ls.): 1½ m. S. E. Hulbert, Okla.

Phanocrinus cylindricus (Miller and Gurley).

Zeacrinus cylindricus Miller and Gurley, Ill. St. Mus., Bull. 5, p. 39, pl. 3, figs. 19-21, 1894.

Phanocrinus cylindricus Sutton and Hagan, Jour. Pal., 13, no. 1, p. 83, 1939.—Sutton and Winkler, Jour. Pal., 14, no. 6, p. 553, pl. 66, figs. 11, 12, 1940.

Miss. (Chester-Glen Dean ls.): Pulaski Co., Ky.

Phanocrinus formosus (Worthen).

Poteriocrinites (Zeacrinus) formosus Worthen, in Meek and Worthen, Geol. Surv. Ill., 5, p. 549, pl. 21, fig. 2, 1873.

Phanocrinus formosus Kirk, Jour. Pal., 11, no. 7, p. 603, pl. 84, figs. 1, 2, 1937.—Sutton and Winkler, Jour. Pal., 14, no. 6, p. 553, pl. 68, figs. 17-19, 1940.

Miss. (Chester): Chester, Ill. and Pulaski Co., Ky. (Glen Dean ls.); Huntsville, Ala. (Gasper fm.).

Phanocrinus fragosus Sutton and Winkler.

Sutton and Winkler, Jour. Pal., 14, no. 6, p. 557, pl. 67, figs. 5, 6, 1940.

Miss. (Chester-Renault ls.): 3 miles east of Waterloo, Ill.

Phanocrinus gordoni Wright.

Wright, Trans. Royal Soc. Edinburgh, 60, pt. 1, p. 26, pl. 9, figs. 3-5, 20, 1939.

Low. Carb. (Low. Ls. gr.): Oxwell Mains, near Dunbar, East Lothian; Carløps, Peebleshire, shore west of Kirkcaldy, and Invertiel, Scotland.

Phanocrinus gracilis (Wetherby).

Cromyocrinus gracilis Wetherby, Jour. Cincinnati Soc. Nat. Hist., 2, p. 248, pl. 16, figs. 2 a-e, 1880.

Phanocrinus gracilis Kirk, Jour. Pal., 11, no. 7, p. 604, pl. 84, fig. 1, 1937.

Pentaramicrinus gracilis Sutton and Winkler, Jour. Pal., 14, no. 6, p. 558, pl. 66, figs. 14, 15, 1940.

Zeacrinus pulaskiensis Miller and Gurley, Ill. St. Mus., Bull. 6, p. 47, pl. 4, figs. 12, 13, 1895.—Miller, N. Amer. Geol. Pal., 2d App., p. 755, fig. 1405, 1897. (Young of *P. gracilis*, fide E. Kirk.)

Pentaramicrinus pulaskiensis Sutton and Winkler, Jour. Pal., 14, no. 6, p. 559, pl. 66, figs. 1, 2, 1940.

Miss. (Chester): Pulaski Co., Ky. (Glen Dean ls.); one mile north of Ruma, Ill. (Golconda ls.).

Phanocrinus inflatoramus Sutton and Winkler.

Sutton and Winkler, Jour. Pal., 14, no. 6, p. 555, pl. 67, figs. 14, 15, 1940.

Miss. (Chester-Glen Dean ls.): Pulaski Co., Ky.

Phanocrinus magnaradialis (Sutton and Winkler).

Pentaramicrinus magnaradialis Sutton and Winkler, Jour. Pal., 14, no. 6, p. 559, pl. 68, figs. 24, 25, 1940.

Miss. (Chester-Glen Dean ls.): Pulaski Co., Ky.

Phanocrinus maniformis (Yandell and Shumard).

Cyathocrinus maniformis Yandell and Shumard, Contr. Geol. Ky., p. 25, pl. fig. 2, 1847.

Zeacrinus maniformis Hall, Geol. Rep. Iowa, 1, pt. 2, p. 682, pl. 25, fig., 8, 1858.

Eupachycrinus maniformis Keyes, Geol. Surv. Mo., 4, pt. 1, p. 217, 1894.—Wood, U. S. Nat. Mus., Bull. 64, p. 94, pl. 11, fig. 4, 1909.

Phanocrinus maniformis Sutton and Winkler, Jour. Pal., 14, no. 6, p. 554, pl. 67, figs. 3, 4, 1940.

Cyathocrinites gracilis Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Miss. (Chester-Glen Dean ls.): Grayson Springs, Grayson Co., Marion and Pulaski Cos., Ky.

Phanocrinus nitidus (Miller and Gurley).

Zeacrinus nitidus Miller and Gurley, Ill. St. Mus., Bull. 3, p. 36, pl. 8, figs. 3, 4, 1894.

Phanocrinus nitidus Sutton and Hagan, Jour. Pal., 13, no. 1, p. 83, 1939.—Sutton and Winkler, Jour. Pal., 14, no. 6, p. 555, pl. 67, figs. 12, 13, 1940.

Miss. (Chester-Glen Dean ls.): Randolph Co., Ill.

Phanocrinus parviramus Sutton and Winkler.

Sutton and Winkler, Jour. Pal., 14, no. 6, p. 556, pl. 67, figs. 9, 10, 1940.

Miss. (Chester-Glen Dean ls.): Pulaski Co., Ky.

Phanocrinus petalloformis Sutton and Winkler.

Sutton and Winkler, Jour. Pal., 14, no. 6, p. 557, pl. 68, figs. 5, 6, 1940.

Miss. (Chester-Paint Creek sh.): 1½ miles northwest Floraville, Ill.

Phanocrinus stellaris (Wright).

Eupachycrinus stellaris Wright, Geol. Mag., 71, p. 247, pl. 13, figs. 12, 13, 1934.

Phanocrinus stellaris Wright, Trans. Royal Soc. Edinburgh, 60, pt. 1, p. 25, pl. 9, fig. 6, 1939.

Low. Carb. (Low. Ls. gr.): Invertiel, Fife, Scotland.

Phanocrinus supratumulosus Sutton and Winkler.

Sutton and Winkler, Jour. Pal., 14, no. 6, p. 556, pl. 68, figs. 9, 10, 1940.

Miss. (Chester-Glen Dean ls.): Randolph Co., Ill.

Phialocrinus Eichwald. Genotype: *P. impressus* Eichwald.

Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, p. 114, 1856.—Zittel, Handb. Pal., 1, p. 360, 1879.—Bather, Treatise Zool. (Lankester), pt. 3, p. 203, 1900.

Phialocrinus impressus Eichwald.

Eichwald, Bull. Soc. Imp. Nat. Moscou, vol. 29, p. 115, 1856; Leth. Ross., 1, p. 579, pl. 31, figs. 27 a-c, 1860. (Stems only.)

Ord. (Kunda fm., B₃): Pulkowa and Pavlowsk, Russia.

Phialocrinus Trautschold = *Aesiocrinus*.

Phialocrinus americanus Weller = *Ulocrinus americanus*.

Phialocrinus?* *elenae Yakovlev.

Yakovlev, Bull. Geol. Prosp. Serv., URSS., 49, pp. 97, 102, pl. 1, figs. 3 a-c, 1930.

Permian: Krasnooufinsk, Russia.

Phialocrinus?* *konincki (Clarke).

Cyathocrinus konincki Clarke, in Koninck, Mém. Soc. Roy Liège, p. 164, text fig., pl. 6, fig. 4, 1876-77.

Phialocrinus konincki Etheridge, Mem. Geol. Surv. New South Wales, Pal., no. 5, p. 107, pl. 16, figs. 1-4, 1892.

Permian: Osterley, Hunter River; Nowra, Co. St. Vincent, New South Wales, Australia (Up Marine ser.—Nowra Grit).

Phialocrinus?* *nodosus Etheridge.

Etheridge, Mem. Geol. Surv. New South Wales, Pal., no. 5, p. 112, pl. 14, figs. 4, 5, 1892.

Permian (Up. Marine ser.): Copper Point, Co. St. Vincent, New South Wales, Australia.

Phialocrinus?* *princeps Etheridge.

Etheridge, Mem. Geol. Surv. New South Wales, Pal., no. 5, p. 110, pl. 17, fig. 1, pl. 18, fig. 1, pl. 22, fig. 5, 1892.

Permian (Up. Marine ser.): Bow-Wow Creek, Co. St. Vincent New South Wales, Australia.

Phialocrinus?* *stephensi Etheridge.

Etheridge, Mem. Geol. Surv. New South Wales, Pal., no. 5, p. 113, pl. 20, figs. 1-5, 1892.

Permian (Up. Marine ser.—Nowra grit): Nowra, Co. St. Vincent, New South Wales, Australia.

Phialocrinus stillativus Keyes = *Stellarocrinus stillativus*.

Phialocrinus urna Trautschold = *Scytalocrinus urna*.

Phillipsoocrinus McCoy = *Actinocrinites*.

Philocrinus d'Koninck = *Woodocrinus*.

Philocrinus nebrascensis Meek and Worthen = *Erisocrinus typus*.

Philocrinus notatus Laudon and Beane = *Graphiocrinus notatus*.

Philocrinus pelvis Meek and Worthen = *Erisocrinus typus*.

Phimocrinus Schultze. Genotype: *P. laevis* Schultze.

Synbathocrinidae (Inadunata-Larviformia). Dev.

Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 141, 1867 (adv. pub. 1866, p. 29).—Zittel, Handb. Pal., 1, p. 350, 1879.—Bather, Treatise Zool. (Lankester), pt. 3, p. 152, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 209, 1913.

Phimocrinus americanus Springer.

Springer, Smiths. Misc. Coll., no. 3, p. 30, pl. 5, figs. 17-19, 1923.

Dev. (Helderbergian-Linden fm., Birdsong sh.): Swaynes Old Mill, Big Sandy River, Benton Co., Tenn.

Phimocrinus jouberti Oehlert.

Oehlert, Bull. Soc. Geol. France, (3) 10, p. 353, text fig., pl. 8, fig. 1, 1882.

Low. Dev.: Sable (Sarthe), France.

Phimocrinus laevis Schultze.

Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, Abth. 2, p. 141, pl. 3, fig. 6, 1867 (adv. pub. 1866, p. 29).

Dev. (Eifelian): Pelm, Kerpen, Germany.

Phimocrinus quinquangularis Schultze.

Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, abth. 2, p. 142, pl. 3, fig. 7, 1867 (adv. pub. 1866, p. 30).

Dev. (Eifelian): Gerolstein, Pelm, Kerpen, Germany.

Phoenicocrinites Austin and Austin = Carpocrinus.

Phoenicocrinus Springer = Carpocrinus.

Phyalocrinus Trautschold. See Phialocrinus.

Physetocrinus Meek and Worthen. Genotype: *Actinocrinus ventricosus* Hall.

Actinocrinitidae (Camerata). Low. Carb.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., pp. 158, 159, 1869; Geol. Surv. Ill., 5, p. 349, 1873.—Wachsmuth and Springer, Rev. Pal., pt. 2, pp. 96, 155 (270, 329), 1881; N. Amer. Crin. Cam., p. 593, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 170, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, pp. 197, 198, 1913.

Physetocrinus asper (Meek and Worthen).

Strotocrinus (*Physetocrinus*?) *asper* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 161, 1869; Geol. Surv. Ill., 5, p. 351, pl. 7, fig. 1, 1873.

Physetocrinus asper Wachsmuth and Springer, N. Amer. Crin. Cam., p. 596, pl. 63, fig. 7, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Physetocrinus copei (S. A. Miller).

Actinocrinus copei S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 4, p. 310, pl. 7, figs. 2-2b, 1881.

Physetocrinus copei Wachsmuth and Springer, N. Amer. Crin. Cam., p. 598, pl. 63, fig. 5, 1897.

Miss. (Lake Valley ls.): Lake Valley, N. Mex.

Physetocrinus costus (McCoy).

Actinocrinus costus (McCoy), Synop. Carb. Foss. Ireland, p. 181, pl. 26, fig. 2, 1844.—de Koninck and Lehon, Rech. Crin. Belg., p. 129, pl. 3, figs. 2a, b, pl. 4, figs. 1 a-d, 1853.

Low. Carb.: Monaster, Clavance, and Hook Head, Co. Wexford, Ireland (Mtn. Ls.); Tournai, Belgium (Tournaisian).

Physetocrinus dilatatus (Meek and Worthen).

Strotocrinus (*Physetocrinus*) *dilatatus* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 162, 1869; Geol. Surv. Ill., 5, p. 363, pl. 10, fig. 6, 1873.

Physetocrinus dilatatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 595, pl. 64, figs. 9, 10, 1897.

Miss. (Upper Burlington ls.): Burlington, Iowa.

Physetocrinus lobatus Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 599, pl. 63, figs. 8a, b, 1897.

Miss. (Lake Valley ls.): Lake Valley, N. Mex.

Physetocrinus ornatus (Hall).

Actinocrinus ornatus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 533, pl. 10, fig. 12, text fig. 86, 1858; Meek and Worthen, Geol. Surv. Ill., 5, p. 332, pl. 9, figs. 9, 10, 1873.

Physetocrinus ornatus Wachsmuth and Springer, Rev. Pal., pt. 2, p. 157 (331), 1881; N. Amer. Crin. Cam., p. 598, pl. 4, fig. 3, pl. 63, figs. 1-4, 1897.—Keyes, Geol. Surv. Mo., 4, pt. 1, p. 192, pl. 24, fig. 7, 1894.

Actinocrinus brittsi S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 290, pl. 6, figs. 1-4, 1894 (adv. pub. 1892, p. 36).

Actinocrinus senarius Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 25, 1860.

Miss.: Burlington, Iowa (Low. Burlington ls.); Sedalia, Mo. (Chouteau ls.).

- Physetocrinus sampsoni** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 10, p. 14, pl. 1, figs. 5-7, 1896.
Miss. (Chouteau ls.): Sedalia, Mo.
- Physetocrinus smalleyi** Weller.
Weller, Bull. Geol. Soc. Amer., 20, p. 286, pl. 11, figs. 1-3, 1909.
Miss. (Fern Glen ls.): Fern Glen, Mo.
- Physetocrinus ventricosus** (Hall).
Actinocrinus ventricosus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 595, pl. 11, figs. 6a, b, 1858; Suppl., pl. 2, fig. 5, 1860.
Physetocrinus ventricosus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., pp. 158, 159, 1869.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 593, pl. 4, fig. 2, pl. 5, fig. 14, pl. 63, fig. 6, pl. 64, figs. 1-8, 1897.
Actinocrinus ventricosus var. *cancellatus* Hall, Descr. N. Sp. Crin., Prelim. Not., p. 3, 1861.
Actinocrinus ventricosus var. *intermedius* Hall, Descr. N. Sp. Crin., Prelim. Not., p. 3, 1861.
Actinocrinus ventricosus var. *reticulatus* Hall, Jour. Boston Soc. Nat. Hist., 7, p. 279, 1861.
Actinocrinus subventricosus McChesney, Descr. N. Sp. Foss. Pal. Rocks, p. 21; Illustr., pl. 4, figs. 6a, b, 1860; Trans. Chicago Acad. Sci., 1, p. 16, pl. 4, figs. 6a, b, p. 17, text fig., 1868.
Miss. (Up. and Low. Burlington ls.): Burlington, Iowa; Sagetown, Ill.
- Pilidiocrinus** Wanner. Genotype: *P. permicus* Wanner.
Hypocrinidae (Inadunata-Fistulata). Permian.
Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, pp. 131, 138, 1937.
- Pilidiocrinus permicus** Wanner.
Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 139, pl. 9, figs. 27-29, 1937.
Permian: Basleo, Timor.
- Pionocrinus** Angelin = **Carpocrinus**.
- Pirasocrinus** Moore and Plummer. Genotype: *P. scotti* Moore and Plummer.
Poteriocrinidae (Inadunata-Fistulata). Penn.
Moore and Plummer, Univ. Texas Pub. No. 3945, p. 235, 1940.
- Pirasocrinus scotti** Moore and Plummer.
Moore and Plummer, Univ. Texas Pub. No. 3945, p. 238, pl. 5, figs. 2-4, text fig. 53, 1940.
Penn. (Shale below Kickapoo Falls ls. mem., Millsap Lake fm.): $\frac{1}{2}$ mile east from Kickapoo Falls, southwest of Dennis, Hood Co., Tex.
- Pisocrinus** de Koninck. Genotype: *P. pilula* de Koninck.
Pisocrinidae (Inadunata-Larviformia). Sil.
De Koninck, Bull. Acad. Roy. Belgique, (2) 4, p. 104, 1858.—Angelin, Icon. Crin. Suec., p. 20, 1878.—Zittel, Handb. Pal., 1, p. 348, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 3, pp. 172, 186 (96, 140), 1886.—Bather, Königl. Sv. Vet. Akad. Handl., 25, no. 2, pp. 21-25, 1893; Treatise Zool. (Lankester), pt. 3, p. 149, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 208, 1913.—Thomas, Proc. Iowa Acad. Sci., 22, p. 291, 1916.—Springer, Amer. Sil. Crin., p. 72, 1926.
Triacrinus Ringueberg (not Münster), Proc. Acad. Nat. Sci. Phila., p. 144, 1884. (Genotype: *T. pyriformis* Ringueberg.)
- Pisocrinus bacula** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 7, p. 79, pl. 5, figs. 23-26, 1895.—S. A. Miller, N. Amer. Geol. Pal., p. 749, fig. 1368, 1897.—Springer, Amer. Sil. Crin., p. 75, pl. 23, figs. 9-15b, 1926.
Sil. (Niagaran-Laurel ls.): St. Paul, Ind.
- Pisocrinus benedicti** S. A. Miller.
S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 639, pl. 6, figs. 13-16, 1892 (adv. pub. 1891, p. 29).—Springer, Amer. Sil. Crin., p. 77, pl. 24, figs. 28-36, 1926.

- Sil. (Niagaran): Marion, Wabash, etc., Ind., and Lemont, Ill. (Racine dol.); St. Paul, Ind. (Laurel ls.); Ste. Genevieve Co., Mo. (Bainbridge ls.); Decatur Co., Tenn. (Beech River fm.).
- Pisocrinus campana** S. A. Miller.
S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 642, pl. 2, figs. 4, 5, 1892 (adv. pub. 1891, p. 32).—Springer, Amer. Sil. Crin., p. 76, pl. 24, figs. 6–27, 1926.
- Sil. (Niagaran): Wabash, etc., Ind. (Racine dol.): St. Paul, Ind. (Laurel ls.); Decatur Co., Tenn. (Beech River fm.).
- Pisocrinus flagellifer* Angelin = *Pisocrinus pilula*.
- Pisocrinus gemmiformis** S. A. Miller.
S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 2, p. 113, pl. 9, figs. 6, 6a–c, 1879; 17th Rep. Geol. Surv. Ind., p. 636, pl. 6, figs. 10–12, 24, 25, 1892 (adv. pub. 1891, p. 26).—Springer, Amer. Sil. Crin., p. 74, pl. 23, figs. 1–8a, 1926.
- Sil.: Ripley Co., etc., Ind. (Osgood sh.); St. Paul, Ind. (Laurel ls.); Lemont, Ill. (Racine dol.); Island of Gotland, (Gotlandian).
- Pisocrinus glabellus** Rowley.
Rowley, Amer. Geol., 34, p. 270, pl. 16, figs. 10–12, 1904.
Sil. (Niagaran-Bainbridge ls.): Near St. Marys, Ste. Genevieve Co., Mo.
- Pisocrinus globosus** (Ringueberg).
Triacrinus globosus Ringueberg, Proc. Acad. Nat. Sci. Phila., p. 146, pl. 3, fig. 2, 1884.
Pisocrinus globosus S. A. Miller, N. Amer. Geol. Pal., p. 269, 1889.—Springer, Amer. Sil. Crin., p. 80, pl. 24, fig. 38, 1926.
- Sil. (Up. Clinton-Irondequoit ls.): Lockport, N. Y.
- Pisocrinus globosus*? Rowley = *P. sphaericus*.
- Pisocrinus gorbyi** S. A. Miller.
S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 640, pl. 6, figs. 17, 20, (not figs. 21–23), 1892 (adv. pub. 1891, p. 30).—Springer, Amer. Sil. Crin., p. 78, pl. 23, figs. 40–45, 1926.
- Sil. (Niagaran): Wabash and Madison Cos., Ind. (Racine dol.); Flatwoods and Rise Mill, Perry Co., Tenn. (Lobelville ls.); Ste. Genevieve Co., Mo. (Bainbridge ls.).
- Pisocrinus gorbyi* S. A. Miller (in part) = *P. quinquelobus*.
- Pisocrinus granulatus** Rowley.
Rowley, Amer. Geol., 34, p. 269, pl. 16, figs. 1–3, 1904.—Springer, Amer. Sil. Crin., p. 75, pl. 23, figs. 37–39a, 1926.
- Sil. (Niagaran): Near St. Marys, Ste. Genevieve Co., Mo. (Bainbridge ls.); Decatur Co., Tenn. (Dixon ls.).
- Pisocrinus milligani* Miller and Gurley = *P. quinquelobus*.
- Pisocrinus ollula** Angelin.
Angelin, Icon. Crin. Suec., p. 21, pl. 4, figs. 2a, c, d, 1878.—Bather, Königl. Sv. Vet. Akad. Handl., 25, no. 2, p. 32, pl. 1, figs. 12–19, 1893.—Springer, Amer. Sil. Crin., p. 80, pl. 25, figs. 7–10, 1926.
- Sil.: Klinteberg, Petesvik, etc., Island of Gotland (Gotlandian); Rise Mill, Perry Co., Tenn. (Niagaran-Lobelville ls.).
- Pisocrinus ornatus* de Koninck = *P. pilula*.
- Pisocrinus pilula** de Koninck.
De Koninck, Bull. Acad. Roy. Belgique, 4, p. 106, figs. 8–11, 1858. (Translation in The Geologist, 1, p. 183, 1858).—Bather, Königl. Sv. Vet. Akad. Handl., 25, no. 2, p. 27, pl. 1, figs. 1–11, 1893.—Springer, Amer. Sil. Crin., p. 60, pl. 25, figs. 1–6, 1926.
- Pisocrinus flagellifer* Angelin, Icon. Crin. Suec., p. 21, pl. 4, figs. 1a–e, 1878.—Weller, Chicago Acad. Sci., Nat. Hist. Surv. Bull. 4, pt. 1, p. 31, text fig. 13, p. 40, fig. 28, 1900.—Springer, Zittel-Eastman Textb. Pal., p. 208, fig. 309–a, 1913.

Pisocrinus ornatus de Koninck, Bull. Acad. Roy. Belgique, (2) 4, p. 107, pl. 2, figs. 12, 13, 1858. (Translation in The Geologist, 1, p. 183, 1858).

Sil.: Dudley, England (Wenlock ls.); Petesvik, etc., Island of Gotland (Gotlandian).

***Pisocrinus pocillum* Angelin.**

Angelin, Icon. Crin. Suec., p. 21, pl. 4, figs. 3, 3a, 1878.—Bather, Königl. Sv. Vet. Akad. Handl., 25, no. 2, pp. 33, 34, figs. 8-11, pl. 1, figs. 20-23, 1893.—Springer, Amer. Sil. Crin., p. 80, pl. 25, figs. 11, 11a, 1926.

Sil. (Gotlandian): Island of Gotland. (Eksta).

***Pisocrinus pyriformis* (Ringueberg).**

Triacrinus pyriformis Ringueberg, Proc. Acad. Nat. Sci. Phila., p. 145, pl. 3, fig. 1, 1884.

Pisocrinus pyriformis S. A. Miller, N. Amer. Geol. Pal., p. 270, 1889.—Springer, Amer. Sil. Crin., p. 80, pl. 24, fig. 37, 1926.

Sil. (Up. Clinton-Irondequoit ls.): Lockport, N. Y.

***Pisocrinus quinquelobus* Bather.**

Bather, Königl. Sv. Vet. Acad. Handl., 25, no. 2, p. 27, 1893.—Springer, Amer. Sil. Crin., p. 77, pl. 23, figs. 16-29, 1926.

Pisocrinus gorbyi S. A. Miller (part), 17th Rep. Ind. Geol. Nat. Res., p. 640, pl. 6, figs. 21-23 (not figs. 17, 20), 1892 (adv. pub. 1891, p. 30).

Haplocrinites hemispherica Troost, Amer. Jour. Sci. and Arts, 8, ser. 2, p. 420, 1849.

Pisocrinus milligani Miller and Gurley, Ill. St. Mus., Bull. 7, p. 80, pl. 5, fig. 27, 1895.

Sil. (Niagaran): Decatur Co., Tenn. (Beech River fm.); Perry Co., Tenn. (Lobelville ls.); Romeo, Ill. (Racine dol.); Ste. Genevieve Co., Mo. (Bainbridge ls.).

***Pisocrinus sphaericus* Rowley.**

Rowley, Amer. Geol., 34, p. 270, pl. 16, figs. 8, 9 (as *P. globosus*?), 1904.

Pisocrinus sphaericus Springer, Amer. Sil. Crin., p. 79, pl. 23, figs. 30-36, 1926.

Sil. (Niagaran): Near St. Marys, Ste. Genevieve Co., Mo. (Bainbridge ls.); Perry, Decatur, and Wayne Cos., Tenn. (Beech River fm. and Lobelville ls.).

***Pisocrinus tennesseensis* (Roemer).**

Synbathocrinus tennesseensis Roemer, Sil. Fauna West Tenn., p. 55, pl. 4, figs. 6 a, b, 1860.

Pisocrinus tennesseensis Bather, Königl. Sv. Vet. Akad. Handl., 25, p. 23, 1893.—Springer, Amer. Sil. Crin., p. 79, pl. 24, figs. 1-5, 1926.

Synbathocrinites tennesseae Troost (part), Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Synbathocrinus tennesseensis Wood (part), U. S. Nat. Mus., Bull. 64, pp. 26, 27, 1909.

Sil. (Niagaran): Decatur Co., Tenn. (Beech River fm. and Dixon ls.); Missouri (Bainbridge ls.).

***Pisocrinus?* *yassensis* Etheridge.**

Etheridge, Rec. Australian Mus., 5, no. 5, p. 289, pl. 37, figs. 1-14, 1904.

Sil.: Limestone Creek and Hallon's Corner, near Yass, Australia.

***Pisocrinus?* *yassensis lobatus* Etheridge.**

Etheridge, Rec. Australian Mus., 5, no. 5, p. 292, pl. 37, fig. 15, 1904.

Sil.: Limestone Creek, near Yass, Australia.

***Plagiocrinus* Wanner. Genotype: *P. torynocrinoides* Wanner.**

Lecanocrinidae (Flexibilia). Permian.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 110, 1924.

Plagiocrinus infratectus Wanner.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia, p. 38, pl. 3, figs. 15-19, pl. 4, fig. 1, p. 39, text fig. 20, p. 40, text fig. 21, 1930.

Permian: Basleo, Timor.

Plagiocrinus jaekeli Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 113, text fig. 5, pl. 6, figs. 3-6, 1924.

Permian: Basleo, Timor.

Plagiocrinus torynocrinoides Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 111, text fig. 4, p. 112, pl. 6, fig. 17, 1924.

Permian: Basleo, Timor.

Platycrinites Miller. Genotype: *P. laevis* Miller.

Platycrinitidae (Adunata). Dev.—Permian.

Miller, Nat. Hist. Crin., pp. 15, 73, 1821.—Goldfuss, Petref. Germ., 1, p. 188, 1833; Nova Acta Leop., 19, p. 343, 1839.—Austin and Austin, Ann. Mag. Nat. Hist., 10, p. 109, 1842; Mon. Rec. Foss. Crin., p. 6, 1843.

Centrocrinus Austin and Austin, Mon. Rec. and Foss. Crin., pp. 6, 25, 1843.—Zittel, Handb. Pal., 1, p. 379, 1879. (Genotype: *Platycrinites gigas* Gilbertson.)

Edwardsocrinus d'Orbigny, Prodr. Pal. Strat., 1, p. 157, 1849 (*Edwardsocrinus* by error): Cour. Element. Pal. Geol., 2, p. 145, 1851.—Bather, Treatise Zool. (Lankester), pt. 3, p. 157, 1900. (Genotype: *Platycrinus ornatus* McCoy.)

Medusacrinus Austin, Ann. Mag. Nat. Hist., (4) 16, p. 91, 1875.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 233 (407), 1881. (Genotype: *Platycrinites mucronatus* Austin and Austin.)

Platycrinus Phillips, Geol. Yorkshire, 2, p. 294, 1836.—Müller, Monatsber. Berlin Akad., 1, p. 207, 1841.—McCoy, Syn. Char. Carb. Foss. Ireland, ed. 2, p. 175, 1844.—Hall, Geol. Rep. Iowa, 1, pt. 2, p. 525, 1858.—Meek and Worthen, Geol. Surv. Ill., 2, p. 170, 1866.—Zittel, Handb. Pal., 1, p. 364, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 65 (249), 1881; N. Amer. Crin. Cam., p. 647, 1897.—Grabau, Bull. Buffalo Soc. Nat. Sci., 6, p. 144, 1899.—Bather, Treatise Zool. (Lankester), pt. 3, p. 157, 1900.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 139, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 190, 1913.—Wright, Geol. Mag., vol. 75, p. 267, 1939.

Platycrinites absentivus (S. A. Miller).

Platycrinus absentivus S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 15, pl. 1, fig. 15, 1891.—Peck and Keyte, Univ. Mo. Studies, 13, pt. 4, p. 91, pl. 31, figs. 2-4, 1938.

Platycrinus pettisensis Miller and Gurley, Ill. St. Mus., Bull. 7, p. 73, pl. 4, figs. 24, 25, 1895.

Miss. (Chouteau ls.): 6 miles southeast of Sedalia, Mo.

Platycrinites acclivus (S. A. Miller).

Platycrinus acclivus S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 12, pl. 1, figs. 9, 10, 1891.

Miss. (Chouteau ls.): Sedalia, Mo.

Platycrinites aequiternus (S. A. Miller).

Platycrinus aequiternus S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 14, pl. 1, fig. 13, 1891.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 658, pl. 71, fig. 12, 1897.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 750, fig. 1371, 1897.—Peck and Keyte, Univ. Mo. Studies, 13, pt. 4, p. 92, pl. 31, fig. 1, 1938.

Miss. (Chouteau ls.): Sedalia, Mo.

Platycrinites allophyllus (S. A. Miller).

Platycrinus allophyllus S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 9, pl. 1, figs. 3, 4, 1891.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 685, pl. 71, fig. 17, 1897.—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 92, pl. 30, figs. 23, 24, 1938.

Miss. (Chouteau ls.): Near Sedalia, Mo.

Platycrinites altidorsatus (Rowley and Hare).

Platycrinus altidorsatus Rowley and Hare, Kansas City Sci., 5, p. 97, pl. 2, fig. 2, 1891.

Miss. (Up. Burlington ls.): Louisiana, Mo.

Platycrinites amabilis (S. A. Miller).

Platycrinus amabilis S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 19, pl. 2, figs. 9, 10, 1891.

Miss. (Chouteau ls.): Sedalia, Mo.

Platycrinites americanus (Owen and Shumard).

Platycrinus americanus Owen and Shumard, Jour. Acad. Nat. Sci. Phila., 2, pt. 2, p. 89, pl. 11, figs. 1a, b, 1852; Rep. Geol. Surv. Iowa, Wis. and Minn., p. 594, pl. 5-B, figs. 1a, b, 1852.—Keyes, Geol. Surv. Mo., 4, p. 199, pl. 25, figs. 2a, b, 1894.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 686, pl. 75, figs. 10-13c, 1897.

Platycrinus broadheadi S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 21, pl. 2, fig. 15, 1891.

Platycrinus truncatus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 537, text fig. 59, 1858.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Platycrinites anaglypticus Goldfuss = *Hexacrinites anaglypticus*.

Platycrinites anguliferus (Whidborne).

Platycrinus? anguliferus Whidborne, Mon. Dev. Fauna S. England, 3, pt. 3, p. 223, pl. 37, figs. 8-12, 1899.

Low. Carb.: Top Orchard, Roborough, Pilton, South England.

Platycrinites ann dixonii Troost = *Cococrinus bacca*.

Platycrinites annosus (S. A. Miller).

Platycrinus annosus S. A. Miller, Mo. Geol. Surv., Bull. 4, p. 14, pl. 1, fig. 12, 1891; N. Amer. Geol. Pal., 2d App., p. 750, fig. 1373, 1897.—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 90, pl. 30, figs. 6-8, 1938.

Miss. (Chouteau ls.): Near Sedalia, Mo.

Platycrinites antheliontes Austin and Austin.

Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 109, 1842; 11, 1843, p. 199; Mon. Rec. Foss. Crin., p. 27, pl. 3, figs. 3 k-r, 1843.

Low. Carb.: Mendip Hills and Yorkshire, England.

Platycrinites anulus (Quenstedt).

Platycrinus anulus Quenstedt, Petref. Deutsch., 4, p. 551, pl. 109, fig. 18, 1876.

Low. Carb.: Ireland.

Platycrinites aqualis (Hall).

Platycrinus aqualis Hall, Descr. N. Sp. Crin., Prelim. Not., p. 17, 1861.

Platycrinus aequalis (by error) Wachsmuth and Springer, N. Amer. Crin. Cam., p. 674, pl. 71, figs. 4a, b, 5, 1897.

Platycrinus batiola S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 22, pl. 3, figs. 1, 2, 1891.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Platycrinites arenosus (de Koninck and Lehon).

Platycrinus arenosus de Koninck and Lehon, Rech. Crin. Carb. Belg., p. 182, pl. 5, fig. 7, 1854.

Low. Carb. (Tournaisian): Tournai, Belgium.

Platycrinites armatus (Münster).

Platycrinus armatus Münster, Beitr. Petref., 1, p. 5, 1839.

Low. Carb. (Tournaisian): Tournai, Belgium.

Platycrinites asper (Meek and Worthen).

Platycrinus (Pleurocrinus) asper Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 129, 1861; Geol. Surv. Ill., 3, p. 468, pl. 18, fig. 9, text fig., 1868.

Platycrinus asper Wachsmuth and Springer, N. Amer. Crin. Cam., p. 690, pl. 68, figs. 9a, b, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Platycrinites augusta (Slocum).

Platycrinus augusta Slocum, Field Col. Mus., Geol. Ser., 2, no. 10, p. 292, pl. 86, figs. 5-7, 1907.

Sil. (Niagaran-Racine dol.): Near Lemont, Ill.

Platycrinites austinianus (deKoninck and Lehon).

Platycrinus austinianus deKoninck and Lehon, Rech. Crin. Carb. Belg., p. 169, pl. 5, figs. 3a, b, 1854.

Platycrinus trigintidactylus Austin and Austin (part), Mon. Rec. and Foss. Crin., p. 50, pl. 3, fig. 1a (not 1 b-h), 1843.

Low. Carb.: Tournai, Belgium (Tournaisian); Hook Head, Co. Wexford, Ireland (Mtn. Ls.).

Platycrinites balladoolensis (Wright).

Platycrinus balladoolensis Wright, Geol. Mag., 75, p. 280, pl. 9, figs. 10, 12, 1938.

Low. Carb. (Dolomite ls., D₂): Balladoola, Isle of Man.

Platycrinites bedfordensis (Hall).

Platycrinus bedfordensis Hall, Geol. Surv. Ohio, Pal., 2, pt. 2, p. 161, pl. 13, fig. 4, 1878.

Miss. (Waverlyan-Cuyahoga sh.): Bedford, Ohio.

Platycrinites blairi (S. A. Miller).

Platycrinus blairi S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 21, pl. 2, figs. 13, 14, 1891; N. Amer. Geol. Pal., 2d App., p. 750, fig. 1374, 1897.

Miss. (Chouteau ls.): Sedalia, Mo.

Platycrinites bollandensis (Wright).

Platycrinus bollandensis Wright, Geol. Mag., 75, p. 281, pl. 11, figs. 11, 13, 1938.

Low. Carb.: Bolland, England.

Platycrinites bonoensis (White).

Platycrinus bonoensis White, Proc. Acad. Nat. Sci. Phila., 30, p. 30, 1878; 12th Rep. U. S. Geol. Surv. Terr., p. 160, pl. 40, fig. 5a, 1883 (adv. pub. 1880).—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 683, pl. 69, fig. 6, 1897.—Beede, 30th Rep. Ind. Geol. Surv., p. 1255, pl. 13, fig. 2, 1906.

Platycrinus aeternalis S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 11, pl. 1, fig. 8, 1891.

Platycrinus caducus S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 267, pl. 2, fig. 13, 1894 (adv. pub. 1892).

Miss. (Keokuk ls.): Bono, Ind.

Platycrinites boonvillensis (S. A. Miller).

Platycrinus boonvillensis S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 8, pl. 1, figs. 1, 2, 1891.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 681, pl. 72, figs. 3a, b, 9, 1897.—Beede, 30th Rep. Geol. Nat. Res. Ind., p. 1256, pl. 14, figs. 5-5b, 1906.

Miss.: Boonville, Mo. (Warsaw ls.); Spergen Hill, Ind. (Spergen ls.).

Platycrinites ? bozemanensis (Miller and Gurley).

Platycrinus bozemanensis Miller and Gurley, Ill. St. Mus., Bull. 12, p. 42, pl. 3, fig. 5, 1897.

Dichocrinus bozemanensis Laudon, Univ. Iowa Studies, 15, no. 2, p. 52, pl. 6, figs. 1, 2, 1933.

Miss.: Bozeman, Bridger Mts. and Spring Canyon, Mont. (Madison ls.); Gilmore City, Iowa. (Kinderhook-Gilmore City fm.).

Platycrinites brevinodus (Hall).

Platycrinus brevinodus Hall, Descr. N. Sp. Crin., p. 4; Jour. Boston Soc. Nat. Hist., p. 236, 1861; N. Y. St. Mus., Bull. 1, pl. 2-A, fig. 5, 1872.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 688, pl. 70, figs. 2, 5, 6a, b, 1897.

Miss.: Burlington, Iowa (Up. Burlington ls.); Indian Creek, Ind. (Keokuk ls.).

Platycrinites brevis Goldfuss = *Hexacrinites brevis*.

Platycrinites bridgerensis (Miller and Gurley).

Platycrinus bridgerensis Miller and Gurley, Ill. St. Mus., Bull. 12, p. 43, pl. 3, fig. 8, 1897.

Miss. (Madison ls.): Bridger Mt., near Bozeman, Mont.

Platycrinites brittsi (S. A. Miller).

Platycrinus brittsi S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 23, pl. 3, figs. 3, 4, 1891.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 659, pl. 71, fig. 10, 1897.—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 93, pl. 30, figs. 4, 5, 1938.

Miss. (Chouteau ls.): Near Sedalia, Mo.

Platycrinites burlingtonensis (Owen and Shumard).

Platycrinus burlingtonensis Owen and Shumard, Jour. Acad. Nat. Sci. Phila., 2, pt. 1, p. 60, pl. 7, fig. 5, 1850; Rep. Geol. Surv. Iowa, Wis., Minn., p. 589, pl. 5-A, fig. 5, 1852.—McChesney, Trans. Chicago Acad. Sci., 1, p. 4, pl. 4, fig. 3, 1868.—Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, pl. 8, fig. 6, pl. 9, fig. 6, 1885; N. Amer. Crin. Cam., p. 653, pl. 69, figs. 3 a-1, 1897.

Platycrinites burlingtonensis Meek and Worthen, Geol. Surv. Ill., 5, p. 452, pl. 3, figs. 6 a-c, 1873.

Platycrinus exsertus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 549, text fig., 1858.

Platycrinus inornatus McChesney, New Sp. Foss. Pal. Rocks, p. 7, 1860.

Platycrinus lautus S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 17, pl. 2, figs. 3, 4, 1891.

Platycrinus nodobrachiatus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 542, text fig., 1858.

Platycrinus nucleiformis Hall, Geol. Surv. Iowa, 1, pt. 2, p. 540, text fig., 1858.

Miss. (Low. Burlington ls.): Burlington, Iowa, and Hannibal, Mo.

Platycrinites calyculus (Hall).

Platycrinus calyculus Hall, Descr. N. Sp. Crin., p. 16, 1861.

Miss. (Burlington ls.): Burlington, Iowa.

Platycrinites canaliculatus (Hall).

Platycrinus canaliculatus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 539, 1858.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 689, pl. 75, figs. 7a, b, 1897.

Miss. (Up. and Low. Burlington ls.): Burlington, Iowa.

Platycrinites casula (Miller and Gurley).

Platycrinus casula Miller and Gurley, Ill. St. Mus., Bull. 7, p. 76, pl. 4, figs. 37-40, 1895.—S. A. Miller, N. Amer. Geol. Pal., p. 750, fig. 1375, 1897.

Miss. (Chouteau ls.): Sedalia, Mo.

Platycrinites cavus (Hall).

Platycrinus cavus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 527, pl. 8, figs. 1a, b, 1858.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 715, pl. 67, figs. 8a, b, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Platycrinites chouteauensis (S. A. Miller).

Platycrinus chouteauensis S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 268, pl. 2, figs. 14, 15, 1894 (adv. pub. 1892, p. 14).—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 94, pl. 30, figs. 2, 14, 15, 1938.

Platycrinus missouriensis Miller and Gurley, Ill. St. Mus., Bull. 7, p. 73, pl. 4, figs. 22, 23, 1895.

Miss. (Chouteau ls.): Sedalia, Mo.

Platycrinites clinatus (Miller and Gurley).

Platycrinus clinatus Miller and Gurley, Ill. St. Mus., Bull. 7, p. 74, pl. 4, figs. 26-30, 1895.—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 95, pl. 30, figs. 18, 19, 1938.

Miss. (Chouteau ls.): Sedalia, Mo.

Platycrinites colletti (S. A. Miller).

Platycrinus colletti S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 268, pl. 2, figs. 16, 17, 1894 (adv. pub. 1892, p. 14).—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 96, pl. 30, figs. 16, 17, 1938.

Miss. (Chouteau ls.): Sedalia, Mo.

Platycrinites concinnulus (Miller and Gurley).

Platycrinus concinnulus (Miller and Gurley, Ill. St. Mus., Bull. 9, p. 63, pl. 4, figs. 16-18, 1896.

Miss. (Chouteau ls.): Sedalia, Mo.

Platycrinites concinnus (S. A. Miller).

Platycrinus concinnus S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 18, pl. 2, figs. 5, 6, 1891.

Miss. (Chouteau ls.): Sedalia, Mo.

Platycrinites conglobatus (Wright).

Platycrinus conglobatus Wright, Geol. Mag., 74, p. 391, pl. 13, figs. 13, 14, pl. 14, figs. 8-10, text fig. 3, 1937; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 9, pl. 12, figs. 7-10, 11-14, text fig. 3, 1939.

Low. Carb. (Low. Ls. gr.): Invertiel and Roscobie, Scotland.

Platycrinites contractus (Gilbertson).

Platycrinus contractus Gilbertson, in Phillips, Geol. Yorkshire, 2, p. 204, pl. 3, fig. 25, 1836.

Low. Carb. (Mtn. Ls.): Bolland, England; Craggenore, Ireland.

Platycrinites contritus (Hall).

Platycrinus contritus Hall, 17th Ann. Rep. Regents Univ., N. Y. State Mus., p. 54, 1864 (Prelim. not., 1863, p. 5).—Hall and Whitfield, Geol. Surv. Ohio, 2, pt. 2, Pl., p. 166, pl. 11, fig. 4, 1875.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 667, pl. 71, fig. 8, 1897.

Miss. (Waverlyan-Cuyahoga sh.): Summit, Richfield Co., Ohio.

Platycrinites corbuliformis (Rowley and Hare).

Platycrinus corbuliformis Rowley and Hare, Kansas City Sci., 5, p. 113, pl. 3, figs. 1, 2, 1891.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 657, pl. 71, figs. 11a, b, 1897.

Miss. (Low. Burlington ls.): Louisiana, Mo.

Platycrinus coronatus Goldfuss = *Pleurocrinus coronatus*.

Platycrinites corporiculus (Ringueberg).

Platycrinus corporiculus Ringueberg, Bull. Buffalo Soc. Nat. Sci., 5, p. 12, pl. 1, fig. 9, 1886.

Sil. (Niagaran-Rochester sh.). Lockport, N. Y.

Platycrinites cortina (Miller and Gurley).

Platycrinus cortina Miller and Gurley, Ill. St. Mus., Bull. 5, p. 40, pl. 3, figs. 15, 16, 1894.—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 97, pl. 30, figs. 9, 10, 1938.

Miss. (Chouteau ls.): Sedalia, Mo.

Platycrinites crassiconus (Wright).

Platycrinus crassiconus Wright, Geol. Mag., 74, p. 392, pl. 13, figs. 15, 16, pl. 15, fig. 15, text fig. 4, 1937; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 10, pl. 12, figs. 15-19, text fig. 4, 1939.

Low. Carb. (Low. Ls. gr.): Invertiel, Carlops, Roscobie, Scotland.

Platycrinites cruciatus (Quenstedt).

Platycrinus cruciatus Quenstedt, Petref. Deutsch., 4, p. 554, pl. 109, fig. 36, 1876.

Low. Carb. (Tournaisian): Tournai, Belgium.

Platycrinites curryvillensis (Rowley and Hare).

Platycrinus curryvillensis Rowley and Hare, Kansas City Sci., 5, p. 98, pl. 2, fig. 5, 1891.—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 98, pl. 30, figs. 11, 12, 1938.

Miss. (Chouteau ls.): 3 miles east Curryville, Mo.

Platycrinites davisii (Wachsmuth and Springer).

Platycrinus davisii Wachsmuth and Springer, N. Amer. Crin. Cam., p. 684, pl. 70, fig. 14, 1897.

Miss. (Low. Burlington ls.): Hannibal, Mo.

Platycrinites decagonus Goldfuss = *Storthingocrinus decagonus*.

Platycrinites decoratus (Roemer).

Platycrinus decoratus Roemer, Palaeontographica, 13, p. 227, 1866.

Dev. (Givetian-Stringocephalus ls.): Tannechener, Germany.

Platycrinites depressus Goldfuss.

Goldfuss, Petref. Germ., 1, p. 188, pl. 58, figs. 1A, B, 1831.

Low. Carb. (Viséan): Rattingen, Germany.

Platycrinites devonicus (Rowley).

Platycrinus devonicus Rowley, in Greene, Cont. Ind. Pal., 1, pt. 12, p. 114, pl. 35, figs. 10, 11, 1903.

Dev. (Onondaga-Jeffersonville ls.): Falls of the Ohio.

Platycrinites diadema (McCoy).

Platycrinus diadema McCoy, Ann. Mag. Nat. Hist., (2) 3, p. 246, 1849.—Wright, Geol. Mag., 75, p. 275, pl. 11, figs. 1, 2, 4-10, 1938.

Low. Carb. (Mt. Ls.): Cleenish, Co. Fermanagh, Ireland; Clitheroe, England.

Platycrinites directus (Wright).

Platycrinus directus Wright, Geol. Mag., 75, p. 280, pl. 9, figs. 7, 9, 1938.

Low. Carb.: Balladoola, Isle of Man.

Platycrinites discoideus (Owen and Shumard).

Platycrinus discoideus Owen and Shumard, Jour. Acad. Nat. Sci. Phila., (2) 2, pt. 1, p. 58, pl. 7, figs. 1a, b, 1850; U. S. Geol. Surv. Iowa, Wis., Minn., p. 588, pl. 5-A, figs. 1a, b, 1852.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 713, pl. 3, fig. 17, pl. 66, figs. 10 a-c, 1897.

Platycrinus corrugatus Owen and Shumard, Jour. Acad. Nat. Sci. Phila., (2) 2, pt. 1, p. 59, pl. 7, figs. 2 a-c, 1850; U. S. Geol. Surv. Iowa, Wis., Minn., p. 588, pl. 5, figs. 2 a-e, 1852.

Platycrinus multibrachiatus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 135, 1861.

Platycrinus pulcellus S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 11, pl. 1, fig. 7, 1891.

Platycrinus shumardianus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 532, pl. 8, fig. 5, 1858.

Platycrinus striobrachiatus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 287, 1861.—Hall, N. Y. St. Mus., Bull. 1, pl. 2-A, figs. 2, 3, 1872.—Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 1, p. 4, pl. 3, figs. 2-4, 1893.

Miss.: Burlington, Iowa and Marion Co., Mo. (Low. Burlington ls.); Sedalia, Mo. (Chouteau ls.).

Platycrinites dodgei (Rowley).

Platycrinus dodgei Rowley, Mo. Bur. Geol. Mines, 8, p. 68, pl. 16, figs. 42-48, 1908.

Miss. (Louisiana ls.): Louisiana, Mo.

Platycrinites echinatus Sandberger.

Sandberger, Neues Jahrb. Min., Geol., Pal., p. 435, 1845.

Dev.: Eifel, Germany.

Platycrinites elegans (Hall).

Platycrinus elegans Hall, Jour. Boston Soc. Nat. Hist., p. 285, 1861; N. Y. St. Mus., Bull. 1, pl. 2-A, fig. 15, 1872.—Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 1, p. 3, fig. 1, 1895.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Platycrinites elongatus Goldfuss = *Hexacrinites elongatus*.

Platycrinites eminulus (Hall).

Platycrinus eminulus Hall, Descr. N. Sp. Crin., p. 17, 1861.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 712, pl. 68, figs. 13 a-c, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Platycrinites excavatus (Hall).

Platycrinus excavatus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 287; Prelim. Descr. N. Sp. Crin., p. 4, 1861; N. Y. St. Mus. Nat. Hist., Bull. 1, pl. 2-A, fig. 1, 1872.—Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 2, p. 3, pl. 3, fig. 5, 1893.—?Wachsmuth and Springer, N. Amer. Crin. Cam., p. 718, pl. 66, fig. 4, 1897.

Platycrinus sulcatus S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 16, pl. 2, fig. 2, 1891.

Miss.: Burlington, Iowa (Up. Burlington ls.); Sedalia, Mo. (Chouteau ls.).

Platycrinites expansus (McCoy).

Platycrinus expansus McCoy, Syn. Char. Carb. Foss. Ireland, p. 175, pl. 25, figs. 18, 19, 1844.—Roemer, Leth. Geogn. 1, pt. 2, p. 245, pl. 4, figs. 14a, b, 1855.

Low. Carb. (Mtn. Ls.): Ireland.

Platycrinites exsculptus Goldfuss = *Hexacrinites exsculptus*.

Platycrinites faberi (S. A. Miller).

Platycrinus faberi S. A. Miller, N. Amer. Geol. Pal., p. 270, fig. 393, 1889.

Miss. (St. Louis or Chester gr.): Scott Co., W. Va.

Platycrinites formosus (Miller and Gurley).

Platycrinus formosus Miller and Gurley, Ill. St. Mus., Bull. 7, p. 72, pl. 4, figs. 20, 21, 1895.—Miller, N. Amer. Geol. Pal., 2d App., p. 750, fig. 1376, 1897.

Miss. (Chouteau ls.): Sedalia, Mo.

Platycrinites formosus approximatus (Miller and Gurley).

Platycrinus formosus var. *approximatus* Miller and Gurley, Ill. St. Mus., Bull. 9, p. 60, pl. 4, figs. 8-11, 1896.

Miss. (Chouteau ls.): Sedalia, Mo.

Platycrinites geometricus (Wachsmuth and Springer).

Platycrinus geometricus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 697, pl. 67, fig. 10, pl. 68, fig. 8, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Platycrinites germanus (Miller and Gurley).

Platycrinus germanus Miller and Gurley, Ill. St. Mus., Bull. 7, p. 78, pl. 4, figs. 46, 47, 1895.—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 99, pl. 30, fig. 3, 1938.

Miss. (Chouteau ls.): Sedalia, Mo.

Platycrinites gerolsteinensis Steininger.

Steininger, Verst. Uebergangs-Geb. Eifel, p. 21, 1849.

Dev. (Eifelian): Gerolstein, Eifel, Germany.

Platycrinites gigas (Gilbertson).

Platycrinus gigas Gilbertson, in Phillips, Geol. Yorkshire, 2, p. 204, pl. 3, figs. 22, 23, 1836.—Austin and Austin, Mon. Rec. and Foss. Crin., p. 39, pl. 4, figs. 1 a-c, 1844.—Wright, Geol. Mag., 75, p. 272, pl. 9, figs. 2, 5, 8, 1938.

Low. Carb.; Bolland, Yorkshire, Clitheroe, Eng. and Ireland (Mt. Ls.); Belgium (Tournaisian); Isle of Man.

Platycrinites glyptus (Hall).

Platycrinus glyptus Hall, Descr. N. Sp. Crin., p. 16, 1861.—Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, pl. 7, fig. 5, 1885; N. Amer. Crin. Cam., p. 693, pl. 67, figs. 4, 5, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Platycrinites goldfussi (Münster).

Platycrinus goldfussi Münster, Beitr. Petref., 1, p. 2, pl. 1, figs. 2a, b, 1839.

Dev. (Eifelian): Eifel, Germany.

Platycrinites gorbyi (S. A. Miller).

Platycrinus gorbyi S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 15, pl. 1, fig. 14, 1891.—
Wachsmuth and Springer, N. Amer. Crin. Cam., p. 715, pl. 68, fig. 15, 1897.

Miss.: Sedalia, Mo. (Chouteau ls.); Burlington, Iowa (Low. Burlington ls.).

Platycrinites granosus (de Koninck and Lehon).

Platycrinus granosus de Koninck and Lehon, Rech. Crin. Carb. Belg., p. 183, pl. 6,
figs. 6 a-c, 1854.

Low. Carb. (Tournaisian): Tournai, Belgium.

Platycrinites granulatus Miller.

Miller, Nat. Hist. Crin., p. 82, pl. figs. 1-3, 1821.

Encrinites granulatus Schlotheim, Nach. Petref., 3, p. 94, pl. 26, figs. 3 a-c, 1823.

Platycrinus granulatus Austin and Austin, Mon. Rec. and Foss. Crin., p. 33, pl. 3,
figs. 2 i-o, 1844.

Low. Carb.: Mendip Hills, Yorkshire, and Bolland, Eng., and Hook Head, Co.
Wexford, Ireland (Mtn. Ls.); Belgium (Tournaisian).

Platycrinites graphicus (Hall).

Platycrinus graphicus Hall, 17th Ann. Rep. Regents Univ. St. N. Y., Prelim. Not.,
p. 55, 1865.—Hall and Whitfield, Geol. Surv. Ohio, 2, pt. 2, Pal., p. 166, pl. 11,
fig. 2, 1875.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 672, pl. 71, fig.
7, 1897.

Platycrinus richfieldensis Hall and Whitfield, Geol. Surv. Ohio, 2, pt. 2, Pal., p. 167,
pl. 2, fig. 1, 1875.

Miss. (Waverlyan-Cuyahoga sh.): Richfield, Summit Co., Ohio.

Platycrinites guttifer (Schmidt).

Platycrinus guttifer Schmidt, Abh. Preuss. Geol. Landesanst., n.f., 122, p. 10, pl. 2,
figs. 3-6, 1930.

Low. Carb. (Etroungtian): Cromford, near Ratingen, Germany.

Platycrinites halli (Shumard).

Platycrinus halli Shumard, Trans. Acad. Sci. St. Louis, 2, p. 388, 1866.

Platycrinites halli Meek and Worthen, Geol. Surv. Ill., 5, p. 454, pl. 3, fig. 3, 1873.

Platycrinus halli Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, pl. 7, fig. 7, 1885.

—Keyes, Geol. Surv. Mo., 4, p. 201, pl. 25, fig. 3, 1894.—Wachsmuth and
Springer, N. Amer. Crin. Cam., p. 662, pl. 72, figs. 6a, b, 7a, b, 1897.

Platycrinus olla Hall, Prelim. Not. N. Sp. Crin., p. 16, 1861.

Platycrinus planus? Hall, Geol. Rep. Iowa, 1, pt. 2, p. 533, pl. 8, figs. 6a, b, 1858.

Miss. (Up. Burlington ls.): Burlington, Iowa, and Louisiana, Mo.

Platycrinites haydeni Meek.

Meek, 6th Ann. Rep. U. S. Geol. Surv. Terr. for 1872, p. 469, 1873.

Miss. (Madison ls.): Old Baldy, near Virginia City, Mont.

Platycrinites hemisphaericus (Meek and Worthen).

Platycrinus hemisphaericus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 162,
1865; Geol. Surv. Ill., 3, p. 511, pl. 20, figs. 2a, b, text fig., 1868; 5, p. 506, pl. 16,
figs. a-c, 1873.—White, 11th Rep. Geol. Surv. Ind., p. 368, pl. 41, fig. 1, 1882.—

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 703, pl. 66, figs. 1 a-d, 1897.

Miss. (Keokuk ls.): Crawfordsville, Ind.

Platycrinites hieroglyphicus Goldfuss.

Goldfuss, Nova Acta Acad. Leop. Carol. Nat. Cur., 19, p. 344, pl. 31, fig. 9, 1839.

Dev. (Eifelian): Eifel, Germany.

Platycrinites hodgsoni (Miller and Gurley).

Platycrinus hodgsoni Miller and Gurley, Ill. St. Mus., Bull. 8, p. 63, pl. 5, figs. 8, 9,
1896.

Miss. (Burlington ls.): Adams Co., Ill.

Platycrinites humilis (Wright).

Platycrinus humilis Wright, Geol. Mag., 75, p. 279, pl. 10, figs. 9-12, 1938.
Low. Carb. (C₂): Newton, Bolland, Yorkshire, England.

Platycrinites huntsvillae Troost.

Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 420, 1849.

Platycrinus huntsvillae Wachsmuth and Springer, N. Amer. Crin. Cam., p. 678, pl. 73, figs. 6-12, 1897.—Bather, Treatise Zool. (Lanckester), pt. 3, p. 158, fig. 71-2, 1900.—Wood, U. S. Nat. Mus., Bull. 64, p. 38, pl. 5, figs. 10-12, 1909.—Butts, Geol. Surv. Ky., p. 59, pl. 14, figs. 1-8, 1917; Geol. Surv. Ala., Spec. Rep., no. 14, p. 181, pl. 59, figs. 27-31, 1926.

Platycrinus alabamensis S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 660, pl. 9, fig. 5, 1892 (adv. pub. 1891, p. 50).

Platycrinus penicillus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 380, 1860; Geol. Surv. Ill., 2, p. 266, pl. 19, figs. 6a, b, 1866.—Weller, Geol. Surv. Ill., Bull. 41, p. 333, pl. 5, figs. 1-4, 1920.

Platycrinus plenus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 381, 1860; Geol. Surv. Ill., 2, p. 267, pl. 20, fig. 3, 1866.

Platycrinites polydactylus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 420, 1849.—Wood, U. S. Nat. Mus., Bull. 64, p. 38, 1909.

Miss. (Ste. Genevieve ls.): Huntsville, etc., Ala.; Hardin Co., Ill.; Princeton, etc., Ky.

Platycrinites illinoisensis (Miller and Gurley).

Platycrinus illinoisensis Miller and Gurley, Ill. St. Mus., Bull. 8, p. 62, pl. 5, figs. 5-7, 1896.

Miss. (Burlington ls.): Adams Co., Ill.

Platycrinites incomptus (White).

Platycrinus incomptus White, Boston Jour. Nat. Hist., 7, p. 503, 1863.

Platycrinites incomptus Meek and Worthen, Geol. Surv. Ill., 5, p. 459, pl. 3, fig. 7, 1873.

Platycrinus incomptus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 664, pl. 67, fig. 6, pl. 71, figs. 1-3, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Platycrinites insculptus Troost.

Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 420, 1849.

Platycrinus insculptus Wood, U. S. Nat. Mus., Bull. 64, p. 40, pl. 4, fig. 18, 1909.

Miss. (Chester): Cumberland Mts., Tenn., and Alabama.

Platycrinites insolens (Rowley and Hare).

Platycrinus insolens Rowley and Hare, Kansas City Sci., 5, p. 98, pl. 2, fig. 4, 1891.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 659, pl. 71, fig. 15, 1897.—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 99, pl. 30, fig. 13, 1938.

Miss. (Chouteau ls.): 3 miles southeast of Curryville, Mo.

Platycrinites laciniatus (Gilbertson).

Platycrinus laciniatus Gilbertson, in Phillips, Geol. Yorkshire, 2, p. 204, pl. 3, fig. 18, 1836.—Austin and Austin, Mon. Rec. and Foss. Crin., p. 42, pl. 5, figs. 1 a-c, 1844.

Low. Carb. (Mtn. Ls.): Bolland, England; Hook Head, Co. Wexford, Ireland.

Platycrinites laevis Miller.

Miller, Nat. Hist. Crin., p. 74, pls. 1, 2, 1821.

Encrinites laevis Schlotheim, Nacht. Petref., 3, p. 94, pl. 25, figs. 4 a-h, 1823.

Platycrinus laevis Austin and Austin, Mon. Rec. and Foss. Crin., p. 8, pl. 1, figs. 1 a-i, 1, m. 1843.—De Koninck and Lehon, Mem. Acad. Roy. Belg., 28, p. 161, pl. 5, fig., 1854.

Low. Carb.: Mendip Hills, Bolland, Avon Gorge, Bristol, England, and Ireland (Mtn. Ls.); Tournai, Belgium (Tournaisian).

Platycrinites lodensis (Hall and Whitfield).

Platycrinus lodensis Hall and Whitfield, Geol. Surv. Ohio, 2, pt. 2, Pal., p. 168, pl. 2, fig. 3, 1875.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 666, pl. 71, fig. 6, 1897.

Miss.: Lodi, Medina Co., Ohio (Cuyahoga sh.); Bono, Ind. (Keokuk ls.).

Platycrinites marginatus (Rowley and Hare).

Platycrinus marginatus Rowley and Hare, Kansas City Sci., 5, p. 98, pl. 2, fig. 3, 1891.

Miss. (Up. Burlington ls.): Spencer Creek, 2 miles north of Curryville, Pike Co., Mo.

Platycrinites megastylus (McCoy).

Platycrinus megastylus McCoy, Ann. Mag. Nat. Hist., (2) 3, p. 248, 1849.

Low. Carb. (Mtn. Ls.): Bolland, England.

Platycrinites microbasalis (Quenstedt).

Platycrinus microbasalis Quenstedt, Petref. Deutsch., 4, p. 551, pl. 109, fig. 17, 1876.

Low. Carb. (Mtn. Ls.): Ireland.

Platycrinites minutus (Steininger).

Platycrinus minutus (Schnur ms.), Steininger, Geog. Besch. Eifel, p. 37, 1853.

Devonian (Eifelian): Gerolstein, Eifel, Germany.

Platycrinites modestus (Miller and Gurley).

Platycrinus modestus Miller and Gurley, Ill. St. Mus., Bull. 7, p. 77, pl. 4, figs. 43-45, 1895.

Miss. (Chouteau ls.): Sedalia, Mo.

Platycrinites (Eucladocrinus) montanensis Meek = Eucladocrinus montanensis.

Platycrinites mucronatus Austin and Austin = Pleurocrinus mucronatus.

Platycrinites müllerianus (de Koninck and Lehon).

Platycrinus müllerianus de Koninck and Lehon, Rech. Crin. Carb., Belg., p. 171, pl. 5, figs. 4 a-d, 1854.

Low. Carb. (Tournaisian): Tournai, Belgium.

Platycrinites niotensis (Meek and Worthen).

Platycrinus niotensis Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 162, 1865; Geol. Surv. Ill., 3, p. 513, pl. 20, fig. 3, text fig., 1868.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 682, pl. 71, fig. 9, 1897.

Miss. (Keokuk ls.): Niota, Hancock Co., etc., Ill.; Keokuk, etc., Iowa; Canton, Ind.

Platycrinites nodostriatus (Wachsmuth and Springer).

Platycrinus nodostriatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 698, pl. 66, figs. 5a, b, pl. 70, figs. 3, 4 a-c, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Platycrinites? nux (Jack and Etheridge).

Platycrinus? nux Jack and Etheridge, Geol. Pal. Queensland and New Guinea, p. 208, pl. 38, fig. 3, 1892.

Permian (Middle or Marine ser.): Southwest of Mt. Britton Township, Queensland, Australia.

Platycrinites occidentalis (S. A. Miller).

Platycrinus occidentalis S. A. Miller, Geol. Surv. Mo., Bull. no. 4, p. 10, pl. 1, figs. 5, 6, 1891.

Miss. (Chouteau ls.): Near Sedalia, Mo.

Platycrinites olla (de Koninck and Lehon).

Platycrinus olla de Koninck and Lehon, Rech. Crin. Carb. Belg., p. 172, pl. 5, fig. 5, 1854.

Low. Carb. (Tournaisian): Tournai, Belgium.

Platycrinites ollicula (S. A. Miller).

Platycrinus ollicula S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 19, pl. 2, figs. 7, 8, 1891.
—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 100, pl. 30, fig. 1, 1938.

Miss. (Chouteau ls.): Near Sedalia, Mo.

Platycrinites ornatus Goldfuss = *Hexacrinites ornatus*.

Platycrinites ornatus (McCoy).

Platycrinus ornatus McCoy, Syn. Char. Carb. Foss. Ireland, p. 176, pl. 25, fig. 1, 1844.

Low. Carb.: Hook Head, Ireland (Mt. Ls.); Tournai, Belgium (Tournaisian).

Platycrinites ornigranulus (McChesney).

Platycrinus ornigranulus McChesney, Descr. N. Sp. Foss. Pal. Rocks, p. 5, 1860; Illustrations, pl. 2, figs. 11a, b, 1865; Trans. Chicago Acad. Sci., 1, pt. 2, p. 3, pl. 5, fig. 8, text fig., 1868.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 701, pl. 66, fig. 8, pl. 68, figs. 10 a-c, 11a, b, 1897.

Platycrinus nodulosus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 541, 1858.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Platycrinites parvinodus (Hall).

Platycrinus parvinodus Hall, Descr. N. Sp. Crin., p. 17, 1861.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 696, pl. 68, figs. 6a, b, 1897.

Miss.: Burlington, Iowa (Low. Burlington ls.); Lake Valley, N. Mex. (Lake Valley ls.).

Platycrinites peculiaris (Wachsmuth and Springer).

Platycrinus peculiaris Wachsmuth and Springer, N. Amer. Crin. Cam., p. 700, pl. 68, figs. 7a, b, pl. 71, fig. 16, 1897.

Miss. (Lake Valley ls.): Lake Valley, N. Mex.

Platycrinites pendens (Springer).

Platycrinus pendens Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 38, pl. 9, figs. 5, 5a, 1926.—Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 249, pl. 19, fig. 1, pl. 17, fig. 3, 1937.

Miss. (Kinderhook-Hampton fm.): Legrand, Iowa.

Platycrinites pentagonus (S. A. Miller).

Platycrinus pentagonus S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 16, pl. 2, fig. 1, 1891.

Miss. (Warsaw ls.): Boonville, Mo.

Platycrinites phillipsii (d'Orbigny).

Platycrinus phillipsii d'Orbigny, Prodr. Pal. Strat., 1, p. 103, 1844.

Platycrinus tuberculatus? Phillips (not Miller), Pal. Foss. Cornwall, Suppl., p. 134, pl. 60, fig. 39, 1841.

Devonian: Newton, England.

Platycrinites pileatus Goldfuss.

Goldfuss, Nova Acta Acad. Leop. Coral. Nat. Cur., 19, p. 343, pl. 31, fig. 7, 1839.

Low. Carb.: Bristol and Clitheroe, England (Mtn. Ls.); Tournai, Belgium (Tournaisian).

Platycrinites pileiformis (Hall).

Platycrinus pileiformis Hall, Geol. Rep. Iowa, 1, pt. 2, p. 529, text fig. 5b, pl. 8, figs. 3 a-c, 1858.—Keyes, Geol. Surv. Mo., 4, p. 198, pl. 25, fig. 5, 1894.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 656, pl. 69, fig. 5, pl. 70, figs. 13a, b, 1897.

Platycrinus carchesium S. A. Miller, Geol. Surv. Ill., Bull. 4, p. 23, figs. 6, 7, 1891.

Miss.: Burlington, Iowa (Low. Burlington ls.); Sedalia, Mo. (Chouteau ls.).

Platycrinites pisum (Rowley and Hare).

Platycrinus pisum Rowley and Hare, Kansas City Sci., 5, p. 113, pl. 3, fig. 3, 1891.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 660, pl. 71, figs. 13a, b, 1897.

Miss. (Low. Burlington ls.): Louisiana, Mo.

Platycrinites planus (Owen and Shumard).

Platycrinus planus Owen and Shumard, Jour. Acad. Nat. Sci. Phila., (2) 2, pt. 1, p. 57, pl. 7, figs. 4 a-c, 1860; U. S. Geol. Surv. Iowa, Wis., Minn., p. 587, pl. 5-A, fig. 4a (not 4b), 1852.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 668, pl. 69, figs. 2 a-d, 1897.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 28, fig. 10, 1900.

Platycrinites planus Meek and Worthen, Geol. Surv. Ill., 5, p. 452, pl. 3, figs. 5 a-c, 1873.

Platycrinus bloomfieldensis S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 2, p. 257, pl. 15, fig. 4, 1880.

Miss.: Burlington, Iowa, and Louisiana, Mo. (Low. and Up. Burlington ls.); Button Mold Knob, near Louisville, Ky. (New Providence sh.); New Bloomfield, Mo. (Keokuk ls.); ? Legrand, Iowa (Kinderhook-Hampton fm.).

Platycrinites pocilliformis (Hall).

Platycrinus pocilliformis Hall, Geol. Rep. Iowa, 1, pt. 2, p. 528, pl. 8, figs. 2a, b, 1858.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 706, pl. 68, figs. 2a, b, 1897.

Miss. (Low Burlington ls.): Burlington, Iowa.

Platycrinites poculum (S. A. Miller).

Platycrinus poculum S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 4, p. 311, pl. 7, fig. 4, 1881.

Miss. (Lake Valley ls.): Lake Valley, N. Mex.

Platycrinites polydactylus Troost = *P. huntsvillae*.

Platycrinites pratteni (Worthen).

Platycrinus pratteni Worthen, Trans. Acad. Sci. St. Louis, 1, p. 569, 1860.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 671, pl. 70, figs. 11, 12, 1897.

Platycrinus planus Owen and Shumard (part), Geol. Rep. Iowa, Wis., Minn., p. 587, pl. 5-A, fig. 4b (not 4a), 1852.—Meek and Worthen, Geol. Surv. Ill., 3, p. 467, pl. 16, fig. 6, 1868.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Platycrinites pumilus (Hall).

Platycrinus pumilus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 82, pl. 1, fig. 6, 1860.

Miss.: Warsaw, Ill. (Warsaw ls.); Harrison Co., Ind. (Spergen ls.).

Platycrinites punctatus (McCoy).

Platycrinus punctatus McCoy, Syn. Char. Carb. Foss. Ireland, p. 177, pl. 25, figs. 15, 17, 1844.

Low. Carb. (Mtn. Ls.): Ireland.

Platycrinites quinquenodus (White).

Platycrinus quinquenodus White, Proc. Boston Soc. Nat. Hist., 9, p. 18, 1865 (adv. pub. 1862).—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 661, pl. 71, figs. 14 a-c, 1897.

Platycrinus planobasalis Rowley and Hare, Kansas City Sci., 5, p. 97, pl. 2, fig. 1, 1891.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Platycrinites regalis (Hall).

Platycrinus regalis Hall, Deser. N. Sp. Crin., p. 16, 1861, N. Y. St. Mus., Bull. 1, pl. 2-A, fig. 6, 1872.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 710, pl. 72, figs. 1, 2, 1897.

Platycrinus oweni Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 128, 1861.

Miss. (Low Burlington ls.): Burlington, Iowa.

Platycrinites rugosus Miller.

Miller, Nat. Hist. Crin. p. 79, pl., 1821.

Platycrinus rugosus Phillips, Geol. Yorkshire, 2, p. 204, pl. 3, fig. 20, 1836.—Austin and Austin, Mon. Rec. Foss. Crin., p. 40, pl. 4, figs. 2d-k, 1844.

Low. Carb. (Mtn. Ls.): Caldy Island, Wales; Mendip Hills and Whitewell, Bolland, England; Ireland.

Platycrinites saffordi Hall.

Platycrinus saffordi (Troost, Ms.) Hall, Geol. Rep. Iowa, 1, pt. 2, p. 634, pl. 18, figs. 5, 6, 1858.—Keyes, Geol. Surv. Mo., 4, p. 202, pl. 25, fig. 1, 1894.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 694, pl. 68, figs. 1-3, 1897.—Wood, U. S. Nat. Mus., Bull. 64, p. 39, pl. 15, fig. 10, 1909.

Miss.: Scottsville, Ky. (Ft. Payne ch.); Warsaw, Ill. and Indian Creek, Ind. (Keokuk ls.); Burlington, Iowa (Burlington-Keokuk transition beds).

Platycrinites sampsoni (S. A. Miller).

Platycrinus sampsoni S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 13, pl. 1, fig. 11, 1891.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 673, pl. 70, fig. 10, 1897.

Miss.: Burlington, Iowa (Up. Burlington ls.); Sedalia, Mo. (Chouteau ls.).

Platycrinites sarae (Hall).

Platycrinus sarae Hall, Geol. Rep. Iowa, 1, pt. 2, p. 673, pl. 17, fig. 4, 1858.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 677, pl. 69, fig. 7, pl. 70, fig. 1, 1897.

Platycrinus georgii Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 82, pl. 1, fig. 7, 1860.

Platycrinus monroensis Worthen, Ill. St. Mus., Bull. 1, p. 30, 1882; Geol. Surv. Ill., 7, p. 306, pl. 30, fig. 9, 1883.

Platycrinus prattenanus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 379, 1860; Geol. Surv. Ill., 2, p. 264, pl. 20, fig. 2, 1866.

Miss.: St. Louis, Mo. and Alton, Ill. (St. Louis ls.); Warsaw, Ill. (Warsaw and Keokuk ls.); Bowling Green, Ky. (Warsaw ls.).

Platycrinites scaber Goldfuss = *Stylocrinus scaber*.

Platycrinites scobina (Meek and Worthen).

Platycrinus scobina Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 129, 1861; Geol. Surv. Ill., 3, p. 466, pl. 16, fig. 9, text fig., 1868.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 695, pl. 68, figs. 14a, b, 1897.

Platycrinus clytis Hall, Jour. Boston Soc. Nat. Hist., 7, p. 236; Prelim. Deser. N. Sp. Crin., p. 4, 1861; N. Y. St. Mus. Nat. Hist., Bull. 1, pl. 2-A, fig. 4, 1872.—Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 2, pl. 3, fig. 6, 1893.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Platycrinites sculptus (Hall).

Platycrinus sculptus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 536, pl. 8, fig. 11, 1858.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 691, pl. 68, fig. 5 (?), pl. 75, figs. 8, 9, 1897.—Butts, Kentucky Geol. Surv., p. 16, pl. 4, figs. 17, 18, 1917.

Platycrinus rotundus S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 20, pl. 2, figs. 11, 12, 1891.

Miss.: Burlington, Iowa (Low. Burlington ls.); Sedalia, Mo. (Chouteau ls.); (?) Lake Valley, N. Mex. (Lake Valley ls.).

Platycrinites semifusus (Miller and Gurley).

Platycrinus semifusus Miller and Gurley, Ill. St. Mus., Bull. 7, p. 77, pl. 4, figs. 41, 42, 1895.

Miss. (Chouteau ls.): Sedalia, Mo.

Platycrinites sharonensis (Miller and Gurley).

Platycrinus sharonensis Miller and Gurley, Ill. St. Mus., Bull. 12, p. 42, pl. 3, figs. 6, 7, 1897.

Miss. (Burlington ls.): Near Sharon, Mo.

Platycrinites siluricus (Hall).

Platycrinus siluricus Hall, Trans. Albany Inst., 10, p. 9, 1882 (adv. pub. 1879); 11th Ann. Rep. Geol. Nat. Res. Ind., p. 256, pl. 15, fig. 5, 1882.

Sil. (Niagaran-Waldron sh.): Waldron, Ind.

Platycrinites similis (McCoy).

Platycrinus similis McCoy, Syn. Char. Carb. Foss. Ireland, p. 177, pl. 26, fig. 6, 1844.

Low. Carb. (Mtn. Ls.): Ballincourty, Co. Waterford, Ireland.

Platycrinites spinifer (Wachsmuth and Springer).

Platycrinus spinifer Wachsmuth and Springer, N. Amer. Crin. Cam., p. 708, pl. 66, fig. 7, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Platycrinites spinifer elongatus (Wachsmuth and Springer).

Platycrinus spinifer var. *elongatus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 709, pl. 67, fig. 7, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Platycrinites spiniger (Wright).

Platycrinus spiniger Wright, Geol. Mag., 74, p. 392, pl. 13, fig. 17, text figs. 5, 6, 1937; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 11, pl. 12, fig. 26, text figs. 5, 6, 1939.

Low. Carb. (Low. Ls. gr.): Roscobie, Inveriel, etc., Scotland.

Platycrinites spinosus Austin and Austin.

Austin and Austin, Ann. Mag. Nat. Hist., 10, p. 109, 1842; 11, p. 199, 1843; Mon. Rec. and Foss. Crin., p. 19, pl. 1, figs. 2 k, o-s, 1843.

Low. Carb.: Mendip Hills and Avon Gorge, near Bristol, England; Hook Head, Ireland (Mt. Ls.); Tournai, Belgium (Tournaisian).

Platycrinites spitzbergensis (Holtedahl).

Platycrinus spitzbergensis Holtedahl, Kristiania Skr., ved Selsk., no. 10, pp. 13, 14, pl. 1, 1911; *ibid.*, p. 16, 1913.

Carb. (Moscovian): Spitzbergen.

Platycrinites springeri (Weller).

Platycrinus springeri Weller, Bull. Geol. Soc. America, 20, p. 281, pl. 11, figs. 17-19, 1909.

Miss. (Fern Glen ls.): Fern Glen, Mo.

Platycrinites stellatus (Weller).

Platycrinus stellatus Weller, Bull. Geol. Soc. Amer., 20, p. 281, pl. 11, figs. 13, 14, 1909.

Miss. (Fern Glen ls.): Fern Glen, Mo.

Platycrinites striatus Miller.

Miller, Nat. Hist. Crin., p. 82, pl., 1821.

Encrinites striatus Schlotheim, Nacht. Petref., pt. 2, p. 97, pl. 26, figs. 4 a-c, 1823.

Platycrinus striatus Austin and Austin, Mon. Rec. Foss. Crin., p. 37, pl. 3, figs. 3 p-u, 1844.

Low. Carb. (Mtn. Ls.): Black Rock, near Avon River, Bristol, England.

Platycrinites subgranulosus (Roemer).

Platycrinus subgranulosus Roemer, Beitr. Geol. Kennt. Nordwestl. Harzgeb., Pal., 3, p. 23, pl. 4, fig. 4, 1850.

Up. Mid. Dev. (Givetian-Stringocephalus ls.): Kehrzu, Harz, Germany.

Platycrinites subscitulus (Miller and Gurley).

Platycrinus subscitulus Miller and Gurley, Ill. St. Mus., Bull. 9, p. 62, pl. 4, figs. 1a-15, 1896.

Miss. (Chouteau ls.): Sedalia, Mo.

Platycrinites subspinosus (Hall).

Platycrinus subspinosus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 536, pl. 8, figs. 9, 10, 1858.

Platycrinus (*Pleurocrinus*) *subspinosus* Meek and Worthen, Geol. Surv. Ill., 2, p. 173, pl. 15, fig. 6, 1866.

Platycrinites subspinosus Meek and Worthen, Geol. Surv. Ill., 5, p. 452, pl. 11, fig. 2, 1873.

Platycrinus subspinosus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 717, pl. 66, figs. 9a, b, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 158, text fig. 71-1, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 199, fig. 300, 1913.—Wilson, Jour. Geol., 24, p. 509, pl. 2, fig. 6, 1916.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Platycrinites subspinulosus (Hall).

Platycrinus subspinulosus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 81, text fig., 1860.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 684, pl. 66, figs. 2a, b, pl. 70, fig. 9, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Platycrinites sulciferus (Miller and Gurley).

Platycrinus sulciferus Miller and Gurley, Ill. St. Mus., Bull. 7, p. 75, pl. 4, figs. 33, 34, 1895.

Miss. (Chouteau ls.): Sedalia, Mo.

Platycrinites symmetricus (Wachsmuth and Springer).

Platycrinus symmetricus Wachsmuth and Springer, Proc. Acad. Nat. Sci. Phila., p. 348, pl. 18, fig. 15, 1888; Geol. Surv. Ill., 8, p. 186, pl. 15, fig. 8, 1890; N. Amer. Crin. Cam., pl. 3, fig. 16, pl. 69, figs. 1 a-c, 1897.—Wilson, Jour. Geol., 24, p. 510, pl. 3, figs. 13, 14, 1916.—Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 249, pl. 16, figs. 6-8, 1937.

Platycrinus agassizi Wachsmuth and Springer, N. Amer. Crin. Cam., p. 669, pl. 69, fig. 4, 1897.—Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 249, 1937.

Platycrinus planus? Wachsmuth and Springer, Geol. Serv. Ill., 8, p. 188, pl. 16, fig. 8, 1890.

Miss. (Kinderhook-Hampton fm.): Legrand, Iowa.

Platycrinites tabulatus Goldfuss = *Stylocrinus tabulatus*.

Platycrinites tenuibrachiatus Meek and Worthen.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 168, 1869; Geol. Surv. Ill., 5, p. 450, pl. 3, fig. 4, 1873.

Platycrinus tenuibrachiatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 687, pl. 70, figs. 7, 8, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa, and Edwardsville, Ind.

Platycrinites triacontadactylus (McCoy).

Platycrinus triacontadactylus McCoy, Syn. Char. Carb. Foss. Ireland, p. 177, pl. 25, figs. 2-7, 1844.—Bronn, Klass. Ord. Thierr., 2, pl. 27, figs. 4 a-d, 1860.

Low. Carb. (Mtn. Ls.): Hook Head, Co. Wexford, Ireland; Bristol, Eng.

Platycrinites trigintidactylus Austin and Austin.

Austin and Austin, Ann. Mag. Nat. Hist., 10, p. 109, 1842; 11, p. 199, 1843; Mon. Rec. Foss. Crin., p. 30, pl. 3, figs. 1 b-h (not fig. 1a), 1843.

Platycrinus trigintidactylus de Koninck and Lehon, Rech. Crin. Terr. Carb. Belg., p. 167, pl. 5, figs. 2 a-g, 1854.

Low. Carb.: Avon Gorge, Bristol, England, and Waterford, Ireland (Mtn. Ls.) Tournai, Belgium (Tournaisian).

Platycrinites truncatulus (Hall).

Platycrinus truncatulus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 538, text fig. 60, 1858.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 675, pl. 67, figs. 11a, b, pl. 71, figs. 18a, b, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Platycrinites tuberculatus Miller = *Pleurocrinus tuberculatus*.

Platycrinites turgurium (Miller and Gurley).

Platycrinus turgurium Miller and Gurley, Ill. St. Mus., Bull. 7, p. 70, pl. 4, figs. 17-19, 1895.

Miss. (Chouteau ls.): Sedalia, Mo.

Platycrinites vascellum (Miller and Gurley).

Platycrinus vascellum Miller and Gurley, Ill. St. Mus., Bull. 6, p. 32, pl. 2, figs. 16-18, 1895.

Miss. (Ft. Payne ch.): Tennessee.

Platycrinites ventricosus Goldfuss = *Hexacrinites ventricosus*.

Platycrinites verrucosus (White).

Platycrinus verrucosus White, Jour. Boston Soc. Nat. Hist., 7, p. 502, 1865.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 705, pl. 66, figs. 3a, b, pl. 68, figs. 1 a-d, 1897.

Miss.: Burlington, Iowa (Low. Burlington ls.); Lake Valley, N. Mex. (Lake Valley ls.).

Platycrinites vesiculosus (McCoy).

Platycrinus vesiculosus McCoy, Ann. Mag. Nat. Hist., (2) 3, p. 246, 1849; British Pal. Foss., p. 119, pl. 3-D, fig. 3, 1854.

Low. Carb.: Near Bakewell, Derbyshire, England.

Platycrinites vexabilis (White).

Platycrinus vexabilis White, Rep. U. S. Geogr. Surv. West 100th Merid., p. 81, pl. 2, fig. 2, 1875 (Prelim. Rep., p. 16, 1874).

Miss.: Mt. Spring, Old Mormon Road, Nevada.

Platycrinites wachsmuthi (Wanner).

Platycrinus wachsmuthi Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 53, pl. 97 (2), figs. 4, 5, pl. 100 (5), figs. 3-10, text figs. 6, 7, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 75, pl. 2, fig. 4, 1924; Neue Beitr. kennt. Perm. Echin. Timor, VIII, p. 81 (p. 82 as *P. wachsmuthi typicus*), 1937.

Permian: Dorf Apna, Basleo, Timor.

Platycrinites wachsmuthi apnaensis (Wanner).

Platycrinus wachsmuthi apnaensis Wanner, Neue Beitr. kennt. Perm. Echin. Timor, VIII, p. 83, 1937.

Platycrinus wachsmuthi Form 5, Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 58, pl. 97 (2), fig. 4, 1916.

Permian: Dorf Apna, Timor.

Platycrinites wachsmuthi frequentior (Wanner).

Platycrinus wachsmuthi frequentior Wanner, Neue Beitr. kennt. Perm. Echin. Timor, VIII, p. 82, pl. 7, figs. 4-7, 1937.

Platycrinus wachsmuthi Forms 2, 3, 4, Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, pp. 56-58, pl. 2, fig. 5, pl. 5, figs. 8-10, 1916.

Platycrinus wachsmuthi Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 75, pl. 2, figs. 1-3, 1924.

Permian: Noil Fatoe and Basleo, Timor.

Platycrinites wortheni (Hall).

Platycrinus wortheni Hall, Geol. Rep. Iowa, 1, pt. 2, p. 530, pl. 8, fig. 4, 1858.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 702, pl. 67, fig. 9, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Platycrinites wrighti (Marez Oyens).

Platycrinus wrighti Marez Oyens, Geol. Mag., 77, p. 254, 1940.

Platycrinus tuberculatus Marez Oyens, Geol. Exped. Lesser Sunda Islands. 1, p. 300, pl. 1, fig. 2, 1940.

Permian: Basleo, Timor.

Platycrinites wunstorfi (Schmidt).

Platycrinus wunstorfi Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 122, p. 13, pl. 3, figs. 24a, b, 1930.

Low. Carb. (Etroungtian): Isenbügel, Germany.

Platycrinites yandelli (Owen and Shumard).

Platycrinus yandelli Owen and Shumard, Jour. Acad. Nat. Sci. Phila., (2), 2, pt. 1, p. 58, pl. 7, figs. 6a, b, 1850; Geol. Surv. Iowa, Wis., Minn., p. 547, pl. 5a, figs. 6a, b, 1852.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 706, pl. 66, figs. 6 a-c, pl. 68, figs. 3 a-c, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Platycrinites yandelli perasper (Meek and Worthen).

Platycrinus perasper Meek and Worthen, Proc. Acad. Nat. Sci. Phila., (1) 17 p. 161, 1865.

Platycrinus yandelli var. *perasper* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 708, pl. 68, figs. 4a, b, 1897.

Platycrinus nodobrachiatus Hall, Prelim. Descr. N. Sp. Crin., p. 17, 1861.
Miss. (Low. Burlington ls.): Burlington, Iowa.

Platycrinus of authors = *Platycrinites*.

Platycrinus aberrans Whidborne = *Hexacrinites aberrans*.

Platycrinus acutus Ivanov.

Ivanov, Bull. Soc. Nat. Moscou, sec. geol., vol. 34, p. 176, 1926.

Carb.: Gov. Moscow, Russia.

Platycrinus aequalis Wachsmuth and Springer = *Platycrinites aequalis*.

Platycrinus agassizi Wachsmuth and Springer = *Platycrinites symmetricus*.

Platycrinus aeternalis S. A. Miller = *Platycrinites bonoensis*.

Platycrinus alabamensis S. A. Miller = *Platycrinites huntsvillae*.

Platycrinus batiola S. A. Miller = *Platycrinites aequalis*.

Platycrinus bloomfieldensis S. A. Miller = *Platycrinites planus*.

Platycrinus broadheadi S. A. Miller = *Platycrinites americanus*.

Platycrinus buchii Roemer = *Hexacrinites buchii*.

Platycrinus caducus S. A. Miller = *Platycrinites bonoensis*.

Platycrinus carchesium S. A. Miller = *Platycrinites pileiformis*.

Platycrinus clytis Hall = *Platycrinites scobina*.

Platycrinus corrugatus Owen and Shumard = *Platycrinites discoideus*.

Platycrinus depressus Owen.

Owen, Cat. Geol. Form. Ohio Valley, No. 279, 1843 (nom. nud.).

Miss.: Monroe Co., Ill.

Platycrinus discoideus Hall (not Owen and Shumard) = *Eucladocrinus pleurovimenus*.

Platycrinus douglassi Miller and Gurley = *Dichocrinus douglassi*.

Platycrinus? *dubius* Weller.

Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 140, pl. 14, fig. 4, 1900.

Sil. (Niagaran-Racine dol.): Bridgeport, Ill.

Platycrinus eboraceus Hall = *Arthroacantha eboraceus*.

Platycrinus eboraceus Hall, 1872 (in error) = *Cyttarocrinus* (?) *jewetti*.

Platycrinus ellipticus Phillips = *Pleurocrinus ellipticus*.

Platycrinus elongatus Gilbertson = *Dichocrinus elongatus*.

Platycrinus eriensis Hall = *Cyttarocrinus eriensis*.

Platycrinus exsertus Hall = *Platycrinites burlingtonensis*.

Platycrinus fritillus Müller = *Storthingocrinus fritillus*.

Platycrinus georgii Hall = *Platycrinites sarae*.

Platycrinus granifer Roemer = *Hexacrinites granifer*.

Platycrinus granosus Ivanov.

Ivanov, Bull. Soc. Nat. Moscou, sec. geol., 34, p. 176, 1926.

Carb.: Gov. Moscow, Russia.

Platycrinus granuliferus Roemer = *Hexacrinites granuliferus*.

- Platycrinus inornatus* McChesney = *Platycrinites burlingtonensis*.
Platycrinus insularis Eichwald = *Dichocrinus insularis*.
Platycrinus interseapularis Phillips = *Hexacrinites interseapularis*.
Platycrinus lautus S. A. Miller = *Platycrinites burlingtonensis*.
Platycrinus leai Lyon = *Hexacrinites leai*.
Platycrinus microstylus Phillips.
 Phillips, Geol. Yorkshire, 2, p. 204, 1836.
 Low. Carb. (Mtn. Ls.): Bolland, England.
Platycrinus (*Eucladocrinus*) *millebrachiatus* Wachsmuth and Springer = *Eucladocrinus millebrachiatus*.
Platycrinus missouriensis Miller and Gurley = *Platycrinites chouteauensis*.
Platycrinus monroensis Worthen = *Platycrinites sarae*.
Platycrinus multibrachiatus Meek and Worthen = *Platycrinites discoideus*.
Platycrinus nodobrachiatus Hall 1858 = *Platycrinites burlingtonensis*.
Platycrinus nodobrachiatus Hall, 1861 = *Platycrinites yandelli perasper*.
Platycrinus nodosus Müller = *Culicocrinus nodosus*.
Platycrinus nodulosus Hall = *Platycrinites ornigranulus*.
Platycrinus nucleiformis Hall = *Platycrinites burlingtonensis*.
Platycrinus olla Hall (not deKoninck and Lehon) = *Platycrinites halli*.
Platycrinus oweni Meek and Worthen = *Platycrinites regalis*.
Platycrinus paradoxus (Eichwald).
Palaeochinus paradoxus Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, p. 127, 1856.
Platycrinus paradoxus Jaekel, Zeits. Deutsch. Geol. Gesell., 49, p. 48, 1897.
 Carb. (Moscovian): Mjatschkowa, near Moscow, Russia.
Platycrinus parvulus Meek and Worthen = *Dichocrinus huntsvillae*.
Platycrinus parvus Hall = *Cordyllocrinus plumosus*.
Platycrinus pectens Salter.
 Salter, Cat. Camb. Sil. Foss., p. 122, 1873.
 Sil. (Wenlock ls.): Dudley, England.
Platycrinus penicillus Meek and Worthen = *Platycrinites huntsvillae*.
Platycrinus pentangularis Müller = *Pleurocrinus pentangularis*.
Platycrinus perasper Meek and Worthen = *Platycrinites yandelli perasper*.
Platycrinus pettisensis Miller and Gurley = *Platycrinites absentivus*.
Platycrinus planobasalis Rowley and Hare = *Platycrinites quinquenodus*.
Platycrinus planolateratus Ivanov.
 Ivanov, Bull. Soc. Nat. Moscou, sec. geol., 34, p. 176, 1926.
 Carb.: Gov. Moscow, Russia.
Platycrinus planus? Hall, 1858 (not Owen and Shumard) = *Platycrinites halli*.
Platycrinus planus? Meek and Worthen = *Platycrinites pratteni*.
Platycrinus planus Owen and Shumard (part) = *Platycrinites pratteni*.
Platycrinus planus? Wachsmuth and Springer = *Platycrinites symmetricus*.
Platycrinus plenus Meek and Worthen = *Platycrinites huntsvillae*.
Platycrinus pleuroviminus White = *Eucladocrinus pleuroviminus*.
Platycrinus plumosus Hall = *Cordyllocrinus plumosus*.
Platycrinus praematurus Hall and Whitfield = *Marsupiocrinus praematurus*.

Platycrinus praenuntius Wachsmuth and Springer = *Eucladocrinus praenuntius*.

Platycrinus prattenanus Meek and Worthen = *Platycrinites sarae*.

Platycrinus pulcellus S. A. Miller = *Platycrinites discoideus*.

Platycrinus punctatus Münster.

Münster, Beitr. Petref., 1, p. 5, 1839.

Low. Carb. (Tournaisian): Tournai, Belgium.

Platycrinus? *punctobrachiatus* Hall = *Arthroacantha punctobrachiatus*.

Platycrinus ramulosus Hall = *Cordylocrinus ramulosus*.

Platycrinus (*Actinocrinus*) *retiarius* Phillips = *Hapalocrinus retiarius*.

Platycrinus richfieldensis Hall and Whitfield = *Platycrinites graphicus*.

Platycrinus rosaceus Roemer = *Amblacrinus rosaceus*.

Platycrinus rotundus S. A. Miller = *Platycrinites sculptus*.

Platycrinus rugosus Ivanov.

Ivanov, Bull. Soc. Nat. Moscow, sec. geol., 34, p. 176, 1926.

Carb.: Gov. Moscow, Russia.

Platycrinus shumardianus Hall = *Platycrinites discoideus*.

Platycrinus stellaris Roemer = *Hexacrinites stellaris*.

Platycrinus stellatus Eichwald.

Eichwald, Bull. Soc. Imp. Nat. Moscow, 29, no. 1, p. 117; 1856; Leth. Ross., 1, p. 603, pl. 31, figs. 21 a-d, 1860 (stems only).

Ord. (*Orthoceras* ls.): Erras, Estonia; Island of Oesel.

Platycrinus striobrachiatus Hall = *Platycrinites discoideus*.

Platycrinus sulcatus S. A. Miller = *Platycrinites excavatus*.

Platycrinus tennesseensis Roemer = *Marsupiocrinus tennesseensis*.

Platycrinus tentaculatus Hall = *Marsupiocrinus tentaculatus*.

Platycrinus (*Storthingocrinus*) *trifidus* Schultze = *Storthingocrinus trifidus*.

Platycrinus trigintidactylus Austin (part) = *Platycrinites austinianum*.

Platycrinus truncatus Hall = *Platycrinites americanus*.

Platycrinus tuberculatus? Phillips = *Platycrinites phillipsi*.

Platycrinus tuberculatus Oyens = *Platycrinites wrighti*.

Platycrinus tuberosus Hall = *Eucladocrinus tuberosus*.

Platycrinus vulgaris Ivanov.

Ivanov, Bull. Soc. Nat. Moscow, sec. geol., 34, p. 176, 1926.

Carb.: Gov. Moscow, Russia.

Platycrinus wachsmuthi typicus Wanner. See *Platycrinites wachsmuthi*.

Platyhexacrinus Schmidt. Genotype: *P. inornatus* Schmidt.

?Hexacrinitidae (*Adunata*). Mid. Dev.

Schmidt, Jahrb. Preuss. Geol. Landesanst., 33, p. 301, 1913; Centralbl. Min. Geol. Pal., no. 4, pp. 119-125, 1915; Palaeontographica, 76, p. 26, 1931. (See also *Arthroacantha*.)

Platyhexacrinus inornatus Schmidt.

Schmidt, Jahrb. Preuss. Geol. Landesanst., Bergakad. 33, p. 304, pl. 22, figs. 2-5, 1913; Palaeontographica, 76, p. 27, 1931.

Mid. Dev., (Eifelian-*Orthocrinus* beds): Elspe, Westphalia, and near Olpe, Germany.

Platyhexacrinus kegeli Schmidt.Schmidt, *Palaeontographica*, 76, p. 27, pl. 4, figs. 2, 3, 1931.

Low. Dev.: Lundzunge El Magaron, Concha de Arnao, Spain.

Platyhexacrinus ornatus Schmidt.Schmidt, *Jahrb. Preuss. Geol. Landesanst., Bergakad.* 33, p. 303, pl. 22, figs. 6, 7, 1913.*Arthroacantha? ornata* Schmidt, *Centralbl. Min., Geol. Pal.*, no. 4, pp. 121, 125, fig. 1, 1915.

Mid. Dev. (Orthocrinus beds): Elspe, Westphalia, and near Olpe, Germany.

Platysphaerites Trenkner. Genotype: *P. columnus fultus* Trenkner.Trenkner, *Abh. Naturf. Ges. Halle*, 10, p. 11, 1868.—Bather, *Treatise Zool.* (Lankester), pt. 3, p. 203, 1900.**Platysphaerites columnis fultus** Trenkner.Trenkner, *Abh. Naturf. Ges. Halle*, 10, p. 11, pl. 6, fig. 1, 1868. (Doubtfully crinoidal.)

Mid. Dev. (Eifelian-Calceola beds): Auerhahn, Germany.

Plaxocrinus Moore and Plummer. Genotype: *Hydreionocrinus crassidiscus* Miller and Gurley.

Poteriocrinitidae (Inadunata-Fistulata). Penn.

Moore and Plummer, *Denison Univ. Bull., Jour. Sci. Lab.*, 32, p. 277, 1938 (1937).—Moore, *Denison Univ. Bull.*, 39, *Jour. Sci. Lab.*, 34, p. 223, 1939.—Moore and Plummer, *Univ. Texas Pub. No. 3945*, p. 187, 1940.**Plaxocrinus aplatatus** Moore and Plummer.Moore and Plummer, *Univ. Texas Pub. No. 3945*, p. 198, pl. 9, figs. 2, 3, 1940.

Penn. (Mineral Wells sh.): East end Barber Mtn., southwest of Mineral Wells Palo Pinto Co., Texas.

Plaxocrinus crassidiscus (Miller and Gurley).*Hydreionocrinus crassidiscus* Miller and Gurley, *Ill. St. Mus., Bull.* 3, p. 43, pl. 6, figs. 18, 19, 1894.*Plaxocrinus crassidiscus* Moore and Plummer, *Denison Univ. Bull., Jour. Sci. Lab.*, 32, p. 278, text fig. 26, 1938 (1937); *Univ. Texas Pub. No. 3945*, p. 188, text fig. 36, 1940.

Penn. (Missouri ser.-?Argentine ls.): Kansas City, Mo.

Plaxocrinus discus (Meek and Worthen).*Zeacrinus discus* Meek and Worthen, *Proc. Acad. Nat. Sci. Phila.*, p. 390, 1860; *Geol. Surv. Ill.*, 2, p. 312, pl. 26, figs. 3a, b, 1866.*Plaxocrinus discus* Moore and Plummer, *Denison Univ. Bull., Jour. Sci. Lab.*, 32, p. 279, 1938 (1937).

Penn.: Sangamon Co., Ill.

Plaxocrinus lobatus Moore and Plummer.Moore and Plummer, *Univ. Texas Pub. No. 3945*, p. 196, pl. 9, fig. 1, text fig. 38, 1940.

Penn. (Mineral Wells sh.): 2½ miles east and 2½ miles north of Rochelle, Texas.

Plaxocrinus modestus Moore.Moore, *Denison Univ. Bull.*, 39, *Jour. Sci. Lab.*, 34, p. 227, pl. 8, figs. 3 a-d, 4 a-d, text figs. 12 a-d, 15b, d, 1939.

Penn. (Brownville ls.): Strohm and vicinity, Oklahoma

Plaxocrinus mooresi (Whitfield).*Zeacrinus mooresi* Whitfield, *Ann. N. Y. Acad. Sci.*, 2, no. 8, p. 227, 1882; vol. 5, p. 597, pl. 15, figs. 6-10, 1891.*Eupachyrcrinus mooresi* Weller, *U. S. Geol. Surv., Bull.* 153, p. 265, 1898.*Plaxocrinus mooresi* Moore and Plummer, *Univ. Texas Pub. No. 3945*, pp. 77, 356, 1940.

Penn. (Bogs ls.): Carbon Hill, Hocking Co., Ohio.

Plaxocrinus obesus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 189, pl. 8, figs. 2, 3, 1940.

Penn.: Southwest of Dennis, Texas (Millsap Lake fm.); 3 miles southwest of Brock, Parker Co., Texas (Millsap Lake fm.-Brannon Bridge ls.); 3 miles northwest of Salesville, Palo Pinto Co., Texas (Palo Pinto ls.).

Plaxocrinus omphaloides Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 194, pl. 8, fig. 4, pl. 9, fig. 4, 1940.

Penn. (Mineral Wells fm.): 2½ miles east and 2½ miles north of Rochelle, and west end Lake Pinto, Palo Pinto Co., Texas.

Plaxocrinus orthodoxus Moore.

Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 233, pl. 8, figs. 1 a-c, text figs. 14a, b, 15c, 1939.

Penn. (Brownville ls.): 5 miles west of Strohm, Okla.

Plaxocrinus parilis Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 199, pl. 9, figs. 5, 6, text fig. 39, 1940.

Penn.: ½ mile west of Joplin, Jack Co., Texas (Graford fm.); Lake of the Forest, Wyandotte Co., Kansas (Wyandotte ls.).

Plaxocrinus perundatus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 191, pl. 8, fig. 5, pl. 15, fig. 5, text fig. 37, 1940.

Penn. (Millsap Lake fm.): Southwest of Dennis, Hood Co., Texas; 3 miles southwest of Brock, Parker Co., Texas (Brannon Bridge ls.).

Plaxocrinus politus Moore.

Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 223, pl. 8, figs. 5 a-c, text figs. 10a, b, 15c, 16a, c, 1939.

Penn. (Nelagoney fm.): 15 miles west of Skiatook, Okla.

Plaxocrinus praevalens Moore.

Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 220, pl. 8, figs. 6 a-c, text figs. 13a, b, 15a, 1939.

Penn. (Brownville ls.): 5 miles west of Strohm, Osage Co., Okla.

Plaxocrinus ?? sanctiludovici (Worthen).

Eupachyrcrinus? sancti-ludovici Worthen, in Miller, N. Amer. Geol. Pal., p. 245, 1889; Geol. Surv. Ill., 8, p. 98, 1890.

Hydreionocrinus sancti-ludovici Miller and Gurley, Ill. St. Mus., Bull. 3, p. 40, pl. 6, fig. 2, 1894.

Plaxocrinus?? sanctiludovici Moore and Plummer, Univ. Texas Pub. No. 3945, p. 356, 1940.

Miss. (St. Louis ls.): St. Louis, Mo.

Plaxocrinus strigosus Moore and Plummer.

Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 279, pl. 14, figs. 1 a-f, text fig. 27, 1938.

Penn. (Brentwood ls.): 2 miles north of Ft. Gibson, Okla., and U. S. Highway 71, opposite Woolsey, Ark.

Plaxocrinus subsinuatus Moore and Plummer = *Laudonocrinus subsinuatus*.

Plaxocrinus virginarius Moore.

Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 231, pl. 8, figs. 2 a-e, text figs. 11a, b, 15f, 1939.

Penn. (Brownville ls.): Strohm, Osage Co., Okla.

Plesiocrinus Wanner. Genotype: *P. piriformis* Wanner.

Platycrinidae (Adunata). Permian.

Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 74, 1937.

Plesiocrinus piriformis Wanner.

Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, p. 2, p. 75, pl. 6, figs. 36-38, 1937.
Permian: Basleo, Timor.

Pleurocrinus Austin and Austin. Genotype: *Platycrinites coronatus* Goldfuss.

Platycrinitidae (Adunata). Low. Carb., Permian.

Austin and Austin, Mon. Rec. and Foss. Crin., p. 6, 1843.—Zittel, Handb. Pal., 1, p. 365, 1879.—Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 45, 1916.
—Wright, Geol. Mag., 75, p. 267, 1938.

Pleurocrinus coplowensis Wright.

Wright, Geol. Mag., 75, p. 283, pl. 10, figs. 17-20, 1938.
Low. Carb. (Mt. Ls.-C₁): Coplow Hill, Clitheroe, England.

Pleurocrinus coronatus (Goldfuss).

Platycrinites coronatus Goldfuss, Nova Acta Acad. Leop., 19, p. 344, pl. 31, fig. 8, 1839.

Pleurocrinus coronatus Wanner, Pal. Timor, XI, Perm. Echin. Timor, p. 46, 1916.—
Wright, Geol. Mag., 75, p. 276, pl. 10, figs. 5-8, 1938.

Low. Carb. (Mt. Ls.): Bristol, Bolland, Clitheroe, and Mendip Hills, England.

Pleurocrinus depressus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 49, pl. 100 (5), fig. 1, 1916;
Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 76, pl. 2, figs. 5, 6, 1924.
Permian: Basleo, Timor.

Pleurocrinus ellipticus (Phillips).

Platycrinus ellipticus Phillips, Geol. Yorkshire, 2, p. 204, pl. 3, figs. 19, 21, 1836.
Pleurocrinus ellipticus Wright, Geol. Mag., 75, p. 279, pl. 10, figs. 21-24, 1938.
Low. Carb. (Mtn. Ls.): Alport, Derbyshire; Clitheroe, Bolland, Yorkshire, England.

Pleurocrinus globosus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 52, pl. 97 (2), fig. 6, pl. 99 (4), fig. 10, 1916.
Permian: Between Niki-Niki and Noil Fatoe, Timor.

Pleurocrinus goldfussi Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 51, pl. 100 (5), fig. 2, 1916.
Permian: Basleo, Timor.

Pleurocrinus grandis Wright.

Wright, Geol. Mag., 75, p. 281, pl. 8, figs. 1-7, 1938.
Low. Carb. (Mt. Ls.-D₂): Balladoola, Isle of Man.

Pleurocrinus inurbanus Wright.

Wright, Geol. Mag., 75, p. 282, pl. 9, figs. 1, 3, 4, 6, 1938.
Low. Carb. (Mt. Ls.-C₁): Coplow Knoll, Clitheroe, England.

Pleurocrinus mucronatus (Austin and Austin).

Platycrinites mucronatus Austin and Austin, Ann. Mag. Nat. Hist., 10, p. 109, 1842;
Mon. Rec. Foss. Crin., p. 22, pl. 2, figs. 1 a-f, 1843.

Pleurocrinus mucronatus Wright, Geol. Mag., 75, p. 277, 1938.

Low. Carb. (Mt. Ls.): Bolland, England.

Pleurocrinus pusillus Wanner = *P. spectabilis*.**Pleurocrinus spectabilis** Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 46, pl. 99 (4), fig. 8, text fig. 5, 1916; Neue Beitr. kennt. Perm. Echin. Timor, VIII, p. 80, pl. 7, figs. 2, 3, text figs. 13, 14, 1937.

Pleurocrinus pusillus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 48, pl. 99 (4), fig. 9, 1916.

Permian: Basleo, Timor.

Pleurocrinus tuberculatus (Miller).

Platycrinites tuberculatus Miller, Nat. Hist. Crin., p. 81, figs. 1, 2, 1821.

Platycrinus tuberculatus Phillips, Geol. Yorkshire, 2, p. 204, pl. 5, fig. 17, 1836.—Austin and Austin, Mon. Rec. Foss. Crin., p. 41, pl. 4, fig. 3, 1844.

Pleurocrinus tuberculatus Wright, Geol. Mag., 75, p. 278, pl. 10, figs. 1-4, 1938.

Low. Carb.: Mendip Hills, Bolland, Clitheroe, etc., Eng. (Mtn. Ls.): Tournai, Belgium (Tournaisian).

Pleurocrinus wanneri Wright.

Wright, Geol. Mag., 75, p. 284, pl. 9, fig. 11, 1938.

Low. Carb. (Mt. Ls.-C₂): Knoll Wood, Newton, Bolland, Yorkshire, and Clitheroe, England.

Podolithus Sardeson. Genotype: *P. schizocrinus* Sardeson.

Sardeson, Jour. Geol., 16, p. 242, 1908. (Bases of various crinoids.)

Podolithus anomalocrinus Sardeson.

Sardeson, Jour. Geol., 16, p. 246, text figs. 18, 19, 1908.

Ord. (Trenton-Prosser ls.): Dodge Co., Minn.

Podolithus dendrocrinus Sardeson.

Sardeson, Jour. Geol., 16, p. 248, text figs. 24-26, 1908.

Ord. (Trenton-Prosser ls.): St. Paul, Minn.

Podolithus eucheiocrinus Sardeson.

Sardeson, Jour. Geol., 16, p. 247, text figs. 20-23, 1908.

Ord. (Black River-Decorah sh.): St. Paul, Minn.

Podolithus schizocrinus Sardeson.

Sardeson, Jour. Geol., 16, p. 244, text figs. 11-17, 1908.

Ord. (Black River-Decorah sh.): St. Paul, Minn.

Podolithus strophocrinus Sardeson = *Carabocrinus dicyclicus*.

Polycerus Fischer de Waldheim. Genotype: *P. stoloniferus* Fischer de Waldheim.

Fischer de Waldheim, Rec. Foss. Gov. Moscou, sec. 3, p. 28, 1811.—Bather, Treatise Zool. (Lankester), pt. 3, p. 182, 1900. (Pentagonal plates; probably not Paleozoic.)

Polycerus stoloniferus Fischer de Waldheim.

Fischer de Waldheim, Rec. Foss. Gov. Moscou, sec. 3, p. 29, pl. 1, fig. 8, 1811; Oryctogr. Gouv. Moscou, pl. 40, fig. 15, pl. 41, figs. 1-4, 1830.

"Moschinka de la Moskou", Russia.

Polycrinus Jaekel. Genotype: *P. ramulatus* Jaekel.

Botryocrinidae (Inadunata-Fistulata). Ord.

Jaekel, Pal. Zeits., 3, p. 55, 1918.

Polycrinus kosoviensis Jaekel.

Jaekel, Pal. Zeits., 3, p. 55, fig. 47, 1918.

Ord. (Div. D₃): Kosov, Bohemia.

Polycrinus ramulatus Jaekel.

Jaekel, Pal. Zeits., 3, p. 55, fig. 46, 1918.

Ord. (Div. D₄): Haj, near Zahorzan, Bohemia.

Polypeltes Angelin = *Clonocrinus*.

Polytrema Rafinesque. Genotype: *P. obtusata* Rafinesque.

Rafinesque, Jour. Physique, p. 429, 1819. (Not recognizable.)

Porocrinus Billings. Genotype: *P. conicus* Billings.

Palaeocrinidae (Inadunata-Fistulata). Ord.; Early Sil.

Billings, Geol. Surv. Canada, Rep. Prog. for 1853-56, p. 279, 1857; Geol. Surv. Canada, Can. Org. Rem., Dec. 4, p. 53, 1859. Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 145, 1865.—Zittel, Handb. Pal., 1, p. 420, 1879.—Bather, Treatise Zool. (Lankester), pt. 3, p. 172, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 217, 1913.—Slocum, Iowa Geol. Surv., 29, p. 332, 1924.

Porocrinus conicus Billings.

Billings, Geol. Surv. Canada, Rep. Prog. 1853-56, p. 279; Canadian Org. Rem., Dec. 4, p. 34, pl. 2, figs. 5 a-d, 1859.

Ord. (Trenton-Hull ls.): Ottawa and Kirkfield, Ontario, Canada.

Porocrinus crassus Meek and Worthen.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 415, 1865; Geol. Surv. Ill., 3, p. 330, pl. 4, figs. 2a, b, text figs. A, B, 1869.

Early Sil. (Richmond-Maquoketa sh.): Oswego, Kendall Co., Ill.

Porocrinus fayettensis Slocum.

Slocum, Iowa Geol. Surv., 29, p. 333, pl. 29, figs. 14-22, pl. 30, fig. 14, 1924.—Thomas and Ladd, Univ. Iowa Studies, 11, no. 8, p. 15, pl. 2, figs. 9-16, pl. 4, fig. 8, pl. 5, figs. 6, 7, 1926.

Early Sil. (Richmond-Maquoketa): Clermont and Bloomfield, Fayette Co., Iowa (Elgin sh.); Ft. Atkinson, Iowa (Ft. Atkinson ls.).

Porocrinus kentuckyensis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 5, p. 24, pl. 2, fig. 10, 1894.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 751, fig. 1380, 1897.

Ord. (Trenton-Curdsville ls.): Mercer Co., Ky.

Porocrinus pentagonius Meek and Worthen.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 146, 1865; Geol. Surv. Ill., 3, p. 332, pl. 1, fig. 5, 1868.

Ord. (Black River-Platteville ls.): Dixon, Ill.

Porocrinus radiatus Beyrich = *Perittoocrinus radiatus*.

Porocrinus shawi Schuchert.

Schuchert, U. S. Nat. Mus., Proc., 22, p. 155, pl. 12, figs. 1-3, 1900.

Ord. (Trenton ls.): Head of Frobisher Bay, Baffin Land.

Porocrinus smithi Grant.

Grant, Trans. Ottawa Field Nat. Club, no. 2, p. 42, pl. figs. 1-8, 1881.—Bather, Treatise Zool. (Lankester), pt. 3, p. 173, text fig. 86, 1900.—Hudson, N. Y. St. Mus., Bull. 177, p. 163, pls. 1, 2, 1915.

Ord. (Trenton): Belleville, Ontario, Canada (Hull ls.); Woodford Co., Ky. (Curdsville ls.).

Poteroicrinites Miller. Genotype: *P. crassus* Miller.

Poteroicrinitidae (Inadunata-Fistulata). Dev.-Permian.

Miller, Nat. Hist. Crin., pp. 14, 67, 1821.—Meek and Worthen, Geol. Surv. Ill., 2, p. 179, 1866; Proc. Acad. Nat. Sci. Phila., p. 137, 1869.

Poteroicrinus Agassiz, Mem. Soc. Neuchatel, 1, p. 197, 1835.—Phillips, Geol. Yorkshire, pt. 2, p. 205, 1836.—Austin and Austin, Mon. Rec. Foss. Crin., p. 68, 1846.—Koninck and Lehon, Rech. Crin. Carb. Belg., p. 84, 1853.—Zittel, Handb. Pal., 1, p. 360, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 104 (360), 1880 (1879); pt. 3, p. 234 (158), 1886; Proc. Acad. Nat. Sci. Phila., pp. 331, 392, 1890.—Bather, Ann. Mag. Nat. Hist., (6) 5, p. 325, 1890; Treatise Zool. (Lankester), pt. 3, p. 180, 1900.—Jaekel, Pal. Zeits., 3, p. 62, 1918.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 177, 1924.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 69, 1926.—Yakovlev, Centralbl. Min., Geol. Pal., Abh. B, no. 9, p. 379, 1930.

Poteroicrinites agnatus (S. A. Miller).

Poteroicrinus agnatus S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 653, pl. 8, figs. 6, 8, figs. 6, 7, 1892 (adv. pub. 1891, p. 43).

Miss. (Warsaw ls.): Boonville, Mo.

Poteriocrinites altonensis (Miller and Gurley).

Poteriocrinus altonensis Miller and Gurley, Ill. St. Mus., Bull. 7, p. 62, pl. 4, figs. 3, 4, 1895.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 751, fig. 1384, 1897.
Miss. (?Ste. Genevieve ls.): Alton, Ill.

Poteriocrinites amoenus (S. A. Miller).

Poteriocrinus amoenus S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 655, pl. 9, fig. 6, 1892 (adv. pub. 1891, p. 45).
Miss. (Keokuk ls.): Indian Creek, Montgomery Co., Ind.

Poteriocrinites angulosus (Schultze).

Poteriocrinus angulosus Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 162, pl. 5, figs. 3, 3a, 1867 (adv. pub. 1866, p. 50).
Dev. (Eifelian): Kerpen, Germany.

Poteriocrinites anomalos (Wetherby).

Poteriocrinus anomalos Wetherby, Jour. Cincinnati Soc. Nat. Hist., 3, p. 158, pl. 5, figs. 6, 6a, b, 1880.
Miss. (Chester-Glen Dean ls.): Pulaski Co., Ky.

Poteriocrinites arachnaeformis (Worthen).

Poteriocrinus arachnaeformis Worthen, Ill. St. Mus., Bull. 1, p. 13, 1882; Geol. Surv. Ill., 7, p. 281, pl. 28, fig. 12, 1883.
Miss. (Keokuk ls.): Warsaw, Ill.

Poteriocrinites (?) arkonensis (Goldring).

Poteriocrinus (?) arkonensis Goldring, Bull. Buffalo Soc. Nat. Sci., 15, p. 191, pl. 2, figs. 6, 7, 1934.
Dev. (Hamilton-Arkona beds): Near Arkona, Canada.

Poteriocrinites (*Zeacrinus*?) *armiger* Meek and Worthen = *Tholocrinus armiger*.

Poteriocrinites arrectarius (Miller and Gurley).

Poteriocrinus arrectarius Miller and Gurley, Ill. St. Mus., Bull. 9, p. 33, pl. 4, fig. 2, 1896.
Miss. (St. Louis-?Ste. Genevieve ls.): Alton, Ill.

Poteriocrinites (*Zeacrinus*) *asper* Meek and Worthen = *Linocrinus asper*.

Poteriocrinites bisseli Worthen = *Phacelocrinus bisseli*.

Poteriocrinites brittsi (S. A. Miller).

Poteriocrinus brittsi S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 30, pl. 4, figs. 5, 6, 1891.
Miss. (Warsaw ls.): Boonville, Mo.

Poteriocrinites broadheadi (Miller and Gurley).

Poteriocrinus broadheadi Miller and Gurley, Ill. St. Mus., Bull. 7, p. 63, pl. 4, figs. 7, 8, 1895.
Poteriocrinus? *broadheadi* Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 105, pl. 31, figs. 6-8, 1938.
Miss. (Chouteau ls.): Sedalia, Mo.

Poteriocrinites buffaloensis (Worthen).

Poteriocrinus buffaloensis Worthen, in Miller, N. Amer. Geol. Pal., p. 273, 1889; Geol. Surv. Ill., 8, p. 89, pl. 12, fig. 1, 1890.—Thomas, Iowa Geol. Surv., 29, p. 478, pl. 44, fig. 19, 1924.
Dev. (Cedar Valley ls.): Near Buffalo, Iowa.

Poteriocrinites cantonensis (Miller and Gurley).

Poteriocrinus cantonensis Miller and Gurley, 16th Rep. Geol. Surv. Ind., p. 358, pl. 8, figs. 3, 4, 1890 (authors' ed., p. 41).
Miss. (Keokuk ls.): Near Canton, Ind.

Poteriocrinites (*Zeacrinus*) *cariniferous* Worthen = *Linocrinus cariniferous*.

Poteriocrinites (*Dendrocrinus*) *casei* Meek = *Dendrocrinus casei*.

Poteriocrinites (*Dendrocrinus*) *cincinnatiensis* Meek = *Dendrocrinus cincinnatiensis*.

Poteriocrinites circumtextus (Miller and Gurley).

Poteriocrinus circumtextus Miller and Gurley, Ill. St. Mus., Bull. 5, p. 31, pl. 2, figs. 29, 30, 1894.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 751, fig. 1385, 1897.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 37, text fig. 25, p. 41, fig. 29, 1900.

Miss. (Keokuk ls.): Crawfordsville, Ind.

Poteriocrinites clarkii (Williams).

Poteriocrinus clarkii Williams, Proc. Acad. Nat. Sci. Phila., p. 21, pl. 1, fig. 4, 1882.—Goldring, N. Y. St. Mus., Mem. 16, p. 412, pl. 54, figs. 4, 5, 1923.

Dev. (Up. Chemung gr.): Haskinsville, Steuben Co. N. Y., and Erie, Pa.

Poteriocrinites clarkii alpha (Williams).

Poteriocrinus clarkii var. *alpha* Williams, Proc. Acad. Nat. Sci. Phila., p. 22, pl. 1, fig. 5, 1882.—Goldring, N. Y. St. Mus., Mem. 16, p. 414, pl. 54, figs. 6, 7, 1923.

Dev. (Low. Chemung gr.): Ithaca, N. Y.

Poteriocrinites claytonensis (Worthen).

Poteriocrinus claytonensis Worthen, Ill. St. Mus., Bull. 1, p. 18, 1882; Geol. Surv. Ill., 7, p. 288, pl. 30, fig. 6, 1883.

Miss. (Warsaw ls.): Near Clayton, Adams Co., Ill.

Poteriocrinites (*Graphiocrinus*; *Scaphiocrinus*) *clio* Meek and Worthen = *Pachylocrinus clio*.

Poteriocrinites clytis (Worthen).

Poteriocrinus clytis Worthen, Ill. St. Mus., Bull. 1, p. 16, 1882; Geol. Surv. Ill., 7, p. 294, pl. 30, fig. 10, 1883.

Miss. (St. Louis ls.—?Ste. Genevieve ls.): Fountain Creek, Monroe Co., Ill.

Poteriocrinites* (?) *colgatensis (Goldring).

Poteriocrinus (?) *colgatensis* Goldring, N. Y. St. Mus., Bull. 267, p. 91, pl. 2, figs. 1-6, 1926.

Dev. (Hamilton-Skanateles sh., Chenango mem.): Hamilton, N. Y.

Poteriocrinites (*Zeacrinus*) *compactilis* Worthen = *Adinocrinus compactilis*.

Poteriocrinites (*Zeacrinus*?) *concinus* Meek and Worthen = *Cydrocrinus concinus*.

Poteriocrinites conicus (Phillips).

Poteriocrinus conicus Phillips, Geol. Yorkshire, 2, p. 205, pl. 4, figs. 3, 7, 1836.—Austin and Austin, Mon. Rec. Foss. Crin., p. 82, pl. 10, figs. 3 a-c, 1847.

Low. Carb. (Mtn. ls.): Bolland, Clifton, Bristol, England; Fermanagh, Ireland.

Poteriocrinites conoideus (deKoninck and Lehon).

Poteriocrinus conoideus de Koninck and Lehon, Rech. Crin. Terr. Carb. Belg., p. 93, pl. 1, fig. 8 a-c, 1854.

Low. Carb. (Viséan): Visé, Belgium.

Poteriocrinites (*Graphiocrinus*; *Scaphiocrinus*) *coreyi* Meek and Worthen = *Pachylocrinus coreyi*.

Poteriocrinites crassimanus (McCoy).

Poteriocrinus crassimanus McCoy, Ann. Mag. Nat. Hist., (2) 3, p. 245, 1849.

Low. Carb.: Hook Head, Co. Wexford, Ireland.

Poteriocrinites crassus Miller.

Miller, Nat. Hist. Crin., p. 68, pl., 1821.—Austin and Austin, Mon. Rec. Foss. Crin., p. 69, pl. 8, figs. 3 g-k, m, 1845.

Encrinites crassus Schlotheim, Nacht. Petref., 3, p. 93, pl. 25, figs. 2 a-e, 1882.

Low. Carb.: Yorkshire, Bristol, Clitheroe, Eng., and Co. Wexford, Ireland (Mtn. Ls.); Clevedon Bay, Somersetshire, Eng. (Magnesian beds); Tournai, Belgium (Tournaisian); Germany.

Poteroicrinites cuneatus (Quenstedt).

Poteroicrinus cuneatus Quenstedt, Petref. Deutsch., 4, p. 546, pl. 109, fig. 14, 1876.
Scaphioicrinus cuneatus Yanichevsky, Mem. Comité Géol., n.s., 107, p. 33, pl. 7, figs. 1, 2, 1915.

Miss. (Burlington ls.): Burlington, etc., Iowa.

Poteroicrinites cylindricus (Lyon).

Poteroicrinus cylindricus Lyon, Trans. Amer. Philos. Soc., 13, p. 458, pl. 27, figs. 1, 1-1, 1869.

Dev. (Onondaga-Jeffersonville ls.): Falls of the Ohio.

Poteroicrinites dactyloides Austin and Austin = *Scytalocrinus dactyloides*.

Poteroicrinites davisanus (S. A. Miller).

Poteroicrinus davisanus S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 5, p. 226, pl. 9, figs. 4 a-c, 1882.

Dev. (Onondaga-Jeffersonville ls. or ?Hamilton-Sellersburg ls.): Deputy, Ind.

Poteroicrinites dekadactylus (Lyon and Casseday).

Cyathocrinus dekadactylus Lyon and Casseday, Amer. Jour. Sci., (2) 29, p. 73, 1860.
Poteroicrinus dekadactylus Wachsmuth and Springer, Rev. Pal., pt. 1, p. 117 (340), 1880 (1879).

Miss. (Keokuk ls.): Montgomery Co., Ind.

Poteroicrinites (*Graphioicrinus*; *Scaphioicrinus*) *delicatus* Meek and Worthen = *Cosmetocrinus delicatus*.

Poteroicrinites (*Scaphioicrinus*) *depressus* Meek and Worthen = *Decadocrinus depressus*.

Poteroicrinites? diffusus (Hall).

Poteroicrinus diffusus Hall, 15th Rep. Regents Univ. St. N. Y., p. 121, 1862 (sep. p. 93); N. Y. St. Mus., Bull. 1, pl. 1-A, fig. 1 (not fig. 2), 1872.

Poteroicrinus? diffusus Goldring, N. Y. St. Mus., Mem. 16, p. 408, pl. 54, fig. 1, 1923.

Dev. (Hamilton-Moscow sh.): Vincent, Ontario Co., N. Y.

Poteroicrinites (?) dignatus (Goldring).

Poteroicrinus (?) dignatus Goldring, N. Y. St. Mus., Mem. 16, p. 416, pl. 54, figs. 9, 10, 1923; Jour. Pal., 10, p. 22, pl. 7, figs. 10, 12, 1936.

Dev. (Hamilton): East side Owasco Lake, Cayuga Co., N. Y. (Skaneateles sh.); New Berlin, N. Y. (Moscow sh.).

Poteroicrinites doris (Hall).

Scaphioicrinus doris Hall, Jour. Boston Soc. Nat. Hist., 7, p. 312; Prelim. Descr. N. Sp. Crin., p. 7, 1861.

Poteroicrinus doris Wachsmuth and Springer, Rev. Pal., pt. 1, p. 111 (334), 1880 (1879).—Springer, Mem. Mus. Comp. Zool., 25, p. 152, pl. 4, figs. 1-6, 1911.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Poteroicrinites? dudleyensis Austin and Austin.

Austin and Austin, Ann. Mag. Nat. Hist., (1), 10, p. 100, 1842; vol. 11, p. 195, 1843. Sil. (Wenlock ls.): Dudley, England.

Poteroicrinites (*Dendroicrinus*) *dyeri* Meek = *Dendroicrinus dyeri*.

Poteroicrinites elsahensis (Worthen).

Poteroicrinus elsahensis Worthen, in S. A. Miller, N. Amer. Geol. Pal., p. 274, 1889; Geol. Surv. Ill., 8, p. 88, pl. 14, fig. 5, 1890.

Miss. (Fern Glen ls.): Near Elsah, Jersey Co., Ill.

Poteroicrinites (*Graphioicrinus*; *Scaphioicrinus*) *fiscellus* Meek and Worthen = *Pelecoicrinus fiscellus*.

Poteroicrinites (*Zeacrinus*) *formosus* Worthen = *Phanocrinus formosus*.

Poteriocrinites gracilis (McCoy).

Poteriocrinus gracilis McCoy, Syn. Char. Carb. Foss. Ireland, p. 178, pl. 25, figs. 11-14, 1844.

Low. Carb. (Mtn. Ls.): Co. Wexford, Ireland; Scotland; England.

Poteriocrinites hardinensis Worthen.

Worthen, in Meek and Worthen, Geol. Surv. Ill., 5, p. 533, pl. 20, fig. 10, 1873.

Miss. (Ste. Genevieve ls.): Rosiclare, Hardin Co., Ill., and Huntsville, Ala.

Poteriocrinites hemisphericus (Müller).

Poteriocrinus hemisphericus Müller, Monatsber. Berlin Acad. Wiss., p. 354, 1856.

Dev. (Eifelian): Prüm, Germany.

Poteriocrinites (Scaphiocrinus) *hemisphericus* Meek and Worthen = *Delocrinus hemisphericus*.

Poteriocrinites illinoisensis (Worthen).

Poteriocrinus illinoisensis Worthen, Ill. St. Mus., Bull. 1, p. 19, 1882; Geol. Surv. Ill., 7, p. 289, pl. 28, fig. 17, 1883.

Miss. (Keokuk ls.): Warsaw, Ill.

Poteriocrinites impressus (Phillips).

Poteriocrinus impressus Phillips, Geol. Yorkshire, 2, p. 205, pl. 4, fig. 1, 1836.—Austin and Austin, Mon. Rec. and Foss. Crin., p. 85, pl. 10, fig. 6, 1847.

Low. Carb. (Mtn. Ls.): Whitewell, Bristol, and Arran, England; Millicent, Clare, Ireland.

Poteriocrinites impressus (Richter and Unger).

Poteriocrinus impressus Richter and Unger, Denk. Wiss. Akad., Math. Nat. Cl., XI, p. 44, pl. 3, figs. 1-3, 1856.

Dev. (Famennian): Thuringerwald, Germany.

Poteriocrinites isacobus Austin and Austin = *Pachylocrinus isacobus*.

Poteriocrinites jeffriesi (Rowley).

Poteriocrinus jeffriesi Rowley, Missouri Bur. Geol. and Mines, 8, p. 69, pl. 16, figs. 71-73, 1908.

Miss. (Kinderhook-Louisiana ls.): Louisiana, Mo.

Poteriocrinites (Scaphiocrinus) *juvenis* Meek and Worthen = *Histocrinus juvenis*.

Poteriocrinites kopfi (Goldring).

Poteriocrinus kopfi Goldring, Ann. Carnegie Mus., 24, p. 362, pl. 27, figs. 4-11, 1935.

Dev. (Hamilton): Eleven Mile Creek, Darien, Genesee Co., N. Y. (Low. Moscow sh.); White Creek, etc., East Bethany, N. Y. (Moscow sh.)

Poteriocrinites labyrinthicus (S. A. Miller).

Cyathocrinus labyrinthicus S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 660, pl. 12, figs. 11-14, 1892 (adv. pub. 1891, p. 49).

Poteriocrinus labyrinthicus Miller and Gurley, Ill. St. Mus., Bull. 9, p. 34, pl. 4, fig. 7, 1896.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 751, fig. 1387, 1897.

Miss. (Warsaw ls.): Boonville, Mo.

Poteriocrinites lasallensis (Worthen).

Poteriocrinus lasallensis Worthen, Geol. Surv. Ill., 6, p. 526, pl. 32, fig. 7, 1875.

Penn.: La Salle, Ill.

Poteriocrinites leviculus (Lyon).

Cyathocrinus leviculus Lyon, Proc. Acad. Nat. Sci. Phila., (2) 5, p. 409, pl. 4, fig. 1, 1861.

Poteriocrinus laeviculus Wachsmuth and Springer, Rev. Pal., pt. 1, p. 120 (343), 1880 (1879).

Dev. (Hamilton-Sellersburg ls.): Beargrass Creek, Jefferson Co., Ky.

Poteriocrinites (Scaphiocrinus) *lilliformis* Meek and Worthen = *Pachylocrinus lilliformis*.

Poteriocrinites longicaudatus (Fraipont).

Poteriocrinus (*Scaphiocrinus*) *longicaudatus* Fraipont, Mem. Soc. Geol. Belg., 2, pt. 1, p. 7, pl. 1, figs. 1, 2, 1904.

Low. Carb. (Viséan): Visé, Belgium.

Poteriocrinites (*Zeacrinus*) *lyra* Meek and Worthen = *Coeliocrinus lyra*.

Poteriocrinites (*Scaphiocrinus*) *meadamsi* Worthen = *Graphiocrinus meadamsi*.

Poteriocrinites macoupinensis Worthen.

Worthen, in Meek and Worthen, Geol. Surv. Ill., 5, p. 561, pl. 24, fig. 3, 1873.

Penn.: Macoupin Co., Ill.

Poteriocrinites (*Graphiocrinus*, *Scaphiocrinus*) *macroductylus* Meek and Worthen = *Hypselocrinus macroductylus*.

Poteriocrinites macropleurus (Hall).

Cyathocrinus macropleurus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 205; Descr. N. Sp. Crin., p. 5, 1861.

Vasocrinus macropleurus Weller, Bull. Geol. Soc. Amer., 20, p. 278, pl. 11, fig. 21, 1909.

Poteriocrinus macropleurus Springer, Mem. Mus. Comp. Zool., 25, p. 151, pl. 4, figs. 7-11, 1911.

Miss.: Burlington, Iowa (Low. Burlington ls.); Lake Valley, N. Mex. (Lake Valley ls.); Button Mold Knob, Ky. (New Providence sh.).

Poteriocrinites magnus (Wright).

Poteriocrinus magnus Wright, Geol. Mag., 74, p. 405, pl. 15, fig. 1, 1937; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 13, pl. 9, fig. 10, 1939.

Poteriocrinites magnus Strimple, Bull. Amer. Pal., 25, no. 89, p. 8 (40), pl. 1, figs. 10-12, 1939.

Low. Carb. (Low. Ls. gr.): Roscobie, Inveriel, etc., Scotland.

?Penn. (Wewoka fm.): Near Holdenville, Okla.

Poteriocrinites malaianus (Wanner).

Poteriocrinus malaianus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 142, pl. 104 (9), fig. 1, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 182, pl. 8, figs. 1-5, 1924; Neue Beitr. kennt. Perm. Echin. Timor, XII, p. 141, pl. 9, fig. 30, 1937.

Permian: Basleo, Timor.

Poteriocrinites mammaeformis (Worthen).

Poteriocrinus mammaeformis Worthen, in Miller, N. Amer. Geol. Pal., p. 274, 1889; Geol. Surv. Ill., 8, p. 91, 1890.

Miss. (Keokuk ls.): Warsaw, Ill.

Poteriocrinites meekianus (Shumard).

Poteriocrinus meekianus Shumard, First and Second Repts. Geol. Surv. Mo., p. 188, pl. A, figs. 7a, b, 1855.—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 103, pl. 31, figs. 17, 18, 20-25, 1938.

Barycrinus meekianus Keyes, Geol. Surv. Mo., 4, p. 211, 1918.

Miss. (Chouteau ls.): Mt. Vernon, Moniteau Co., Sedalia, Providence, etc., Mo.

Poteriocrinites mespiliformis (Richter and Unger).

Poteriocrinus mespiliformis Richter and Unger, Den. Kais. Akad. Wiss., Math. Nat. Cl., XI, p. 131, pl. 3, fig. 4, 1856.

Dev. (Famennian): Thuringerwald, Germany.

Poteriocrinites minimus Austin = *Pachylocrinus isacobus*.

Poteriocrinites municipalis Troost = *Rhopocrinus municipalis*.

Poteriocrinites (*Graphiocrinus*, *Scaphiocrinus*) *nanus* Meek and Worthen = *Cosmetocrinus nanus*.

Poteriocrinites nassa (Hall).

Poteriocrinus nassa Hall, 15th Rep. Regents Univ. St. N. Y., p. 120, 1862 (sep. p. 92); New York St. Mus., Bull. 1, pl. 1-A, fig. 5, 1872.—Goldring, N. Y. St. Mus., Mem. 16, p. 410, pl. 54, figs. 2, 3, 1923.

Dev. (Hamilton-Moscow sh.): Canandaigua, N. Y.

Poteriocrinites nettelrothanus (S. A. Miller).

Poteriocrinus nettelrothanus S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 5, p. 227, pl. 9, figs. 5, 5a, 1862.

Dev. (Onondaga-Jeffersonville ls. or ?Hamilton-Sellersburg ls.): Deputy, Ind.

Poteriocrinites nodobrachiatus (Hall).

Scaphiocrinus nodobrachiatus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 314; Prelim. Descr. N. Sp. Crin., p. 8, 1861; Nat. Hist. N. Y., Bull. 1, pl. 6, fig. 2, 1872.

Poteriocrinus nodobrachiatus Wachsmuth and Springer, Rev. Pal., pt. 1, p. 120 (343), 1880 (1879).

Miss. (Keokuk ls.): Crawfordsville, Ind.

Poteriocrinites notabilis Meek and Worthen.

Poteriocrinites (*Graphiocrinus*, *Scaphiocrinus*) *notabilis* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 147; 1869.

Poteriocrinites (*Scaphiocrinus*) *notabilis* Meek and Worthen, Geol. Surv. Ill., 5, p. 410, pl. 1, fig. 9, 1873.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Poteriocrinites nuciformis (Fischer de Waldheim).

Cupressocrinites nuciformis Fischer de Waldheim, Oryctographia Gouv. Moscou, ed. 2, p. 151, pl. 41, figs. 5, 6, 1837.

Poteriocrinus nuciformis Eichwald, Leth. Ross., 1, p. 588, 1860.

Low. Carb.: River Nara, Gov. Moscow, Russia.

Poteriocrinites obuncus (White).

Poteriocrinus obuncus White, Proc. Boston Soc. Nat. Sci., 9, p. 11, 1865 (adv. pub. 1862).

Miss. (Low. Burlington ls.): Burlington, Iowa.

Poteriocrinites otterensis (Worthen).

Poteriocrinus otterensis Worthen, Ill. St. Mus., Bull. 1, p. 14, 1882; Geol. Surv. Ill., 7, p. 283, pl. 28, fig. 4, 1883.

Miss. (Keokuk ls.): Otter Creek, Jersey Co., Ill.

Poteriocrinites peculiaris (Worthen).

Poteriocrinus clytis Worthen (by error), Ill. St. Mus., Bull. 1, p. 25, 1882.

Poteriocrinus peculiaris Worthen, Geol. Surv. Ill., 7, p. 298, pl. 29, fig. 10, 1883.

Miss. (Ste. Genevieve ls.): Monroe Co., Ill.

Poteriocrinites (*Scaphiocrinus*) *penicillus* Meek and Worthen = *Linocrinus penicillus*.

Poteriocrinites pentonensis (Wright).

Poteriocrinus pentonensis Wright, Geol. Mag., 74, p. 404, pl. 14, fig. 6, 1937; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 18, pl. 9, fig. 15, 1939.

Low. Carb. (Low. Ls. gr.): Penton Linns, and Liddesdale, Scotland.

Poteriocrinites perplexus Meek and Worthen = *Parisocrinus perplexus*.

Poteriocrinites plicatus Austin and Austin.

Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 108, 1842; 11, p. 196, 1843; Mon. Rec. Foss. Crin., p. 78, pl. 9, figs. 4a-f, 1846.

Poteriocrinus plicatus Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 122, p. 46, figs. 8a₁₋₃, 1930.

Low. Carb.: Avon Gorge near Bristol and Clitheroe, England; Co. Wexford, Ireland (Mtn. Ls.); Tournai, Belgium (Tournaisian).

- Poteroicrinites pulaskiensis** (Miller and Gurley).
Poteroicrinus pulaskiensis Miller and Gurley, Ill. St. Mus., Bull. 8, p. 39, pl. 3, figs. 26, 27, 1896.
 Miss. (Chester-Glen Dean ls.): Pulaski Co., Ky.
- Poteroicrinites pygmaeus** (Wenjukoff).
Poteroicrinus pygmaeus Wenjukoff, Fauna Devon. Syst. Russland, p. 446, pl. 1, fig. 12, pl. 11, fig. 6, 1886.
 Dev.: Don River, Russia.
- Poteroicrinites quinquangularis** Austin and Austin.
 Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 108, 1842; 11, p. 196, 1843; Mon. Rec. Foss. Crin., p. 80, pl. 10, figs. 2 a-e, 1846.
 Low. Carb. (Mtn. Ls.): Black Rock, Bristol, England; Hook Point, Co. Wexford, Ireland.
- Poteroicrinites radiatus* Austin and Austin = *Parisocrinus radiatus*.
- Poteroicrinites ramonaensis** Strimple.
 Strimple, Bull. Amer. Pal., 25, no. 89, p. 7 (39), pl. 1, figs. 5, 6, 1939.
 Penn. (Ochelata-Stanton ls.): 3½ miles west of Ramona, Okla.
- Poteroicrinites rhenanus** (Müller).
Poteroicrinus rhenanus Müller, in Zeiler and Wirtgen, Verh. Nat. Hist. Preuss. Rheinl., 12, p. 20, pl. 7, fig. 3 (not figs. 1, 2), 1855.
 Dev. (Coblentzian): Niederlahnstein, etc., near Coblenz, Germany.
- Poteroicrinites robbi** (Roy).
Poteroicrinus robbi Roy, Field Mus. Pub. 254, p. 205, pl. 34, figs. 1, 2, 1929.
 Miss. (Burlington ls.): Burlington, Iowa.
- Poteroicrinites rostratus* Austin and Austin = *Scytalocrinus rostratus*.
- Poteroicrinites rowleyi** (Worthen).
Poteroicrinus rowleyi Worthen, in S. A. Miller, N. Amer. Geol. Pal., p. 275, 1889; Geol. Surv. Ill., 8, p. 90, pl. 14, fig. 9, 1890.
 Miss. (Chester-Ste. Genevieve ls.): Monroe Co., Ill.
- Poteroicrinites* (*Graphiocrinus*, *Scaphiocrinus*) *rudis* Meek and Worthen = *Graphiocrinus rudis*.
- Poteroicrinites rugosus** (Grenfell).
Poteroicrinus rugosus Grenfell, Proc. Bristol Nat. Soc., n.s., I, p. 479, pl. 7, figs. 3-5, 1876.
 Low. Carb. (Mtn. Ls.): Avon Gorge, Bristol, England.
- Poteroicrinites* (*Graphiocrinus*, *Scaphiocrinus*) *scalaris* Meek and Worthen = *Decadocrinus scalaris*.
- Poteroicrinites* (*Zeacrinus*) *scobina* Meek and Worthen = *Linocrinus scobina*.
- Poteroicrinites scotocarbonarius** (Wright).
Poteroicrinus scotocarbonarius Wright, Geol. Mag., 74, p. 397, pl. 13, figs. 10-12, pl. 14, figs. 1-5, pl. 15, figs. 10, 13, pl. 16, figs. 1, 3, 7, text figs. 7-9, 1937; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 14, pl. 9, figs. 12-14, 16-18, text figs. 7-9, 1939.
 Low. Carb. (Low. Ls. gr.): Roscobie and Invertiel, Scotland.
- Poteroicrinites* (*Zeacrinus*) *serratus* Meek and Worthen = *Eratocrinus serratus*.
- Poteroicrinites sigillatus** (Quenstedt).
Poteroicrinus sigillatus Quenstedt, Petref. Deutsch., 4, p. 525, pl. 108, fig. 41, 1876.
 Low. Carb.: Nefiez (Herault), France.
- Poteroicrinites similis** (Worthen).
Poteroicrinus similis Worthen, Ill. St. Mus., Bull. 1, p. 23, 1882; Geol. Surv. Ill., 7, p. 295, pl. 30, fig. 12, 1883.
 Miss. (Chester-Ste. Genevieve ls.): Monroe Co., Ill.

Poteriocrinites simplex (Lyon).

Poteriocrinus simplex Lyon, Trans. Amer. Philos. Soc. 12, p. 458, pl. 26, fig. f, 1869.

Dev. (Onondaga-Jeffersonville ls.): Falls of the Ohio.

Poteriocrinites smithi (Jack and Etheridge).

Poteriocrinus? smithi Jack and Etheridge, Geol. Pal. Queensland and New Guinea, p. 209, pl. 8, fig. 1, 1892.

Permian (Gympie beds): Stanwell, near Rockhampton, Queensland, Australia.

Poteriocrinites spissus (de Koninck and Lehon).

Poteriocrinus spissus de Koninck and Lehon, Rech. Crin. Carb. Belgique, p. 94, pl. 1, figs. 9a, b, 1854.

Encrinus Cumberland, Trans. Geol. Soc. London, 5, pl. 3, fig. 2, 1819.

Low. Carb.: Avon Gorge, etc., England (Mtn. Ls.); Scotland; Tournai, Belgium (Tournaisian); ?Button Mold Knob, Ky. (New Providence sh.).

Poteriocrinites (*Graphiocrinus*; *Scaphiocrinus*) *striatus* Meek and Worthen = *Graphiocrinus striatus*.

Poteriocrinites (*Scaphiocrinus*) *tethys* = *Hypselocrinus tethys*.

Poteriocrinites ulrichi (Worthen).

Poteriocrinus ulrichi Worthen, in Miller, N. Amer. Geol. Pal., p. 275, fig. 408, 1889; Geol. Surv. Ill., 8, p. 87, pl. 17, fig. 2, 1890.

Miss. (Keokuk ls.): Keokuk, Iowa.

Poteriocrinites vagulus (Miller and Gurley).

Poteriocrinus vagulus Miller and Gurley, Ill. St. Mus., Bull. 6, p. 46, pl. 4, figs. 10, 11, 1895.

Miss. (Chester-Glen Dean ls): Pulaski Co., Ky.

Poteriocrinites validus (Worthen).

Poteriocrinus validus Worthen, Ill. St. Mus., Bull. 1, pl. 18, 1882; Geol. Surv. Ill., 7, p. 287, pl. 28, fig. 16, 1883.

Miss. (Keokuk ls.): Warsaw, Ill.

Poteriocrinites verneuili (Cailliaud).

Poteriocrinus verneuili Cailliaud, Bull. Soc. Geol. France, (2) 18, p. 334, text figs. 1861.—Oehlert, Bull. Soc. Geol. France, ser. 3, 17, p. 785, pl. 21, fig. 4, 1890.

Low. Dev.: Loire Inferieur, France.

Poteriocrinites verus (Miller and Gurley).

Poteriocrinus verus Miller and Gurley, Jour. Cincinnati Soc. Nat. Hist., 13, p. 24, pl. 4, fig. 9; 16th Rep. Geol. Surv. Ind., p. 344, pl. 4, fig. 9 (adv. pub. p. 24), 1890.

Miss. (Keokuk ls.): Crawfordsville, Ind.

Poteriocrinites waltersi (Rowley and Hare).

Poteriocrinus waltersi Rowley and Hare, Kansas City Sci., 5, p. 101, pl. 2, fig. 15, 1891.

Miss. (Low. Burlington ls.): Louisiana, Mo.

Poteriocrinites wortheni (Lyon).

Cyathocrinus wortheni Lyon, Proc. Acad. Nat. Sci. Phila., (2) 5, p. 410, pl. 4, fig. 2, 1861.

Poteriocrinus wortheni Wachsmuth and Springer, Rev. Pal., pt. 1, p. 121, (344), 1880 (1879).

Dev. (Hamilton-Sellersburg ls.): Beargrass Creek, near Louisville, Ky.

Poteriocrinites zethus (Williams).

Poteriocrinus (*Decadocrinus*) *zethus* Williams, Proc. Acad. Nat. Sci. Phila., p. 27, pl. 1, fig. 9, 1882.

Poteriocrinus zethus Goldring, N. Y. St. Mus., Mem. 16, p. 414, pl. 54, fig. 8, 1923.

Dev. (Portage-Ithaca beds): Ithaca, N. Y.

- Poteriocrinus of authors = Poteriocrinites.
- Poteriocrinus abbreviatus Austin and Austin = Pachylocrinus brevidactylus.
- Poteriocrinus (Scytalocrinus) abnormis Wachsmuth and Springer = Scytalocrinus abnormis.
- Poteriocrinus (Scaphiocrinus) aegina Hall = Decadocrinus aegina.
- Poteriocrinus albersi Miller and Gurley = Decadocrinus albersi.
- Poteriocrinus alternatus Hall = Dendrocrinus alternatus.
- Poteriocrinus aqualis Hall = Pelecocrinus aqualis.
- Poteriocrinus arcanus Miller and Gurley = Hypselocrinus arcanus.
- Poteriocrinus asper Worthen = Pachylocrinus extensus.
- Poteriocrinus asperatus Worthen = Pachylocrinus asperatus.
- Poteriocrinus barrisi Hall = Cyathocrinites barrisi.
- Poteriocrinus barumensis Whidborne = Hydriocrinus barumensis.
- Poteriocrinus barumensis Dreverman = Hydriocrinus ratingensis.
- Poteriocrinus (Scaphiocrinus) bayensis Meek and Worthen = Decadocrinus bayensis.
- Poteriocrinus bijugis Trautschold = Pegocrinus bijugis.
- Poteriocrinus biplex* Eichwald.
Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, no. 1, p. 121, 1856; Leth. Ross., 1, p. 587, pl. 31, figs. 22 a-c, 42 a-c, 1860 (stems only).
Ord. (*Orthoceras* ls.): Iswow, Russia.
- Poteriocrinus (Scytalocrinus) bisselli Wachsmuth and Springer = Phacelocrinus bisselli.
- Poteriocrinus blairi Miller and Gurley = Cercidocrinus blairi.
- Poteriocrinus bockschii Geinitz = Ulocrinus bockshii.
- Poteriocrinus boonvillensis S. A. Miller = Hypselocrinus boonvillensis.
- Poteriocrinus bozemanensis Miller and Gurley = Gilmocrinus bozemanensis.
- Poteriocrinus briareus Worthen = Pachylocrinus briareus.
- Poteriocrinus burketi Worthen = Pachylocrinus burketi.
- Poteriocrinus bursaeformis White = Cercidocrinus bursaeformis.
- Poteriocrinus (Dendrocrinus) caduceus Hall = Dendrocrinus caduceus.
- Poteriocrinus calyculus Hall = Hypselocrinus calyculus.
- Poteriocrinus calyx de Koninck and Lehon = Phanocrinus calyx.
- Poteriocrinus ? calyx Hall = Ampheristocrinus? calyx.
- Poteriocrinus (Scaphiocrinus) carbonarius Meek and Worthen = Apographiocrinus carbonarius.
- Poteriocrinus (Scaphiocrinus) carinatus Whitfield = Pachylocrinus carinatus.
- Poteriocrinus carinatus Meek and Worthen = Pachylocrinus liliiformis.
- Poteriocrinus carinobrachiatus Quenstedt = Cyathocrinites multibrachiatus.
- Poteriocrinus clytis Worthen. See Poteriocrinites peculiaris.
- Poteriocrinus columbiensis Worthen = Phacelocrinus columbiensis.
- Poteriocrinus coreyi Worthen = Histocrinus coreyi.
- Poteriocrinus cornellianus Williams = Glossocrinus cornellianus.
- Poteriocrinus corycia Hall = Pachylocrinus corycia.
- Poteriocrinus coryphaeus S. A. Miller = Ulrichicrinus coryphaeus.
- Poteriocrinus coxanus Worthen = Cydrocrinus coxanus.

Poteriocrinus crassiformis Eichwald.

Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, no. 1, p. 120, 1856; Leth. Ross., 1, p. 586, pl. 33, figs. 12 a-c, 1860.

Ord. (*Orthoceras* ls.): Pulkowa, Russia.

Poteriocrinus crawfordsvillensis Miller and Gurley = *Cosmetocrinus crawfordsvillensis*.

Poteriocrinus crineus Hall = *Cosmetocrinus crineus*.

Poteriocrinus cultidactylus Hall = *Blothrocrinus cultidactylus*.

Poteriocrinus curtus Müller = *Parisocrinus curtus*.

Poteriocrinus (*Scaphiocrinus*) *decabrachiatus* Hall = *Phacelocrinus decabrachiatus*.

Poteriocrinus (*Scaphiocrinus*) *decadactylus* Meek and Worthen = *Scytalocrinus decadactylus*.

Poteriocrinus (*Scaphiocrinus*) *dichotomus* Hall = *Pachylocrinus dichotomus*.

Poteriocrinus diffusus Hall = *Decadocrinus nereus*.

Poteriocrinus dilatatus Hall = *Coeliocrinus dilatatus*.

Poteriocrinus dilatatus Schultze = *Costalocrinus dilatatus*.

Poteriocrinus (*Scaphiocrinus*) *divaricatus* Hall = *Pachylocrinus divaricatus*.

Posteriocrinus douglassi Miller and Gurley = *Hypselocrinus douglassi*.

Poteriocrinus dubius Valette.

Valette, Mem. Serv. Carte Geol. Tunisie, n.s., no. 1, p. 98, pl. figs. 13 a-c, 1934 (stems only).

Permian: Djebel, Tebaga, Tunis.

Poteriocrinus? *egertoni* Phillips = *Onychoocrinus polydactylus*.

Poteriocrinus? *enormis* Meek and Worthen = *Cyathocrinites enormis*.

Poteriocrinus excavatus McCoy = *Eupachycrinus impressus*.

Poteriocrinus fountainensis Worthen = *Decadocrinus fountainensis*.

Poteriocrinus fusiformis Roemer = *Bactrocrinites fusiformis*.

Poteriocrinus fusiformis Hall = *Hypselocrinus fusiformis*.

Poteriocrinus fusiformis Schultze (part) = *Bactrocrinites fusiformis*; (part) = *Bactrocrinites tenuis*.

Poteriocrinus fusiformis Müller = *Bactrocrinites mulleri*.

Poteriocrinus genista Miller and Gurley = *Blothrocrinus spartarius*.

Poteriocrinus geometricus (Goldfuss) = *Sphaerocrinus geometricus*.

Poteriocrinus geometricus var. *typus* Schultze = *Sphaerocrinus geometricus*.

Poteriocrinus (*Scaphiocrinus*) *gibsoni* White = *Pachylocrinus gibsoni*.

Poteriocrinus gracilis Hall = *Dendrocrinus gracilis*.

Poteriocrinus (*Scytalocrinus*) *grandis* Wachsmuth and Springer = *Histocrinus coreyi*.

Poteriocrinus granilineus Miller and Gurley = *Sarocrinus granilineus*.

Poteriocrinus granulatus Phillips. See *Euryocrinus granulatus*.

Poteriocrinus granulatus Phillips (part) = *Euryocrinus granulatus*; (part) = *Hydreionocrinus phillipsianus*.

Poteriocrinus (*Decadocrinus*) *gregarius* Williams = *Decadocrinus gregarius*.

Poteriocrinus (*Decadocrinus*) *gregarius* alpha, beta, and gamma Williams = *Decadocrinus gregarius*.

Poteriocrinus hamiltonensis Worthen = *Scytalocrinus hamiltonensis*.

- Poteriocrinus hammondi* Miller and Gurley = *Hypselocrinus maccabei*.
Poteriocrinus hemisphericus Shumard = *Delocrinus hemisphericus*.
Poteriocrinus hoveyi Worthen = *Hypselocrinus hoveyi*.
Poteriocrinus impressus Eichwald.
 Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, p. 121, 1856; Leth. Ross. 1, p. 587, pl. 31, figs. 43 a-c, 1860.
 Low. Carb.: Sloboda, Gov. Toula, Russia.
Poteriocrinus indentus Hall.
 Hall, 15th Rep. Regents Univ. State N. Y., p. 122, 1862. (Description inadequate; type lost.)
 Dev. (Hamilton sh.): Ontario Co., N. Y.
Poteriocrinus indianensis Meek and Worthen = *Cosmetocrinus indianensis*.
Poteriocrinus (*Parisocrinus*) *intermedius* Wachsmuth and Springer = *Parisocrinus intermedius*.
Poteriocrinus (*Scaphiocrinus*) *internodius* Hall = *Phacelocrinus internodius*.
Poteriocrinus iowensis Worthen = *Sarocrinus tentaculatus*.
Poteriocrinus isacobus Austin and Austin = *Pachylocrinus isacobus*.
Poteriocrinus jesupi Whitfield = *Blothrocrinus jesupi*.
Poteriocrinus (*Decadocrinus*) *juvenis* Wachsmuth and Springer = *Histocrinus juvenis*.
Poteriocrinus kaskaskiensis Worthen = *Ampelocrinus kaskaskiensis*.
***Poteriocrinus keokuk* Hall.**
 Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 64, textfig., 1860.
Poteriocrinus (*Scaphiocrinus*) *keokuk* Wachsmuth and Springer, Rev. Pal., pt. 1, p. 113 (336), 1880 (1879).
 Miss. (Keokuk ls.): Keokuk, Iowa.
Poteriocrinus latidactylus Worthen = *Pachylocrinus latidactylus*.
Poteriocrinus latifrons Austin and Austin = *Pachylocrinus latifrons*.
Poteriocrinus lautus Miller and Gurley = *Linocrinus lautus*.
Poteriocrinus legrandensis Miller and Gurley = *Cosmetocrinus elegantulus*.
Poteriocrinus lepidus Hall = *Pelecocrinus lepidus*.
Poteriocrinus longidactylus Austin = *Pachylocrinus longidactylus*.
Poteriocrinus longidactylus Shumard = *Culmierinus missouriensis*.
Poteriocrinus (*Scaphiocrinus*) *lyriope* Hall = *Decadocrinus lyriope*.
Poteriocrinus maccabei Miller and Gurley = *Hypselocrinus maccabei*.
Poteriocrinus maccabei decrepitatus Miller and Gurley = *Hypselocrinus maccabei*.
Poteriocrinus mecoyanus de Koninck and Lehon = *Zeacrinites konincki*.
Poteriocrinus (*Zeacrinus*) *magnoliaeformis* Hall = *Zeacrinus magnoliaeformis*.
Poteriocrinus magniventrus Springer = *Springerocrinus magniventrus*.
Poteriocrinus maschatensis Romanovsky.
 Romanovsky, Materiaux Geol. Turkestan, 3, p. 82, pl. 14, fig. 15, 1890 (plates only)
 Low. Carb.?: Turkestan.
Poteriocrinus milleri Wetherby = *Decadocrinus milleri*.
Poteriocrinus minutus Roemer = *Lophocrinus minutus*.
Poteriocrinus missouriensis Shumard = *Culmierinus missouriensis*.
Poteriocrinus montanensis Meek = *Pachylocrinus montanensis*.

- Poteriocrinus multiplex* Trautschold = *Moscovierinus multiplex*.
Poteriocrinus nanus C. F. Roemer = *Rhadinoecrinus nanus*.
Poteriocrinus nauvoensis Worthen = *Pachylocrinus nauvoensis*.
Poteriocrinus neglectus Miller and Gurley = *Hypselocrinus neglectus*.
Poteriocrinus nereus Hall = *Decadocrinus nereus*.
Poteriocrinus nikitini Stuckenberg.
 Stuckenberg, Mem. Con. Géol., (2) 23, pp. 25, 118, 1905 (1907). Samara, Russia.
Poteriocrinus? *nobilis* Phillips = *Taxocrinus nobilis*.
Poteriocrinus nodobasalis Worthen = *Pachylocrinus nodobasalis*.
Poteriocrinus (*Scaphiocrinus*) *norwoodi* Meek and Worthen = *Pachylocrinus norwoodi*.
Poteriocrinus nucifrons McCoy = *Cromyocrinus nucifrons*.
Poteriocrinus nycteus Hall = *Botryocrinus nycteus*.
Poteriocrinus occidentalis Owen and Shumard = *Agassizocrinus occidentalis*.
Poteriocrinus occidentalis Worthen = *Abrotocrinus occidentalis*.
Poteriocrinus okawensis Worthen = *Pachylocrinus okawensis*.
Poteriocrinus orestes Worthen = *Abrotocrinus orestes*.
Poteriocrinus originarius Trautschold = *Ophiurocrinus originarius*.
Poteriocrinus patulus Müller = *Gastrocrinus patulus*.
Poteriocrinus patulus Follmann = *Gastrocrinus patulus follmanni*.
Poteriocrinus penicilliformis Worthen = *Decadocrinus penicilliformis*.
Poteriocrinus pentagonus Austin = *Taxocrinus pentagonus*.
Poteriocrinus phillipsianus de Koninck and Lehon = *Hydreionocrinus phillipsianus*.
Poteriocrinus pisiformis Roemer = *Lecanocrinus pisiformis*.
Poteriocrinus pleias Hall = *Hypselocrinus pleias*.
Poteriocrinus popensis Worthen = *Pachylocrinus popensis*.
Poteriocrinus posticus Hall = *Dendrocrinus posticus*.
Poteriocrinus proboscidalis Worthen = *Rhopocrinus proboscidalis*.
Poteriocrinus propinquus Worthen = *Pachylocrinus propinquus*.
Poteriocrinus quenstedti Waagen.
 Waagen, Pal. Indica, p. 822, 1885.—Nechaev, Trudui Kazan Univ., 27 (IV), p. 117, fig., 1894.
 Permian: Russia.
Poteriocrinus (*Parisocrinus*) *quinguangularis* Wachsmuth and Springer = *Parisocrinus quinguangularis*.
Poteriocrinus regularis H. von Meyer = *Culmicrinus regularis*.
Poteriocrinus rhenanus Müller (part) = *Bactrocrinus zeileri*; (part) = *Orthocrinus simplex*.
Poteriocrinus rhombiferus Owen and Shumard = *Barycrinus rhomiferus*.
Poteriocrinus richfieldensis Worthen = *Cosmetocrinus richfieldensis*.
Poteriocrinus rostratus Austin and Austin = *Scytalocrinus rostratus*.
Poteriocrinus rugosus Shumard = *Delocrinus rugosus*.
Poteriocrinus salignoides White = *Parisocrinus salignoides*.
Poteriocrinus salteri Worthen = *Dinotocrinus salteri*.
Poteriocrinus sampsoni Miller and Gurley = *Cercidiocrinus?* *sampsoni*.

- Poteriocrinus scopae* Miller and Gurley = *Blothrocinus spartarius*.
Poteriocrinus (*Scaphiocrinus*) *scoparius* Hall = *Pachylocrinus scoparius*.
Poteriocrinus sculptus Worthen = *Abrotocrinus sculptus*.
Poteriocrinus (*Scaphiocrinus*) *simplex* Hall = *Graphiocrinus simplex*.
Poteriocrinus (*Scaphiocrinus*) *solidus* Meek and Worthen = *Pelecocrinus solidus*.
Poteriocrinus spartarius Miller and Gurley = *Blothrocinus spartarius*.
Poteriocrinus spinobrachiatus Worthen = *Pachylocrinus spinobrachiatus*.
Poteriocrinus spinosus Owen and Shumard = *Dasciocrinus spinosus*.
Poteriocrinus spinuliferous Worthen = *Linocrinus spinuliferous*.
Poteriocrinus stadiodactylus Whidborne = *Scytalocrinus stadiodactylus*.
Poteriocrinus stellaris Schultze = *Vasocrinus stellaris*.
Poteriocrinus (*Pachylocrinus*) *subaequalis* Wachsmuth and Springer = *Pachylocrinus aequalis*.
Poteriocrinus subgracilis d'Orbigny = *Dendrocinus gracilis*.
Poteriocrinus subimpressus Meek and Worthen = *Graphiocrinus subimpressus*.
Poteriocrinus subramosus Miller and Gurley = *Parisocrinus subramosus*.
Poteriocrinus subramulosus Worthen = *Cydrocinus subramulosus*.
Poteriocrinus (*Scaphiocrinus*) *subtumidus* Meek and Worthen = *Eupachyrcrinus subtumidus*.
Poteriocrinus swallowi Meek and Worthen = *Blothrocinus swallowi*.
Poteriocrinus talboti Worthen = *Scytalocrinus talboti*.
Poteriocrinus tenuibrachiatus Meek and Worthen = *Parisocrinus tenuibrachiatus*.
Poteriocrinus tensus Whidborne = *Culmicrinus tensus*.
Poteriocrinus tentaculatus Worthen = *Sarocrinus tentaculatus*.
Poteriocrinus tenuidactylus Worthen (part) = *Pachylocrinus obscurus*; (part) = *Sarocrinus tentaculatus*.
Poteriocrinus (*Scaphiocrinus*) *tenuidactylus* Meek and Worthen = *Pelecocrinus tenuidactylus*.
Poteriocrinus tenuis Miller = *Scytalocrinus tenuis*.
Poteriocrinus tenuissimus Eichwald.
 Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, p. 120, 1856; Leth. Ross., 1, p. 590, pl. 31, figs. 41 a-c, 1860.
 Low. Carb.: Sloboda, Gov. Toula, Russia.
Poteriocrinus tethys Meek and Worthen = *Hypselocrinus tethys*.
Poteriocrinus tumidus Owen and Shumard = *Agassizocrinus tumidus*.
Poteriocrinus vanhornei Worthen = *Phacelocrinus vanhornei*.
Poteriocrinus varians Eichwald.
 Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, p. 120, 1856; Leth. Ross., 1, p. 591, pl. 31, figs. 30, 31, 34, 40 a-c, 1860.
 Low. Carb.: Sloboda, Gov. Toula, Russia.
Poteriocrinus varsoviensis Worthen = *Pachylocrinus varsoviensis*.
Poteriocrinus ventricosus Hall = *Coeliocrinus ventricosus*.
Poteriocrinus venustus Worthen = *Pachylocrinus venustus*.
Poteriocrinus verticillus Hall.
 Hall, 15th Rep. Regents Univ. St. N. Y., p. 122, 1862. (Description inadequate and type lost.)
 Dev. (Hamilton sh.): Ontario Co., N. Y.

- Poteriocrinus* (*Scaphiocrinus*) *wachsmuthi* Meek and Worthen = *Graphiocrinus wachsmuthi*.
- Poteriocrinus wetherbyi* S. A. Miller = *Phacelocrinus wetherbyi*.
- Poteriocrinus whitei* Wachsmuth and Springer = *Ascetocrinus whitei*.
- Poteriocrinus zaeiformis* Schultze = *Parisangulocrinus zaeiformis*.
- Pradocrinus* Verneuil = *Periechocrinites*.
- Prininocrinus** Goldring. Genotype: *P. robustus* Goldring.
Poteriocrinidae (*Inadunata-Fistulata*). Dev.
 Goldring, Bull. Amer. Pal., 24, no. 81, p. 17, 1938.
- Prininocrinus robustus** Goldring.
 Goldring, Bull. Amer. Pal., 24, no. 81, p. 18, text fig. 1, pl. 2, figs. 3, 4, 1938.
 Dev. Redknife River, Mackenzie River Basin, Northwest Territory, Canada.
- Proapsidocrinus** Wanner. Genotype: *P. permicus* Wanner.
Lecanocrinidae (*Flexibilia*). Permian.
 Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 116, 1924; Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 106, 1937.
- Proapsidocrinus cuspidatus** (Wanner).
Prophyllocrinus cuspidatus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 278, text fig. 70, pl. 111 (16), figs. 9, 10, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 116, text fig. 6, 1924; Neue Beitr. Kennt. Perm. Echin. Timor, IV, *Flexibilia*, pp. 42, 43, text figs. 26, 27, pl. 4, figs. 2-4, 1930.
Proapsidocrinus cuspidatus Wanner, Neue Beitr. kennt. Perm. Echin. Timor, IX, p. 106, 1937.
Proapsidocrinus permicus Wanner, Neue Beitr. kennt. Perm. Echin. Timor, IV, *Flexibilia*, p. 44, 1930 (not *P. permicus* Wanner, 1924).
 Permian: Between Niki-Niki and Noil Fatoe, Basleo, and Noil Fatoe, Timor.
- Proapsidocrinus permicus** Wanner.
 Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 117, pl. 6, figs. 14-16, 1924.—Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 315, pl. 3, fig. 15, 1940.
 Permian: Basleo, Timor.
- Proapsidocrinus permicus* Wanner, 1930 (not 1924) = *P. cuspidatus*.
- Prochoidiocrinus** Wanner. Genotype: *P. nodosus* Wanner.
Hypocrinidae (*Inadunata-Fistulata*). Permian.
 Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 127, 1937.
- Prochoidiocrinus nodosus** Wanner.
 Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 128, text fig. 35, pl. 9, figs. 11-14, 1937.
 Permian: Basleo, Timor.
- Proclivocrinus* Ringueberg = *Eucheirocrinus*.
- Proctenocrinus* Jaekel. See *Promelocrinus*.
- Procupressocrinus* Jaekel = *Cupressocrinites*.
- Prodromocrinus* Jaekel.
 Jaekel, Verhandl. 5, International Zool. Congress, Berlin, p. 1074, 1902. No species named.
- Proguettardicrinus* Steinman = *Forbesiocrinus*.
- Proindocrinus** Yakovlev. Genotype: *Indocrinus pizowii* Yakovlev.
Poteriocrinidae (*Inadunata-Fistulata*). Permian.
 Yakovlev, Compt. Rend. (Doklady) Acad. Sci. URSS, 24, no. 6, p. 832, 1939.
- Proindocrinus pizowii** (Yakovlev).
Indocrinus pizowii Yakovlev, Bull. Comité Géol., 45, no. 2 pp. 53, 54, text figs 4 a-c, pl. 1, fig. 6, 1926; 46, pl. 6, figs. 7, 7a, 16, 16a, b, 1927.

- Proindocrinus pizowii* Yakovlev, Compt. Rend. (Doklady) Acad. Sci. URSS, 24, no. 8, p. 832, 1939.
Permian: Krasnooufimsk, Russia.
- Prolobocrinus** Wanner. Genotype: *P. permicus* Wanner.
Poteriocrinitidae (Inadunata-Fistulata). Permian.
Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 184, 1937.
- Prolobocrinus gracilis** (Wanner).
Protencrinus gracilis Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 286, text fig. 55, pl. 19, figs. 1-3, 1924.
Prolobocrinus gracilis Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 184, 1937.
Permian: Basleo, Timor.
- Prolobocrinus permicus** Wanner.
Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 185, text fig. 66, pl. 12, figs. 7-10, 1937.
Permian: Basleo, Timor.
- Prolobocrinus striatus** Wanner.
Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 187, 1937.
Permian: Nipol Sumpek, Basleo, Timor.
- Promelocrinus** Jaekel. Genotype: *P. anglicus* Jaekel.
Melocrinitidae (Camerata). Sil.
Jaekel, Verh. Int. Zool. Congr. Berlin, p. 1068, fig. 8, 1902; Pal. Zeits., 3, p. 32, 1918 (as *Proctenocrinus*).—Kirk, Amer. Jour. Sci., 18, p. 337, 1929.
- Promelocrinus anglicus** Jaekel.
Jaekel, Verh. Int. Zool. Congr. Berlin, p. 1068, fig. 8, 1902.
Sil. (Wenlock ls.): Dudley, England.
- Prophylocrinus** Wanner. Genotype: *P. dentatus* Wanner.
Lecanocrinidae (Flexibilia). Permian.
Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, pp. 250, 273, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 89, 1924.
Prophylocrinus cuspidatus Wanner = *Proapsidocrinus cuspidatus*.
- Prophylocrinus dentatus** Wanner.
Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 273, text fig. 67, pp. 276, 277, text figs. 68, 68a, 69, pl. 111 (16), figs. 6-8, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 115, pl. 6, figs. 7-9, 1924; Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia, pp. 40, 41, figs. 22, 23, p. 42, figs. 24, 25, 1930.
Permian: Basleo, Timor.
- Propoteriocrinus** Schmidt. Genotype: *P. follmanni* Schmidt.
Poteriocrinitidae (Inadunata-Fistulata). Dev.
Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 109, 1934.
- Propoteriocrinus follmanni** Schmidt.
Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 110, 1934.
Dev. (Up. Coblenzian): Coblenz, Germany.
- Propoteriocrinus scopae** Schmidt.
Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 110, pl. 5, fig. 3, pp. 142, 146, 1934.
Low. Dev. (Hunsrück beds): Gemunden, Germany.
- Protaxocrinus** Springer. Genotype: *Taxocrinus ovalis* Angelin.
Taxocrinidae (Flexibilia). Ord.-Dev.
Springer, Jour. Geol., 14, pp. 515, 519, 1906; Zittel-Eastman Textb. Pal., 1, p. 205, 1913; Crin. Flexibilia, pp. 88, 342, 345, 1920; Amer. Sil. Crin., p. 69, 1926.

Protaxocrinus elegans (Billings).

Lecanocrinus elegans Billings, Geol. Surv. Canada, Rep. Prog. for 1853-56, p. 278, 1857; Cam. Org. Rem., Dec. 4, p. 47, pl. 4, figs. 4a, b, 1859.

Protaxocrinus elegans Springer, Jour. Geol., 14, p. 487, 1906.

Ord. (Trenton-Hull ls.): Ottawa, Ontario, Canada.

Protaxocrinus girardeau Springer.

Springer, Crin. Flexibilia, pp. 346, 349, pl. 45, fig. 8, 1920.

Sil. (Girardeau ls.): Thebes, Ill., and Cape Girardeau, Mo.

Protaxocrinus interbrachiatus (Angelin).

Taxocrinus interbrachiatus Angelin, Icon. Crin. Suec., p. 8, pl. 20, figs. 9, 10, 1878.

Protaxocrinus interbrachiatus Springer, Jour. Geol., 14, p. 515, 1906; Crin. Flexibilia, pp. 346, 350, pl. 45, figs. 13-16, 1920.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Protaxocrinus laevis (Billings).

Lecanocrinus laevis Billings, Geol. Surv. Canada, Rep. Prog. for 1853-56, p. 278, 1857; Can. Org. Rem., dec. 4, p. 47, pl. 4, fig. 3a, 1859.

Protaxocrinus laevis Springer, Geol. Surv. Canada, Mem. 15-P, p. 11, pl. 3, figs. 10, 11a, b, 1911; Crin. Flexibilia, pp. 346, 348, pl. 45, figs. 2-7, 1920.

Ord. (Trenton-Hull ls): Ottawa and Kirkfield, Ont.; Hull, Quebec.

Protaxocrinus ovalis (Angelin).

Taxocrinus ovalis Angelin, Icon. Crin. Suec., p. 8, pl. 20, figs. 13, 14, 1878.

Protaxocrinus ovalis Springer, Jour. Geol., 14, p. 515, 1906; Crin. Flexibilia, pp. 346, 351, pl. 46, figs. 8-11, 1920.

Sil.: Follingbo, Island of Gotland (Gotlandian); Dudley, England (Wenlock ls.).

Protaxocrinus robustus Springer.

Springer, Crin. Flexibilia, pp. 346, 349, pl. 45, figs. 9-11, 1920; Amer. Sil. Crin., p. 70, pl. 22, figs. 6, 7, 1926.

Sil. (Niagaran-Beech River fm.): 2 miles north Decaturville, Tenn.

Protaxocrinus salteri (Angelin).

Taxocrinus salteri Angelin, Icon. Crin. Suec., p. 9, pl. 23, figs. 1, 1a, 1878.

Protaxocrinus salteri Springer, Jour. Geol., 14, p. 515, 1906; Crinoidea Flexibilia, pp. 346, 352, pl. 46, figs. 1-7, 1920.

Taxocrinus austini Angelin, Icon. Crin. Suec., p. 9, pl. 19, figs. 11, 11a, 1878.

Taxocrinus distensus Angelin, Icon. Crin. Suec., p. 9, pl. 26, figs. 7, 7a, 1878.

Taxocrinus tubuliferus Angelin, Icon. Crin. Suec., p. 9, pl. 20, figs. 11, 12, 1878.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Protaxocrinus virginianus Springer.

Springer, Crin. Flexibilia, pp. 346, 350, pl. 45, fig. 12, 1920.

Dev. (Helderbergian-Keyser fm.): Keyser, W. Va.

Protencrinus Jaekel. Genotype: *P. moscoviensis* Jaekel.

Poteriocrinidae (Inadunata-Fistulata). Carbonif.

Jaekel, Pal. Zeits., 3, pp. 66, 67, 1918.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, pp. 181, 286, 1924.

Protencrinus gracilis Wanner = *Prolobocrinus gracilis*.

Protencrinus moscoviensis Jaekel.

Jaekel, Pal. Zeits., 3, p. 66, fig. 56, 1918.

Carb. (Moscovian): Mjatschkowa, near Moscow, Russia.

Protoeurayle Müller = *Culicocrinus*.

Pterinocrinus Goldring. Genotype: *P. quinquenodus* Goldring.

Dimerocrinitidae (Camerata). Dev.

Goldring, N. Y. St. Mus., Mem. 16, p. 86, 1923.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 127, 1934.

Pterinocrinus diensti Schmidt.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 123, text fig. 29, pl. 22, fig. 1, pp. 143, 146, 1934.

Low. Dev. (Hunsrück sl.): Bundenbach, Germany.

Pterinocrinus quinquenodus Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 87, text fig. 32, pl. 1, figs. 3-10, 1923.

Dev. (Low. Chemung fm.): Chemung Narrows, Chemung Co., N. Y.

Pterotocrinus Lyon and Casseday. Genotype: *Asterocrinus capitalis* Lyon.

Hexacrinitidae (Adunata). Miss.

Lyon and Casseday, Proc. Amer. Acad. Sci. and Arts, 4, p. 301, 1859; Amer. Jour. Sci., 29, p. 68, 1860.—Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 382 (footnote), 1860; Geol. Surv. Ill., 2, p. 288, 1866.—Wetherby, Jour. Cincinnati Soc. Nat. Hist., pp. 3-8, 1879.—Zittel, Handb. Pal., 1, p. 365, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 87 (261), 1881; Proc. Acad. Nat. Sci. Phila., p. 352, 1890; N. Amer. Crin. Cam., p. 791, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 159, 1900.—Wood, U. S. Nat. Mus., Bull. 64, p. 43, 1909.—Springer, Zittel-Eastman Textb. Pal., 1, p. 201, 1913; U. S. Nat. Mus., Proc., 67, art. 9, p. 47, 1926.—Sutton, Jour. Pal., 8, no. 4, p. 394, 1934.

Asterocrinus Lyon (not Münster), Geol. Surv. Ky., 3, p. 472, 1857. (Genotype: *A. capitalis* Lyon.)

Codonocrinites Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.—Wood, U. S. Nat. Mus., Bull. 64, p. 43, 1909. (Genotype: *C. gracilis* Troost, nom. nud.)

Codonocrinus Shumard, Trans. Acad. Sci. St. Louis, 2, p. 359, 1866.—Bather, Treatise Zool. (Lankester), pt. 3, p. 202, 1900.

Pterotocrinus abruptus Sutton.

Sutton, Jour. Pal., 8, no. 4, p. 409, pl. 49, figs. 29-31, 1934.

Miss. (Chester-Golconda fm.): 8 miles southeast of Scottsburg and 1½ miles southwest of Claxton, Ky.

Pterotocrinus acutus Wetherby.

Wetherby, Jour. Cincinnati Soc. Nat. Hist., 2, no. 3, p. 134, pl. 11, figs. 2 a-c, 1879. Wachsmuth and Springer, N. Amer. Crin. Cam., p. 799, pl. 79, figs. 3 a-g, 1897.—Ulrich, U. S. Geol. Surv., Prof. Paper 36, pl. 6, figs. 23, 24, 1905.—Butts, Ky. Geol. Surv., p. 100, pl. 24, figs. 15, 16, 1917.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 50, pl. 13, fig. 16, 1926.—Sutton, Jour. Pal., 8, no. 4, p. 411, pl. 50, figs. 10-13, 1934.

Codonocrinites gracilis Troost, Amer. Jour. Sci., (2) 8, p. 419, 1849.

Miss. (Chester-Glen Dean fm.): Pulaski, Breckinridge, and Grayson Cos., Ky.

Pterotocrinus acutus bifurcatus Wachsmuth and Springer = *P. bifurcatus*.

Pterotocrinus arcuatus Sutton.

Sutton, Jour. Pal., 8, no. 4, p. 402, pl. 49, figs. 1, 2, 1934.

Miss. (Chester-Paint Creek fm.): 6 miles south of Vienna, Ill.

Pterotocrinus armatus Sutton.

Sutton, Jour. Pal., 8, no. 4, p. 407, pl. 49, figs. 34-39, 1934.

Miss. (Chester-Golconda fm.): ½ mile north Forest Grove School, Marion, Ky.

Pterotocrinus bifurcatus Wetherby.

Wetherby, Jour. Cincinnati Soc. Nat. Hist., 2, p. 136, pl. 11, figs. 1 a-c, 1879.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 801, pl. 79, figs. 9a, b, 1897 (as *P. acutus* var. *bifurcatus*).—Butts, Ky. Geol. Surv., p. 100, pl. 24, fig. 15, 1917.—Weller, Geol. Surv. Ill., Bull. 41, p. 372, pl. 10, fig. 14, 1920.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 50, pl. 14, fig. 5, 1926.—Sutton, Jour. Pal., 8, no. 4, p. 412, pl. 50, figs. 14-16, 1934.

Miss. (Chester): Pulaski Co., Ky. (Glen Dean fm.); Randolph Co., Ill. (Up. Okaw fm.).

Pterotocrinus capitalis (Lyon).

Asterocrinus capitalis Lyon, Geol. Surv. Ky., 3, p. 472, pl. 3, figs. 1 a-k, 1857.

Pterotocrinus capitalis Lyon and Casseday, Amer. Jour. Sci. and Arts, 29, p. 68, 1860.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 794, pl. 79, figs. 6a, b, 1897.—Ulrich, U. S. Geol. Surv., Prof. Paper 36, pl. 6, figs. 21, 22, 1905.—Butts, Ky. Geol. Surv., p. 95, pl. 23, figs. 1-4, 1917.—Weller, Geol. Surv. Ill., Bull. 41, p. 360, pl. 8, figs. 36-39, 1920.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 49, pl. 13, fig. 23, 1926.—Sutton, Jour. Pal., 8, no. 4, p. 409, pl. 50, figs. 20-24, 1934.

Miss. (Chester): Crittenden and Hardin Cos., Ky. (Golconda fm.); Salem, Ky. (Glen Dean fm.).

Pterotocrinus chesterensis (Meek and Worthen).

Dichocrinus (*Pterotocrinus*) *chesterensis* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 383, 1860.

Pterotocrinus chesterensis Meek and Worthen, Geol. Surv. Ill., 2, p. 292, pl. 23, figs. 1 a-c, text fig. 30, 1866.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 802, pl. 79, figs. 5a, b, 1897.—Sutton, Jour. Pal., 8, no. 4, p. 414, pl. 49, figs. 23, 24, 1934.

Miss. (Chester ls.): Chester, Ill.

Pterotocrinus cirnarius Wilson (by error) = *P. coronarius*.

Pterotocrinus clorensis Sutton.

Sutton, Jour. Pal., 8, no. 4, p. 405, pl. 49, figs. 52, 53, 1934.

Miss. (Chester-Clore fm.): 1½ miles south of Smithland, Ky.

Pterotocrinus convexus Sutton.

Sutton, Jour. Pal., 8, no. 4, p. 405, pl. 49, figs. 32, 33, 1934.

Miss. (Chester-Paint Creek fm.): 6 miles south of Vienna, Ill.

Pterotocrinus coronarius (Lyon).

Asterocrinus coronarius Lyon, Rep. Geol. Ky., 3, p. 476, pl. 1, figs. 1, 1a, 1857.

Pterotocrinus coronarius Lyon and Casseday, Amer. Jour. Sci. and Arts, 29, p. 68, 1860.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 795, pl. 79, figs. 7a, b, 1897 (as *coronatus*, by error).—Wilson, Jour. Geol., 24, p. 510, pl. 3, fig. 11, 1916 (*cirnarius* by error).—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 48, pl. 14, figs. 1-3a, 1926.—Sutton, Jour. Pal., 8, no. 4, p. 410, pl. 50, figs. 25-31, 1934.

Miss. (Chester-Golconda fm.): Crittenden Co., Ky.

Pterotocrinus coronatus Wachsmuth and Springer. See *P. coronarius*.

Pterotocrinus crassus (Meek and Worthen).

Dichocrinus (?*Pterotocrinus*) *crassus* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 382, 1860.

Pterotocrinus crassus Meek and Worthen, Geol. Surv. Ill., 2, p. 290, pl. 23, figs. 2a, b, text fig. 29, 1866.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 801, pl. 79, fig. 8, 1897.—Sutton, Jour. Pal., 8, no. 4, p. 414, pl. 50, fig. 9, 1934.

Miss. (Chester-Glen Dean ls.): Hardin Co., Ill. and Grayson Co., Ky.

Pterotocrinus cuneatus Sutton.

Sutton, Jour. Pal., 8, no. 4, p. 407, pl. 49, figs. 11-14, 1934.

Miss. (Chester-Glen Dean ls.): Maynard and Pope Cos., Ill.

Pterotocrinus depressus Lyon and Casseday.

Lyon and Casseday, Amer. Jour. Sci. and Arts, 29, p. 68, 1860.—Meek and Worthen, Geol. Surv. Ill., 5, p. 559, pl. 21, fig. 13, 1873.—Wetherby, Jour. Cincinnati Soc. Nat. Hist., 2, pl. 8, fig. 11, 1879.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 796, pl. 79, figs. 2a-3, 1897.—Ulrich, U. S. Geol. Surv., Prof. Paper 36, pl. 6, figs. 25, 26, 1905.—Butts, Ky. Geol. Surv., p. 100, pl. 24, fig. 12, 1917.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 50, pl. 14, figs. 4, 4a, 1926.—Sutton, Jour. Pal., 8, no. 4, p. 403, pl. 49, figs. 7, 8, 40-44, 1934.

Miss. (Chester-Glen Dean fm.): Grayson Springs, Grayson Co., Edmonson and Pulaski Cos., Ky.

Pterotocrinus elongatus Sutton.

Sutton, Jour. Pal., 8, no. 4, p. 408, pl. 49, figs. 15-18, 1934.

Miss. (Chester-Paint Creek fm.): 1½ miles northwest of Floraville, 2 mi. south of Columbia, etc., Ill.

Pterotocrinus lingulaformis Sutton.

Sutton, Jour. Pal., 8, no. 4, p. 402, pl. 49, figs. 25-28, 1934.

Miss. (Chester-Okaw ls.): ¾ mile north of Marigold, Ill.

Pterotocrinus menardensis Weller.

Weller, Geol. Surv. Ill., Bull. 41, p. 373, pl. 11, fig. 9, 1920.—Sutton, Jour. Pal., 8, no. 4, p. 405, pl. 49, figs. 47-49, 1934.

Miss. (Chester-Menard ls.): Union, Johnson, Pope, Hardin Cos., Ill.

Pterotocrinus pentalobus Sutton.

Sutton, Jour. Pal., 8, no. 4, p. 413, pl. 49, figs. 3, 4, 1934.

Miss. (Chester ls.): Randolph Co., Ill.

Pterotocrinus ? primus Sutton.

Sutton, Jour. Pal., 8, no. 4, pp. 398, 402, pl. 49, figs. 5, 6, 1934.

Miss. (Chester-Renault fm.): Fairview Bluff, Hardin Co., Ill.

Pterotocrinus protuberans (Hall).*Dichocrinus protuberans* Hall, Geol. Rep. Iowa, 1, pt. 2, p. 689, pl. 25, fig. 7, 1858.*Pterotocrinus protuberans* Wachsmuth and Springer, Rev. Pal., pt. 2, p. 91 (265), 1881.

Miss. (Chester ls.): Chester, Ill.

Pterotocrinus pyramidalis Lyon and Casseday.

Lyon and Casseday, Amer. Jour. Sci. and Arts, 29, p. 69, 1860.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 798, pl. 79, figs. 4 a, b, 1897.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 50, pl. 13, figs. 21, 22, 1926.—Sutton, Jour. Pal., 8, no. 4, p. 404, pl. 49, figs. 19, 20, 1934.

Miss. (Chester-Glen Dean ls.): Grayson Springs, Grayson Co., Ky.

Pterotocrinus rugosus Lyon and Casseday.

Lyon and Casseday, Amer. Jour. Sci. and Arts, 29, p. 71, 1860.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 47, pl. 13, figs. 17-20, 1926.—Sutton, Jour. Pal., 8, no. 4, p. 404, pl. 49, figs. 21, 22, 1934.

Miss. (Chester-Glen Dean ls.): Falls of Rough Creek, Breckinridge Co., Ky.

Pterotocrinus scapulatus Sutton.

Sutton, Jour. Pal., 8, no. 4, p. 403, pl. 50, figs. 17-19, 1934.

Miss. (Chester): ¾ mile north of Marigold (Okaw ls.): Pope Co. and Menard (Glen Dean ls.), Illinois.

Pterotocrinus serratus Weller.

Weller, Geol. Surv. Ill., Bull. 41, p. 342, pl. 5, figs. 24-26, 1920.—Sutton, Jour. Pal., 8, no. 4, p. 406, pl. 49, figs. 50, 51, 1934.

Miss. (Chester-Paint Creek fm.): St. Clair, Monroe, Randolph, and Johnson Cos., Ill.

Pterotocrinus spatulatus Wetherby.

Wetherby, Jour. Cincinnati Soc. Nat. Hist., 2, p. 137, pl. 11, figs. 3 a-c, 1879.—Sutton, Jour. Pal., 8, no. 4, p. 410, pl. 50, figs. 5-8, 1934.

Miss. (Chester-Glen Dean ls.): Pulaski Co., Ky.

Pterotocrinus subspatulatus Sutton.

Sutton, Jour. Pal., 8, no. 4, p. 412, pl. 49, figs. 45, 46, 1934.

Miss. (Chester-Menard ls.): 2½ miles north of Princeton, Ky.

Pterotocrinus vannus Sutton.

Sutton, Jour. Pal., 8, no. 4, p. 412, pl. 49, figs. 45, 46, 1934.

Miss. (Chester-Glen Dean ls.): Menard, Ill.

Pterotocrinus wetherbyi Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 6, p. 44, pl. 4, figs. 6-9, 1895.—S. A. Miller, N. Amer. Geol. Pal., App. 2, p. 752, fig. 1389, 1897.—Sutton, Jour. Pal., 8, no. 4, p. 414, pl. 50, figs. 1-4, 1934.

Miss. (Chester-Glen Dean ls.): Pulaski Co., Ky.

Ptilocrinus Wanner = Eifelocrinus.

Ptychocrinus Wachsmuth and Springer. Genotype: *Gaurocrinus splendens* Miller.

Dimerocrinitidae (Camerata). Ord.; Early Sil.

Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, p. 99 (321), 1885; N. Amer. Crin. Cam., p. 197, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 198, 1900.—Springer, Zittel-Eastman Textb. Pal., vol. 1, p. 187, 1913.

Ptychocrinus parvus (Hall).

Glyptocrinus parvus Hall, 20th Rep. N. Y. St. Cab. Nat. Hist., p. 304, 1867; 24th Rep., p. 207, pl. 5, fig. 17, 1872 (adv. pub. 1871, fig. only.)—Meek, Geol. Surv. Ohio, Pal., 1, p. 36, pl. 2, figs. 4 a, b, 1873.

Ptychocrinus parvus Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, p. 100 (332), 1885.

Glyptocrinus angularis Miller and Dyer, Jour. Cincinnati Soc. Nat. Hist., 1, p. 28, pl. 1, fig. 10, 1878.

Reteocrinus gracilis Wetherby, in Wachsmuth and Springer, Rev. Pal., pt. 2, p. 193 (367), 1881; Jour. Cincinnati Soc. Nat. Hist., 4, p. 83, pl. 2, figs. 2, 2a, 1881.

Ord. (Maysville-Fairmount ls.): Cincinnati, etc., Ohio.

Ptychocrinus splendens (S. A. Miller).

Gaurocrinus splendens S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 6, p. 230, pl. 11, figs. 3, 3a, 1883.

Ptychocrinus splendens Wachsmuth and Springer, N. Amer. Crin. Cam., p. 198, pl. 18, figs. 3a, b, 1897.—Savage, Bull. Geol. Surv. Ill., 23, p. 95, pl. 3, fig. 1, 1917 (adv. pub. 1913, p. 39, pl. 1, fig. 1).

Early Sil. (Medinan-Girardeau ls.): Cape Girardeau, Mo.; Thebes, Alexander Co., Ill.

Pycnocrinus S. A. Miller. Genotype: *Glyptocrinus shafferi* S. A. Miller.

Glyptocrinidae (Camerata). Ord.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 6, pp. 219, 231, 1883.

Pycnocrinus dyeri (Meek).

Glyptocrinus dyeri Meek, Proc. Acad. Nat. Sci. Phila., p. 314, 1872; Geol. Surv. Ohio, 1, pt. 2, p. 32, pl. 2, figs. 2a, b, 1873.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 271, pl. 20, figs. 1 a-c, pl. 21, figs. 3 a-f, 6, 1897.—Ehrenberg, Acta Zool., 3, p. 274, fig. 3, p. 275, fig. 5, 1922.

Ord. (Maysville-Corryville sh.): Cincinnati, Ohio and vicinity.

Pycnocrinus dyeri sublaevis (S. A. Miller).

Glyptocrinus dyeri var. *sublaevis* S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 1 p. 103, pl. 3, fig. 2, 1878; 6, p. 217, pl. 3, fig. 2, 1883.

Ord. (Maysville-Corryville sh.): Cincinnati, Ohio.

Pycnocrinus germanus (S. A. Miller).

Glyptocrinus shafferi var. *germanus* S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 3, p. 233, pl. 7, figs. 2, 2a, 1880.

Pycnocrinus germanus S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 6, p. 232, 1883; N. Amer. Geol. Pal., p. 277, fig. 412, 1889.

?*Glyptocrinus shafferi* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 272, pl. 21, figs. 3 d-f, 1897.

Ord. (Maysville-Corryville sh.): Cincinnati, Ohio.

Pycnocrinus ornatus (Billings).

Glyptocrinus ornatus Billings, Geol. Surv. Canada, Rep. Prog. 1853-56, p. 260, 1857; Can. Org. Rem., dec. 4, p. 60, pl. 9, fig. 2a, 1859.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 274, pl. 20, figs. 6 a, b, 1897.

Ord. (Trenton-Hull ls.): Ottawa and Kirkfield, Ont., Canada.

- Pycnocrinus pattersoni** (S. A. Miller).
Glyptocrinus pattersoni S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 5, p. 80, pl. 3, figs. 2, 2a, 1882.
 Ord. (Trenton-Cynthiana fm.): West Covington, Ky.
- Pycnocrinus shafferi** (S. A. Miller).
Glyptocrinus shafferi S. A. Miller, Cincinnati Quart. Jour. Sci., 2, pp. 277, 278, text fig. 20, 1873; Jour. Cincinnati Soc. Nat. Hist., p. 233, pl. 7, fig. 3, 1880.—Ehrenberg, Acta Zool., 3, p. 275, fig. 4, 1922; Bull. Amer. Mus. Nat. Hist., 59, p. 27, fig. 17, 1929.
 Ord. (Maysville-Fairmount and Corryville ls.): Cincinnati, Ohio.
- Pycnocrinus subglobosus** (Meek).
Glyptocrinus dyeri var. *subglobosus* Meek, Proc. Acad. Nat. Sci. Phila. p. 315, 1872; Geol. Surv. Ohio, Pal., 1, pt. 2, p. 34, pl. 2, fig. 2c, 1873.
 Ord. (Maysville-Corryville ls.): Cincinnati, Ohio.
- Pycnosaccus** Angelin. Genotype: *Cyathocrinites scrobiculatus* Hisinger.
 Lecanocrinidae (Flexibilia). Sil.; Dev.
 Angelin, Icon. Crin. Suec., p. 13, 1878.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 41 (264), 1880 (1879).—Zittel, Handb. Pal., 1, p. 356, 1879.—Bather, Treatise Zool. (Lankester), pt. 3, p. 187, 1900.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 140, 1900.—Springer, Jour. Geol., 14, pp. 484, 517, 1906; Zittel-Eastman Textb. Pal., 1, p. 203, 1913; Crin. Flexibilia, p. 180, 1920; Amer. Sil. Crin., p. 67, 1926.
Oncocrinus Bather, Ann. Mag. Nat. Hist., (6) 5, p. 387, 1890; Treatise Zool. (Lankester), pt. 3, p. 187, 1900. (Genotype: *O. bucephalus* Bather).
- Pycnosaccus americanus** Weller.
 Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 149, pl. 15, fig. 12 (as *P. ornatus*), 1900.—Springer, Crin. Flexibilia, p. 188, pl. 13, fig. 10, 1920.
 Sil. (Niagaran-Racine dol.): Hawthorne, Ill.
- Pycnosaccus bucephalus** (Bather).
Oncocrinus bucephalus Bather, Ann. Mag. Nat. Hist., (6) 5, p. 334, pl. 14, fig. 31, p. 387, 1890.
Pycnosaccus bucephalus Springer, Crin. Flexibilia, p. 187, pl. 12, figs. 10, 11, 1920.
 Sil. (Wenlock ls.): Dudley, England.
- Pycnosaccus calyculus** (Hall).
Lecanocrinus calyculus Hall, Nat. Hist. N. Y., Pal., 2, p. 203, pl. 46, figs. 3a, b, 1852.
Pycnosaccus calyculus Springer, Crin. Flexibilia, p. 185, pl. 13, figs. 6-9, 1920.
Lecanocrinus waukoma Weller, (part), Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 148, pl. 15, fig. 11 (not figs. 6-10), 1900.
 Sil. (Niagaran-Rochester sh.): Lockport, N. Y.
- Pycnosaccus canadensis** (Whiteaves).
Arachnocrinus canadensis Whiteaves, Cont. Can. Pal., 1, pt. 3, p. 208, pl. 28, figs. 2, 2a, 1891.
Pycnosaccus canadensis Springer, Crin. Flexibilia, p. 189, 1920.
 Up. Dev.: Hay River, 40 miles above mouth, Mackenzie River Basin, Canada.
- Pycnosaccus* ? *costatus* Angelin = *P. scrobiculatus*.
- Pycnosaccus dubius** Springer.
 Springer, Crin. Flexibilia, p. 189, pl. 13, figs. 11a, b, 1920; Amer. Sil. Crin., p. 68, pl. 21, figs. 9, 9a, 1926.
 Sil. (Niagaran-Beech River fm.): 2 miles north of Decaturville, Tenn.
- Pycnosaccus laurelianus** Springer.
 Springer, Amer. Sil. Crin., p. 67, pl. 21, figs. 8, 8a, 1926.
 Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Pycnosaccus nodulosus Angelin.

Angelin, Icon. Crin. Suec., p. 14, pl. 15, figs. 12, 14, pl. 28, fig. 29, 1878.—Springer, Crin. Flexibilia, p. 184, pl. 11, figs. 11-16, 1920.

Sil. (Gotlandian): Island of Gotland.

Pycnosaccus ornatus Weller. See *P. americanus*.

Pycnosaccus patei Springer.

Springer, Crin. Flexibilia, p. 186, pl. 12, figs. 1-9, 1920; Amer. Sil. Crin., p. 67, pl. 21, figs. 1-4, 1926.

Sil. (Niagaran-Beech River fm.): 2 miles north of Decaturville, Tenn.

Pycnosaccus scrobiculatus (Hisinger).

Cyathocrinites scrobiculatus Hisinger, Leth. Suec., Supp., 2, p. 6, pl. 39, figs. 4 a-e, 1840.

Pycnosaccus scrobiculatus Angelin, Icon. Crin. Suec., p. 14, pl. 15, figs. 10, 11, 1878.—Springer, Crin. Flexibilia, p. 182, pl. 11, figs. 1-10, 1920.

Pycnosaccus? *costatus* Angelin, Icon. Crin. Suec., p. 14, pl. 15, fig. 13, 1878.

Sil. (Gotlandian): Klinteberg, Island of Gotland.

Pycnosaccus tenuibrachiatus Springer.

Springer, Crin. Flexibilia, p. 187, pl. 13, figs. 1, 2, 1920.

Dev. (Helderbergian-Keyser fm.): Keyser, W. Va.

Pycnosaccus welleri Springer.

Springer, Crin. Flexibilia, p. 188, pl. 13, figs. 3a-5b, 1920; Amer. Sil. Crin., p. 67, pl. 21, figs. 5-7, 1926.

Sil. (Niagaran-Beech River fm.): 2 miles north of Decaturville, Tenn.

Pyxidocrinus Müller = *Periechocrinites*.

Reteocrinus Billings. Genotype: *R. stellaris* Billings.

Reteocrinidae (Camerata). Ord.; Early Sil.

Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 4, p. 63, 1859.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 191 (365), 1881; pt. 3, sec. 1, p. 94 (316), 1885; N. Amer. Crin. Camerata, p. 176, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 198, 1900.—Springer, Geol. Surv. Canada, Mem. 15-P, p. 9, 1911; Zittel-Eastman Textb. Pal., 1, p. 186, 1913.

Reteocrinus alveolatus Miller and Gurley.

Reteocrinus alveolatus Miller and Gurley, Ill. St. Mus., Bull. 5, p. 26, pl. 2, fig. 22, 1894.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 752, fig. 1390, 1897.

Reteocrinus alveolatus Springer, Geol. Surv. Canada, Mem. 15-P, p. 10, pl. 1, figs. 1-5, 1911.

Ord. (Trenton): Mercer Co., Ky., and Goat Island, Lake Huron (Curdsville ls.); Kirkfield, Ontario (Hull ls.).

Reteocrinus elongatus Raymond.

Raymond, Bull. Mus. Comp. Zool., Harvard, 35, no. 6 (Geol. ser., vol. 9), p. 203, pl. 4, fig. 5, 1931.

Ord. (Black River-Lebanon ls.): Cumberland Gap, Tenn.

Reteocrinus fimbriatus Billings.

Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 4, p. 65, pl. 9, figs. 3 a-c, 1859.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 179, pl. 9, fig. 4, 1897.

Early Sil. (Richmond-English Head, Vaurial, and Ellis Bay fm.): Carleton Point and Vaureal River, Anticosti.

Reteocrinus gracilis Wetherby = *Ptychocrinus parvus*.

Reteocrinus magnificus (S. A. Miller).

Gaurocrinus magnificus S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 6, p. 230, pl. 11, fig. 2, 1883.

- Reteocrinus magnificus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 181, pl. 9, fig. 2, 1897.
Early Sil. (Richmond—Waynesville ls., Blanchester beds): Near Waynesville, Ohio.
- Reteocrinus onealli* Wachsmuth and Springer = *Gaurocrinus nealli*.
- Reteocrinus pattersoni* Wachsmuth and Springer = *Pycnocrinus pattersoni*.
- Reteocrinus stellaris** Billings.
Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 4, p. 64, pl. 9, figs. 4 a-e, 1859.—Wachsmuth and Springer, Amer. Jour. Sci., (3), 25, p. 261, text figs. 1-3, 1883; N. Amer. Crin. Cam., p. 178, pl. 9, figs. 3 a-c, 1897.—Springer, Geol. Surv. Canada, Mem. 15-F, p. 10, pl. 1, figs. 6, 7, 1911.
Ord. (Trenton-Hull ls.): Ottawa, Ontario, Canada.
- Revalocrinus** Jaekel. Genotype: *R. costatus* Jaekel.
Hybocrinidae (Inadunata-Fistulata). Ord.
Jaekel, Pal. Zeits., 3, p. 90, 1918.
- Revalocrinus costatus** Jaekel.
Jaekel, Pal. Zeits., 3, p. 90, fig. 84, 1918.
Ord. (Reval fm., C₁): Near Reval, Estonia.
- Rhadinocrinus** Jaekel. Genotype: *R. rhenanus* Jaekel.
Botryocrinidae (Inadunata-Fistulata). Dev.
Jaekel, Pal. Abhandl., 7, p. 87, 1895.—Bather, Treatise Zool. (Lankester), pt. 3, p. 179, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 221, 1913.—Haarmann, Jahrb. Preuss. Geol. Landesanst., 41, p. 28, 1920.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 99, 1934.
- Rhadinocrinus dactylus** Schmidt.
Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 103, text figs. 23d, e, pl. 18, figs. 1a, b, pp. 142, 146, 147, 1934.
Low. Dev. (Hunsrück sl.): Bundenbach and Wisperthal, near Caub, Germany.
- Rhadinocrinus minae** (Jaekel).
Rhenocrinus minae Jaekel, in Schmidt, Zeits. Deutsch. Geol. Gesell., 57, p. 546, pl. 21, figs. 1, 2, text figs. 3, 4, 1905.
Rhadinocrinus minae Haarmann, Jahrb. Preuss. Geol. Landesanst., 41, p. 29, pl. 3, figs. 2, 3, 1921.
Up. Mid. Dev. (Upper Honseler beds): Near Letmathe, Germany.
- Rhadinocrinus nanus** (Roemer).
Poteriocrinus nanus Roemer, in Dunker, Palaeontographica: Beit. Natur. Vorwelt, 9, no. 4, p. 150, pl. 29, figs. 2, 3, pl. 25, fig. 9 (not pl. 26, fig. 7), 1863.
Rhadinocrinus nanus Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 100, text figs. 23a, b, ?24, pl. 17, figs. 1-3, pl. 20, fig. 3, pl. 32, fig. 2, pp. 142, 146, 147, 1934.
Low. Dev. (Hunsrück sl.): Bundenbach and near Caub, etc., Germany.
- Rhadinocrinus rhenanus** Jaekel.
Jaekel, Pal. Abhandl., 7, p. 88, pl. 4, fig. 1, 1893.
Low. Dev. (Up. Coblenzian): Coblenz, Germany.
- Rhaphanocrinus** Wachsmuth and Springer. Genotype: *Glyptocrinus subnodosus* Walcott.
Rhodocritidae (Camerata). Ord.—Dev.
Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, p. 98 (320), 1885; N. Amer. Crin. Cam., p. 258, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 200, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 187, 1913.
Coelocrinus Salter, Mem. Geol. Surv. Great Britain, 3, ed. 2, p. 473, 1866 (not Meek and Worthen, 1865). (Genotype: *Glyptocrinus basalis* McCoy.)

Rhaphanocrinus basalis (McCoy).

Glyptocrinus basalis McCoy, Ann. Mag. Nat. Hist., (2), 6, p. 289, 1850; British Pal. Foss., p. 57, pl. 1-D, fig. 4, 1854.

Glyptocrinus? (*Coelocrinus*) *basalis* Salter, Mem. Geol. Surv. Great Britain, 3, p. 283, pl. 23, fig. 4, 1866.

Ord. (Bala ls.): Alt y Anker, Meiford District, Montgomeryshire, Wales.

Rhaphanocrinus gemmeus Hudson.

Hudson, Rep. N. Y. St. Pal. for 1913 (Bull. 80), p. 280, pl. 2, figs. 1-5, text fig. 6, 1905.

Ord. (Chazyan-Valcour ls.): Valcour Island, Lake Champlain, N. Y.

Rhaphanocrinus sculptus (S. A. Miller).

Glyptocrinus sculptus S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 5, p. 37, pl. 1, fig. 2, 1882; 6, p. 224, pl. 1, fig. 2, 1883.

Rhaphanocrinus sculptus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 260, pl. 10, fig. 3, 1897.

Early Sil. (Richmond-Waynesville ls., Blanchester beds): Waynesville, Ohio.

Rhaphanocrinus subnodosus (Walcott).

Glyptocrinus? *subnodosus* Walcott, 35th Rep. N. Y. St. Mus., p. 208, pl. 17, fig. 3, 1884 (adv. pub. 1883).

Rhaphanocrinus subnodosus Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, p. 98 (320), 1885; N. Amer. Crin. Cam., p. 259, pl. 11, fig. 2, 1897.

Ord. (Up. Trenton ls.): Trenton Falls, N. Y.

Rhaphanocrinus? *wachsmuthi* Oehlert.

Oehlert, Ann. Soc. Geol. France, 19, pt. 1, art. 1, pp. 68, 69, text fig., pl. 1, figs. 1-10, 1887.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 259, 1897.

Low. Dev.: Sable (Sarthe), France.

Rhenocrinus Jaekel. Genotype: *R. ramosissimus* Jaekel.

Cyathocrinitidae (Inadunata-Fistulata). Dev.

Jaekel, in Schmidt, Zeits. Deutsch. Geol. Gesell., 58, p. 544, 1906; Pal. Zeits., 3, p. 59, 1918.—Haarmann, Jahrb. Preuss. Geol. Landesanst., 41, p. 35, 1920.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 108, 1934.

Rhenocrinus minae Jaekel = *Rhadinocrinus minae*.

Rhenocrinus ramosissimus Jaekel.

Jaekel, in Schmidt, Zeits. Deutsch. Geol. Gesell., 58, p. 544, 1906; Pal. Zeits., 3, p. 59, fig. 51, 1918 (as *R. ramosus*).—Haarmann, Jahrb. Preuss. Geol. Landesanst., 41, p. 36, pl. 4, fig. 1, pl. 5, figs. 1, 2, p. 68, text fig. 7, 1921.—Opitz, Bilder Erdges. Nahe-Hunsrück-Landes Birkenfeld, p. 96, fig. 93, p. 99, fig. 97, 1932.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 108, pl. 32, fig. 1, pp. 142, 145, 147, 1934.

Low. Dev. (Hunsrück sl.): Gemunden, Bundenbach, and Schneppenbach, Germany.

Rhenocrinus winterfeldi Jaekel = *Schmidtocrinus winterfeldi*.

Rhipidocrinus Zittel. Genotype: *Rhodocrinites crenatus* Goldfuss.

Rhodocrinitidae (Camerata). Dev.

Zittel (Beyrich Ms.), Handb. Pal., 1, p. 376, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 205 (321), 1881 (as *Rhipidocrinus*).—Bather, Treatise Zool. (Lan-kester), pt. 3, p. 201, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 189, 1913.

Rhipidocrinus crenatus (Goldfuss).

Rhodocrinites crenatus Goldfuss, Petref. Germ., 1, p. 212, pl. 64, figs. 3a, b, 1831.

Rhodocrinus crenatus Roemer, Ver. Nat. Hist. Preuss. Rheinl., 8, p. 358, pl. 1, figs. 1 a-c, 1851;—Schultze, Denk. Kais. Akad. Wiss., Math. Natur. Cl., 26, p. 165, pl. 7, figs. 1 a-n, 1867 (adv. pub. 1866).

- Rhipidocrinus crenatus* Zittel, Handb. Pal., p. 377, text fig. 263, 1879.—Springer, Zittel-Eastman Textb. Pal., 1, p. 188, fig. 286, 1913.
Dev.: Eifel, Kerpen and Gerolstein, Germany (Eifelian); Lummaton, England.
- Rhipidocrinus crenatus aculeatus** (Schultze).
Rhodocrinus crenatus var. *aculeatus* Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 168, pl. 7, fig. 11, 1867 (adv. pub. 1866).
Dev. (Eifelian): Gerolstein, Germany.
- Rhipidocrinus crenatus bursiformis** (Quenstedt).
Rhodocrinites crenatus var. *bursiformis* Quenstedt, Petref. Deutsch., 4, p. 608, pl. 111, figs. 18, 19, 1876.
Dev. (Eifelian): Gerolstein, Germany.
- Rhipidocrinus crenatus reticularis** (Schultze).
Rhodocrinus crenatus var. *reticularis* Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, pl. 7, figs. 1e, 1867 (adv. pub. 1866).
Dev. (Eifelian): Gerolstein, Germany.
- Rhipidocrinus crenatus reticulatus** (Quenstedt).
Rhodocrinites crenatus var. *reticulatus* Quenstedt, Petref. Deutsch. 4, p. 606, pl. 111, fig. 14, 1876.
Dev. (Eifelian): Gerolstein, Germany.
- Rhipidocrinus perloricatus** Jaekel.
Jaekel, in Schmidt, Zeits. Deutsch. Geol. Gesell., 58, p. 543, pl. 22, figs. 5a, b, 1906.
Low. Dev. (Up. Lenneschiefer): Near Letmathe, Germany.
- Rhodocrinites** Miller. Genotype: *R. verus* Miller.
Rhodocrinitidae (Camerata). Sil.—Low. Carb.
Miller, Nat. Hist. Crin., pp. 15, 106, 1821.—Austin and Austin, Ann. Mag. Nat. Hist., 11, p. 201, 1843.
Rhodocrinus Agassiz, Mem. Soc. Neuchatel, 1, p. 196, 1835.—De Koninck and Lehon, Recher. Crin. Carb. Belg., p. 103, 1854.—Sandberger and Sandberger, Verst. Rhein. Schichtensyst. Nassau, p. 390, 1856.—Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 4, p. 26, 1859.—Zittel, Handb. Pal., 1, p. 376, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 209 (383), 1881; N. Amer. Crin. Cam., pp. 218, 236, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 201, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 188, 1913.—Ehrenberg, Acta Zool., 3, p. 276, 1922.
- Rhodocrinites abnormis** (McCoy).
Rhodocrinus (*Gilbertocrinus*) *abnormis* McCoy, Carb. Foss. Ireland, p. 180, pl. 26, fig. 3, 1844.
Low. Carb. (Mtn. Ls.): Millicent, Clane, Co. Kildare, Ireland.
- Rhodocrinites baccatus** (Wright).
Rhodocrinus baccatus Wright, Geol. Mag., 74, p. 386, pl. 13, figs. 1-9, text figs. 1, 2, 1937; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 5, pl. 12, figs. 1, 2, 4-6, 8, 9, text figs. 1, 2, 1939.
Low. Carb.: (Low. Ls. gr.): Invertiel, Roscobie, Beils, Scotland; East of Elie, etc., Scotland (Calif. ss-Ardross ls.).
- Rhodocrinites barrisi** (Hall).
Rhodocrinus barrisi Hall, Jour. Boston Soc. Nat. Hist., 7, p. 322; Prelim. Descr. N. Sp. Crinoids, p. 9, 1861; N. Y. St. Mus. Nat. Hist., Bull. 1, pl. 6, figs. 16, 17, 1872.
Miss. (Up. Burlington ls.): Burlington, Iowa.
- Rhodocrinites barrisi divergens** (Hall).
Rhodocrinus barrisi var. *divergens* Hall, Jour. Boston Soc. Nat. Hist., 7, p. 324; Prelim. Descr. N. Sp. Crin., p. 9, 1861; N. Y. St. Mus. Nat. Hist., Bull. 1, pl. 6, fig. 18, 1872.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 230, pl. 12, figs. 3, 4a-d, 5a, b, 1897.
Miss. (Up. Burlington ls.): Burlington and Pleasant Grove, Iowa.

Rhodocrinites barrisi striatus (Wachsmuth and Springer).

Rhodocrinites barrisi var. *striatus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 231, pl. 12, fig. 6, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Rhodocrinites benedicti (S. A. Miller).

Rhodocrinites benedicti S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 269, pl. 2, figs. 18-20, 1894 (adv. pub. 1892).

Miss. (Keokuk ls.): Harrison Co., Ind.

Rhodocrinites blairi (Miller and Gurley).

Rhodocrinites blairi Miller and Gurley, Ill. St. Mus. Nat. Hist., Bull. 9, p. 37, pl. 2, figs. 20-23, 1896.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 752, fig. 1391, 1897.—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 74, pl. 28, figs. 11-14, 1938.

Miss. (Chouteau ls.): Sedalia, Mo.

Rhodocrinites bozemanensis (Miller and Gurley).

Rhodocrinites bozemanensis Miller and Gurley, Ill. St. Mus., Bull. 12, p. 40, pl. 3, fig. 2, 1897.

Miss. (Madison ls.): Bridger Mts., near Bozeman, Mont.

Rhodocrinites bridgerensis (Miller and Gurley).

Rhodocrinites bridgerensis Miller and Gurley, Ill. St. Mus., Bull. 12, p. 41, pl. 3, fig. 3, 1897.

Miss. (Madison ls.): Bridger Mts. and Spring Canyon, Alden, Mont.

Rhodocrinites caelatus (Miller and Gurley).

Rhodocrinites caelatus Miller and Gurley, 16th Rep. Geol. Surv. Ind., p. 360, pl. 7, fig. 10, 1890. (Authors' ed., p. 43.)

Miss. (Kinderhook-Hampton fm.): LeGrand, Iowa.

Rhodocrinites canaliculatus Goldfuss.

Goldfuss, Petref. Germ., 1, p. 199, pl. 60, figs. 6 a-f, 1831. (Stems only.)

Dev. (Eifelian): Eifel, Germany.

Rhodocrinites cavanaughi (Laudon).

Rhodocrinites cavanaughi Laudon, Univ. Iowa Studies, 15, no. 2, p. 39, pl. 1, figs. 4-6, 1933.

Miss. (Kinderhook-Gilmore City fm.): Gilmore City, Iowa.

Rhodocrinites costatus Austin and Austin.

Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 109, 1842; 11, p. 203, 1843.

Low. Carb. (Mtn. Ls.): England and Ireland.

Rhodocrinites coxanus (Worthen).

Rhodocrinites coxanus Worthen, Ill. St. Mus., Bull. 1, p. 20, 1882; Geol. Surv. Ill., 7, p. 305, pl. 28, fig. 7, 1883.—Keyes, Geol. Surv. Mo., 4, p. 163, pl. 22, fig. 3, 1894.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 222, pl. 13, figs. 6, 7, 1897.

Rhodocrinites polydactylus Worthen, Ill. St. Mus., Bull. 1, p. 30, 1882.

Miss. (Keokuk ls.): One mile below Keokuk, Iowa.

Rhodocrinites crenatus bursiformis Quenstedt = *Rhipidocrinites crenatus bursiformis*.

Rhodocrinites crenatus reticulatus Quenstedt = *Rhipidocrinites crenatus reticulatus*.

Rhodocrinites douglassi (Miller and Gurley).

Rhodocrinites douglassi Miller and Gurley, Ill. St. Mus., Bull. 12, p. 39, pl. 3, fig. 1, 1897.—Laudon, Iowa Studies in Nat. Hist., 15, no. 2, p. 41, pl. 1, figs. 10, 11, 1933.

Miss. (Madison ls.): Bridger Mts., near Bozeman, Mont.

Rhodocrinites douglassi constrictus (Laudon).

Rhodocrinites douglassi var. *constrictus* Laudon, Univ. Iowa Studies in Nat. Hist., 15, no. 2, p. 45, pl. 2, figs. 1, 2, 1933.

Miss. (Kinderhook-Gilmore City fm.): Gilmore City, Iowa.

- Rhodocrinites douglassi excavatus** (Laudon).
Rhodocrinus douglassi var. *excavatus* Laudon, Univ. Iowa Studies in Nat. Hist., 15, no. 2, p. 46, pl. 1, fig. 15, 1933.
 Miss. (Kinderhook-Gilmore City fm.): Gilmore City, Iowa.
- Rhodocrinites douglassi haploformis** (Laudon and Beane).
Rhodocrinus douglassi var. *haploformis* Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 242, pl. 15, fig. 12, 1937.
 Miss. (Kinderhook-Hampton fm.): Legrand, Iowa.
- Rhodocrinites douglassi multidactylus** (Laudon).
Rhodocrinus douglassi var. *multidactylus* Laudon, Univ. Iowa Studies in Nat. Hist., 15, no. 2, p. 44, pl. 1, figs. 12-14, 1933.
 Miss. (Kinderhook-Gilmore City fm.): Gilmore City, Iowa.
- Rhodocrinites douglassi serpens** (Laudon).
Rhodocrinus douglassi var. *serpens* Laudon, Univ. Iowa Studies in Nat. Hist., 15, no. 2, p. 42, pl. 1, figs. 7-9, 1933.
 Miss. (Kinderhook-Gilmore City fm.): Gilmore City, Iowa.
- Rhodocrinites granulatus** Austin and Austin.
 Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 109, 1842; vol. 11, p. 203, 1843.
 Low. Carb. (Mtn. Ls.): England and Ireland.
- Rhodocrinites gyratus** Goldfuss.
 Goldfuss, Petref. Germ., 1, p. 198, pl. 60, figs. 4a, b, 1831 (stems only).
 Dev. (Eifelian): Eifel, Germany.
- Rhodocrinites insculptus** (Goldring).
Rhodocrinus insculptus Goldring, Ann. Carnegie Mus., 24, p. 249, pl. 25, fig. 1, 1935.
 Dev. (Hamilton-Tichenor ls.): 2 miles east of Alden, Genesee Co., N. Y.
- Rhodocrinites kirbyi** (Wachsmuth and Springer).
Rhodocrinus kirbyi Wachsmuth and Springer, in Miller, N. Amer. Geol. Pal., p. 277, 1889; Geol. Surv. Ill., 8, p. 180, pl. 15, fig. 10, pl. 16, fig. 3, 1890; N. Amer. Crin. Cam., p. 226, pl. 12, figs. 1 a-d, 1897.—Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 240, pl. 15, fig. 7, 1937.
 Miss. (Kinderhook gr.): Legrand, Iowa (Hampton fm.); Near Burlington, Iowa.
- Rhodocrinites? mutabilis** Austin and Austin.
 Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 109, 1842. (Nom. nud.)
- Rhodocrinites nanus** (Meek and Worthen).
Rhodocrinus nanus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 254, 1866; Geol. Surv. Ill., 3, p. 476, pl. 13, figs. 2a, b, text fig. 1863.—Wachsmuth and Springer, Geol. Surv. Ill., 8, p. 182, pl. 16, fig. 4, pl. 17, fig. 15, 1890; N. Amer. Crin. Cam., p. 228, pl. 11, figs. 7a, b, pl. 12, fig. 2a (not 2b), 1897.—Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 240, pl. 15, figs. 4, 5, 1937.
 Miss. (Low. Burlington ls.): Burlington, Iowa.
- Rhodocrinites nanus glyptiformis** (Laudon and Beane).
Rhodocrinus nanus var. *glyptiformis* Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 241, pl. 15, figs. 6, 10, 11, 1937.
Rhodocrinus nanus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 228, pl. 12, fig. 2b, 1897.
 Miss. (Kinderhook-Hampton fm.): Legrand, Iowa.
- Rhodocrinites nortoni** (Goldring).
Rhodocrinus nortoni Goldring, Proc. Portland Soc. Nat. Hist., 4, pp. 153-155, text figs. 1, 2, pl. 4, figs. 1, 2, 1933.
 Dev. (Oriskany-glacial drift of Moose River ss.): Caratunk, Maine.
- Rhodocrinites octadaetylus** (Laudon and Beane).
Rhodocrinus octadaetylus Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 242, pl. 15, figs. 8, 9, 1937.
 Miss. (Kinderhook-Hampton fm.): Legrand, Iowa.

Rhodocrinites parvus (S. A. Miller).

Rhodocrinus parvus S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 39, pl. 5, figs. 8, 9, 1891;
N. Amer. Geol. Pal., 2d App., p. 752, fig. 1392, 1897.

Miss. (Warsaw ls.): Boonville, Mo.

Rhodocrinites punctatus (Weller).

Rhodocrinus punctatus Weller, Bull. Geol. Soc. Amer., 20, p. 282, pl. 11, figs. 15, 16,
1909.

Miss. (Fern Glen ls.): Fern Glen, Mo.

Rhodocrinites quinquangularis Miller.

Miller, Nat. Hist. Crin., p. 109, 1821.

Low. Carb.: Mitchell Dean and Bolland, England (Mtn. Ls.); Visé, Belgium
(Viséan).

Rhodocrinites quinquelobus (Schultze).

Rhodocrinus quinquelobus Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26,
p. 169, pl. 7, fig. 6, 1867 (adv. pub. 1866, p. 57).

Dev. (Eifelian): Kerpen, Germany.

Rhodocrinites quinquepartitus Goldfuss.

Goldfuss, Petref. Germ., 1, p. 199, pl. 60, figs. 5 A-D, 1831 (stems only).

Dev. (Eifelian): Eifel, Germany.

Rhodocrinites sculptus (Miller and Gurley).

Rhodocrinus sculptus Miller and Gurley, 16th Rep. Geol. Surv. Ind., p. 359, pl. 7,
fig. 11, 1890 (authors' ed., p. 42).

Miss. (Kinderhook-Hampton fm.): Legrand, Iowa.

Rhodocrinites tessellatus Steininger.

Steininger, Geogn. Eifel, p. 36, 1853.

Dev. (Eifelian): Gerolstein, Germany.

Rhodocrinites tortuosus Roemer.

Roemer, Verst. Hartsgebirge, p. 8, pl. 3, fig. 12, 1893.

Dev. (Kahlenberg ss.): Rammelsberg, Germany.

Rhodocrinites truncatus (Wachsmuth and Springer).

Rhodocrinus truncatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 231, pl.
13, figs. 2 a-f, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Rhodocrinites tuberculatus (Wachsmuth and Springer).

Rhodocrinus tuberculatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 232,
pl. 13, figs. 3, 4, 1897.

Miss. (Lake Valley ls.): Lake Valley, N. Mex.

Rhodocrinites uniarticulatus (de Koninck and Lehon).

Rhodocrinus uniarticulatus de Koninck and Lehon, Rech. Crin. Carb. Belgium, p.
107, pl. 1, figs. 13 a-c, 1854.—Schmidt, Abhandl. Preuss. Geol. Landesanst., heft
122, p. 63, pl. 2, figs. 1, 2, 1930.

Low. Carb.: Visé, Belgium (Viséan); Wasserfall near Velbert, Germany. (Up.
Tournaisian).

Rhodocrinites verisimilis (Grenfell).

Rhodocrinus verisimilis Grenfell, Proc. Bristol Nat. Soc., 1, p. 482, pl. 7, figs. 8-10,
1876.

Low. Carb. (Low. Ls. sh.): Avon Gorge, Bristol, England.

Rhodocrinites verus Miller.

Miller, Nat. Hist. Crin., p. 106, pls. 1, 2 (not fig. 1 A), 1821.—Wachsmuth and
Springer, N. Amer. Crin. Cam., p. 219, 1897.

Encrinites rhodocrinites von Schlotheim, Nacht. Petref., p. 101, pl. 28, fig. 3, 1823;
Merkwurd., Expl. Plates, p. 25, pl. 28, figs. 3 a-f, 1832.

- Rhodocrinus radiatus* Grenfell, Proc. Bristol Nat. Soc., 1, p. 482, 1876.
Low. Carb. (Mtn. Ls.): River Avon, near Bristol; Mendip Hills; Mitchel Dean; England.
- Rhodocrinites verus* Miller (part) = *Sagenocrinites expansus*.
- Rhodocrinites wachsmuthi** (Hall).
Rhodocrinus wachsmuthi Hall, Descr. N. Sp. Crin., p. 18, 1861.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 222, pl. 13, figs. 5 a-d, pl. 15, fig. 7, 1897.
Miss. (Low. Burlington ls.): Burlington, Iowa.
- Rhodocrinites watersianus** (Wachsmuth and Springer).
Rhodocrinus watersianus Wachsmuth and Springer, in Miller, N. Amer. Geol. Pal., p. 278, 1889; Geol. Surv. Ill., 8, p. 184, pl. 17, fig. 16, 1890; N. Amer. Crin. Cam., p. 221, pl. 12, fig. 9, 1897.—Ehrenberg, Acta Zool., 3, p. 277, fig. 7, 1922.—Laudon, Univ. Iowa Studies, 15, no. 2, p. 36, pl. 1, fig. 1, 1933.—Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 241, pl. 15, fig. 1, 1937.
Miss. (Kinderhook): Legrand, Iowa (Hampton fm.); Gilmore City, Iowa (Gilmore City fm.).
- Rhodocrinites whitei** (Hall).
Rhodocrinus whitei Hall, Jour. Boston Soc. Nat. Hist., 7, p. 324; Prelim. Not., p. 9, 1861; N. Y. St. Mus., Bull. 1, pl. 6, figs. 19-21, 1872.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 223, pl. 13, figs. 1 a-c, pl. 15, figs. 6a, b, 1897.—Peck and Keyte, Univ. Mo. Studies, 13, no. 4, p. 73, pl. 27, figs. 10, 11, 1938.
Rhodocrinus whitei var. *burlingtonensis* Hall, Jour. Boston Soc. Nat. Hist., 7, p. 325; Descr. N. Sp. Crin., Prelim. Not., p. 9, 1861.
Miss.: Burlington, Iowa (Low. Burlington ls.); Sedalia, Mo. (Chouteau ls.).
- Rhodocrinites wortheni** (Hall).
Rhodocrinus wortheni Hall, Geol. Rep. Iowa, 1, pt. 2, p. 556, pl. 9, figs. 8 a-c, 1858.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 220, pl. 11, fig. 6, pl. 12, figs. 7a-c, 1897.—Laudon, Iowa Studies in Nat. Hist., 15, no. 2, p. 38, pl. 1, figs. 2-3, 1933.—Laudon and Beane, Iowa Studies in Nat. Hist., 17, no. 6, p. 243, pl. 15, figs. 2, 3, 1937.
Miss.: Burlington, Iowa, Hannibal and Louisiana, Mo. (Low. Burlington ls.); Gilmore City, Iowa (Kinderhook-Gilmore City fm.); Marshall Co., Iowa (Hampton fm.).
- Rhodocrinites wortheni urceolatus** (Wachsmuth and Springer).
Rhodocrinus wortheni var. *urceolatus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 221, pl. 12, figs. 8a, b, 1897.
Miss. (Lake Valley ls.): Lake Valley, N. Mex.
- Rhodocrinus* of authors = *Rhodocrinites*.
- Rhodocrinus asperatus* Billings = *Deocrinus asperatus*.
- Rhodocrinus crenatus* Roemer and authors = *Rhipidocrinus crenatus*.
- Rhodocrinus crenatus aculeatus* Schultze = *Rhipidocrinus crenatus aculeatus*.
- Rhodocrinus crenatus reticularis* Schultze = *Rhipidocrinus crenatus reticularis*.
- Rhodocrinus gigas* Billings.
Billings, Geol. Surv. Canada, Can. Org. Rem., dec. 4, pl. 6, fig. 3, 1859 (stems only).
Ord. (Trenton-Hull ls.): Ottawa, Canada.
- Rhodocrinus gonatodes* Müller = (part) *Diamenocrinus gonatodes*; (part) *D. grandis*; (part) *D. pachydaetylus*.
- Rhodocrinus* (*Acanthocrinus*) *gracilis* Hall = *Thylacocrinus gracilis*.
- Rhodocrinus halli* Lyon = *Dimeroerinites halli*.
- Rhodocrinus longispina* Wachsmuth and Springer = *Acanthocrinus longispina*.
- Rhodocrinus melissa* Hall = *Lyriocrinus melissa*.
- Rhodocrinus microbasalis* Billings = *Archaeocrinus microbasalis*.

- Rhodocrinus nanus* Wachsmuth and Springer (part) = *Rhodocrinites nanus glyptiformis*.
- Rhodocrinus* (*Acanthocrinus*) *nodulosus* Hall = *Dimerocrinites nodulosus*.
- Rhodocrinus polydactylus* Worthen = *Rhodocrinites coxanus*.
- Rhodocrinus?* *rectus* Hall = *Eucalyptocrinites rectus*.
- Rhodocrinus* (*Lyriocrinus*) *sculptilis* Hall = *Lyriocrinus sculptilis*.
- Rhodocrinus spinosus* Hall = *Acanthocrinus spinosus*.
- Rhodocrinus stellaris* de Koninck and Lehon = *Gilbertsocrinus stellaris*.
- Rhodocrinus tessacontadactylus* Schultze = *Abacocrinus tessacontadactylus*.
- Rhodocrinus tuberculatus* Romanovsky.
Rhodocrinus (*Rhipidocrinus*) *tuberculatus* Romanovsky, *Materiaux Géol. Turkestan*, 3, p. 85, pl. 14, fig. 8, 1890 (stems only). Turkestan.
- Rhodocrinus varsoviensis* Hall.
 Hall, *Geol. Rep. Iowa*, 1, pt. 2, Suppl., p. 80, 1860.
 Miss. (Warsaw ls.): Warsaw, Ill.
- Rhodocrinus verus* Roemer = *Sagenocrinites expansus*.
- Rhodocrinus vesperalis* White = *Diaboloocrinus vesperalis*.
- Rhodocrinus whitei burlingtonensis* Hall = *Rhodocrinites whitei*.
- Rhombifera** Barrande. Genotype: *R. bohémica* Barrande.
 Stephanoeriniidae (Inadunata-Larviformia). Ord.
 Barrande, *Syst. Sil. Centre Bohême*, 3, Pteropodes, p. 175, 1867; 7, pt. 1, pp. 80, 175, 1887.—Zittel, *Handb. Pal.*, 1, p. 424, 1879.—Jaekel, *Stammesges. Pelmat.*, 1, p. 340, 1899.—Bather, *Treatise Zool. (Lankester)*, pt. 3, p. 57, 1900.
- Rhombifera bohémica** Barrande.
 Barrande, *Syst. Sil. Centre Bohême*, 7, pt. 1, p. 178, pl. 6, figs. 1–21, 1887.—Jaekel, *Stammes. Pelmat.*, 1, p. 342, pl. 10, fig. 8, 1899.
 Ord. (Div. D₄): Wraz, Bohemia.
- Rhopalocrinus** Wachsmuth and Springer. Genotype: *Taxocrinus gracilis* Schultze.
 ?Dendrocrinidae (Inadunata-Fistulata). Dev.
 Wachsmuth and Springer, *Rev. Pal.*, pt. 1, p. 57 (231), 1880 (1879).—Bather, *Treatise Zool. (Lankester)*, pt. 3, p. 191, 1900.—Springer, *Amer. Geol.*, 30, p. 95, 1902; *Jour. Geol.*, 14, pp. 484, 519, 1906; Zittel-Eastman *Textb. Pal.*, 1, p. 206, 1913; *Crin. Flexibilia*, p. 453, 1920.—Bather, *Bull. Soc. Belge, Geol. Pal., Hyd.*, 36, p. 43, 1926.
- Rhopalocrinus gracilis** (Schultze).
Taxocrinus gracilis Schultze, *Denk. Kais. Akad. Wiss., Math. Nat. Cl.*, 26, p. 149, pl. 4, figs. 3, 3a, 1867 (adv. pub. 1866, p. 39).
Rhopalocrinus gracilis Wachsmuth and Springer, *Rev. Pal.*, pt. 1, p. 58 (281), 1880 (1879).—Springer, *Crin. Flexibilia*, p. 453, pl. 75, figs. 11 a–d, 1920.—Bather, *Bull. Soc. Belge. Geol.*, 36, p. 44, text figs. 6–8, 1926.
 Dev. (Eifelian): Prüm, Germany.
- Rhopocrinus** Kirk. Genotype: *R. spinosus* Kirk.
 Pachylocrinidae (Inadunata-Fistulata) Miss.
 Kirk, *Proc. U. S. Nat. Mus.*, 92, no. 3144, p. 152, 1942.
- Rhopocrinus municipalis** (Troost).
Poteroocrinites municipalis Troost, *Amer. Jour. Sci.* (2) 8, p. 419, 1849 (nom. nud.).
Cyathocrinus? municipalis (Troost) Wood, *U. S. Nat. Mus., Bull.* 64, p. 82, pl. 11, fig. 5, 1909.
Rhopocrinus municipalis Kirk, *Proc. U. S. Nat. Mus.*, 92, no. 3144, pp. 152, 154, 1942.
 Miss. (Chester-Gasper ls.): Lawrence Co., Tenn.

Rhopocrinus proboscidualis (Worthen).

Poteroocrinus proboscidualis Worthen, Geol. Surv. Ill., 6, p. 518, pl. 31, fig. 1, 1875.

Poteroocrinus (Scaphioocrinus) proboscidualis Wachsmuth and Springer, Rev. Pal., pt. 1, p. 114, 1880 (1879).

Rhopocrinus proboscidualis Kirk, Proc. U. S. Nat. Mus., 92, no. 3144, p. 153, 1942. Miss. (Chester-Ste. Genevieve ls.): Carondolet, Mo.; Huntsville, Ala.

Rhopocrinus spinosus Kirk.

Kirk, Proc. U. S. Nat. Mus., 92, no. 3144, p. 152, pl. 16, 1942.

Miss. (Chester-Glen Dean): Near Sloans ValleKy.

Rimpia Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 40, 1930.

Genotype: *R. osiensis* Gregorio. (Probably a coral.)

Rimpia osiensis Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 40, pl. 15, figs. 3, 4, 1930.

Permian: Sicily.

Ripidocrinus Wachsmuth and Springer. See Rhipidocrinus.**Ristnacrinus** Öpik. Genotype: *R. marinus* Öpik.

Heterocrinidae (Inadunata-Fistulata). Ord.

Öpik, Pub. Geol. Inst. Tartu, no. 40, pp. 1-7, 1934.

Ristnacrinus marinus Öpik.

Öpik, Pub. Geol. Inst. Tartu no. 40, p. 3, text fig. 1, pl. 1, figs. 1, 2, 1934.

Ord. (Jewe fm., D₁): Ristna, 65 km. west of Tallinn, Estonia.

Roemerocrinus Wanner. Genotype: *R. gracilis* Wanner.

Poteroocrinitidae (Inadunata-Fistulata). Permian.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 205, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, pp. 179, 209, 1924; Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 164, 1937.

Roemerocrinus gracilis Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 205, pl. 108 (13), fig. 1, 1916; Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 164, text figs. 58, 59, pl. 10, figs. 29, 30, 1937.

Permian: Basleo, Timor.

Roemerocrinus gracilis granulatus Wanner.

Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 165, pl. 10, fig. 31, 1937.

Permian: Basleo, Timor.

Roemerocrinus scrobiculatus Wanner.

Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 165, pl. 10, figs. 32-34, 1937.

Permian: Basleo, Timor.

Rossocrinus Ivanov. Genotype: *R. magnus* Ivanov.

Ivanov, Bull. Soc. Nat. Moscow, Sec. geol., 34, pp. 152, 176, 1926. (Nom. nud.).

Carb.: Gouv. Moscow, Russia.

Rubocrinus Ivanov. Genotype: *R. trautscholdi* Ivanov.

Ivanov, Bull. Soc. Nat. Moscow, Sec. geol., 34, p. 176, 1926. (Nom. nud.).

Carb.: Gouv. Moscow, Russia.

Rumphiocrinus Wanner. Genotype: *R. singularis* Wanner.

Ichthyocrinidae (Flexibilia).

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 122, 1924.

Rumphiocrinus singularis Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 123, text fig. 7, pl. 7, figs. 7, 8, 1924; Neue Beitr. kennt. Perm. Echin. Timor, Flexibilia, pp. 51, 52, text fig. 31, pl. 4, figs. 13, 14, 1930.

Permian: Basleo, Timor.

Saccocrinus Hall. Genotype: *S. speciosus* Hall.

Periechocrinitidae (Camerata). Sil.; Dev.

Hall, Nat. Hist. N. Y. Pal., 2, p. 205, 1852.—Meek and Worthen, Geol. Surv. Ill., 5, p. 395, 1873.—Zittel, Handb. Pal., 1, p. 369, 1879.—Springer, Zittel-Eastman Textb. Pal., 1, p. 194, 1913.—Goldring, N. Y. St. Mus., Mem. 16, p. 206, 1923.—Springer, Amer. Sil. Crin., p. 45, 1926.

Saccocrinus benedicti S. A. Miller.

S. A. Miller, 18th Rep. Geol. Nat. Res. Ind., p. 233, pl. 5, figs. 1, 2, 1894 (adv. pub. 1892, p. 29).—Springer, Amer. Sil. Crin., p. 46, pl. 10, figs. 6-14, 1926.

Habrocrinus benedicti Slocum, Field Col. Mus., geol. ser., 2, p. 295, pl. 87, figs. 6, 7, 1908.—Foerste, Ohio Jour. Sci., 17, p. 240, pl. 10, figs. 50A, B, 1917.

Periechocrinus ornatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 527, pl. 51, fig. 7 (not pl. 50, figs. 3a, b) 1897.

Sil. (Niagaran): St. Paul, Ind. (Laurel ls.); Bridgeport, Ill. and Muncie, Ind. (Racine dol.).

Saccocrinus christyi Hall = *Periechocrinites whitfieldi*.

Saccocrinus cuspidatus Springer.

Springer, Amer. Sil. Crin., p. 46, pl. 10, fig. 15, 1926.

Sil. (Niagaran-Louisville ls.): Jefferson Co., Ky.

Saccocrinus egani S. A. Miller = *Periechocrinites egani*.

Saccocrinus gorbyi S. A. Miller = *Periechocrinites gorbyi*.

Saccocrinus (?) hamiltonensis Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 207, pl. 26, figs. 6, 7, 1923.

Dev. (Hamilton-Up. Moscow sh.): Bellona, N. Y.

Saccocrinus howardi S. A. Miller = *Periechocrinites howardi*.

Saccocrinus infelix S. A. Miller = *Periechocrinites infelix*.

Saccocrinus (?) intrastigmatus Schmidt.

Schmidt, Palaeontographica, 76, p. 21, pl. 4, figs. 5 a-c, 6, 7, 1931.

Low. Devon.: Kap La Vela, Concha de Arnao, Spain.

Saccocrinus marcouanus S. A. Miller = *Periechocrinites marcouanus*.

Saccocrinus necis S. A. Miller = *Periechocrinites necis*.

Saccocrinus ornatus Hall and Whitfield = *Periechocrinites ornatus*.

Saccocrinus pyriformis S. A. Miller = *Periechocrinites urniformis*.

Saccocrinus sacculus Meek and Worthen = *Periechocrinites whitfieldi*.

Saccocrinus speciosus Hall.

Hall, Nat. Hist. N. Y., Pal., 2, p. 205, pl. 46, figs. 1 a-n, 2, 1852.

Periechocrinus speciosus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 521, pl. 50, fig. 6, 1897.

Sil. (Niagaran): Lockport, N. Y. and Grimsby, Ont. (Rochester sh.); Racine, Wis. (Racine dol.).

Saccocrinus speciosus Roemer = *Periechocrinites dubius*.

Saccocrinus tennesseensis Hall = *Periechocrinites tennesseensis*.

Saccocrinus umbrosus Miller and Gurley = *Periechocrinites umbrosus*.

Saccocrinus urniformis S. A. Miller = *Periechocrinites urniformis*.

Saccosomopsis Meek and Worthen = *Cyathocrinites*.

Sagenocrinites Austin and Austin. Genotype: *Actinocrinites? expansus* Phillips.

Sagenocrinitidae (Flexibilia). Sil.

Austin and Austin, Ann. Mag. Nat. Hist., 10, p. 110, 1842; 11, p. 305, 1843.

Sagenocrinus Morris, Cat. British Foss., p. 58, 1843.—Zittel, Handb. Pal., 1, p. 375, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, 1881, p. 201 (375), 1881.—Zittel, Grundzüge Pal., p. 130, 1895.—Bather, Treatise Zool. (Lankester), pt.

- 3, p. 190, 1900.—Springer, Amer. Geol., 30, p. 89, 1902; Jour. Geol. 14, p. 519, 1906; Zittel-Eastman Textb. Pal., 1, p. 204, 1913; Crin. Flexibilia, pp. 205, 215, 1920; Amer. Sil. Crin., p. 68, 1926.
- Sagenocrinites americanus** (Springer).
Sagenocrinus americanus Springer, Amer. Geol., 30, p. 88, text fig., 1902; Crinoidea Flexibilia, p. 221, pl. 19, fig. 5, 1920; Amer. Sil. Crin., p. 68, pl. 22, fig. 5, 1926.
 Sil. (Niagaran-Waldron sh.): Waldron, Ind.
- Sagenocrinites clarki** (Springer).
Sagenocrinus clarki Springer, Crin. Flexibilia, p. 220, pl. 19, figs. 4 a-d, 1920; Amer. Sil. Crin., p. 68, pl. 22, figs. 4, 4a, 1926.
 Sil. (Niagaran-Beech River fm.): 2 miles north of Decaturville, Tenn.
- Sagenocrinites expansus** (Phillips).
Actinocrinites? expansus Phillips, in Murchison, Sil. Syst., p. 674, pl. 17, fig. 9, 1839.
Sagenocrinites expansus Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 110, 1842; 11, p. 205, 1843.
Glyptocrinus expansus Phillips, in Murchison, Siluria, p. 247, pl. 15, figs. 1, 2, 1859.
Sagenocrinus expansus Angelin, Icon. Crin. Suec., p. 8, pl. 28, fig. 8, 1878.—Springer, Crin. Flexibilia, p. 218, pl. 18, figs. 1-9, pl. 19, figs. 1-3, 1920.
Rhodocrinites verus Miller (part), Nat. Hist. Crin., p. 107, pl. 1, fig. 1 A, 1821.
Rhodocrinus verus Roemer, in Bronn, Leth. Geog., 1, p. 241, pl. 4, figs. 2 a-c, 1852-54.
Sagenocrinites giganteus Austin and Austin, Ann. Mag. Nat. Hist., 10, p. 110, 1842; 11, p. 205, 1843.
 Sil.: Dudley, England (Wenlock ls.); Follingbo, Island of Gotland (Gotlandian).
 Sagenocrinites giganteus Austin and Austin = *S. expansus*.
 Sampsonocrinus Miller and Gurley = Actinocrinites.
- Sarocrinus** Kirk. Genotype: *S. nitidus* Kirk.
 Zeacrinitidae (Camerata): Miss.-Permian.
 Kirk, Jour. Pal., 16, no. 3, p. 382, 1942.
- Sarocrinus carinatus** Kirk.
 Kirk, Jour. Pal., 16, no. 3, p. 383, pl. 58, figs. 1-7, 1942.
 Miss. (Burlington-Keokuk transition beds): Burlington, Iowa.
- Sarocrinus granilineus** (Miller and Gurley).
Poteriocrinus granilineus Miller and Gurley, Jour. Cincinnati Soc. Nat. Hist., 13, p. 22, pl. 4, fig. 7; 16th Rep. Geol. Surv. Ind., p. 343, pl. 4, fig. 7, 1890 (authors' ed. p. 22).
Sarocrinus granilineus Kirk, Jour. Pal., 16, no. 3, p. 382, 1942.
 Miss. (Keokuk): Crawfordsville, Ind.
- Sarocrinus ? keokuk** (Worthen).
Zeacrinus keokuk Worthen, Ill. St. Mus., Bull. 1, p. 28, 1882; Geol. Surv. Ill., 7, p. 303, pl. 28, fig. 3, 1883.
Sarocrinus ? keokuk Kirk, Jour. Pal., 16, no. 3, p. 382, 1942.
 Miss. (Keokuk): 1 mile below Keokuk, Iowa.
- Sarocrinus nitidus** Kirk.
 Kirk, Jour. Pal., 16, no. 3, p. 385, pl. 58, fig. 11-20, 1942.
 Miss. (Keokuk): Indian Creek, Montgomery Co., Ind.
- Sarocrinus plenus** Kirk.
 Kirk, Jour. Pal., 16, no. 3, p. 386, pl. 58, fig. 8, 1942.
 Miss. (Keokuk): Near Canton, Washington Co., Ind.
- Sarocrinus pocillum** (S. A. Miller).
Zeacrinus pocillum S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 28, pl. 4, figs. 1, 2, 1891.
Sarocrinus pocillum Kirk, Jour. Pal., 16, no. 3, p. 383, 1942.
 Miss. (Warsaw): Boonville, Cooper Co., Mo.

Sarocrinus tentaculatus (Worthen).

Poteriocrinus tentaculatus Worthen, Geol. Surv. Ill., 7, p. 277, pl. 28, fig. 11, 1833.

Woodocrinus tentaculatus Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 2, p. 242 (166), 1886.

Sarocrinus tentaculatus Kirk, Jour. Pal., 16, no. 3, p. 384, pl. 58, fig. 21, 1942.

Poteriocrinus tenuidactylus Worthen, Ill. St. Mus., Bull. 1, p. 10, 1882.

Poteriocrinus iowensis Worthen, Ill. St. Mus., Bull. 1, p. 6, 1882.

Miss. (Keokuk); 1 mile below Keokuk, Iowa.

Scaphiocrinus Hall = *Graphiocrinus*.

Scaphiocrinus abnormis Worthen = *Scytalocrinus abnormis*.

Scaphiocrinus aequalis Hall = *Pachylocrinus aequalis*.

Scaphiocrinus calyculus Hall = *Hypselocrinus calyculus*.

Scaphiocrinus cuneatus Yanichevsky = *Poteriocrinites cuneatus*.

Scaphiocrinus dactyliformis Keyes = *Phacelocrinus dactyliformis*.

Scaphiocrinus depressus Meek and Worthen = *Decadocrinus depressus*.

Scaphiocrinus depressus Mansuy.

Mansuy, Mem. Serv. Geol. Indochine, 1, p. 115, 1912 (listed).

Carb.: Mascaren section, Chouei-tang, Indo China.

Scaphiocrinus doris Hall = *Poteriocrinites doris*.

Scaphiocrinus elegans Wachsmuth and Springer = *Culmicrinus elegans*.

Scaphiocrinus elegantulus Wachsmuth and Springer = *Cosmetocrinus elegantulus*.

Scaphiocrinus glaber Ivanov.

Ivanov, Bull. Soc. Nat. Moscow, geol. ser., 34, p. 176, 1926.

Carb.: Gov. Moscow, Russia.

Scaphiocrinus globosus Wachsmuth and Springer = *Pachylocrinus globosus*.

Scaphiocrinus graphicus Miller and Gurley = *Histocrinus graphicus*.

Scaphiocrinus halli Hall = *Decadocrinus halli*.

Scaphiocrinus? *hemisphericus* Meek = *Delocrinus hemisphericus*.

Scaphiocrinus huntsvillae Worthen.

Worthen, in Meek and Worthen, Geol. Surv. Ill., 5, p. 534, pl. 20, fig. 1, 1873.

Miss. (Chester-Ste. Genevieve ls.): Near Huntsville, Ala.

Scaphiocrinus ? inordinatus Whidborne.

Whidborne, Mon. Dev. Fauna S. England, 3, pt. 3, p. 230, pls. 34-36, 1899.

Low. Carb. (Marwood beds): Upcall Arch. Poleshill, Braunton, North Devon, England.

Scaphiocrinus longidactylus McChesney = *Phacelocrinus longidactylus*.

Scaphiocrinus lyoni S. A. Miller = *Pachylocrinus coreyi*.

Scaphiocrinus maniformis S. A. Miller = *Decadocrinus maniformis*.

Scaphiocrinus missouriensis Keyes = *Culmicrinus missouriensis*.

Scaphiocrinus nodobrachiatus Hall = *Poteriocrinites nodobrachiatus*.

Scaphiocrinus notatus Miller and Gurley = *Graphiocrinus notatus*.

Scaphiocrinus occidentalis Wachsmuth and Springer = *Abrotocrinus occidentalis*.

Scaphiocrinus orbicularis Hall = *Eratocrinus orbicularis*.

Scaphiocrinus orestes Wachsmuth and Springer = *Abrotocrinus orestes*.

Scaphiocrinus? *plumifer* Whidborne = *Hydriocrinus plumifer*.

Scaphiocrinus repertus Miller and Gurley = *Pachylocrinus repertus*.

Scaphiocrinus robustus Hall = *Scytalocrinus robustus*.

- Scaphiocrinus rusticellus* White = *Ascetocrinus rusticellus*.
Scaphiocrinus salebrosus Whidborne = *Hydriocrinus salebrosus*.
Scaphiocrinus salteri Wachsmuth and Springer = *Dinotocrinus salteri*.
Scaphiocrinus scoparius Hall = *Pachylocrinus scoparius*.
Scaphiocrinus spinifer Wetherby = *Dasciocrinus spinifer*.
Scaphiocrinus subtortuosus Hall = *Decadocrinus subtortuosus*.
Scaphiocrinus swallowi Bather = *Blothrocrinus swallowi*.
Scaphiocrinus tortuosus Hall = *Graphiocrinus tortuosus*.
Scaphiocrinus transcisus Whidborne = *Hydriocrinus transcisus*.
Scaphiocrinus tuberculatus Ivanov.
 Ivanov, Bull. Soc. Nat. Moscow, geol. ser., 34, p. 176, 1926.
 Carb.: Gov. Moscow, Russia.
- Scaphiocrinus unicus* Hall = *Abrotocrinus unicus*.
Scaphiocrinus whitei Hall = *Ascetocrinus whitei*.
- Schistocrinus** Moore and Plummer. Genotype: *S. torquatus* Moore and Plummer.
 Poteriocrinitidae (Inadunata-Fistulata). Penn.
 Moore and Plummer, Univ. Texas Pub. no. 3945, p. 217, 1940.
- Schistocrinus confertus** Moore and Plummer.
 Moore and Plummer, Univ. Texas Pub. no. 3945, p. 222, pl. 2, fig. 8, pl. 5, fig. 1, text fig. 48, 1940.
 Penn. (Millsap Lake fm.-Brannon Bridge ls.): 3 miles southwest of Brock, Parker Co., Texas.
- Schistocrinus parvus** Moore and Plummer.
 Moore and Plummer, Univ. Texas Pub. No. 3945, p. 226, pl. 19, fig. 1, text fig. 49, 1940.
 Penn. (Millsap Lake fm.-Brannon Bridge ls.): 3 miles southwest of Brock, Parker Co., Texas.
- Schistocrinus planulatus** Moore and Plummer.
 Moore and Plummer, Univ. Texas Pub. no. 3945, p. 225, pl. 7, fig. 8, 1940.
 Penn. (Millsap Lake fm.): 3 miles southwest of Brock, Parker Co., Texas.
- Schistocrinus torquatus** Moore and Plummer.
 Moore and Plummer, Univ. Texas Pub. No. 3945, p. 220, pl. 2, fig. 6, text fig. 47, 1940.
 Penn. (Missouri ser.-Dennis ls.): Near U. S. Highway 40, east of Kansas City, Mo.
- Schizocrinus** Hall. Genotype: *S. nodosus* Hall.
 Glyptocrinidae (Camerata), Ord.
 Hall, Nat. Hist. N. Y., Pal., 1, p. 81, 1847.—Zittel, Handb. Pal., 1, p. 371, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 220 (394), 1881.—Bather, Treatise Zool. (Lankester), pt. 3, p. 161, 1900.
- Schizocrinus nodosus** Hall.
 Hall, Nat. Hist. N. Y., Pal., 1, p. 81, pl. 27, figs. 1 a-b, 1847; Geol. Lake Superior Land Dist., Foster and Whitney's Rep., p. 208, pl. 25, figs. 2 a-c, 1851.—S. A. Miller, N. Amer. Geol. Pal., p. 281, fig. 427, 1889.—Ockerman, Trans. Wisconsin Acad. Sci., 22, p. 113, pl. 1, fig. 7, 1926.
 Ord.: Middleville, Trenton Falls, Jacksonburg, Glen Falls, Plattsburgh, and Watertown; Mohawk, Champlain, and Black River Valleys, New York (Trenton ls.); Beloit, Wis. (Platteville ls.).
- Schizocrinus striatus** Hall.
 Hall, Nat. Hist. N. Y., Pal., 1, p. 316, pl. 28, figs. 4 a-c, 1847.
 Ord. (Trenton ls.): Middleville, N. Y.

- Schmidtocrinus** Haarmann. Genotype: *Rhenocrinus winterfeldi* Jaekel.
Botryocrinidae (Inadunata-Fistulata). Mid. Dev.
Haarmann, Jahrb. Preuss. Geol. Landesanst., 41, p. 33, 1921.
- Schmidtocrinus winterfeldi** (Jaekel).
Rhenocrinus winterfeldi Jaekel, in Schmidt. Zeits. Deutsch. Geol. Gesell., p. 544, text fig. 2, 1906.
Schmidtocrinus winterfeldi Haarmann, Jahrb. Preuss. Geol. Landesanst., 41, p. 34, pl. 1, fig. 4, 1921.
Low. Middle Dev. (Lenneschiefer): Between Letmarthe and Iserlohn, Germany.
- Schultzicrinus** Springer. Genotype: *S. typus* Springer.
Gasterocomidae (Inadunata-Fistulata). Dev.
Springer, Mem. Mus. Comp. Zool., Harvard, 25, no. 3, p. 132, 1911; Zittel-Eastman Textb. Pal., vol. 1, p. 219, 1913.
- Schultzicrinus ? elongatus** Springer.
Springer, Mem. Mus. Comp. Zool., Harvard, 25, no. 3, p. 133, pl. 3, figs. 7 a-e, 1911.
—Goldring, N. Y. St. Mus., Mem. 16, p. 352, pl. 44, figs. 8-10, 1923.
Dev. (Onondaga ls.): LeRoy and Lima, N. Y.
- Schultzicrinus typus** Springer.
Springer, Mem. Mus. Comp. Zool., Harvard, 25, no. 3, p. 132, pl. 3 figs. 1-6, 1911.—
Goldring, N. Y. St. Mus., Mem. 16, p. 351, pl. 44, figs. 1-7, 1923.
Dev. (Onondaga ls.): LeRoy, Livingston Co., and Lima, N. Y.
- Sciadiocrinus** Moore and Plummer. Genotype: *Zeacrinus (Hydreionocrinus?) acanthophorus* Meek and Worthen.
Poteriocrinidae (Inadunata-Fistulata). Penn.
Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 275, 1938; Univ. Texas Pub. no. 3945, p. 223, 1940.
- Sciadiocrinus acanthophorus** (Meek and Worthen).
Zeacrinus (Hydreionocrinus?) acanthophorus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 23, 1870; Geol. Surv. Ill., 5, p. 563, pl. 24, fig. 11, 1872.
Hydreionocrinus acanthophorus Keyes, Geol. Surv. Mo., 4, p. 215, pl. 26, fig. 6, 1894.
Sciadiocrinus acanthophorus Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 275, text fig. 23, 1938; Univ. Texas Pub. No. 3945, p. 229, text fig. 50, 1940.
Penn. (Middle Nodaway ls.): Fulton Co. and LaSalle, Ill.; Mo., etc.
- Sciadiocrinus? crassacanthus** Moore and Plummer.
Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 276, text fig. 24, 1938.
Hydreionocrinus sp. Mather, Denison Univ. Sci. Lab. Bull., 18, p. 102, pl. 2, figs. 5, 5a, 6, 6a, 1915.
Penn. (Brentwood ls.): North of Ft. Gibson, Oklahoma; near Woolsey, Ark.
- Sciadiocrinus disculus** Moore and Plummer.
Moore and Plummer, Univ. Texas Pub. no. 3945, p. 230, pl. 10, fig. 5, text fig. 51, 1940.
Penn.: 2½ miles northwest of Graford, Palo Pinto Co., (Graford fm.), and northeast of Rochelle, Texas (Mineral Wells fm.).
- Sciadiocrinus harrisae** Moore and Plummer.
Moore and Plummer, Univ. Texas Pub. no. 3945, p. 232, pl. 16, figs. 7, 8, text fig. 52, 1940.
Penn.: 4½ miles east-northeast Lipan, Hood Co.; ¼ mile below Kickapoo Falls, southwest of Dennis, Hood Co., and 3 miles southwest Brock, Parker Co., Texas (Millsap Lake fm.); 7 miles northeast Tulsa, Okla. (Oolagah ls.).

Sciadiocrinus platybasis (White).

Eupachycrinus platybasis White, Geol. Uinta Mts., p. 108, 1876; 12th Ann. Rep. U. S. Geol. Surv. Terr., p. 124, pl. 35, fig. 8a, 1880.

Sciadiocrinus platybasis Moore and Plummer, Univ. Texas Pub. no. 3945, p. 356, 1940.

Penn. (Low. Aubrey gr.): Confluence Green and Grand Rivers, Utah.

Scillus Gregorio. Genotype: *S. pauper* Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 39, 1930.

Scillus pauper Gregorio.

Gregorio, Ann. Geol. Pal., 52, Palermo, p. 39, pl. 14, fig. 8, 1930. (Columns only.)

Permian: Sicily.

Scoliocrinus Jaekel. Genotype: *S. eremita* Jaekel.

Gasterocomidae (Inadunata-Fistulata). Dev.

Jaekel, Pal. Abhandl., 7, p. 76, 1895.—Bather, Treatise Zool., (Lankester), pt. 3, p. 178, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 219, 1913.

Scoliocrinus eremita Jaekel.

Jaekel, Pal. Abhandl., 7, p. 77, figs. 23, 24, 1895.

Mid. Dev. (Eifelian): Pelm, Eifel, Germany.

Scyphocrinites Zenker. Genotype: *S. elegans* Zenker.

Melocrinitidae (Camerata). Sil.; Dev.

Zenker, Beit. Natur. Urwelt, p. 25, 1833.

Camarocrinus Hall, 28th Rep. N. Y. St. Mus. Nat. Hist., pp. 205, 206, 1879.—Bather, Treatise Zool. (Lankester), pt. 3, pp. 77, 136, 161, 1900.—Schuchert. Smiths. Misc. Coll., 47, p. 253, 1904.—Fric, Vesmir, 33, 1904 (as *Camarocrinus*).—Ehrenberg, Pal. Zeits. 8, heft 3, p. 199, 1926; Bull. Amer. Mus. Nat. Hist., 59, pp. 20-24, 1929. (Genotype: *C. stellatus* Hall.)

Lobolithus Waagen and Jahn, Syst. Sil. Centre Bohême, 7, pt. 2, p. 189, 1899.—Zittel, Grundz. Pal., p. 154, 1895 (as *Lobolithes*).—Haeckel, Amphor. Cystoid., p. 168, 1896 (as *Lobolithes*).—Jaekel, Zeits. Deutsch. Geol. Gesell., 56, p. 59, 1904 (as *Lobolithen*).

Scyphocrinus Roemer (not Hall), in Bronn, Leth. Geogn. 1, pt. 2, p. 254, 1855.—Zittel, Handb. Pal., 1, p. 372, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 123 (297), 1881; pt. 3, sec. 1, p. 105 (327), 1885.—Waagen and Jahn, Syst. Sil. Centre Bohême, 7, pt. 2, pp. 35-78, 1899.—Bather, Treatise Zool. (Lankester), pt. 3, p. 161, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 190, 1913; On the Crinoid Genus *Scyphocrinus*, pp. 1-53, pls. 1-9, 1917.—Ehrenberg, Senckenberg, Naturf. Gesell., 56, Bericht., heft 6, pp. 161-165, 1926.

Scyphocrinites asiaticus (Reed).

?*Scyphocrinus* sp., Reed, Pal. Indica, n.s., 2, Mem. 3, p. 86, pl. 8, figs. 13-15, 1906.

Camarocrinus asiaticus Reed, Pal. Indica, n.s., 2, mem. 3, p. 88, pl. 8, figs. 16 a-c, 1906; Rec. Geol. Surv. India, 43, pt. 4, pp. 333, 335, pl. 29, 1913; Pal. Indica, n.s. 6, mem. 3, p. 19, 1917.

Sil. (?) (Naungbaw beds): Yemeyé, Burma, India; Shih-tien, China.

Scyphocrinites clarkii (Hall).

Camarocrinus clarkii Hall, 28th Rep. N. Y. St. Mus. (Mus. ed.), p. 209, pl. 36, figs. 7, 8, pl. 37, fig. 3, 1879.

Dev. (Helderbergian-Linden fm.): Hardin Co., Tenn.

Scyphocrinites decoratus (Waagen and Jahn).

Scyphocrinus decoratus Waagen and Jahn, Syst. Sil. Centre Bohême, 7, pt. 2, p. 88, pl. 40, 1899.

Sil. (E₁, E₂): Dvorce, Bohemia.

Scyphocrinites elegans Zenker.

Zenker, Beitr. Natur. Umwelt, p. 26, pl. 4, figs. A-F, 1833.

Scyphocrinus elegans Quenstedt, Handb. Petref. p. 621, pl. 55, figs. 1-3, 1850.—Roemer, in Bronn, Leth. Geogn., 1, pt. 2, p. 255, pl. 4, figs. 5a, b, 1852-54.—Springer, On the Crinoid Genus *Scyphocrinus*, p. 30, pls. 1-5, 1917.

Sil.: Karlstein, Dvorce, and Barum, Bohemia (E₁, E₂); France; Eastern Pyrenees, Spain; ?England; India; Near Cape Girardeau, Mo. (Helderbergian-Bailey ls.).

Scyphocrinites excavatus (Schlotheim).

Pentacrinites excavatus Schlotheim, Petref. auf ihrem jetzigen, Standp., p. 329, 1820.

Scyphocrinus excavatus Waagen and Jahn, Syst. Sil. Centre Bohême, 7, pt. 2, p. 80, 1899.—Springer, On the Crinoid Genus *Scyphocrinus*, p. 22, 1917.—Heritsch, Abh. Geol. Bundesanst., Wein, 22, pt. 2, p. 30, pl. fig. 881, 1929.

Scyphocrinus excavatus var. *typica* W. & J., Syst. Sil. Centre Bohême, 7, pt. 2, p. 84, pl. 50, figs. 7-10, pl. 51, figs. 1-15, 1899.

Sil.: Mnisek, near Prague, Dvorce and Karlstein, Bohemia (E₁, E₂); ?Cornwall, England.

Scyphocrinites excavatus schlotheimi (Waagen and Jahn).

Scyphocrinus excavatus var. *schlotheimi* Waagen and Jahn, Syst. Sil. Centre Bohême, 7, pt. 2, pp. 24, 85, pl. 40, fig. 6, pl. 43, figs. 2-6, pl. 48, figs. 3, 4, pl. 48, figs. 50, figs. 1-5, pl. 51, figs. 1-7, pl. 58, fig. 10, 1899.

Sil. (Div. E₁, E₂): Klein Kuchel and Karlstein, Bohemia.

Scyphocrinites excavatus schröteri (Waagen and Jahn).

Scyphocrinus excavatus var. *schröteri* Waagen and Jahn, Syst. Sil. Centre Bohême, 7, pt. 2, pp. 24, 85, pl. 40, fig. 6, pl. 43, figs. 2-6, pl. 48, figs. 3, 4, pl. 48, figs. 50, figs. 1-5, pl. 51, figs. 1-7, pl. 58, fig. 10, 1899.

Sil. (Div. E₁, E₂): Dvorce, Mnisek, Karlstein, Bohemia.

Scyphocrinites gibbosus (Springer).

Scyphocrinus gibbosus Springer, On the Crinoid Genus *Scyphocrinus*, p. 55, pl. 9, figs. 3a, b, 1917.

Sil. (Helderbergian-Haragan ls.): Franks, Oklahoma.

Scyphocrinites mutabilis (Springer).

Scyphocrinus mutabilis Springer, On the Crinoid Genus *Scyphocrinus*, p. 47, pl. 6, figs. 3-19, pl. 8, figs. 3-5, 1917.

Dev. (Linden fm.-Ross ls.): $\frac{1}{2}$ mile above Dodds old mill and Pyburns Bluff, Hardin Co.; near Linden, Perry Co.; and Benton Co., Tenn.

Scyphocrinites pratteni (McChesney).

Forbesiocrinus pratteni McChesney, Descr. N. Sp. Foss., Pal. Rocks Western States, p. 29, 1860.

Melocrinus pratteni McChesney, Trans. Chicago Acad. Sci., 1, p. 22, pl. 5, fig. 4, 1868.

Scyphocrinus pratteni Springer, On the Crinoid Genus *Scyphocrinus*, p. 50, pl. 7, figs. 1a, b, pl. 8, figs. 1, 2a, b, 1917; Crin. Flexibilia, p. 244, 1920.

Dev. (Linden fm.-Ross ls.): Hardin Co., Tenn. (Calybeate Springs, Horse Creek, Grandview, etc.).

Scyphocrinites pyburnensis (Springer).

Scyphocrinus pyburnensis Springer, On the Crinoid Genus *Scyphocrinus*, p. 52, pl. 7, figs. 2a, b, 3, pl. 8, figs. 6a, b, 7, 1917.

Dev. (Linden fm.-Birdsong sh. and Ross ls.): Pyburns Bluff and Horse Creek, Hardin Co., Tenn.

Scyphocrinites quarcitarum (Fritsch).

Camerocrinus quarcitarum Fritsch, Sitz. Königl. Böhmischen Gesell. Wiss., 21, p. 1, 1905.

Camerocrinus (Lobolithus) quartzitarum Fritsch, Miscell. Pal., Palaeozoica, p. 4, text fig. 1, 1907.

Camarocrinus quartzitarum Kirk, U. S. Nat. Mus., Proc., 41, p. 56 (footnote), 1911. Sil. (Div. E₂): Bohemia.

Scyphocrinites saffordi (Hall).

Camarocrinus saffordi Hall, 28th Rep. N. Y. St. Mus. Nat. Hist., (Mus. ed.), p. 208, pl. 36, figs. 1-6, pl. 37, figs. 1, 2, 1879.—Schuchert, Smiths. Misc. Coll., 47, pt. 2, p. 270, pl. 40, fig. 10, 1904.

Dev. (Helderbergian-Linden fm., Rockhouse sh.): Hardin Co., Tenn.

Scyphocrinites spinifer (Springer).

Scyphocrinus spinifer Springer, The Crinoid Genus *Scyphocrinus*, p. 46, pl. 9, figs. 1 a-c, 1917.

Dev. (Helderbergian-Linden fm., Ross ls.): Calybeate Springs, 10 miles south of Savannah, Hardin Co., Tenn.

Scyphocrinites stellatus (Hall).

Camarocrinus stellatus Hall, 28th Rep. N. Y. St. Mus. Nat. Hist., p. 270, pl. 35, figs. 1-8, 1879.—Schuchert, Smiths. Misc. Coll., 47, pt. 2, pp. 269, 270, 1904; Md. Geol. Surv., Low. Dev., p. 228, pl. 31, figs. 1-5, 1913.

Scyphocrinus stellatus Springer, On the Crinoid Genus *Scyphocrinus*, p. 49, pl. 7, figs. 4a, b, 1917.

Dev.: Schoharie Co., N. Y. (Up. Manlius); Devils Backbone, near Cumberland, Md., and Keyser, W. Va. (Keyser fm.).

Scyphocrinites subornatus (Barrande).

Scyphocrinus subornatus Barrande in Waagen and Jahn, Syst. Sil. Centre Bohême, 7, pt. 2, p. 74, pls. 40-44, 58, figs. 8, 9, pl. 62, figs. 3-5, 8, 1899.—Springer, On the Crinoid Genus *Scyphocrinus*, pp. 22-24, 1917.

Sil. (Div. E₁, E₂): Klukovik, Karlstein, and Klein Kuchel, Bohemia.

Scyphocrinites ulrichi (Schuchert).

Camarocrinus ulrichi Schuchert, Amer. Geol., 32, p. 239, 1903; Smiths. Misc. Coll., 47, pp. 263, 270, pl. 40, figs. 6-8, pls. 41-43, 1904.

Scyphocrinus ulrichi Springer, On the Crinoid Genus *Scyphocrinus*, p. 54, pl. 9, figs. 2a, b, 1917.

Dev. (Helderbergian-Haragan ls.): 3 miles northeast of Dougherty and 1½ miles south of Franks, Okla.

Scyphocrinites ulrichi stellifer (Schuchert).

Camarocrinus ulrichi var. *stellifer* Schuchert, Smiths. Misc. Coll., 47, p. 272, pl. 40, fig. 9, pl. 41, fig. 6, 1904.

Dev. (Helderbergian-Haragan ls.): Dougherty and 2 miles south of Franks, Okla.

Scyphocrinites zenonis (Waagen and Jahn).

Scyphocrinus excavatus var. *zenonis* Waagen and Jahn, Syst. Sil. Centre Bohême, 7, pt. 2, pp. 26, 80, pl. 40, fig. 7, pl. 41, fig. 67, pl. 43, fig. 1, 1899.

Scyphocrinus zenonis Springer, On the Crinoid Genus *Scyphocrinus*, p. 24, 1917.

Sil. (Div. E₁, E₂): Dvorce and Karlstein, Bohemia.

Scyphocrinus Hall = Cupulocrinus

Scyphocrinus Roemer and authors = Scyphocrinites.

Scyphocrinus excavatus typica Waagen and Jahn = S. excavatus.

Scyphocrinus excavatus zenonis Waagen and Jahn = S. zenonis.

Scytalecrinus Bather. See Scytalocrinus.

Scytalocrinus Wachsmuth and Springer. Genotype: *Scaphiocrinus robustus* Hall.

Poteriocrinitidae (Inadunata-Fistulata). Dev.-Penn.

Wachsmuth and Springer, Rev. Pal., pt. 1, p. 116 (338), 1880 (1879); pt. 3, pp. 191, 233, 237 (115, 157, 161), 1886.—Whidborne, Mon. Dev. Fauna S. Engl., 3, Pal. Soc., p. 233, 1898.—Bather, Treatise Zool. (Lanckester), pt. 3, p. 180, 1900 (as *Scytalecrinus*).—Jaekel, Pal. Zeits., 3, p. 63, 1913.—Wanner, Perma. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 178, 1924.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 70, 1926.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft

- 122, p. 51, 1930.—Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 247, 1938; Univ. Texas Pub. no. 3945, p. 130, 1940.
- Dactylocrinus* Sladen, Proc. Geol. Polyt. Soc. West Riding, Yorkshire, Wachsmuth and Springer, Rev. Pal., pt. 3, p. 237 (161), 1886 (as *Dactylocrinus*). (Genotype: *D. loreus* Sladen.)
- Scytalocrinus abnormis** (Worthen).
Scaphiocrinus abnormis Worthen, Geol. Surv. Ill., 6, p. 519, pl. 31, fig. 6, 1875.
Poteriocrinus (Scytalocrinus) abnormis Wachsmuth and Springer, Rev. Pal., pt. 1, p. 117 (340), 1880 (1879).
 Miss. (?Ste. Genevieve ls.): Monroe Co., Ill.
- Scytalocrinus arachnoides** Whidborne.
 Whidborne, Mon. Dev. Fauna S. Eng., 3, pt. 3, p. 235, pl. 38, figs. 5, 6, 1899.
 Low. Carb.: Barnstaple, S. England.
- Scytalocrinus arbiglandensis* Wright = *Gilmocrinus arbiglandensis*.
Scytalocrinus beggi Wright = *Gilmocrinus beggi*.
Scytalocrinus? bellulus Sutton and Hagen = *Phanocrinus bellulus*.
- Scytalocrinus braggi** Laudon.
 Laudon, Jour. Pal., 15, no. 4, p. 387, pl. 57, fig. 3, 1941.
 Miss. (Chester-Pitkin ls.): 1½ m. S.E. Garfield, Okla.
- Scytalocrinus covensis* Wright = *Anemetocrinus covensis*.
- Scytalocrinus dactyloides** (Austin and Austin).
Poteriocrinites dactyloides Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 108, 1842; vol. 11, p. 197, 1843.
Poteriocrinus dactyloides Austin and Austin, Mon. Rec. and Foss. Crin., p. 85, pl. 10, fig. 7, pl. 11, figs. 1a, b, 1847.
Poteriocrinus (Scytalocrinus) dactyloides Wachsmuth and Springer, Rev. Pal., pt. 1, p. 117 (340), 1880 (1879).
 Low. Carb. (Mtn. Ls.): Hook Point, Co. Wexford, Ireland.
- Scytalocrinus dactylus** (Hall).
Graphiocrinus dactylus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 80, 1860.—Meek and Worthen, Geol. Surv. Ill., 5, p. 559, pl. 20, fig. 9, 1873.
Poteriocrinus (Scytalocrinus) dactylus Wachsmuth and Springer, Rev. Pal., pt. 1, p. 117 (340), 1880 (1879).
 Miss. (St. Louis ls.): St. Louis, Missouri and Illinois.
- Scytalocrinus decadactylus** (Meek and Worthen).
Poteriocrinus (Scaphiocrinus) decadactylus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 394, 1860; Geol. Surv. Ill., 2, p. 238, pl. 17, fig. 5, text fig. 25, 1866.
Poteriocrinus (Scytalocrinus) decadactylus Wachsmuth and Springer, Rev. Pal., pt. 1, p. 117 (340), 1880 (1879).
 Miss. (Keokuk ls.): Appanoose, Hancock Co., Ill.; Keokuk, Iowa; Canton, Ind.
- Scytalocrinus deminutivus** Strimple.
 Strimple, Bull. Amer. Pal., 25, no. 89, p. 11 (43), pl. 2, figs. 8–10, 1939.
 Penn.: Mound just west of Bartlesville, Oklahoma (Stanton ls.); Dewey, Okla. (Dewey ls.).
- Scytalocrinus dunlapi** Laudon.
 Laudon, Jour. Pal., 15, no. 4, p. 386, pl. 57, fig. 1, 1941.
 Miss. (Chester-Pitkin ls.): 1½ m. S.E. Garfield, Okla.
- Scytalocrinus elongatus** (Sladen).
Dactylocrinus elongatus Sladen, Proc. Geol. Polyt. Soc. West Riding, Yorkshire, p. 247, 1878.
 Low. Carb. (Mtn. Ls.): Hook Head, Co. Wexford, Ireland.

Scytalocrinus garfieldi Laudon.

Laudon, Jour. Pal., 15, no. 4, p. 388, pl. 57, fig. 2, 1941.

Miss. (Chester-Pitkin ls.): 1½ m. S.E. Garfield, Okla.

Scytalocrinus ? gracilis Wood = Phacelocrinus gracilis.

Scytalocrinus hamiltonensis (Worthen).*Poteriocrinus hamiltonensis* Worthen, Ill. St. Mus., Bull. 1, p. 7, 1882; Geol. Surv. Ill., 7, p. 273, pl. 27, fig. 9, 1883.

Miss. (Keokuk ls.); Hamilton, Ill.; Indian Creek, Ind.

Scytalocrinus hoveyi Springer = Hypselocrinus hoveyi.

Scytalocrinus larvalis Strimple.

Strimple, Bull. Amer. Pal., 25, no. 89, p. 10 (42), pl. 2, figs. 11-13, 1939.

Penn.: 5 miles southwest of Bartlesville, Okla. (Ochelata); near Wayside, Kansas (Stanton ls.).

Scytalocrinus loreus (Sladen).*Dactylocrinus loreus* Sladen, Proc. Geol. Polyt. Soc. West Riding, Yorkshire, p. 246, 1878.

Low. Carb. (Mtn. Ls.): Mendip Hills, etc., England.

Scytalocrinus maccabei Laudon and Beane = Hypselocrinus maccabei.

Scytalocrinus ornatissimus Clarke = Maragnicrinus portlandicus.

Scytalocrinus pentacolumnus Strimple.

Strimple, Bull. Amer. Pal., 25, no. 92, p. 104, pl. 9, figs. 14, 15, 1940.

Penn. (Wewoka fm.): Near Holdenville, Okla.

Scytalocrinus pentonensis Wright = Anemetocrinus pentonensis.

Scytalocrinus robustus (Hall).*Scaphiocrinus robustus* Hall, Jour. Boston Soc. Nat. Hist., 7, p. 315; Prelim. Descr. N. Sp. Crin., p. 7, 1861; N. Y. St. Mus., Bull. 1, pl. 6, figs. 3-5, 1872.*Poteriocrinus (Scytalocrinus) robustus* Wachsmuth and Springer, Rev. Pal., pt. 1, p. 118 (341), 1880 (1879).

Miss.: Crawfordsville, Indian Creek, and Canton, Ind., Keokuk, Iowa, Hamilton, Ill. (Keokuk ls.); Burlington, Iowa (Burlington-Keokuk transition beds).

Scytalocrinus rostratus (Austin and Austin).*Poteriocrinites rostratus* Austin and Austin, Ann. Mag. Nat. Hist., 10, p. 108, 1842; 11, p. 196, 1843.*Poteriocrinus rostratus* Austin and Austin, Mon. Rec. Foss. Crin., p. 75, pl. 9, figs. 2a, b, 1846.*Poteriocrinus (Scytalocrinus) rostratus* Wachsmuth and Springer, Rev. Pal., pt. 1, p. 118 (341), 1880 (1879).

Low. Carb. (Mtn. Ls.): Hook Pt., Co. Wexford, Ireland; Bristol, England.

Scytalocrinus sansabensis Moore and Plummer.

Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lan., 32, p. 247, pl. 14, figs. 9a, b, text fig. 9, 1938; Univ. Texas Pub. no. 3945, p. 131, pl. 5, fig. 6, pl. 14, fig. 10, text fig. 17, 1940.

Penn. (Marble Falls ls.): Rough Creek, San Saba Co., 15 miles southeast of San Saba, Texas.

Scytalocrinus stadiodactylus (Whidborne).*Poteriocrinus stadiodactylus* Whidborne, Proc. Geol. Assoc., 14, p. 377, 1896.*Scytalocrinus stadiodactylus* Whidborne, Mon. Dev. Fauna S. England, 3, pt. 3, p. 233, pl. 36, figs. 2-6, 8, pl. 37, fig. 14, 1899.

Low. Carb.: Braunton and Barnstaple, Roborough, Pilton, England.

Scytalocrinus talboti (Worthen).*Poteriocrinus talboti* Worthen, Ill. St. Mus., Bull. 1, p. 17, 1882; Geol. Surv. Ill., 7, p. 287, pl. 30, fig. 7, 1883.

- Scytalocrinus talboti* Wachsmuth and Springer, Rev. Pal., pt. 3, p. 238 (162), 1886.
Miss. (?Ste. Genevieve ls.): Monroe Co., Ill.
- Scytalocrinus tenuis** (Miller).
Poteriocrinus tenuis Miller, Nat. Hist. Crin., p. 71, pl. 1821.
Encrinites tenuis Schlotheim, Petrefact., 3, p. 94, pl. 25, fig. 3, 1823.
Poteriocrinus tenuis Roemer, in Bronn, Leth. Geogn., ed. 3, 1, p. 239, pl. 4, figs. 8a, b, 1852-54.—Austin and Austin, Mon. Rec. and Foss. Crin., p. 83, pl. 10, figs. 5a, b, 1847.
Low. Carb.: Mendip Hills, Black Rock, near Avon River, Bristol, England (Mtn. Ls.); Tournai, Belgium (Tournaisian).
- Scytalocrinus urna** (Trautschold).
Phialocrinus urna Trautschold, Kalkbr. Mjatschkowa, p. 123, pl. 15, fig. 5, 1879.
Poteriocrinus (Scytalocrinus) urna Wachsmuth and Springer, Rev. Pal., pt. 1, p. 118 (341), 1880 (1879).
Carb. (Moscovian): Mjatschkowa, near Moscow, Russia.
- Scytalocrinus validus** Wachsmuth and Springer.
Wachsmuth and Springer, N. Amer. Crin. Cam., pl. 7, figs. 2a, b, 3, 1897.—Springer, Amer. Geol., 26, p. 141, pl. 16, figs. 9, 10, 1900.
Miss. (Keokuk ls.): Indian Creek, Ind.
- Scytalocrinus vanhornei* Wachsmuth and Springer = *Phacelocrinus vanhornei*.
Scytalocrinus wachsmuthi Wetherby = *Phacelocrinus wachsmuthi*.
Scytalocrinus wetherbyi Wachsmuth and Springer = *Phacelocrinus wetherbyi*.
- Sellardsicrinus** Moore and Plummer. Genotype: *S. marrsae* Moore and Plummer.
Poteriocrinidae (Inadunata-Fistulata). Penn.
Moore and Plummer, Univ. Texas Pub. no. 3945, pp. 351, 357, 1940.
- Sellardsicrinus marrsae** Moore and Plummer.
Moore and Plummer, Univ. Texas Pub. no. 3945, p. 358, pl. 3, fig. 9, pl. 20, figs. 1, 2, pl. 21, fig. 3, 1940.
Penn. (Millsap Lake fm.-Brannon Bridge ls.): 3 miles southwest of Brock, Parker Co., Texas.
- Senariocrinus** Schmidt. Genotype: *S. maucheri* Schmidt.
Calceocrinidae (Inadunata-Fistulata). Dev.
Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 15, 1934.
- Senariocrinus maucheri** Schmidt.
Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, pp. 16, 17, text fig. 1, pl. 1, figs. 1-3, pp. 140, 144, 147, 1934.
Dev. (Hunsrück sl.): Bundenbach, Germany.
- Shumardocrinus* Miller and Gurley = *Steganocrinus*.
Sicyocrinus Angelin = *Botryocrinus*.
Siderocrinites Troost. See *Siderocrinus*.
- Siderocrinus** Wood. Genotype: *S. ornatus* (Troost Ms.) Wood.
? Rhodocrinitidae (Camerata). Sil.
Wood, U. S. Nat. Mus., Bull. 64, p. 104, 1909. (Name substituted for Troost's manuscript name, *Siderocrinites*.)
- Siderocrinus ornatus** (Troost) Wood.
Wood, (Troost ms.) U. S. Nat. Mus., Bull. 64, p. 105, pl. 12, fig. 7, 1909.
Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.
- Sinocrinus** Tien. Genotype: *S. microgranulosus* Tien.
Poteriocrinidae (Inadunata-Fistulata). Carb.
Tien, Bull. Geol. Surv. China, no. 6, p. 34, 1924; Pal. Sinica, ser. B, 5, pp. 16, 17, 1926.

Sinocrinus houkouensis Tien.

Tien, Bull. Geol. Surv. China, no. 6, p. 34, 1924; Pal. Sinica, ser. B, 5, p. 27, pl. 3, figs. 1 a-1, 1926.

Carb. (Taiyuan ser.): Lin Cheng Coal Field, S. Chihli, North China.

Sinocrinus lincgensis Tien.

Tien, Bull. Geol. Surv. China, no. 6, p. 34, 1924; Pal. Sinica, ser. B, p. 24, text fig. 3, pl. 1, figs. 5 a-d, 1926.

Carb. (Taiyuan ser.): Lin Cheng Coal Field, S. Chihli, North China.

Sinocrinus microgranulosus Tien.

Tien, Bull. Geol. Surv. China, no. 6, p. 34, 1924; Pal. Sinica, ser. B, 5, p. 19, pl. 1, figs. 1-3, text fig. 1, 1926.

Carb. (Taiyuan ser.): Lin Cheng Coal Field, S. Chihli, N. China.

Sinocrinus microgranulosus pentalobus Tien.

Sinocrinus pentalobus Tien, Bull. Geol. Surv. China, no. 6, p. 34, 1924.

Sinocrinus microgranulosus var. *pentalobus* Tien, Pal. Sinica, ser. B, 5, p. 23, text fig. 2, pl. 1, figs. 4 a-d, 1926.

Carb. (Taiyuan ser.): Lin Cheng Coal Field, S. Chihli, North China.

Sinocrinus nodosus Tien.

Tien, Bull. Geol. Surv. China, no. 6, p. 34, 1924; Pal. Sinica, ser. B, 5, p. 25, pl. 1, figs. 6 a-k, 1926.

Carb. (Taiyuan ser.): Lin Cheng Coal Field, S. Chihli, North China.

Sinocrinus nodosus spinosus Tien.

Tien, Pal. Sinica, ser. B, 5, p. 26, pl. 1, figs. 7 a-c, 1926.

Carb. (Taiyuan ser.): Lin Cheng Coal Field, S. Chihli, North China.

Sinocrinus pentalobus Tien = *S. microgranulosus pentalobus*.

Siphonocrinus S. A. Miller. Genotype: *Glyptocrinus nobilis* Hall.

Dimerocrinitidae (Camerata). Sil.

S. A. Miller, Amer. Geol., 1, p. 263, 1888.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 209, 1897.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 85, 1900.—Bather, Treatise Zool. (Lankester), pt. 3, p. 199, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 187, 1913.

Siphonocrinus armosus (McChesney).

Eucalyptocrinus armosus McChesney, Descr. N. Foss., p. 95, text fig., 1861.

Glyptocrinus? *armosus* McChesney, Trans. Chicago Acad. Sci., 1, p. 23, pl. 7, fig. 6, 1868.

Glyptocrinus armosus Whitfield, Geol. Wisconsin, 4, p. 284, pl. 16, fig. 11, 1882.

Siphonocrinus armosus S. A. Miller, Amer. Geol., 1, p. 264, 1888.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 66, pl. 18, fig. 5, 1926.

Sil. (Niagaran-Racine dol.): Racine, and Milwaukee, Wis.; Chicago, Ill.

Siphonocrinus nobilis (Hall).

Glyptocrinus nobilis Hall, Rep. Prog. Geol. Surv. Wisconsin, p. 21, 1861; 18th Ann. Rep. N. Y. St. Cab. Nat. Hist., Prelim. not., p. 23, pl. 1, figs. 9, 10, 1865; 20th Rep. N. Y. St. Cab. Nat. Hist., Doc. ed., p. 328, pl. 10, figs. 9, 10, 1867; Rev. ed. p. 373, pl. 10, figs. 9, 10, 1870.

Siphonocrinus nobilis S. A. Miller, Amer. Geol., 1, p. 264, 1888.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 212, pl. 19, figs. 1a, b, 2 a-c, 1897.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 86, pl. 2, fig. 1, 1900.

Sil. (Niagaran-Racine dol.): Racine and Waukesha, Wis.; Chicago, Ill.

Siphonocrinus pentagonus Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 213, pl. 19, figs. 4a, b, 1897.

Sil. (Niagaran-Racine dol.): Racine and Waukesha, Wis.; Chicago, Ill.

- Spaniocrinus** Wanner. Genotype: *S. validus* Wanner.
 Poteriocrinitidae (Inadunata-Fistulata). Permian.
 Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, pp. 181, 292, 1924.—
 Moore and Plummer, Univ. Texas Pub. no. 3945, p. 133, 1940.
- Spaniocrinus transcaucasicus** Yakovlev.
 Yakovlev, Bull. Geol. Leningrad, p. 976, pl. 1, figs. 1 a-c, 1933.
 Permian: Transcaucasia.
- Spaniocrinus ? trinodus** (Weller).
Erisocrinus trinodus Weller, Jour. Geol., 17, p. 630, pl. 1, figs. 10, 11, 1909.
Spaniocrinus ? trinodus Moore and Plummer, Univ. Texas Pub. no. 3945, p. 134, pl.
 2, fig. 2, 1940.
 Permian (Cibolo ls.): 3 miles north of Shafter, Presidio Co., Texas.
- Spaniocrinus validus** Wanner.
 Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 293, pl. 19, fig. 4, 1924.
 Permian: Basleo, Timor.
- Sphaerocrinites** Steininger = **Sphaerocrinus**.
Sphaerocrinus Meek and Worthen (not Roemer) = **Coelocrinus**.
- Sphaerocrinus** Roemer. Genotype: *Cyathocrinites geometricus* Goldfuss.
 Carabocrinidae (Inadunata-Fistulata). Dev.
 Roemer, Verhandl. Nat. Hist. Preuss. Rheinl., 8, p. 369, 1851.—Sandberger and
 Sandberger, Verst. Rhein. Schichtensyst. Nassau, p. 389, 1856.—Bather, Ann.
 Mag. Nat. Hist., (6) 5, p. 332, 1890; 9, p. 207, 1892.—Whidborne, Mon. Dev.
 Fauna S. England, 2, Pal. Soc., p. 210, 1895.—Jaekel, Pal. Abhandl., 7, p. 68,
 1895.—Springer, Zittel-Eastman Textb. Pal., 1, p. 218, 1913.
Sphaerocrinites Steininger, Geog. Besch. Eifel, p. 38, 1853.
- Sphaerocrinus geometricus** (Goldfuss).
Cyathocrinites geometricus Goldfuss, Petref. Germ., 1, p. 189, pl. 53, fig. 5, 1831.—
 Austin and Austin, Mon. Rec. Foss. Crin., p. 61, pl. 7, figs. 5 a-e, 1845.
Cyathocrinus geometricus Phillips, Pal. Foss. Cornwall, p. 135, pl. 60, fig. 41, 1841.
Sphaerocrinus geometricus Roemer, Verh. Nat. Preuss. Rheinl., 8, p. 366, pl. 8,
 figs. 1 a-e, 1851.—Yakovlev, Centralbl. Min., Geol. Pal., Abt. B, no. 9, p. 377,
 fig. 2, 1930.
Poteriocrinus geometricus Müller, Neue Echin. Eifelk., p. 250, pl. 2, figs. 4-7, pl. 4,
 figs. 1-3, 1857.—Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 163,
 pl. 5, figs. 6, 6a, 6b (var. *typus*), figs. 6 c-e; vars. *typus major* and *typus minor*,
 p. 165, 1867 (adv. pub. 1866, pp. 51, 52).—Quenstedt, Petref. Deutsch., 4, p.
 535, pl. 108, figs. 69-74, 1876.
 Mid. Dev.: Klankenheim, Pelm, Kerpen, and Gerolstein, Eifel, Germany (Eife-
 lian); Newton Bushel, England.
- Sphaerocrinus geometricus concentricus** (Schultze).
Poteriocrinus geometricus var. *concentrica* Schultze, Denk. Kais. Akad. Wiss., Math.
 Nat. Cl., 26, p. 165, pl. 7, fig. 7, 1867 (adv. pub. 1866, p. 53).
Sphaerocrinus geometricus var. *concentrica* Quenstedt, Petref. Deutsch., 4, p. 538,
 pl. 108, fig. 74, 1876.
 Mid. Dev. (Eifelian): Eifel, Germany.
- Sphaerocrinus geometricus ornatus** (Schultze).
Poteriocrinus geometricus var. *ornatus* Schultze, Denk. Kais. Akad. Wiss., Math.
 Nat. Cl., 26, p. 165, pl. 5, fig. 6-1, 1867 (adv. pub. 1866, p. 53).
 Mid. Dev. (Eifelian): Eifel, Germany.
- Sphaerocrinus geometricus ornatus tuberculatus** (Schultze).
Poteriocrinus geometricus var. *ornatus tuberculata* Schultze, Denk. Kais. Akad.
 Wiss., Math. Nat. Cl., 26, p. 165, pl. 5, fig. 6-k, 1867 (adv. pub. 1866, p. 53).
 Mid. Dev. (Eifelian): Gerolstein, Germany.

- Sphaerocrinus geometricus reticularis** (Schultze).
Poteriocrinus geometricus var. *reticularis* Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 165, pl. 5, figs. 6-f, i, 1867 (adv. pub. 1866, p. 53).
 Mid. Dev. (Eifelian): Pelm, Germany.
- Sphaerocrinus geometricus trabeculatus* Quenstedt = *S. trabeculatus*.
- Sphaerocrinus laevigatus** Jaekel.
 Jaekel, Pal. Abhandl., 7, pt. 1, p. 72, fig. 21, 1895.
 Mid. Dev. (Eifelian): Kerpen, Eifel, Germany.
- Sphaerocrinus stellatus** (Steininger).
Sphaerocrinites stellatus Schnur, in Steininger, Geog. Besch. Eifel, p. 38, 1853.
 Mid. Dev. (Eifelian): Gerolstein, Germany.
- Sphaerocrinus trabeculatus** Quenstedt.
Sphaerocrinus geometricus trabeculatus Quenstedt, Petref. Deutsch., 4, p. 537, pl. 108, fig. 73, 1876.
Sphaerocrinus trabeculatus Quenstedt, Handb. Petref., ed. 3, p. 949, pl. 75, fig. 6, 1885.
 Mid. Dev. (Eifelian): Eifel, Germany.
- Sphaerotocrinus** Goldring. Genotype: *S. ornatus* Goldring.
 Rhodocrinitidae (Camerata). Dev.
 Goldring, N. Y. St. Mus., Mem. 16, p. 99, 1923.
- Sphaerotocrinus ornatus** Goldring.
 Goldring, N. Y. St. Mus., Mem. 16, p. 99, text fig. 35, pl. 3, figs. 7, 8, 1923.
 Dev. (Helderbergian-Keyser fm.): Frankstown, Pa.
- Spheniscocrinus** Wanner. Genotype: *S. spinosus* Wanner.
 Poteriocrinitidae (Inadunata-Fistulata). Permian.
 Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 175, 1937.
- Spheniscocrinus spinosus** Wanner.
 Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 176, text fig. 62, pl. 11, figs. 20, 21, 1937.
 Permian: Basleo, Timor.
- Sphenocrinus** Eichwald. Genotype: *S. obtusus* Eichwald.
 Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, p. 125, 1856.—Bather, Treatise Zool. (Lankester), pt. 3, p. 203, 1900.
- Sphenocrinus obtusus** Eichwald.
 Eichwald, Bull. Soc. Imp. Nat. Moscou, 29, p. 125, 1856. (Quinquepartite columns.)
 Ord.: Russia.
- Springericrinus** Jaekel. Genotype: *Poteriocrinus magniventrus* Springer.
 Poteriocrinitidae (Inadunata-Fistulata). Miss.
 Jaekel, Pal. Zeits., 3, p. 62, 1918.
- Springericrinus magniventrus** (Springer).
Poteriocrinus magniventrus Springer, Mem. Mus. Comp. Zool., Harvard, 25, no. 3, p. 155, pl. 5, figs. 1a, b, 2, 3, pl. 6, figs. 1-3, 1911.
Springericrinus magniventrus Jaekel, Pal. Zeits., 3, p. 62, 1918.
 Miss. (Keokuk ls.): Crawfordsville, Ind.
- Spyridiocrinus* Oehlert = *Trybliocrinus*.
- Stachyocrinus** Wanner. Genotype: *S. zea* Wanner.
 Poteriocrinitidae (Inadunata-Fistulata). Permian.
 Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 233, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 181, 1924.

Stachyocrinus zea Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 233, pl. 107 (12), fig. 12, 1916; Neue Beitr. kennt. Perm. Echin. Timor, XII, p. 201, pl. 13, figs. 25-27, 1937.

Permian: Between Niki Niki and Noil Fateo, Timor.

Staurosoma Barrande = Tiaracrinus.

Steganocrinus Meek and Worthen. Genotype: *Actinocrinus pentagonus* Hall.

Actinocrinitidae (Camerata). Miss.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 253, 1866; Geol. Surv. Ill., 2, p. 195, 1866; 3, p. 475, 1868.—Zittel, Handb. Pal., 1, p. 370, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, pp. 96, 149 (270, 325), 1881; N. Amer. Crin. Cam., p. 578, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 170, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 197, 1913.

Shumardocrinus Miller and Gurley, Ill. St. Mus., Bull. 7, p. 40, 1895. (Genotype: *Actinocrinus concinnus* Shumard.)

Steganocrinus albersi Miller and Gurley = Actinocrinites albersi.

Steganocrinus araneolus (Meek and Worthen).

Actinocrinus araneolus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 387, 1860.

Steganocrinus araneolus Meek and Worthen, Geol. Surv. Ill., 2, p. 198, pl. 15, figs. 1a, b, 1866.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 581, pl. 61, figs. 2a, b, 1897.

Miss.: Burlington, Iowa (Low. Burlington ls.); Lake Valley, New Mexico (Lake Valley ls.).

Steganocrinus benedicti Miller and Gurley = Actinocrinites benedicti.

Steganocrinus blairi Miller and Gurley = Actinocrinites blairi.

Steganocrinus concinnus (Shumard).

Actinocrinus concinnus Shumard, Geol. Surv. Mo., 1, p. 189, pl. A, fig. 5, 1855.—Meek and Worthen, Geol. Surv. Ill., 2, pp. 149, 200, pl. 15, figs. 9a, b, p. 202, text fig. 11, 1866.

Shumardocrinus concinnus Miller and Gurley, Ill. St. Mus., Bull. 7, p. 41, pl. 2, figs. 7-10, 1895.

Steganocrinus concinnus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 582, pl. 61, figs. 5a, b, 1897.

Actinocrinus validus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 384, 1860. Miss. (Burlington ls.): North River, Marion Co., Mo. (Upper); Cedar Creek, Warren Co., Springfield, and Sedalia, Mo., Kinderhook and Jersey Co., Ill., Burlington and Pleasant Grove, Iowa.

Steganocrinus globosus Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 585, pl. 51, fig. 6, 1897.

Miss. (Kinderhook, up. beds): Burlington, Iowa.

Steganocrinus griffithi Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 12, p. 34, pl. 2, figs. 17-20, 1897. (? = *Actinocrinites scitulus*).

Miss. (Up. Burlington ls.): Burlington, Iowa.

Steganocrinus pentagonus (Hall).

Actinocrinus pentagonus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 577, pl. 10, figs. 6a, b, 1858.

Steganocrinus pentagonus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 253, 1866; Geol. Surv. Ill., 3, p. 474, pl. 16, fig. 8, 1868.—Keyes, Geol. Surv. Mo., 4, p. 195, pl. 24, fig. 9, 1894.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 579, pl. 4, fig. 12, pl. 61, figs. 3 a-e, 4a, b, 1897.—Wilson, Jour. Geol., 24, p. 509, pl. 3, figs. 1-3, 1916.

Miss.: Burlington, Iowa, Louisiana and Sedalia, Mo. (Low. Burlington ls.); Lake Valley, N. Mex. (Lake Valley ls.).

Steganocrinus sculptus (Hall).

Actinocrinus sculptus Hall, Geol. Rep. Iowa, 1, pt. 2, p. 582, pl. 10, figs. 11a, b, 1858; Suppl., pl. 3, fig. 3, 1860.—Meek and Worthen, Geol. Surv. Ill., 5, p. 343, pl. 4, fig. 9, 1872.

Steganocrinus sculptus Meek and Worthen, Geol. Surv. Ill., 2, p. 197, fig. 10, 1866.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 583, pl. 61, figs. 1 a-f, 1897. Miss.: Burlington, Iowa, and Marion Co., Mo. (Low. Burlington ls.); Lake Valley, N. Mex. (Lake Valley ls.).

Steganocrinus sharonensis Miller and Gurley = *Actinocrinites sharonensis*.

Steganocrinus spergenensis Miller and Gurley = *Actinocrinites spergenensis*.

Stelidiocrinus Angelin. Genotype: *S. capitulum* Angelin.

Patelloocrinidae (Camerata). ?Ord.; Sil.

Angelin, Icon. Crin. Suec., p. 21, 1878.—Zittel, Handb. Pal., 1, pp. 345, 371, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, pp. 92, 96 (266, 270), 1881; N. Amer. Crin. Cam., p. 279, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 161, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 189, 1913.—Jaekel, Pal. Zeits., 3, p. 33, 1918.

Harmocrinus Angelin, Icon. Crin. Suec., p. 22, 1878.—Zittel, Handb. Pal., 1, p. 371, 1879. (Genotype: *H. longimanus* Angelin.)

Patinocrinus Jaekel, Pal. Zeits., 3, p. 36, 1918. (Name proposed for *Stelidiocrinus* Wachsmuth and Springer, not Angelin.)

Stelidiocrinus argutus (Walcott).

Glyptocrinus argutus Walcott, 35th Rep. N. Y. St. Mus. Nat. Hist., p. 1, 1884 (adv. pub., 1883).

?*Stelidiocrinus argutus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 280, pl. 24, fig. 6, 1897.

Ord. (Trenton ls.): Trenton Falls, N. Y.

Stelidiocrinus capitulum Angelin.

Angelin, Icon. Crin. Suec., p. 21, pl. 17, figs. 5 a-g, 1878.—Bather, Treatise Zool. (Lankester), pt. 3, p. 162, text fig. 75-1, 2, 1900.—Jaekel, Pal. Zeits., 3, p. 33, fig. 24, 1918.

Sil. (Gotlandian): Lickershamn, Island of Gotland.

Stelidiocrinus laevis Angelin.

Angelin, Icon. Crin. Suec., p. 21, pl. 27, figs. 3, 3a, pl. 28, figs. 7, 7a, b, (not pl. 15, figs. 20, 20a), 1878.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 280, 1897.

Sil.: Follingbo, Island of Gotland (Gotlandian); Dudley, Eng. (Wenlock ls.).

Stelidiocrinus laevis Angelin (part) = *Chytrocrinus laevis*.

Stelidiocrinus longimanus (Angelin).

Harmocrinus longimanus Angelin, Icon. Crin. Suec., p. 22, pl. 21, figs. 6, 7, 1878.

Stelidiocrinus longimanus Wachsmuth and Springer, Rev. Pal., pt. 2, p. 99 (273), 1881.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Stelidiocrinus ? ovalis Angelin.

Angelin, Icon. Crin. Suec., p. 21, pl. 19, fig. 6, 1878.

Sil. (Gotlandian): Follingbo, Island of Gotland.

Stellarocrinus Strimple. Genotype: *Cyathocrinus stillativus* White.

Poteroicrinitidae (Inadunata-Fistulata). Penn.

Strimple, Bull. Amer. Pal., 25, no. 92-A, Add., p. 1 (109), 1940.

Apollocrinus Moore and Plummer, Univ. Texas Pub. no 3945, p. 102, 1940. (Genotype: *A. geometricus* Moore and Plummer.)

Whiteocrinus Strimple (not Jaekel), Bull. Amer. Pal., 25, no. 89, p. 4 (36), 1939. (Genotype: *Cyathocrinus stillativus* White.)

- Brychiocrinus* Moore and Plummer, Univ. Texas Pub. no. 3945, p. 146, 1940. (Genotype: *B. texanus* Moore and Plummer.)
- Stellarocrinus angulatus** (Miller and Gurley).
Aesiocrinus angulatus Miller and Gurley, Ill. St. Mus., Bull. 3, p. 59, pl. 6, fig. 9, 1894.
Whiteocrinus angulatus Strimple, Bull. Amer. Pal., 25, no. 89, p. 4 (36), 1939.
Apollocrinus angulatus Moore and Plummer, Univ. Texas Pub. no. 3945, pp. 72, 103, 1940.
 Penn. (Missouri ser.-?Argentine ls.): Kansas City, Mo.
- Stellarocrinus distinctus** Strimple.
 Strimple, Bull. Amer. Pal., 25, no. 92-A, Add., p. 3 (111), pl. 1, fig. 5, 1940.
 Penn. (Stanton ls.): Bartlesville, Okla.
- Stellarocrinus exsculptus** (Strimple).
Whiteocrinus exsculptus Strimple, Bull. Amer. Pal., 25, no. 89, p. 5 (37), pl. 1, figs. 7, 8, 1939.
Apollocrinus exsculptus Moore and Plummer, Univ. Texas Pub. no. 3945, p. 81, 1940.
 Penn. (Stanton ls.): Bartlesville, Okla.
- Stellarocrinus florealis** (Moore and Plummer).
Apollocrinus florealis Moore and Plummer, Univ. Texas Pub. no. 3945, p. 106, pl. 19, fig. 7, 1940.
 Penn. (Millsap Lake fm.-Brannon Bridge ls.): 3 miles southwest of Brock, Parker Co., Texas.
- Stellarocrinus geometricus** (Moore and Plummer).
Apollocrinus geometricus Moore and Plummer, Univ. Texas Pub. no. 3945, p. 104, pl. 19, fig. 2, text fig. 12, 1940.
 Penn. (Top Iola ls.): Iola, Kansas.
- Stellarocrinus stillativus** (White).
Cyathocrinus stillativus White, U. S. Nat. Mus., Proc., 2, p. 253, pl. 1, figs. 9, 10, 1879; 12th Ann. Rep. U. S. Geol. Surv. Terr., p. 125, pl. 35, figs. 3a, b, 1880; Final Rep., p. 125, 1883.
Phialocrinus stillativus Keyes, Geol. Surv. Mo., 4, p. 219, pl. 28, figs. 6a, b, 1894.
Whiteocrinus stillativus Strimple, Bull. Amer. Pal., 25, no. 89, p. 5 (37), pl. 1, figs. 1, 2, 9, 1939.
Stellarocrinus stillativus Strimple, Bull. Amer. Pal., 25, no. 92-A, Add., p. 1, pl. 1, figs. 1-4, 1940.
Apollocrinus stillativus Moore and Plummer, Univ. Texas Pub. no. 3945, pp. 72, 106, 108, 1940.
 Penn.: 30 miles west of Humboldt, Kansas (Virgil ser.); Bartlesville, Okla., and near Wayside, Kansas (Stanton ls.).
- Stellarocrinus texanus** (Moore and Plummer).
Brychiocrinus texanus Moore and Plummer, Univ. Texas Pub. no. 3945, p. 149, pl. 2, fig. 1, text fig. 23, 1940.
 Penn. (Millsap Lake fm.): 3 miles southwest of Brock, Parker Co., Tex.
- Stemmatocrinus** Trautschold. Genotype: *S. cernuus* Trautschold.
 Poteriocritinidae (Inadunata-Fistulata). Low. Carb.
 Trautschold, Bull. Soc. Imp. Nat. Moscou, 40, no. 3, p. 28, 1867; Kalkbr. Mjatschkowa, p. 124, 1879.—Zittel, Handb. Pal., 1, p. 359, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, pp. 63, 141 (286, 364), 1880 (1879).—Bather, Treatise Zool. (Lankester), pt. 3, p. 181, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 225, 1913.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 181, 1924.

Stemmatocrinus cernuus Trautschold.

Trautschold, Bull. Soc. Imp. Nat. Moscou, 40, no. 3, p. 28, pl. 3, fig. 5, text fig., 1867;
Mon. Kalkbr. Mjatschkowa, p. 125, pl. 14, fig. 12, 1879.

Carb. (Moscovian): Mjatschkowa, near Moscow, Russia.

Stemmatocrinus trautscholdi Wachsmuth and Springer.

Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, p. 180, pl. 9, figs. 7, 8, 1885; sec.
2, p. 256, 1886.

Cyathocrinites robustus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Miss. (New Providence sh.): Whites Creek, near Nashville, Tenn., and Button
Mold Knob, Ky.

Stemmatocrinus ? veryi Rowley.

Rowley in Greene, Cont. Ind. Pal., 1, pt. 13, p. 133, pl. 38, figs. 7, 8, 1903.

Miss. (Ft. Payne ch.): Cumberland Co., Ky.

Stenocrinus Wachsmuth and Springer = *Heterocrinus*.

Stephanoblastus Jaekel. Genotype: *Rhombifera? mira* Barrande.

Stephanocrinidae (Inadunata-Larviformia). Sil.

Jaekel, Pal. Zeits., 3, p. 110, 1918; Archiv. Zool., 19-A, no. 4, p. 4, 1927.

Stephanoblastus mirus (Barrande).

Rhombifera? mira Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 80, pl. 31, case 1,
figs. 1-5, 1887.

Stephanoblastus mirus Jaekel, Pal. Zeits., 3, p. 110, text fig. 103, 1918.

Sil. (Div. E₂): Near Lodenitz, Bohemia.

Stephanocrinus Conrad. Genotype: *S. angulatus* Conrad.

Stephanocrinidae (Inadunata-Larviformia). Sil.

Conrad, Jour. Acad. Nat. Sci. Phila., 8, p. 278, 1842.—Hall, Nat. Hist. N. Y., Pal.,
2, pp. 212, 351, 1851.—Zittel, Handb. Pal., 1, p. 436, 1879.—Bather, Treatise
Zool. (Lankester), pt. 3, p. 145, 1900.—Weller, Chicago Acad. Sci., Nat. Hist.
Surv., Bull. 4, pt. 1, p. 150, 1900.—Grabau, Bull. Buffalo Soc. Nat. Sci., 7, p. 153,
1901.—Springer, Zittel-Eastman Textb. Pal., 1, p. 207, 1913.—Jaekel, Pal.
Sprin Zeits., 3, p. 110, 1918 (as a blastoid); Archiv. Zool., 19-A, p. 4, 1927.

Stephanocrinus angulatus Conrad.

Conrad, Jour. Acad. Nat. Sci. Phila., 8, p. 279, pl. 15, fig. 18, 1842.—Hall, Nat. Hist.
N. Y., Pal., 2, p. 212, pl. 48, figs. 1 a-m, p. 351, pl. 85, figs. 1-4, 1852.—Pictet,
Traité Pal., 4, p. 304, pl. 99, fig. 23, 1857.—Roemer, Leth. Geogn., 1, Leth. Pal.,
Atlas, pl. 11, fig. 5a, 1876.—Etheridge and Carpenter, Cat. Blastoidea, pl. 19,
figs. 8-12, 1886.—Wachsmuth and Springer, Proc. Acad. Nat. Sci. Phila., pp.
99, 113, pl. 4, fig. 3, 1887.—Bather, Treatise Zool. (Lankester), pt. 3, p. 97, text
fig. 2, 1900.—Grabau, Bull. Buffalo Soc. Nat. Sci., 7, p. 154, text fig. 48, 1901
(Reprint, Bull. 9, N. Y. St. Mus.).—Springer, Zittel Eastman Textb.
Pal., p. 207, fig. 308, 1913.—Wilson, Jour. Geol., 24, p. 509, pl. 2, fig. 5, 1916.—
Springer, Amer. Sil. Crin., p. 139, pl. 31, figs. 13-16, 1926.

Sil. (Niagaran): Lockport, N. Y., Grimsby, Ont., etc. (Rochester sh.); Clark Co.,
Ind. (Louisville ls.).

Stephanocrinus cornetti S. A. Miller.

S. A. Miller, 18th Rep. Geol. Surv. Ind., p. 266, pl. 2, figs. 10-12, 1894 (adv. pub.,
1892, p. 12).

Sil. (Clinton-Osgood sh.): 4½ miles northeast Madison, Ind.

Stephanocrinus deformis Rowley.

Rowley in Greene, Cont. Ind. Pal., 1, pt. 11, p. 103, pl. 32, figs. 22, 23, 1903.

Sil. (Clinton-Osgood sh.): Near Big Creek P. O., Jefferson Co., Ind.

Stephanocrinus elongatus S. A. Miller.

S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 634, pl. 6, fig. 5, 1892 (adv. pub. 1891,
p. 24).

Sil. (Clinton-Osgood sh.): Jefferson Co., Ind.

Stephanocrinus gemmiformis Hall.

Hall, Nat. Hist. N. Y., Pal., 2, p. 215, pl. 48, figs. 2 a-i, 1852; 28th Rep. N. Y. St. Mus. Nat. Hist., (Mus. ed.), p. 146, pl. 14, figs. 15, 20, 1879; 11th Rep. Geol. Nat. Hist. Ind., p. 279, pl. 13, figs. 15, 20, 1882.—Grabau, Bull. Buffalo Soc. Nat. Sci., 7, p. 155, text fig. 49, 1901 (Reprint, Bull. N. Y. St. Mus., 9).—Rowley in Greene, Cont. Ind. Pal., 1, pt. 11, p. 104, pl. 32, figs. 24, 25, 1903.—Springer, Amer. Sil. Crin., p. 140, pl. 31, figs. 17-19a, 1926.

Sil. (Niagaran): Lockport, N. Y., Grimsby, Ont. (Rochester sh.); Lockport, N. Y. (Irondequoit ls.); Ripley Co., Ind. (Osgood sh.); Waldron, etc., Ind., and Newsom, Wayne Co., etc. Tenn. (Waldron sh.); Romeo, Ill. (Racine dol.).

Stephanocrinus hammelli S. A. Miller.

S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 635, pl. 6, figs. 7-9, 1892 (adv. pub. 1891, p. 25).

Sil. (Niagaran): $4\frac{1}{2}$ miles northeast of Madison, Ind. (Osgood sh.); Newsom, Tenn. (Waldron sh.).

Stephanocrinus obconicus Slocum.

Slocum, Field Col. Mus., Geol. Ser., 2, no. 10, p. 281, pl. 84, figs. 12, 13, 1908.

Sil. (Niagaran-Racine dol.): Romeo, Ill.

Stephanocrinus obpyramidalis S. A. Miller.

S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 634, pl. 6, fig. 6, 1892 (adv. pub. 1891, p. 24).

Sil. (Niagaran): Near Madison, Ind. (Osgood sh.); Newsom, Tenn. (Waldron sh.).

Stephanocrinus osgoodensis S. A. Miller.

S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 2, p. 116, pl. 10, figs. 7, 7a, 1879; 17th Rep. Geol. Surv. Ind., p. 632, pl. 6, figs. 1, 2, 1892 (adv. pub. 1891, p. 22).—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 151, pl. 15, fig. 14, 1900.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 11, p. 104, pl. 32, figs. 26, 27, 1903.

Sil. (Niagaran): Osgood, Ind. (Osgood sh.); Romeo, Ind. (Racine dol.).

Stephanocrinus quinquepartitus Rowley.

Rowley in Greene, Cont. Ind. Pal., 1, pt. 11, p. 105, pl. 32, figs. 31-33, 1903.

Sil. (Niagaran-Osgood sh.): Big Creek, near Big Creek P. O., Jefferson Co., Ind.

Stephanocrinus skiffi Slocum.

Slocum, Field Col. Mus., Geol. Ser., 2, no. 10, p. 282, pl. 84, figs. 16-20, 1908.

Sil. (Niagaran-Racine dol.): Near Lemont, Ill.

Stephanocrinus tennesseensis Foerste.

Foerste, Jour. Geol., 11, no. 7, p. 708, 1903; Bull. Sci. Lab. Denison Univ., 14, p. 99, pl. 1, figs. 4a, b, 1909.

Sil. (Niagaran-Waldron sh.): Iron City and Clifton, Tenn.

Stereobrachiocrinus Mather. Genotype: *S. pustulosus* Mather.

?Poteriocrinitidae (Inadunata-Fistulata). Penn.

Mather, Bull. Sci. Lab. Denison Univ., 18, p. 108, 1915.—Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 311, 1938.

Stereobrachiocrinus pustulosus Mather.

Mather, Bull. Sci. Lab. Denison Univ., 18, p. 108, pl. 3, figs. 9, 9a, 1915.—Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 312, pl. 16, figs. 8a, b, 1938.

Penn. (Morrow fm.): Near Fort Gibson, Oklahoma.

Stereocrinus Barris. Genotype: *S. triangulatus* Barris.

Dolatocrinidae (Camerata). Dev.

Barris, Proc. Davenport Acad. Sci., 2, p. 282, 1878.—Wachsmuth and Springer, Rev. Pal., pt. 2, pp. 96, 126 (270, 300), 1881; Proc. Acad. Nat. Sci. Phila., p. 376, 1890; N. Amer. Crin. Cam., p. 324, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 164, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 191, 1913.—Thomas, Iowa Geol. Surv., 29, p. 442, 1924.

Stereocrinus barrisi Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 326, pl. 26, figs. 9a, b, 1897.
Dev. (Traverse-Thunder Bay ls.): Near Alpena, Mich.

Stereocrinus bentonensis Stainbrook.

Stainbrook, Amer. Midland Nat., 18, no. 5, p. 904, pl. 1, fig. 4, 1937.
Dev. (Cedar Valley ls.): 2 miles west of Palo, Iowa.

Stereocrinus ? dilatus Rowley.

Rowley, in Greene, Cont. Ind. Pal., 2, pt. 1, p. 8, pl. 3, fig. 5, 1906.
Dev. (Onondaga-Jeffersonville ls.): Falls of the Ohio.

Stereocrinus harberti Stainbrook.

Stainbrook, Amer. Midland Nat., 18, no. 5, p. 902, pl. 1, figs. 1, 2, 8, 1937.
Dev. (Cedar Valley ls.): 2 miles west of Palo, Iowa.

Stereocrinus helderbergensis Springer.

Springer, U. S. Nat. Mus., Bull. 115, p. 15, pl. 5, figs. 3, 4, 1921.
Dev. (Linden fm.-Birdsong sh.): One mile south Holliday, Benton Co., Tenn.

Stereocrinus indianensis Miller and Gurley = *Comanthocrinus indianensis*.

Stereocrinus littletonensis Thomas.

Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 444, text fig. 68, pl. 38, figs. 4, 5, 1924.
Dev. (Cedar Valley ls.): Dry Run, near Littleton, Iowa.

Stereocrinus moori Branson and Wilson.

Branson and Wilson, Mo. Bur. Geol. and Mines, 17, p. 62, pl. 6, figs. 5, 6, pl. 8, fig. 8, 1922.
Dev. (Mineola ls.): Ralls Co., Mo.

Stereocrinus springeri Branson and Wilson.

Branson and Wilson, Mo. Bur. Geol. and Mines, 17, p. 63, pl. 7, figs. 1-3, 1922.
Dev. (Mineola ls.): Near Spalding, Ralls Co., Mo.

Stereocrinus triangulatus Barris.

Barris, Proc. Davenport Acad. Sci., 2, p. 283, pl. 11, figs. 1, 2, 1878.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 325, pl. 25, figs. 8a, b, 1897.—Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 442, pl. 38, figs. 1-3, 1924.
Dev.: Davenport, Iowa (Up. Davenport beds-*Strobilocystites* zone); Alpena, Mich. (Thunder Bay ls.).

Stereocrinus triangulatus liratus Barris.

Barris, Proc. Davenport Acad. Sci., 2, p. 284, pl. 11, fig. 3, 1878.
Dev.: Davenport, Iowa (Up. Davenport beds-*Strobilocystites* zone); Alpena, Mich. (Thunder Bay ls.).

Stereocrinus vandiveri Branson and Wilson.

Branson and Wilson, Mo. Bur. Geol. and Mines, 17, p. 63, pl. 7, figs. 6-8, 1922.
Dev. (Mineola ls.): Ralls Co., Mo.

Stinocrinus Kirk. Genotype: *S. granulosus* Kirk.

Paleocrinidae (Inadunata-Fistulata). Miss.
Kirk, Jour. Pal., 15, no. 1, p. 84, 1941.

Stinocrinus granulosus Kirk.

Kirk, Jour. Pal., 15, no. 1, p. 85, pl. 18, figs. 6, 7, 1941.
Miss. (New Providence sh.): Button Mold Knob, south of Louisville, Ky.

Stomiocrinus Wanner. Genotype: *S. subglobosus* Wanner.

Hexacrinitidae (Adunata). Permian.
Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 84, 1937.

Stomiocrinus minimus Wanner.

Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 86, pl. 7, figs. 19-25, pl. 8, figs. 1-3, 1937.

Permian: Basleo, Timor.

Stomiocrinus piriformis Wanner.

Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 86, pl. 8, figs. 4-8, 1937.

Permian: Basleo, Timor.

Stomiocrinus subglobosus Wanner.

Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 85, pl. 7, figs. 11-18, 1937.

Permian: Basleo, Timor.

Storthingocrinus Schultze. Genotype: *Platycrinus fritillus* Müller.

Synbathocrinidae (Inadunata-Fistulata). Dev.

Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 181, 1867 (adv. pub., 1866).—Zittel, Handb. Pal., 1, p. 365, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 171 (95), 1886 (as *Stortingocrinus*).—Bather, Treatise Zool. (Lankester), pt. 3, p. 152, 1900 (as *Stortingocrinus*).—Schmidt, Paleontographica, 76, p. 25, 1931.

Storthingocrinus decagonus (Goldfuss).

Platycrinites decagonus Goldfuss, Nova Acta Acad. Leop. Carol. Nat. Cur., 19, p. 345, 1839.

Storthingocrinus decagonus Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 182, pl. 10, fig. 8, 1867 (adv. pub. 1866, p. 70).

Dev. (Eifelian): Gerolstein, Eifel.

Storthingocrinus fritillus (Müller).

Platycrinus fritillus Müller, in Zeiler and Wirtgen, Verh. Natur. Rheinl., Jahrg. XII, n.s., p. 80, pl. 10, fig. 4, 1855.

Storthingocrinus fritillus Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 181, pl. 10, figs. 8-8f, 1867 (adv. pub. 1866, p. 69).

Dev.: Gerolstein, Pelm, Prüm, Germany (Eifelian); Padaukpin, India; Woborough, S. England.

Storthingocrinus haugi Oehlert.

Oehlert, Bull. Soc. Geol. France, (3) 24, p. 821, text fig. 2, pl. 26, figs. 5-7, 1897; Bol. Com. Map. Geol. Espana, 26, p. 89, text fig. 2, pl. 3, figs. 5-7, 1902.

Dev. (Eifelian): Concha d'Arnao, Santa Lucia, Spain.

Storthingocrinus labiatus Schmidt.

Schmidt, Palaeontographica, 76, p. 26, pl. 4, figs. 10a, b, 1931.

Low. Dev.: Landzunge El Mugaron, Concha d'Arnao, Spain.

Storthingocrinus sphaericus von Koenen.

Von Koenen, Neues Jahrb. Min., Geol., Pal., 1, p. 116, pl. 1, figs. 7a, b, 1886.

Up. Dev. (Famennian-Goniatite ls.) Martenberg, near Adorf, Germany.

Storthingocrinus trifidus Schultze.

Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 182, pl. 10, figs. 8 a-g, 1867 (adv. pub. 1866, p. 70).

Dev. (Eifelian): Pelm, Germany.

Storthingocrinus Wachsmuth and Springer. See *Storthingocrinus*.

Streptocrinus Wachsmuth and Springer. Genotype: *Ophiocrinus crotalurus* Angelin.

Botryocrinidae (Inadunata-Fistulata). Sil.

Wachsmuth and Springer, Rev. Pal., pt. 3, pp. 224, 302 (148, 226), 1886.—Bather, Kongl. Akad. Handl., 25, no. 2, p. 122, 1893; Treatise Zool. (Lankester), pt. 3, p. 179, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 220, 1913.—Jaekel, Pal. Zeits., 3, p. 60, 1918.

- Ophiocrinus* Angelin (not Sharpe and Salter), Icon. Crin. Suec., p. 24, 1878.—Zittel, Handb. Pal., 1, pt. 1, p. 352, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 97 (320), 1880 (1879). (Genotype: *O. crotalurus* Angelin.)
- Streptocrinus crotalurus** (Angelin).
Ophiocrinus crotalurus Angelin, Icon. Crin. Suec., p. 24, pl. 4, figs. 8 a-c, 1878.
Sil. (Gotlandian): Follingbo, Island of Gotland.
- Streptocrinus crotalurus* Bather (not Angelin) = *Cylocrinus scolopendra*.
- Streptostomicrinus* Yakovlev = *Acariaocrinus*.
- Strongylocrinus** Wanner. Genotype: *S. molengraffi*.
Poteriocrinitidae (Inadunata-Fistulata). Permian.
Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 72, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, pp. 179, 200, 1924.
- Strongylocrinus molengraffi** Wanner.
Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 72, text fig. 12, pl. 101 (6), fig. 11, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 209, pl. 9, figs. 8-13, pl. 15, fig. 26, 1924; Neue Beitr. kennt. Perm. Echin. Timor, V, Poteriocrinidae, p. 3, text fig. 1, pl. 4, figs. 11, 12, 1931.
Permian: Basleo and Niki, Timor.
- Strongylocrinus uralicus** Yakovlev.
Yakovlev, Soc. Pal. Russie, Ann. 11, p. 9, pl. 1, fig. 2, 1937.
Permian: Krasnooufmsk, Russia.
- Strophocrinus** Sardeson. Genotype: *S. dicyclicus* Sardeson.
Carabocrinidae (Inadunata-Fistulata). Ord.
Sardeson, Amer. Geol., 24, p. 264, 1899.—Bather, Treatise Zool. (Lankester), pt. 3, p. 172, 1900.
- Strophocrinus dicyclicus** Sardeson.
Sardeson, Amer. Geol., 24, p. 264, pl. 12, text figs., 1899; Pan Amer. Geol., 43, pp. 55-68, pl. 5, figs. 1-3, 1925; vol. 71, pp. 29, 30, pl. 2, fig. 3, 1939.
Podolithus strophocrinus Sardeson, Jour. Geol., 16, p. 242, text figs. 8-10, 1908.
Ord. (Black River-Decorah sh., Ion mem.): St. Paul and Cannon Falls, Minn.; Ellsworth, Wis.
- Strotocrinus** Meek and Worthen. Genotype: *Actinocrinus regalis* Hall.
Actinocrinitidae (Camerata). Miss.
Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 253, 1866; *ibid.* p. 158, 1869; Geol. Surv. Ill., 5, pp. 327, 332, 347, 1873.—Zittel, Handb. Pal., 1, p. 370, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 158 (332), 1881; N. Amer. Crin. Cam., p. 637, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 170, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 198, 1913.
- Strotocrinus* (Physetocrinus?) *asper* Meek and Worthen = *Physetocrinus asper*.
- Strotocrinus* ? *asperrimus* Meek and Worthen = *Actinocrinites asperrimus*.
- Strotocrinus blairi** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 7, p. 48, pl. 2, fig. 24, 1895.
Miss. (Chouteau ls.): Sedalia, Mo.
- Strotocrinus bloomfieldensis* Miller = *S. regalis*.
- Strotocrinus* (Physetocrinus) *dilatatus* Meek and Worthen = *Physetocrinus dilatatus*.
- Strotocrinus ectypus* Meek and Worthen = *Cactocrinus ectypus*.
- Strotocrinus glyptus** (Hall).
Actinocrinus glyptus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 2, 1860.
Strotocrinus glyptus Meek and Worthen, Geol. Surv. Ill., 2, p. 190, 1866.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 640, pl. 60, figs. 1 a-c, pl. 65, figs. 2a, b, 1897.
Miss. (Up. Burlington ls.): Burlington, Iowa.

Strotocrinus ornatus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 8, p. 30, pl. 2, figs. 12-14, 1896.
Miss. (Burlington ls.): Near Burlington, Iowa.

Strotocrinus perumbrosus (Hall).

Actinocrinus perumbrosus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 7, 1860.
Strotocrinus perumbrosus Meek and Worthen, Geol. Surv. Ill., 2, p. 188, fig. 5, 1866;
vol. 5, p. 357, pl. 8, fig. 4, 1873.
Miss. (Burlington ls.): Burlington, Iowa.

Strotocrinus regalis (Hall).

Actinocrinus regalis Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 8, 1860.
Strotocrinus regalis Meek and Worthen, Geol. Surv. Ill., 2, pp. 189-192, text fig. 6, pl. 16, figs. 6a, b, 1866.—Wachsmuth and Springer, Rev. Pal., pt. 2, p. 160 (334), pl. 18, fig. 1, 1881; pt. 3, sec. 1, pl. 8, fig. 1, 1885.—Keyes, Geol. Surv. Mo., 4, p. 193, pl. 24, fig. 9, 1894.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 638, pl. 4, fig. 4, pl. 65, figs. 6 a-d, 1897.
Actinocrinus speciosus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 386, 1860.
Strotocrinus bloomfieldensis S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 2, no. 4, p. 258, pl. 15, figs. 6, 6a, 1880; 4, no. 1, p. 76, pl. 1, fig. 6, 1881.
Miss. (Up. Burlington ls.): Burlington, Iowa, and Louisiana, Mo.

Strotocrinus umbrosus Meek and Worthen = *Teleiocrinus umbrosus*.

Strotocrinus venustus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 3, p. 26, pl. 6, fig. 1, 1894.
Miss. (Burlington ls.): Burlington, Iowa.

Stuartwellerocrinus Moore and Plummer. Genotype: *Cibolocrinus turbinatus* Weller. Poteriocritidae (Inadunata-Fistulata). Permian.

Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 305, 1938; Univ. Texas Pub. no. 3945, p. 328, 1940.

Stuartwellerocrinus jonkeri (Wanner).

Cibolocrinus jonkeri Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 260, pl. 18, figs. 3-5, 1934.
Stuartwellerocrinus jonkeri Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 305, 1938.
Permian: Basleo, Timor.

Stuartwellerocrinus minimus (Wanner).

Cibolocrinus minimus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 211, pl. 103 (8), fig. 12, 1916; Beitr. Geol. Niederl.-Ind., Abt. 4, p. 183, pl. 12, figs. 21-23, 1937.
Stuartwellerocrinus minimus Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 305, 1938.
Permian: Basleo, Timor.

Stuartwellerocrinus propinquus (Wanner).

Cibolocrinus propinquus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 213, text fig. 57; pl. 103 (8), fig. 13, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 257, pl. 18, figs. 6-11, 1924; Beitr. Geol. Niederl.-Ind., Abt. 4, p. 190, text fig. 671, 1937.
Stuartwellerocrinus propinquus Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 305, 1938.
Permian: Basleo, Timor.

Stuartwellerocrinus symmetricus (Weller).

Cibolocrinus symmetricus Weller, Jour. Geol., 17, p. 633, pl. 1, figs. 27-30, 1909.
Stuartwellerocrinus symmetricus Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 305, 1938; Univ. Texas Pub. no. 3945, p. 332, pl. 15, figs. 2, 3, 1940.

Permian (Cibolo ls.): 3 miles north of Shafter, Presidio Co., Texas.

Stuartwellerocrinus texanus (Weller).

Cibolocrinus texanus Weller, Jour. Geol., 17, p. 633, pl. 1, figs. 18, 19, 1909.

Stuartwellerocrinus texanus Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 305, 1938; Univ. Texas Pub. no. 3945, p. 331, pl. 15, fig. 1, 1940.

Permian (Cibolo ls.): 3 miles north of Shafter, Presidio Co., Texas.

Stuartwellerocrinus turbinatus (Weller).

Cibolocrinus turbinatus Weller, Jour. Geol., 17, p. 632, pl. 1, figs. 23-26, 1909.

Stuartwellerocrinus turbinatus Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 305, 1938; Univ. Texas Pub. no. 3945, p. 329, 1940.

Permian (Cibolo ls.): 3 miles north of Shafter, Presidio Co., Texas.

Stylocrinus Sandberger and Sandberger. Genotype: *Platycrinites scaber* Goldfuss. Synbathocrinidae (Inadunata-Larviformia). Dev.

Sandberger and Sandberger, Verst. Rhein. Schichtensyst. Nassau, p. 399, 1856.—Wachsmuth and Springer, Rev. Pal., pt. 3, pp. 171, 302 (95, 226), 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 152, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 209, 1913.

Stylocrinus (?) **canandaigua** Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 331, pl. 40, fig. 19, 1923.

Dev. (Hamilton-Moscow sh.): West shore of Canandaigua Lake, N. Y.

Stylocrinus scaber (Goldfuss).

Stylocrinus scaber Sandberger and Sandberger, Verst. Rhein. Schichtensyst. in Nassau, p. 400, pl. 35, fig. 12, 1856. (*Platycrinites scaber* Goldfuss, MS.)

Dev. (Givetian-Stringocephalus ls.): Gerolstein, Eifel and Villmar, Germany.

Stylocrinus tabulatus (Goldfuss).

Platycrinites tabulatus Goldfuss, Nova Acta Acad. Leop. Carol. Nat. Cur., 19, p. 345, 1839.

Symbathocrinus tabulatus Müller, in Zeiler and Wirtgen, Verh. Nat. Ver. Rheinl., 12, p. 19, pl. 4, figs. 4, 5, 1855.—Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 139, pl. 3, figs. 4, 5, 1867 (adv. publ. 1866, p. 27).

Stylocrinus tabulatus Wachsmuth and Springer, Rev. Pal., pt. 3, p. 171 (95), 1886. Dev. (Eifelian): Eifel, Germany.

Stylocrinus tabulatus altus (Müller).

Symbathocrinus tabulatus var. *altus* Müller, in Zeiler and Wirtgen, Verh. Natur. Ver. Rheinl., 12, p. 19, pl. 6, fig. 5, 1855.—Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 139, pl. 3, fig. 4, 1867 (adv. pub. 1866, p. 27).

Scytalocrinus tabulatus var. *altus* Wachsmuth and Springer, Rev. Pal., pt. 3, p. 171 (95), 1886.

Dev. (Eifelian): Gerolstein, Germany.

Stylocrinus tabulatus depressus (Müller).

Symbathocrinus tabulatus var. *depressa* Müller, in Zeiler and Wirtgen, Verh. Natur. Ver. Rheinl., 12, p. 19, pl. 6, fig. 5, 1855.—Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 140, pl. 3, fig. 5, 1867 (adv. pub. 1866, p. 28).

Stylocrinus tabulatus var. *depressa* Wachsmuth and Springer, Rev. Pal., pt. 3, p. 171 (95), 1886.

Dev. (Eifelian): Gerolstein, Germany.

Sudacrinus Wanner. Genotype: *S. granulatus* Wanner.

Poteroicrinitidae (Inadunata-Fistulata). Permian.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 219, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, pp. 179, 192, 1924; Beitr. Geol. Niederl. Ind., Abt. 4, pt. 2, p. 153, 1937.

Sundacrinus elongatus Wanner.

Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 162, pl. 10, figs. 23, 24, 1937. Permian: Basleo, Timor.

Sundacrinus granulatus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 220, text figs. 58-61, pl. 107 (12), figs. 9-11, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 193, text figs. 20-28, pl. 15, figs. 23-25, pl. 16, figs. 1-5, 1924; Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 154, text figs. 48-51, pl. 10, figs. 16, 17, 1937.

Permian: Basleo, Timor.

Sundacrinus septentrionalis Yakovlev.

Yakovlev, Soc. Pal. Russie, 11, p. 8, pl. 1, fig. 6, 1937.

Permian: Krasnooufinsk, Russia.

Sundacrinus triangulus Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 200, text fig. 29, pl. 16, figs. 6-10, 1924; Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 156, text figs. 52-55, pl. 10, figs. 18-22, 1937.

Permian: Basleo, Timor.

Sundacrinus vastus Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 202, text fig. 30, pl. 16, figs. 11-14, 1924.

Permian: Basleo, Timor.

Sycocrinites Austin and Austin. Genotype: *S. anapeptamenus* Austin and Austin.

Hypocrinidae (Inadunata-Fistulata). Carb.

Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 111, 1842; 11, p. 206, 1843.

Sycocrinus Bather, Treatise Zool. (Lankester), pt. 3, p. 203, 1900; Ann. Mag. Nat. Hist., (8) 13, p. 245, 1914.—Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 96, 1916.—Springer, Crin. Flexibilia, p. 454, 1920.—Wanner, Neue Beitr. kennt. Perm. Echin. Timor, p. 39, 1929.

Sycocrinites anapeptamenus Austin and Austin.

Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 111, 1842; 11, p. 206, 1843.

Sycocrinus anapeptamenus Bather, Ann. Mag. Nat. Hist., (8) 13, p. 246, pl. 4, figs. 1, 1a-d, 2, 2a-e, 1914.—Wanner, Ueber. Armlöse Krin. Jung. Pal., Verh. Mijnb. Genoots. Nederl. Kolonien, p. 23, fig. 1, p. 26, fig. 15, 1920.

Low. Carb. (Mtn. Ls.): Settle, Yorkshire, England.

Sycocrinites clausus Austin and Austin = *Abrachioerinus clausus*.

Sycocrinites jacksoni Austin and Austin.

Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 111, 1842; 11, p. 206, 1843.

Sycocrinus jacksoni Bather, Ann. Mag. Nat. Hist., (8) 13, p. 246, pl. 10, figs. 4, 4a b, 1914.

Low. Carb. (Mtn. Ls.): Settle, Yorkshire, England.

Sycocrinus of authors = *Sycocrinites*.

Sycocrinus piriformis Wanner = *Metasycocrinus piriformis*.

Sygycaulocrinus Ulrich. Genotype: *S. typus* Ulrich.

Homocrinidae (Inadunata-Fistulata). Early Sil.

Ulrich, in Foerste, Geol. Surv. Canada, Mem. 138, p. 98, 1924.

Sygycaulocrinus typus Ulrich.

Ulrich in Foerste, Geol. Surv. Canada, Mem. 138, p. 93, text fig. 10-B, p. 99, 1924.

Early Sil. (Richmond-Maquoketa-Ft. Atkinson ls.): Fort Atkinson, Iowa.

Symbathoerinus d'Orbigny = *Synbathoerinus*.

Symbathoerinus sinuosus Wanner = *Synbathoerinus constrictus sinuosa*.

Symbathoerinus subtrigonalis Goldring = *Synbathoerinus hamiltonensis*.

Symbathoerinus tennesseensis Wood = *Pisocrinus tennesseensis*.

Synaptocrinus Springer. Genotype: *Forbesiocrinus nuntius* Hall.

Ichthyocrinidae (Flexibilia). Dev.

- Springer, Crin. Flexibilia, pp. 261, 301, 1920.—Goldring, N. Y. St. Mus., Mem. 16, p. 307, 1923.
- Synaptocrinus nuntius** (Hall).
Forbesiocrinus nuntius Hall, 15th Rep. N. Y. St. Mus. Nat. Hist., p. 124, 1862; N. Y. St. Mus., Bull. 1, pl. 1-A, fig. 12, 1872.
Synaptocrinus nuntius Springer, Crin. Flexibilia, p. 302, pl. 38, figs. 3-6, 1920.—Goldring, N. Y. St. Mus., Mem. 16, p. 307, pl. 38, figs. 3-7, 1923.
 Dev. (Hamilton): Hamburg and 18 Mile Creek, N. Y. (Ludlowville-Wanakah); Bellona and Alden, N. Y. (Moscow sh.).
- Synaptocrinus (?) rotundatus** Goldring.
 Goldring, Bull. Amer. Pal., 24, no. 81, p. 12, pl. 1, fig. 9, 1938.
 Up. Dev.: Jean Marie River, Mackenzie River Basin, Northwest Territory, Canada.
- Synbathocrinites Austin and Austin = Synbathocrinus.
 Synbathocrinites tennesseae Troost=(part) Pisocrinus tennesseensis; (part) Synbathocrinus troosti.
- Synbathocrinus** Phillips. Genotype: *S. conicus* Phillips.
 Synbathocrinidae (Inadunata-Larviformia). Dev.—Permian.
 Phillips, Geol. Yorkshire, 2, p. 206, 1836.—Austin and Austin, Mon. Rec. and Foss. Crin., p. 93, 1847.—Springer, Zittel-Eastman Textb. Pal., 1, p. 209, 1913.
Donacirinites Troost., Amer. Jour. Sci. and Arts, (2) 8, p. 420, 1849.—Wood, U. S. Nat. Mus., Bull. 64, p. 28, 1909. (Genotype: *D. simplex* Troost = *Synbathocrinus robustus* Shumard.)
Donacirinus Bather, Treatise Zool. (Lankester), pt. 3, p. 202, 1900.
Synbathocrinus d'Orbigny, Prodr. Pal. Strat., 1, p. 157, 1849.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 166 (90), 1886.—Bather, Königl. Sv. Vet. Akad. Handl., 25, no. 2, pp. 21, 25, 1893; Treatise Zool. (Lankester), pt. 3, p. 152, 1900.—Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 15, 1916.
Synbathocrinites Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 108, 1842.
Taidocrinus Tolmatchoff, Comité Géol., 25, p. 289, 1924; *ibid.* pt. 2, p. 597, 1931. (Genotype: *T. poljenowi* Tolmatchoff.)
- Synbathocrinus angularis** Miller and Gurley.
 Miller and Gurley, Ill. St. Mus., Bull. 5, p. 42, pl. 4, figs. 3, 4, 1894.
 Miss. (New Providence sh.): Button Mold Knob, Ky.
- Synbathocrinus blairi** S. A. Miller.
 S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 32, pl. 4, figs. 13-15, 1891.
 Miss. (Warsaw ls.): Boonville, Mo.
- Synbathocrinus brevis** Meek and Worthen.
 Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 68, 1869; Geol. Surv. Ill., 5, p. 439, pl. 2, fig. 6, 1873.
 Miss. (Low. Burlington ls.): Burlington, Iowa.
- Synbathocrinus campanulatus** (Wanner).
Synbathocrinus campanulatus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 16, text figs. 3, 4, pl. 96 (1), figs. 5, 6, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 310, pl. 20, figs. 23-25, 1924.
 Permian: Basleo, Timor.
- Synbathocrinus campanulatus elongatus** (Wanner).
Synbathocrinus campanulatus var. *elongata* Wanner, Pal. Timor, Perm. Echin. Timor, 1 Teil, p. 20, pl. 96 (1), fig. 8, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 311, pl. 20, figs. 6-8, 1924.
 Permian: Basleo, Timor.
- Synbathocrinus campanulatus inflatus** (Wanner).
Synbathocrinus campanulatus var. *inflata* Wanner, Pal. Timor, Perm. Echin. Timor, 1 Teil, p. 19, pl. 96 (1), fig. 7, 1916.
 Permian: Noil Tonini, Timor.

Synbathocrinus celechovicensis (Remes).

Synbathocrinus celechovicensis Remes, Vest. Stat. Geol. Ust. Ceskoslov. Repub., 5, p. 242, pl. 1, figs. 3a, b, 1929.

Dev.: Czechoslovakia.

Synbathocrinus conicus Phillips.

Phillips, Geol. Yorkshire, 2, p. 206, pl. 4, figs. 12, 13, 1836.—Austin and Austin, Mon. Rec. and Foss. Crin., p. 93 pl. 11, fig. 5, 1847.

Low. Carb. (Mtn. Ls.): Bolland and Clitheroe, England; Co. Wexford, Ireland.

Synbathocrinus constrictus (Wanner).

Synbathocrinus constrictus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 21, pl. 96 (1), figs. 9-13, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 313, pl. 20, figs. 17-22, 1924; Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 204, pl. 13, figs. 30-32, 1937.

Permian: Basleo, Timor.

Synbathocrinus constrictus sinuosus (Wanner).

Synbathocrinus sinuosus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 22, pl. 96 (1), fig. 14, 1916.

Synbathocrinus constrictus var. *sinuosa* Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 314, pl. 20, figs. 15, 16, 1924.

Permian: Basleo, Timor.

Synbathocrinus dentatus Owen and Shumard.

Owen and Shumard, Jour. Acad. Nat. Sci. Phila., (2) 2, pt. 2, p. 93, pl. 11, fig. 7, 1852; Rep. Geol. Surv. Wis., Iowa, Minn., p. 597, pl. 5-B, figs. 7a, b, 1852.—Keyes, Geol. Surv. Mo., 4, p. 206, pl. 25, fig. 14, 1894.—Weller, Bull. Geol. Soc. Amer., 20, p. 278, pl. 11, fig. 20, 1909.—Springer, Smiths. Misc. Coll., 76, no. 3, p. 19, pl. 5, figs. 9, 10, 1923.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Synbathocrinus expansus Goldring.

Goldring, in Cooper and Williams, Bull. Geol. Soc. Amer., 46, p. 836, pl. 58, fig. 8, 1935.

Dev. (Tully ls-West Brook mem.): 3 miles south of Sherburne, N. Y.

Synbathocrinus granulatus (Troost).

Synbathocrinites granulatus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Synbathocrinus granulatus Wood, U. S. Nat. Mus., Bull. 64, p. 27, pl. 9, figs. 4, 7, 8, 1909.

Miss. (Fort Payne Ch.): Whites Creek Spring, Tenn. (? Decatur Co., Tenn.).

Synbathocrinus granulosus Wetherby.

Wetherby, Jour. Cincinnati Soc. Nat. Hist., 2, no. 4, p. 250, pl. 16, figs. 3, 3a, 1880.

Miss. (New Providence sh.): Kings Mountain Tunnel, Ky.

Synbathocrinus hamiltonensis Springer.

Springer, Smiths. Misc. Coll., 76, no. 3, p. 29, pl. 5, figs. 13, 14, 1923.

Synbathocrinus subtrigonalis Goldring, N. Y. St. Mus., Mem. 16, p. 328, pl. 40, figs. 16, 17, 1923.

Dev. (Hamilton-Moscow sh.): Kashong Creek, near Bellona, N. Y.

Synbathocrinus illinoisensis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 8, p. 53, pl. 3, figs. 29-31, 1896.

Miss. (Burlington ls.): Adams Co., Ill.

Synbathocrinus matutinus Hall.

Hall, Geol. Rep. Iowa, 1, pt. 2, p. 483, pl. 1, fig. 2, 1858.—Goldring, N. Y. St. Mus., Mem. 16, pp. 329, 330, pl. 40, fig. 18, 1923.—Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 475, pl. 44, fig. 9, 1924.

Dev.: Buffalo, Iowa (Cedar Valley ls.): Partridge Point, Michigan (Thunder Bay ls.).

Synbathocrinus melba Strimple.

Strimple, A Group of Crinoids from the Penn. of Northeastern Okla., p. 8, pl. 1, figs. 12, 13, 1938.

Penn. (Plattsburg-Lansing fm.): Bartlesville, Okla.

Synbathocrinus ogivalis deKoninck.

De Koninck, Rec. Foss. Australia, Mem. Roy. Soc. Liege, 6, p. 158, pl. 6, fig. 1, 1876.

Carb.: Burragood, Paterson River, New South Wales, Australia.

Synbathocrinus onondaga Springer.

Springer, Smiths. Misc. Coll., 76, no. 3, p. 29, pl. 5, figs. 15, 16, 1923.

Dev. (Onondaga-Jeffersonville ls.): Louisville, Ky.

Synbathocrinus oweni Hall.

Hall, 13th Rep. N. Y. St. Cab. Nat. Hist., p. 111, 1860.

Miss. (Kinderhook-Rockford ls.): Rockford, Ind.

Synbathocrinus papillatus Hall.

Hall, Prelim. Not. Descr. New Crinoids, p. 18, 1861.

Miss. (Burlington ls.): Burlington, Iowa, and Louisiana, Mo.

Synbathocrinus poljenowi (Tolmatchoff).

Taidocrinus poljenowi Tolmatchoff, Carbonif. bassin Kousnetzk, pt. 1, Comité Géol., 25, p. 290, pl. 21, figs. 1-3, 1924; pt. 2, p. 593, 1931.

Carb.: Taidon River, Kousnetzk Basin, Russia.

Synbathocrinus robustus Shumard.

Shumard, Trans. Acad. Sci. St. Louis, 2, p. 397, 1866.—Worthen and Meek, Geol. Surv. Ill., 6, p. 514, pl. 29, fig. 4, 1875.—Wood, U. S. Nat. Mus., Bull. 64, p. 28, pl. 4, fig. 11, 1909.—Springer, Smiths. Misc. Coll., 76, no. 3, p. 19, pl. 5, figs. 11, 12, 1923.

Donacirinites simplex Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Miss.: Button Mold Knob, Ky.; Whites Creek Springs, near Nashville, Tenn. (New Providence sh.); Greene Co., Ill.

Synbathocrinus sulcatus (Goldring).

Synbathocrinus sulcatus Goldring, N. Y. St. Mus., Mem. 16, p. 329, pl. 40, fig. 15, 1923.

Dev. (Onondaga ls.): Limerock, near LeRoy, Genesee Co., N. Y.

Synbathocrinus swallowi Hall.

Hall, Geol. Rep. Iowa, 1, pt. 2, p. 672, pl. 17, figs. 8, 9, 1858.—Beede, 30th Rep. Geol. Nat. Res. Ind., p. 1262, pl. 13, fig. 11, pl. 14, fig. 1, 1906.

Miss.: St. Louis, Mo., (St. Louis ls.); Canton, Ind. and Keokuk, Iowa (Keokuk ls.); Boonville, Mo., Colesburg, etc., Ky. (Warsaw ls.); Spergen Hill, Lanesville, etc., Ind. (Spergen ls.).

Synbathocrinus tennesseensis Roemer = *Pisocrinus tennesseensis*.

Synbathocrinus troosti (Wood).

Synbathocrinus troosti Wood, U. S. Nat. Mus., Bull. 64, p. 27, pl. 9, fig. 9, 1909.

Synbathocrinites tennesseae Troost (part), Amer. Jour. Sci. and Arts (2), 8, p. 419, 1849.

Miss. (Fort Payne ch.): Whites Creek Springs, Tenn. (?Decatur Co., Tenn.).

Synbathocrinus wachsmuthi Meek and Worthen.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 67, 1869; Geol. Surv. Ill., 5, p. 437, pl. 2, fig. 5, 1873.—Wachsmuth and Springer, N. Amer. Crin. Cam., pl. 3, fig. 25, pl. 8, figs. 8, 9, 1897.—Springer, Smiths. Misc. Coll., 76, no. 3, p. 19, pl. 5, figs. 1-7, 1923.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Synbathocrinus (*Nematocrinus*) *wachsmuthi* Meek and Worthen = *Catillocrinus wachsmuthi*.

Synbathocrinus wortheni Hall.

Hall, Geol. Rep. Iowa, 1, pt. 2, p. 560, pl. 9, fig. 9, 1858.—Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, pl. 4, figs. 9–11, 1885.

Synbathocrinus wortheni Keyes, Geol. Surv. Mo., 4, p. 206, pl. 25, fig. 15, 1894.

Synbathocrinus wortheni Springer, Smiths. Misc. Coll., 76, no. 3, p. 19, pl. 5, fig. 8, 1923.

Miss. (Up. Burlington ls.): Jersey Landing, Ill., and Burlington, Iowa.

Synchirocrinus Jaekel = *Calceocrinus*.

Synchirocrinus anglicus Jaekel = *Calceocrinus nitidus*.

Syndetocrinus Kirk. Genotype: *S. dartae* Kirk.

Crotalocrinitidae (Inadunata-Fistulata). Sil.

Kirk, Amer. Jour. Sci., 26, pp. 344, 345, 1933.

Syndetocrinus dartae Kirk.

Kirk, Amer. Jour. Sci., 26, p. 347, figs. 1–4, 1933.—Northrup, Geol. Soc. Amer., Spec. Paper No. 21, p. 158, 1939.

Sil. (Niagaran-West Point fm.): Near Port Daniel, Quebec.

Syndetocrinus northrupi Kirk.

Kirk, Amer. Jour. Sci., 26, p. 351, figs. 5–8, 1933.—Northrup, Geol. Soc. Amer., Spec. Paper No. 21, p. 158, 1939.

Sil. (Niagaran-West Point fm.): Point l'Enfer, near Port Daniel, Quebec.

Synerocrinus Bather and authors (not Jaekel) = *Talanterocrinus*.

Synerocrinus Jaekel. Genotype: *Forbesiocrinus incurvus* Trautschold.

Ichthyocrinidae (Flexibilia). Low. Carb.

Jaekel, Zeits. Deutsch. Geol. Gesell., 49, p. 47, 1897.—Moore and Plummer, Univ. Texas Pub. no. 3945, p. 90, 1940.

Forbesiocrinus Trautschold, Bull. Soc. Imp. Nat. Moscou, 40, no. 3, p. 31, 1867. (Genotype: *F. incurvus* Trautschold).

Synerocrinus farishi Laudon = *Talanterocrinus farishi*.

Synerocrinus formosus Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. No. 3945, p. 94, pl. 2, figs. 3, 4, text fig. 10, 1940.

Penn. (Millsap Lake fm.-Brannon Bridge ls.): 3 miles southwest of Brock, Parker Co., Tex.

Synerocrinus incurvus (Trautschold).

Forbesiocrinus incurvus Trautschold, Bull. Soc. Imp. Nat. Moscou, 40, no. 3, p. 31, pl. 4, figs. 4, 5, text fig., 1867; Kalkbr. Mjatschkowa, p. 126, pl. 14, fig. 11 (not pl. 15, figs. 3a, b), 1879.

Synerocrinus incurvus Jaekel, Zeits. Deutsch. Geol. Gesell., 49, p. 47, 1897.—Springer, Crin. Flexibilia, p. 335, pl. 42, figs. 1, 2 (not figs. 3–9), pl. 75, figs. 12, 13, 1920.

Encrinites stoloniferus Fischer de Waldheim, Oryctogr. Gouv. Moscou, 1st. ed., pl. 41, figs. 1, 2, 1830.

Encrinites moniliformis Fischer de Waldheim, Oryctogr. Gouv. Moscou, 2d ed., p. 151, pl. 41, figs. 1, 2 (as *stoloniferus*), 1837.

Carb. (Moscovian): Mjatschkowa, near Moscow, Russia.

Synerocrinus incurvus Springer (part) = *Talanterocrinus jaekeli*.

Synerocrinus incurvus Wright = *Talanterocrinus jaekeli*.

Synerocrinus ? smithi Wright = *Ainacrinus smithi*.

Syntomocrinus Wanner. Genotype: *S. sundaicus* Wanner.

Lecanocrinidae (Flexibilia). Permian.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, pp. 250, 256, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 88, 1924.

Syntomocrinus sundaicus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 257, pl. 110 (15), figs. 4-8, 1916; Neue Beitr. kennt. Perm. Echin. Timor, IV, Flexibilia, p. 15, pl. 1, figs. 6-8, pl. 16, figs. 4-6, 1930; Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 94, text figs. 15-19, pl. 8, figs. 25-27, 1937.—Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 308, pl. 2, fig. 7, 1940.

Permian: Basleo, Snob Nencoe, Noil Fatoe, and between Niki Niki and Noil Fatoe, Timor.

Synphocrinus Trautschold. Genotype: *S. cornutus* Trautschold.

Poteriocrinitidae (Inadunata-Fistulata). Low. Carb.; Permian.

Trautschold, Bull. Soc. Imp. Nat. Moscou, no. 4, p. 1, 1881.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, pp. 180, 217, 1924; Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 169, 1937.

Synphocrinus cornutus Trautschold.

Trautschold, Bull. Soc. Imp. Nat. Moscou, no. 4, p. 7, pl. 6, figs. 1-8, 1881.

Bursacrinus cornutus Wachsmuth and Springer, Rev. Pal., pt. 3, p. 253 (177), 1886. Carb. (Moscovian): Mjatschkowa, near Moscow, Russia.

Synphocrinus indicus (Wanner).

Graphiocrinus ? *indicus* Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 175, text fig. 51, pl. 104 (9), fig. 13, 1916.

Synphocrinus indicus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 221, 1924.

Permian: Basleo, Timor.

Synphocrinus trautscholdi Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 217, text fig. 33, pl. 13, figs. 6, 7, 12, 13, pl. 14, fig. 1, 1924.

Permian: Basleo, Timor.

Synphocrinus weidneri Wanner.

Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 169, text fig. 61, pl. 11, figs. 7-9, 1937.

Permian: Basleo, Timor.

Taidocrinus Tolmatchoff = *Synbathocrinus*.**Talanterocrinus** Moore and Plummer. Genotype: *T. jaekeli* Moore and Plummer.

Ichthyocrinidae (Flexibilia). Penn.

Moore and Plummer, Univ. Texas Pub. no. 3945, p. 96, 1940.

Synerocrinus Bather, Treatise Zool. (Lankester), pt. 3, p. 190, 1900.—Springer, Amer. Geol., 30, p. 95, 1902; Zittel-Eastman Textb. Pal., 1, p. 205, 1913; Crin. Flexibilia, p. 261, 1920.

Trautscholdicrinus Moore and Plummer, in Moore, Denison Univ. Bull. 39, Jour. Sci. Lab., 34, p. 195, 1939. (Not Ivanoff.)

Talanterocrinus farishi (Laudon).

Synerocrinus farishi Laudon, Jour. Pal., 11, pp. 706, 707, text fig. 2, 1937.

Talanterocrinus farishi Moore and Plummer, Univ. Texas Pub. no. 3945, pp. 71, 97, 1940.

Penn. (Bendian ser.-Bostwick congl.): Ardmore Basin, Okla.

Talanterocrinus jaekeli (Moore and Plummer).

Trautscholdicrinus jaekeli Moore and Plummer, in Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 196, 1939.

Talanterocrinus jaekeli Moore and Plummer, Univ. Texas Pub. no. 3945, p. 97, text fig. 9, 1940.

Forbesiocrinus incurvus Trautschold (part), Soc. Imp. Nat. Moscou, Nouv. Mem., 14, pl. 15, figs. 3a, b (not p. 126, pl. 14, fig. 11), 1879.

- Synerocrinus incurvus* Bather, Treatise Zool. (Lankester), pt. 3, p. 190, fig. 111, 1900.—Springer, Crin. Flexibilia, pl. 43, figs. 3-9 (not figs. 1, 2, nor pl. 75, figs. 12, 13), 1920.—Wright, Trans. Roy. Soc. Edinburgh, 60 pt. 1, p. 55, pl. 11, figs. 7, 8.
Carb. (Moscovian): Near Moscow, Russia.
- Talanterocrinus mcguirei** (Moore).
Trautscholdicrinus mcguirei Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 190, pl. 5, figs. 2 a-c, 1939.
Penn. (Brownville ls.): 5 miles west of Strohm, Osage Co., Okla.
- Talarocrinus** Wachsmuth and Springer. Genotype: *Dichocrinus cornigerus* Shumard.
Hexacrinitidae (Adunata). Miss.
- Wachsmuth and Springer, Rev. Pal., pt. 2, pp. 58, 85 (232, 259), 1881; Proc. Acad. Nat. Sci. Phila., p. 342, 1888; N. Amer. Crin. Cam., p. 781, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 159, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 201, 1913.
- Daemenocrinites* Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 420, 1849.—Wood, U. S. Nat. Mus., Bull. 64, p. 41, 1909. (Genotype: *D. cornutus* Troost.)
- Daemenocrinus* Bather, Treatise Zool. (Lankester), pt. 3, p. 202, 1900.
- Doliolocrinites* Hall (Troost Ms.), Geol. Rep. Iowa, 1, pt. 2, p. 655, 1858.—Wood, U. S. Nat. Mus., Bull. 64, p. 41, 1909. (Genotype: *D. ovalis* Troost Ms.)
- Doliolocrinus* Wachsmuth and Springer, Rev. Pal., pt. 2, p. 231 (404), 1881.—Bather, Treatise Zool. (Lankester), pt. 3, p. 202, 1900.
- Talarocrinus buttsi** Ulrich.
Ulrich, Kentucky Geol. Surv., p. 264, pl. 8, figs. 1-4, 1917.
Miss. (Chester): Near Princeton, etc., Ky. (Ste. Genevieve-Ohara ls.); Hardin Co., Ill. (Shetlerville fm.).
- Talarocrinus constrictus** (Meek and Worthen).
Dichocrinus constrictus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 381, 1860; Geol. Surv. Ill., 2, p. 263, pl. 19, figs. 2 a-c, 1866.
Talarocrinus constrictus Ulrich, Kentucky Geol. Surv., p. 183, 1917.
Miss. (Spergen ls.): Bloomington, Ind.
- Talarocrinus cornigerus** (Shumard).
Dichocrinus cornigerus Shumard, Trans. Acad. Sci. St. Louis, 1, p. 72, pl. 1, figs. 1 a-d, 1857; Meek and Worthen, Geol. Surv. Ill., 5, p. 537, pl. 20, fig. 6, 1873.
Talarocrinus cornigerus Wachsmuth and Springer, Rev. Pal., pt. 2, pp. 87 (259), 1881; N. Amer. Crin. Cam., p. 783, pl. 78, figs. 6, 7, 1897.—Ulrich, Kentucky Geol. Surv., p. 266, pl. 8, figs. 18, 19, pl. 9, figs. 7, 8, 1917.—Weller, Geol. Surv. Ill., Bull. 41, p. 340, pl. 6, fig. 35, 1920.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 46, pl. 14, fig. 6, 1926.
Miss. (Chester-Ste. Genevieve ls.): Buzzards Roost, Franklin Co., Ala.; near Tateville, Ky.
- Talarocrinus decornis** Wachsmuth and Springer.
Wachsmuth and Springer, N. Amer. Crin. Cam., p. 788, pl. 3, fig. 19, pl. 78, figs. 3 a-c, 1897.
Miss. (Chester-Glen Dean ls.): Tateville, Pulaski Co., Ky.
- Talarocrinus depressus** Ulrich.
Ulrich, Kentucky Geol. Surv., p. 267, pl. 8, figs. 28, 29, pl. 10, figs. 17-20, 1917.
Miss. (Chester-Gasper oolite): Lambs Cut, 3 miles east of Scottsburg, Ky.
- Talarocrinus dewolfi** Ulrich.
Ulrich, Kentucky Geol. Surv., p. 264, pl. 8, figs. 5-10, 1917.
Miss. (Chester-Ste. Genevieve ls. Ohara mem.): 2 miles north Cerulean Springs, Ky.
- Talarocrinus elegans** (Casseday and Lyon).
Dichocrinus elegans Casseday and Lyon, Proc. Amer. Acad. Arts and Sci., 5, p. 22, 1862.

- Talarocrinus elegans* Wachsmuth and Springer, Rev. Pal., pt. 2, p. 87 (261), 1881.—Ulrich, Kentucky Geol. Surv., p. 266, pl. 8, figs. 20, 21, pl. 10, figs. 1-4, 1917.
Miss. (Chester-Low. Gasper oolite): Edmonston Co., Ky.
- Talarocrinus elegans spinigerus** Ulrich.
Ulrich, Kentucky Geol. Surv., p. 267, pl. 8, figs. 26, 27, pl. 10, figs. 14-16, 1917.
Miss. (Chester-Gasper oolite): Breckenridge Co., Ky.
- Talarocrinus inflatus** Ulrich.
Ulrich, Kentucky Geol. Surv., p. 265, pl. 8, figs. 14, 15, pl. 9, figs. 4-6, 1917.—Weller, Geol. Surv. Ill., Bull. 41, p. 337, pl. 6, figs. 1-13, 1920.
Miss. (Chester-Renault fm.): 4.5 miles southwest Floraville, Ill.
- Talarocrinus ovatus** Worthen.
Worthen, Ill. St. Mus., Bull. 1, p. 36, 1882; Geol. Surv. Ill., 7, p. 314, pl. 29, fig. 11, 1883.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 787, pl. 78, figs. 2a, b, 1897.—Ulrich, Kentucky Geol. Surv., p. 266, pl. 8, figs. 16-17b, p. 268, pl. 9, figs. 1-3, 1917.—Weller, Geol. Surv. Ill., Bull. 41, p. 340, pl. 6, figs. 27-33, 1920.
Miss. (Chester): Monroe Co., Ill. (Renault fm.); Breckenridge Co., Ky. (Gasper fm.).
- Talarocrinus patei** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 12, p. 44, pl. 3, figs. 9-12, 1897.—Wilson, Jour. Geol., 24, p. 510, pl. 3, figs. 7-10, 1916.—Butts, Kentucky Geol. Surv., p. 80, pl. 21, figs. 24-26, 1917.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 46, pl. 13, figs. 1-14, 1926.
Miss. (Chester): One mile east of Sample, Breckenridge Co., Ky. (Gasper fm.); Floraville, Ill. (Renault fm.).
- Talarocrinus planus** Weller.
Weller, Geol. Surv. Ill., Bull. 41, p. 342, pl. 6, figs. 14-16, 1920.
Miss. (Chester-Paint Creek fm.): Randolph Co., Ill.
- Talarocrinus sexlobatus** (Shumard).
Dichocrinus sex-lobatus Shumard, Trans. Acad. Sci. St. Louis, 1, p. 73, pl. 1, figs. 3 a-e, 1867.
Talarocrinus sexlobatus Wachsmuth and Springer, Rev. Pal., pt. 2, p. 87 (261), 1881; N. Amer. Crin. Cam., p. 784, pl. 78, figs. 1 a-c, 1897. Ulrich, Kentucky Geol. Surv., p. 267, pl. 8, figs. 24, 25, pl. 9, figs. 12-16, 1917.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 46, pl. 13, fig. 15, 1926.
Miss. (Chester-Gasper oolite): Russellville, Ky.; Flagpoint, Va.
- Talarocrinus similis** Ulrich.
Ulrich, Kentucky Geol. Surv., p. 269, pl. 10, figs. 8-13, 1917.
Miss. (Chester-Gasper oolite): Lambs Cut, 3 miles east of Scottsburg, Ky.
- Talarocrinus simplex** (Shumard).
Dichocrinus simplex Shumard, Trans. Acad. Sci. St. Louis, 1, p. 74, pl. 1, figs. 2a, b, 1857.—Hall, Geol. Rep. Iowa, 1, pt. 2, p. 654, pl. 22, figs. 12a, b, 1858; Suppl., pl. 1, figs. 4 a-c, 1860.
Talarocrinus simplex Keyes, Geol. Surv. Mo., 4, p. 205, pl. 25, fig. 6, 1894.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 790, pl. 78, figs. 8a, b, 1897.—Rowley in Greene, Cont. Ind. Pal., 1, pt. 10, p. 91, pl. 29, figs. 24-27, 1902; 2, pt. 2, p. 30, pl. 6, figs. 10, 11, 19, 1906.—Beede, 30th Rep. Geol. Nat. Res. Ind., p. 1261, pl. 13, figs. 7-7c, 1906.—Wood, U. S. Nat. Mus., Bull. 64, p. 42, pl. 13, fig. 1, 1909.
Doliocrinites ovalis (Troost Ms.) Hall, Geol. Rep. Iowa, 1, pt. 2, p. 655, 1858.
Miss.: Spergen Hill, Ind. Ste. Genevieve Co., Mo. (Spergen ls.); Colesburg, etc. Ky., and near Gallatin, Tenn. (Warsaw ls.).
- Talarocrinus subglobosus** Wachsmuth and Springer.
Wachsmuth and Springer, N. Amer. Crin. Cam., p. 789, pl. 79, figs. 1a, b, 1897.
Miss. (Chester-Low. Gasper oolite): Tateville, Pulaski Co., Ky.

Talarocrinus symmetricus (Casseday and Lyon).

Dichocrinus symmetricus Casseday and Lyon, Proc. Amer. Acad. Arts and Sci., 5, p. 20, 1862.

Talarocrinus symmetricus Wachsmuth and Springer, Rev. Pal., pt. 2, p. 87 (261), 1881; N. Amer. Crin. Cam., p. 786, pl. 78, figs. 4a, b, 5, 1897.—Wood, U. S. Nat. Mus., Bull. 64, p. 41, pl. 4, figs. 1, 2, 1909.—Ulrich, Kentucky Geol. Surv., p. 266, pl. 8, figs. 22, 23, pl. 10, figs. 5-7, 1917.—Butts, Geol. Surv. Ala., Spec. Rep. no. 14, p. 190, pl. 59, fig. 16, 1926.

Daemonocrinites cornutus Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.

Miss. (Chester): Breckenridge, Grayson, Edmonson, Hart, and Warren Cos., Ky., Jackson Co., Ala. (Gasper oolite); Monroe Co., Ill. (Renault fm.).

Talarocrinus trijugis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 3, p. 45, pl. 3, figs. 9-11, 1894.—Butts, Kentucky Geol. Surv., p. 61, pl. 15, figs. 3-5, 1917.—Ulrich, *ibid.*, p. 265, pl. 8, figs. 11-13, pl. 9, figs. 10, 11, 1917.—Weller, Geol. Surv. Ill., Bull. 41, p. 338, pl. 6, figs. 17-26, 1920.

Miss. (Chester): Rosiclare, Hardin Co., Pope Co., etc. Ill. (Ste. Genevieve-Ohara ls.); Hardin Co., Ill. (Shetlerville fm.); Union Co., Ill. (Renault fm.).

Tanaocrinus Wachsmuth and Springer. Genotype: *T. typus* Wachsmuth and Springer.

Xenocrinidae (Camerata). Early Sil.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 185, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 165, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 193, 1913.

Tanaocrinus typus Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 186, pl. 9, figs. 7 a-c, 1897.

Early Sil. (Richmond-Waynesville ls.): Warren Co., Ohio.

Taxocrinites Steininger = Taxocrinus.

Taxocrinus Phillips. Genotype: *Cyathocrinus? macrodactylus* Phillips.

Taxocrinidae (Flexibilia). Dev.; Low. Carb.

Phillips, in Morris, Cat. British Foss., p. 59, 1843.—Sandberger and Sandberger, Verst. Rheinl. Schichtensyst. Nassau, p. 392, 1856.—Zittel, Handb. Pal., 1, p. 353, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 43 (266), 1880 (1879); pt. 3, p. 144 (220), 1886.—Grabau, Bull. Buffalo Soc. Nat. Sci., 6, p. 145, 1899.—Bather, Treatise Zool. (Lankester), pt. 3, p. 189, 1900.—Springer, Amer. Geol., 30, pp. 90, 95, 1902; Jour. Geol., 14, p. 519, 1906.—Bather, Ann. Mag. Nat. Hist., (8) 12, p. 390, 1913.—Springer, Crin. Flexibilia, pp. 239, 342, 373, 1920.—Goldring, N. Y. St. Mus., Mem. 16, p. 318, 1923.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, pp. 114, 141, 1934.

Cladocrinites Austin and Austin, Ann. Mag. Nat. Hist., (1) 11, p. 197, 1843. (Genotype: *Poteriocrinites egertoni* Phillips.)

Cladocrinus Morris, Cat. British Foss., p. 59, 1843.—Wachsmuth and Springer, Rev. Pal., pt. 1, p. 43 (59), 1880 (1879).

Isocrinus Phillips (not von Meyer), Pal. Foss. Cornwall, p. 30, 1841. (Genotype: *Cyathocrinus? macrodactylus* Phillips.)

Euryalecrinus Austin and Austin, Mon. Rec. and Foss. Crin., p. 66, 1846.—Delage and Herouard, Zool. Conc., 3, p. 477, 1903 (as *Euryalocrinus*).

Taxocrinites Steininger, Geog. Besch. Eifel, p. 37, 1853.

Taxocrinus affinis Müller = *Eutaxocrinus affinis*.

Taxocrinus austini Angelin = *Protaxocrinus salteri*.

Taxocrinus belgicus Springer.

Springer, Crin. Flexibilia, pp. 381, 395, pl. 54, figs. 2a, b, 1920.

Low. Carb. (Tournaisian): Tournai, Belgium.

Taxocrinus briareus Schultze = *Lecythocrinus briareus*.

Taxocrinus colletti White.

Taxocrinus multibrachiatus var. *colletti* White, 2d Ann. Rep. Stat. and Geol. Ind., p. 506, pl. 6, fig. 3, 1880.

Taxocrinus colletti Miller and Gurley, Ill. St. Mus., Bull. 3, p. 49, 1894.—Springer, Crin. Flexibilia, p. 239, figs. 32-34, pp. 381, 398, pl. 21, fig. 4, pl. 55, fig. 11, pl. 56, figs. 1-11, pl. 57, figs. 1-10, 1920.

Forbesiocrinus meeki Quenstedt, Handb. Petref., 4, p. 946, pl. 75, figs. 24, 25, 1885.

Taxocrinus splendens Miller and Gurley, Ill. St. Mus., Bull. 8, p. 59, pl. 5, figs. 1, 2, 1896.

Miss. (Keokuk ls.): Crawfordsville and Indian Creek, Ind.

Taxocrinus communis Springer.

Springer, Crin. Flexibilia, pp. 381, 387, pl. 52, figs. 1-4, 1920.

Forbesiocrinus communis Hall (part), 17th Rep. N. Y. St. Cab. Nat. Hist., p. 6 (sep.), 1864 (Final Rep. p. 55).—Hall and Whitfield, Geol. Surv. Ohio, 2, Pal., p. 169, pl. 12, fig. 3 (not figs. 4, 5), 1875.

Miss. (Waverlyan-Cuyahoga sh.): Richfield, Ohio.

Taxocrinus concavus Rowley = *Dactyloocrinus concavus*.

Taxocrinus crawfordsvillensis Miller and Gurley = *Parichthyocrinus crawfordsvillensis*.

Taxocrinus curtus Williams = *Eutaxocrinus curtus*.

Taxocrinus delabolei Wright.

Wright, Geol. Surv. Gt. Britain, Summ. Prog. for 1935, pt. 2, pp. 89-92, 1 fig., 1 pl., 1937.

Up. Dev. (Delabole sl.): Cornwall, England.

Taxocrinus distensus Angelin = *Protaxocrinus distensus*.

Taxocrinus expansus Angelin = *Gnorimocrinus expansus*.

Taxocrinus fletcheri Worthen = *Eutaxocrinus fletcheri*.

Taxocrinus giddingsi (Hall).

Forbesiocrinus giddingsi Hall, Geol. Rep. Iowa, 1, pt. 2, p. 633, pl. 17, figs. 2, 4, 1858.

Taxocrinus giddingsi Wachsmuth and Springer, Rev. Pal., pt. 1, p. 48 (271), 1880 (1879).—Springer, Crin. Flexibilia, pp. 382, 405, pl. 59, figs. 1-12, 1920.

Forbesiocrinus elegantulus S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 40, pl. 5, figs. 14, 15, 1891.

Miss.: Boonville, Mo. (Warsaw ls.); Canton, Ind. (Keokuk ls.).

Taxocrinus gracilis Meek and Worthen = *Eutaxocrinus gracilis*.

Taxocrinus gracilis Schultze = *Rhopalocrinus gracilis*.

Taxocrinus granulatus Salter.

Salter, Cat. Camb. Sil. Foss., p. 126, 1873 (nom. nud.).

Sil. (Wenlock ls.): Dudley, England.

Taxocrinus grebei Follmann = *Follicrinus grebei*.

Taxocrinus hollandi Laudon and Beane.

Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 253, pl. 19, fig. 3, 1937.

Miss. (Kinderhook-Hampton fm.): Legrand, Iowa.

Taxocrinus huntsvillae Springer.

Springer, Crin. Flexibilia, pp. 382, 407, pl. 59, figs. 17, 18, 20-25, 1920.

Miss. (Chester-Gasper oolite): Huntsville, Ala.

Taxocrinus interbrachiatus Angelin = *Protaxocrinus interbrachiatus*.

Taxocrinus intermedius Wachsmuth and Springer.

Wachsmuth and Springer, Proc. Acad. Nat. Sci. Phila., p. 344, pl. 18, figs. 1 a-e, 1888; Geol. Surv. Ill., 8, p. 199, pl. 15, fig. 11, 1890; N. Amer. Crin. Cam., pl. 3,

fig. 11, pl. 8, figs. 5 a, b, 1897.—Springer, Crin. Flexibilia, p. 389, pl. 53, figs. 1-6, 1920.—Laudon and Beane, Univ. Iowa Studies, 17, no. 6, p. 252, pl. 17, fig. 9, pl. 18, fig. 1, 1937.

Miss. (Kinderhook-Hampton fm.): Legrand, Marshall Co., Iowa.

Taxocrinus interscapularis Hall.

Hall, Geol. Rep. Iowa, 1, pt. 2, p. 482, pl. 1, fig. 3, 1858.—Quenstedt, Petref. Deutsch., p. 505, pl. 107, fig. 146, 1872.—Springer, Crin. Flexibilia, pp. 381, 385, pl. 52, fig. 6, 1920.—Thomas, Ann. Rep. Iowa Geol. Surv., 29, p. 474, pl. 44, fig. 10, 1924.

Dev. (Cedar Valley ls.): Buffalo, Iowa.

Taxocrinus interscapularis Cleland = *T. telleri*.

Taxocrinus ithacensis Williams = *Eutaxocrinus ithacensis*.

Taxocrinus ithacensis alpha Williams = *Eutaxocrinus* alpha.

Taxocrinus juglandiformis Schultze = *Eutaxocrinus juglandiformis*.

Taxocrinus juvenis (Hall).

Forbesiocrinus juvenis Hall, Jour. Boston Soc. Nat. Hist., 7, p. 319; Descr. N. Sp. Crin., p. 8, 1861; N. Y. St. Mus., Bull. 1, pl. 7, fig. 3, 1872.

Taxocrinus juvenis Meek and Worthen, Geol. Surv. Ill., 2, p. 271, 1865.—Whitfield, Mem. Amer. Mus. Nat. Hist., 1, p. 35, pl. 3, figs. 21, 22, 1893.—Wachsmuth and Springer, N. Amer. Crin. Cam., pl. 6, fig. 16, 1897.—Springer, Crin. Flexibilia, pp. 381, 392, pl. 54, figs. 3-11, 1920.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Taxocrinus kellogi (Hall).

Forbesiocrinus kellogi Hall, Prelim. Not. 17th Rep. Regents Univ. St. N. Y., p. 66, 1863; Final Rep. 1864.—Hall and Whitfield, Geol. Surv. Ohio, 2, pt. 2, Pal., p. 171, pl. 12, fig. 1, 1875.

Taxocrinus kellogi Meek and Worthen, Proc. Acad. Nat. Sci. Phila., ser. 2, 9, p. 140, 1865.—Springer, Crin. Flexibilia, p. 388, pl. 52, figs. 5 a-c, 1920.

Miss. (Waverlyan-Cuyahoga sh.) Richfield, Summit Co., Ohio.

Taxocrinus lobatus (Hall).

Forbesiocrinus lobatus Hall, 15th Rep. Regents Univ. St. N. Y., p. 124 (sep. p. 96 1862; N. Y. St. Mus., Bull. 1, pl. 1-A, fig. 11, 1872).

Taxocrinus lobatus Wachsmuth and Springer, Rev. Pal., pt. 1, p. 49 (272), 1880 (1879).—Springer, Crin. Flexibilia, pp. 381, 386, pl. 52, figs. 9-11, 1920.—Goldring, N. Y. St. Mus., Mem. 16, p. 319, pl. 39, figs. 18-20, 1923.

Dev. (Hamilton-Moscow sh.): Bristol, Ontario Co., and Canandaigua Lake, N. Y.

Taxocrinus lobatus var. *Whiteaves* = *Eutaxocrinus whiteavesi*.

Taxocrinus ?? longidactylus (Austin and Austin).

Isocrinites longidactylus Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 108; 1842; 11, p. 197, 1843 (as *Cladocrinites longidactylus*).

Taxocrinus longidactylus Morris, Cat. Brit. Foss., p. 59, 1843.—Springer, Crin. Flexibilia, p. 383, 1920. (An inadunate crinoid.)

Low. Carb.: Mendip Hills and Clevedon, England.

Taxocrinus (*Gnorimocrinus*) *loveni* Wachsmuth and Springer = *Meristocrinus interbrachiatus*.

Taxocrinus macrodactylus (Phillips).

Cyathocrinus (?) *macrodactylus* Phillips, Pal. Foss. Cornwall, p. 29, pl. 15, fig. 41 (p. 30, as *Isocrinus macrodactylus*), 1841.

Taxocrinus macrodactylus Morris, Cat. British Foss., p. 90, 1843.—Springer, Crin. Flexibilia, pp. 381, 383, pl. 51, figs. 1-4, 1920.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 122, p. 62, pl. 1, figs. 9, 10, 1930.

Low. Carb.: Brushford, North Devon, England (Pilton beds); Co. Wexford, etc., Ireland; near Ratingen, Germany (Etroeungtian).

***Taxocrinus marmoratus* Salter.**

Salter, Cat. Camb. and Sil. Foss., p. 125, 1873 (nom. nud.).

Sil. (Wenlock ls.): Dudley, England.

Taxocrinus multibrachiatus colletti* White = *T. colletti*.**Taxocrinus nanus* Salter = *Homalocrinus parabasalis*.*****Taxocrinis nobilis* (Phillips).***Poteriocrinus nobilis* Phillips, Geol. Yorkshire, 2, p. 205, pl. 3, fig. 40, 1836.*Taxocrinus nobilis* Morris, Cat. British Foss., p. 59, 1843.—Geinitz, Verst. Grauw. Form., p. 72, pl. 20, fig. 11, 1853.—Springer, Crin. Flexibilia, pp. 381, 394, pl. 54, figs. 1 a-c, 1920.

Low. Carb. (Mtn. Ls.): Bolland, Clitheroe, and Yorkshire, England; Ireland.

Taxocrinus oblongatus* Angelin = *Eutaxocrinus oblongatus*.**Taxocrinus orbignii* McCoy = *Meristocrinus orbignii*.*****Taxocrinus ornatus* Springer.**

Springer, Crin. Flexibilia, pp. 381, 393, pl. 54, figs. 12-13, 1920.

Miss. (Low. Burlington ls.): Burlington, Iowa.

Taxocrinus ovalis* Angelin = *Protaxocrinus ovalis*.**Taxocrinus pentagonus* (Austin and Austin).***Cladocrinites pentagonus* Austin and Austin, Ann. Mag. Nat. Hist., 11, p. 198, 1843.*Poteriocrinites pentagonus* Austin and Austin, Mon. Rec. Foss. Crin., p. 86, pl. 2, figs. 2 a-f, 1847.*Taxocrinus pentagonus* Bronn, Index Pal., p. 1217, 1849.—Springer, Crin. Flexibilia, p. 383, 1920.

Low. Carb. (Mtn. Ls.): Somersetshire, England.

Taxocrinus polydactylus* McCoy = *Onychocrinus polydactylus*.**Taxocrinus praestans* Springer.**

Springer, Crin. Flexibilia, p. 381, pl. 58, figs. 1-8, 1920.

Miss. (Keokuk ls.): Indian Creek and Canton, Ind.

***Taxocrinus priscus* Steining.**

Steining (Schnur ms.), Geogn. Besch. Eifel, p. 37, 1853.—Springer, Crin. Flexibilia, p. 383, 1920.

Dev. (Eifelian): Prüm, Eifel, Germany.

Taxocrinus punctatus* Angelin = *Gnorimocrinus punctatus*.**Taxocrinus pustulosus* Springer.**

Springer, Crin. Flexibilia, pp. 381, 391, pl. 54, figs. 19-20, 1920.

Miss. (New Providence sh.): Clark Co., Ind., and Button Mold Knob, Ky.

Taxocrinus ramulosus* (Hall).Forbesiocrinus ramulosus* Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 67, 1860.*Taxocrinus ramulosus* Springer, Crin. Flexibilia, pp. 381, 395, pl. 54, figs. 14-18, 1920.*Forbesiocrinus subramulosus* Shumard, Trans. Acad. Sci. St. Louis, 2, p. 372, 1866.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Taxocrinus rhenanus* Sandberger = *Eutaxocrinus rhenanus*.**Taxocrinus rigens* Angelin = *Eutaxocrinus oblongatus*.*****Taxocrinus salteri* Angelin = *Protaxocrinus salteri*.*****Taxocrinus semiovatus* Meek and Worthen = *Onychocrinus semiovatus*.*****Taxocrinus shumardianus* (Hall).***Forbesiocrinus shumardianus* Hall, Geol. Rep. Iowa, 1, pt. 2, p. 671, pl. 18, fig. 1, 1858.

- Taxocrinus shumardianus* Wachsmuth and Springer, Rev. Pal., pt. 1, p. 49 (272), 1880 (1879).—Springer, Jour. Geol., 14, pl. 7, fig. 17, 1906; Crin. Flexibilia, p. 382, pl. 59, figs. 13-16, 19, 1920.
- Miss.: St. Louis, Mo. and Waterloo, Ill. (St. Louis ls.-? Ste. Genevieve); Huntsville, Ala. (St. Louis ls.); Burksville, Monroe Co., Ill. (Renault fm.).
- Taxocrinus splendens* Miller and Gurley = *T. colletti*.
- Taxocrinus stultus*** Whidborne.
Whidborne, Proc. Geol. Assoc., 14, p. 377, 1896; Mon. Dev. Fauna S. Eng., 3, pt. 3, p. 216, pl. 34, figs. 1-3, 1898.—Springer, Crin. Flexibilia, pp. 381, 385, pl. 51, figs. 5 a-c, 1920.
Low. Carb. (Pilton beds): Pilton, Poleshill, Roborough, South England.
- Taxocrinus sturtzii* Opitz = *Eutaxocrinus sincerus*.
- Taxocrinus sturtzii* Schmidt = *Eutaxocrinus sturtzii*.
- Taxocrinus sturtzii spinifer* Schmidt = *Eutaxocrinus sturtzii spinifer*.
- Taxocrinus subovatus* Miller and Gurley = *Parichthyocrinus subovatus*.
- Taxocrinus telleri*** Springer.
Springer, Crin. Flexibilia, pp. 381, 386, pl. 52, figs. 7, 8, 1920.
Taxocrinus interscapularis Cleland, Wis. Geol. Nat. Hist. Surv., Bull. 21, p. 42, pl. 3, figs. 11, 12, 1911.
Dev. (Milwaukee fm.-Lindwurm mem.): Near Milwaukee, Wis.
- Taxocrinus thiemei* Meek and Worthen = *Wachsmuthicrinus spinifer*.
- Taxocrinus tubuliferus* Angelin = *Protaxocrinus salteri*.
- Taxocrinus ungula*** Miller and Gurley.
Miller and Gurley, Ill. St. Mus., Bull. 8, p. 59, pl. 5, figs. 1, 2, 1896.—Springer, Crin. Flexibilia, pp. 381, 397, pl. 55, figs. 1-10, 1920.
Miss. (Keokuk ls.): Indian Creek and Crawfordsville, Ind.
- Taxocrinus wetherbyi* Miller and Gurley = *T. whitfieldi*.
- Taxocrinus whitfieldi*** (Hall).
Forbesiocrinus whitfieldi Hall, Geol. Rep. Iowa, 1, pt. 2, p. 632, text fig. 104, 1858.
Onychocrinus whitfieldi Meek and Worthen, Geol. Surv. Ill., 5, p. 552, pl. 20, fig. 3, 1873.
Taxocrinus whitfieldi Springer, Crin. Flexibilia, pp. 382, 408, pl. 60, figs. 1-11, 1920.
Forbesiocrinus cestriensis Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 68, 1860.
Forbesiocrinus parvus Wetherby, Jour. Cincinnati Soc. Nat. Hist., 2, no. 3, p. 138, pl. figs. 4a, b, 1879.
Taxocrinus wetherbyi Miller and Gurley, Ill. St. Mus., Bull. 6, p. 41, pl. 4, figs. 3-5, 1895.
Miss. (Chester-Glen Dean ls.): Randolph Co., Ill.; Pulaski and Grayson Cos., Ky.
- Technocrinus*** Hall. Genotype: *T. andrewsi* Hall.
Clonocrinidae (Camerata). Sil.; Dev.
Hall, Nat. Hist. N. Y., Pal., 3, p. 139, 1859 (1861).—Zittel, Handb. Pal., 1, p. 327, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, pp. 96, 116 (270, 290), 1881; N. Amer. Crin. Cam., p. 304, 1897.—Bather, Treatise Zool. (Lankester), pt. 3 p. 163, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 191, 1913; U. S. Nat. Mus., Bull. 115, p. 3, 1921.
- Technocrinus andrewsi*** (Hall).
Mariacrinus (*Technocrinus*) *andrewsi* Hall, Nat. Hist. N. Y., Pal., 3, p. 141, pl. 86, figs. 1-4, 1859.
Technocrinus andrewsi Wachsmuth and Springer, N. Amer. Crin. Cam., p. 306, pl. 24, fig. 3, 1897.—Ohern, Md. Geol. Surv., Low. Dev., p. 251, pl. 38, fig. 2, 1913.
Dev. (Oriskany-Ridgeley ss.): Cumberland, Md.; Berkeley Springs, W. Va.

Technocrinus (?) lepidus Ohern.

Ohern, Md. Geol. Surv., Low. Dev., p. 252, pl. 37, figs. 3-5, pl. 38, fig. 1, pl. 39, 1913.
Dev. (Oriskany-Ridgeley ss.): Cacapon Bridge, and near Berkeley Springs, W. Va.

Technocrinus niagarensis Springer.

Springer, U. S. Nat. Mus., Bull. 115, p. 14, pl. 5, figs. 1, 2, 1921.
Sil. (Niagaran-Bob fm.): Hardin Co., Tenn.

Technocrinus sculptus (Hall).

Mariacrinus (Technocrinus) sculptus Hall, Nat. Hist. N. Y., Pal., 3, p. 143, pl. 86, figs. 13, 14, 1859.

Technocrinus sculptus Ohern, Md. Geol. Surv., Low. Dev., p. 250, pl. 36, figs. 10, 11, 1913.

Dev. (Oriskany-Ridgeley ss.): Cumberland, Md.

Technocrinus spinulosus (Hall).

Mariacrinus (Technocrinus) spinulosus Hall, Nat. Hist. N. Y. Pal., 3, p. 140, pl. 85, figs. 1-18, 1859.

Technocrinus spinulosus Ohern, Md. Geol. Surv., Low. Dev., p. 251, pl. 37, figs. 1, 2, 1913.

Dev. (Oriskany-Ridgeley ss.): Cumberland, Md.

Technocrinus striatus (Hall).

Mariacrinus (Technocrinus) striatus Hall, Nat. Hist. N. Y., Pal., 3, p. 142, pl. 86, figs. 5-11, 12, 1859.

Technocrinus striatus Ohern, Md. Geol. Surv., Low. Dev., p. 250, pl. 36, figs. 8, 9, 1913.

Dev. (Oriskany-Ridgeley ss.): Cumberland, Md.

Teleiocrinus Wachsmuth and Springer. Genotype: *Actinocrinus umbrosus* Hall.

Actinocritinidae (Camerata). Miss.

Wachsmuth and Springer, Rev. Pal., pt. 2, pp. 96, 146 (270, 320), 1881; N. Amer. Crin. Cam., p. 626, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 170, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 191, 1913.

Calathocrinus Hall (not von Meyer). Descr. N. Sp. Crin., Prelim. Not., pp. 12, 13, 1861. (Genotype: *Actinocrinus (Calathocrinus) erodus* Hall.)

Teleiocrinus adolescens Wachsmuth and Springer.

Wachsmuth and Springer, N. Amer. Crin. Cam., p. 635, pl. 59, fig. 4, 1897.

Miss. (Low. and Up. Burlington ls.): Burlington, Iowa.

Teleiocrinus aeglops Whitfield = *T. umbrosus*.

Teleiocrinus althea (Hall).

Actinocrinus (Calathocrinus) althea Hall, Descr. N. Sp. Crin., Prelim. Not., p. 13, 1861.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 632, pl. 60, fig. 4, pl. 63, fig. 9, 1897.

Actinocrinus (Strotocrinus) althea Hall, N. Y. St. Mus., Bull. 1, pl. 4, fig. 13, 1872.

Teleiocrinus althea Wachsmuth and Springer, Rev. Pal., pt. 2, p. 148 (322), 1881.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Teleiocrinus liratus (Hall).

Actinocrinus liratus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 1, 1860.

Strotocrinus liratus Meek and Worthen, Geol. Surv. Ill., 5, p. 355, pl. 7, fig. 2, 1873.

Teleiocrinus liratus Keyes, Geol. Surv. Mo., 4, p. 191, pl. 24, fig. 8, 1894.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 633, pl. 60, fig. 3, 1897.

Actinocrinus subumbrosus Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 3, text fig., 1860.

Strotocrinus subumbrosus Wachsmuth and Springer, Rev. Pal., pt. 2, pl. 18, fig. 2, 1881.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Teleocrinus rudis (Hall).

Actinocrinus rudis Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 33, 1860.

Teleocrinus rudis Wachsmuth and Springer, Rev. Pal., pt. 2, p. 149 (323), pl. 19, fig. 11, 1881; N. Amer. Crin. Cam., p. 630, pl. 5, fig. 16, pl. 59, figs. 1-3, 1897.

Actinocrinus clivosus Hall, Jour. Boston Soc. Nat. Hist., 7, p. 274, 1861.

Actinocrinus (*Calathocrinus*) *erodus* Hall, Descr. N. Sp. Crin., Prelim. Not., p. 12, 1861.

Actinocrinus (*Calathocrinus*) *insculptus* Hall, Descr. N. Sp. Crin., Prelim. Not., p. 12, 1861.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Teleocrinus tenuiradiatus (Hall).

Actinocrinus tenuiradiatus Hall, Descr. N. Sp. Crin., Prelim. Not., p. 12, 1861.

Teleocrinus tenuiradiatus Wachsmuth and Springer, Rev. Pal., pt. 2, p. 149 (323), 1881; N. Amer. Crin. Cam., p. 634, pl. 59, figs. 5, 6, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Teleocrinus umbrosus (Hall).

Actinocrinus umbrosus Hall, Geol. Surv. Iowa, 1, pt. 2, p. 590, pl. 11, figs. 3a, b, text fig. 89, 1858.—Quenstedt, Petref. Deutsch. 4, pp. 571, 585, pl. 110, fig. 28, 1876.

Strotocrinus umbrosus Meek and Worthen, Geol. Surv. Ill., 5, p. 360, pl. 8, fig. 5, 1873.

Teleocrinus umbrosus Wachsmuth and Springer, Rev. Pal., pt. 2, p. 149 (323), 1881; N. Amer. Crin. Cam., p. 628, pl. 4, fig. 11, pl. 5, figs. 3, 4, pl. 59, fig. 7, pl. 60, figs. 2a-d, 1897.—Wilson, Jour. Geol., 24, p. 508, pl. 1, figs. 1-6, 1916.—Van Tuyl, Geol. Surv. Iowa, 30, pl. 4, fig. 11, 1925.

Actinocrinites delicatus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 156, 1869; Geol. Surv. Ill., 5, p. 343, pl. 8, fig. 2, 1873.

Actinocrinus aeglops Hall, Geol. Rep. Iowa, 1, pt. 2, Suppl., p. 5, text fig., 1860.

Teleocrinus aeglops Whitfield, Mem. Amer. Mus. Nat. Hist., 1, pt. 1, p. 21, pl. 2, figs. 27, 28, 1893.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Temnocrinus Springer. Genotype: *Cyathocrinites tuberculatus* Miller.

Sagenocrinitidae (Flexibilia). Sil.

Springer, Amer. Geol., 30, p. 94, 1902; Jour. Geol., 14, p. 518, 1906; Zittel-Eastman Textb. Pal., 1, p. 204, 1913; Crin. Flexibilia, pp. 205, 207, 1920.

Temnocrinus tuberculatus (Miller).

Cyathocrinites tuberculatus Miller, Nat. Hist. Crin., p. 88, pl., fig. 1 (not fig. 2) 1821.—Goldfuss, Petref., p. 190, pl. 58, fig. A, 1831.—Phillips, in Murchison, Silur. Syst., p. 671, pl. 18, fig. 7, 1839.

Temnocrinus tuberculatus Springer, Amer. Geol., 30, p. 94, 1902; Jour. Geol., 14, p. 492, pl. 7, fig. 15, 1906; Crin. Flexibilia, p. 209, pl. 16, figs. 1-15, 1920.

Sil. (Wenlock-Transition ls.): Dudley, England.

Tenagocrinus Wanner. Genotype: *Embryocrinus sulcatus* Wanner.

Hypocrinidae (Inadunata-Fistulata). Permian.

Wanner, Neue Beitr. kennt. Perm. Echin. Timor, pp. 39, 48, 1929.

Tenagocrinus sulcatus (Wanner).

Embryocrinus sulcatus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 141, pl. 111 (16), fig. 17, 1916.

Tenagocrinus sulcatus Wanner, Neue Beitr. kennt. Perm. Echin. Timor, p. 49, text figs. 3, 4, pl. 2, figs. 7-14, 1929.

Permian: Koeafeoe, Timor.

Teratocrinus Wanner. Genotype: *T. spathulifer* Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped., 1916, p. 316, 1924. (Un-classified).

Teratocrinus spathulifer Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped., 1916, p. 316, pl. 21, figs. 12-31, 1924.

Permian: Basleo, Timor.

Tetrabrachiocrinus Yakovlev. Genotype: *T. fabianii* Yakovlev.

Poteriocrinitidae (Inadunata-Fistulata). Permian.

Yakovlev, Palaeontographia Ital., 34, p. 276, 1934.

Tetrabrachiocrinus fabianii Yakovlev.

Yakovlev, Palaeontographia Ital., 34, p. 276, pl. 19, figs. 7-12, 1934.

Permian: Sicily.

Tetracrinites Austin and Austin. Genotype: *T. formosus* Austin and Austin.

Austin and Austin, Ann. Mag. Nat. Hist., 10, p. 110, 1842.

Tetracrinus Bather, Treatise Zool. (Lankester), pt. 3, p. 203, 1900.

Tetracrinites formosus Austin and Austin.

Austin and Austin, Ann. Mag. Nat. Hist., 10, p. 110, 1842; 11, p. 203, 1843 (as *Tetramerocrinites*).

Sil.: Dudley, England.

Tetracrinus Bather = Tetracrinites.

Tetractocrinus Jaekel. Genotype: *T. compactus* Jaekel.

Jaekel, Pal. Zeits., 3, p. 25, 1918.

Tetractocrinus compactus Jaekel.

Jaekel, Pal. Zeits., 3, p. 26, fig. 19, 1918. (Possibly abnormal growth.)

Ord. (Walchow or Kunda fm.): St. Petersburg, Russia.

Tetramerocrinites Austin and Austin. Genotype: *T. simplex* Austin and Austin (nom. nud.).

Austin and Austin, Ann. Mag. Nat. Hist., 10, p. 110, 1842; 11, p. 203, 1843.

Tetramerocrinus Bather, Treatise Zool. (Lankester), pt. 3, p. 204, 1900.

Tetramerocrinites simplex Austin and Austin.

Austin and Austin, Ann. Mag. Nat. Hist., (1) 10, p. 110, 1842 (nom. nud.); 11, p. 203, 1843 (as *T. formosus*).

Sil.: Dudley, England.

Tetramerocrinus Bather = Tetramerocrinites.

Texacrinus Moore and Plummer. Genotype: *T. gracilis* Moore and Plummer.

Poteriocrinitidae (Inadunata-Fistulata). Penn.

Moore and Plummer, Univ. Texas Pub. no. 3945, p. 143, 1940.

Texacrinus gracilis Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. no. 3945, p. 144, pl. 15, fig. 4, pl. 21, fig. 5, text fig. 22, 1940.

Penn. (Millsap Lake fm.-Brannon Bridge ls.): 3 miles southwest of Brock, Parker Co., Texas.

Thalamocrinus Miller and Gurley. Genotype: *T. ovatus* Miller and Gurley.

Palaeocrinidae (Inadunata-Fistulata). Sil.

Miller and Gurley, Ill. St. Mus., Bull. 7, p. 81.—Springer, Amer. Sil. Crin., p. 131, 1926.

Thalamocrinus cylindricus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 7, p. 82, pl. 5, figs. 32, 33, 1895.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 754, fig. 1401, 1897.—Springer, Amer. Sil. Crin., p. 132, pl. 26, figs. 6-9, 1926.

Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.

Thalamocrinus elongatus Springer.

Springer, Amer. Sil. Crin., p. 132, pl. 26, fig. 11, 1926.

Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.

Thalamocrinus globosus Springer.

Springer, Amer. Sil. Crin., p. 132, pl. 26, figs. 10-10b, 1926.
 Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.

Thalamocrinus ovatus Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 7, p. 82, pl. 5, figs. 29-31, 1895.—S. A. Miller, N. Amer. Geol. Pal., 2d App., p. 754, fig. 1402, 1897.—Springer, Amer. Sil. Crin., p. 131, pl. 26, figs. 2-5, 1926.
 Sil. (Niagaran-Beech River fm.): Decatur Co., Tenn.

Thalassocrinus Wanner = *Peripterocrinus*.

Thallocrinus Jaekel. Genotype: *T. hauchecornei* Jaekel.

Platycrinidae (Adunata). Dev.

Jaekel, Pal. Abhandl., 7, p. 106, 1895.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, pp. 39, 142, 1934.

Thallocrinus hauchecornei Jaekel.

Jaekel, Pal. Abhandl., 7, p. 106, pl. 8, fig. 1, 1895.—Ehrenberg, Acta Zool., 3, pp. 279, 280, fig. 11, 1922.—Opitz, Natur und Museum, 61, heft 4, p. 165, fig. 2, 1931.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, pp. 39, 40, text figs. 52-b, pl. 22, fig. 2, pl. 25, fig. 2, pl. 29, fig. 1, pp. 142, 146, 1934.

Hapalocrinus elegans Opitz, Bilder Erdgesch. Nahe-Hunsrück-Landes, p. 95, fig. 92, 1932.

Agriocrinus inermis Opitz, Bilder Erdgesch. Nahe-Hunsrück-Landes, p. 99, fig. 96, 1932.

Low. Dev. (Hunsrück sl.): Bundenbach, Germany.

Thallocrinus hauchecornei Opitz = *T. procerus*.

Thallocrinus procerus Schmidt.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 43, text fig. 5 c-cs, pl. 3, fig. 3, pl. 25, fig. 1, pp. 142, 146, 1934.

Agriocrinus inermis Klahn, Palaeobiologica, 2, pp. 297, 301, pl. 28, 1926.

Thallocrinus hauchecornei Opitz, Bilder Erdges. Nahe-Hunsrück-Landes, p. 100, fig. 98, 1932.

Low. Dev. (Hunsrück sl.): Bundenbach, Germany.

Thallocrinus rugosus Schmidt.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 44, pl. 4, fig. 1, pp. 142, 146, 1934.

Low. Dev. (Hunsrück sl.): Bundenbach, Germany.

Thamnocrinus Goldring. Genotype: *T. springeri* Goldring.

Periechocrinitidae (Camerata). Dev.

Goldring, N. Y. St. Mus., Mem. 16, p. 239, 1923.

Thamnocrinus devonicus (Springer).

Dorycrinus devonicus Springer, Mem. Mus. Comp. Zool., Harvard, 25, no. 3, p. 120, pl. 3, figs. 12 a-d, 13, 1911.

Thamnocrinus devonicus Goldring, N. Y. St. Mus., Mem. 16, p. 239, 1923.

Dev. (Hamilton-Sellersburg ls.): Charlestown, Ind.

Thamnocrinus springeri Goldring.

Goldring, N. Y. St. Mus., Mem. 16, p. 243, text fig. 48, pl. 26, figs. 8-10, 1923.

Dev. (Hamilton-Moscow sh.): Cashong Creek, near Bellona, N. Y.

Thenarocrinus Bather. Genotype: *T. callipygus* Bather.

Dendrocrinidae (Inadunata-Fistulata). Sil.

Bather, Ann. Mag. Nat. Hist., (6) 5, pp. 334, 380, 1890; Treatise Zool. (Lankester), pt. 3, p. 179, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 215, 1913.

Thenarocrinus callipygus Bather.

Thenarocrinus callipyge Bather, Ann. Mag. Nat. Hist., (6) 5, p. 334, pl. 14, fig. 14; 6, p. 224, pl. 10, figs. 1-9, p. 227, figs. 1-9, 1890.

Thenarocrinus callipygus Bather, Ann. Mag. Nat. Hist., (6) 7, p. 35, pl. 1, figs. 1-3, 1891.

Sil. (Wenlock ls.): Dudley, England.

Thenarocrinus gracilis Bather.

Bather, Ann. Mag. Nat. Hist., (6) 7, p. 36, pl. 1, figs. 4, 5, 1891.

Sil. (Wenlock ls.): Dudley, England.

Thetidicrinus Wanner. Genotype: *T. piriformis*, Wanner.

Hypocrinidae (Inadunata-Fistulata). Permian.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 112, text fig. 29, pl. 102 (7), figs. 12-15, 1916; Neue Beitr. kennt. Perm. Echin. Timor, III, p. 3, pl. 1, figs. 1-4, 1930; Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 126, text fig. 34, pl. 9, figs. 7-10, 1937.

Thetidicrinus piriformis Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 112, text fig. 29, pl. 102 (7), figs. 12-15, 1916; Neue Beitr. kennt. Perm. Echin. Timor, III, p. 3, pl. 1, figs. 1-4, 1930; Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 126, text fig. 34, pl. 9, figs. 7-10, 1937.

Permian: Basleo, Timor.

Tholocrinus Kirk. Genotype: *Hydreionocrinus spinosus* Wood.

Poteriocrinidae (Inadunata-Fistulata). Miss.

Kirk, Jour. Washington Acad. Sci., 29, no. 11, p. 470, 1939.

Tholocrinus armiger (Meek and Worthen).

Zeacrinus? armiger Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 27, 1870.

Poteriocrinites (Zeacrinus?) armiger Meek and Worthen, Geol. Surv. Ill., 5, p. 547, pl. 21, fig. 3, 1873.

Tholocrinus armiger Kirk, Jour. Washington Acad. Sci., 29, no. 11, p. 471, 1939.

Miss. (Chester): Pope Co., Ill. (Okaw ls.); Grayson Springs and Sloans Valley, Ky. (Glen Dean ls.).

Tholocrinus spinosus (Wood).

Hydreionocrinus spinosus Wood, U. S. Nat. Mus., Bull. 64, p. 93, 1909.

Tholocrinus spinosus Kirk, Jour. Washington Acad. Sci., 29, no. 11, p. 471, 1939.

Hydreionocrinus depressus Wetherby, Jour. Cincinnati Soc. Nat. Hist., 3, p. 325, pl. 9, figs. 1-4, 6 (in error), 1881.—Springer, U. S. Nat. Mus., 67, art. 9, pp. 89, 90, pl. 26, figs. 1-12, 1926.

Xystocrinus depressus Moore and Plummer (part), Denison Univ. Bull., Jour. Sci. Lab., 32, p. 269, fig. 21, 1938.

Miss. (Chester-Glen Dean ls.): Pulaski Co., Ky.

Tholocrinus wetherbyi (Wachsmuth and Springer).

Hydreionocrinus wetherbyi Wachsmuth and Springer, Rev. Pal., pt. 3, p. 245 (169), 1886.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 89, pl. 25, figs. 4-12, 1926.

Tholocrinus wetherbyi Kirk, Jour. Washington Acad. Sci., 29, no. 11, p. 471, 1939.

Hydreionocrinus armiger Wetherby, Jour. Cincinnati Soc. Nat. Hist., p. 328, pl. 9, figs. 4-11, 1881.

Miss. (Chester-Glen Dean ls.): Sloans Valley, Pulaski Co., and Grayson Springs, Grayson Co., Ky.

Thuringocrinus Jaekel. Genotype: *T. saalfeldianus* Jaekel.

Poteriocrinidae (Inadunata-Fistulata). Up. Dev.

Jaekel, Pal. Zeits., 3, p. 61, 1918.

Thuringocrinus saalfeldianus Jaekel.

Jaekel, Pal. Zeits., 3, p. 62, fig. 52, 1918.

Up. Dev.: Saalfeld, Thuringia.

- Thylacocrinus Oehlert.** Genotype: *T. vannioti* Oehlert.
Rhodocrinitidae (Camerata). Dev.
Oehlert, Bull. Soc. Geol. France, (3) 7, p. 6, 1879 (adv. sep. 1878).—Zittel, Handb. Pal., 1, p. 375, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 2, pp. 184, 207 (358, 381), 1881; N. Amer. Crin. Cam., p. 248, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 200, 1900.
- Thylacocrinus clarki** Wachsmuth and Springer.
Wachsmuth and Springer, N. Amer. Crin. Cam., p. 248, pl. 13, figs. 11a, b, 1897.—Goldring, N. Y. St. Mus., Mem. 16, p. 105, pl. 4, figs. 1-4, 1923.
Dev. (Hamilton-Low. Moscow sh.): Canandaigua Lake and Vincent, N. Y.
- Thylacocrinus gracilis** (Hall).
Rhodocrinus (Acanthocrinus) gracilis Hall, 15th Rep. N. Y. St. Cab. Nat. Hist., p. 127, 1852 (sep., p. 99); N. Y. St. Mus. Nat. Hist., Bull. 1, pl. 1-A, fig. 7, 1872.
Thylacocrinus gracilis Goldring, N. Y. St. Mus., Mem. 16, p. 102, pl. 4, fig. 5, 1923.
Dev. (Hamilton-Low. Moscow sh.): North Bristol, Ontario Co., N. Y.
- Thylacocrinus vannioti** Oehlert.
Oehlert, Bull. Soc. Geol. France, (3) 7, p. 2, pl. 1, figs. 1-7, pl. 2, fig. 1, 1879; 10, p. 359, pl. 9, figs. 1, 1a, 1882.—Bather, Treatise Zool. (Lankester), pt. 3, p. 200, fig. 126, 1900.
Dev.: Mayenne, La Baconniere, St. Germain, St. Jean, France.
- Thysanocrinus** Hall = Dimerocrinites.
Thysanocrinus (Rhodocrinus) microbasalis Billings = *Archaeocrinus microbasalis*.
Thysanocrinus milliganae Miller and Gurley = *Gazacrinus milliganae*.
Thysanocrinus (Rhodocrinus) pyriformis Billings = *Archaeocrinus pyriformis*.
- Tiaracrinus** Schultze. Genotype: *T. quadrifrons* Schultze.
Pisocrinidae (Inadunata-Larviformia). Dev.
Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 226, 1867 (adv. pub. 1866).—Zittel, Handb. Pal., 1, p. 420, 1879.—Schlüter, Sitz. Nieder. Ges. Nat. Heilkunde, p. 211, 1881.—Bather, Treatise Zool. (Lankester), pt. 3, p. 57, 1900.—Springer, Amer. Sil. Crin., p. 81, 1926.
Staurosoma Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 21, 1887. (Genotype: *S. rarum* Barrande.)
- Tiaracrinus oehlerti** Schlüter.
Schlüter, Sitz. Nied. Gesell. Nat. Heilkunde, p. 212, 1881.
Dev. (Eifelian): Kerpen, Germany.
- Tiaracrinus quadrifrons** Schultze.
Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 226, pl. 13, fig. 8, 1867 (adv. pub. 1866, p. 114).—Springer, Amer. Sil. Crin., p. 81, pl. 25, figs. 27-27c, 1926.
Staurosoma rarum Barrande, Syst. Sil. Centre Bohême, 7, pt. 1, p. 82, pl. 31, case III, figs. 1-16, 1887.
Dev.: Nollenbach, Kerpen, Germany (Eifelian); Koniepruss, Bohemia.
- Tiaracrinus soyei** Oehlert.
Oehlert, Bull. Soc. Geol. France, (3) 10, p. 369, text fig., pl. 9, fig. 2, 1882.
Low. Dev.: Sable (Sarthe), France.
- Tiaracrinus tetraedra** Jaekel.
Jaekel, in Lotz, Jahrb. Preuss. Geol. Landesanst., Bergakad., 21, Th. 1, p. 77, text fig., 1901.
Mid. Dev.: Kellerwald, Germany.
- Timorechinus** Wanner. Genotype: *T. mirabilis* Wanner.
Poteriocrinitidae (Inadunata-Fistulata). Permian.
Wanner, Zeits. Induktive Abstamm. Vererb., 4, pp. 123-143, 1910.—Jaekel, Pal. Zeits., 3, p. 64, 1918.

- Timorocrinus* Wanner, Centralbl. Min. Geol., Pal., p. 599, 1912; Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 283, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, pp. 181, 269, 1924; Neue Beitr. kennt. Perm. Echin. Timor, V, Poteriocrinidae, p. 14, 1931. (Substituted for *Timorechinus*.)
- Timorocystis* Lambert, Revue Critique Palaeozool., p. 185, 1914.—Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 284, 1916 (footnote).
- Timorechinus decurtatus** (Wanner).
Timorocrinus decurtatus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 209, pl. 113 (18), fig. 10, 1916.
 Permian: Basleo, Timor.
- Timorechinus lacertosus** (Wanner).
Timorocrinus lacertosus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 273, pl. 11, figs. 9-12, 1924.
 Permian: Basleo, Timor.
- Timorechinus maximus** (Wanner).
Timorocrinus maximus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 277, pl. 11, figs. 13-15, 1924.
 Permian: Nefotassi and Basleo, Timor.
- Timorechinus mirabilis** Wanner.
 Wanner, Zeits. für Inductiv. Abstamm. und Vererb., 4, heft 2, p. 125, pl. 1, figs. 1-7, pl. 2, figs. 6, 10, 11 (not fig. 5 = *T. spinosus*), 1910; Centralbl. Min., Geol. Pal., p. 600, text fig. 1-5, 1912.
Timorocrinus mirabilis Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, pp. 286-296, text figs. 71-79, pl. 109 (14), fig. 11, pl. 112 (17), figs. 1-7, pl. 114 (19), figs. 1, 2, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 269, pl. 10, fig. 10, 1924; Neue Beitr. kennt. Perm. Echin. Timor, V, Poteriocrinidae, p. 15, pl. 2, figs. 13, 14, pl. 3, figs. 1-18, 1931.
Timorocrinus alatus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 298, pl. 112 (17), fig. 9, pl. 113 (18), figs. 1, 3, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 274, pl. 11, fig. 19, 1924.
 Permian: Basleo and Noil Fatoe, Timor.
- Timorechinus mirabilis major** (Wanner).
Timorocrinus alatus var. *major* Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 299, pl. 112 (17), fig. 8, pl. 114 (19), fig. 9, 1916.
 Permian: Koeafeo, Basleo, Timor.
- Timorechinus mirabilis vermistriatus** (Wanner).
Timorocrinus mirabilis var. *vermistriata* Wanner, Neue Beitr. kennt. Perm. Echin. Timor, V, Poteriocrinidae, p. 18, pl. 4, figs. 1-4, 1931.
 Permian: Basleo, Timor.
- Timorechinus mirabilis* Wanner (part) = *T. spinosus*.
- Timorechinus multicostatus** Wanner.
 Wanner, Zeits. Induktiv. Abatam. Vererb., 4, heft 2, p. 132, pl. 2, figs. 1-4, 1910.
Timorocrinus multicostatus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 270, pl. 10, figs. 11-15, 1924; Neue Beitr. Kennt. Perm. Echin. Timor, V, Poteriocrinidae, p. 19, pl. 3, fig. 19, pl. 4, figs. 5-10, pl. 5, fig. 1, 1931.
Timorocrinus mirabilis var. *multicosтата* Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, pp. 296, 298, text fig. 80, pl. 109 (14), fig. 12, pl. 112 (17), fig. 10, pl. 113 (18), fig. 2, pl. 114 (19), fig. 3, 1916.
Timorocrinus ovalus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 278, pl. 10, fig. 20, pl. 11, fig. 5, 1924.
Timorocrinus tenuicostatus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 275, pl. 11, figs. 6-8, 1924.
 Permian: Basleo, Timor.

Timorechinus nefotassiensis (Wanner).

Timorocrinus nefotassiensis Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 270, text figs. 61, 62, pl. 10, figs. 18, 19, 1924.

Permian: Nefotassi, Timor.

Timorechinus pentagonalis (Wanner).

Timorocrinus spinosus var. *pentagonalis* Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 305, pl. 113 (18), figs. 6, 7, pl. 114 (19), figs. 5-7, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 276, pl. 11, figs. 16, 17 (not figs. 2-4 = *T. pentagonalis* var. *nodosa*), 1924.

Timorocrinus pentagonalis Wanner, Neue Beitr. kennt. Perm. Echin. Timor, V, Poteriocrinidae, p. 24, pl. 5, figs. 7-10, 1931; Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 197, text fig. 69, 1937.

Timorocrinus spinosus var. *informis* Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 308, pl. 113 (18), fig. 12, pl. 114 (19), fig. 8, 1916.

Permian: Basleo, Timor.

Timorechinus pentagonalis nodosus (Wanner).

Timorocrinus pentagonalis var. *nodosa* Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 197, pl. 13, figs. 10-12, 1937.

Timorocrinus spinosus var. *pentagonalis* Wanner (part), Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 276, pl. 11, figs. 2-4 (not figs. 16, 17), 1924.

Permian: Basleo, Timor.

Timorechinus proboscideus (Wanner).

Timorocrinus proboscideus Wanner, Pal. Timor, XI, Perm. Echin. 1 Teil, p. 310, text fig. 87, pl. 113 (18), fig. 13, 1916; Beitr. Geol. Niederl.-Ind., abt. 4, pt. 2, p. 198, text fig. 70, pl. 13 figs. 13-16, 1937.

Permian: Basleo, Timor.

Timorechinus spinosus (Wanner).

Timorocrinus spinosus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 299, text figs. 81-85, pl. 113 (18), figs. 4, 5, 8, 11, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 276, pl. 11, fig. 1, 1924; Perm. Echin. Timor, V, Poteriocrinidae, p. 22, pl. 5, figs. 5, 6, 1931.

Timorechinus mirabilis Wanner, Zeits. Induktiv. Abatamm. Vererb., 4, heft 2, p. 125, pl. 2, fig. 5 (not figs. 6, 10, 11), 1910.

Permian: Noil Fatoe, Timor.

Timorechinus spinosus amarassicus (Wanner).

Timorocrinus spinosus var. *amarassica* Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, pl. 114 (19), fig. 4, 1916.

Permian: Koeafeoe, Timor.

Timorechinus spinosus incisus (Wanner).

Timorocrinus spinosus var. *incisus* Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 308, text fig. 86, pl. 113 (18), fig. 8, 1916.

Permian: Basleo, Timor.

Timorocidaris Wanner. Genotype: *T. sphaeracantha* Wanner.

Wanner, Konink. Akad. Wetens. Amsterdam, Proc., 22, p. 1, 1920 (Versl. Naturk. Afdeel. Akad. Wetens. Amsterdam, 23, p. 797, 1920).—Bather, Geol. Mag., 57, p. 371, 1920.

Timorocidaris sphaeracantha Wanner.

Wanner, Konink. Akad. Wetens. Amsterdam, Proc., 22, p. 697, pl. figs. 1-13, 1920. (?crinoid).

Permian: Basleo, Timor.

Timorocrinus Wanner = *Timorechinus*.

Timorocrinus alatus Wanner = *Timorechinus mirabilis*.

Timorocrinus mirabilis multicostata Wanner = *Timorechinus multicostatus*.

- Timorocrinus ovatus* Wanner = *Timorechinus multicostatus*.
Timorocrinus tenuicostatus Wanner = *Timorechinus multicostatus*.
Timorocrinus spinosus informis Wanner = *Timorechinus pentagonalis*.
Timorocrinus spinosus pentagonalis Wanner 1916 = *Timorechinus pentagonalis*.
Timorocrinus spinosus pentagonalis Wanner, 1924 (part) = *Timorechinus pentagonalis*; (part) = *T. pentagonalis nodosus*.
Timorocystis Lambert = *Timorechinus*.
Termoblastus Jaekel. Genotype: *T. bodae* Jaekel.
 Stephanocrinidae (Inadunata-Larviformia). Ord.
 Jaekel, Archiv. Zool., 19-A, no. 4, p. 1, 1927.
Termoblastus bodae Jaekel.
 Jaekel, Archiv. Zool., 19-A, no. 4, p. 6, pl. 1, 1927.
 Ord. (Leptaena ls.): Boda, Dalarne, Sweden.
Trautscholdicrinus Ivanov.
 Ivanov, Bull. Soc. Nat. Moscou, Geol. Ser., 34, p. 176, 1926.
 Species listed: *T. intermedius* Ivanov, *T. obliquus* Ivanov (nom. nud.).
 Carb.: Gouv. Moscow, Russia.
Trautscholdicrinus Moore and Plummer = *Talanterocrinus*.
Trematocrinus Hall = *Gilbertsocrinus*.
Trematocrinus papillatus Hall = *Gilbertsocrinus typus*.
Trematocrinus robustus Hall (not Münster) = *Gilbertsocrinus tuberosus*.
Triacrinus Ringueberg (not Münster) = *Pisocrinus*.
Triacrinus Münster. Genotype: *T. pyriformis* Münster.
 Pisocrinidae (Inadunata-Larviformia). Sil., Dev.
 Münster, Beitr. Petref., p. 3, 1839.—Zittel, Handb. Pal., 1, p. 348, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 174 (98), 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 149, 1900.—Jaekel, Pal. Zeits., 3, pp. 85, 89, 1918.
Trichocrinus Müller, Monatsber. K. Akad. Wiss., p. 354, 1856. (Genotype: *T. altus* Müller).
Triacrinus altus (Müller).
Trichocrinus altus Müller, Abhandl. Akad. Wiss., Berlin, p. 249, pl. 2, figs. 8-11; Monatsber., p. 355, 1856.
Triacrinus altus Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 221, pl. 12, fig. 9, 1867 (adv. pub. 1866, p. 109).—Springer, Amer. Sil. Crin., p. 74, pl. 25, figs. 15, 15a, b, 1926.
 Dev. (Eifelian): Eifel, Prüm, Kerpen, etc., Germany.
Triacrinus depressus (Müller).
Trichocrinus depressus Müller, Abhandl. Akad. Wiss., Berlin, p. 249, pl. 2, figs. 12-17; Monatsber., p. 355, 1856.
Triacrinus depressus Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 220, pl. 12, fig. 8, 1867 (adv. pub. 1866, p. 108).—Springer, Amer. Sil. Crin., p. 74, pl. 25, figs. 16, 16a, 17, 17a, b, 18, 18a, b, 1926.
 Dev. (Eifelian): Kerpen and Prüm, Eifel, Germany.
Triacrinus elongatus Follmann.
 Follman, Verh. Nat. Hist. Preuss. Rheinl., 4, p. 114, pl. 1, figs. 1, 1a, 1887.—Jaekel, Pal. Abhandl., 7, p. 46, pl. 3, fig. 1, 1895.—Frech, Leth. Pal., pp. 145, 146, pl. 23-B, figs. 5a, 5b, 1897-1902.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n. f., heft 163, p. 22, pl. 2, fig. 3, pl. 12, fig. 2, text fig. 2a, b, pp. 140, 144, 1934.
 Dev. (Hunsrück sl.): Gemunden, near Birkenfeld, Germany.
Triacrinus elongatus Opitz = *T. kutscheri*.

Triacrinus gothlandicus Quenstedt.

Quenstedt, Petref. Deutsch., 4, p. 631, pl. 112, figs. 40-42, 1876.
Sil. (Gotlandian): Island of Gotland.

Triacrinus granulatus Münster.

Münster, Beit. Petref., p. 3, pl. 1, figs. 4 a-c, 1830.
Up. Dev. (Famennian-Clymenia ls.): Near Schubelhammer, Germany.

Triacrinus koenigswaldi Schmidt.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 23, text fig. 2c, p. 25, pl. 2, figs. 1, 2, pl. 26, fig. 1, pp. 140, 144, 1934.
Dev. (Hunsrück sl.): Bundenbach, Germany.

Triacrinus kutscheri Schmidt.

Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 163, p. 23, text fig. 2d, p. 26, pl. 2, figs. 4a, b, pl. 34, fig. 5, 1934.
Triacrinus elongatus Opitz, Bilder. Erdges. Nahe-Hunsrück-Landes, Birkenfeld, p. 110, 1932.

Dev. (Hunsrück sl.): Muhlenberg, near Bundenbach, Germany.

Triacrinus polydonta Roemer.

Roemer, Palaeontographica, 13, p. 222, 1886.
Mid. Dev. (Eifelian-Wissenbach beds): Lerbach, Harz, Germany.

Triacrinus pyriformis Münster.

Münster, Beitr. Petref., p. 3, pl. 1, figs. 4 a-c, 1839.—Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 122, p. 6, figs. 1, 1930.
Up. Dev. (Famennian-Clymenia ls.): Schubelhammer, Fichtelbirge, Germany.

Tribliocrinus Springer. See *Trybliocrinus*.**Tribrachiocrinus** McCoy. Genotype: *T. clarkii* McCoy.

Poteroicrinidae (Inadunata-Fistulata). Carb.; Permian.

McCoy, Ann. Mag. Nat. Hist., 20, p. 228, 1847 (as *Tibrachyocrinus*).—Pictet, Traite Pal., 4, p. 321, 1859.—Wachsmuth and Springer, Rev. Pal., pt. 3, p. 250 (174), 1886.—Bather, Ann. Mag. Nat. Hist., (6) 5, p. 332, pl. 14, fig. 35, 1890.—Etheridge, Mem. Geol. Surv. New South Wales, p. 82, 1892.—Bather, Geol. Mag., (3) 10, p. 82, 1893; Treatise Zool. (Lankester), pt. 3, p. 181, 1900.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 179, 1924.

Tibrachiocrinus caledonicus Wright.

Wright, Geol. Mag., 73, p. 402, pl. 10, figs. 3, 8, 10, 1936; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 41, pl. 6, figs. 1, 3, 9, 12-18, pl. 12, fig. 24, 1939.
Low. Carb. (Low. Ls. gr.): Near Kirkcaldy, Fife, Scotland.

Tibrachiocrinus clarkii McCoy.

McCoy, Ann. Mag. Nat. Hist., 20, p. 228, pl. 12, figs. 2 a-c, 1847.—De Koninck, Foss. Pal. nouv. Galles Sud (Australia), p. 161, pl. 6, fig. 5, 1876-77.
Low. Carb.: Darlington, near Sydney, New South Wales, Australia.

Tibrachiocrinus corrugatus Ratte.

Ratte, Proc. Linn. Soc. N. S. W., 9, pt. 4, p. 1, pl. 68; 1885; (2) 1, p. 1069, pl. 16, 1887.
Permian (Up. Marine ser.): Wallongong, New South Wales, Australia.

Tibrachiocrinus granulatus Etheridge.

Etheridge, Mem. Geol. Surv. N. S. W., Pal., p. 97, pl. 22, figs. 2, 3, 1892.
Permian (Up. Marine ser.): Banks of Minumurra River, near Jamberoo, Co. Camden, Australia.

Tibrachiocrinus ornatus Etheridge.

Etheridge, Mem. Geol. Surv. N. S. W., Pal., p. 94, pl. 19, 1892.
Permian (Nowra grit): Nowra, Co. St. Vincent, Australia.

Tribrachioocrinus tasmanicus Johnson.

Johnson, Proc. Roy. Soc. Tasmania for 1886, p. 233, fig. opp. p. 232, 1887.

Permian (Pachydomus beds): Madstone Cliffs, Shot Tower, Browns River Road, Darlington, Moira Is, Tasmania.

Tribrachyoocrinus McCoy. See *Tribrachioocrinus*.

Trichocrinus (Müller) = *Triacrinus*.

Trichotocrinus Olsson. Genotype: *T. harrisi* Olsson.

Melocrinitidae (Camerata). Dev.

Olsson, Bull. Amer. Pal., 5, p. 27, 1912.

Trichotocrinus harrisi Olsson.

Melocrinus (*Trichotocrinus*) *harrisi* Olsson, Bull. Amer. Pal., 5, p. 29, pl. 6, figs. 1, 2, 1912.—Goldring, N. Y. St. Mus., Mem. 16, p. 148, text figs. 37, 38, pl. 16, fig. 6, 1923.

Dev. (Portage-Ithaca beds): Ithaca, N. Y.

Trichotocrinus lutheri Goldring.

Melocrinus (*Trichotocrinus*) *lutheri* Goldring, N. Y. St. Mus., Mem. 16, p. 149, pl. 16, figs. 7-12, 1923.

Dev. (Portage-West Hill flags): Italy Hollow, near Naples, N. Y.

Trimerocrinus Ivanov.

Ivanov, Bull. Soc. Nat. Moscow, Geol. Ser., 34, p. 176, 1926. (Nom. nud.)

Species listed: *T. conicus*, *elegantulus*, and *simplex*. Carb.: Gov. Moscow, Russia.

Trimerocrinus Wanner. Genotype: *T. pumilus* Wanner.

Poteriocrinitidae (Inadunata-Fistulata). Permian.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 143, 1916; Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 179, 1924.

Trimerocrinus minimus Wanner.

Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 163, pl. 10, figs. 27, 28, 1937.—Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 333, pl. 4, fig. 2, 1940.

Permian: Toboe Lopo (Basleo), Timor.

Trimerocrinus pentagonus Wanner = *T. pumilus pentagonus*.

Trimerocrinus pumilus Wanner.

Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 144, text fig. 40, p. 143, pl. 104 (9), fig. 2, 1916; Neue Beitr. kennt. Perm. Echin. Timor, V, Poteriocrinidae, p. 1, pl. 1, figs. 1, 2, 5 (not figs. 3, 4), 1931.

Trimerocrinus ventricosus Wanner, Pal. Timor, XI, Perm. Echin. Timor, 1 Teil, p. 146, text fig. 41, pl. 104 (9), fig. 3, 1916.

Permian: Basleo, Timor.

Trimerocrinus pumilus Wanner (part) = *T. pumilus pentagonus*.

Trimerocrinus pumilus pentagonus Wanner.

Trimerocrinus pentagonus Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 207, pl. 10, figs. 7-9, 1924.

Trimerocrinus pumilus pentagonus Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 162, text figs. 56, 57, 1937.

Trimerocrinus pumilus Wanner (part), Neue Beitr. kennt. Perm. Echin. Timor, V, Poteriocrinidae, p. 1, pl. 1, figs. 3, 4 (not figs. 1, 2, 5), 1931.

Permian: Basleo, Timor.

Trimerocrinus platypleura Yakovlev.

Yakovlev, Bull. Geol. Prosp. Serv. USSR, 49, pp. 96, 101, pl. 1, figs. 6 a-c, 1930.

Permian: Krasnooufimsk, Russia.

Trimerocrinus ventricosus Wanner = *T. pumilus*.

Triplariocrinites Goldfuss = *Hexacrinites*.

- Triplariocrinus Zittel = Hexacrinites.
 Tripleurocrinus Wood = Myrtillocrinus.
 Trochocrinites Portlock = Periechocrinites.
 Trochocrinites gotlandicus Pander = Lindstroemioocrinus.
 Trochocrinus Bather = Periechocrinites.
Trophocrinus Kirk. Genotype: *T. tumidus* Kirk.
 Allagecrinidae (Inadunata-Larviformia). Miss.
 Kirk, Jour. Washington Acad. Sci., 20, p. 210, 1930.—Moore, Denison Univ. Bull., 40, Jour. Sci. Lab., 35, p. 78, 1940.
Trophocrinus corpulentus Peck.
 Peck, Jour. Pal., 10, p. 287, pl. 46, figs. 23-26, 1936.
 Miss. (Fern Glen ls.): $\frac{3}{4}$ mile south of Kimmswick, Ste. Genevieve Co., Mo.
Trophocrinus exsertus Peck.
 Peck, Jour. Pal., 10, p. 285, pl. 47, figs. 10-14, 21, 22, 25, 26, 1936.
 Miss. (Chouteau ls.): 3 miles northwest Browns Station, south of Providence, Mo.
Trophocrinus tumidus Kirk.
 Kirk, Jour. Washington Acad. Sci., 20, p. 211, text figs. 1-4, 1930.
 Miss. (Sycamore ls.): Railroad cut south of Ada, Okla.
Trybliocrinus Geinitz. Genotype: *Glyptocrinus* (in error for *Trybliocrinus*) *flatheanus* Geinitz.
 Clonocrinidae (Camerata). Dev.
 Geinitz, Neues Jahrb. Min., p. 284, 1867.—Springer, Zittel-Eastman Textb. Pal., 1, p. 191, 1913 (as *Trybliocrinus*).
Spyridiocrinus Oehlert. Bull. Soc. Géol. France, (3) 17, p. 786, 1889.—Bather, Treatise Zool., (Lankester), pt. 3, p. 163, 1900. (Genotype: *S. cheuxi* Oehlert.)
Trybliocrinus cheuxi (Oehlert).
Spyridiocrinus cheuxi Oehlert, Bull. Soc. Géol. France, (3) 17, p. 786, figs. 1, 2, 1889; 19, p. 223, pls. 7, 8, 1891.
 Low. Dev.: Fourneaux, near Angers, France.
Trybliocrinus flatheanus (Geinitz).
Glyptocrinus flatheanus Geinitz, Neues Jahrb. Min., Geol. Pal., p. 286, pl. 3, figs. 1, 2, 1867 (in error for *Trybliocrinus flatheanus*).
 Dev.: Arnao, Asturias, Spain.
Tundracrinus Yakovlev. Genotype: *T. polaris* Yakovlev.
 Poteriocrinitidae (Inadunata-Fistulata). Permian.
 Yakovlev. Trav. Mus. Geol. Leningrad, 3, p. 1, 1928.
Tundracrinus polaris Yakovlev.
 Yakovlev, Trav. Mus. Geol. Leningrad, 3, p. 1, pl. 1, pl. 2, figs. 1-3, 1928.
 Permian: Bolchezemelakaya, Toundra, Russia.
 Turbinicrinites Troost. See Cytocrinus.
 Turbinicrinites verneuili Troost = Cytocrinus laevis.
 Turbinoocrinus Wachsmuth and Springer and authors = Cytocrinus.
 Tyloocrinus Wood = Megistocrinus.
Tytthocrinus J. M. Weller. Genotype: *T. comptus* J. M. Weller.
 Hypocrinidae (Inadunata-Fistulata). Penn.
 J. M. Weller, St. Geol. Surv. Ill., Rep. Invest. no. 21, p. 35, 1930.
Tytthocrinus comptus J. M. Weller.
 J. M. Weller, St. Geol. Surv. Ill., Rep. Invest. no. 21, p. 35, text fig. 7, pl. 2, figs. 7a, b, 1930.
 Low. Penn.: N. $\frac{1}{2}$ Sec. 35, T. 21 N., R. 9 W., Warren Co., Ind.

- Ulocrinus** Miller and Gurley. Genotype: *U. buttsi* Miller and Gurley.
Poteriocrinitidae (Inadunata-Fistulata). Carb.; Perm.
- Miller and Gurley, Jour. Cincinnati Soc. Nat. Hist., 13, pp. 6, 7, 1890.—Bather, Geol. Mag., (4) 6, p. 33, 1899; Treatise Zool. (Lankester), pt. 3, p. 181, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 224, 1913.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 170, 1924.—Wright, Geol. Mag., 64, p. 363, 1927.—Moore and Plummer, Univ. Texas Pub. no. 3945, pp. 336, 351, 1940.
- Ulocrinus americanus** (Weller).
Phialocrinus americanus Weller, Jour. Geol., 17, p. 625, pl. 1, figs. 8, 9, 1909.
Ulocrinus americanus Moore and Plummer, Univ. Texas Pub. no. 3945, p. 338, pl. 19, fig. 6, text fig. 67, 1940.
Permian (Cibolo ls.); 3 miles north of Shafter, Presidio Co., Texas.
- Ulocrinus blairi** Miller and Gurley = *Parulocrinus blairi*.
- Ulocrinus bockshii** (Geinitz).
Poteriocrinus bockshii Geinitz, Grund. Verstein., p. 549, pl. 23, fig. 13, 1846.
Ulocrinus bockshii Schmidt, Abhandl. Preuss. Geol. Landesanst., n.f., heft 122, p. 58, pl. 3, figs. 17, 18, 1930.—Wright, Geol. Mag., 75, p. 344, pl. 14, figs. 1, 3-6, 1938; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 28, pl. 6, figs. 2, 7, 8, text figs. 19-30, 1939.
Hydreionocrinus? globularis de Koninck, Bull. Acad. Roy. Belge, 4, pt. 2, p. 101, pl. 2, figs. 1-4, 1858.
Ulocrinus globularis Bather, Trans. Geol. Soc. Edinburgh, 10, pt. 1, p. 74, text fig. 14, 1912; Trans. Geol. Soc. Glasgow, 16, pt. 2, pp. 207-217, text fig. 3, 1917.—Wright, Geol. Mag., 64, pp. 356-364, figs. 1-57a, 1927.
Low. Carb.: Near Altwasser, Germany; Inverteil, near Glasgow, etc., Scotland (Low. Ls. gr.).
- Ulocrinus buttsi** Miller and Gurley.
Miller and Gurley, Jour. Cincinnati Soc. Nat. Hist., 13, p. 7, pl. 1, figs. 5, 6, 1890; 16th Rep. Geol. Nat. Res. Ind., p. 331, pl. 1, figs. 5, 6, 1890.—Bather, Treatise Zool. (Lankester), pt. 3, p. 122, fig. 29-2, 1900.
Penn. (Missouri ser.-?Argentine ls.): Kansas City, Mo.
- Ulocrinus conoideus** Wanner.
Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 150, text fig. 46, 1937.
Permian: Basleo, Timor.
- Ulocrinus convexus** (Strimple).
Ethelocrinus convexus Strimple. Bull. Amer. Pal., 24, no. 87, p. 13 (373), pl. 1, figs. 11, 12, 15, 16, 1939.
Ulocrinus convexus Moore and Plummer, Univ. Texas Pub. no. 3945, p. 337 (footnote), 1940.
Penn. (Stanton ls.): West of Bartlesville, Okla.
- Ulocrinus dollolus** Wright.
Wright, Geol. Mag., 73, p. 404, text figs. 28-32, pl. 9, fig. 5, 1936; 75, p. 344, pl. 14, fig. 2, 1938; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 30, pl. 2, fig. 2, pl. 8, fig. 12, text figs. 31-35, 1939.
Low. Carb. (Calcif. ss. ser.): St. Andrews, Scotland.
- Ulocrinus globularis** Bather = *U. bockshii*.
- Ulocrinus? goliathus** (Waagen).
Cyathocrinus goliathus Waagen, Mem. Geol. Surv. India, ser. 8 (Pal. Indica), p. 823, pl. 96, figs. 6-12, 1885.—Valette, Mem. Serv. Carte Geol. Tunisie, n.s., no. 1, p. 97, pl. fig. 11, 1934.
Ulocrinus? goliathus Moore and Plummer, Univ. Texas Pub. no. 3945, p. 337, 1940.
Permian (Productus ls.): Salt Range, Virgal, India; ?Tunis.

Ulocrinus indicus Wanner.

Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 189, text fig. 19, pl. 16, figs. 17-21, 1924.

Permian: Basleo, Timor.

Ulocrinus kansasensis Miller and Gurley.

Miller and Gurley, Jour. Cincinnati Soc. Nat. Hist., 13, p. 8, pl. 1, figs. 7-10; 16th Rep. Geol. Nat. Res. Ind., p. 332, pl. 1, figs. 7-10, 1890.—S. A. Miller, N. Amer. Geol. Pal., First App., p. 683, fig. 1253, 1892.

Cromyocrinus kansasensis Keyes, Geol. Surv. Mo., 4, pt. 1, p. 216, pl. 24, fig. 7, 1894.

Ulocrinus kansasensis Bather, Treatise Zool. (Lankester), pt. 3, p. 122, figs. 29-3, 4, 1900.

Penn. (Missouri ser.-?Argentine ls.): Kansas City, Mo.

Ulocrinus nuciformis Hind = *Cromyocrinus nuciformis*.

Ulocrinus occidentalis Miller and Gurley.

Miller and Gurley, Ill. St. Mus., Bull. 3, p. 53, pl. 6, figs. 6-8, 1894.—Plummer and Moore, Univ. Texas Bull. no. 2132, p. 79, pl. 13, fig. 3, p. 169, pl. 23, fig. 13, 1921.

Penn.: Gilpin, Mo. (?Argentine ls.); Mineral Wells, Tex. (Strawn fm.); Graham, Tex. (Cisoo fm.).

Ulocrinus sangamonensis (Meek and Worthen).

Cyathocrinus? sangamonensis Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 392, 1860; Geol. Surv. Ill., 2, p. 310, pl. 26, figs. 1a, b, text fig. 31, 1866.

Cromyocrinus sangamonensis Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 2, p. 249 (173), 1886.

Ulocrinus sangamonensis Mather, Bull. Sci. Lab. Denison Univ., 18, p. 104, 1915.—Moore and Plummer, Univ. Texas Pub. no. 3945, p. 337, 1940.

Penn.: Sugar Creek, Sangamon Co., Ill.

Ulocrinus uralensis Yakovlev.

Yakovlev, Bull. Geol. Prosp. Serv. USSR, 49, pp. 95, 102, pl. 1, figs. 11 a-c, 1930.

Permian: Krasnooufmsk, Russia.

Ulrichicrinus Springer. Genotype: *U. oklahoma* Springer.

Poteriocrinidae (Inadunata-Fistulata). Penn.

Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 75, 1926.—Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 250, 1938.

Ulrichicrinus coryphaeus (S. A. Miller).

Poteriocrinus coryphaeus S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 654, pl. 9, fig. 1, 1892 (adv. pub. 1891, p. 44); N. Amer. Geol. Pal., 2d App., p. 751, fig. 1386, 1897.—Beede, 30th Rep. Geol. Nat. Res. Ind., p. 1256, pl. 13, figs. 1, 1a, 1906.

Ulrichicrinus coryphaeus Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 76, pl. 20, fig. 3, 1926.

Miss. (Keokuk ls.): Indian Creek, Montgomery Co., and Canton, Ind.

Ulrichicrinus oklahoma Springer.

Springer, U. S. Nat. Mus., 67, art. 9, p. 76, pl. 20, figs. 1, 2, 1926.—Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 250, text fig. 10, 1938.

Penn. (Wapanucka ls.): Near Crittenden, Oklahoma.

Uperocrinus Meek and Worthen. Genotype: *Actinocrinus pyriformis* Shumard.

Batocrinidae (Camerata). Miss.

Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 153, 1865.—Springer, Zittel-Eastman Textb. Pal., 1, p. 196, 1913.

Hyperocrinus Bather, Zool. Rec., 34, p. 117, 1897; Treatise Zool. (Lankester), pt. 3, p. 168, 1900.

Lobocrinus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 434, 1897.—Wood, U. S. Nat. Mus., Bull. 64, p. 74, 1909.—Springer, Zittel-Eastman Textb. Pal., 1, p. 196, 1913. Genotype: *Actinocrinites nashvillae* (Troost) Hall.

Uperocrinus aequibrachiatus (McChesney).

Actinocrinus aequibrachiatus McChesney, Descr. N. Sp. Foss., p. 25, 1860; Illustr. N. Sp. Foss., pl. 4, figs. 2a, b, pl. 10, fig. 1, 1865; Trans. Chicago Acad. Sci., 1, p. 21, pl. 4, figs. 2, 5, p. 19, text fig., 1868.

Lobocrinus aequibrachiatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 440, pl. 29, fig. 8, pl. 46, fig. 6, 1897.

Miss. (Up. Burlington ls.): Monmouth, Ill.; Burlington, Iowa; Louisiana, Mo.

Uperocrinus aequibrachiatus asteriscus (Meek and Worthen).

Actinocrinus asteriscus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 385, 1860.

Actinocrinus (Batocrinus) asteriscus Meek and Worthen, Geol. Surv. Ill., 2, p. 207, pl. 15, figs. 8 a-c, 1866.

Lobocrinus aequibrachiatus var. *asteriscus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 441, pl. 29, figs. 9a, b, 1897.

Actinocrinus aequibrachiatus var. *alatus* Hall, Jour. Boston Soc. Nat. Hist., 7, p. 263; Descr. N. Sp. Crin., p. 1, 1861; N. Y. St. Mus., Bull. 1, pl. 3, figs. 21-23, 1872.

Miss. (Upper Burlington ls.): Cedar Creek, Warren Co., and Monmouth, Ill., Burlington, Iowa, and Hannibal, Mo.

Uperocrinus dubius (Rowley).

Lobocrinus dubius Rowley, Amer. Geol., 29, p. 306, pl. 18, fig. 11, 1902.

Miss. (Low. Burlington ls.): Near Louisiana, Mo.

Uperocrinus dubius pustulosus (Rowley).

Lobocrinus dubius var. *pustulosus* Rowley, Amer. Geol., 29, p. 307, pl. 18, fig. 12, 1902.

Miss. (Low. Burlington ls.): Louisiana, Mo.

Uperocrinus hageri (McChesney).

Actinocrinus hageri McChesney, Descr. N. Sp. Foss., p. 28, 1860; Illustr. N. Sp. Foss., pl. 4, fig. 1, pl. 10, fig. 3, 1865; Trans. Chicago Acad. Sci., 1, p. 21, pl. 4, fig. 1, p. 22, text fig., 1868.

?*Lobocrinus hageri* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 445, pl. 30, figs. 9, 10, 1897.

Miss. (Up. Burlington ls.): Burlington, Iowa.

Uperocrinus inflatus (Rowley and Hare).

Batocrinus inflatus Rowley and Hare, Kansas City Sci., 5, p. 102, pl. 2, fig. 19, 1891.

Lobocrinus inflatus Wachsmuth and Springer, N. Amer. Crin. Cam., p. 444, pl. 34, figs. 18a, b, 1897.

Batocrinus bulbosus Rowley and Hare, Kansas City Sci., 5, p. 114, pl. 3, fig. 5, 1891.

Miss. (Low. Burlington ls.): Louisiana, Mo.

Uperocrinus insolitus (Rowley).

Lobocrinus insolitus Rowley, Amer. Geol., 29, p. 307, pl. 18, fig. 13, 1902.

Miss. (Low. Burlington ls.): White Ledge, Mo.

Uperocrinus longirostris (Hall).

Actinocrinus longirostris Hall, Geol. Rep. Iowa, 1, pt. 2, p. 589, pl. 11, figs. 2, 2a, b (4c, 4d on pl. by error), text fig. 83, 1858.

Batocrinus longirostris Wachsmuth and Springer, Rev. Pal., pt. 2, p. 167 (341), pl. 19, figs. 16, 17, 1881.—Keyes, Geol. Surv. Mo., 4, p. 180, pl. 24, fig. 5, 1894.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 34, text fig. 22, 1900.

Lobocrinus longirostris Wachsmuth and Springer, N. Amer. Crin. Cam., p. 442, pl. 5, fig. 15, pl. 28, figs. 1 a-e, 1897.

Batocrinus casedayanus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 353, 1868; Geol. Surv. Ill., 5, p. 370, pl. 5, fig. 1, 1873.—Wachsmuth and Springer N. Amer. Crin. Cam., p. 443, 1897.

Miss. (Low. Burlington ls.): Burlington, Iowa; Louisiana, Mo.

Uperocrinus nashvillae (Troost).

- Actinocrinites nashvillae* Troost, Amer. Jour. Sci. and Arts, (2) 8, p. 419, 1849.
Actinocrinus nashvillae Hall, Geol. Rep. Iowa, 1, pt. 2, p. 609, pl. 15, fig. 4, pl. 16, figs. 4a, b, 1858.
Batocrinus nashvillae Worthen, Geol. Surv. Ill., 8, p. 85, pl. 13, fig. 5, 1890.
Lobocrinus nashvillae Wachsmuth and Springer, N. Amer. Crin. Cam., p. 435, pl. 31, fig. 1, 1897.—Wood, U. S. Nat. Mus., Bull. 64, p. 75, pl. 6, figs. 1-4, 1909.
 Miss.: Whites Creek Springs, Tenn., Allen and Barren Cos., Ky. (Ft. Payne ls.); Keokuk, Iowa, Warsaw and Nauvoo, Ill. (Keokuk ls.).

Uperocrinus nashvillae subtractus (White).

- Actinocrinus nashvillae* var. *subtractus* White, Proc. Boston Soc. Nat. Hist., 9, p. 16, 1865 (adv. pub. 1862).
Lobocrinus nashvillae var. *subtractus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 436, pl. 31, figs. 2a, b, 1897.
 Miss. (Up. Burlington ls.): Burlington, Iowa, Nauvoo and Sagetown, Ill.

Uperocrinus pyriformis (Shumard).

- Actinocrinus pyriformis* Shumard, Geol. Surv. Mo., 1, p. 192, pl. A, figs. 6a, b, 1855; Geol. Rep. Iowa, 1, pt. 2, Suppl., pl. 2, fig. 8, 1860.
Batocrinus pyriformis Meek and Worthen, Geol. Surv. Ill., 5, p. 375, pl. 5, fig. 5, 1873; Keyes, Geol. Surv. Mo., vol. 4, p. 182, pl. 23, fig. 7, 1894.
Lobocrinus pyriformis Wachsmuth and Springer, N. Amer. Crin. Cam., p. 437, pl. 31, figs. 3 a-e, 1897.
Actinocrinus pyriformis var. *rudis* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 131, 1861.
Actinocrinus (*Uperocrinus*) *pistiliformis* Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 153, 1865.
 Miss.: Near Palmyra, Mo., Burlington, Iowa, Sagetown, Ill. (Up. Burlington ls.); Sedalia, Mo. (Chouteau ls.).

Uperocrinus robustus (Wachsmuth and Springer).

- Lobocrinus robustus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 436, pl. 30, figs. 8a, b, 1897.
Actinocrinites holbrookii (Troost, Ms.) Wood, U. S. Nat. Mus., Bull. 64, p. 76, 1909.
 Miss. (Ft. Payne ch.): Whites Creek Springs, etc., Tenn.

Uperocrinus spiniferus (Wachsmuth and Springer).

- Lobocrinus spiniferus* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 439, pl. 30, figs. 11, 12, 1897.
 Miss. (Keokuk ls.): Indian Creek, Montgomery Co., Ind.

Urnocrinus Ivanov.

- Ivanov, Bull. Soc. Nat. Moscow, Geol. Ser., 34, p. 176, 1926. (nom. nud.)
 Species listed: *U. alternans*, *U. parvus*.

Utharocrinus Moore and Plummer. Genotype: *Delocrinus pentanodus* Mather. Poteriocrinitidae (Inadunata-Fistulata). Penn.

- Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 285, 1938;—Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 236, 1939.

Utharocrinus granulatus Strimple.

- Strimple, Bull. Amer. Pal., 25, no. 89, p. 8 (40), pl. 2, figs. 1-7, 1939.
 Penn. (Stanton ls.): Bartlesville, Okla.

Utharocrinus oreadensis Moore.

- Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 242, pl. 7, figs. 2 a-c, text figs. 20a, b, 1939.
 Penn. (Oread fm.-Plattsmouth ls.): Lecompton, Kansas.

Utharocrinus pentanodus (Mather).

- Delocrinus pentanodus* Mather, Bull. Sci. Lab. Denison Univ., 18, p. 106, pl. 3, figs. 8-8b, text fig. 3, 1915.

- Utharocrinus pentanodus* Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 286, text fig. 31, 1938.
Penn. (Morrow fm.): Near Ft. Gibson, Okla.
- Utharocrinus quinquacutus** Moore.
Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 239, pl. 7, figs. 1 a-c, text figs. 21 a-e, 1939.
Penn. (Brownville ls.): 5 miles west of Strohm, Osage Co., Okla.
- Utharocrinus topekensis** Moore.
Moore, Denison Univ. Bull., 39, Jour. Sci. Lab., 34, p. 244, pl. 7, figs. 3 a-c, text figs. 19a, b, 1939.
Penn. (Topeka fm.-Coal Creek ls.): 8 miles north of Oskaloosa, Jefferson Co., Kansas.
- Vasocrinus** Lyon. Genotype: *V. valens* Lyon.
Botryocrinidae (Inadunata-Fistulata). Dev.
Lyon, Geol. Surv. Ky., 3, p. 485, 1857.—Kirk, U. S. Nat. Mus., Proc., 74, art. 15, pp. 1, 2, 1929.
- Vasocrinus canaliculatus** (Jaekel).
Parisocrinus canaliculatus Jaekel, Pal. Abhandl., 7, p. 68, fig. 18, 1895.
Vasocrinus canaliculatus Kirk, U. S. Nat. Mus., Proc., 74, art. 15, p. 8, 1929.
Low. Dev. (Coblentzian): Nieder-Lahnstein, Germany.
- Vasocrinus macropleurus* Weller = *Poteroocrinites macropleurus*.
- Vasocrinus sculptus** Lyon.
Lyon, Geol. Surv. Ky., 3, p. 486, pl. 4, figs. 3 b-e, 1857.—Kirk, U. S. Nat. Mus., Proc., 74, art. 15, pp. 3, 10, pl. 1, figs. 1-3, 10, pl. 2, figs. 5-10, 1929.
Dev. (Hamilton-Sellersburg ls.): Jefferson Co., Ky.
- Vasocrinus stellaris** (Schultze).
Poteroocrinus stellaris Schultze, Denk. Kais. Akad. Wiss., Math. Nat. Cl., 26, p. 161, pl. 5, fig. 2, 1867 (adv. pub. 1866, p. 49).
Parisocrinus stellaris Jaekel, Pal. Abhandl., 7, p. 67, fig. 17, 1895.
Vasocrinus stellaris Kirk, U. S. Nat. Mus., Proc., 74, art. 15, p. 8, 1929.
Dev. (Eifelian): Kerpen, Gerolstein, Germany.
- Vasocrinus turbinatus** Kirk.
Kirk, U. S. Nat. Mus., Proc., 74, art. 15, p. 13, pl. 2, figs. 1-4, 1929.
Dev. (Onondaga-Jeffersonville ls.): Louisville, Ky.
- Vasocrinus valens** Lyon.
Lyon, Geol. Surv. Ky., 3, p. 485, pl. 4, figs. 3, 3a, 1857.—Kirk, U. S. Nat. Mus., Proc., 74, art. 15, pp. 2, 8, pl. 1, figs. 4-6, 10, 1929.
Dev. (Onondaga-Jeffersonville ls.): Beargrass Creek, near Louisville, Ky.
- Vasocrinus* of authors (not Lyon) = *Pellecrinus*.
- Vletavicrinus** Waagen and Jahn. Genotype: *V. haueri* Waagen and Jahn.
Batocrinidae (Camerata). Sil.
Waagen and Jahn, Syst. Sil. Centre Boheme, 7, pt. 2, p. 98, 1899.—Bather, Ann. Mag. Nat. Hist., (7) 6, p. 109, 1900; Treatise Zool. (Lankester), pt. 3, p. 204, 1900.
- Vletavicrinus haueri** Waagen and Jahn.
Waagen and Jahn, Syst. Sil. Centre Bohemé, 7, pt. 2, p. 102, pl. 61, 1899.
Sil. (Div. E1, E2): Dvorce, Bohemia.
- Vosekocrinus** Jaekel. Genotype: *V. granulatus* Jaekel.
?Dendrocrinidae (Inadunata-Fistulata). Ord.
Jaekel, Pal. Zeits., 3, p. 56, 1918.
- Vosekocrinus granulatus** Jaekel.
Jaekel, Pal. Zeits., 3, p. 56, fig. 49, 1918.
Ord. (Div. D1): Vosek, Bohemia.

- Wachsmuthicrinus** Springer. Genotype: *Forbesiocrinus thiemii* Hall.
 Ichthyocrinidae (Flexibilia). Miss.
 Springer, Amer. Geol., 30, pp. 95, 96, 1902; Jour. Geol., 14, p. 519, 1906; Zittel-Eastman Textb. Pal., 1, p. 205, 1913; Crin. Flexibilia, pp. 261, 326, 1920.
- Wachsmuthicrinus bernhardinae** Springer.
 Springer, Crin. Flexibilia, pp. 328, 332, pl. 44, figs. 6, 7, 1920.
 Miss. (Low. Burlington ls.): Burlington, Iowa.
- Wachsmuthicrinus iowensis** Springer.
 Springer, Crin. Flexibilia, pp. 328, 333, pl. 44, fig. 8, 1920.
 Miss. (Up. Burlington ls.): Burlington, Iowa.
- Wachsmuthicrinus ponderosus** Springer.
 Springer, Crin. Flexibilia, pp. 328, 333, pl. 44, figs. 9 a-c, 1920.
 Low. Carb. (Low. Ls. gr.): Bank of Tweed between Roxburgh and Kelso, Scotland.
- Wachsmuthicrinus spinifer** (Hall).
Forbesiocrinus spinifer Hall, Jour. Boston Soc. Nat. Hist., 7, p. 318, 1861.
Wachsmuthicrinus spinifer Springer, Crin. Flexibilia, pp. 328, 331, pl. 44, figs. 1-5, 1920.
Taxocrinus thiemii Meek and Worthen, Geol. Surv. Ill., 5, p. 399, pl. 4, fig. 1, 1873.
 Miss.: Burlington, Iowa (Low. Burlington ls.); Fern Glen, Mo. (Fern Glen ls.); Lake Valley, N. Mex. (Lake Valley ls.).
- Wachsmuthicrinus spinosulus** (Miller and Gurley).
Ichthyocrinus spinosulus Miller and Gurley, Ill. St. Mus., Bull. 5, p. 44, pl. 5, fig. 4, 1894.
Wachsmuthicrinus spinosulus Springer, Crin. Flexibilia, p. 328, pl. 43, figs. 11-16, 1920.
 Miss. (New Providence sh.): Clark Co., Ind., Button Mold Knob, etc., Ky.
- Wachsmuthicrinus thiemii** (Hall).
Forbesiocrinus thiemii Hall, Jour. Boston Soc. Nat. Hist., 7, p. 317; Descr. N. Sp. Crin., Prelim. Not., p. 8, 1861; N. Y. St. Mus., Bull. 1, pl. 7, fig. 4, 1872.
Taxocrinus thiemii Keyes, Geol. Surv. Mo., 4, p. 223, pl. 30, fig. 5, 1894.
Wachsmuthicrinus thiemii Springer, Amer. Geol., 30, p. 96, 1902; Jour. Geol., vol. 14, p. 519, pl. 6, fig. 19, 1906; Crin. Flexibilia, pp. 328, 329, pl. 43, figs. 1-10, 1920.
 Miss. (Low. Burlington ls.): Burlington, Iowa.
- Wannerocrinus** Marez Oyens. Genotype: *W. glans* Marez Oyens.
 Actinocrinitidae? (Camerata). Permian.
 Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 294, 1940.
- Wannerocrinus glans** Marez Oyens.
 Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 295, pl. 1, fig. 1, text fig. 1, 1940.
 Permian: Basleo, Timor.
- Whiteocrinus** Strimple (not Jaekel) = *Stellarocrinus*.
- Whiteocrinus** Jaekel. Genotype: *Belemnocrinus florifer* Wachsmuth and Springer.
 Belemnocrinidae (Inadunata-Fistulata). Miss.
 Jaekel, Pal. Zeits., 3, p. 58, 1918.
- Whiteocrinus florifer** (Wachsmuth and Springer).
Belemnocrinus florifer Wachsmuth and Springer, Amer. Jour. Sci., (3) 13, p. 256, 1877; Rev. Pal., pt. 3, sec. 1, pl. 5, fig. 11, pl. 6, fig. 28, 1885; sec. 2, p. 214 (138), 1886.
Whiteocrinus florifer Jaekel, Pal. Zeits., 3, p. 58, 1918.
 Miss. (Up. Burlington ls.): Burlington, Iowa.

Wilsonicrinus Springer. Genotype: *W. discoideus* Springer.

Rhodocrinitidae (Camerata). Sil.

Springer, Amer. Sil. Crin., p. 23, 1926.

Wilsonicrinus discoideus Springer.

Springer, Amer. Sil. Crin., p. 23, pl. 4, figs. 6, 6a, 1926.

Sil. (Niagaran-Laurel ls.): St. Paul, Ind.

Woodocrinus de Koninck. Genotype: *W. macrodactylus* de Koninck.

Poteriocrinitidae (Inadunata-Fistulata). Low. Carb.

De Koninck, Mem. Acad. Roy. Soc. Belgique, 28, p. 210, 1854.—Zittel, Handb. Pal., 1, p. 361, 1879.—Rev. Pal., pt. 1, pp. 63, 124 (286, 347), 1880 (1879); pt. 3, pp. 191, 239 (115, 163), 1886.—Bather, Treatise Zool. (Lankester), pt. 3, p. 180, 1900.—Springer, Zittel-Eastman Textb. Pal., 1, p. 223, 1913.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped. 1916, p. 177, 1924.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 77, 1926.—Wright, Geol. Mag., 73, p. 386, 1936.

Philocrinus de Koninck, Mem. Soc. Roy. Soc. Liege, 18, p. 573, 1863; Quart. Jour. Geol. Soc. London, 19, p. 4, 1863.—Zittel, Handb. Pal., vol. 1, p. 359, 1879.—Bather, Treatise Zool. (Lankester), pt. 3, p. 180, 1900. (Genotype: *P. cometa* de Koninck.)

Woodocrinus cometa (de Koninck).

Philocrinus cometa de Koninck, Mem. Soc. Roy. Liege, 18, p. 573, pl. 2, fig. 1; 1863; Quart. Jour. Geol. Soc. London, 19, p. 4, pl. 2, fig. 5, 1863.

Carb.: Punjab Salt Range, India.

Woodocrinus decodactylus de Koninck and Wood.

De Koninck and Wood, Rep. British Assoc. for 1857, p. 78, 1858; The Geologist, 1, p. 13, 1858 (nom. nud.).

Low. Carb.: (Mtn. Ls.): Richmond, Yorkshire, England.

Woodocrinus expansus de Koninck and Wood.

De Koninck and Wood, Rep. British Assoc. for 1857, p. 77, 1858; The Geologist, 1, p. 13, pl. 2, 1858.—Wright, Geol. Mag., 61, p. 272, fig. 1, 1924; Trans. Edinburgh Geol. Soc., 11, pt. 3, pl. 28, 1925.

Low. Carb. (Mtn. Ls.): Richmond, Yorkshire, England.

Woodocrinus goniodactylus de Koninck and Wood.

De Koninck and Wood, Rep. British Assoc. for 1857, p. 78, 1858; The Geologist, 1, p. 13, 1858 (nom. nud.).

Low. Carb. (Mtn. Ls.): Richmond, Yorkshire, England.

Woodocrinus gravis Wright.

Wright, Geol. Mag., 73, p. 396, text figs. 5–21, pl. 8, fig. 1, pl. 9, figs. 1–3, pl. 10, figs. 1, 9, 1936; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 33, pl. 3, figs. 1, 2, 4–9, pl. 6, fig. 11, text figs. 36–40, 1939.

Low. Carb. (Low. Ls. gr.): Inveriel, Roscobie, etc., Scotland.

Woodocrinus liddesdalensis Wright.

Wright, Geol. Mag., 73, p. 387, pl. 7, pl. 8, fig. 3, text figs. 1, 2, 1936; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 31, pl. 1, figs. 1, 2, pl. 3, fig. 3, pl. 6, fig. 10, pl. 7, fig. 8, 1939.

Woodocrinus macrodactylus Wright, Geol. Mag., 61, pp. 270–279, pl. 13, 1924; Trans. Edinburgh Geol. Soc., 11, pt. 3, pl. 26, 1925.

Low. Carb. (Low. Ls. gr.): Liddesdale, Roxburghshire, Scotland.

Woodocrinus macrodactylus de Koninck.

De Koninck, Rech. Crin. Carb. Belg., Suppl., p. 212, pl. 8, figs. 1 a–d, 1854.—De Koninck and Wood, The Geologist, 1, p. 13, pl. 1, 1858.—Bather, Ann. Mag. Nat. Hist., (6) 5, p. 388, pl. 15, fig. 16, 1890.—Kirk, U. S. Nat. Mus., Proc., 41, p. 44, pl. 4, fig. 3, 1911.—Springer, Zittel-Eastman Textb. Pal., 1, p. 223, fig. 324, 1913; U. S. Nat. Mus., Proc., 67, art. 9, p. 77, pl. 26, fig. 19, 1926.—Wright, Geol. Mag., 73, p. 391, text figs. 3, 4, 1936.

Low. Carb. (Mtn. Ls.): Richmond, England.

- Woodocrinus macrodactylus* Wright, 1924 = *W. liddesdalensis*.
- Woodocrinus serratus* Springer = *Eratoecrinus serratus*.
- Woodocrinus tentaculatus* Wachsmuth and Springer = *Sarocrinus tentaculatus*.
- Woodocrinus whytei** Wright.
Wright, Geol. Mag., 73, p. 394, pl. 10, fig. 4, 1936; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 34, pl. 1, fig. 4, pl. 12, fig. 23, 1939.
Low. Carb. (Low. Ls. gr.): Garpel Water, Muirkirk, Ayrshire, Scotland.
- Wrightocrinus** Moore. Genotype: *Allagecrinus jakovlevi* Wanner.
Allagecrinidae (Inadunata-Larviformia). Carb.; Permian.
Moore, Denison Univ. Bull., 40, Jour. Sci. Lab., vol. 35, p. 92, 1940.
- Wrightocrinus biplex** (Wright).
Allagecrinus biplex Wright, Geol. Mag., 69, p. 348, text figs. 12-15, pl. 23, figs. 35-38, p. 356, 1932; 70, pl. 14, figs. 13, 14, 1933; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 50, pl. 10, figs. 7, 8, 1939; Geol. Mag. 78, no. 4, p. 294, pl. 7, figs. 2-6, 9, 12-14, textf. 1-10, 1941.
Wrightocrinus biplex Moore, Denison Univ. Bull., 40, Jour. Sci. Lab., 35, p. 92, 1940.
Low. Carb. (Low. Ls. ser.): Carlops and Inverteil, Scotland.
- Wrightocrinus yakovlevi** (Wanner).
Allagecrinus jakovlevi Wanner, Neue Beitr. kennt. Perm. Echin. Timor, pp. 4, 14, 15, pl. 1, figs. 1-9 (as *yakovlevi*), 1929.
Kallimorphocrinus Yakovlevi Wright, Geol. Mag., 70, p. 204, 1933.
Callimorphocrinus jakovlevi Marez Oyens, Geol. Exped. Lesser Sunda Islands, 1, p. 344, 1940.
Wrightocrinus jakovlevi Moore, Denison Univ. Bull., 40, Jour. Sci. Lab., 35, p. 93, 1940.
Permian: Basleo, Timor.
- Xenobasis** Faber. Genotype: *X. williamsi* Faber.
?Heterocrinidae (Inadunata-Fistulata). Early Sil.
Faber, Amer. Midland Nat., 11, no. 9, p. 480, 1929.
- Xenobasis williamsi** Faber.
Faber, Amer. Midland Nat., 11, no. 9, p. 480, pl. 35, figs. 1-3, 1929.
Early Sil. (Richmond-Liberty ls.): Dodge Creek, near Oxford, Ohio.
- Xenocatillocrinus** Wanner. Genotype: *X. wrighti* Wanner.
Catillocrinidae (Inadunata-Fistulata). Permian.
Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, pp. 109, 119, 1937.—Moore, Denison Univ. Bull., 40, Jour. Sci. Lab., 35, p. 90, 1940.
- Xenocatillocrinus wrighti** Wanner.
Wanner, Beitr. Geol. Niederl.-Ind., Abt. 4, pt. 2, p. 112, text fig. 31, p. 119, pl. 14, figs. 14-18, p. 120, fig. 32, 1937.
Permian: Basleo, Timor.
- Xenocrinus* Jahn (not S. A. Miller) = *Ctenocrinus*.
- Xenocrinus** S. A. Miller. Genotype: *X. penicillus* S. A. Miller.
Xenocrinidae (Camerata). Sil.
S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 4, p. 71, 1881.—Wachsmuth and Springer, Rev. Pal., pt. 3, sec. 1, p. 95 (317), 1885; N. Amer. Crin. Cam., p. 182, 1897.—Bather, Treatise Zool. (Lankester), pt. 3, p. 165, 1900.—Cummings, 32d Rep. Geol. Nat. Res. Ind., p. 715, 1908.—Springer, Zittel-Eastman Textb. Pal., 1, p. 193, 1913.
- Xenocrinus baeri** (Meek).
Glyptocrinus baeri Meek, Amer. Jour. Sci., 3, p. 260, 1872; Geol. Surv. Ohio, 1, pt. 2, p. 37, pl. 2, figs. 1a, b, 1873.—S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 3, p. 234, pl. 7, figs. 3, 4, 1880.

- Xenocrinus baeri* Wachsmuth and Springer, N. Amer. Crin. Cam., p. 185, pl. 9, figs. 5 a-d, 1897.
Early Sil. (Richmond-Whitewater fm.): Richmond, Ind., Waynesville, Harshville, and near Oregonia, Ohio.
- Xenocrinus penicillus** S. A. Miller.
S. A. Miller, Jour. Cincinnati Soc. Nat. Hist., 4, no. 1, p. 72, pl. 1, figs. 3 a-c, 1881.—Carpenter, Philos. Trans. Roy. Soc. London, 174, p. 924, pl. 71, fig. 8, 1884.—Wachsmuth and Springer, N. Amer. Crin. Cam., p. 183, pl. 9, figs. 6a, b, 1897.
Early Sil. (Richmond-Liberty ls.): Warren Co., Ohio.
- Xystocrinus* Moore and Plummer = *Zeacrinites*.
Xystocrinus depressus Moore and Plummer = (part) *Zeacrinites depressus*; (part) *Tholocrinus spinosus*.
- Zeacrinites** Troost. Genotype: *Z. magnoliaeformis* (Troost) Hall.
Zeacrinitidae (Camerata) Penn.; Miss.
Troost, Amer. Jour. Sci. and Arts. (2) 8, p. 419, 1849 (nom. nud.); Troost in Hall, Iowa Geol. Surv., 1, pt. 2, p. 543, 1858.—Moore and Plummer, Univ. Texas Pub. No. 3945, p. 243, 1940.
- Zeacrinus* Hall, Geol. Rept. Iowa, 1, pt. 2, p. 544, 1858.—Meek and Worthen, Geol. Surv. Ill., 2, p. 186, 1866.—Zittel, Handb. Pal., 1, p. 360, 1879.—Wachsmuth and Springer, Rev. Pal., pt. 1, pp. 63, 125 (286, 348), 1880 (1879); pt. 3, p. 243 (167), 1886.—Bather, Ann. Mag. Nat. Hist. (6) 5, p. 325, 1890; Treatise Zool. (Lankester), pt. 3, p. 180, 1900.—Wood, U. S. Nat. Mus., Bull. 64, p. 89, 1909.—Springer, Zittel-Eastman Textb. Pal., 1, p. 223, 1913.—Wanner, Perm. Krin. Timor, 2e Nederl. Timor Exped., 1916, p. 178, 1924.—Springer, U. S. Nat. Mus., Proc. 67, art. 9, p. 77, 1926.—Kirk, Jour. Washington Acad. Sci., 23, no. 4, p. 160, 1933.—Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 267, 1938.—Sutton and Hagan, Jour. Pal., 13, no. 1, p. 82, 1939.
- Xystocrinus* Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 271, 1938. (Genotype: *Zeacrinus depressus* Troost-Hall).
- Zeacrinites acicularis** (Moore and Plummer).
Xystocrinus? *acicularis* Moore and Plummer, Denison Univ. Bull., Jour. Sci. Lab., 32, p. 272, text fig. 22, 1938.
Penn. (Brentwood ls.): North of Ft. Gibson, Okla.
- Zeacrinites acuminatus** (Sutton and Hagan.)
Zeacrinus acuminatus Sutton and Hagan, Jour. Pal., 13, no. 1, p. 90, pl. 1, figs. 4-6, text fig. 3, 1939.
Miss. (Chester-Golconda fm.): 2½ miles northeast Gowansville, Ill.
- Zeacrinites bifurcatus** (McChesney.)
Zeacrinus bifurcatus McChesney, Descr. N. Sp. Foss., p. 9, 1860; Illustr. N. Sp. Foss., pl. 5, fig. 3, 1865; Trans. Chicago Acad. Sci., 1, p. 6, pl. 5, fig. 5, text fig., 1868.
Miss. (Chester ls.): Kaskaskia, Ill.
- Zeacrinites brevilatus** (Sutton and Hagan.)
Zeacrinus brevilatus Sutton and Hagan, Jour. Pal., 13, no. 1, p. 92, pl. 15, figs. 1-3, text fig. 8, 1939.
Miss. (Chester-Glen Dean ls.): Sloans Valley, Ky.
- Zeacrinites chesterensis** (Sutton and Wagner.)
Zeacrinus chesterensis Sutton and Wagner, Jour. Pal., 5, no. 1, p. 31, pl. 5, figs. 12-14, text fig. 1, 1931.
Miss. (Chester-Paint Creek fm.): Hardin Co., Ill.
- Zeacrinites depressus** (Troost).
Cyathocrinites depressus Troost, Amer. Jour. Sci. and Arts. (2) 8, p. 419, 1849.
Zeacrinus depressus (Troost) Hall, Geol. Rep. Iowa, 1, pt. 2, pp. 545, 546, text figs. 66, 67, 1858.
Hydreionocrinus depressus Wood, U. S. Nat. Mus., Bull. 64, p. 92, pl. 11, figs. 6-8, 1909.

- Xystocrinus depressus* Moore and Plummer (in part) Denison Univ. Bull., Jour. Sci. Lab., 32, p. 272, 1938.
- Zeacrinus depressus* Kirk, Jour. Washington Acad. Sci., 29, no. 11, pp. 469, 470, 1939.
Miss. (Chester-Glen Dean ls.): Huntsville, Ala.; Pulaski and Grayson Cos., Ky.
- Zeacrinites doverensis** (Miller and Gurley).
Zeacrinus doverensis Miller and Gurley, Ill. St. Mus., Bull. 8, p. 35, pl. 2, figs. 20-22, 1896.
Miss. (Chester-probably Glen Dean): Dover Hill, Ind.
- Zeacrinites dubius** (Miller and Gurley.)
Zeacrinus dubius Miller and Gurley, Descr. N. Gen. and Sp. Echin., Authors' ed., p. 44, pl. 7, figs. 7, 8, 1890; 16th Rep. Geol. Surv. Ind., p. 361, pl. 7, figs. 7, 8, 1890.
Miss. (Keokuk ls.): Bono, Ind.
- Zeacrinites fusiformis** (Sutton and Hagan.)
Zeacrinus fusiformis Sutton and Hagan, Jour. Pal., 13, no. 1, p. 91, pl. 15, figs. 9, 10, text fig. 7, 1939.
Miss. (Chester-Renault ls.): 5½ miles southeast of Waterloo, Ill.
- Zeacrinites grandiculus** (Miller and Gurley.)
Zeacrinus grandiculus Miller and Gurley, Ill. St. Mus., Bull. 5, p. 32, pl. 2, figs. 31, 32, 1894.
Miss. (Chester ls.): Bowling Green, Ky.
- Zeacrinites intermedius** (Hall).
Zeacrinus intermedius Hall, Geol. Rep. Iowa, 1, pt. 2, p. 681, pl. 25, fig. 4, text fig. 109, 1858.
Miss. (Chester ls.): Chester, Ill.
- Zeacrinites kentuckiensis** (Miller and Gurley.)
Zeacrinus kentuckiensis Miller and Gurley, Ill. St. Mus., Bull. 8, p. 37, pl. 2, figs. 23, 24, 1896.
Miss. (Chester-Glen Dean ls.): Pulaski Co., Ky.
- Zeacrinites konincki** (Bather.)
Zeacrinus konincki Bather, Trans. Edinburgh Geol. Soc., 10, p. 73, text figs. 9-12, 1912.—Wright, Trans. Edinburgh Geol. Soc., 10, p. 162, pl. 18, figs. 2, 3, 1914; Trans. Geol. Soc. Glasgow, 16, pt. 3, p. 380, figs. 7-11, 1918; Geol. Mag., 63, pp. 156-164, figs. 61-89, pl. 16, pl. 17, figs. 1-3, 1926; Trans. Roy. Soc. Edinburgh, 60, pt. 1, p. 27, pl. 5, figs. 2, 3, 5, text fig. 18, 1939.
Cupressocrinus impressus McCoy, Ann. Mag. Nat. Hist., (2) 3, p. 245, 1849; British Pal. Foss., p. 117, pl. 3-D, fig. 2, 1854 (*Poteriocrinus excavatus*, new name suggested).
Eupachyrcrinus? impressus Bather, Trans. Edinburgh Geol. Soc., 10, p. 69, text fig. 8, 1913.
Poteriocrinus mccoynus de Koninck and Lehon, Rec. Crin. Terr. Carb. Belg., p. 91, pl. 1, fig. 7, 1854.
Low. Carb.: Invertiel, Fife, Roscobie, Howood, etc., Scotland (Low. Ls. gr.); Visé, Belgium (Viséan); Derbyshire, England (Mtn. Ls.).
- Zeacrinites lanceolatus** (Sutton and Hagan.)
Zeacrinus lanceolatus Sutton and Hagan, Jour. Pal., 13, no. 1, p. 87, pl. 15, figs. 11-13, text fig. 2, 1939.
Miss. (Chester-Paint Creek fm.): 1¼ miles northwest of Floraville, Ill.
- Zeacrinites lineatus** (Sutton and Hagan.)
Zeacrinus lineatus Sutton and Hagan, Jour. Pal., 13, no. 1, p. 89, pl. 15, figs. 7, 8, text fig. 4, 1939.
Miss. (Chester-Glen Dean ls.): Pulaski Co., Ky.

Zeacrinites magnoliaeformis Troost.

Troost, Amer. Jour. Sci., (2) 8, p. 419, 1849 (nom. nud.); Proc. Amer. Assoc. Adv. Sci., p. 61, 1850 (nom. nud.).

Zeacrinus magnoliaeformis (Troost) Hall, Geol. Rep. Iowa, 1, pt. 2, pp. 544, 545, 684, text fig., 1853.—Wood, U. S. Nat. Mus., Bull. 64, p. 90, pl. 12, figs. 3, 4, 1909.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, p. 81, pl. 22, figs. 4-11, text figs. 4, 5, 1926.—Kirk, Jour. Washington Acad. Sci., 28, no. 4, p. 160, 1938.

Miss. (Chester-Gasper fm.): Huntsville, Ala.

Zeacrinites merope (Hall.)

Zeacrinus merope Hall, 17th Rep. Regents Univ. St. N. Y., Prelim. Not., p. 60, 1863.—Hall and Whitfield, Geol. Surv. Ohio, 2, pt. 2, Pal., p. 172, pl. 12, fig. 15, 1875.

Miss. (Waverlyan-Cuyahoga sh.): Richfield, Summit Co., and Cuyahoga Co., Ohio.

Zeacrinites obesus (Miller and Gurley.)

Zeacrinus obesus Miller and Gurley, Ill. St. Mus., Bull. 3, p. 35, pl. 4, figs. 6-8, 1894.

Miss. (Chester-?Gasper fm.): Flag Pond, Va.

Zeacrinites ovalis (Lyon and Casseday.)

Zeacrinus ovalis Lyon and Casseday, Amer. Jour. Sci. and Arts, (2) 29, p. 71, 1860.

Miss. (Chester-Glen Dean ls.): Grayson Springs, Breckinridge, Edmonson, and Todd Cos., Ky.

Zeacrinites paternus (Hall.)

Zeacrinus paternus Hall, 17th Rep. Regents Univ. St. N. Y., Prelim. Not., p. 59, 1863.—Hall and Whitfield, Geol. Surv. Ohio, 2, pt. 2, Pal., p. 177, pl. 12, fig. 17, 1875.

Miss. (Waverlyan-Cuyahoga sh.): Richfield, Summit Co., and Cuyahoga Co., Ohio.

Zeacrinites peculiaris (Miller and Gurley.)

Zeacrinus peculiaris Miller and Gurley, Ill. St. Mus., Bull. 8, p. 34, pl. 2, figs. 17-19, 1896.

Miss. (Chester-Glen Dean ls.): Pulaski Co., Ky.

Zeacrinites phillipsi (Sladen.)

Zeacrinus phillipsi Sladen, Proc. Geol. Polytec. Soc. Yorkshire, p. 9, 1878.

Low. Carb.: Yorkshire, England.

Zeacrinites planobrachiatus (Meek and Worthen.)

Zeacrinus planobrachiatus Meek and Worthen, Proc. Acad. Nat. Sci. Phila., p. 391, 1860; Geol. Surv. Ill., 2, p. 240, pl. 18, fig. 5, 1866.

Miss. (Keokuk ls.): Monroe Co., Ill.

Zeacrinites pocillum (S. A. Miller.)

Zeacrinus pocillum S. A. Miller, Geol. Surv. Mo., Bull. 4, p. 28, pl. 4, figs. 1, 2, 1891.

Miss. (Warsaw ls.): Boonville, Mo.

Zeacrinites sellardsi Moore and Plummer.

Moore and Plummer, Univ. Texas Pub. no. 3945, p. 245, pl. 10, fig. 6, pl. 17, fig. 2, text fig. 55, 1940.

Penn. (Graford fm.): West slope Kyle Mt., Palo Pinto Co., Texas.

Zeacrinites trapeziatus (Sutton and Hagan.)

Zeacrinus trapeziatus Sutton and Hagan, Jour. Pal., 13, no. 1, p. 88, pl. 15, figs. 15-17, text fig. 3, 1939.

Miss. (Chester ls.): Monroe Co., Ill.

Zeacrinites wortheni (Hall.)

Zeacrinus wortheni Hall, Geol. Rep. Iowa, 1, pt. 2, p. 683, text fig. 111, 1858.—Springer, U. S. Nat. Mus., Proc., 67, art. 9, pp. 65, 81, pl. 22, fig. 12, pl. 23, figs. 1-8, p. 83, text figs. 6-9, 1926.

Miss. (Chester): Chester, Ill., Glasgow, Pulaski and other Cos., Ky. (Glen Dean ls.); Evansville, Ill. (Okaw fm.).

- Zeacrinus* (*Hydreionocrinus*?) *acanthophorus* Meek and Worthen = *Sciadiocrinus acanthophorus*.
- Zeacrinus*? *armiger* Meek and Worthen, 1870 = *Tholocrinus armiger*.
- Zeacrinus asper* Meek and Worthen = *Linocrinus asper*.
- Zeacrinus bellulus* Miller and Gurley = *Phanocrinus bellulus*.
- Zeacrinus beyrichi* Dewalque = *Dactylocrinus beyrichi*.
- Zeacrinus blairi* Miller and Gurley = *Eratocrinus blairi*.
- Zeacrinus bursaeformis* Springer = *Cercidocrinus bursaeformis*.
- Zeacrinus commaticus* S. A. Miller = *Eratocrinus commaticus*.
- Zeacrinus compactus* Laudon = *Linocrinus compactus*.
- Zeacrinus coxanus* Worthen = *Eratocrinus coxanus*.
- Zeacrinus*? *crassus* Worthen = *Ethelocrinus crassus*.
- Zeacrinus cylindricus* Miller and Gurley = *Phanocrinus cylindricus*.
- Zeacrinus discus* Meek and Worthen = *Plaxocrinus discus*.
- Zeacrinus durabilis* Miller and Gurley = *Eupachyocrinus durabilis*.
- Zeacrinus elegans* Hall = *Eratocrinus elegans*.
- Zeacrinus excavatus* Schultze = *Dactylocrinus excavatus*.
- Zeacrinus excavatus interscapularis* Schultze = *Dactylocrinus excavatus*.
- Zeacrinus faggi* Rowley and Hare = *Eratocrinus faggi*.
- Zeacrinus girtyi* Springer = *Alcimocrinus girtyi*.
- Zeacrinus infrequens* Laudon and Beane = *Cercidocrinus infrequens*.
- Zeacrinus keokuk* Worthen = *Sarocrinus keokuk*.
- Zeacrinus lyra* Meek and Worthen = *Coeliocrinus lyra*.
- Zeacrinus maniformis* Hall = *Phanocrinus maniformis*.
- Zeacrinus mooresi* Whitfield = *Plaxocrinus mooresi*.
- Zeacrinus mucrospinus* McChesney = *Aatocrinus mucrospinus*.
- Zeacrinus nitidus* Miller and Gurley = *Phanocrinus nitidus*.
- Zeacrinus nodosus* Wachsmuth and Springer = *Adinocrinus nodosus*.
- Zeacrinus perangulatus* White = *Linocrinus perangulatus*.
- Zeacrinus pikensis* Worthen = *Eratocrinus pikensis*.
- Zeacrinus pulaskiensis* Miller and Gurley = *Phanocrinus gracilis*.
- Zeacrinus ramosus* Hall = *Eratocrinus ramosus*.
- Zeacrinus*? *robustus* Beede = *Aatocrinus robustus*.
- Zeacrinus sacculus* White = *Eratocrinus sacculus*.
- Zeacrinus sacculus concinnus* White = *Eratocrinus sacculus*.
- Zeacrinus salemensis* Miller and Gurley = *Eratocrinus salemensis*.
- Zeacrinus scoparius* Hall = *Eratocrinus scoparius*.
- Zeacrinus stimpsoni* Lyon = *Pachylocrinus coreyi*.
- Zeacrinus*? *sundaicus* Wanner = *Malaocrinus sundaicus*.
- Zeacrinus troostanus* Meek and Worthen = *Eratocrinus troostanus*.
- Zenkericrinus* Waagen and Jahn = *Ctenocrinus*.

Zophocrinus S. A. Miller. Genotype: *Z. howardi* S. A. Miller.

Pisocrinidae (Inadunata-Larviformia). Sil.

S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 642, 1892 (adv. pub., 1891, p. 32).—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, p. 152, fig. 7, 1900.—Bather, Treatise Zool. (Lankester), pt. 3, p. 151, 1900.—Slocum, Field Col. Mus., 2, Geol. Ser., p. 284, fig. 3, 1908.—Springer, Zittel-Eastman Textb. Pal., 1, p. 158, 1913; Amer. Sil. Crin., p. 61, 1926.

Zophocrinus globosus Slocum.

Slocum, Field Columbian Mus., Geol. Ser., II, no. 10, p. 285, pl. 85, figs. 15-19, 1908.

Sil. (Niagaran-Racine ls.): Near Lemont, Ill.

Zophocrinus howardi S. A. Miller.

S. A. Miller, 17th Rep. Geol. Surv. Ind., p. 643, pl. 6, figs. 26-28, 1892 (adv. pub. 1891, p. 33); N. Amer. Geol. Pal., First App., p. 683, fig. 1254, 1892.—Weller, Chicago Acad. Sci., Nat. Hist. Surv., Bull. 4, pt. 1, p. 152, pl. 15, fig. 13, 1900.—Springer, Amer. Sil. Crin., p. 82, pl. 25, figs. 19-26, 1926.

Sil. (Niagaran): St. Paul and Greensboro, Ind. (Laurel ls.); Flatwoods, Perry Co., Tenn. (Beech River fm.); Lemont, Ill. (Racine dol.).

Zophocrinus pyriformis Slocum.

Slocum, Field Col. Mus., Geol. Ser., 2, no. 10, p. 285, pl. 85, figs. 12-14, 1908.

Sil. (Niagaran-Racine dol.): Romeo, Ill.

CLASSIFICATION OF FRAGMENTARY CRINOIDAL REMAINS

By R. C. Moore

Denison Univ. Bull., Jour. Sci. Lab., 33, 1939
(unless otherwise stated)

- Division Crinostyli (Columnals), p. 183.
 - Main group Cyclostyli (Circular outline), p. 189.
 - Group Cyclocyclopaes, p. 189.
 - Cyclocyclopa acuticarinata*, p. 189, pl. 1, figs. 8a, b.
Penn. (Stanton fm.-Stoner ls.): 1 mi. w. Wayside, Kan.
 - Group Cyclopentagonopae, p. 190.
 - Cyclopentagonopa excentrica*, p. 191, pl. 1; figs. 2a, b.
Penn. (Des Moines ser.): 2 mi. w. Pittsburg, Kan.
 - Cyclopentagonopa granulosa*, p. 190, pl. 1, fig. 1a, b.
Penn. (Savanna fm.-Sam Creek ls.): Southwest of Porum, Okla.
 - Main group Pentagonostyli (Subpentagonal, pentagonal, and pentastellate outline), p. 192.
 - Group Pentagonocyclopaes, p. 192.
 - Pentagonocyclopa dispar*, p. 193, pl. 1, figs. 4a, b, 5, 6a, b.
Penn. (Coffeyville sh.-Checkerboard? ls.) Coffeyville, Kan.
 - Main group Ellipsostyli (Columnals with elliptical articular faces and generally a strong fulcral ridge), p. 194.
 - Group Ellipsellipsopae, p. 194.
 - Ellipsellipsopa latissima* Moore, Jour. Pal., 13, no. 2, p. 239, text fig. 1, 1939. Low. Permian (Wolfcamp fm.): Epps Creek, Sutton Co., Texas.
 - Ellipsellipsopa spicata*, p. 195, pl. 1, figs. 3a, b.
Penn. (Coffeyville sh.-Checkerboard? ls.): Coffeyville, Kan.
- Division Crinobases (Apicals-basals and infrabasals), p. 196.
 - Subdivision Anobases (Apical plates with upward flaring distal part), p. 201.
 - Main group Anocyclotypi (Circular stem impression), p. 201.
 - Group Pentanobases (Five subequal plates in circlet), p. 201.
 - Pentanobasis regularis*, p. 201, pl. 1, figs. 10 a-c.
Penn. (Stanton ls.): Bartlesville, Okla.
 - Group Tetranobases (Four plates in circlet), p. 202.
 - Tetranobasis nobilissima* (Hall). See *Ctenocrinus nobilissimus*.
 - Group Trianobases (Two large and one small plate in circlet), p. 203.
 - Trianobasis bridwelli*, p. 203, pl. 2, figs. 2a, b.
Penn. (Oread ls.-Toronto ls. mem.): Southwest of Lawrence, Kan.
 - Group Isotrianobases (Three equal sized plates in circlet), p. 204.
 - Isotrianobasis urna*, p. 204, pl. 1, figs. 11 a-c.
Miss. (Osage gr.-Burlington ls.): Springfield, Mo.
 - Group Dianobases (Two plates to circlet), p. 205.
 - Dianobasis lineata* (Meek and Worthen). See *Dichocrinus lineatus*.
 - Group Henanobases (Circlet of apicals fused into a solid piece).
 - Henanobasis coffeyvillensis*, p. 206, pl. 2, figs. 3 a-c; pl. 3, fig. 11. Penn. (Ochelata gr.-Coffeyville sh.): Coffeyville, Kan. = *Paragassizoocrinus coffeyvillensis*.
 - Main group Anopentagonotypi (Pentagonal stem impressions), p. 207.
 - Group Pentanobathra (Each apical subtending one-fifth of circlet), p. 207.
 - Pentanobathrum rosei* (Moore and Plummer). See *Hydriocrinus? rosei*.

Subdivision Exobases (Apical plates with outward flaring distal part), p. 208.

Main group Exocyclotypi (Subhorizontal apicals with circular stem impressions), p. 208.

Group Pentexobases (5 plates to circlet), p. 208.

Pentexobasis glypta, p. 208, pl. 1, figs. 9 a-c.

Penn. (Des Moines ser.): 2 mi. w. Pittsburg, Kan.

Pentexobasis plana, p. 209, pl. 4, figs. 1 a-c.

Penn. (Ochelata gr.-Coffeyville sh.): Coffeyville, Kan.

Group Triexobases (Circlet mostly with 2 large and 1 small plate), p. 210.

Triexobasis banioni, p. 210, pl. 2, figs. 1a, b.

Penn. (Brownville ls.): 7 mi. s.w. Strohm, Osage Co., Kan.

Main group Exopentagonotypi (Apicals with little upward or downward slope), p. 211.

Group Pentexobathra, p. 211.

Pentexobathrum magnificum (Miller and Gurley). See *Aesiocrinus magnificus*.

Subdivision Catobases (Downward flaring apicals), p. 212.

Main group Catocyclotypi (Circular stem impressions), p. 212.

Group Pentecatobases, p. 212.

Pentecatobasis excavata, p. 212, pl. 1, fig. 12.

Low. Permian (Wreford ls.-Havensville sh.): 5 mi. n.w. Elmdale, Kan.

Division Crinarthra (Facetals—plates with facets for union with basal segment of arm), p. 214.

Subdivision Lioerinarthra (Facets lacking transverse ridge), p. 218.

Subdivision Lophocrinarthra (Facets with transverse ridge), p. 218.

Main group Stenolopharthra (Articular facets narrower than plates), p. 219.

Group Hoplarthra, p. 220.

Hoplarthrum canalis, p. 220, pl. 2, figs. 7 a-d.

Penn. (Des Moines ser.-Cherokee sh.): 2 mi. w. Pittsburg, Kan.

Hoplarthrum tenuis, p. 221, pl. 2, figs. 4 a-d.

Penn. (Des Moines ser.-Cherokee sh.): 2 mi. w. Pittsburg, Kan.

Group Engoniarthrum, p. 222.

Engoniarthrum granulosus, p. 222, pl. 3, figs. 2 a-c.

Penn. (Plattsburg ls.-Hickory Cr. sh.): Sycamore, Kan.

Engoniarthrum lineatum, p. 224, pl. 2, figs. 5, 6, pl. 3, figs. 3, 4a, b.

Penn. (Oologah ls.): 7 mi. n.e. Tulsa, Okla.

Main group Platylopharthra (Articular facets equal to greatest width of plates; transverse ridge present), p. 225.

Group Macrocrinarthra, p. 225.

Macrocrinarthrum corrugatum, p. 225, pl. 2, figs. 9 a-c.

Penn. (Coffeyville sh.-Checkerboard? ls.): Coffeyville, Kan.

Macrocrinarthrum tuberculatum, p. 227, pl. 2, figs. 8 a-c, pl. 3, fig. 10.

Penn. (Cherokee sh.): 2 mi. w. Pittsburg, Kan.

Group Bunarthra, p. 228.

Bunarthrum septatum, p. 228, pl. 3, figs. 1 a-d.

Penn. (Stanton ls.): 1 mi. s.w. Wayside, Kan.

Division Crinopolygona (Polygonal ossicles—polygons lacking identifiable characters), p. 229.

Main group Liopolygona (Smooth, unornamented exterior), p. 233.

Main group Aglaopolygona (External decoration), p. 233.

Group Schedaglaopolygona, p. 233.

Schedaglaopolygonum corrugatum, p. 233, pl. 3, figs. 9a, b.

Penn. (Coffeyville sh.-Checkerboard? ls.): Coffeyville, Kan.

Group Lophaglaopolygona, p. 234.

Lophaglaopolygonum tenuirugosum, p. 234, pl. 3, figs. 6 a-c, 7 a-c.

Penn. (Missouri ser.): Southwestern Iowa.

Group Bunaglaopolygona, p. 235.

Bunaglaopolygonum tuberculatum, p. 235, pl. 3, figs. 8a, b.
Penn. (Des Moines ser.): 2 mi. w. Pittsburg, Kan.

Division Crinostegae (Tegminals—plates above dorsal cup), p. 236.

Main group Somphostegae (Tegminals of anal sac, characterized by pore grooves), p. 236.

Group Aulosomphostegae, p. 238.

Aulosomphostega incisa, p. 238, pl. 4, fig. 6.
Penn. (Des Moines ser.): 2 mi. w. Pittsburg, Kan.

Main group Acanthostegae (Tegminals primarily of simple, elongate spines) p. 239.

Group Gisacanthostegae, p. 239.

Gisacanthostega expansa, p. 240, pl. 4, figs. 4 a-c.
Penn. (Des Moines ser.): 2 mi. w. Pittsburg, Kan.

Gisacanthostega angusta, p. 241, pl. 4, figs. 5a, b.
Penn. (Plattsburg ls.-Lansing gr.): Sycamore, Kan.

Division Crinoptera (Pinnates—segments of all free arms, including pinnules), p. 242.

Main group Diarthroptera (Pinnates with only two articular surfaces), p. 245.

Group Tetraxonoptera (Occupy width of arms and have subparallel upper and lower surfaces), p. 246.

Tetragonopterum formosus (Worthen) *Phanocrinus formosus*.

Group Trapezoptera (Divergent upper and lower surfaces), p. 246.

Trapezopterum scalare (Meek and Worthen). See *Decadocrinus scalare*.

Group Sphenarthroptera (Occupy one-half arm width; lower and upper surfaces parallel), p. 247.

Sphenarthropterum monticulatum (Beede) = *Ethelocrinus monticulatus*.

Main group Triarthroptera (Axillary pinnates, an articulate facet below, two facets above), p. 247.

Group Coenarthroptera (Rounded or flat on the dorsal side), p. 247.

Coenarthropterum elegans (Hall) = *Eratocrinus elegans*.

Coenarthropterum corrugatum, p. 247, pl. 4, figs. 2 a-c.
Penn. (Coffeyville sh.-Checkerboard? ls.): Coffeyville, Kan.

Group Acantharthroptera (Produced dorsally with knob or spine), p. 249.

Acantharthropterum acutum, p. 249, pl. 3, figs. 5a, b.

Penn. (Cherokee sh.): 2 mi. w. Pittsburg, Kan.

Acantharthropterum cornu, p. 250, pl. 4, figs. 3a, b.

Penn. (Cherokee sh.): 2 mi. w. Pittsburg, Kan.

Main group Micarthroptera (Ossicles composing pinnules), p. 250.

"COLLECTIVE GROUP" NAME

By A. H. Sutton and Virgil D. Winkler

Jour. Pal., 14, no. 6, 1940.

Ageneracrinus, Collective Group, p. 563.

Ageneracrinus altacalyx, p. 565, pl. 68, figs. 7, 8. Miss. (Chester): Randolph Co., Ill.

Ageneracrinus basalis, p. 564, pl. 68, figs. 1, 2. Miss. (Chester): Prairie du Long Cr., St. Clair Co., Ill.

Ageneracrinus basalotumidus, p. 565, pl. 68, figs. 22, 23. Miss. (Chester): Union Co., Ill.

Ageneracrinus parvabasalis, p. 565, pl. 68, figs. 3, 4. Miss. (Chester-Glen Dean): Sloans Valley, Ky.

Ageneracrinus parvaradianalis, p. 565, pl. 66, fig. 13. Miss. (Chester-Golconda ls.): 5 mi. n. Marion, Ky.

Ageneracrinus platycalyx, p. 564, pl. 68, figs. 13, 14. Miss. (Chester-Renault ls.-Shetlerville mem.): $\frac{1}{2}$ mi. s. Eichorn, Ill.

Ageneracrinus subtumidus (Worthen) = *Eupachycrinus subtumidus*.

Ageneracrinus tumidorugosus, p. 566, pl. 68, figs. 20, 21. Miss (Chester): Randolph Co., Ill.

Ageneracrinus tumulosus (S. A. Miller) = *Eupachycrinus tumulosus*.

Publications of the Geological Society of America—Continued

- 31.—SUBMARINE TOPOGRAPHY OF THE CALIFORNIA COAST; CANYONS AND TECTONIC INTERPRETATION. By F. P. Shepard and K. O. Emery. 1941. 171 p., 4 charts, 18 pls., 42 figs.
- 32.—PALEOZOIC GASTROPOD GENOTYPES. By J. Brookes Knight. 1941. 510 p., 96 pls., 8 figs.
- 33.—NUMERICAL STRUCTURE FACTOR TABLES. By M. J. Buerger. 1941. 119 p., 4 figs.
- 34.—SEISMICITY OF THE EARTH. By Beno Gutenberg and C. F. Richter. 1941. 131 p., 17 figs.
- 35.—GEOLOGY OF THE "MARTIC OVERTHRUST" AND THE GLENARM SERIES IN PENNSYLVANIA AND MARYLAND. By Ernst Cloos and Anna Hietanen. 1941. 207 p., 23 pls., 53 figs.
- 36.—HANDBOOK OF PHYSICAL CONSTANTS. Edited by Francis Birch, *Chairman*. 1942. 325 p., 19 figs.
- 37.—OZARKIAN AND CANADIAN CEPHALOPODS. PART I: NAUTILICONES. By E. O. Ulrich, Aug. F. Foerste, A. K. Miller, and W. M. Furnish. 1942. 157 p., 57 pls., 23 figs.
- 38.—TEREBRATULOID BRACHIOPODA OF THE SILURIAN AND DEVONIAN. By Preston E. Cloud, Jr. 1942. 182 p., 26 pls., 17 figs.
- 39.—EOCENE RADIOLARIAN FAUNAS FROM THE MT. DIABLO AREA, CALIFORNIA. By B. L. Clark and A. S. Campbell. 1942. 112 p., 9 pls., 5 figs.
- 40.—HADROSAAURIAN DINOSAURS OF NORTH AMERICA. By R. S. Lull and N. E. Wright. 1942. 242 p., 31 pls., 90 figs.
- 41.—TERTIARY PRAIRIE GRASSES AND OTHER HERBS FROM THE HIGH PLAINS. By Maxim K. Elias. 1942. 176 p., 17 pls., 1 fig.
- 42.—BIBLIOGRAPHY OF FOSSIL VERTEBRATES, 1934-1938. By C. L. Camp, D. N. Taylor, and S. P. Welles. 1942. 663 p.
- 43.—MIOCENE FISHES OF SOUTHERN CALIFORNIA. By Lore Rose David. 1943. 193 p., 16 pls., 39 figs.
- 44.—REVISION OF THE SUBORDERS, FAMILIES, AND GENERA OF THE SCLERACTINIA. By Thomas Wayland Vaughan and John West Wells. 1943. 363 p., 51 pls., 39 figs.

Publications of the Geological Society of America

BULLETIN

Published monthly. Individual papers and separate numbers are available.

PROCEEDINGS

Business of Annual Meeting, reports of standing committees, and memorials.

HISTORY

THE GEOLOGICAL SOCIETY OF AMERICA, 1888-1930: A Chapter in Earth Science History. By H. L. Fairchild. 1932. 232 p., 18 pls.

GEOLOGY, 1888-1938: Fiftieth Anniversary Volume. By 21 authors. 1941. 578 p., 15 figs.

BIBLIOGRAPHY AND INDEX OF GEOLOGY EXCLUSIVE OF NORTH AMERICA

Annually since 1933. By John M. Nickles, Marie Siegrist, and Eleanor Tatge.

Publication notice of volumes other than the BULLETIN is sent to subscribers and others upon request. Standing orders may be placed with the Secretary.

All communications should be addressed to the Secretary of the Society, 419 West 117 Street, New York, N. Y.

MEMOIRS

- 1.—STRATIGRAPHY OF WESTERN NEWFOUNDLAND. By C. Schuchert and C. O. Dunbar. 1934. 123 p., 11 pls., 8 figs.
- 2.—PALEOZOIC PLANKTON OF NORTH AMERICA. By Rudolf Ruedemann. 1934. 141 p., 26 pls., 6 figs.
- 3.—EVOLUTION OF THE CONGO BASIN. By A. C. Veatch. 1935. 183 p., 10 pls., 8 figs.
- 4.—GEOLOGY IN THE COASTAL ATLAS OF WESTERN ALGERIA. By R. van V. Anderson. 1936. 450 p., 19 pls., 2 figs.
- 5.—STRUCTURAL BEHAVIOR OF IGNEOUS ROCKS. By Robert Balk. 1937. 177 p., 24 pls., 38 figs.
- 6.—STRUCTURAL PETROLOGY. By Eleanor Bliss Knopf and Earl Ingerson. 1938. 270 p., 27 pls., 81 figs.
- 7.—ADIRONDACK IGNEOUS ROCKS AND THEIR METAMORPHISM. By A. F. Buddington. 1939. 354 p., 21 pls., 30 figs.

SPECIAL PAPERS

- 1.—BIBLIOGRAPHIC INDEX OF PALEOZOIC OSTRACODA. By R. S. Bassler and B. Kellett. 1934. 500 p., 24 figs.
- 2.—FOSSIL CRUSTACEA OF THE ATLANTIC AND GULF COASTAL PLAIN. By M. J. Rathbun. 1935. 160 p., 26 pls., 2 figs.
- 3.—FOSSIL NON-MARINE MOLLUSCA OF NORTH AMERICA. By Junius Henderson. 1935. 313 p.
- 4.—NUCULID BIVALVES OF THE GENUS *Acila*. By Hubert G. Schenck. 1936. 149 p., 18 pls., 15 figs.
- 5.—GEOLOGY OF SAINT JOHN, NEW BRUNSWICK. By A. O. Hayes and B. F. Howell. 1937. 146 p., 9 pls., 4 figs.
- 6.—HISTORY OF THE GRAND CANYON OF THE YELLOWSTONE. By A. D. Howard. 1937. 159 p., 21 pls., 31 figs.
- 7.—ATLANTIC SUBMARINE VALLEYS OF THE UNITED STATES AND THE CONGO SUBMARINE VALLEY. By A. C. Veatch and P. A. Smith. 102 p., 5 charts, 10 pls., 28 figs.
- 8.—MIDDLE DEVONIAN CORALS OF OHIO. By Grace Anne Stewart. 1938. 120 p., 20 pls., 2 figs.
- 9.—FOSSIL SNAKES OF NORTH AMERICA. By Charles W. Gilmore. 1938. 96 p., 4 pls., 38 figs.
- 10.—STRATIGRAPHY AND MOLLUSCA OF THE EOCENE OF WESTERN OREGON. By F. E. Turner. 1938. 130 p., 22 pls., 7 figs.
- 11.—GEOLOGY AND PALEONTOLOGY OF THE MINGAN ISLANDS, QUEBEC. By W. H. Twenhofel (With A. F. Foerster and M. S. Whiting). 1938. 132 p., 24 pls., 1 fig.
- 12.—TERTIARY FLORA FROM THE RIO PICHELLEUFU, ARGENTINA. By E. W. Berry. 1938. 150 p., 56 pls., 11 figs.
- 13.—OZARKIAN AND CANADIAN BRACHIOPODA. By E. O. Ulrich and G. A. Cooper. 1938. 324 p., 58 pls., 14 figs.
- 14.—DEVONIAN AMMONOIDS OF AMERICA. By A. K. Miller. 1938. 262 p., 39 pls., 41 figs.
- 15.—CAMBRIAN SYSTEM (RESTRICTED) OF THE SOUTHERN APPALACHIANS. By C. E. Resser. 1938. 140 p., 16 pls.
- 16.—LOWER CRETACEOUS DEPOSITS IN CALIFORNIA AND OREGON. By F. M. Anderson. 1938. 340 p., 84 pls., 3 figs.
- 17.—PENNSYLVANIAN CORRELATIONS IN THE EASTERN INTERIOR AND APPALACHIAN COAL FIELDS. By H. R. Wanless. 1939. 130 p., 9 pls., 8 figs.
- 18.—CAMBRIAN STRATIGRAPHY AND TRILOBITES OF NORTHWESTERN MONTANA. By Charles Deiss. 1939. 136 p., 18 pls., 7 figs.
- 19.—CAMBRIAN MEROSTOMATA. By Gilbert O. Ranssch. 1939. 146 p., 21 pls., 14 figs.
- 20.—GEOLOGY ALONG THE SOUTHERN MARGIN OF THE ABSAROKA RANGE, WYOMING. By J. D. Love. 134 p., 17 pls., 3 figs.
- 21.—PALEONTOLOGY AND STRATIGRAPHY OF THE SILURIAN ROCKS OF THE PORT DANIEL-BLACK CAPE REGION, GASPÉ. By S. A. Northrop. 1939. 302 p., 28 pls., 1 fig.
- 22.—LOWER MISSISSIPPIAN ROCKS OF THE EAST-CENTRAL INTERIOR. By Paris B. Stockdale. 1939. 248 p., 26 pls., 2 figs.
- 23.—BIBLIOGRAPHIC INDEX OF NORTH AMERICAN DEVONIAN CEPHALOPODA. By E. M. Kindle and A. K. Miller. 1939. 180 p.
- 24.—CONTRIBUTIONS TO A KNOWLEDGE OF THE LEAD AND ZINC DEPOSITS OF THE MISSISSIPPI VALLEY REGION. Edited by Edson S. Bastin. 1939. 156 p., 4 pls., 27 figs.
- 25.—DEVONIAN STRATIGRAPHY AND PALEONTOLOGY OF THE ROBERTS MOUNTAINS REGION, NEVADA. By C. W. Merriam. 1940. 114 p., 16 pls., 7 figs.
- 26.—PERMIAN AMMONOIDS OF THE GUADALUPE MOUNTAIN REGION AND ADJACENT AREAS. By A. K. Miller and W. M. Furnish. 1940. 242 p., 44 pls., 59 figs.
- 27.—BIBLIOGRAPHY OF FOSSIL VERTEBRATES, 1928-1933. By C. L. Camp and V. L. VanderHoof. 1940. 503 p.
- 28.—REVIEW OF THE PELYCOSAURIA. By A. S. Romer and L. I. Price. 1940. 538 p., 46 pls., 71 figs.
- 29.—PHACOPID TRILOBITES OF NORTH AMERICA. By David M. Delo. 1940. 135 p., 13 pls.
- 30.—PRELIMINARY REPORT ON THE CRETACEOUS AND TERTIARY LARGER FORAMINIFERA OF TRINIDAD, BRITISH WEST INDIES. By T. W. Vaughan and W. S. Cole. 1941. 137 p., 46 pls., 2 figs.

(Continued on inside back cover)