

The Genera of the North American Gill Fungi

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In the revision of the classification of any group of organisms one of the first and most important of the problems that confronts the monographer is to decide on the number of genera to recognize and, what is often still more difficult, on the name that should properly be applied to each. Modern systematists all agree that priority should be the determining factor in the selection and application of generic and specific names. Unfortunately they are not yet fully agreed as to the exact rules of procedure by which priority is to be determined. The older naturalists did not, however, realize the need for strictly following the principle of priority. More attention was usually paid to the supposed appropriateness of a name than to the date of its first application. Each writer felt at perfect liberty to choose whatever name seemed to him most appropriate and, if no existing name pleased him, to coin a new one.

At the present time the tendency is to look upon a genus as merely a collection of closely related species and to consider that it has no standing apart from the species that compose it. Formerly a genus was considered as an independent concept or entity, and many books on genera have been written in which species are not even mentioned. When a writer changed the definition or limits of a genus he felt that he had recognized or created a new entity and that therefore he was entitled to give it a new name.

The natural growth or development of any descriptive science inevitably tends to the multiplication of genera. When only a few forms are known they are naturally thrown into a small number of generic groups. Someone then discovers a new species that does not accord with any of these and he creates a new genus for it. It may at first be monotypic or he

may associate with it certain of the older species that seem to him out of place in their former alliance. As the years go by other species are discovered and added to this genus until it becomes cumbersome, when some other student decides to divide it. He lops off groups of species here and there, giving them new generic names. It has very often happened that the original species or group of species is thus taken out of the genus and renamed while the old name remains with a group that was entirely unknown to its author. Any attempt in later years to restore this name to its original, proper application must involve a most confusing shifting of generic names. This manner of dividing genera has come to be called the "method of residues." It is responsible for a large part of the confusion which exists in the use of generic names at the present time. The process has been carried so far that in some cases all of the recognizable species have been taken away from a genus, leaving only a mass of doubtful or unknown *species inquirendae* under the old name. The case of *Sphaeria* may be cited as an example. The more advanced thinkers among the taxonomists have become convinced that the only method for preventing this most unfortunate shifting of names is to insist that a generic name shall always be retained for the species or group of species to which it was first applied, or in other words, that a generic name to be valid must always be inseparably associated with some type species. This is, in reality, only the strict recognition of the law of priority, but it is known as the "method of types." Unfortunately this principle has not been widely accepted in Europe and it was voted down at the recent International Botanical Congress held in Vienna during the summer of 1905. It is, however, recognized by the great majority of American systematists and has been incorporated in the code of botanical nomenclature formulated by the nomenclature commission appointed by the Botanical Club of the American Association for the Advancement of Science at its Washington meeting, January 2, 1903. This code was published in the Bulletin of the Torrey Botanical Club, May,

1904, and a revision, embodying a few slight changes, in the same journal for April, 1907.

This code has been followed in the selection of the generic names which are adopted in this paper. It has resulted in the rejection, owing to the errors of earlier authors, of a number of names which have become familiar to us. Still more unfortunately it necessitates the shifting of certain other names from the groups to which they have been applied in recent times to other and entirely different groups. The necessity for such changes is exceedingly regrettable, but the inconceivable confusion revealed by even a casual study of the literature of this group of plants shows that the consistent following of any possible set of rules will inevitably result in the making of many similar changes. It must be admitted that the selection of type species for the older genera, as provided in the canons of the above code, is at best often arbitrary. This is necessarily so, since the idea of the type of a genus held by its author was a mental concept and not a concrete species. It is believed, however, that the provisions of the code are so clear that in the great majority of cases the same result would necessarily be reached by any conscientious worker. Furthermore it is firmly believed that what may well be called heroic measures are necessary to bring order and stability out of a condition that can only be described by the word chaotic. The argument which is so often advanced that "existing usage" is in itself a sufficient warrant for the continued use of a name can well be met, in the case of this family at least, by the statement that there is no "existing usage." By referring to the two most recent and authoritative general works on the fungi we find that Saccardo, in the *Sylloge Fungorum*, recognizes 82 genera of gill fungi, but of these only 50 per cent. are to be found in Engler & Prantl's *Pflanzenfamilien*. Of the 54 genera found in the latter work 28 per cent. have names not used by Saccardo.

Tournefort (*Institutiones*) in 1700 included all the stalked pileate fungi, whether they had lamellae or not, in the genus

Fungus, placing the dimidiate, woody forms in *Agaricus*. Nineteen years later Dillenius (*Cat. Pl. Giss.* 1719) proposed *Amanita* for the stalked gill fungi but he still placed the sessile, dimidiate ones in *Agaricus* with the woody pore fungi. Micheli (*Nov. Pl. Gen.* 1729) adopted practically the same arrangement, but he restored the older generic name of *Fungus* for the stalked forms and dropped the name *Amanita*. Linnaeus in 1737 (*Genera Plantarum*) seems to have been the first to recognize the presence of lamellae as a character of primary importance. In all of his writings he combined all of the stalked and dimidiate lamellate fungi in a single genus, but in choosing a name for it he very unfortunately selected *Agaricus*. This name had previously only been used for sessile, usually woody and pore-bearing forms and for the very few known species of sessile gill fungi that had been associated with them. It had never included any of the central-stemmed species. According to modern ideas it is clear that he should have chosen *Amanita* or *Fungus* and not *Agaricus* as the name for the gill fungi. In fact, this was the opinion of most of his contemporaries. Battara, Haller, Adanson, and La Marck all refused to accept the innovation. As late as 1806, Roussel (*Flore du Calvados*) continued to use the name *Agaricus* exclusively for the sessile woody pore fungi. Logically and historically this is evidently its proper usage. In the first edition of the *Species Plantarum* (1753) Linnæus recognizes 27 species of *Agaricus*, only three of which are sessile. According to a strict historical interpretation one of these, *Agaricus quercinus*, should be regarded as the type, and the name would thus be lost for any group of the gill fungi. That clause of the code, however, which provides that where economic species are included in a genus one of these must be selected as the type, enables us to designate *Agaricus campestris* as the type of the genus as taken in the Linnaean sense and thus to continue the usually accepted modern usage.

Two years after the appearance of the *Species Plantarum*, Battara (1755) published an important work, *Fungorum Agri*

Ariminensis Historia, in which he used at least twenty generic names for different groups of the gill fungi. *Agaricus* is not one of them. Neither did he follow Linnaeus in confining himself to the use of a single word for specific names, since he used binomials and polynomials indiscriminately. The genera that are accompanied by binomial specific names must certainly be considered as properly published, since they are subsequent to the arbitrarily chosen starting point of 1753, are fully described, and are for the most part fully illustrated. Many of Battara's species have been recognized and cited by Fries and other writers, but always under other generic names of their own choosing. Otto Kuntze in 1891 seems to have been the first to have recognized Battara's genera, and even he takes up but a small portion of them. A part of these names were clearly not established according to the provisions of the code, but twelve of them seem to be valid since they are accompanied by binomial species that are as certainly identifiable at the present day as are any other of the older names for which no type specimens are in existence. A certain element of doubt must always exist in regard to the identity of most of the older species of these fleshy fungi where herbarium material is so unsatisfactory and so difficult to preserve. Published plates are more or less useful, but after all we must largely rely on the traditions handed down by citation from one author to the next. It is only where these traditions can be verified by the study of living material from the type locality that anything approaching certainty can be reached.

Haller (*Historia Stirpium indigenarum Helvetiae inchoata*, 1768) seems to have been the first post-Linnaean author to take up Dillenius' generic name, *Amanita*. He uses it as the equivalent of Linnaeus' *Agaricus* to include all of the gill fungi whether central-stemmed or not. He did not follow what he evidently considered the passing fad of binomialism, but since he includes and cites all of the species of *Agaricus* in the second edition of Linnaeus' *Species Plantarum*, the genus is clearly published according to the provisions of canon 10 of the code.

As no species are figured either by Dillenius or by Haller the first rule applicable in selecting the type species is section *d* of canon 15. As the genus as here published includes *Agaricus campestris*, and as this is the only economic species, it must be selected as the type, hence the *Amanita* of Haller becomes a typonym of *Agaricus* of Linnaeus, and must be rejected. This is historically correct usage if we are to accept the *Agaricus* of Linnaeus, since the two names were used for the same group of species by so many of the older authors. They are the only two names that have ever been used to include the entire family of the gill fungi.

The next important author to publish on the genera of the gill fungi was Paulet. The text of his *Traité des Champignons* was published in 1793. In the first volume he gives a review of the early literature of the fungi with a complete table of synonyms. In the second he describes many species and a number of genera, but unfortunately he only uses vernacular names in the text, the formal latin ones appearing with the plates, which were issued later and at long intervals, in forty-two fascicles, the last not appearing until 1835, long after Paulet's death. His genera, therefore, can only date from the publication of the plates. As the original edition of the plates has not been accessible it has been difficult to determine accurately the date of issue of the different parts. Apparently fascicles 1-8 were issued prior to 1812 and no more until 1818 or later. Fascicles 31-42, containing 56 plates only, appeared in 1835, after a long interruption. With this understanding of the facts we are able to place three of his genera in the available list. These are *Hyponevris*, *Hypophyllum*, and *Hypodendrum*, and all of them are recognized in the following pages of the present memoir.

Schaeffer, Scopoli, Bolton, and Bulliard, who described so many new species, seem to have followed Linnaeus closely in the matter of genera.

Persoon was the first to classify the gill fungi on anything approaching modern lines. In *Observationes Mycologicae* (1796) he established *Russula*, and in *Tentamen Disposi-*

tionis Methodicae Fungorum (1797), *Coprius* and *Lactaria*. He also takes up *Amanita*, and uses it for the first time in the modern sense as including species with an evident basal volva. His type, however, would fall among the ex-annulate species now usually included in *Amanitopsis*. In *Synopsis Methodica Fungorum* (1801) he reduces all of these except *Amanita* to sections of *Agaricus*. For his sections he also uses a number of other names which were taken up by Fries and hence have come down to us as generic names as used by Saccardo and other modern writers. In many cases, however, these modern genera do not contain what would have to be considered as Persoon's types had he given his groups generic rank.

In 1806, Roussel, in the admirable little work already cited, raised many of Persoon's sectional names to generic rank. It seems remarkable that this important work has been so completely overlooked. It is rarely cited and even seems to have escaped the keen eyes of Otto Kuntze, yet we get from it the earliest generic use of at least eight names for the gill fungi and of very many more in the other groups, including such important ones as *Albugo* and *Ustilago*. Here too, on page 59, we find *Amanitoideae* used as a family name for the gill fungi, the earliest family name to be applied to them.

S. F. Gray (1821) is the next important author from the generic standpoint. Eight of his names may be found in the available list. They include *Lepiota* and *Crepidotus*. The latter, however, is not used for brown-spored species as it was by Fries but the well-known *Pleurotus ostreatus* must stand as its type.

For the sixty years (1815-1874), during which Elias Fries was publishing on the gill fungi, he consistently followed Persoon in keeping the great majority of species in the single genus *Agaricus*, which he divided into numerous subgenera or, as he called them, "tribes." At one time or another, however, mostly in *Genera Hymenomycetes*, a pamphlet published in 1836, he established seventeen genera, a number of which he later reduced to subgeneric rank.

Quélet in 1872 (*Les Champignons du Jura et Vosges*)

raised most of the subgenera of Fries to generic rank. He must, therefore, be cited as the author of a large share of the generic names used in Saccardo's *Sylloge*. Twenty-four of these names are to be found in the appended available list. It is here, by the way, that *Inocybe* was first recognized as a genus, and not in Karsten's *Hattsvampar* (1879), as is stated in a recent monograph. In the *Enchridion Fungorum* (1886) Quélet again reduced many of these genera to subgenera, proposing new generic names for the groups in which he arranged them. This was utterly unjustifiable. Luckily only five of these new names find their way to the available list. The others are typonyms.

Gillet in 1876-8 (*Les Champignons de France*) followed Quélet's earlier work in treating the Friesian subgenera as of generic rank. He also raised two subgenera proposed by W. G. Smith to genera and made one new one.

Karsten in 1879 (*Hattsvampar*) was the first seriously to question the Friesian classification, which, based as it was on a comparatively few characters, had often resulted in the bringing into one group of many very dissimilar species. The breaking up of these incongruous aggregations necessitated the employment of many new generic names. Thirty of them are here classed as available. Karsten's work, like all that had gone before, was mostly based on obvious macroscopic characters, but it must be recognized as having been done very well indeed.

Patouillard in his various writings (mostly in the *Hyméno-mycètes d'Europe*, 1887) has proposed a number of new genera, of which eight are here included as available. This number would be considerably increased if the limits of the family were extended in conformity with his ideas. He is the first to utilize minute anatomical characters to any extent, in the separation of genera.

In 1889 two important works appeared. Schroeter in the *Kryptogamen Flora von Schlesien* gives us five new available names. Fayod in the *Histoire Naturelle des Agaricines* (Ann. Sci. Nat. Bot. VII. 9: 181-411) adds twenty-five more.

These latter are based entirely on microscopic and structural characters such as heretofore had received but scanty attention. Our knowledge of the histology and development of most of our species is as yet too limited to enable us always to recognize his generic distinctions.

Maire in his *Recherches Cytologique et Taxonomique sur les Basidiomycètes* (1902) has followed similar lines and has even added cytological characters. His work, however, furnishes us only one new generic name.

Various other authors have from time to time established one or more genera in this group, but the works mentioned above include the more important contributions to the generic nomenclature of the gill fungi.

In preparing this paper a card index has been made giving each name, so far as ascertained, that has been used for either a genus or a subgenus. Each card shows, besides the name of the genus, the name of the author, the date and place of publication, and the type species as determined by the above mentioned code. A parallel series of cards has also been prepared in which the name of the type species stands first, followed by the name of the genus which it typifies. For convenience the names used for the type species are those given in Saccardo's *Sylloge*.

Armed with these series of cards it is easy to learn quickly the bibliographic history of any given group. The following alphabetic list is copied from these cards. It includes the names that have been applied to genera of the gill fungi since 1753. Subgeneric names are not given except as they have been subsequently raised to generic rank; in this case the name of the author of the subgenus is given in parentheses. Those names that for any reason are not considered available are indicated by prefixing numerals as follows: (1) Type species does not belong to the family. (2) Typonym, based on the same type species as a previous genus. (3) Homonym, previously used for another genus or only a variation in spelling of the name of another genus. (4) Hyponym, not associable with a determinable binomial species. Those not so

indicated are to be considered as available, and in any proposed classification of this family each genus should bear the oldest one of these names the type of which chances to fall within its proposed limits. When more than one type falls within the limits of a genus the names of all but the oldest are to be rejected as metonyms. These, however, are still available for any future division of the genus.

ALPHABETICAL LIST OF THE NAMES PROPOSED FOR THE
 GENERA OF THE AGARICACEAE WITH THE DATE
 OF PUBLICATION AND THE NOMENCLATORIAL
 TYPE SPECIES * OF EACH.

- AGARICUS (Dill.) L. Sp. Pl. 1171. 1753.
Agaricus campestris L.
- AGROCYBE Fayod, Ann. Sci. Nat. Bot. VII. 9: 358. 1889.
Naucoria semiorbicularis (Bull.).
- ALECTOROLOPHOIDES Batt. Fung. Hist. 39. 1755.
Cantharellus cibarius Fries.
2. AMANITA (Dill.) Hall. Hist. Stirp. 2: 151. 1768.
Agaricus campestris L.
 See *Agaricus* L. 1753.
2. AMANITOPSIS Roze, Bull. Soc. Bot. Fr. 23: 50. 1876.
Amanitopsis vaginata (Bull.) Roze.
 See *Vaginata* S. F. Gray. 1821.
2. ANDROSACEUS (Pers.) Pat. Hymén. Eur. 105. 1887.
Marasmius androsaceus Fries.
 See *Marasmius* Fries. 1836.
- ANELLARIA Karst. Hattsv. 517. 1879.
Anellaria separata (L.) Karst.
3. ANNULARIA Schulz. Verh. Zool.-Bot. Ges. Wien 16: 49.
 1866.
- ANNULARIUS Roussel, Fl. Calvados ed. 2. 61. 1806.
Coprinus ephemeroïdes (Bull.) Fries.
- ANTHRACOPHYLLUM Ces. Myc. Borneo 3. 1879.
Anthracophyllum nigrita (Lév.) Kalchb.
2. APUS (Nees) S. F. Gray, Nat. Arr. Brit. Pl. 1: 617. 1821.
Schizophyllum commune Fries.
 See *Hyponevris* Paulet. 1793-1812.

* For convenience of comparison, the type species is stated in accordance with the nomenclature of Saccardo's *Sylloge*.

- ARMILLARIA (Fries) Quél. Champ. Jura Vosg. 36. 1872.
Armillaria ramentacea (Bull.) Quél.
2. ARMILLARIELLA Karst. Acta Soc. Faun. Fl. Fenn. 2: 4. 1881.
Armillaria mellea (Vahl).
 See *Polymyces* Batt. 1755.
- ARRHENIA Fries, Sum. Veg. Scand. 312. 1849.
Arrhenia tennella Fries.
- ASTEROPHORA Dittm. Jour. Bot. Schrad. 3^r: 56. 1809.
Nyctalis asterophora Fries.
- ASTROSPORINA Schroet. Krypt. Fl. Schles. 3^r: 576. 1889.
Inocybe scabella (Fries).
- ASTYLOSPORA Fayod, Ann. Sci. Nat. Bot. VII. 9: 376. 1889.
Psathyra corrugis (Fries).
- BOLBITIUS Fries, Epicr. Myc. 253. 1838.
Bolbitius vitellinus Fries.
- BULLA Batt. Fung. Hist. 57. 1755.
Naucoria arvalis (Fries).
- CALATHINUS Quél. Ench. Fung. 46. 1886.
Pleurotus porrigenus (Pers.).
4. CALANTICA Batt. Fung. Hist. 30. 1755.
- CAMAROPHYLLUS (Fries) Karst. Hattsv. 224. 1879.
Hygrophorus caprinus (Scop.) Fries.
- CAMPANELLA P. Henn. Bot. Jahrb. 22: 95. 1895.
Campanella Buttneri P. Henn.
- CAMPANULARIUS Roussel, Fl. Calvados ed. 2. 64. 1806.
Panaeolus campanulatus (L.).
2. CANTARELLUS (Juss.) Pers. Neues Mag. Bot. 1: 106. 1794.
Cantharellus cibarius Fries.
 See *Alectorolophoides* Batt. 1755.
2. CANTHARELLUS Fries, Epicr. Myc. 1838.
Cantharellus cibarius Fries.
 See *Alectorolophoides* Batt. 1755.
- CHALYMOTA Karst. Hattsv. 518. 1879.
Panaeolus phalénarum (Fries).
2. CHAMAECRAS (Rebent.) O. Kuntze, Rev. Gen. 3: 454. 1898.
Marasmius androsaceus Fries.
 See *Marasmius* Fries. 1836.
- CHAMAEMYCES Batt. Fung. Hist. 32. 1755.
Armillaria fracida Fries.

2. CHANTERREL Adans. Fam. Pl. 2: 11. 1763.
Cantharellus cibarius Fries.
 See *Alectorolophoides* Batt. 1755.
3. CHITONIA (Fries) Karst. Hattsv. 482. 1879. Not *Chiton*
 Moc. & Sene. 1824.
Chiton *coprinus* (Fries) Karst.
 CHITONIELLA P. Henn. in E. & P. Nat. Pfl. 1^{1**}: 240. 1898.
Chiton *poderes* (Berk. & Br.).
4. CHLOROPHYLLUM Mass. Eur. Fung. Fl. Agar. 118. 1902.
 Not *Chlorophyllum* Batsch. 1802.
3. CHLOROSPORA Mass. Eur. Fung. Fl. Agar. 118. 1902. Not
Chlorospora Speg. 1891.
Schulzeria *Eyrei* Masee.
- CLARKEINDA O. Kuntze, Rev. Gen. 2: 848. 1891.
Chiton *coprinus* (Fries) Karst.
- CLAUDOPUS (W. G. Smith) Gillet, Champ. Fr. 1: 426. 1878.
Claudopus variabilis (Pers.).
- CLITOCYBE (Fries) Quél. Champ. Jura Vosg. 48. 1872.
Clitocybe nebularis (Batsch) Quél.
- CLITOPILUS (Fries) Quél. Champ. Jura Vosg. 87. 1872.
Clitopilus Prunulus (Scop.) Quél.
3. CLYPEUS (Britz.) Fayod, Ann. Sci. Nat. Bot. VII. 9: 362.
 1889. Not *Clypea* Blume. 1825.
Inocybe asterospora Quél.
- COLLYBIA (Fries) Quél. Champ. Jura Vosg. 56. 1872.
Collybia radicata (Relh.) Quél.
- CONOCYBE Fayod, Ann. Sci. Nat. Bot. VII. 9: 357. 1889.
Galera tenera (Bull.).
2. COPRINARIUS (Fries) Quél. Enchr. Fung. 118. 1886.
Anellaria separata (L.) Karst.
 See *Anellaria* Karst. 1879.
- COPRINELLUS Karst. Hattsv. 542. 1879.
Coprinus deliquescens (Bull.) Fries.
- COPRINOPSIS Karst. Acta Soc. Fl. Faun. Fenn. 2: 26. 1881.
Coprinus Friesii Quél.
- COPRINUS Pers. Tent. Disp. Fung. 62. 1797.
Coprinus comatus (Muell.) Fries.
3. CORNIOLA S. F. Gray, Nat. Art. Brit. Pl. 1: 637. 1821. Not
Corniola Adans. 1763.
Cantharellus muscigenus (Bull.) Fries.

- CORTINARIUS Roussel, Fl. Calvados ed. 2. 61. 1806.
Cortinarius armillatus (Alb. & Schw.) Fries.
- CORTINELLUS Roze, Bull. Soc. Bot. Fr. 23: 50. 1876.
Tricholoma vaccinum Pers.
2. CORTINOPSIS Schroet. Krypt. Fl. Schles. 3¹: 566. 1889.
Hypholoma lacrymabundum (Bull.).
 See *Lacrymaria* Pat. 1887.
- CREPIDOTUS (Nees) S. F. Gray, Nat. Arr. Brit. Pl. 1: 616.
 1821.
Pleurotus ostreatus (Jacq.).
- CRINIPELLIS Pat. Jour. de Bot. 3: 336. 1889.
Collybia stipitaria (Fries).
- CYMATELLA Pat. Bull. Soc. Myc. Fr. 15: 193. 1899.
Cymatella minima Pat. (? Agaricaceae).
- CYPHELLOPUS Fayod, Ann. Sci. Nat. Bot. VII. 9: 365. 1889.
Locellina acetabulosa (Sow.).
- CYSTODERMA Fayod, Ann. Sci. Nat. Bot. VII. 9: 350. 1889.
Lepiota amianthina (Scop.).
- DECONICA (W. G. Sm.); Sacc. Syll. Fung. 5: 1058. 1887.
Deconica coprophila (Bull.) Sacc.
- DELICATULA Fayod, Ann. Sci. Nat. Bot. VII. 9: 313. 1889.
Omphalia integrella (Pers.).
1. DENDROSARCUS O. Kuntze, Rev. Gen. 3: 462. 1898.
Pleurotus carpini (Fries).
 (Based on *Dendrosarcus* Paulet, the type of which is *Fistulina hepatica*, hence it cannot be used in the Agaricaceae).
- DERMINIUS (Fries) Schroet., Krypt. Fl. Schles. 3¹: 578. 1889.
Crepidotus scalaris (Fries).
- DERMOCYBE (Fries) Peck, Bull. N. Y. State Mus. 2: 8. 1887.
Cortinarius simulans (Peck) Sacc.
- DICTYOLUS Quél. Enchr. Fung. 139. 1886.
Cantharellus muscigenus (Bull.) Fries.
2. DOCHMIOPUS Pat. Hymén. Eur. 113. 1887.
Claudopus variabilis (Pers.).
 See *Claudopus* (Smith) Gillet. 1878.
2. DRYOPHILA Quél. Enchr. Fung. 66. 1886.
Pholiota caperata (Pers.).
 See *Rozites* Karst. 1879.
- DRYOSOPHILA Quél. Enchr. Fung. 115. 1886.
Hypholoma cascum (Fries).

- ECCILIA (Fries) Quél. Champ. Jura Vosg. 83. 1872.
Eccilia atrides (Lasch) Quél.
- ENTOLOMA (Fries) Quél. Champ. Jura Vosg. 83. 1872.
Entoloma lividum (Bull.) Quél.
- EOMYCENELLA Atk. Bot. Gaz. 34: 32. 1902.
Eomycenella echnocephala Atk.
- EPHEMEROCYBE Fayod, Ann. Sci. Nat. Bot. VII. 9: 380. 1889.
Coprinus ephemerus (Bull.) Fries.
2. FLABELLARIA Pers. Champ. Comest. 105. 1818.
Schizophyllum commune Fries.
 See *Hyponeuris* Paulet. 1793-1812.
- FLAMMOPSIS Fayod, Ann. Sci. Nat. Bot. VII. 9: 356. 1889.
Flammula abrupta (Fries).
3. FLAMMULA (Fries) Quél. Champ. Jura Vosg. 97. 1872. Not
Flammula DC. 1818.
Flammula gummosa (Lasch) Quél.
2. FUNGUS Adans. Fam. Pl. 2: 12. 1763.
Agaricus campestris L.
 See *Agaricus* L. 1753.
- FUSIPORA Fayod, Ann. Sci. Nat. Bot. VII. 9: 351. 1889.
Lepiota sistrata (Fries).
3. GALERA (Fries) Quél. Champ. Jura Vosg. 103. 1872. Not
Galera Blume. 1825.
Galera pygmaeo-affinis (Fries) Quél.
4. GALERICULUS Batt. Fung. Hist. 33. 1755.
 GALERULA Karst. Hattsv. 442. 1879.
Galera pityria (Fries).
- GALORRHEUS Fries, Syst. Orb. Veg. 75. 1825.
Lactarius controversus (Pers.) Fries.
4. GELONA Adans. Fam. Pl. 2: 11. 1763.
 GEOPETALUM Pat. Hymén. Eur. 127. 1887.
Pleurotus petaloides (Bull.).
- GEOPHILA Quél. Enchr. Fung. III. 1886.
Stropharia depilata (Pers.).
- GLYPTOSPORA Fayod, Ann. Sci. Nat. Bot. VII. 9: 377. 1889.
Hypholoma velutinum (Pers.).
- GODFRINIA Maire, Rech. Cyt. Tax. Basid. 116. 1902.
Hygrophorus conicus Fries.
- GOMPHIDIUS Fries, Gen. Hymen. 8. 1836.
Gomphidius glutinosus (Schaeff.) Fries.

4. GOMPHOS Batt. Fung. Hist. 33. 1755.
GOMPHOS O. Kuntze, Rev. Gen. 2: 853. 1891.
Cortinarius castaneus Fries.
1. GOMPHUS Pers. Comm. Schaeff. Consp. 1800.
Craterellus clavatus Fries.
3. GYMNOCHILUS Clements, Bot. Surv. Neb. 4: 23. 1896. Not
Gymnochilus Blume. 1858.
Hypholoma appendiculatum (Bull.).
- GYMNOCYBE Karst. Hattsv. 412. 1879.
Flammula Weinmanni (Fries).
4. GYMNOGOMPHUS Fayod, Ann. Sci. Nat. Bot. VII. 9: 385. 1889.
GYMNOPIIUS Karst. Hattsv. 400. 1879.
Flammula liquiritiæ (Pers.).
- GYMNOPIUS Roussel, Fl. Calvados ed. 2. 62. 1806.
Collybia longipes (Bull.).
- GYROPHILA QuéL. Enchr. Fung. 9. 1886.
Armillaria bulbigeræ (Alb. & Schw.) QuéL.
- HEBELOMA (Fries) QuéL. Champ. Jura Vosg. 1872.
Hebeloma mesophaeum (Pers.) QuéL.
- HELIOMYCES Lév. Ann. Sci. Nat. Bot. III. 2: 177. 1844.
Heliomyces elegans Lév.
- HEMICYBE Karst. Hattsv. 248. 1879.
Lentinus ursinus Fries.
2. HEXAJUGA Fayod, Ann. Sci. Nat. Bot. VII. 9: 389. 1889.
Clitopilus orcella (Bull.).
See *Orcella* Batt. 1755.
- HIATULA (Fries) Sacc. Syll. Fung. 5: 305. 1887.
Hiatula bengonii (Fries) Sacc.
- HYDROCYBE (Fries) Karst. Hattsv. 233. 1879.
Hygrophorus sciophanus Fries.
- HYDROPHORUS Batt. Fung. Hist. 51. 1755.
Hygrophorus coccineus (Schaeff.) Fries.
2. HYGROCYBE Fayod. 1889.
Hygrophorus coccineus (Schaeff.) Fries.
See *Hydrophorus* Batt. 1755.
- HYGROPHORUS Fries, Gen. Hymen. 8. 1836.
Hygrophorus chrysodon (Batsch) Fries.
- HYLOPHILA QuéL. Enchr. Fung. 93. 1886.
Hebeloma sinuosum (Bull.).
- HYPHOLOMA (Fries) QuéL. Champ. Jura Vosg. 112. 1872.
Hypholoma sublateritium (Schaeff.) QuéL.

- HYPODENDRUM Paulet, Ic. 75. 1835.
Pholiota squarrosa Fries.
- HYPONEVRIS Paulet, Ic. 75. 1793-1812.
Schizophyllum commune Fries.
- HYPOPHYLLUM Paulet, Ic. 11. 1793-1812.
Lactarius rufus Fries.
2. HYPORHODIUS (Fries) Schroet. Krypt. Fl. Schles. 3: 613. 1889.
Eccilia atrides (Lasch) Quél.
 See *Eccilia* (Fries) Quél. 1872.
4. HYSTERO-SPHAEROCEPHALOS Batt. Fung. Hist. 1755.
 INOCYBE (Fries) Quél. Champ. Jura Vosg. 151. 1872.
Inocybe relicina (Fries) Quél.
- INOLOMA (Fries) Karst. Medd. Soc. Fl. Faun. Fenn. 18: 70. 1891.
Cortinarius opimus Fries.
4. KUEMA Adans. Fam. Pl. 2: 11. 1763.
 LACCARIA Berk. & Br. Ann. Nat. Hist. (1883): 370. 1883.
Clitocybe laccata (Scop.).
- LACRYMARIA Pat. Hymén. Eur. 122. 1887.
Hypoloma lacrymabundum (Bull.).
- LACTARIA Pers. Tent. Disp. Fung. 63. 1797.
Lactarius piperatus (L.).
- LACTARIELLA Schroet. Krypt. Fl. Schles. 3: 544. 1889.
Lactarius fuliginosus Fries.
3. LACTARIUS S. F. Gray, Nat. Arr. Brit. Pl. 1: 623. 1821.
Lactarius piperatus (L.) Fries.
 See *Lactaria* Pers. 1797.
2. LACTIFLUUS Roussel, Fl. Calvados ed. 2. 66. 1806.
Lactarius piperatus (L.) Fries.
 See *Lactaria* Pers. 1797.
- LENTINELLUS Karst. Hattsv. 246. 1879.
Lentinus umbellatus Fries.
- LENTINUS Fries, Syst. Orb. Veg. 77. 1825.
Lentinus tuber-regium Fries.
- LENTISPORA Fayod, Ann. Sci. Nat. Bot. VII. 9: 379. 1889.
Coprinus tomentosus (Bull.).
- LENTODIOPSIS Bubak, Hedwigia 43: 196. 1904.
Lentodiopsis albida Bubak.
- LENTODIUM Morgan, Jour. Cinc. Soc. Nat. Hist. 18: 36. 1895.
Lentinius tigrinus (Bull.) Fries.

- LEPIOTA S. F. Gray, Nat. Arr. Brit. Pl. 1: 601. 1821.
Lepiota procera (Scop.).
- LEPISTA (Fries) W. G. Smith, Clavis Ag. Jour. Bot. 8: 26. 1870.
Tricholoma nudum (Bull.).
2. LEPTOPUS Karst. Hattsv. 242. 1879.
Arrhenia tenella Fries.
 See *Arrhenia* Fries. 1849.
3. LEPTOGLOSSUM Karst. Hattsv. 242. 1879. Not *Leptoglossa* DC. 1841.
Cantharellus muscigenus (Bull.) Fries.
- LEPTOMYCES Mont. Syll. Crypt. 125. 1854.
Hiatula lignifragus Mont.
3. LEPTONIA (Fries) Quél. Champ. Jura Vosg. 88. 1872. Not *Leptonium* Griffiths. 1843.
Leptonia anatina (Lasch) Quél.
- LEUCOMYCES Batt. Fung. Hist. 27. 1755.
Amanita coccola (Scop.).
- LEUCOPRINUS Pat. Bull. Soc. Myc. Fr. 4: 26. 1888.
Hiatula flaviceps (Pat.) Sacc.
4. LEUCOSPHAEROCEPHALUS Batt. Fung. Hist. 32. 1755.
3. LIMACIUM (Fries) Schroet. Krypt. Fl. Schles. 3¹: 530. 1889.
 Not *Limacia* Lour. 1790.
Hygrophorus cburneus (Bull.) Fries.
4. LITHODERMYCES Batt. Fung. Hist. 62. 1755.
- LOCELLINA Gillet, Champ. Fr. 1: 428. 1878.
Locellina Alexandri Gillet.
- LYOPHYLLUM Karst. Acta Soc. Faun. Fl. Fenn. 2: 3. 1881.
Collybia leucophaeata Karst.
2. MARASMIOPSIS P. Henn. in E. & P. Nat. Pfl. 1^{***}: 230. 1898.
Marasmius subannulatus Fries.
 See *Phaeomarasmius* Scherffel. 1897.
- MARASMIUS Fries, Gen. Hymen. 9. 1836.
Marasmius androsaceus (L.) Fries.
- MASTOCEPHALUS (Batt.) O. Kuntze, Rev. Gen. 2: 859. 1891.
Lepiota cepaestipes (Sow.).
2. MASTOLEUCOMYCES (Batt.) O. Kuntze, Rev. Gen. 2: 860. 1891.
Armillaria ramentacea (Bull.).
 See *Armillaria* Quél. 1872.
3. MELALEUCA Pat. Hymén. Eur. 96. 1887. Not *Melaleuca* L. 1767.

- Tricholoma melaleucum* (Pers.).
 MELANOLEUCA Pat. Tax. Hymén. 159. 1900.
Tricholoma melaleucum (Pers.).
 MELANOTUS Pat. Tax. Hymén. 175. 1900.
Crepidotus bambusinus Pat.
2. MERULIUS Haller, Hist. Stirp. 1768.
Cantharellus cibarius Fries.
 See *Alectorolophoides* Batt. 1755.
- METRARIA Cooke & Massee; Sacc. Syll. Fung. 9: 82. 1891.
Metraria insignis Cooke & Massee.
- MICROMPHALE (Nees) S. F. Gray, Nat. Arr. Brit. Pl. 1: 622.
 1821.
Pleurotus fimbriatus (Bolt.).
- MONOMYCES Batt. Fung. Hist. 41. 1755.
Tricholoma sculpturatum (Fries).
- MONTAGNEA Fries, Gen. Hymen. 7. 1836.
Montagnites Pallasii Fries.
1. MONTAGNITES Fries, Epicr. Myc. 240. 1838.
Gymnophragmium Delilei Mont. Not *Agaricaceae*.
- MUCIDULA Pat. Hymén. Eur. 95. 1887.
Armillaria mucida (Schrad.).
- MYCENA Roussel, Fl. Calvados ed. 2. 64. 1806.
Bolbitius conocephalus (Bull.) Fries.
- MYCENULA Karst. Medd. Soc. Faun. Fl. Fenn. 16: 89. 1889.
Mycena pura (Pers.).
4. MYOMYCES Batt. Fung. Hist. 48. 1755.
3. MYXACIUM Peck, Bull. N. Y. State Mus. 2: 14. 1887. Not
Myxadium Lév. 1849.
Cortinarius amarus (Peck) Sacc.
- . MYXOCYBE Fayod, Ann. Sci. Nat. Bot. VII. 9: 361. 1889.
Pholiota radicata (Bull.).
2. NÆMATOLOMA Karst. Hattsv. 495. 1879.
Hypholoma sublateritium (Schaeff.).
 See *Hypholoma* QuéL. 1872.
- NAUCORIA (Fries) QuéL. Champ. Jura Vosg. 99. 1872.
Naucoria melinoides (Bull.) QuéL.
1. NEUROPHYLLUM Pat. Hymén. Eur. 129. 1887.
Craterellus clavatus (Pers.) Fries.
- NOLANEA (Fries) QuéL. Champ. Jura Vosg. 89. 1872.
Nolanea pascua (Pers.).

- NYCTALIS Fries, Syst. Orb. Veg. 78. 1825.
Nyctalis parasitica (Bull.) Fries.
2. OCTUJUGA Fayod, Ann. Sci. Nat. Bot. VII. 9: 390. 1889.
Claudopus variabilis (Pers.).
 See *Claudopus* (W. G. Smith) Gillet. 1878.
3. OMPHALIA (Fries) Quél. Champ. Jura Vosg. 64. 1872. Not
Omphalius Roussel. 1806.
Omphalia cyanophyllus (Fries).
 OMPHALINA Quél. Ench. Fung. 42. 1886.
Omphalia hydrogramma (Fries).
 OMPHALIUS Roussel, Fl. Calvados ed. 2. 66. 1806.
Clitocybe cyathiformis (Bull.).
 OMPHALOMYCES Batt. Fung. Hist. 36. 1755.
Russula galochroa Fries.
 OMPHALOTUS Fayod, Ann. Sci. Nat. Bot. VII. 9: 338. 1889.
Pleurotus olearinus (DC.).
 ONCHOPUS Karst. Hattsv. 526. 1879.
Coprinus clavatus (Batt.) Fries.
- ORCELLA Batt. Fung. Hist. 74. 1755.
Clitopilus orcellus (Bull.).
- OUDESMANSIELLA Speg. Anal. Soc. Ci. Argent. 12: 1881.
Oudemansiella platensis Speg.
- PANAEOLOUS (Fries) Quél. Champ. Jura Vosg. 121. 1872.
Anellaria fimeputris (Bull.) Karst.
- PANELLUS Karst. Hattsv. 512. 1879.
Panus stypticus (Bull.).
- PANNUCIA Karst. Hattsv. 512. 1879.
Psathyra fatua (Fr.).
- PANUS Fries, Epicr. Myc. 396. 1838.
Panus farneus Fries.
- PAXILLUS Fries, Gen. Hymen. 8. 1836.
Paxillus involutus (Batsch.) Fries.
4. PETRONA Adans. Fam. Pl. 2: 11. 1763.
- PHAEOHYGROCYBE P. Henn. Bot. Jahrb. 30: 50. 1901.
Phaeohygrocybe Zenkeri P. Henn.
- PHAEOLIMACIUM P. Henn. Monunia I: 14. 1899.
Phaeolimacium bulbosum P. Henn. & Nym.
- PHAEOMARASMIUS Scherffel, Hedwigia 36: 289. 1897.
Marasmius subannulatus (Trog.) Fries.
- PHIALOCYBE Karst. Hattsv. 415. 1879.
Crepidotus epibryus (Fries).

4. PHLEBOPHORA Lév. Ann. Sci. Nat. Bot. II. 16: 238. 1841.
(Founded on an abnormality.)
PHLEGMACIUM (Fries) Fayod, Ann. Sci. Nat. Bot. VII. 9:
375. 1889.
Cortinarius saginus Fries.
PHOLIOTA (Fries) Qué. Champ. Jura Vosg. 91. 1872.
Pholiota dura (Bolt.) Qué.
PHOLIOTELLA Speg. Bol. Acad. Ci. Cordoba 11: 412. 1889.
Phliotella blatteropsis Speg.
PHOLIOTINA Fayod, Ann. Sci. Nat. Bot. VII. 9: 359. 1889.
Phliota blattaria (Fries).
PHYLLOPORUS Qué. Fl. Myc. 409. 1888.
Gomphidius rhodoxanthus (Schw.) Fries.
3. PHYLLOTUS Karst, Hattsv. 92. 1879. Not *Phyllota* Benth.
1837.
Pleurotus porregeus (Pers.).
PICROMYCES Batt. Fung. Hist. 47. 1755.
Hebeloma fastibile (Fries).
PILOSACE (Fries) Pat. Hymén. Eur. 122. 1887.
Pilosace algeriensis (Fries).
2. PLEUROPUS Roussel, Fl. Calvados ed. 2. 67. 1806.
Clitopilus orcellus (Bull.).
See *Orcella* Batt. 1755.
PLEUROTELLUS Fayod, Ann. Sci. Nat. Bot. VII. 9: 359. 1889.
Pleurotus hypnophilus (Berk.).
PLEUROTUS (Fries) Qué. Champ. Jura Vosg. 77. 1872.
Pleurotus corticatus (Fries) Qué.
PLICATURA Peck, Ann. Rep. N. Y. State Mus. 24: 75. 1872.
Trogia alni (Peck) Sacc.
PLUTEOLUS (Fries) Gillet, Champ. Fr. 1: 549. 1876.
Pluteolus reticulatus (Pers.) Gillet.
PLUTEOPSIS Fayod, Ann. Sci. Nat. Bot. VII. 9: 377. 1889.
Agaricus pellospermus Bull. (*Psathyra corrugis* Sacc. pro parte).
PLUTEUS Fries, Gen. Hymen. 6. 1836.
Pluteus cervinus (Schaeff.) Fries.
POCILLARIA (P. Browne) O. Kuntze, Rev. Gen. 2: 865. 1891.
Lentinus crinitus Fries.
POLYMYCES Batt. Fung. Hist. 34. 1755.
Armillaria mellea (Vahl.).

- PRATELLA (Pers.) S. F. Gray, Nat. Arr. Brit. Pl. 1: 626.
1821.
Agaricus arvensis Schaeff.
- PRUNULUS (Cesalp.) S. F. Gray, Nat. Arr. Brit. Pl. 1: 630
1821.
Mycena pelianthina (Fries).
- PSALLIOTA (Fries) Quél. Champ. Jura Vosg. 107. 1872.
Agaricus cretaceus Fries.
3. PSATHYRA (Fries) Quél. Champ. Jura Vosg. 122. 1872.
Psathyra conopilea (Fries) Quél. Not *Psathyra* Spreng.
1818. (= *Psathura* Commerson 1789.)
- PSATHYRELLA (Fries) Quél. Champ. Jura Vosg. 122. 1872.
Psathyrella gracilis (Fries) Quél.
2. PSELLIOPHORA Karst. Hattsv. 528. 1879.
Coprinus comatus (Muell.) Fries.
See *Coprinus* Pers. 1797.
- PSEUDOFARINACEUS Batt. Fung. Hist. 29. 1755.
Volvaria gloiocephala Fries.
- PSILOCYBE (Fries) Quél. Champ. Jura Vosg. 116. 1872.
Psilocybe cernua (Vahl.) Quél.
4. PTEROPHYLLUS Lév. Ann. Sci. Not. Bot. III. 2: 178. 1844.
(An abnormality.)
4. PTYCHELLA Roze & Boudier, Bull. Soc. Myc. Fr. 26: lxxiv.
1879. (An abnormality.)
- RADDETES Karst. Hedwigia 26: 112. 1887.
Stylobates turkestanicus Karst.
- RESUPINATUS (Nees) S. F. Gray, Nat. Arr. Brit. Pl. 1: 617.
1821.
Pleurotus applicatus (Batsch).
- RHACOPHYLLUS Berk & Br. Jour. Linn. Soc. 11: 559. 1871.
Rhacophyllus lilacinus Berk. & Br.
3. RHIPIDIUM Wallr. Fl. Crypt. Germ. 2: 742. 1833.
Panus stypticus (Bull.) Fries. Not *Rhipidium* Trinn.
1820.
2. RHODOPHYLLUS Quél. Enchr. Fung. 57. 1886.
Entoloma lividum (Pers.).
See *Entoloma* Quél. 1872.
- RIMBACHIA Pat. Bull. Soc. Myc. Fr. 7: 159. 1891.
Rimbachia paradoxa Pat.

2. RHODOSPORUS Schroet. Krypt. Fl. Schles. 3¹: 617. 1889.
Clitopilus prunulus (Scop.).
 See *Clitopilus* Quél. 1872.
- RIPARITES Karst. Hattsv. 477. 1879.
Inocybe Tricholoma (Alb. & Schw.).
- ROUMEGUERIA Karst. Hattsv. 452. 1879.
Hebeloma strophosum (Fries).
2. ROUMEGUERITES Karst. Hattsv. 571. 1879.
 (= *Roumegueria*).
- ROZITES Karst. Hattsv. 290. 1879.
Pholiota caperata (Pers.).
- RUSSULA Pers. Obs. Myc. 1: 100. 1796.
Russula lepida Fries.
- RUSSULINA Schroet. Krypt. Fl. Schles. 3: 550. 1898.
Russula integra Fries.
2. RUSSULIOPSIS Schroet. Krypt. Fl. Schles. 3¹: 622. 1889.
Clitocybe laccata (Scop.).
 See *Laccaria* Berk. & Br. 1883.
- RYSSOSPORA Fayod, Ann. Sci. Nat. Bot. VII. 9: 361. 1889.
Flammula apicrea (Fries).
2. SCAPHOPHORUM Ehrenb. Horae Phys. Berol. 1: 94. 1820.
Schizophyllum commune Fries.
 See *Hyponeuris* Paulet, 1793-1812.
- SCHINZINIA Fayod, Ann. Sci. Nat. Bot. VII. 9: 365, 1889.
Schinzinia pustulosa Fayod.
2. SCHIZONIA Pers. Myc. Eur. 3: 14. 1828.
Schizophyllum commune Fries.
 See *Hyponeuris* Paulet, 1793-1812.
2. SCHIZOPHYLLUM Fries, Syst. Myc. 1: 330. 1821.
 See *Hyponeuris* Paulet, 1793-1812.
2. SCHIZOPHYLLUS Fries, Obs. Myc. 1: 103. 1815.
 See *Hyponeuris* Paulet, 1793-1812.
- SCHULZERIA Bres. in Sacc. Syll. Fung. 5: 72. 1887.
Schulzeria rimulosa Bres. & Schulz.
- SCYTINOTUS Karst. Hattsv. 97. 1879.
Panus ringens Fries.
- SIMOCYBE Karst. Hattsv. 416. 1879.
Naucoria lugubris (Fries).
- SPHAEROCEPHALUS Batt. Fung. Hist. 32. 1755.
Armillaria focalis (Fries).

2. SPHAEROPUS Paulet, Ic. 108. 1835.
Nyctalis asterophora Fries.
 See *Asterophora* Dittm. 1809.
- SPHAEROTRACHYS Fayod, Ann. Sci. Nat. Bot. VII. 9: 374.
 1889.
Cortinarius liquidus Fries.
- STROPHARIA (Fries) Quéf. Champ. Jura Vosg. 110. 1872.
Stropharia aeruginosa (Curt.) Quéf.
- STYLOBATES Fries, Epicr. Myc. 370. 1838.
Stylobates paradoxus Fries (probably an abnormality).
- TAPINIA (Fries) Karst. Hattsv. 452. 1879.
Paxillus pannuoides Fries.
- TELAMONIA (Fries) Peck, Bull. N. Y. State Mus. 2: 8. 1887.
Cortinarius gracilis (Peck) Sacc.
3. TRICHOLOMA (Fries) Quéf. Champ. Jura Vosg. 38. 1872.
 Not *Tricholoma* Benth. 1846.
Tricholoma colossus (Fries) Quéf.
- TROGIA Fries, Gen. Hymen. 10. 1836.
Trogia Montagnei Fries.
- TUBARIA (W. G. Smith) Gillet, Champ. Fr. 1: 537. 1876.
Tubaria inquilina (Fries) Gillet.
- UROSPORA Fayod, Ann. Sci. Nat. Bot. VII. 9: 328. 1889.
Pleurotus striatulus (Fries).
3. VAGINARIUS Roussel, Fl. Calvados ed. 2. 59. 1806. Not
Vaginaria Rich. in Pers. Enchr. 1805.
Lepiota cepaestipes cretacea (Bull.) Sacc.
- VAGINATA (Nees) S. F. Gray, Nat. Arr. Brit. Pl. 1: 60r.
 1821.
Amanitopsis vaginatus (Bull.).
4. VOLVA (Plin) Adans. Fam. Pl. 2: 12. 1763.
 VOLVARIELLA Speg. Anal. Mus. Nac. Buenos Aires 6: 118.
 1899.
Volvariella argentina Speg.
3. VOLVARIUS Roussel, Fl. Calvados ed. 2. 59. 1806. Not *Vol-*
varia DC. 1805 (a lichen).
Volvaria volvacius (Bull.).
- XEROTINUS Reichenb. Consp. 14. 1828.
Xerotus afer Fries.
3. XEROTUS Fries, Elench. Fung. 1: 48. 1830. Not *Xerotes*
 R. Brown. 1810.
Xerotus afer Fries.

SYSTEMS OF CLASSIFICATION

It is difficult to propose a satisfactory arrangement for the genera of this family. They do not present an orderly progression from lower and simpler to higher and more complex forms, but can be likened rather to an amoeba-like body with arms extending in various directions. Thus the chanterelles and their allies shade off so imperceptibly into the Thelephoraceae that authorities are not agreed as to where to draw the line between them. *Panus* is related to *Lenzites* and the other lamellate Polyporaceae. *Paxillus* has some of the characters of the Boletaceae, while *Coprinus* with its deliquescent lamellae points clearly in the direction of *Gyrophragmium* and similar forms among the Gasteromycetes. No character can be selected for the primary division of this mass into groups that will not result at some point in the artificial separation of clearly related forms. Fries, whose system of classification is the one still usually followed, after first lopping off a few outlying groups, based his primary division on the color of the spores. His other generic or, rather, subgeneric characters were based for the most part on the mode of attachment of the lamellae, whether free, adnexed, adnate, or decurrent; on the nature of the stem, whether fleshy and uniform in texture or slender and tubular with a cartilaginous cortex; and on the presence or absence of an annulus or volva. The use of these few characters often resulted in the bringing together under the same generic or subgeneric name of great numbers of rather incongruous species which it was necessary to subdivide into sections. Quélet's contribution was simply that of raising Fries's subgenera to generic rank without in the least altering the scheme of the classification. Karsten went further. He evidently intended to make each generic name stand for a homogeneous clearly related group of species. To accomplish this he recognized numerous other characters as of generic rank and named as genera many of the sectional groups of Fries. His characters were still for the most part macroscopic. Patouillard, Fayod, and Maire have used microscopic, histological and cytological

characters as well. There can be no question that the careful histological study of a large series of species, with special attention to the earliest stages and to development, would throw much light on their relationships. At present, however, our knowledge of these characters, especially as far as our American species are concerned, is too limited to admit of broad generalizations. It is my belief, also, that histological characters of importance will in nearly all cases be found to be correlated with recognizable macroscopic differences. Hennings in the *Pflanzenfamilien*, while he has recognized a considerable number of tribes or subfamilies, has not kept pace with the modern tendencies in the matter of genera, but tends to revert to the complicated system of a few large genera with many subgenera and sections. His generic names have been chosen, too, according to a system which is quite incomprehensible.

In seeking for a character to use as the primary dividing line for the grouping of the genera belonging to the great tribe Agariceae in arranging the following key, the presence or absence of a membranous organ covering the young lamellae has finally been chosen, thus grouping them in two series, *Gymnohylli* and *Cryptophylli*. This seeming innovation is in reality only a return to the original basis of classification first proposed by Persoon. It is not fully satisfactory and results in the separation of some evidently related groups. Part of such old genera as *Tricholoma*, *Hebeloma*, *Flammula*, *Coprinus* and *Lentinus* will be found in each of these series. There can be little question that the genus *Leucomyces* (usually known as *Amanita*) with its basal cup-like volva formed from the universal veil, and its well-marked annulus formed from the partial veil or cortina, represents the highest and most complex type to be found among the gill fungi. It should be noted that here the young lamellae are protected by two clearly distinct membranes, each of which has unfortunately been called a veil. In this discussion this term will be retained for the outer or universal covering, while the inner or partial one will be referred to as the cortina. Since these membranes thus mark the highest

development attained by the family it seems only logical to accept the presence or absence of one or both of them as a character of primary importance. Two practical inconveniences, however, must be admitted. First, the two membranes are often confounded in descriptive works and, as either of them may or may not form an annulus on the stem, it is often impossible to determine from the literature which organ is really present. Second, the rudiment of a veil consisting of a more or less evident powdery or waxy coating is said to exist in the very young stages of even the most pronounced gymnohyllous species, while in many that are clearly cryptophyllous the veil entirely disappears at an early stage in the growth of the pileus. However, there are probably very few cases in which a careful examination of the younger stages will not show at once to which of the two series any given species belongs. Only three tribes are here recognized, the *Cantharelleae*, the *Lactarieae* and the *Agariceae*, the last divided in two series as above indicated.

The characters selected for the separation of genera are for the most part the old familiar ones, although others have been utilized when necessary to carry out the fundamental idea of making each generic name stand as far as possible for a compact, clearly related assemblage of species. The system adopted may therefore be considered as an amplification of that of Karsten or at least as being based on the same fundamental idea. Further study, and the discovery of the yet unknown multitudes of species which unquestionably exist in our territory, will result in a considerable increase in the number of genera to be recognized, and it is hoped that it may also lead to a better understanding of relationships and to a more natural grouping. The arrangement adopted in the following key is largely a matter of convenience, and yet the attempt has been made, so far as is possible in a lineal arrangement, to bring related genera together.

The family as here limited is taken in a narrower sense than has been done by Patouillard and others. This, too, is also done more as a matter of convenience than as expressing any fixed views as to natural limits.

KEY TO THE NORTH AMERICAN GENERA OF
AGARICACEAE

KEY TO THE TRIBES

1. Hymenium plicate, covering obtuse folds: spores white. CANTHARELLEAE.
Hymenium covering true lamellae 2.
2. Cells of the sporocarp in part swollen, vesicular: spores white or
yellow LACTARIEAE.
Cells of the sporocarp all slender, elongated: spores black, brown,
pink or white AGARICAEAE.

Tribe I. CANTHARELLEAE

1. Sporocarp tough, coriaceous or woody, reviving 2.
Sporocarp fleshy or membranous, putrescent, not reviving 4.
2. Stipe lateral or wanting 1. PLICATURA.
Stipe central 3.
3. Pileus thick, firm, woody 2. XEROTINUS.
Pileus thin, membranous, tubular (see below 5. TROGIA).
4. Stipe eccentric, lateral, or wanting 3. DICTYVOLUS.
Stipe central or nearly so 5.
5. Densely connate-cespitose: pileus irregular 4. MERISMODES.
Scattered or gregarious: pileus regular or nearly so 6.
6. Pileus turbinate, infundibuliform or tubular 7.
Pileus convex or depressed, fleshy 8.
7. Pileus thin, membranous 5. TROGIA.
Pileus thick, tough and somewhat corky 6. TURBINELLUS.
8. Lamellae much forked 7. ALECTOROLOPHOIDES.
Lamellae simple 8. ASTEROPHORA.

Tribe II. LACTARIEAE

1. Cells of the sporocarp lactiferous, bleeding when cut 2.
Cells of the sporocarp non-lactiferous, not bleeding 5.
2. Lamellae at first pallid, becoming darker with age 9. HYPOPHYLLUM.
Lamellae uniform in color, unchanging 3.
3. Pileus dry, glabrous, without a pellicle 10. LACTARIA.
Pileus pelliculose, usually viscid 4.
4. Pileus glabrous, slimy-viscid, margin expanded 11. GLOBOCYBE.
Pileus tomentose, margin involute 12. GALORRHIZUS.
5. Pellicle adnate to the pileus or none 6.
Pellicle easily separable 8.
6. Pileus thick, involute, umbilicate or infundibuliform 13. LACTERELIS.
Pileus thin, convex to expanded or depressed 7.

7. Pileus moist or sub-viscid: lamellae forking . . . 14. *DIKOPHYLLUM*.
 Pileus slimy-viscid: lamellae heterophyllous . . . 15. *OMPHALOMYCES*.
 8. Pellicle dry, velvety, or crustose-areolate 16. *RUSSULA*.
 Pellicle moist or viscid, glabrous: lamellae equal . . . 17. *RUSSULINA*.

Tribe III. AGARICEAE

1. Lamellae naked even when young: no veil or cortina (*Gymnophylli*) 2.
 Lamellae when young covered by a veil or a cortina or by both
 (*Cryptophylli*) 58.

(Gymnophylli.)

2. Lamellae densely hirsute, the edge splitting longitudinally: sessile.
 18. *HYPONEVRIS*.
 Lamellae glabrous, the edge entire 3.
 3. Sporocarp tough, coriaceous or woody, reviving: spores white . . 4.
 Sporocarp fleshy or membranous, not reviving 17.
 4. Stipe eccentric, lateral or wanting: pileus irregular 5.
 Stipe central: pileus regular or nearly so 8.
 5. Pileus sessile, resupinate when young 6.
 Pileus stipitate or dimidiate, not resupinate 7.
 6. Pileus thin, membranous 19. *PLEUROTOPSIS*.
 Pileus coriaceous, of uniform texture 20. *SCYTIOTUS*.
 Pileus coriaceous, with a gelatinous upper layer . . . 21. *RESUPINATUS*.
 7. Stipe lateral or none: lamellae thin, lacerate 22. *HEMICYBE*.
 Stipe lateral or none: lamellae thick, entire 23. *PANELLUS*.
 Stipe eccentric: pileus somewhat fleshy 24. *PANUS*.
 8. Stipe tubular, slender, with a cartilaginous cortex 9.
 Stipe solid, thick, of uniform texture 14.
 9. Pileus gelatinous: stipe horny 25. *HELIOMYCES*.
 Pileus membranous or somewhat fleshy 10.
 10. Margin of pileus straight, appressed to the stipe when young . . . 11.
 Margin of pileus incurved when young 12.
 11. Pileus convex: stipe rigid, radicate or dilated 26. *MYCETINIS*.
 Pileus plane or umbilicate: stipe filiform, inserted . . 27. *MARASMIUS*.
 12. Pileus with a pellicle of thread-like hairs: hymenium persistent, of
 well developed lamellae 28. *CRINIPELLIS*.
 Pileus glandular-hirsute: hymenium deliquescent, of rudimentary
 lamellae 29. *EOMYCENELLA*.
 Pileus without a pellicle, glabrous or nearly so 13.
 13. Lamellae adnate or subdecurent 30. *COLLYBIOPSIS*.
 Lamellae free or slightly adnexed 31. *SCORTEUS*.
 14. Cespiteous: pileus irregular, subeccentric 32. *LENTINELLUS*.
 Solitary or gregarious, regular 15.
 15. Arising from a tuberous sclerotium 33. *LENTINUS*.
 Arising from ordinary mycelium 16.
 16. Pileus thin, umbilicate or infundibuliform: lamellae long decurrent.
 34. *POCILLARIA*.
 Pileus thick, convex: lamellae adnate 35. *LENTINULA*.

17. Stipe eccentric, lateral or wanting: pileus irregular 18.
 Stipe central: pileus regular 21.
18. Spores black: pileus tough 36. ANTHRACOPHYLLUM.
 Spores purplish-brown 37. MELANOTUS.
 Spores ochraceous-brown: lamellae separable from trama . 38. TAPINIA.
 Spores ochraceous-brown: lamellae fused with trama . 39. PHIALOCYBE.
 Spores pink or salmon 40. CLAUDOPUS.
 Spores white or hyaline or lilac tinted 19.
19. Pileus sessile, at first resupinate 41. UROSPORA.
 Pileus dimidiate, sessile or stipitate 42. GYPHETALUM.
 Pileus stipitate, the stipe eccentric 20.
20. Lamellae decurrent 43. CREPIDOTUS.
 Lamellae sinuate or adnexed 44. MICROMPHALE.
 (*Stipe central.*)
21. Stipe slender, tubular, with a cartilaginous cortex 22.
 Stipe stout, fleshy, of uniform texture 46.
22. Spores black 23.
 Spores purplish-brown or dark fuscous 24.
 Spores ochraceous, ferruginous or cinnamon 26.
 Spores pink or salmon 33.
 Spores white or hyaline 35.
23. Lamellae deliquescent: pileus membranous-plicate, splitting along
 the backs of the lamellae 45. COPRINOPSIS.
 Lamellae persistent: margin of pileus appressed to stipe when young.
 46. PSATHYRELLA.
24. Margin of pileus appressed to the stipe when young. 47. ASTYLOSPORA.
 Margin at first incurved 25.
25. Lamellae decurrent 48. DECONICA.
 Lamellae adnate or adnexed. 49. PSILOCYBE.
 (*Spores ochraceous.*)
26. Lamellae deliquescent (= *Bolbitius*) 50. MYCENA.
 Lamellae persistent 27.
27. Margin of pileus straight and appressed to stipe when young . . . 28.
 Margin of pileus incurved when young 31.
28. Lamellae adnate or adnexed 29.
 Lamellae free 51. PLUTEOLUS.
29. Pileus plicate, splitting on the back of the lamellae . . 52. GALERELLA.
 Pileus even or slightly striate 30.
30. Pileus conic-campanulate: lamellae attached to a conical enlarge-
 ment of apex of stipe 53. CONOCYBE.
 Pileus convex or broadly campanulate: lamellae squarely adnate:
 apex of stipe not enlarged 54. GALERINA.
31. Lamellae decurrent 55. TUBARIA.
 Lamellae adnate, adnexed or nearly free 32.
32. Spores small, bright-colored, ochraceous or ferruginous . 56. NAUCORIA.
 Spores large, dull, fuscous or cinnamon 57. BULLA.
 (*Spores pink.*)
33. Margin of pileus at first straight and appressed to stipe . 58. NOLANEA.

- Margin of pileus incurved when young 34.
34. Lamellae decurrent 59. *ECCILIA*.
Lamellae adnate or adnexed 60. *LEPTOMIELLA*.
(*Spores white.*)
35. Margin at first straight and appressed to stipe 36.
Margin at first incurved 43.
36. Pileus plicate, splitting down the backs of the lamellae. 61. *LEPTOMYCES*.
Pileus even or striate, not splitting as above 37.
37. Pileus umbilicate: lamellae decurrent 38.
Pileus convex, often umbonate: lamellae adnate or adnexed 39.
38. Lamellae thick, obtuse, narrow (*Cantharellus*-like) 62. *DELICATULA*.
Lamellae acute, broad 63. *OMPHALOPSIS*.
39. Base of slender stipe deeply inserted in matrix 64. *INSITICIA*.
Base of stipe dilated into a disc or bulbil 65. *RASIDIOPUS*.
Stipe not as above, base normal or radicating 40.
40. Stipe glutinous-viscid 66. *COLLOPUS*.
Stipe and lamellae lactiferous, bleeding when cut 67. *GALACTOPUS*.
Stipe neither glutinous nor lactiferous 41.
41. Cespitose, lignatile: stipe tough, radicating 68. *STEREOPEDIUM*.
Solitary or gregarious: stipe often fragile 42.
42. Lamellae white, thin, gray or reddish: stipe slender, fragile, radicating 69. *LINOPODIUM*.
Lamellae unchanging, often bright colored: stipe firmer, not radicating 70. *FRUNULUS*.
43. Lamellae decurrent: pileus umbilicate 71. *OMPHALINA*.
Lamellae adnate or adnexed 44.
44. Pileus hygrophanous: lamellae cinereous 72. *TEPHROPHANA*.
Pileus not hygrophanous: lamellae white or tinted 45.
45. Stipe slender, not conspicuously striate 73. *COLLYBIDIUM*.
Stipe stout, sulcate or fibrillose-striate 74. *GYMNOPUS*.
(*Stipe fleshy.*)
46. Spores purplish-brown: lamellae free 75. *PILOSACE*.
Spores ochraceous, etc. 47.
Spores pink or salmon 50.
Spores white or hyaline 51.
47. Lamellae easily separable from the pileus 48.
Lamellae concrete with the pileus 49.
48. Spores sordid-whitish: lamellae adnexed 76. *LEPISTA*.
Spores ferruginous: lamellae decurrent 77. *PAXILLUS*.
49. Lamellae decurrent, anastomosing at base: spores elongate. 78. *PHYLLPORUS*.
Lamellae decurrent, distinct: spores elliptical 79. *GYMNOCYBE*.
Lamellae adnate or adnexed 80. *HEBLOMATIS*.
(*Spores pink.*)
50. Lamellae decurrent (= *Clitopilus*) 81. *ORCELLA*.
Lamellae sinuate or adnexed 82. *ENTOLOMA*.
Lamellae free 83. *PLUTEUS*.
(*Spores white.*)

51. Lamellae of waxy consistency 52.
Lamellae fleshy, not waxy 53.
52. Pileus firm, moist but not viscid : lamellae broad, arcuate.
84. CAMAROPHYLLUS.
Pileus less firm, viscid : lamellae often bright colored.
85. HYDROPHORUS.
53. Lamellae decurrent 54.
Lamellae sinuate or adnexed 57.
54. Cespitose : pileus convex, often umbonate : lamellae unequally decurrent. 86. MONADELPHUS.
Solitary or gregarious 55.
55. Lamellae long-decurrent : pileus thin, infundibuliform. 87. OMPHALIUS.
Lamellae short-decurrent : pileus convex or depressed. 56.
56. Spores elliptical, smooth 88. CLITOCYBE.
Spores globose, echinulate. 89. LACCARIA.
57. Pileus moist, hygrophanous, usually thin 90. MELANOLEUCA.
Pileus viscid, usually thick 91. GLUTINASTER.
- (*Cryptophylli.*)
58. Veil and cortina poorly developed or evanescent, leaving neither annulus nor volva 59.
Cortina (or sometimes the veil) strongly developed : stipe annulate, no volva 81.
Veil strongly developed, forming a volva : cortina and annulus none. 95.
Veil and cortina both strongly developed, forming both volva and annulus. 97.
59. Sporocarp tough, reviving, resupinate 92. TECTELLA.
Sporocarp tough, reviving, with a central stipe 93. LENTODIUM.
Sporocarp fleshy or membranous, putrescent 60.
60. Stipe slender, tubular, with a cartilaginous cortex. 61.
Stipe usually stouter, fleshy or fibrous, of uniform texture. 63.
61. Spores black : margin of pileus at first incurved . 94. CAMPANULARIUS.
Spores purplish-black or dark fuscous : lamellae subdecurrent.
95. DELITESCOR.
Spores ochraceous, etc. 62.
62. Margin of pileus at first straight and appressed 96. GALERULA.
Margin of pileus at first incurved 97. FLAMMULASTER.
63. Spores black : lamellae deliquescent 98. COPRINELLUS.
Spores black or fuscous, elongate : lamellae decurrent. 99. GOMPHIDIUS.
Spores purplish-brown or dark fuscous 64.
Spores ochraceous, ferruginous or cinnamon 65.
Spores white 80.
(*Spores purplish-brown.*)
64. Pileus hygrophanous : stipe slender, fragile 100. HYPHLOMOPSIS.
Pileus viscid or squamulose : scattered or subcespitose.
101. DRYOSOPHILA.
Pileus dry, glabrous, firm : densely cespitose 102. HYPHLOMA.
(*Spores ochraceous.*)

65. Cortina poorly developed or none, the lamellae at first covered by the veil 66.
Cortina of loosely woven, subsistent, silky threads 74.
66. Pileus moist or viscid 67.
Pileus dry, scaly, fibrillose or silky 70.
67. Lamellae adnate or decurrent 68.
Lamellae sinuate or adnexed 69.
68. Pileus moist, usually hygrophanous 103. RYSSOSPORA.
Pileus glutinous or viscid 104. VISCVLUS.
69. Stipe slender, fibrous, not whitened above (= *Inocybe*).
105. RIPARTITES.
Stipe stouter, fleshy, the apex whitened (= *Hebeloma*).
106. PICROMYCES.
70. Lamellae adnate-decurrent: stipe fleshy or woody . 107. GYMNOPILUS.
Lamellae sinuate or adnexed 71.
71. Pileus silky, not fibrillose or scaly 72.
Pileus fibrillose or scaly 73.
72. Pileus even, not rimose 108. ASTROSPORINA.
Pileus radiately rimose 109. AGMOCYBE.
73. Stipe fibrillose: pileus fibrillose or appressed-squamose.
110. INOCYBIUM.
Stipe squarrose: pileus squarrose-squamose 111. INOCYBE.
74. Veil absent or very poorly developed 75.
Veil present, clearly evident, at least when young, persistent on stem. 79.
75. Pileus hygrophanous: stipe slender 112. HYDROCYBIUM.
Pileus dry or viscid 76.
76. Stipe slender, fibrous: pileus dry, at first villous . 113. DERMOCYBE.
Stipe stouter, fleshy 77.
77. Pileus dry, often squamulate 114. INOLOMA.
Pileus viscid 78.
78. Stipe elongated: cortina attached medially 115. PHEGMACTIUM.
Stipe short, bulbous: cortina attached to bulb . . . 116. BULBOPODIUM.
79. Veil viscid: stipe and pileus viscid 117. SPHAEROTRACHYS.
Veil membranous: stipe peronate: pileus usually hygrophanous.
118. CORTINARIUS.
- (Spores white.)
80. Pileus dry, fibrillose: veil fibrillose 119. MONOMYCES.
Pileus viscid-glutinous: veil glutinous 120. HYGROPHORUS.
(Annulus present.)
81. Stipe slender, tubular, with a cartilaginous cortex 82.
Stipe fleshy, of uniform texture 83.
82. Spores black: lamellae deliquescent (= *Coprinus*) . 121. ANNULARIUS.
Spores black: lamellae persistent (= *Anellaria*) . . 122. PANAEOLUS.
Spores ochraceous, etc. 123. PHOLIDOTOPSIS.
83. Spores black: lamellae deliquescent 124. COPRINUS.
Spores purplish-brown or dark fuscous 84.
Spores ochraceous, etc. 85.
Spores pink 87.

- Spores white 88.
84. Lamellae attached 125. STROPHARIA.
Lamellae free 126. AGARICUS.
85. Pileus hygrophanous 127. PHOLIOTINA.
Pileus dry 86.
86. Stipe glabrous or fibrillose 128. PHOLIOTA.
Stipe squarrose-scaly 129. HYPODENDRUM.
87. Lamellae free 130. CHAMAEMYCES.
(*Spores white.*)
88. Stipe more or less eccentric 131. PLEUROTUS.
Stipe central 89.
89. Stipe slender, tubular, with a cartilaginous cortex: lamellae adnate.
132. CHAMAEMYCES.
Stipe fleshy, of uniform texture 90.
90. Lamellae decurrent 133. POLYMYCES.
Lamellae sinuate or adnexed 134. SPHAEROCEPHALUS.
Lamellae free 91.
91. Pileus viscid 135. LIMACELLA.
Pileus dry 92.
92. Annulus inferior: cuticle of pileus granular with swollen vesicles.
135. CYSTODERMA.
Annulus medial or superior 93.
93. Pileus glabrous: stipe slender, tubular 137. FUSISPORA.
Pileus floccose or squamose: stipe fleshy 94.
94. Annulus fixed: stipe peronate 138. MASTOCEPHALUS.
Annulus movable: stipe glabrate 139. LEPIOTA.
(*Volva, no annulus.*)
95. Spores black 140. CLARKERINDA.
Spores ochraceous 141. LOCELLINA.
Spores pink (= *Volvaria*) 142. PSEUDOFARINACEUS.
Spores white 96.
96. Volva closely adnate to stipe and pileus, breaking into scales.
143. AMANITELLA.
Volva free, basal, cup-like or with a free limb 144. VAGINATA.
(*Volva and annulus.*)
97. Spores ochraceous 145. ROZITES.
Spores white 98.
98. Volva adnate to stipe and pileus, breaking into scales.
146. VENENARIUS.
Volva free, basal, cup-shaped or with a free limb 147. LEUCOMYCES.

DESCRIPTIONS OF GENERA

Family AGARICACEAE

Basidiomycetous fungi in which the hymenium covers radiating plates called lamellae or lamellae-like folds of the substance of the pileus.

Tribe I. CANTHARELLEAE

Hymenium covering obtuse lamellae-like folds of the substance of the pileus.

1. PLICATURA Peck, Ann. Rep. N. Y. State Mus. 24: 75. 1872.

Reviving, persistent: pileus sessile or resupinate, tough: lamellae obtuse, fold-like: spores white or hyaline: veil none: stipe none.

Type, *Trogia Alni* (Peck) Sacc. (Syll. 5: 637.)

The sessile species of *Trogia* and *Xerotus* as given in the *Sylloge* should be sought here.

2. XEROTINUS Reichenb. Consp. 14. 1828.

Xerotus Fries. 1828. Not *Xerotus* R. Brown. 1810.

Reviving, persistent: pileus tough, stipitate: lamellae obtuse, fold-like, usually furcate: spores white or hyaline: veil none: stipe central, thick, homogeneous with the pileus.

Type, *Xerotus afer* Fries. (Syll. 5: 632.)

Fries first used the name *Xerotes* in Syst. Orb. Veg. 78. 1825, but without citing species. In the *Elenchus* he changed it to *Xerotus*, which is only a different ending for the same word. According to our rules Reichenbach was correct in renaming it. The sessile species of the *Sylloge* are here excluded.

3. DICTYOLUS QuéL. Enchr. Fung. 139. 1886.

Corniola S. F. Gray. 1821. Not *Corniola* Adans. 1763.

Leptoglossum Karst. 1879. Not *Leptoglossa* DC. 1841.

Putrescent: pileus eccentric, dimidiate or resupinate, fleshy: lamellae obtuse, fold-like: spores white or hyaline: veil none: stipe lateral or wanting.

Type, *Cantharellus muscigenus* (Bull.) Fries. (Syll. 5: 495.)

As here defined this includes *Cantharellus*, § *Pleuroopus* and § *Resupinatus*, of the *Sylloge*.

4. MERISMODES gen. nov.

Putrescent, densely connate-cespitate: pileus fleshy, ir-

regular: lamellae reduced to obscure folds: spores white or hyaline: veil none: stipes irregular, the bases fused.

Type, *Cantharellus fasciculatus* Schw. Trans. Am. Phil. Soc. II. 4: 153. 1832. (Syll. 5: 495.)

This equals *Cantharellus* § *Merisma*, of the *Sylloge*. This name cannot be utilized, however, since the type of *Merisma* Pers. belongs in the Thelephoraceae.

5. TROGIA Fries, Gen. Hymen. 10. 1836.

Putrescent: pileus membranous, deeply infundibuliform or tubular: hymenium plicate: spores white or hyaline: veil none: stipe central, usually tough.

Type, *T. Montagnei* Fries. (Syll. 5: 636.)

I have here followed Patouillard (Tax. Hymén. 127) in grouping the membranaceous species of *Xerotus* with *Trogia* and have added the thin membranaceous species found under *Cantharellus* in the *Sylloge*.

6. TURBINELLUS gen. nov.

Putrescent: pileus turbinate, rugose-infundibuliform, thick, fleshy-suberous: hymenium covering irregular, forking and reticulating folds: spores white or hyaline: stipe central, short, thick.

Type, *Cantharellus floccosus* Schw. Trans. Am. Phil. Soc. II. 4: 153. 1832. (Syll. 5: 491.)

Thus far only three species are known, all from North America. They constitute a striking and well-marked genus which seems to have more in common with the club-shaped species of *Craterellus* than with the following genus where they have always been placed.

7. ALECTOROLOPHOIDES Batt. Fung. Hist. 39. 1755.

Chantarel Adans. (typonym). 1763.

Merulius Hall. (typonym). 1768.

Cantarellus Pers. (typonym). 1794.

Cantharellus Fries (typonym). 1838.

Putrescent: pileus convex or depressed, fleshy: hymenium covering obtuse, much forked, lamella-like folds: spores white or hyaline: stipe central, fleshy.

Type, *Cantharellus cibarius* Fries. (Syll. 5: 482.)

These are the typical chanterelles. It is unfortunate that the familiar generic name of *Cantharellus* is antedated.

8. ASTEROPHORA Ditmar, in Link, Jour. Bot. Schrad. 3: 17. 1809.

Nyctalis Fries (metonym). 1825. Type, *N. parasitica* (Bull.) Fries. (Syll. 5: 502.)

Sphaeropus Paulet (typonym). 1835.

Putrescent, usually parasitic: pileus fleshy, convex or depressed, bearing conidia: hymenium covering lamella-like folds, simple, not forked; spores white or hyaline: veil none: stipe central, fleshy.

Type, *Nyctalis asterophora* Fries. (Syll. 5: 501.)

Tribe II. LACTARIEAE

Hymenium covering true lamellae. Cells of the sporocarp in part swollen, vesicular: spores white or yellow.

9. HYPOPHYLLUM Paulet, Ic. 11. 1793-1812.

Lactariella Schröt., Krypt. Fl. Schles. 3¹: 544 (metonym). 1889. Type, *Lactarius fuliginosus* Fries. (Syll. 5: 446.)

Putrescent: cells of the sporocarp vesicular, lactiferous: pileus fleshy, convex or depressed, viscid, pruinose or squamulose: lamellae adnate or decurrent, becoming darker and pruinose with age: spores white or yellowish, usually globose, echinulate: veil none: stipe central, fleshy.

Type, *Lactarius rufus* Fries. (Syll. 5: 442.)

The genus as here defined is practically equivalent to *Lactarius*, Tribe 3, *Russularia*, of the *Sylloge*. To make the treatment fully consistent the viscid species should perhaps be separated from the dry squamulose ones. The slightly yellowish color of the spores in some of the species hardly seems a character of generic importance.

10. LACTARIA Pers. Tent. Disp. Fung. 63. 1797.

Lactifluus Roussel (typonym). 1806.

Lactarius S. F. Gray (typonym). 1821.

Putrescent: cells of the sporocarp vesicular, lactiferous: pileus fleshy, convex or depressed, dry, glabrous, epelliculose: lamellae adnate or decurrent, color unchanging: spores white or whitish, usually globose, echinulate: veil none: stipe central, fleshy.

Type, *Lactarius piperatus* Fries.

The genus is taken to equal *Lactarius*, Tribe 1, § 3, *Piperati*, of the *Sylloge*.

11. GLOEOCYBE gen. nov.

Putrescent: cells of sporocarp vesicular, lactiferous: pileus fleshy, depressed or infundibuliform, slimy-viscid, margin expanded: lamellae adnate or decurrent, unchanging: spores white or whitish, globose, echinulate: veil none: stipe central, fleshy.

Type, *Lactarius insulsus* Fries, Epicr. 336. 1838. (Syll. 5: 427.)

This equals *Lactarius*, Tribe 1, § 2, *Limacini*, of the *Sylloge*.

12. GALORRHEUS Fries, Syst. Orb. Veg. 75. 1825.

Putrescent: cells of sporocarp vesicular, lactiferous: pileus fleshy, depressed or infundibuliform, moist or viscid, tomentose, the margin at first strongly involute: lamellae adnate or decurrent, unchanging: spores white or whitish, globose, echinulate: veil none: stipe central, stout, fleshy.

Type, *Lactarius controversus* Fries. (Syll. 5: 426.)

As here defined this equals *Lactarius*, Tribe 1, § 1, *Tricholomoidei*, of the *Sylloge*. The name *Galorrhæus* was first used by Fries as a subgenus in 1818 (Obs. Myc. 2: 188). Why he abandoned it in his later works for *Lactarius* is not apparent.

13. LACTARELIS gen. nov.

Putrescent: cells of the sporocarp vesicular, non-lactiferous: pileus fleshy, thick, moist or subviscid, pellicle non-separable or none, umbilicate or infundibuliform, margin at first involute: lamellae adnate-decurrent, heterophyllous:

spores white, usually globose, echinulate: veil none: stipe central, firm, solid.

Type, *Russula nigricans* (Bull.) Fries, Epicr. 350. 1838. (Syll. 5: 453.)

This equals *Russula* § 1, *Compactae*, of the *Sylloge*. The species closely resembles *Galorrheus* except for the lack of a milky secretion.

14. DIXOPHYLLUM gen. nov.

Putrescent: cells of the sporocarp vesicular, non-lactiferous: pileus fleshy, thin, epelliculate, moist or subviscid, convex or depressed: lamellae adnate or subdecurrent, usually narrow, forking and somewhat heterophyllous: spores white or yellow, usually globose, echinulate: veil none: stipe central, fleshy, becoming somewhat spongy but usually solid.

Type, *Russula furcata* (Pers.) Fries, Epicr. 352. 1838. (Syll. 5: 456.)

This is *Russula* § 2, *Furcatae*, of the *Sylloge*, but it should probably also include some of the species there given under § 4, *Heterophyllae*. Some of the species approach rather close to *Russulina*, but on the whole it is a sufficiently well-marked group.

15. OMPHALOMYCES Batt. Fung. Hist. 36. 1755.

Putrescent: cells of sporocarp vesicular, non-lactiferous: pileus fleshy, thin, slimy-viscid, convex or depressed, striate: lamellae adnate, heterophyllous, sometimes forking, narrow: spores white or whitish, globose or elliptical, usually echinulate: veil none: stipe central, stout, usually spongy.

Type, *Russula galochroa* Fries. (Syll. 5: 466).

This is intended to represent in part at least *Russula* § 4, *Heterophyllae*, of the *Sylloge*. It is unfortunate that the nomenclatorial type species is poorly known and may belong elsewhere, in which case the genus must be renamed. *Russula foetens* Pers. may be considered as the representative species. It remains for European mycologists to determine what *Russula galochroa* Fries really is.

16. RUSSULA Pers. Obs. Myc. 1: 100. 1796.

Putrescent: cells of the sporocarp vesicular, non-lactiferous: pileus fleshy, convex or depressed, dry, velvety, or the pellicle breaking into areolate, crustose scales, the margin obtuse, seldom striate: lamellae adnate, broad, somewhat heterophyllous or sometimes forking: spores white or yellow, usually globose, echinulate: veil none: stipe central, fleshy, solid or spongy, sometimes hollow.

Type, *Russula lepida* Fries. (Syll. 5: 461.)

This is *Russula* § 3, *Rigidae*, of the *Sylloge*. It forms a well-marked group, though some of the species approach *Russulina* rather closely.

17. RUSSULINA Schroet. Krypt. Fl. Schles. 3¹: 550. 1889.

Putrescent: cells of sporocarp vesicular, non-lactiferous: pileus fleshy, fragile, convex or depressed, moist or viscid, glabrous but with a thin separable pellicle, usually tuberculate-striate: lamellae adnate, normally all equal, rather broad: spores white, yellow or subochraceous, usually globose, echinulate: veil none: stipe central, fleshy, fragile, often hollow.

Type, *Russula integra* Fries. (Syll. 5: 475.)

This is *Russula* § 5, *Fragiles*, of the *Sylloge*. It is a large and natural group. Schroeter's genus was founded on the color of the spores, but this character is not here accepted as of generic importance.

Tribe III. AGARICEAE

Hymenium covering true lamellae. Cells of the sporocarp all slender, elongated: spores black, brown, pink or white.

§ 1. *Gymnophylli*

Lamellae naked even when young: no veil or cortina.

18. HYPONEVRIS Paulet, Ic. 1: Pl. 1: 3-5. 1793-1812.
Schizophyllus Fries, Obs. Myc. 1: 103 (typonym). 1815.
Flabellaria Pers. Champ. Comest. 105 (typonym). 1818.

Scaphophorum Ehrenb. Horae Phys. Berol. 1: 94 (typonym). 1820.

Schizophyllum Fries, Syst. Myc. 1: 330 (typonym). 1821.

Apus S. F. Gray, Nat. Arr. Brit. Pl. 1: 617 (typonym). 1821.

Schizonia Pers. Myc. Eur. 3: 14 (typonym). 1828.

Sporocarp tough, coriaceous, reviving: pileus dimidiate: lamellae densely hirsute, the edge splitting longitudinally, the parts becoming revolute: spores white or hyaline: veil none: stipe none or a mere lateral prolongation of the pileus.

Type, *Schizophyllum commune* Fries. (Syll. 5: 655.)

This well-marked genus has had many names, all based on the same type species, *Agaricus alneus* L.

19. PLEUROTOPSIS (P. Henn.) gen. nov.

Marasmius § *Pleurotopsis* P. Henn in E. & P. Nat. Pfl. 1^{1**}: 226. 1898.

Sporocarp thin, membranous, reviving: pileus sessile, at first resupinate: lamellae radiating from a central or eccentric point: spores white or hyaline: veil none: stipe none.

Type, *Marasmius spodoleucus* Berk. Outlines Brit. Fung. 224. 1860. (Syll. 5: 567.) Ann. Nat. Hist. 1859.

This corresponds to *Marasmius* § 3, *Apus*, of the *Sylloge*.

20. SCYTINOTUS Karst. Hattsv. 97. 1879.

Sporocarp tough, coriaceous, reviving: pileus sessile, at first resupinate, of uniform texture: lamellae radiating from a central or eccentric point: spores white or hyaline: veil none: stipe none.

Type, *Panus ringens* Fries. (Syll. 5: 628.)

This corresponds in a general way to the resupinate sections of *Panus* and *Lentinus* as given in the *Sylloge*.

21. RESUPINATUS (Nees) S. F. Gray, Nat. Arr. Brit. Pl. 1: 617. 1821.

Sporocarp tough, coriaceous, reviving: pileus sessile, at first resupinate, with a gelatinous upper stratum: lamellae from a central or eccentric point: spores white or hyaline: veil none: stipe none.

Type, *Pleurotus applicatus* (Batsch). (Syll. 5: 379.)

This is *Pleurotus* § 3, *Resupinata*, subsection **, of the *Sylloge*. It differs from *Scytinotus* solely in the gelatinous upper layer of the pileus. It is a well-marked group easily distinguished from the other segregates of *Pleurotus* by the tough, reviving pileus.

22. HEMICYBE Karst. Hattsv. 248. 1879.

Sporocarp tough, coriaceous, reviving: pileus dimidiate: lamellae from a lateral point, thin, lacerate: spores white or hyaline: veil none: stipe short, lateral or none.

Type, *Lentinus ursinus* Fries. (Syll 5: 608.)

This corresponds to *Lentinus* series B, *Pleuroti*, of the *Sylloge*.

23. PANELLUS Karst. Hattsv. 96. 1879.

Rhipidium Wallr. Fl. Crypt. Germ. 2: 742. 1833. Not *Rhipidium* Trinn. 1820.

Sporocarp tough, coriaceous or woody, reviving: pileus dimidiate: lamellae from a lateral point, thick, entire, sub-obtuse: spores white or hyaline: veil none: stipe lateral or none.

Type, *Panus stypticus* (Bull.) Fries. (Syll. 5: 622.)

This is *Panus* § **, of the *Sylloge*. It is difficult to find technical characters by which to separate this from *Hemicybe*, but the two types are sufficiently distinct.

24. PANUS Fries, Epicr. Myc. 396. 1838.

Sporocarp coriaceous, often thick and fleshy, reviving: pileus irregular, convex or depressed: lamellae adnate or decurrent: spores white or hyaline: veil none: stipe eccentric, usually stout, solid.

Type, *P. farneus* Fries. (Syll. 5: 614.)

As here defined the genus excludes the dimidiate and resupinate sections. It differs from the segregates of *Lentinus* solely in the irregular pileus and eccentric stipe. The character of the lamellae, whether thin and lacerate or thick and entire, cannot be here used as a generic character. Many species of *Pocillaria* have entire lamellae.

25. HELIOMYCES Lév. Ann. Sci. Nat. Bot. III. 2: 177.
1844.

Pileus thin, subgelatinous, reviving: lamellae adnexed, adnate or decurrent: spores white or whitish: veil none: stipe central, slender, tubular, horny.

Type, *H. elegans* Lév. (Syll. 5: 569.)

A small, poorly known tropical genus, here taken in the same sense as in the *Sylloge*.

26. MYCETINIS gen. nov.

Marasmius § *Mycinopsis* Schroet. Krypt. Fl. Schles. 3¹: 558. 1889.

Pileus thin, membranous, reviving, the margin at first appressed not incurved, convex or campanulate: lamellae free, adnexed or adnate: spores white: veil none: stipe central, rigid, horny, radicaing or dilated.

Type, *Marasmius alliaceus* (Jacq.) Fries, Epicr. 383. 1838. (Syll. 5: 534.)

This includes *Marasmius* § *Mycena*, subsection *Chordales*, of the *Sylloge*.

27. MARASMIUS Fries, Gen. Hymen. 9. 1836.

Pileus thin, membranous, reviving, the margin at first appressed not incurved, plane or umbilicate: lamellae free, adnexed or adnate, often joined in a collar: spores white: veil none: stipe central, filiform, flaccid, inserted.

Type, *M. androsaceus* (L.) Fries. (Syll. 5: 543.)

As here defined this includes only the subsection *Rotulae*, of the *Sylloge*. It is probable that a careful study of the many species included under the old genus *Marasmius* would result in even further segregation.

28. CRINIPPELLIS Pat. Jour. Bot. 3: 336. 1889.

Pileus thin, reviving, margin incurved, pellicle of thread-like hairs: lamellae adnate or adnexed: spores white: veil none: stipe central, slender, tubular.

Type, *Collybia stipitaria* Fries. (Syll. 5: 216.)

The limits of this genus are not well known. In his *Essai*

Taxonomique sur les Hyménomycètes, p. 143, Patouillard includes here species of *Collybia*, *Marasmius*, and *Lentinus*, some of which would be excluded under the above definition.

29. EOMYCENELLA Atk. Bot. Gaz. 34: 37. 1902.

Pileus thin, of interlacing threads, trama rudimentary (reviving?): lamellae rudimentary, often wanting, hymenium deliquescent: spores white: veil none: stipe very slender, fleshy.

Type, *E. echinocephala* Atk. loc. cit.

The genus is monotypic and its true relationship is very doubtful. The one known species is very minute, the pileus being less than 1 mm. broad and the stipe only $\frac{3}{8}$ mm. high. It is figured as glandular-hirsute throughout.

30. COLLYBIOPSIS (Schroet.) gen. nov.

Marasmius § *Collybiopsis* Schroet. Krypt. Fl. Schles. 3': 559. 1889.

Pileus thin, reviving, margin at first incurved, epelliculose: lamellae adnate or decurrent: spores white: veil none: stipe central, tubular, slender.

Type, *Marasmius ramealis* (Bull.) Fries, Epicr. 381. 1838. (Syll. 5: 531.)

This corresponds to *Marasmius* § *Collybia*, subsection *Calopodes*, of the *Sylloge*. It is distinguished from *Scorteus* by the adnate or decurrent lamellae.

31. SCORTEUS gen. nov.

Pileus thin, but somewhat fleshy, reviving, the margin at first incurved, epelliculose, usually glabrous: lamellae free or slightly adnexed: spores white: veil none: stipe central, tubular or of compacted fibers, usually elongated.

Type, *Marasmius oreades* Fries, Epicr. 375. 1838. (Syll. 5: 510.)

In the segregations heretofore proposed for *Marasmius* no name has been given to this group. As here understood it includes § *Collybia* and subsections *Scortei* and *Tergini*, of the *Sylloge*.

32. LENTINELLUS Karst. Hattsv. 246. 1879.

Sporocarp coriaceous, reviving, densely cespitose: pileus more or less irregular from crowding: lamellae adnate or decurrent: spores white or hyaline: veil none: stipe central or subcentral, the bases connate.

Type, *Lentinus umbellatus* Fries. (Syll. 5: 594.)

This includes the cespitose species of § *Cochleati* and § *Cornucopioides* of *Lentinus*, as given in the *Sylloge*. It is clearly distinct from the other segregates of *Lentinus*, but probably intergrades with cespitose species of *Clitocybe*, of the *Sylloge*, which are here placed in *Monadelphus*.

33. LENTINUS Fries, Syst. Orb. Veg. 77. 1825.

Lentinus § *Scleroma* Fries, Nov. Symb. 35. 1851.

Sporocarp coriaceous, reviving, arising from a tuberous sclerotium: pileus thin, deeply umbilicate or infundibuliform: lamellae decurrent: spores white or hyaline: veil none: stipe central, solid.

Type, *L. tuber-regium* Fries. (Syll. 5: 604.)

As here defined this is a strictly tropical genus and none of the species has been certainly identified from North America.

34. POCILLARIA (P. Browne) O. Kuntze, Rev. Gen. 2: 865. 1891.

Sporocarp coriaceous, reviving, arising from a mycelium of the usual form: pileus thin, umbilicate or infundibuliform: lamellae decurrent: spores white or hyaline: veil none: stipe central, solid, woody.

Type, *Lentinus crinitus* (L.) Fries. (Syll. 5: 576.)

This is here taken to include the central-stemmed species of *Lentinus* § *Criniti*, § *Pulverulenti* and parts of § *Cochleati* and § *Cornucopioides*. It is distinguished from *Lentinus* by the absence of tuberous sclerotia and from the following genus by the thin, infundibuliform pileus and decurrent lamellae. The species are mostly tropical.

35. LENTINULA gen. nov.

Sporocarp coriaceous, reviving: pileus thick, convex or

slightly depressed: lamellae adnate: spores white: veil none: stipe central, solid, woody.

Type, *Lentinus cubensis* B. & C. Jour. Linn. Soc. Bot. 10: 302. 1868. (Syll. 5: 605.)

This is a small genus distinguished from *Lentodium* solely by the absence of a veil. If this organ should be discovered by the study of young specimens, then this name would become a synonym under that genus.

36. ANTHRACOPHYLLUM Cesati, Myc. Borneo 3. 1879.

Sporocarp fleshy, putrescent: pileus dimidiate: lamellae from a lateral point, unequal: spores black: veil none: stipe none or very short and lateral.

Type, *A. nigrita* (Lév.) Kalchbr. (Syll. 5: 1139.)

There is some doubt as to the validity of this genus. Patouillard (Tax. Hymén. 146) says that the spores are colorless. The single species referred to it is not known to me.

37. MELANOTUS Pat. Tax. Hymén. 175. 1900.

Sporocarp fleshy, putrescent: pileus dimidiate; lamellae radiating from a lateral point: spores purplish-brown: veil none: stipe none.

Type, *Crepidotus bambusianus* Pat. (Syll. 11: 63.)

No species of this genus has been reported from North America, but an undescribed one occurs in Cuba.

38. TAPINIA (Fries) Karst. Hattsv. 452. 1879.

Sporocarp fleshy but firm, putrescent: pileus dimidiate or resupinate: lamellae from a lateral point, often anastomosing, separable from the pileus: spores ochraceous-brown: veil none: stipe none.

Type, *Paxillus pannoides* Fries. (Syll. 5: 889.)

Besides being distinguished by the separable, anastomosing lamellae, these plants are usually larger and tougher than those of the next genus.

39. PHIALOCYBE Karst. Hattsv. 415. 1879.

Crepidotus (Fries) Quél. (homonym). 1872. Type, *C.*

mollis (Schaeff.) Quél. (Syll. 5: 877.) Not *Crepidotus* S. F. Gray. 1821.

Derminius (Fries) Schroet. (metonym). 1889. Type, *Crepidotus scalaris* Fries. (Syll. 5: 878.)

Sporocarp soft, fleshy, putrescent: pileus irregular, often dimidiate or resupinate: lamellae neither separable nor anastomosing: spores ochraceous-brown or cinnamon: veil none: stipe eccentric, lateral or wanting.

Type, *Crepidotus epibryus* Fries. (Syll. 5: 881.)

The use of the generic characters adopted in the corresponding series of white-spored species would result in considerable segregation. For the present it seems more convenient to hold the species together.

40. CLAUDOPUS (W. G. Sm.) Gillet, Champ. Fr. 1: 426. 1878.

Sporocarp fleshy, putrescent: pileus irregular, dimidiate or resupinate: lamellae neither separable nor anastomosing: spores pink or salmon: veil none: stipe eccentric, lateral, or wanting.

Type, *C. variabilis* (Pers.) Gillet. (Syll. 5: 733.)

Here again a strictly consistent treatment would require needless segregation.

41. UROSPORA Fayod, Ann. Sci. Nat. Bot. VII. 9: 328. 1889.

Phyllotus Karst. Hattsv. 92. 1879. Not *Phyllota* Benth. 1837. (Type, *Pleurotus porrigens* (Pers.). (Syll. 5: 374).)

Sporocarp fleshy or membranous, putrescent: pileus sessile, at first resupinate: lamellae from a central or eccentric point: spores white: veil none: stipe none.

Type, *Pleurotus striatulus* (Fries). (Syll. 5: 382.)

With age some of the larger species become pronouncedly dimidiate and might easily be confused with the next genus. At first, however, all are clearly resupinate. As here used this genus corresponds to *Pleurotus* § 3, *Resupinati*, subsections * and ***, of the *Sylloge*.

42. GEOPETALUM Pat. Hymén. Eur. 127. 1887.

Sporocarp fleshy, putrescent: pileus dimidiate, not at first resupinate: lamellae from a lateral point: spores white: veil none: stipe none or a lateral prolongation of the margin of the pileus.

Type, *Pleurotus petaloides* (Bull.). (Syll. 5: 361.)

This probably intergrades to some extent with the next genus but the groups as a whole are sufficiently distinct. As here used it corresponds in a general way with *Pleurotus* § *Dimidiati*, of the *Sylloge*.

43. CREPIDOTUS (Nees) S. F. Gray, Nat. Arr. Brit. Pl. 1: 616. 1821. Not *Crepidotus* (Fries) Quél. 1872.

Sporocarp fleshy, putrescent: pileus irregular: lamellae long-decurrent: spores white or lilac tinted: veil none: stipe eccentric, stout, solid.

Type, *Pleurotus ostreatus* (Jacq.). (Syll. 5: 355.)

As here defined this includes *Pleurotus* subsections *Clytocybarii* and *Eu-Pleurotus*, of the *Sylloge*. This is an example of a most confusing shifting of names. Our generation is not responsible for the error of completely ignoring the work of S. F. Gray. His work was in the main good and deserves recognition on other grounds besides priority.

44. MICROMPHALE (Nees) S. F. Gray, Nat. Arr. Brit. Pl. 1: 622. 1821.

Sporocarp fleshy, putrescent: pileus more or less irregular: lamellae sinuate or adnexed: spores white: veil none: stipe more or less eccentric, stout, solid.

Type, *Pleurotus fimbriatus* (Bolt.). (Syll. 5: 344.)

This is *Pleurotus*, subsection *Tricholomatarii*, of the *Sylloge*. It is a sufficiently well-marked genus of which *Pleurotus ulmarius* (Bull.) is the best known North American species.

45. COPRINOPSIS Karst. Acta Soc. Faun. Fl. Fenn. 2: 26. 1881.

Ephemorocybe Fayod, Ann. Sci. Nat. Bot. VII. 9: 380

(metonym). 1889. Type *Coprinus ephemerus* (Bull.) Fries. (Syll. 5: 1106.)

Putrescent: pileus membranous, deeply sulcate-plicate from splitting along the backs of the lamellae: lamellae free, adnexed or adnate, deliquescent at maturity: spores black or brownish-black: veil none: stipe central, slender, tubular, with a cartilaginous cortex.

Type, *Coprinus Friesii* Quél. (Syll. 5: 1106.)

This is *Coprinus* tribe *Veliformes*, of the *Sylloge*. The other segregates of *Coprinus* must be sought in the series *Cryptophylli*.

46. PSATHYRELLA (Fries) Quél. Champ. Jura Vosg. 122. 1872.

Putrescent: pileus thin, membranous, the margin appressed to the stipe when young, not incurved: lamellae adnexed or adnate, persistent, non-deliquescent: spores black: veil none: stipe central, slender, tubular, with a cartilaginous cortex.

Type, *P. gracilis* (Fries) Quél. (Syll. 5: 1127.)

This is taken in the same sense as in the *Sylloge*. It differs from *Coprinopsis* in the non-deliquescent lamellae which do not split along the back. The species assigned to the neighboring genus *Panecolus*, of the *Sylloge*, must be sought under *Campanularius* in the *Cryptophylli*. If there are any of these that are really destitute of a veil they are not provided for in this classification.

47. ASTYLOSPORA Fayod, Ann. Sci. Nat. Bot. VII. 9: 376. 1889.

Psathyra (Fries) Quél. 1872. Not *Psathyra* Spreng. 1818. Not *Psathura* Commers. 1789.

Pluteopsis Fayod, Ann. Sci. Nat. Bot. VII. 9: 377. 1889. Type, *Agaricus heliospermus* Bull. = *Psathyra corrugis* (Pers.). (Syll. 5: 1061.) (metonym.)

Putrescent: pileus thin, submembranous, the margin appressed when young, not incurved: lamellae adnexed or adnate: spores purplish-brown or dark fuscous: veil none: stipe central, slender, tubular, with a cartilaginous cortex.

Type, *Psathyra corrugis* (Pers.). (Syll. 5: 1061.)

This is *Psathyra* in the *Sylloge*. It is quite possible that Fayod's separation should be recognized, but it seems unwise to attempt segregations until the structure of our American species is better known. *Pannucia* Karst. is probably a good genus, but no American species have been reported.

48. DECONICA (W. G. Sm.) Sacc. Syll. Fung. 5: 1058. 1887.

Agaricus § *Deconica* W. G. Sm. Jour. Bot. 8: 1870.

Putrescent: pileus fleshy, the margin at first incurved: lamellae decurrent: spores purplish-brown or dark fuscous: veil none: stipe central, slender, tubular, with a cartilaginous cortex.

Type, *D. coprophila* (Bull.) Sacc. *loc. cit.*

Used in the same sense as in the *Sylloge* except that the species with a veil must be sought under *Veliprons* in the *Cryptophylli*.

49. PSILOCYBE (Fries) Quél. Champ. Jura Vosg. 116. 1872.

Putrescent: pileus thin but fleshy, the margin at first incurved: lamellae adnexed or adnate: spores purplish-brown or dark fuscous: veil none: stipe central, slender, tubular, with a cartilaginous cortex.

Type, *P. cernua* (Vahl.) Quél. (Syll. 5: 1053.)

Taken in the same sense as in the *Sylloge*.

50. MYCENA (Pers.) Roussel, Fl. Calvados ed. 2. 64. 1806.

Bolbitius Fries, Epicr. Myc. 253 (metonym). 1838. Type, *B. vitellinus* (Pers.) Fries. (Syll. 5: 1074.)

Putrescent: pileus fleshy or submembranous: lamellae free or attached, deliquescent: spores ochraceous, ferruginous or cinnamon: veil none: stipe central, slender, tubular, with a cartilaginous cortex.

Type, *Bolbitius conocephalus* (Bull.) Fries. (Syll. 5: 1075.)

This is a most unfortunate shifting of names. The genus

is taken in the same sense as in the *Sylloge*, but it is an incongruous group, separated from the other ochraceous-spored genera solely by the deliquescent lamellae. This is not a well-marked character, as it is dependent to some extent on weather conditions and it often appears in a less degree in undoubted species of *Galera* and *Pluteolus*.

51. PLUTEOLUS (Fries) Gillet, Champ. Fr. 1: 549. 1876.

Putrescent: pileus fleshy, margin appressed when young, not incurved: lamellae free: spores ochraceous, ferruginous or cinnamon: veil none: stipe central, slender, tubular, the cortex cartilaginous.

Type, *P. reticulatus* (Pers.) Gillet. (Syll. 5: 859.)

This is used as in the *Sylloge*.

52. GALERELLA gen. nov.

Putrescent: pileus thin, the margin at first appressed not incurved, plicate-sulcate, splitting on the back of the lamellae as in *Coprinopsis*: lamellae adnexed or adnate: spores ochraceous or cinnamon: veil none: stipe central, slender, tubular, with a cartilaginous cortex.

Type, *Agaricus coprinoides* Peck, Rep. N. Y. State Mus. 26: 54. 1874. (Syll. 5: 867, as *Galera coprinoides*.)

This is segregated from *Galera* on account of the plicate-sulcate pileus which splits on the back of the lamellae towards the margin, as in *Coprinopsis*. It probably includes several North American species.

53. CONOCYBE Fayod, Ann. Sci. Nat. Bot. VII. 9: 357-1889.

Galera (Fries) Quél. 1872. Not *Galera* Blume. 1825.

Putrescent: pileus thin, conic-campanulate, the margin at first appressed, not incurved: lamellae attached to a conical enlargement at apex or stipe: spores ochraceous or cinnamon: veil none: stipe central, slender, tubular, cortex cartilaginous, the apex conically enlarged.

Type, *Galera tenera* (Bull.). (Syll. 5: 860.)

The genus is here defined to include only the section

Conocephalae of the *Sylloge*. These plants grow in open pastures and manured grass lands.

54. GALERINA gen. nov.

Putrescent: pileus convex or broadly campanulate, the margin at first appressed not incurved: lamellae squarely adnate: spores ochraceous or cinnamon: veil none: stipe central, slender, tubular, cortex cartilaginous, cylindrical, the apex not enlarged.

Type, *Agaricus villaeformis* Fries, Epicr. Myc. 207. 1838. (Syll. 5: 867, as *Galera vittiformis*.)

This includes *Galera* § *Bryogenae*, of the *Sylloge*. The plants usually grow among mosses in the woods.

55. TUBARIA (W. G. Sm.) Gillet, Champ. Fr. 1: 537. 1876.

Putrescent: pileus fleshy, the margin at first inrolled: lamellae decurrent: spores ochraceous, ferruginous or cinnamon: veil none: stipe central, slender, tubular, with a cartilaginous cortex.

Type, *T. inquilina* (Fries) Gillet. (Syll. 5: 876.)

Used as in the *Sylloge*, but a considerable number of the species there referred to this genus have a veil in the young stage and are here referred to *Flammulaster*.

56. NAUCORIA (Fries) Qué. Champ. Jura Vosg. 99. 1872.

Simocybe Karst. Hattsv. 416 (metonym). 1879. Type, *Naucoria lugubris* Fries. (Syll. 5: 828.)

Putrescent: pileus fleshy, the margin at first inrolled: lamellae adnexed or adnate: spores bright-ochraceous or ferruginous: veil none: stipe central, slender, tubular, with a cartilaginous cortex.

Type, *N. melinoides* (Bull.) Qué. Champ. Jura Vosg. 99. 1872. (Syll. 5: 836.)

This is equivalent to *Naucoria* § *Gymnotae*, of the *Sylloge*. The species may be distinguished from the following by habitat and general habit as well as by the technical difference in the color of the spores.

57. BULLA Batt. Fung. Hist. 57. 1755.

Agrocybe Fayod, Ann. Sci. Nat. Bot. VII. 9: 358 (metonym). 1889. Type, *Naucoria semiorbicularis* (Bull.). (Syll. 5: 844.)

Putrescent: pileus fleshy, the margin at first inrolled: lamellae at first adnexed or adnate: spores dull colored, fuscous or cinnamon: veil none: stipe central, slender, tubular, with a cartilaginous cortex or somewhat fibrous.

Type, *Naucoria arvalis* (Fries). (Syll. 5: 845.)

This is *Naucoria* § *Phaeotae*, of the *Sylloge*. The type selected, *Bulla platicephala*, is the first identifiable binomial used by the author. La Planche's reference of *Bulla verucunda* to *Collybia extuberans* is clearly an error, since Fries cites Fig. 1 not Fig. A.

58. NOLANEA (Fries) Quél. Champ. Jura Vosg. 89. 1872.

Putrescent: pileus thin, campanulate, margin appressed when young, not incurved: lamellae free or adnexed: spores pink or salmon: veil none: stipe central, slender, tubular, cortex, cartilaginous.

Type, *N. pasqua* (Pers.) Quél. (Syll. 5: 716.)

Used as in the *Sylloge*.

59. ECCILIA (Fries) Quél. Champ. Jura Vosg. 90. 1872.

Hyporhodium Schroet. Krypt. Fl. Schles. 3¹: 613 (typonym). 1889.

Putrescent: pileus thin, the margin at first incurved: lamellae decurrent: spores pink or salmon: veil none: stipe central, slender, tubular, cortex cartilaginous.

Type, *E. atrides* (Lasch) Quél. (Syll. 5: 731.)

Used as in the *Sylloge*.

60. LEPTONIELLA gen. nov. (Fries) Quél. Champ. Jura Vosg. 88. 1872. Not *Leptonium* Griffith. 1843.

Putrescent: pileus thin, umbilicate, squamulate, the margin at first incurved: lamellae adnexed or adnate not decurrent: spores pink or salmon: veil none: stipe central, slender, tubular, cortex cartilaginous.

Type, *L. anatina* (Lasch) Quél. (Syll. 5: 707.)

Used as in the *Sylloge*.

61. LEPTOMYCES Mont. Syll. Crypt. 128. 1854.

Hiatula (Fries) Sacc. Syll. 5: 305 (metonym). 1887.

Type, *H. Bengonii* (Fries) Sacc. (Syll. 5: 305.)

Leucoprinus Pat. Bull. Soc. Myc. Fr. 4: 26 (metonym).

1888. Type, *Hiatula flaviceps* (Pat.) Sacc. (Syll. 9: 40.)

Putrescent: pileus membranous, plicate-sulcate, the margin splitting on the back of the lamellae, appressed to stipe when young: lamellae free or attached: spores white: veil none: stipe central, slender, tubular, cortex cartilaginous.

Type, *Hiatula lignifragus* Mont. (Syll. 5: 307.)

This takes the place of *Hiatula* of the *Sylloge*. The character of the pileus is the same as in *Coprinopsis* and *Galerella*.

62. DELICATULA Fayod, Ann. Sci. Nat. Bot. VII. 9: 313. 1889.

Putrescent: pileus umbilicate, the margin at first appressed: lamellae decurrent, thick, obtuse, narrow: spores white: veil none: stipe central, slender, tubular, cortex cartilaginous.

Type, *Omphalia integrella* (Pers.). (Syll. 5: 337.)

This is *Omphalia* subsection *Integrellae*, of the *Sylloge*.

63. OMPHALOPSIS gen. nov.

Omphalia (Fries) Quél. 1872. Not *Omphalius* Roussel. 1806. Type, *O. cyanophylla* Fries. (Syll. 5: 329.)

Putrescent: pileus usually umbilicate, the margin at first appressed: lamellae decurrent, thin, broad, acute: spores white: veil none: stipe central, slender, tubular, cortex cartilaginous.

Type, *Agaricus campanella* Fries, Syst. Myc. 1: 166. 1821. (Syll. 5: 327, as *Omphalia Campanella*.)

This is *Omphalia* subsection *Campanellae*, of the *Sylloge*.

64. INSITICIA gen. nov.

Putrescent: pileus convex, the margin at first appressed: lamellae adnate or adnexed: spores white: veil none: stipe

central, slender, tubular, short, the base deeply inserted in the matrix.

Type, *Agaricus corticola* Fries, Syst. Myc. 1: 159. 1821. (Syll. 5: 302, as *Mycena corticola*.)

This is *Mycena* § *Insititiae*, of the *Sylloge*.

65. BASIDOPUS gen. nov.

Putrescent: pileus convex, the margin at first appressed: lamellae adnate or adnexed: spores white: veil none: stipe central, slender, tubular, cortex cartilaginous, the base dilated in a disc or bulbil.

Type, *Agaricus stylobates* Pers. Syn. Fung. 390. 1801. (Syll. 5: 297, as *Mycena stylobates*.)

This is *Mycena* § *Basipides*, of the *Sylloge*.

66. COLLOPUS gen. nov.

Putrescent: pileus convex, the margin at first appressed: lamellae adnate or adnexed: spores white: veil none: stipe central, slender, tubular, glutinous-viscid.

Type, *Agaricus epipterygius* (Scop.) Fries, Syst. Myc. 1: 155. 1821. (Syll. 5: 294, as *Mycena epipterygia*.)

This is *Mycena* § *Glutinipedes*, of the *Sylloge*.

67. GALACTOPUS gen. nov.

Putrescent: pileus convex, the margin at first appressed: lamellae adnate or adnexed: spores white: veil none: stipe central, tubular, lactiferous, bleeding when cut, as do also the lamellae.

Type, *Agaricus haematopus* Pers. Syn. Fung. 379. 1801. (Syll. 5: 291, as *Mycena haematopoda*.)

This is *Mycena* § *Lactipedes*, of the *Sylloge*.

68. STEREOPODIUM gen. nov.

Putrescent, densely cespitose: pileus convex, the margin at first appressed: lamellae adnate or adnexed: spores white: veil none: stipe central, tubular, tough, radicating.

Type, *Agaricus galericulatus* (Scop.) Fries, Syst. Myc. 1: 143. 1821. (Syll. 5: 268, as *Mycena galericulata*.)

This corresponds to *Mycena* § *Rigidipedes*, of the *Sylloge*.

69. LINOPODIUM gen. nov.

Putrescent, solitary or gregarious: pileus convex, the margin appressed: lamellae adnate or adnexed, white, changing to gray or reddish: spores white: veil none: stipe central, tubular, slender, fragile, radicating.

Type, *Agaricus filipes* (Bull.) Fries, Syst. Myc. 1: 142. 1821. (Syll. 5: 283, as *Mycena filipes*.)

This includes *Mycena* § *Filipedes* and § *Fragilipedes*, of the *Sylloge*.

70. PRUNULUS (Cesalp.) S. F. Gray, Nat. Arr. Brit. Pl. 1: 630. 1821.

Mycenula Karst. Medd. Soc. Faun. Fl. Fenn. 16: 89 (metonym). 1889. Type, *Mycena pura* (Pers.). (Syll. 5: 256.)

Putrescent, solitary or gregarious: pileus convex, the margin appressed: lamellae adnate or adnexed, color unchanging, usually bright: spores white: veil none: stipe central, tubular, rather firm, not radicating.

Type, *Mycena pelianthina* Fries. (Syll. 5: 251.)

This includes *Mycena* § *Calodontes* and § *Adonidae*, of the *Sylloge*.

71. OMPHALINA QuéL. Ench. Fung. 42. 1886.

Putrescent, solitary or gregarious: pileus umbilicate, the margin at first incurved: lamellae decurrent: spores white: veil none: stipe central, tubular, cortex cartilaginous.

Type, *Omphalia hydrogramma* (Fries). (Syll. 5: 309.)

This is here taken to include *Omphalia* § *Collybiariae*, of the *Sylloge*.

72. TEPHROPHANA gen. nov.

Putrescent, solitary or cespitose: pileus convex, hygrophanous, the margin at first incurved: lamellae adnate or adnexed, cinereous: spores white: veil none: stipe central, slender, tubular, cortex cartilaginous.

Type, *Collybia fimicola* Earle, Bull. N. Y. Bot. Gard. 3: 298. 1904.

This is equivalent to *Collybia* § *Tephrophane*, of the *Sylloge*. The distinguishing features are the hygrophanous pileus and cinereous lamellae.

73. COLLYBIDIUM gen. nov.

Putrescent, solitary or cespitose: pileus convex, not hygrophanous, margin at first incurved: lamellae adnate or adnexed, white or bright-tinted: spores white: veil none: stipe central, slender, tubular, cortex cartilaginous, not striate.

Type, *Agaricus velutipes* (Curt.) Fries, Syst. Myc. 1: 119. 1821. (Syll. 5: 212, as *Collybia velutipes*.)

This as here understood is a large genus, including *Collybia* § *Vestipides* and § *Levipides*, of the *Sylloge*. The characters are mostly negative.

74. GYMNOPUS Roussel, Fl. Calvados ed. 2. 62. 1806.

Collybia (Fries) Qué. Champ. Jura Vosg. 56 (metonym). 1872. Type, *C. radicata* (Relh.) Qué. (Syll. 5: 200.)

Lyophyllum Karst. Acta Soc. Faun. Fl. Fenn. 2: 3 (metonym). 1881. Type, *Collybia leucophaeata*, Karst. (Syll. 5: 205.)

Putrescent, solitary or gregarious: pileus convex, not hygrophanous, the margin at first incurved: lamellae adnate or adnexed, white or tinted: spores white: veil none: stipe central, rather stout, tubular or fibrous, sulcate or fibrillose-striate.

Type, *Collybia longipes* (Bull.). (Syll. 5: 202.)

This is *Collybia* § *Striipedes*, of the *Sylloge*. It is distinguished from the previous genus by larger size and stouter, striate stipe.

75. PILOSACE (Fries) Pat. Hymén. Eur. 122. 1887.

Putrescent, solitary or gregarious: pileus fleshy, convex or expanded, discrete from the stipe: lamellae free: spores purplish-brown: veil none: stipe central, stout, fleshy, without a cortex.

Type, *P. algeriensis* (Fries). (Syll. 5: 1011.)

Taken in the same sense as in the *Sylloge*.

76. LEPISTA (Fries) W. G. Sm. Clavis Agar. 26. 1870.

Putrescent, solitary or gregarious: pileus large, fleshy: lamellae easily separable from the pileus, adnexed: spores sordid-white: veil none: stipe central, stout, fleshy, without a cortex.

Type, *Tricholoma nudum* (Bull.). (Syll. 5: 131.)

The species supposed to constitute this genus must be looked for under *Tricholoma* in the *Sylloge*. The validity of the genus and the value of so-called easily separable lamellae as a generic character can only be determined by careful histological studies. At present the status of this genus must be considered as doubtful.

77. PAXILLUS Fries, Gen. Hymen. 8. 1836.

Putrescent, solitary or gregarious: pileus fleshy, often somewhat irregular: lamellae easily separable from the pileus, adnate or decurrent: spores sordid or ochraceous: veil none: stipe central or somewhat eccentric, fleshy, no cortex.

Type, *P. involutus* (Batsch) Fries. (Syll. 5: 987.)

This includes only the central-stemmed or slightly eccentric species of the *Sylloge*. Those that are lateral or resupinate must be sought under *Tapinia* (Fries) Karst.

78. PHYLLOPORUS Quél. Fl. Myc. 409. 1888.

(See Bres. Fung. Trid. 2: 95. 1900, for synonymy.)

Putrescent, solitary: pileus thick, fleshy, convex, tomentose: lamellae concrete with the pileus, long-decurrent, anastomosing at base: spores ochraceous, elongated: stipe central, fleshy, no cortex.

Type, *Gomphidius rhodoxanthus* (Schw.). (Syll. 5: 1139.)

This genus is well marked by the tomentose, *Boletus*-like pileus and the elongated, *Gomphidius*-like spores. So far as known it is monotypic.

79. GYMNOCYBE Karst. Hattsv. 412. 1879.

Putrescent, solitary or cespitose: pileus fleshy, dry, often squamulose, not striate: lamellae adnate-decurrent, not anas-

tomosing: spores ferruginous or fusco-ferruginous, elliptical: veil none: stipe central, fleshy or somewhat woody, no cortex.

Type, *Flammula Weinmanni* (Fries). (Syll. 5: 1144.)

This includes *Flammula* § *Gymnotae*, of the *Sylloge*, but there is reason to suppose that at least many of the tropical species referred to that section really have a well-developed veil in the young state and therefore do not belong here. The genus must be considered as somewhat doubtful.

80. HEBOLOMATIS gen. nov.

Putrescent, solitary or gregarious: pileus fleshy, glabrous, moist or subviscid: lamellae adnexed: spores ochraceous: veil none: stipe central, fleshy, no cortex, whitened above.

Type *Agaricus crustuliniformis* (Bull.) Fries, Epicr. 180. 1838. (Syll. 5: 799, as *Hebeloma crustuliniforme*.)

This is *Hebeloma* § *Denudata*, of the *Sylloge*.

81. ORCELLA Batt. Fung. Hist. 74. 1755.

Pleuropus Roussel, Fl. Calvados ed. 2. 67 (typonym). 1806.

Clitopilus (Fries) Quéf. Champ. Jura Vosg. 87 (metonym). 1872. Type, *Clitopilus prunulus* (Scop.) Quéf. (Syll. 5: 699.)

Rhodosporus Schroet. Krypt. Fl. Schles. 3¹: 617 (metonym). 1889. Type, *Clitopilus prunulus* (Scop.) Quéf. (Syll. 5: 699.)

Hexajuga Fayod, Ann. Sci. Nat. Bot. VII. 9: 389 (typonym). 1889.

Putrescent, solitary or gregarious: pileus fleshy: lamellae decurrent: spores pink or salmon: veil none: stipe central, stout, fleshy or fibrous, no cortex.

Type, *Clitopilus Orcella* (Bull.). (Syll. 5: 699.)

This is *Clitopilus* of the *Sylloge*. There are, however, at least two earlier names.

82. ENTOLOMA (Fries) Quéf. Champ. Jura Vosg. 83. 1872.

Rhodophyllus Quéf. Ench. Fung. 57 (typonym). 1886.

Putrescent, solitary or gregarious: pileus fleshy: lamellae sinuate or adnexed: spores pink or salmon: veil none: stipe central, stout, fleshy or fibrous, no cortex.

Type, *E. lividum* (Bull.) Quél. (Syll. 5: 680.)

This is used in the same sense as in the *Sylloge*.

83. PLUTEUS Fries, Gen. Hymen. 6. 1836.

Putrescent, solitary or gregarious: pileus fleshy, discrete from the stipe: lamellae free: spores pink or salmon: veil none: stipe central, stout, fleshy or fibrous, no cortex.

Type, *P. cervinus* (Schaeff.) Fries. (Syll. 5: 665.)

Used in the same sense as in the *Sylloge*.

84. CAMAROPHYLLUS (Fries) Karst. Hattsv. 224. 1879.

Putrescent, scattered or gregarious: pileus fleshy, firm, moist but not viscid: lamellae waxy, distant, broad, firm, decurrent or adnexed: spores white: veil none: stipe central, fleshy, no cortex.

Type, *Hygrophorus caprinus* (Scop.) Fries. (Syll. 5: 399.)

This is *Hygrophorus* § *Camarophyllus*, of the *Sylloge*.

85. HYDROPHORUS Batt. Fung. Hist. 51. 1755.

Hydrocybe (Fries) Karst. Hattsv. 233 (metonym). 1879.

Type, *Hygrophorus scropanus* Fries. (Syll. 5: 410.) (Not *Hydrocybe* Peck. 1887.)

Hydrocybe Fayod, Ann. Sci. Nat. Bot. VII. 9: 307 (typonym). 1889.

Godfrinia Maire, Rech. Cyt. Tax. 116 (metonym). 1902.

Type, *Hygrophorus conicus* (Scop.) Fries. (Syll. 5: 418.)

Putrescent, solitary or gregarious: pileus fleshy but thin and fragile, viscid: lamellae waxy, fragile, often bright colored, decurrent or adnexed: spores white: veil none: stipe central, fragile, hollow, no cortex.

Type, *Hygrophorus coccineus* (Schaeff.) Fries. (Syll. 5: 412.)

This is *Hygrophorus* § *Hydrocybe*, of the *Sylloge*.

86. MONODELPHUS gen. nov.

Putrescent, cespitose: pileus fleshy with thin margin, at first umbonate: lamellae unequally decurrent, not waxy: spores white: veil none: stipe central or nearly so, usually fibrous, no cortex.

Type, *Agaricus illudens* Schw. Schr. Nat. Ges. Leipzig 1: 81. 1822. (Syll. 5: 162, as *Clitocybe illudens*.)

This is taken to equal *Clitocybe* § *Diformes*, of the *Sylloge*. It is a well-marked genus closely related to *Crepidotus* S. F. Gray and *Lentinellus* Karst., but having little in common with the groups with which it has usually been associated.

87. OMPHALIUS Roussel, Fl. Calvados ed. 2. 66. 1806.

Putrescent, solitary or gregarious: pileus thin, infundibuliform: lamellae long-decurrent: spores white: veil none: stipe central, fleshy or fibrous, no cortex.

Type, *Clitocybe cyathiformis* (Fries). (Syll. 5: 176.)

This includes *Clitocybe* § *Infundibuliformes* and § *Cyathiformes*, of the *Sylloge*. It is comparable with *Pocillaria*, but the texture is softer and there is less vestiture. It is not to be confounded with *Omphalia* (Fries) Quél. 1872. The name is perhaps too nearly the same as *Omphalea* L.

88. CLITOCYBE (Fries) Quél. Champ. Jura Vosg. 48. 1872.

Putrescent, solitary or gregarious: pileus fleshy, usually convex: lamellae adnate or short-decurrent: spores white, elliptical, smooth: veil none: stipe central, fleshy, no cortex.

Type, *C. nebularis* (Batsch) Quél. (Syll. 5: 142.)

This is *Clitocybe* § *Disciformes*, of the *Sylloge*. It differs from *Omphalius* in the thick, fleshy, usually convex pileus and in the short-decurrent gills. Some species of sections *Orbiformes* and *Versiformes* are also included here.

89. LACCARIA Berk. & Br. Ann. Nat. Hist. 370. 1883.

Putrescent, solitary or gregarious: pileus thin, fleshy, convex or depressed, hygrophanous, often somewhat irregular: lamellae short-decurrent, thick, conspicuously whitened by

the spores: spores white, globose, echinulate: stipe central or nearly so, fleshy or fibrous, no cortex.

Type, *Clitocybe laccatus* (Scop.). (Syll. 5: 197.)

This is *Clitocybe* § *Versiformes*, subsection *Laccaria*, of the *Sylloge*. It is a well-marked group having little in common with the other sections of the Saccardian *Clitocybe*.

90. MELANOLEUCA Pat. Tax. Hymén. 157. 1900.

Melaleuca Pat. 1887. Not *Melaleuca* L. 1767.

Putrescent, solitary or gregarious: pileus fleshy but usually thin, moist, usually hygrophanous: lamellae sinuate or adnexed: spores white: veil none: stipe central, stout, fleshy, no cortex.

Type, *Tricholoma melaleucum* (Pers.). (Syll. 5: 134.)

This is here taken to include the sections *Guttatae*, *Spongiosa* and *Hygrophana*, of the genus *Tricholoma*, of the *Sylloge*.

91. GLUTINASTER gen. nov.

Tricholoma (Fries) Qué. 1872. *p.p.* Type, *T. collossus* (Fries) Qué. (Syll. 5: 91.) Not *Tricholoma* Benth. 1820.

Putrescent, solitary or gregarious: pileus thick, fleshy, viscid: lamellae sinuate or adnexed: spores white: veil none: stipe central, stout, fleshy, no cortex.

Type, *Agaricus equestris* Fries, Ench. Fung. 1: 6. 1828. (Syll. 5: 87, as *Tricholoma equestre*.)

As here defined this includes only the § *Limacina* of the *Sylloge*. It constitutes a well-defined, clearly recognizable generic group, probably representing the highest development of the *Gymnophylli*.

§ 2. *Cryptophylli*

Lamellae when young covered by a veil or a cortina or by both.

92. TECTELLA gen. nov.

Persistent, reviving, fasciculate: pileus resupinate, poculate: lamellae concentric from a central point: spores white: veil covering the young lamellae, soon vanishing: stipe none.

Type, *Panus operculatus* B. & C. Ann. Mag. Nat. Hist. 1859. (Syll. 5: 629.)

So far as known this genus is monotypic.

93. LENTODIUM Morgan, Jour. Cinc. Soc. Nat. Hist. 18: 36. 1895.

Persistent, reviving, solitary or cespitose: pileus tough, squamose, usually convex: lamellae decurrent or adnate: spores white: veil poorly developed, often evanescent, not forming a distinct annulus: stipe central, hard, woody.

Type, *Lentinus tigrinus* (Bull.) Fries. (Syll. 5: 580).

This is *Lentinus* § *Lepidei*, of the *Sylloge*. This generic name is selected with some hesitation, as it was first applied to an abnormality, but there is none other available. The annulate species of *Marasmius* form a valid genus which should be placed here, but none of them have been reported from our limits.

94. CAMPANULARIUS Roussel, Fl. Calvados ed. 2. 64. 1806.

Chalymota Karst. Hattsv. 518 (metonym). 1879. Type, *Panaeolus Phalenarum* (Fries). (Syll. 5: 1119.)

Putrescent, solitary or gregarious: pileus campanulate or convex, margin at first incurved: lamellae adnate or adnexed, not deliquescent: spores black: veil slight, usually soon evanescent, not forming a persistent annulus; stipe central, slender, tubular, cortex cartilaginous.

Type, *Panaeolus campanulatus* (L.). (Syll. 5: 1121.)

This is the genus *Panaeolus* of the *Sylloge* (1887), but not of Quélet, 1872.

95. DELITESCOR gen. nov.

Putrescent, solitary or gregarious: pileus convex, glabrous: lamellae subdecurrent, broad: spores purplish-brown or dark fuscous: veil manifest when young, soon vanishing from pileus but usually persisting as a fibrillose coating on the stipe: stipe central, tubular, cortex cartilaginous.

Type, *Agaricus bullaccus* (Bull.) Fries, Syst. Myc. 1: 297. 1821. (Syll. 5: 1058, as *Deconica bullacea*.)

It is probable that other species now referred to *Deconica* have a veil and should go here.

96. GALERULA Karst. Hattsv. 442. 1879.

Putrescent, solitary or gregarious: pileus thin, convex, margin at first appressed: lamellae adnate or adnexed: spores ochraceous or cinnamon: veil slight, soon evanescent, not forming an annulus: stipe central, slender, tubular, cortex cartilaginous.

Type, *Galera pityria* (Fries). (Syll. 5: 871.)

This is *Galera* § *Eriodermæ*, of the *Sylloge*.

97. FLAMMULASTER gen. nov.

Putrescent, solitary or gregarious: pileus convex, squamose or silky, the margin at first incurved: lamellae adnexed, adnate, or decurrent: spores ferruginous or cinnamon: veil slight, subevanescent, not forming a distinct annulus: stipe central, slender, tubular, cortex cartilaginous.

Type, *Agaricus carpophilus* Fries, Obs. Myc. 1: 45. 1815. (Syll. 5: 857, as *Naucoria carpophila*.)

This is *Naucoria* § *Lepidotæ*, of the *Sylloge*, and it also includes a considerable number of species that are there placed in *Tubaria*.

98. COPRINELLUS Karst. Hattsv. 542. 1879.

Lentispora Fayod, Ann. Sci. Nat. Bot. VII. 9: 379 (metonym). 1889. Type, *Coprinus tomentosus* (Bull.) Fries. (Syll. 5: 1088.)

Putrescent, solitary or gregarious: pileus thin, fleshy or submembranous: lamellae deliquescent: spores black: veil usually well developed and remaining as a vestiture on the pileus, but not forming an annulus: stipe central, fleshy, but usually slender and fragile, often hollow.

Type, *Coprinus deliquescens* (Bull.) Fries. (Syll. 5: 1094.)

For the present I include here *Coprinus* § *Picacei*, § *Tomentosi*, § *Micacei* and § *Glabrati*, of the *Sylloge*. It forms a large and rather incongruous group that will probably be subjected to further segregation.

99. GOMPHIDIUS Fries, Gen. Hymen 8. 1836.

Putrescent, solitary or gregarious: pileus convex, thick, fleshy, viscid: lamellae decurrent, waxy: spores black, elongated: veil glutinous or submembranous: stipe central, stout, fleshy, without a cortex sometimes subannulate.

Type, *G. glutinosus* (Schaeff.) Fries. (Syll. 5: 1137.)

This is used in the same sense as in the *Sylloge*. It is a striking and well-marked genus.

100. HYPHOLOMOPSIS nom. nov. Clements, Bot. Surv. Neb. 4: 23. 1896. Not *Gymnochilus* Blume. 1858.

Putrescent, solitary or caespitose: pileus fleshy but thin and fragile, hygrophanous: lamellae adnate or adnexed: spores purplish-brown or dark fuscous: veil slight and evanescent or conspicuous and appendiculate, not forming an annulus: stipe central, fleshy, hollow, usually slender and fragile.

Type, *Hypholoma appendiculatum* (Bull.). (Syll. 5: 1039.)

This is *Hypholoma* § *Appendicularia*, of the *Sylloge*. *Gymnochilus* was proposed by Blume as a substitute for *Psathyra*, but the author specifically based it on the subgenus *Psathyra* of Fries's *Systema Mycologicum*. Fries's type, so far as it can now be determined, was what is called *Hypholoma appendiculatum* Bull., in the *Sylloge*, which falls within the limits of this genus, although the author of *Gymnochilus* had no intention that it should be so used.

101. DRYOSOPHILA QuéL. Ench. Fung. 115. 1886.

Lachrymaria Pat. Hymén. Eur. 122 (metonym). 1887.

Type, *Hypholoma lacrymabundum* (Fries). (Syll. 5: 1033.)

Cortinopsis Schroet. Krypt. Fl. Schles. 3¹: 566 (typonym).

1889. Type, *Hypholoma lacrymabundum* (Fries). (Syll. 5: 1033.)

Glyptosperma Fayod, Ann. Sci. Nat. Bot. VII. 9: 377 (metonym). 1889. Type, *Hypholoma velutinum* (Pers.). (Syll. 5: 1034.)

Putrescent, solitary or caespitose: pileus fleshy, thin, rather firm, viscid or squamulose, not hygrophanous: lamellae

adnate or adnexed: spores purplish-brown or dark fuscous: veil fairly well developed, appendiculate, not forming an annulus: stipe central, fleshy or fibrous, rather firm.

Type, *Hypholoma cascum* (Fries). (Syll. 5: 1036.)

This includes *Hypholoma* § *Viscidae*, § *Flocculosae* and § *Velutinae*, of the *Sylloge*. This arrangement is tentative; further segregation will doubtless be needed.

102. HYPHOLOMA (Fries) Quél. Champ. Jura Vosg. 112. 1872.

Naematoloma Karst. Hattsv. 495 (typonym). 1879.

Putrescent, densely cespitose: pileus fleshy, firm, dry, glabrous: lamellae adnate or adnexed: spores purplish-brown or dark fuscous: veil fairly well developed, appendiculate, not forming an annulus: stipe central or nearly so, fibrous, firm, usually solid.

Type, *H. sublateritium* (Schaeff.) Quél. (Syll. 5: 1028.)

This is *Hypholoma* § *Fascicularia*, of the *Sylloge*.

103. RYSSOSPORA Fayod, Ann. Sci. Nat. Bot. VII. 9: 361. 1889.

Putrescent, solitary or cespitose: pileus fleshy, thin, hygrophanous: lamellae adnate or decurrent: spores ochraceous or cinnamon: cortina none: veil usually slight and vanishing but sometimes leaving an indistinct annular mark: stipe central, fleshy or fibrous, firm.

Type, *Flammula apicrea* (Fries). (Syll. 5: 821.)

This is *Flammula* § *Udae*, of the *Sylloge*.

104. VISCULUS gen. nov.

Flammula (Fries) Quél. 1872. Not *Flammula* DC. 1818.

Putrescent, solitary or cespitose: pileus fleshy, firm, viscid or glutinous: lamellae adnate or decurrent: spores cinnamon: cortina none: veil poorly developed, evanescent, not forming an annulus: stipe central, fleshy or fibrous, firm.

Type, *Agaricus gummosus* Fries, Monogr. Hymen. Suec. 1: 354. (Syll. 5: 817, as *Flammula gummosa*.)

This is *Flammula* § *Lubricae*, of the *Sylloge*.

105. RIPARTITES Karst. Hattsv. 477. 1879.

Putrescent, solitary or gregarious: pileus thin, fleshy, viscid: lamellae adnexed or sinuate: spores ochraceous or cinnamon: cortina none: veil slight, soon evanescent: stipe central, slender, fibrous, apex not whitened.

Type, *Inocybe tricholoma* (Alb. & Schw.). (Syll. 5: 790.)

This is *Inocybe* § *Viscidae*, of the *Sylloge*. It may be distinguished from the next genus by the smaller average size and the slender, fibrous stipe.

106. PICROMYCES Batt. Fung. Hist. 47. 1755.

Hebeloma (Fries) Quél. Champ. Jura Vosg. 334 (metonym). 1872. Type, *H. mesophaeum* (Pers.) Quél. (Syll. 5: 795.)

Roumegueria Karst. Hattsv. 452. 1879. Type, *Hebeloma struphosum* Fries (metonym).

Hylophila Quél. Ench. Fung. 98 (metonym). 1886. Type, *Hebeloma sinuosum* (Bull.) Quél. (Syll. 5: 792.)

Putrescent, solitary or gregarious: pileus fleshy, usually thick, subviscid: lamellae sinuate or adnexed: spores ochraceous: cortina none: veil very slight and soon evanescent: stipe central, stout, fleshy, whitened at apex.

Type, *Hebeloma fastibile* (Fries) Quél. (Syll. 5: 792.)

This is *Hebeloma* § *Indusiata*, of the *Sylloge*. It is very closely related to *Hebelomatis* in the *Gymnophylli*. The two series seem to approach each other here more closely than at any other one point.

107. GYMNOPHILUS Karst. Hattsv. 400. 1879.

Putrescent, solitary or cespitose: pileus fleshy, dry, squamose or silky: lamellae adnate or decurrent: spores ferruginous: cortina none: veil manifest, at length evanescent: stipe central or nearly so, firm, fleshy or often woody.

Type, *Flammula Liquiritiae* (Pers.). (Syll. 5: 825.)

This is *Flammula* § *Sapinae* and § *Sericellae*, of the *Sylloge*. A number of the species placed in § *Gymnotae* also belong here, since they have a well-developed veil when young.

108. ASTROSPORINA Schroet. Krypt. Fl. Schles. 3': 576. 1889.

Putrescent, solitary or gregarious: pileus thin, dry, silky, smooth, not rimose: lamellae adnexed: spores ochraceous or cinnamon, often rough or angular: cortina none: veil slight, soon evanescent: stipe central, slender, fibrous, glabrous.

Type *Inocybe scabella* (Fries). (Syll. 5: 787.)

This is *Inocybe* § *Velutinae*, of the *Sylloge*. It runs very close to the next genus. In some cases it is difficult to say whether the covering of the young lamellae should be considered as a veil or a cortina.

109. AGMOCYBE gen. nov.

Clypeus (Britz.) Fayod. 1889. Not *Clypea* Blume. 1825. Type, *Inocybe asterospora* Sucht. (Syll. 5: 780.)

Putrescent, solitary or gregarious: pileus thin, dry, silky, the pellicle at length radiately rimose: lamellae adnexed: spores ochraceous or cinnamon, often rough or angular; cortina none: veil slight, soon evanescent: stipe central, slender, fibrous, whitened, slightly fibrillose.

Type, *Agaricus rimosus* (Bull.) Fries, Syst. Myc. 1: 258. 1821. (Syll. 5: 775, as *Inocybe vinosa*.)

This is *Inocybe* § *Rimosae*, of the *Sylloge*. It tends to intergrade with both the preceding and the following genera and yet the group as a whole is easily distinguished by the rimose surface of the pileus. The peculiar character of the spores often furnishes excellent specific characters in this and allied genera, but these peculiarities do not seem to be correlated with other characteristics and so do not serve for generic distinctions.

110. INOCIBIUM gen. nov.

Putrescent, solitary or gregarious: pileus thin, dry, the pellicle splitting into lacerate or imbricate, appressed scales: lamellae adnexed: spores ochraceous or cinnamon, often rough or angular: cortina none: veil slight, evanescent: stipe central, slender, fibrous, subconcolorous, fibrillose.

Type, *Agaricus lacerus* Fries, Syst. Myc. 1: 257. 1821.
(Syll. 5: 767, as *Inocybe lacera*.)

This is *Inocybe* § *Lacerae*, of the *Sylloge*.

111. INOCYBE (Fries) Quéf. Champ. Jura Vosg. 151.
1872.

Putrescent, solitary or gregarious: pileus thin, squarrose-squamose: lamellae adnexed: spores ochraceous or cinnamon, often roughened or angular: cortina none: veil slight, evanescent: stipe central, slender, fibrous, concolorous, squamose.

Type, *I. relicina* (Fries) Quéf. (Syll. 5: 764.)

This is *Inocybe* § *Squarrosae*, of the *Sylloge*.

112. HYDROCYBIUM gen. nov.

Gomphos O. Kuntze, Rev. Gen. 2: 853. 1891. Type, *Cortinarius castaneus* Fries. (Syll. 5: 971.) Not *Gomphos* Batt. 1775. Not *Gomphus* Pers. 1800.

Putrescent, solitary or gregarious: pileus thin, fleshy, moist, hygrophanous: lamellae adnate or adnexed: spores cinnamon: cortina of thin cobweb-like threads, soon evanescent: veil none or very slight; stipe central, slender, firm, glabrous, not peronate.

Type, *Hydrocybe praepallens* Peck, Bull. N. Y. State Mus. 1²: 9. 1887. (Syll. 9: 134, as *Cortinarius praepallens*.)

This is *Cortinarius* § *Hydrocybe*, of the *Sylloge*. The group has several times been given generic rank but so far no tenable name seems to have been proposed for it.

113. DERMOCYBE (Fries) Peck, Bull. N. Y. State Mus. 2: 8. 1887.

Putrescent, solitary or gregarious; pileus thin, fleshy, dry, at first fibrillose: lamellae adnate or adnexed: spores cinnamon: cortina of thin cobweb-like threads: veil poorly developed: stipe central, slender, cylindrical, firm, hollow or stuffed, glabrate, not peronate.

Type, *Cortinarius simulans* (Peck) Sacc. (Syll. 9: 129.)

This is *Cortinarius* § *Dermocybe*, of the *Sylloge*. It is

distinguished from the following genus mainly by its smaller size, thinner pileus, and slender stem.

114. INOLOMA (Fries) Karst. Medd. Soc. Faun. Fl. Fenn. 18: 70. 1891.

Putrescent, solitary: pileus thick, fleshy, dry, at first fibrillose or squamose: lamellae adnate or adnexed: spores cinnamon: cortina of cobweb-like threads, fugacious: veil none or slight: stipe central, stout, fleshy, enlarged below, not peronate.

Type, *Cortinarius opimus* Fries. (Syll. 5: 923.)

This is *Cortinarius* § *Inoloma*, of the *Sylloge*.

115. PHLEGMACIUM (Fries) Fayod, Ann. Sci. Nat. Bot. VII. 9: 375. 1889.

Putrescent, solitary: pileus fleshy, usually thick, viscid: lamellae adnate or adnexed: spores cinnamon: cortina of cobweb-like threads, fugacious, attached above the middle of the stipe: veil none: stipe central, stout, somewhat elongated, fleshy, glabrous, dry.

Type, *Cortinarius saginus* Fries. (Syll. 5: 895.)

This includes *Cortinarius* § *Phlegmacium*, subsections *Cli-duchi* and *Elastici*, of the *Sylloge*. To select the type it is necessary to go back to Fries, *Systema Mycologicum*, on which Fayod states that he bases the genus. He states that he knows 36 species that belong here, but he only mentions a few that he does not consider typical.

116. BULBOPODIUM gen. nov.

Putrescent, solitary: pileus thick, fleshy, viscid: lamellae adnate or adnexed: spores cinnamon: cortina of cobweb-like threads, attached to the bulbous base of the stipe: veil none: stipe central, short, stout, bulbous.

Type, *Cortinarius caeruleus* Fries, Epicr. 265. 1838. (Syll. 5: 902.)

This is *Cortinarius* § *Phlegmacium*, subsection *Scauri*, of the *Sylloge*. It is one of the most clearly defined generic groups in the family.

17. SPHAEROTRACHYS Fayod, Ann. Sci. Nat. Bot. VII. 9: 374. 1889.

1 *Myxadium* (Fries) Peck. 1887. Not *Myxadium* Lév. 1849.

Putrescent, solitary or gregarious: pileus thick, fleshy, viscid: lamellae adnate or adnexed: spores cinnamon: cortina of cobweb-like threads: veil viscid or glutinous: stipe central, stout, viscid-peronate.

Type, *Cortinarius liquidus* Fries. (Syll. 5: 919.)

This is *Cortinarius* § *Myxadium*, of the *Sylloge*. *Sphaerotrachys* was founded to include certain species with rough, globose spores.

118. CORTINARIUS (Pers.) Roussel, Fl. Calvados ed. 2. 61. 1806.

Telamonia (Fries) Peck, Bull. N. Y. State Mus. 2: 8 (metonym). 1887. Type, *Cortinarius gracilis* (Peck) Sacc. (Syll. 9: 133.)

Putrescent, solitary or gregarious: pileus fleshy, usually hygrophanous: lamellae adnate or adnexed: spores cinnamon: cortina arachnoid, often subpersistent: veil fibrillose, conspicuous: stipe central, usually stout and elongated, peronate.

Type, *C. armillatus* (Alb. & Schw.) Fries. (Syll. 5: 952.)

This is *Cortinarius* § *Telamonia*, of the *Sylloge*. It is well marked by the persistent fibrillose veil which forms a white peronate coating on the stipe.

119. MONOMYCES Batt. Fung. Hist. 41. 1755.

Cortinellus (Roze) Karst. Hattsv. 24 (metonym). 1879. Type, *Tricholoma rutilans* (Schaeff.). (Syll. 5: 96.)

Putrescent, solitary or gregarious: pileus thick, fleshy, dry, fibrillose or squamulose: lamellae sinuate or adnexed: spores white: cortina if present arachnoid: veil remaining as a vestiture on the pileus: stipe central, stout, fleshy.

Type, *Tricholoma sculpturatum* (Fries). (Syll. 5: 100.)

This is *Tricholoma* § *Genuina*, § *Rigida* and § *Sericella*,

of the *Sylloge*. It is a large group that will probably require further segregation.

120. HYGROPHORUS Fries, Gen. Hymen. 8. 1836.

Limacium (Fries) Schroet. Krypt. Fl. Schles. 3¹: 330. 1889. Type, *Hygrophorus eburneus* (Bull.) Fries. (Syll. 5: 388.) Not *Limacia* Tour. 1790.

Putrescent, solitary or gregarious: pileus fleshy, viscid: lamellae adnate or decurrent, waxy: spores white: veil glutinous: stipe central, fleshy, sometimes subannulate.

Type, *H. chrysodon* (Batsch) Fries. (Syll. 5: 387.)

This is *Hygrophorus* § *Limacium*, of the *Sylloge*.

121. ANNULARIUS Roussel, Fl. Calvados ed. 2. 61. 1806.

Putrescent, solitary or gregarious: pileus thin, membranous: lamellae free or attached, deliquescent: spores black: veil persisting as a vestiture on the pileus and forming an annulus: stipe central, slender, tubular, cortex cartilaginous.

Type, *Coprinus ephemeroideus* (Bull.) Fries. (Syll. 5: 1096.)

This is *Coprinus* § *Veliformes*, subsection *Cyclodei*, of the *Sylloge*. It is not to be confounded with *Annularia* Schultz.

122. PANAEOLUS (Fries) Quél. Champ. Jura Vosg. 121. 1872.

Anellaria Karst. Hattsv. 517 (metonym). 1879. Type, *A. separata* (L.) Karst. (Syll. 5: 1125.)

Putrescent, solitary or gregarious: pileus thin, fleshy, the margin at first incurved: lamellae adnexed: spores black: veil persistent, forming a more or less distinct annulus: stipe central, slender, tubular, cortex cartilaginous.

Type, *Anellaria fimiputris* (Bull.) Karst. (Syll. 5: 1126.)

This is *Anellaria* of the *Sylloge*, and furnishes another example of the unfortunate shifting of generic names, that will in future be avoided by recognizing genuine types.

123. PHOLIDOTOPSIS gen. nov.

Putrescent, solitary or gregarious: pileus thin, hygroph-

anous: lamellae adnate: spores ochraceous or cinnamon: veil persistent, forming an annulus: stipe central, tubular, cortex cartilaginous.

Type, *Agaricus mycenoides* Fries, Syst. Myc. 1: 246. 1821. (Syll. 5: 760, as *Pholiota mycenoides*.)

This is *Pholiota* § *Muscigenae*, of the *Sylloge*.

124. COPRINUS Pers. Tent. Disp. Fung. 62. 1797.

Onchopus Karst. Hattsv. 526 (metonym). 1879. Type, *Coprinus clavatus* (Batt.) Fries. (Syll. 5: 1080.)

Pselliophora Karst. Hattsv. 528 (typonym). 1879.

Putrescent, solitary or gregarious: pileus fleshy, usually campanulate: veil persistent, forming an annulus: stipe central, fleshy, fragile, no cortex.

Type, *Coprinus comatus* (Muell.) Fries. (Syll. 5: 1079.)

This is *Coprinus* § *Comati* and § *Atramentarii*, of the *Sylloge*.

125. STROPHARIA (Fries) Quél. Champ. Jura Vosg. 110. 1872.

Geophila Quél. Ench. Fung. 111 (metonym). 1886. Type, *Stropharia depilata* (Pers.). (Syll. 5: 1012.)

Putrescent, solitary or gregarious: pileus fleshy: lamellae adnate or adnexed: spores purplish-brown or dark fuscous: veil well developed, forming a persistent annulus: stipe central, stout, fleshy, no cortex.

Type, *S. aeruginosa* (Curt.) Quél. (Syll. 5: 1013.)

Used in the same sense as in the *Sylloge*. It includes two quite diverse groups of species, but it seems difficult to find a technical character by which to distinguish them.

126. AGARICUS L. Sp. Plant. 1171. 1753.

Pratella (Pers.) S. F. Gray, Nat. Arr. Brit. Pl. 1: 626 (metonym). 1821. Type, *Agaricus arvensis* Schaeff. (Syll. 5: 994.)

Psalliota (Fries) Quél. Champ. Jura Vosg. 107 (metonym). 1872. Type, *Agaricus cretaceus* Fries. (Syll. 5: 995.)

Putrescent, solitary or gregarious: pileus fleshy, discrete

from the stipe: lamellae free: spores purplish-brown: veil thick, well developed, forming a persistent annulus: stipe central, stout, fleshy, no cortex.

Type, *Agaricus campestris* L. (Syll. 5: 997.)

This is *Agaricus* of the *Sylloge* and *Psalliota* of many recent writers.

127. PHOLIOTINA Fayod, Ann. Sci. Nat. Bot. VII. 9: 359. 1889.

Putrescent, solitary or gregarious: pileus fleshy, hygrophanous, glabrous or squamulose: lamellae adnate or adnexed: spores cinnamon: veil well developed, forming an annulus: stipe central, fleshy or fibrous, no cortex.

Type, *Pholiota blattaria* (Fries). (Syll. 5: 738.)

This is taken to include all the hygrophanous species of *Pholiota* in the *Sylloge*. The species are there badly classified and some of them will be found in different sections.

128. PHOLIOTA (Fries) Quél. Champ. Jura Vosg. 91. 1872.

Putrescent, solitary or cespitose: pileus fleshy, dry, usually squamose: lamellae adnate or adnexed: spores ferruginous or cinnamon: veil well developed, forming an annulus: stipe central, fleshy or fibrous, firm, glabrous or fibrillose.

Type, *P. dura* (Bolt.) Quél. (Syll. 5: 738.)

This comprises the greater part of *Pholiota* § *Humigenae*, and subsection *Aegeritinae*, of the *Truncigenae*, of the *Sylloge*. Some authors would consider it necessary to replace this name on account of *Pholidota* Lindl. 1825.

129. HYPODENDRUM Paulet, Ic. 75. 1793.

Myxocybe Fayod, Ann. Sci. Nat. Bot. VII. 9: 361 (metonym). 1889. Type, *Pholiota radicata* (Bull.). (Syll. 5: 741.)

Putrescent, usually cespitose: pileus firm, fleshy, naked or densely squamose: lamellae adnate or adnexed: spores ferruginous or fuscous: veil strongly developed, forming an

annulus: stipe central, stout, firm, fleshy or woody, densely squarrous-squamose below the annulus.

Type, *Pholiota squarrosa* (Muell.). (Syll. 5: 749.)

Most of these species may be found in the *Sylloge* under *Pholiota* subsection *Squamosae*. They are probably all lignatile and are mostly densely cespitose.

130. CHAMAEOTA (W. G. Sm.) gen. nov.

Agaricus § *Chamaeota* W. G. Sm. Clav. Agar. 15. 1870.

Annularia Schultz. 1868. Not *Annularius* Roussel. 1806.

Putrescent, solitary or gregarious: pileus fleshy, discrete from the stipe: lamellae free: spores pink or salmon: veil persistent, forming an annulus: stipe central, fleshy, no cortex.

Type, *Agaricus xanthogrammus* Cesati, Comm. Critt. Ital. 1: 58. 1861. (Syll. 5: 664, as *Annularia xanthogramma*.)

This is *Annularia* of the *Sylloge*, but that name is pre-occupied.

131. PLEUROTUS (Fries) Quél. Champ. Jura Vosg. 77. 1872.

Putrescent, solitary or cespitose: pileus fleshy, somewhat irregular: lamellae decurrent: spores white: veil well developed, forming an annulus: stipe more or less eccentric, firm, fleshy or woody.

Type, *P. corticatus* (Fries) Quél. (Syll. 5: 339.)

This is *Pleurotus* § *Lepiotarii*, of the *Sylloge*. The other sections must be sought under the *Gymnophylli*. It differs from *Polymyces* only in the slightly eccentric stipe.

132. CHAMAEMYCES Batt. Fung. Hist. 32. 1755.

Mucidula Pat. Hymén. Eur. 95 (metonym). 1887. Type, *Armillaria mucida* (Schrad.). (Syll. 5: 85.)

Putrescent, solitary or cespitose: pileus fleshy: lamellae adnate, not waxy: spores white: veil forming an annulus: stipe central, slender, cortex subcartilaginous.

Type, *Armillaria fracida* (Fries). (Syll. 5: 86.)

This is *Armillaria* § *Collybiae-annulatae*, of the *Sylloge*. It is entirely probable that *Mucidula* Pat. represents a distinct genus, but the group requires more study.

133. POLYMYCES Batt. Fung. Agri. Hist. 34. 1755.
Armillariella Karst. Acta Soc. Faun. Fl. Fenn. 2: 4 (typonym). 1881.

Putrescent, usually cespitose: pileus fleshy: lamellae decurrent: spores white: veil forming an annulus: stipe central or nearly so, firm, fleshy or fibrous.

Type, *Armillaria mellea* (Vahl.). (Syll. 5: 80.)

This is *Armillaria* § *Clitocybe-annulatae*, of the *Sylloge*.

134. SPHAEROCEPHALUS Batt. Fung. Hist. 32. 1755.
Armillaria (Fries) Quél. Champ. Jura Vosg. 36 (metonym). 1872. Type, *A. ramentacea* (Bull.) Quél. (Syll. 5: 76.)
Gyrophila Quél. Ench. Fung. 9 (metonym). 1886. Type, *Armillaria bulbiger* (Alb. & Schw.). (Syll. 5: 73.)

Putrescent, solitary or gregarious: pileus fleshy: lamellae sinuate or adnexed: spores white: veil forming an annulus: stipe central, fleshy or fibrous.

Type, *Armillaria focalis* (Fries). (Syll. 5: 74.)

This is *Armillaria* § *Tricholomata-subannulatae*, of the *Sylloge*.

135. LIMACELLA gen. nov.

Putrescent, solitary or gregarious: pileus fleshy, viscid, discrete from the stipe: lamellae free: spores white: veil forming an annulus: stipe central, slender, fleshy, no cortex.

Type, *Agaricus delicatus* Fries, Syst. Myc. 1: 23. 1821. (Syll. 5: 70, as *Lepiota delicata*.)

This is *Lepiota* § *B. pilei cuticula viscosa*, of the *Sylloge*.

136. CYSTODERMA Fayod, Ann. Sci. Nat. Bot. VII. 9: 350. 1889.

Putrescent, solitary or gregarious: pileus fleshy, dry, cuticle granular with swollen vesicles: lamellae free: spores white: veil forming an inferior annulus attached below the middle: stipe central, slender, fleshy or fibrous.

Type, *Lepiota amianthina* (Scop.). (Syll. 5: 48.)

This is *Lepiota* § *Granulosae*, of the *Sylloge*.

137. FUSISPORA Fayod, Ann. Sci. Nat. Bot. VII. 9: 351. 1889.

Putrescent, solitary or gregarious: pileus fleshy, dry, glabrous: lamellae free: spores white: veil forming a medial or superior annulus: stipe central, slender, tubular.

Type, *Lepiota sistrata* (Fries). (Syll. 5: 50.)

This is *Lepiota* § *Mesomorphae*, of the *Sylloge*.

138. MASTOCEPHALUS (Batt.) O. Kuntze, Rev. Gen. 2: 859. 1891.

Vaginarius Roussel. 1806. Not *Vaginaria* Rich. 1805.

Putrescent, solitary or gregarious: pileus fleshy, dry, floccose or squamose: lamellae free: spores white: veil forming a superior annulus: stipe central, fleshy, often bulbous, peronate.

- Type, *Lepiota cepaestipes* (Sow.). Fries, Hymen. Eur. 35. 1874.

This is *Lepiota* § *Clypeolariae* and § *Annulosae*, of the *Sylloge*. *Mastocephalus* Batt. Fung. Hist. 30. 1755, has no binomial species and is therefore excluded under the rules. The name however was taken up and properly published by Kuntze in 1891.

139. LEPIOTA (P. Browne) S. F. Gray, Nat. Arr. Brit. Pl. 1: 601. 1821.

Putrescent, solitary or gregarious: pileus fleshy, squamose: lamellae free: spores white or green: veil forming a movable annulus: stipe central, long, fleshy, glabrate.

Type, *L. procera* (Scop.). (Syll. 5: 27.)

This is *Lepiota* § *Procerae*, of the *Sylloge*.

140. CLARKEINDA O. Kuntze, Rev. Gen. 2: 848. 1891.

Chitonia (Fries) Karst. Hattsv. 482. 1879. Type, *C. coprinus* (Fries) Karst. (Syll. 5: 992.) Not *Chitonia* Moc. & Sesse. 1824.

Putrescent, solitary or gregarious: pileus fleshy, discrete

from the stipe: lamellae free: spores purplish-brown or black: veil forming a basal volva, no annulus: stipe central, fleshy, hollow.

Type, *Chitonina coprinus* (Fries) Karst. (Syll. 5: 992.)

Used as in the *Sylloge*.

141. LOCELLINA Gillet, Champ. Fr. 1: 428. 1878.

Putrescent, solitary or gregarious: pileus fleshy, discrete from the stipe: lamellae free: spores ferruginous or ochraceous: veil forming a basal volva, no annulus: stipe central, fleshy.

Type, *L. Alexandri* Gillet. (Syll. 5: 761.)

Used as in the *Sylloge*.

142. PSEUDOFARINACEUS Batt. Fung. Hist. 29. 1755.

Not *Pseudofarinaceus* O. Kuntze. 1891.

Volvarius Roussel, Fl. Calvados ed. 2. 59 (metonym). 1806. Type, *Volvaria volvacea* (Bull.). (Syll. 5: 657.)

Volvaria (Fries) Gillet, Champ. Fr. 1: 385. 1878. Not *Volvaria* DC. 1805.

Putrescent, solitary or gregarious: pileus fleshy, discrete from the stipe: lamellae free: spores pink or salmon: veil forming a basal volva, no annulus: stipe central, fleshy.

Type, *Volvaria gloiocephala* (Fries). (Syll. 5: 662.)

This is *Volvaria* of the *Sylloge*. This name was first used by DeCandolle for a lichen, and therefore is not available. There is doubt on the part of some as to what species was intended by Battara. O. Kuntze claims that it was *Amanitopsis vaginatus*, but LaPlanche identifies it as above.

143. AMANITELLA gen. nov.

Putrescent, solitary: pileus fleshy, squamose: lamellae free: spores white: veil adnate, breaking up into squamules on the pileus and base of the stipe, no annulus: stipe central, fleshy.

Type, *Amanita farinosa* Schw. Schr. Nat. Ges. Leipzig 1: 79. 1822. (Not in the *Sylloge*.)

These species are included under *Amanitopsis* in the *Sylloge*.

144. VAGINATA (Nees) S. F. Gray, Nat. Arr. Brit. Pl. 1: 601. 1821.

Amanita Pers. Tent. Disp. Fung. 63. 1797. Not *Amanita* Hall. 1768. Type, *Amanitopsis vaginata* (Bull.) Karst.

Amanitopsis Roze, Bull. Soc. Bot. Fr. 23: 50 (typonym). 1876.

Pseudofarinaceus O. Kuntze, Rev. Gen. 2: 867. 1891. Not *Pseudofarinaceus* Batt. (typonym). 1755.

Putrescent, solitary: pileus fleshy, glabrous or with thin volval patches: lamella free: spores white: veil forming a basal volva, no annulus: stipe central, fleshy.

Type, *Amanitopsis vaginata* (Bull.) Karst. (Syll. 5: 21.)

This is a part of *Amanitopsis* of the *Sylloge*.

145. ROZITES Karst. Hattsv. 290. 1879.

Dryophila Quél. Ench. Fung. 66 (typonym). 1886.

Putrescent, solitary: pileus fleshy: lamellae free or at first adnate: spores ochraceous or ferruginous: cortina present, forming an annulus: veil present, forming a basal volva: stipe central, fleshy.

Type, *Pholiota caperata* (Pers.). (Syll. 5: 736.)

The only American species known is *Locellina Starnesii* Peck. As this has both volva and annulus it cannot belong to *Locellina*.

146. VENENARIUS gen. nov.

Putrescent, solitary: pileus fleshy, squamose or densely pruinose: lamellae free: spores white: cortina present, forming an annulus: veil present, adnate, forming scales on pileus and base of stipe: stipe central, fleshy.

Type, *Agaricus muscarius* Fries, Syst. Myc. 1: 16. 1821. (Syll. 5: 13, as *Amanita muscaria*.)

This is *Amanita*, §§ 2, 3 and 4, of the *Sylloge*. The name refers to the well known poisonous properties of the type species.

147. LEUCOMYCES Batt. Fung. Hist. 27. 1755.

Elvela Batt. 1755. (Not *Elvela* L. 1753.)

Putrescent, solitary: pileus fleshy, glabrous or with thin volval patches: lamellae free: spores white: cortina present, forming an annulus: veil present, forming a basal volva: stipe central, fleshy.

Type, *Amanita coccola* (Scop.). (Syll. 5: 8.)

This is *Amanita* § 1, of the *Sylloge*.