TYPE STUDIES IN THE HYDNACEAE—VI. THE GENERA CREOLOPHUS, ECHINODONTIUM, GLOIODON, AND HYDNODON[1]

HOWARD J. BANKER

CREOLOPHUS P. Karsten, Medd. Soc. Faun. et Fl. Fenn. 5: —— (28). 1879

Climacodon P. Karsten, Rev. Myc. 3^1: 20. 1881.

The genus *Creolophus* Karst. was established on *Hydnum corrugatum* Fr. as the type. No type specimen of this species was found at Upsala but several specimens in the herbarium collected by P. A. Karsten, E. Th. Fries, and Fr. Kjellman in Sweden and Finland were referred to this species. All of these agree perfectly with Fries's description and may be regarded as authentic representatives of the species.

They do not appear to be generically different from *H. septentrionale* Fr., having much the same form, color, and fleshy or subfleshy substance. The species has not yet been positively recognized as an American form.

Climacodon Karst. was established on *Hydnum septentrionale* Fr. and is, therefore, a metonym of *Creolophus.*

We have hitherto included the species of this genus in the genus *Steccherinum.* The peculiar fleshy or subfleshy character of the substance of these plants, so strikingly different from the dry and tough fibrous character of typical *Steccherrinum,* has convinced us that they should be maintained in a separate genus for which a name has already been provided by Prof. Karsten.

Creolophus septentrionalis (Fries)

Hydnum septentrionale Fries, Sys. Myc. 1: 414. 1821.

There is no type of this species preserved at Upsala, but forms of the plant often found on beech in Indiana conform perfectly

[1] Investigation prosecuted with the aid of a grant from the Esther Herrman Research Fund of the New York Academy of Science.

in every respect to the figure given by Fries, Icon. *pl. 9, 10.* A fine, large specimen was found at Upsala that had grown on *Tilia* in the Botanical Garden. It differs from what appears to be the typical form of the plant in that the whole mass is much more elongated vertically, probably from its having emerged from a crack, and the pilei are smaller, thinner, and more numerous. Specimens reported in this country as growing on maple differ in some respects from the typical form on beech.

Creolophus agaricoides (Swartz)

Hydnum agaricoides Swartz, Prodr. 149. 1788.
Hydnum discolor Fries, Sys. Myc. 1: 411. 1821.

Swartz's type of *H. agaricoides* could not be located in Europe nor could a specimen of *H. discolor* Fr. be found in Fries's herbarium at Upsala: the species did not appear to be known there. Strangest of all, nothing was found in Berkeley's herbarium at Kew that in any way answered to his elaborate discussion with figures of this species in the Annals and Magazine of Natural History 10: 380. *pl. 10. f. 9.*

In 1909, Murrill and Harris discovered in the remarkable Cockpit country of Jamaica a plant that appears to answer in every essential feature the descriptions of Swartz and of Berkeley. As this region is the type locality of Swartz's species and as the specimen, *Murrill and Harris 1095,* conforms so well to Swartz's species and to no other, there seems to be the best of reasons for regarding it as representing the Swartzian species. It is the only specimen of the species that I know of and is preserved in the herbarium of the New York Botanical Garden.

Creolophus pulcherrimus (Berk. & Curt.)

Hydnum pulcherrimum Berkeley and Curtis, Hooker's Jour. Bot. and Kew Garden Misc. 1: 235. 1849.
Hydnum friabile Fries, Nov. Symb. Myc. 106. 1855.

The type of *Hydnum pulcherrimum* B. & C. is preserved in the Berkeley herbarium at Kew and is marked "*Hydnum pulcherrimum* B. & C. No. 1648. Santee River." The specimen is in

good condition and shows clearly that the species is our common American form.

At Upsala a specimen was found marked "*Hydnum pulcherrimum* Berk. & Curt. *H. friabile* Fr. ad *Liquidambar* dejecit. Carol. austr. M. A. Curtis." The handwriting was that of Curtis. Is this specimen the type of *H. friabile* Fr.? There was no other specimen found at Upsala named *H. friabile*. This specimen was certainly a good example of *H. pulcherrimum* B. & C. As Fries himself expressed doubt as to the species being distinct we are justified in regarding them as the same species.

ECHINODONTIUM Ellis and Everhart, Bull. Torrey Bot. Club **27**: 49. Feb. 1900

Hydnofomes Hennings, Engler's Bot. Jahrb. **28**: 267. Mar. 1900.
Hydnophysa Clements, Genera of Fung. 108. 1909.

The genus *Echinodontium* Ell. & Everh. was established on *Fomes tinctorius* Ell. & Everh. Bull. Torrey Club **22**: 362. 1895. This species was originally described from a specimen received from Alaska and known as "Swan 20851." The type specimen is now preserved in the herbarium of the New York Botanical Garden. It has the teeth broken off even with the pileus and hence was described as a *Fomes*. Later, on obtaining more perfect specimens and discovering the hydnaceous character of the plant, Ellis established the genus *Echinodontium* for the species.

Hydnofomes Henn. was established on *H. tsugicola* Henn. & Shir., Engler's Bot. Jahrb. **28**: 268. Mar. 1900. The species and genus were described from specimens collected at Nikko in Japan by Prof. Shirai and now preserved in the herbarium at Berlin. These specimens are smaller than the type of *Echinodontium tinctorium* Ell. & Everh. and appear to have a somewhat pendant habit; otherwise they do not appear to differ from our American species. It seems possible that the specimens are not typical of the species. The difficulties of transportation might readily account for the sending of undersized and perhaps poorly developed specimens. Until further collections in Japan show conclusively that the species is distinct from the American form, it seems necessary to regard the Japanese plant as the same species

as the American. The habitat and distribution of the plants give confirmation to this view. *Hydnofomes* Henn. must then be regarded as a synonym of *Echinodontium* Ell. & Everh.

Hydnophysa Clements is an unwarranted and a careless attempt to improve upon the name *Hydnofomes* Henn. It may be claimed that the change is in the interests of literary taste in dispensing with a hybrid name. If such be the ground for the proposed change, it seems rather far-fetched and pedantic; for while such considerations doubtless should have weight and be heeded by an author in the coining of a new name, it is by no means a sufficient reason for disturbing an established system of nomenclature. The proposed change is further unwarranted since the name *Hydnophysa* does not have the same significance as *Hydnofomes* and the change does violence to the purpose of the author of the genus. It is evident that Hennings intended to express by his name a relationship between *Hydnum* and *Fomes,* and, under the circumstances, such relationship could not be better expressed by the name. Since *Hydnophysa* suggests no such connection, the change defeats Hennings's purpose. A biologist ought to be the last to object to hybridism when it throws any light on the problems of the relationship of living things. The mistake that Ellis made in referring the Swan specimen to *Fomes* confirms the appropriateness of Hennings's name.

The proposal of the name *Hydnophysa* was also made carelessly and without sufficient investigation of the problem involved; for, although on the same page the name *Echinodontium* was noted by Clements and especially mentioned as included in *Hydnum,* there was a complete failure to perceive that it was generically identical with *Hydnofomes.* From which it is evident that a work claiming not to be critically taxonomic is no place for proposing important changes in nomenclature.

GLOIODON P. A. Karsten, Medd. Soc. Faun. et Fl. Fenn. **5**: 28. 1879

Sclerodon P. A. Karsten, Finlands Basidsv. 360. 1889.
Leaia Banker, Mem. Torrey Club **12**: 175. 1906.

A study of the European types concerned with this genus confirms the conclusions of a former paper on the nomenclature of

the group.[2] There need only be added here a brief account of the types still available in European herbaria. In Persoon's herbarium at Leyden were found two specimens, one marked "*Hydnum parasiticum* Pers. Syn." and the other marked "*Hydnum strigosum* Swartz. ——— *parasiticum* Pers. Syn.," both apparently in Persoon's hand. The latter was much the better specimen and showed clearly the peculiar characters which distinguish this genus. In Berkeley's herbarium, at Kew, there was found an abundant supply of material under the label "*Hydnum stratosum* Berk. Ohio No. 279," showing that the plant is precisely as we have previously treated it.

A reëxamination of Schweinitz's specimen in his herbarium in the Philadelphia Academy of Science shows it to be a distinct form from the type of this genus. Schweinitz referred it to *Hydnum strigosum* Swartz, but the hymenium appears to be distinctly poroid and I am inclined to think it should be referred to *Inonotus hirsutus* (Scop.) Murr.

Hydnodon gen. nov.

Hymenophore pileate, expanded, irregular; surface plane, orange to red; substance fleshy, thin, drying hard and brittle; stipe deformed; teeth short, stout, deformed, tuberculoid, reddish; spores minute, whitish, clouded, echinulate.

Hydnodon thelephorum (Lév.)

Hydnum thelephorum Lévéille, Ann. Sci. Nat. III. 2: 204. 1844.
Thelephora padinaeformis Montagne, Syll. Crypt. 175. 1856.
Hydnum lateritium Massee, Kew Bull. **1907**: 124. 1907.

In the herbarium at Paris is a specimen marked "*Hydnum thelephorum* Lév. Ann. Sc. Nat. 3 ser. tom. II. p. 204. Cayenne. Lév." It seems probable that this specimen is the type specimen of the species. It agrees perfectly with specimens in the New York Botanical Garden collected in Jamaica, *Murrill 691,* and in the Bahamas, *Brace 4833.* The species is very distinct and well marked, not at all likely to be confused with anything else. In fact, so peculiar are its characters that it has seemed necessary to

[2] Banker, Mycologia 2: 7. 1910.