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EDITORS

M. A. DONK
(Herbarium Bogoriense)

AND

C. G. G. J. VAN STEENIS
(Flora Malesiana)

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THE GENERIC NAMES PROPOSED FOR HYMENOMYCETES—IV*

Boletaceae

M. A. DONK**

SUMMARY

1. This fourth part deals with the family of Boletaceae as currently delimited, with the exclusion of the frankly lamellate groups.

2. The commonly accepted typification of *Boletus* Fr. by *B. edulis* Bull. ex Fr. is not that which would be arrived at by strict adherence to the recommendations for the selection of types. It is, however, desirable to find a way of accepting *B. edulis* as the type species of *Boletus*.

3. The correct name for the genus generally called *Gyrodon* Opat. seems to be *Uloporus* Quél.

4. The proposal to conserve *Xerocomus* Quél. against *Versipelles* Quél. is repeated.

INTRODUCTION.—This paper forms the fourth part of a series planned to give an annotated nomenclatorial enumeration of all generic names proposed for Hymenomycetes. For some general remarks on the series and the explanation of some nomenclatorial terms the reader is referred to Part I (Donk *in* Reinwardtia 1: 199-203. 1951). I am very much indebted to Dr. R. W. G. Dennis, The Herbarium, Royal Botanic Gardens, Kew, for linguistic improvements and other help.

DEFINITION.—Boletaceae (or Boletales) as understood in the present paper is the family currently so called, with the exception of some frankly lamellate genera that will be dealt with together with the agarics. This is not done because these genera are taxonomically excluded, but merely because all lamellate genera will be treated together. Those genera which are undoubtedly related to certain typical agaric genera, but have a porose hymenophore (*Filoboletus* P. Henn., etc.), will also be included in the "Agaricaceae." Finally, some genera that might be looked for here, but are now invariably referred to other families (*Boletopsis* Fayod, *Albatrellus* S. F. Gray) will find a place in the "Polyporaceae."

* Part I ("Cyphellaceae") of this series was published *in* Reinwardtia 1: 199-220. 1951; Part II (Hymenolichenes), *in* Reinwardtia 2: 435-440. 1954; Part III ("Clavariaceae"), *in* Reinwardtia 2: 441-493. 1954.

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ALPHABETICAL ENUMERATION

Acrocomus.—See *Xerocomus*.

Albatrellus S. F. Gray.—See "Polyporaceae."

Anastomaria Rafin, Ann. Nat. ou Ann. Synop. 16. 1820 (devalidated name). — Type species (by original designation): *Anastomaria campanulata* Rafin. — In connection with the first of the two original species, the author stated, "This may be the type of the genus," and with the second, "It may be the type of a subgenus *Campsilicus*." Rafinesque's descriptions of the genus and the type species run as follows:

Anastomaria Rafin.—"Fructifications in flexuose lamellar veins; anastomosed like a net. — The genus will be next to *Merulius* and *Dedalea*; some species of them may probably belong to it."

Anastomaria campanulata Rafin.—"Stipulated fulvous; stipe thick; peride campanulated; netted outside, margin erose, insides scaly and dark spotted. . . . Size four or five inches. It grows in the State of New York."

This genus and its two species were discussed by Leman (*in* Dict. Sci. nat. **30**: 179. 1824) at the end of his treatment of *Merulius* [Haller]: "Dans l'*Anastomaria* les nervures sont lamelliformes, anastomosées en manière de réseau. Ce caractère ne nous semble pas suffisant pour séparer ce genre du *Cantharellus*, avec lequel il nous paroit devoir être confondu." The genus not being definitely admitted, this treatment does not constitute the valid publication of the name after the starting-point date. It is difficult to form an opinion about the identity of *A. campanulata* from the too incomplete description. I enter *Anastomaria* here because one is reminded, for instance, of *Boletinellus merulioides* (Schw.) Murrill or *Phylloporus rhodoxanthus* (Schw.) Bres., rather than of the "Polyporaceae" (including *Merulius* Fr.).

Bactroboletus Clem.—See "Agaricaceae."

Boletellus Murrill *in* Mycologia **1**: 9. 1909. — ETYMOLOGY: diminutive of *Boletus*. Gender: m. — TYPE SPECIES (by original designation and only original species): *Boletus ananas* Curt.—This species is sometimes identified with the earlier described *Boletus coccinus* Fr.; Singer (*in* Farlowia **2**: 125-126. 1945) accepted this identity only with doubt. — TYPONYM: *Strobilofungus* Lloyd (1912; not validly published).

Boletinellus Murrill *in* Mycologia **1**: 7. 1909. — ETYMOLOGY: diminutive of *Boletinus*. Gender: m. — TYPE SPECIES (by original designation): "*Boletinus porosus* Peck" = *Paxillus porosus* Berk. apud Lea.—Murrill

(*l.c.*) and subsequent American authors have identified this species with *Daedalea merulioides* Schw. = *Boletinellus merulioides* (Schw.) Murrill. — SCOPE. Introduced with three species.

Boletinus Kalchbr. *in* Bot. Ztg 25: 182. 1867. —ETYMOLOGY: diminutive of *Boletus*. Gender: m.— TYPE SPECIES (only original species): *Boletus cavipes* Opat. — REMARKS. Often "Kalchbr., Ic. sel. Hym. Hung. Fasc. 4: 52 *pl. 31*. 1877" is cited as the place of publication of this generic name. — Kalchbrenner (*l.c.*, 1867) stated that before the name *Boletinus* was definitely published he had used both it and *Tramaporus* as manuscript names in correspondence. — TYPONYM: *Euryporus* Quél. (1886).

Boletium Clem., Gen. Fungi 108. 1909. — ETYMOLOGY: apparently irregularly formed diminutive of *βωλίτης* or boletus, both ancient fungus names. Gender: n. — TYPE SPECIES (only original species of basinym): *Boletus volvatus* Pers.—For this fungus, see under *Volvoboletus*. — BASINYM: *Volvoboletus* P. Henn. (1898), q.v. — REMARK. A superfluous isonym.

Boletochaete Sing. *in* Mycologia 36: 358. 1944. — ETYMOLOGY: the genus *Boletus*; *χαίτη*, hair. Gender: f. — TYPE SPECIES (by original designation): *Boletus spinifer* Pat. & C. F. Baker. — SCOPE. Introduced for two species.

Boletogaster Lohwag *in* Beih. bot. Cbl. 42II: 274. 1926; *in* Handel-Mazzetti, Symb. sinicae 2 (Keissl. & Lohwag, Fungi): 55. 1937. — ETYMOLOGY: the genus *Boletus*; *γαστήρ*, belly. Gender: f. — TYPE SPECIES (only original species): *Ceriomyces jalapensis* Murrill sensu Lohwag.—Lohwag's identification of his fungus is still to be confirmed; compare Singer (*in* Farlowia 2: 135. 1945). — REMARK. It is somewhat doubtful whether there is a valid generic (rather than a specific) description accompanying the publication of the name in 1926; in the publication of 1937 a Latin generic description was given.

Boletopsis Fayod.—See "Polyporaceae."

Boletopsis P. Henn. *in* Engl. & Pr., Nat. Pflfam. 1 (1**): 194. 1898. — ETYMOLOGY: the genus *Boletus*; *ὄψις*, appearance. Gender: f. — TYPE SPECIES (selected): *Boletus luteus* L. ex Fr. — SCOPE. Introduced for the ringed species of *Boletus* L. ex Fr. *sensu lato*; thirteen species were mentioned and arranged in three groups: section 1, "*Versipelles*,"[1] with two

[1] No author was given, but there is no doubt that this epithet should have been cited as originating from Fries (cf. Hym. europ. 514. 1874), whose *Boletus* sect. *Versipelles* Fr. includes *B. rufus* as a synonym of *Boletus versipellis*.

species (*Boletus rufus* "Schaeff.," first species, and *Boletopsis staudtii* P. Henn.) ; section 2, "*Cricunopus* Karst.," with ten species (*Boletus luteus*, *B. flavus* With. ex Fr., *B. flavidus* Fr., etc.) ; section 3, "*Boletinus* Kalchbr.," with one species [*Boletinus cavipes* (Opat.) Kalchbr.]. — TYPIFICATION. Three species, *Boletus rufus*, *B. luteus*, and *Boletinus cavipes*, the type species of the names of the three sections into which the genus was divided, are to be considered as the most eligible ones; for two of these, see under *Cricunopus* P. Karst. and *Boletinus* Kalchbr. When subsequently Smotlacha [*in* S.B. böhm. Ges. Wiss., Math.-nat. Cl. 1911 (8) : 32. 1912] applied the name *Boletopsis* P. Henn. in a somewhat restricted circumscription, he excluded Hennings's first section, '*Versipelles*,' which became *Boletus* subgen. *Krombholzia* (P. Karst.) Smotlacha. Beck von Mannagetta (*in* Z. Pilzk. 2 : 147. 1923), too, emended *Boletopsis* with the exclusion of the same group; he contested the presence of a ring in *Boletus rufus* (*op. cit.* p. 144, footnote). Thus *Boletus rufus* drops out. It seems best to select *Boletus luteus* as the type species of *Boletopsis*, because it represents the largest group included in that genus. It was already selected by Singer (*in* Lilloa 22 : 654. 1951). — Murrill (*in* Mycologia 1 : 5. 1909), for some reason not clear to me, enumerated *Boletopsis* P. Henn. as a "metonym" of *Boletinus* Kalchbr.; it is not apparent what species he considered the type. — Clements & Shear (Gen. Fungi 346. 1931) suggested *Boletus rufus*. This choice should be rejected on historical grounds (see above). Moreover, it is not a species answering well to the chief characteristic of the genus: "Hut anfangs mit dem Stiele durch einen Schleier verbunden," although Hennings, the author of *Boletopsis*, stated that it possessed such a veil (exceeding margin). A well developed veil is typical of the second and third section and its existance expressed in the name *Cricunopus*, based on *Boletus luteus!* — REMARK. A superfluous name; compare Underwood (*in* Bull. Torrey bot. Cl. 25 : 630. 1898). — HOMONYM: *Boletopsis* Fayod (1889; "Polyporaceae"). — TYPONYMS: *Suillus* S. F. Gray (1821), *Cricunopus* P. Karst. (1881), *Viscipellis* Quél. (1886), *Peplopus* (Quél.) Quél. apud Moug. & Ferry (1887), and *Ixocomus* Quél. (1888). And compare *Boletus* L. ex Fr. (1821). — STATUS. Impriorable on account of the earlier homonym.

Boletus L. *ex* Fr., Syst. mycol. 1 : 385. 1821. — ETYMOLOGY: *βῶλος*, clod, *βωλίτης*, Greek fungus name, or, rather, boletus, Roman fungus name. Gender: m. — TYPE SPECIES (selected) : *Boletus bovinus* L. ex Fr., but see below, where *B. edulis* Bull. ex Fr. is proposed as substitute type species. — SOME HISTORICAL NOTES. The name *βωλίτης*, or boletus, is an ancient one.

The Romans used it for instance for *Amanita caesarea* (Scop. ex Fr.) Schw. and perhaps others mushrooms were also indicated by that name. — *Boletus* Tourn., Elem. Bot. 1: 440. 1694; Inst. 1: 561. 1700.—De Tournefort designated by this name a varied assemblage of fungi, comprising species of *Morchella* [Dill.] Fr., *Clathrus* Pers., and *Phallus* Pers. His French name for the genus is "Morille" and species of the *Morchella* element were listed first by him. We may confidently reduce *Boletus* Tourn. to the synonymy of *Morchella*. — *Boletus* [Tourn.] Adans., Fam. Pl. 2: 9. 1763.—Adanson, who had his own nomenclatural system, continued the Tournefortian tradition. He called the genus "*Boletus*. Tour. *t. 329*" (= Tourn., Inst. 1: 561 *pl. 329*. 1700). The plate referred to represents two species, one belonging to *Morchella* (*f. A*) and one to *Clathrus* (*f. B.*). His generic description in combination with other considerations allow us to list *Boletus* [Tourn.] Adans., too, as a synonym of *Morchella*. Compare also *Boletus* "Micheli" of Von Haller (Hist. Stirp. indig. Helv. inch. 2: 133. 1768). — *Boletus* [Tourn.] Juss., Gen. Pl. 4. 1789.—Both Adanson and Von Haller alike rejected Linnaeus's arbitrary usage of old established names. The first author to introduce *Boletus* in continuation of the Tournefortian tradition in the binomial system was De Jussieu. He restricted *Boletus* to *Morchella*. This is one of the instances in which he resisted Linnaeus's authority by backing De Tournefort; a similar case is his use of *Amanita* Dill. for *Agaricus* L. — The name *Boletus* has not been used in the sense of *Morchella* in any publication subsequent to 1821. — *Boletus* Dill., Cat. Pl. ca Gissam nasc. 188 & App. 74. 1719.[2]—The forerunner of Linnaeus's genus *Boletus* is this Dillenian use by which the old name *Boletus* was transferred to those fungi we are now calling the boletes (that is, to *Suillus* of Dillenius's contemporaries) and perhaps a few polypores. It is almost impossible to know what precisely the ten species listed by Dillenius represent. — DEVALIDATED NAME: *Boletus* [Dill.] L., Spec. Pl. 2: 1176. 1753.—When Linnaeus took up the Dillenian name, he extented its application by also including the polypores. Even in comparatively recent times the Linnean genus is still often ascribed to Dillenius. Linnaeus's first use of the name is in "Systema naturae" (1735; as "*Boletus* D."), which shows that he had already adopted it before the introduction of his binomial method. — SCOPE. When Fries took up Linnaeus's name and genus, he restricted it by excluding the polypores and retaining the boletes. His first species is *Boletus luteus*. He called the genus "*Boletus*. Dill." — TYPIFICATION. Various species have been suggested or indicated. (i) The

[2] "*Boletus luteus* Dill. 1719, der Butterpilz, ist eigentlich der Typus von *Boletus* . . . ."—O. Kuntze [Rev. Gen. Pl. 3 (2): 522. 1898].

first author drastically to restrict *Boletus* "(Tiu)" [!][3] in Fries's circumscription, before any type species had been indicated, was Karsten [*in* Rev. mycol. 3 (No. 9): 17. 1881]: the three (Finnish) species admitted were "*B. bovinus* Linn.," "*B. piperatus* Bull.," and "*B. variegatus* Swartz," in this order. The first of these is a (ringless) species of Linnaeus's (of 1753). The Appendix for the determination of types seems to favour the selection of this fungus, *B. bovinus!* This would make *Boletus* the correct name for the segregate now often called, *Ixocomus* Quél. = *Suillus* S. F. Gray. — (ii) Murrill (*in* Mycologia 1: 10. 1909; *in* N. Amer Fl. 9: 154. 1910) was perhaps the first author to appoint a type species in the modern direct manner, viz., *Boletus luteus* L. ex Fr., for *Boletus* L. (1753), of which it is the first species. Maire, who contrary to Murrill adopted the later starting-point date for these fungi, made the same species his choice for *Boletus* L. ex Fr., defending it as follows:

"Le genre *Boletus*, tel que l'envisageait Fries dans le *Systema mycologicum*, point de départ de nomenclature des Hyménomycètes, était un démembrement du genre *Boletus* de Linné, qui comprenait les *Polyporus*, les *Boletus* et une partie des *Daedalea* de Fries. La première espèce décrite par Fries dans ces *Boletus* est justement une des espèces de Linné, *B. luteus*, Champignon bien connu et ne pouvant donner lieu à aucune confusion. Elle doit à notre avis, être considerée comme le type du genre de Fries."—Maire [*in* Publ. Inst. Bot., Barcelona 3 (4): 40. 1937].

The acceptance of this (ringed) species would again make *Boletus* the correct name for *Ixocomus* Quél. = *Suillus* S. F. Gray.[4] — (iii) Clements & Shear (Gen. Fungi 346. 1933) made the surprising suggestion of *Boletus subtomentosus* L., for *Boletus* "(Dill.) L." — (v) W. B. Cooke (Gen. Homobas. 14. 1953) listed *Boletus cavipes* Opat. as Opatowski's type species of *Boletus* "Dill. ex Fr." Apparently an error; it merely is Opatowski's first species. — (vi) Several modern authors still use *Boletus* in a wide circumscription, but an ever increasing number admit among a considerable series of smaller genera one with the name *Boletus* and with *Boletus edulis* as the type species: Gilbert, Konrad, Konrad & Maublanc, Snell, Singer, and several more (Maire, as quoted above, being an exeption). "[Le] dé-

[3] The following year Karsten (*in* Bidr. Känn. Finl. Nat. Folk 37: 9. 1882) wrote "(Dill.)."

[4] Singer (*in* Amer. Midl. Nat. 37: 21. 1947) thought that he could put aside *B. luteus* because "S. F. Gray [1821] separated the genus *Suillus* with the type species *S. luteus* from the rest of the boletes, and Snell accepted this name." This is not a fair statement of the situation. Gray divided *Boletus* L. (*sensu lato*) into numerous genera, retaining *Boletus* for some of the polypores, and excluded *all* of the boletes, which he distributed over three genera, *Leccinum* S. F. Gray, *Pinaxa* S. F. Gray, and *Suillus* S. F. Gray. In this way he also excluded *B. edulis*, the species accepted by Singer! An other of Singer's untenable conclusions is that one is not bound under any circumstance to accept a lectotype indicated in accordance with the first-species rule of the former American code.

membrement de l'ancien genre Bolet, oblige . . . forcément à conserver un genre *Boletus* résiduel, don't l'espèce type, par raison quelque peu sentimentale, ne peut être que le *B. edulis*."—Gilbert (Bolets 73. 1931). This was also the conclusion of the "Commission de Nomenclature" of the "Société Mycologique de France" (*in* Bull. Soc. mycol. France **66**: 76, 77, 81, 104. 1950). A drawback of this selection is that *Boletus edulis* is not among Linnaeus's species, but it figures among Fries's. If this species be preferred to the perhaps technically more correct choice of *B. bovinus*, the generic name as re-published by Fries should become dissociated from Linnaeus's and be cited as '*Boletus* Fr. (not *Boletus* L.)' rather than as '*Boletus* L. ex Fr.' I would heartily support any legal way of arriving at the typification of '*Boletus* Fr.' by *B. edulis*. — MONADELPHOUS HOMONYMS: (i) *Boletus* L. *ex* Hook., Fl. scot. 2: 26. 1821.—This is perhaps the first re-introduction of the broadly conceived Linnean genus (inclusive of the polypores) after the starting-point date. The next authors validly to re-publish the name for the same broadly conceived genus are Mérat (Nouv. Fl. Paris, 2e Ed., 1: 39. 1821) and Roques (Phytogr. médic. 18. 1821), in this order. This generic name must be typified in connection with *Boletus* L. (non Fr.), a puzzle which I do not attempt to solve here. — (ii) *Boletus* S. F. Gray, Nat. Arrang. Brit. Pl. 1: 640. 1821.—A re-publication of the Linnean name (but ascribed to Dillenius) independently of Fries's and Hooker's and applied exclusive of the boletes, but including only a selection of the polypores. Gray included 17 (British) species. His generic description runs: "Cap sessile, semicircular, attached by the side." Common to Gray's and Linnaeus's genus (of 1753) are, for instance, *Boletus igniarius* L. (*Phellinus* Quél.) and *B. versicolor* L. (*Coriolus* Quél.). A belated example of the application of the first-species rule is the listing of *Boletus caesius* Schrad. as the type species by W. B. Cooke (Gen. Homobas. 14. 1953). — (iii) Compare also the emendations of *Boletus* L. by Murrill (type species, *Boletus luteus*) and of *Boletus* L. by Karsten (type species, *B. bovinus*[3]), both already mentioned above. If *Boletus edulis* is taken as the type species of *Boletus* 'Fr.' these two applications would become additional monadelphous homonyms; see Donk (*in* Bull. bot. Gdns Buitenzorg III **18**: 285, 286. 1949). — HOMONYM: *Boletus* [Tourn.] Adans. (1763; Pezizales; devalidated name), see above. — TYPONYMS. If *Boletus bovinus* is accepted as the type species: none; if *Boletus luteus* is taken: *Suillus* S. F. Gray (1821), *Cricunopus* P. Karst. (1881), *Viscipellis* Quél. (1886), *Peplopus* (Quél.) Quél. apud Moug. & Ferry. (1887), *Ixocomus* Quél. (1888), and *Boletopsis*

[3] Listed as the type species of *Boletus* "Dill. ex Fr. sensu Karst." by W. B. Cooke (Gen. Homobas. 14. 1953).

P. Henn. (1898); and if *Boletus edulis* will be appointed: *Tubiporus* Paul. ex P. Karst. (1881), *Dictyopus* Quél. (1886), *Oedipus* Bataille (1908), and *Ceriomyces* Murrill (1909; preoccupied); and compare *Suillus* [Haller] O.K. (1898; preoccupied).

Campbellia Cooke & Mass. *apud* Cooke *in* Grevillea 18: 87. 1890. — ETYMOLOGY: Mrs. F. Campbell-Martin. Gender: f. — TYPE SPECIES (selected): *Merulius infundibuliformis* Cooke & Mass.—A very imperfecty known species which needs to be redescribed from the type collection; the spores suggest *Uloporus* Quél. ('*Gyrodon* Opat.'). — SCOPE. Two species. The one here indicated as the type is the first, *Campbellia africana* Cooke & Mass., the second. The latter is said by Singer (*in* Lilloa 22: 648. 1951) to be certainly *Gyrodon* (= *Uloporus*). — TYPIFICATION. The first species was sent in by the collector who was commemorated in the generic name; labels and documents (coloured figure) in the Kew Herbarium leave no doubt as to this species being the correct choice. It was selected by Murrill (*in* J. Mycol. 9: 98. 1903), Imazeki (*in* Bull. Tokyo Sci Mus. No. 6: 41. 1943), and W. B. Cooke (Gen. Homobas. 16. 1953). — Clements & Shear (Gen. Fungi 347. 1931) suggested *C. africana*; Singer (*in* Schweiz. Z. Pilzk. 29: 217. 1951) selected the same species and, moreover, remarked (Singer *in* Sydowia 5: 466. 1951), in connection with "a specimen at the Riksmuseet [Stockholm] which came from the Herbarium Sydow and is evidently part of the type as it was collected by Wood 1888," that "since it is the first species of this dubious genus available for examination, it is here considered as type of the genus." This argument must be rejected: the types of both species have been available from the start in the Kew Herbarium, and I would add that a study of the specimens used by the authors of the name ought to have precedence. Finally, the indication of *C. africana* as type species is of a much later date than that of *M. infundibuliformis!* — HOMONYM: *Campbellia* Wight (1850; Orobanchaceae). — ISONYM: *Rodwaya* H. & P. Syd. (1901), q.v. — STATUS. Imprriorable on account of the earlier homonym, and, therefore, renamed.

Ceriomyces Murrill *in* Mycologia 1: 140. 1909; *in* N. Amer. Fl. 9: 136. 1910. — ETYMOLOGY: κηρίον, honeycomb; μύκης, fungus. Gender: f. — TYPE SPECIES (by original designation): "*Ceriomyces crassus* Batt.," interpreted by Murrill as identical with *Boletus edulis* Bull. ex Fr. — SCOPE. Applied to a part of *Boletus* L. — REMARK. Murrill resurrected an old name and validly published it in so doing in 1909. He (Murrill *in* J. Mycol. 9: 87, 98. 1903) had earlier entered "*Ceriomyces* Batarr." with

"*C. crassus* Batarr." (the first 'binomial' listed) as a genus of Boletaceae, but on that occasion he did not validly publish the name because he added no generic description and his reference to Battarra is worthless since the latter author gave no description that would comply with the present Code. Some general remarks on Battarra's names (which are neither binomial nor binary) will be given in the instalment devoted to "Agaricaceae"; compare also Donk (*in* Bull. bot. Gdns Buitenzorg III 18: 370-371. 1949). *Ceriomyces* Batt. (Fung. Agri arimin. Hist. 62 *pl. 24 f. A.* 1755) is the (monoverbal) specific name for the fruit-bodies of *Polyporus tuberaster* (Jacq.) ex Fr., sprouting from the well-known Italian 'fungus stones'; this species is among the contents of Battarra's class XV. (*Polyporus tuberaster* is the selected type species of *Polyporus* [Mich.] Fr. ex Fr.) Besides, the word "Ceriomyces" entered into the names of nine species forming together the whole of Battarra's class XVI. The first of these, *Ceriomyces crassus* Batt. (*op. cit. pl. 29 f. A, B*), identified with *Boletus edulis*,[6] was regarded as the nomenclatorial type species by Murrill. If Battarra's 'generic name' is to be typified at all, it should be by the species bearing the specific name *Ceriomyces*, that is, by *Polyporus tuberaster*. However, that species was passed by Murrill because its name was 'non-binomial': "[Battarra's] first binomial species listed is *C. crassus* Battarr. . . . . "—Murrill (*in* J. Mycol. 9: 87. 1903). This latter name is biverbal but not binomial! Since the valid publication of *Ceriomyces* rests on Murrill accompanying description, it should be typified by that author's interpretation of *Ceriomyces crassus*, rather than by Battarra's fungus. — HOMONYM: *Ceriomyces* Corda (1837; "Polyporaceae"), q.v. — TYPONYMS: *Tubiporus* Paul. ex P. Karst. (1881), *Dictyopus* Quél. (1886), and *Oedipus* Bataille (1908). And compare *Boletus* L. ex Fr. (1821) and *Suillus* [Haller] O.K. (1898; preoccupied). — STATUS. Impriorable on account of the earlier homonym.

Chalciporus Bataille *in* Bull. Soc. Hist. nat. Doubs No. 15: 19 (reprint pagination). 1908. — ETYMOLOGY: *χαλκός*, copper; *πόρος*, pore. Gender: m. — TYPE SPECIES (selected): *Boletus piperatus* Bull. ex Fr. — SCOPE. Three species were treated in a key, their order being *Boletus pierrhuguesii* Boud., *B. piperatus*, and *B. amarellus* Quél. — TYPIFICATION. The obvious choice is *Boletus piperatus*, already selected by W. B. Cooke (Gen. Homobas. 19. 1953).

[6] This is apparently Laplanche's determination (Dict. icon. Champ. sup. 371. 1894). Fries (Syst. mycol. 1: 381. 1821) and Persoon (Mycol. europ. 2: 133. 1825) referred Battarra's fungus to "*Boletus luridus*" and "*Boletus luridus* var. *tuberosum*" respectively.

"*Chlorosiphon*,"
"*Heterosarcus*,"
"*Holosiphon*,"
"*Homosarcus*," and
"*Porphyrosporus*" (see also under *Porphyrosporus*).

Kallenbach (*in* Pilze Mitteleurop. 1), who favoured an inclusive genus *Boletus*, often cited in his synonymy specific names the generic appellations of which corresponded to infrageneric epithets.

"*Chlorosiphon badius* (Fr.) Beck v. Mann. 1923" (Kallenbach, *op. cit.* p. 147. ca. 1939) reflects the existence of *Boletus* subsect. *Chlorosiphon* Beck (*in* Z. Pilzk. 2: 144. 1923); "*Heterosarcus appendiculatus* (ex Schaeff.) Bataille 1908" (Kallenbach, *op. cit.* p. 83. ca. 1931), of *Oedipus* subgen. *Heterosarcus* Bataille [*in* Bull. Soc. Hist. nat. Doubs No. 15: 14 (reprint pagination). 1908]; "*Holosiphon variegatus* von Beck 1923" (Kallenbach, *op. cit.* p. 49. 1928), of *Boletus* sect. *Holosiphon* Beck (*in* Z. Pilzk. 2: 143. 1923); "*Homosarcus regius* Bat. 1908" (Kallenbach, *op. cit.* p. 25. 1927), of *Oedipus* subgen. *Homosarcus* Bataille [*in* Bull. Soc. Hist. nat. Doubs No. 15: 13 (reprint pagination). 1908]; and "*Porphyrosporus* Smotl. 1911" (Kallenbach, *op. cit.* p. 61. 1930), of *Boletus* subgen. *Porphyrosporus* Smotlacha [*in* S.B. böhm. Ges. Wiss., Math.-nat. Cl. 1911 (8): 31. 1911]. And see also under *Gymnopus* Quél. and *Peplopus* Quél.

Coelopus Bataille *in* Bull. Soc. Hist. nat. Doubs No. 15: 12 (reprint pagination). 1908 — ETYMOLOGY: κοῖλος, hollow; πούς, foot. Gender: m. — TYPE SPECIES (selected): *Boletus cyanescens* Bull. ex Fr. — SCOPE. Two species were treated in a key; first species, *Boletus cyanescens*. The other species is *B. castaneus* Bull. — TYPIFICATION. The first species was indicated as the type by W. B. Cooke (Gen. Homobas. 22. 1953). — TYPONYMS: *Suillus* P. Karst. (1882; preoccupied), *Gyroporus* Quél. (1886), *Lactisuillus* O.K. (1898; not validly published), and *Leucoconius* (Reichenb.) ex Beck (1923).

Cricunopus P. Karst. *in* Rev. mycol. 3 (No. 9): 16. 1881. — ETYMOLOGY: κρίκος, ring; πούς, foot. Gender: m. — TYPE SPECIES (selected): *Boletus luteus* L. ex Fr. — SCOPE. Introduced for the ringed species of *Boletus* sect. *Viscipelles* * *Genuini* Fr. (Hym. europ. 496. 1874), although this name was not especially mentioned. Karsten listed three (Finnish) species of which the first is *Boletus luteus*. — TYPIFICATION. Murrill (*in* Mycologia 1: 10. 1909) indicated the first species as the type; later authors selected the same species. — TYPONYMS: *Suillus* S. F. Gray (1821), *Viscipellis* Quél. (1886), *Peplopus* (Quél.) Quél. apud Moug. & Ferry (1887), *Ixocomus*

Quél. (1888), and *Boletopsis* P. Henn. (1898; preoccupied). And compare *Boletus* L. ex Fr. (1821).

Dictyopus Quél., Ench. Fung. 159. 1886. — ETYMOLOGY: *δίκτυον*, network; *πούς*, foot. Gender: m. — TYPE SPECIES (selected): *Boletus edulis* Bull. ex Fr. — SCOPE. Introduced for a part of *Boletus* L. ex Fr. First species, *Boletus felleus* Bull. ex Fr.; second species, *B. edulis*. — TYPIFICATION. The first species, *B. felleus*, was soon afterwards given a special provisional generic name (*Rhodoporus* Quél., q.v.), a name validly published by Bataille in 1908. The indication of this species as the type of *Dictyopus* by Murrill (*in* Mycologia 1: 15. 1909) is, therefore, to be rejected. There should be no hesitation in selecting *B. edulis;* it is the best known edible bolete included. It was chosen by Konrad (*in* Schweiz. Z. Pilzk. 10: 150. 1932; for *Dictyopus* as a subgeneric epithet), Singer (*in* Amer. Midl. Nat. 37: 20. 1947, and Kühner (*in* Bull. Soc. Nat. Oyonnax 2: 44. 1948). — TYPONYMS: *Tubiporus* Paul. ex P. Karst. (1881), *Oedipus* Bataille (1908), and *Ceriomyces* Murrill (1909; preoccupied). And compare *Boletus* L. ex Fr. (1821) and *Suillus* [Haller] O.K. (1898; preoccupied).

Eriocorys Quél., Ench. Fung. 163. 1886. — ETYMOLOGY: *ἔριον*, wool; *κόρυς*, helmet, head. Gender: f. — TYPE SPECIES (only original species): *Boletus strobilaceus* Scop. ex Fr.—The correct name for this species is rather *Strobilomyces floccopus* (Vahl ex Fr.) P. Karst. — REMARK. Though not indicated as such, one might well be tempted to consider this name an isonym of *Strobilomyces* Berk.; however, the latter was not mentioned even as a synoym. In any case *Eriocorys* is a perfectly superfluous name. — TYPONYM: *Strobilomyces* Berk. (1851).

Euriporus.—See *Euryporus*.

Euryporus Quél., Ench. Fung. 163. 1886. — ETYMOLOGY: *εὐρύς*, wide; *πόρος*, pore. Gender: m. — TYPE SPECIES (only original species): *Boletus cavipes* Opat. — REMARK. Though not indicated as such, one might well be tempted to consider this name an isonym of *Boletinus* Kalchbr.; however, the latter was not mentioned even as a synonym. In any case *Euryporus* is a perfectly superfluous name. — VARIANT SPELLING: "*Euriporus*"; Léon March., Enum. méth. Mycoph. 203. 1896.—Apparently an error. — TYPONYMS: *Boletinus* Kalchbr. (1867) and *Tramaporus* Kalchbr. (1867; not validly published).

Favaria Rafin., Anal. Nat. ou Tabl. Univ. 211. 1815. — A nomen nudum for a genus of "Boletidia," the latter including boletes as well as

polypores. No suggestion is possible as to the group for which it was coined.

Filoboletus P. Henn.—See "Agaricaceae."

Fistulina Bull. ex Fr.—See "Polyporaceae."

Fistulinella P. Henn. *in* Bot. Jb. **30**: 43. 1901. — ETYMOLOGY: diminutive of *Fistulina*. Gender: f. — TYPE SPECIES (only original species): *Fistulinella staudii* P. Henn.

Frostiella Murrill, Florida Bol. *in* Mimeogr. Contr. Herb. Univ. Florida Exp. Sta. [unnumbered]: 1, 6. 1942. — Introduced for two species, *Boletus russellii* Frost and *B. betula* Schw. The first of these was indicated as the type species by W. B. Cooke (Gen. Homobas. 36. 1953). — Not validly published: no Latin description; there is a short English one in the key on page 1.

Gasteroboletus.—See *Gastroboletus*.

Gastroboletus Lohwag *in* Beih. bot. Cbl. **42II**: 273. 1926 (description reproduced by Singer *in* Ann. mycol. **40**: 21, 1942); *in* Handel-Mazetti. Symb. sinicae **2** (Keissl. & Lohwag, Fungi): 54. 1937. — ETYMOLOGY: γαστήρ, belly; the genus *Boletus*. Gender: m. — Type species (only original species): [*Gastroboletus boedijni* Lohwag].[7]—Although the genus was already described in 1926, it was not until 1937 that the author properly named its only species. — VARIANT SPELLING: "*Gasteroboletus*"; W. B. Cooke, Gen. Homobas. 38. 1953.

Girodon.— See *Gyrodon*.

Gymnopus (Quél.) Quél. *apud* Moug. & Ferry, Champ. *in* Louis, Départ. Vosges, Fl. Vosges 476 (108, reprint pagination). 1887. — ETYMOLOGY: γυμνός, naked; πούς, foot. Gender: m. — TYPE SPECIES (same as of basinym): *Boletus granulatus* L. ex Fr. — BASINYM: *Viscipellis* [subgen.] *Gymnopus* Quél., Ench. Fung. 156. 1886.[8]—This name was not mentioned, but there can be no doubt it being basinym of the generic name. It was introduced for the ringless species of *Viscipellis* Quél. (1886), the ring bearing ones being called *Viscipellis* [subgen.] *Peplopus* Quél., basinym of *Peplopus* (Quél.) Quél. — SCOPE. Same as of basinym. — TYPIFICATION. The best known and perhaps most common representative in France is

[7] According to W. B. Cooke (Gen. Homobas. 38. 1953) this species belongs to *Truncocolumella* Zeller (synonym, *Dodgea* Malençon).

[8] Kallenbach (*in* Pilze Mitteleurop. 1: 70. 1930) cited "*Gymnopus bovina* Quél. 1886," etc. as synonyms. This is evidently an error. See also under *Chloroxiphon*.

selected here. — REMARK. These generic names, *Peplopus* and *Gymnopus*, have been overlooked and no species have so far been suggested as types. I assume that Quélet himself is their author because the names appear in a catalogue "dressé par Antoine Mougeot . . . et par Réné Ferry, avec le concours de M. Quélet . . . et de M. Forquignon . . ." If this supposition would prove to be incorrect, the citation of the names would presumably become '*Peplopus* (Quél.) Moug. & Ferry' and '*Gymnopus* (Quél.) Moug. & Ferry' respectively. — HOMONYM: *Gymnopus* (Pers.) ex S. F. Gray 1821 ("Agaricaceae"). — TYPONYM: *Rostkovites* P. Karst. (1881). — STATUS. Impriorable on account of the earlier homonym.

Gyrodon Opat. *in* Arch. Naturgesch. 2 (1): 5. 1836 (description reproduced by Kallenbach *in* Pilze Mitteleurop. 1: 113. 1936). — ETYMOLOGY: γῦρος, ring; ὀδών, tooth. Gender: m. — TYPE SPECIES (selected): *Boletus sistotremoides* Fr. = *B. sistotrema* Fr.—An as yet unidentifiable species (see below). — SCOPE. See below. — TYPIFICATION. The first of Opatowski's two species (*B. sistotremoides*) was designated as the type by Fries (Epicr. 414. 1838) and Maire [*in* Publ. Inst. bot., Barcelona 3 (4): 42. 1937]. The second species (*Boletus volvatus* Pers.) has been placed in a genus of its own: *Volvoboletus* P. Henn., q.v. — Many modern authors have been acting as if *Boletus lividus* Bull. ex Fr. were the type species; it has even been suggested or indicated as such: Clements & Shear (Gen. Fungi 347. 1931), Gilbert (Bolets 103. 1931), Konrad (*in* Schweiz. Z. Pilzk. 10: 149. 1932; *in* Bull. mens. Soc. linn. Lyon 1: 116. 1932), and Singer (*in* Ann. mycol. 34: 326. 1936; *in* Rev. Mycol. 5: 37. 1938); all incorrectly ascribing the combination *Gyrodon lividum* to Opatowski. — O. Kuntze [Rev. Gen. Pl. 3 (2): 482. 1898] 'restored' the name for *Volvoboletus* P. Henn., q.v., a genus based on Opatowoski's second species, *B. volvatus*. — REMARK. I reproduce two authorative comments on the status of the type species:

"Die Gattung *Gyrodon* wurde im Jahr 1836 von Opatowski ursprünglich für 2 Literaturarten aufgestellt, *sistotremoides* Fr. und *volvatus* Pers. Die Beschreibungen folgen als Fussnote. Alle beiden Arten sind sehr kritisch. Der letztere Pilz ist in der Natur wohl gar nicht vorhanden, sondern war nach Quélet vielleicht nur eine Missbildung von *Amanita vaginata*.[9]

"*Boletus sistotremoides* Fr. = [*Boletus*] *Sistotrema* Fr. ist mir ebenfalls noch nicht zu Gesicht gekommen. Auch habe ich in der Literatur noch keine ganz klaren Anhaltspunkte dafür gefunden. Fries bezweifelt diese Art selbst, er bemerkt zu diesem Pilz: 'An vero monstrosa progenies' und 'Typus generis *Gyrodontis* Opat. sed omnes ejus species sunt modo *Boleti* deformes.' Den wirklichen Grübling — vielleicht die einzige europaische *Gyrodon*-Species — hat Opatowski überhaupt nicht zu seiner neuen Gattung *Gyrodon* gezogen, sondern er führt ihn als *lividus* unter *Boletus* auf!

[9] See also under *Volvoboletus*.

Also wieder eine Nomenclaturkomödie, wobei der Name *Gyrodon* heute für etwas Geltung hat, wofür er ursprunglich gar nicht gemünzt war. . . ."—Kallenbach (*in* Pilze Mitteleurop. 1: 113-114, 1936; compare also *in* Z. Pilzk. 8: 90-96 1929).

Singer's real conclusion is ingeniously covered by the next comment:

"Konrad and Maublanc [Ic. sel. Fung. 6: 474, 1937] and other authors think that *G. sistotrema* and *G. sistotremoides* are synonyms of *G. lividus*, and judging from the description which is the only document we have, we admit that there is no good reason for eliminating this species from *Gyrodon* since it may well pass as an extreme form [of] *G. lividus*. It would thus become a form with more elongated stipe and 'whitish' context, and the configuration of the hymenophore described by Fries would find its logical explanation when considered to be of the type observed in old stages of *Gyrodon lividus* rather than by looking for rare deformations in other genera. The secret of *Gyrodon sistotrema* will never be lifted in an absolutely conclusive way, and, as it seems to us, it would be best to let it go at that, and not cause nomenclatural trouble by refusing 'endorsement' of this species as a *Gyrodon* sensu stricto. The general consensus appears to be rather to model *Gyrodon* along the characters of *Gyrodon lividus* even at the risk of having to conserve the generic name *Gyrodon* in this sense."—Singer (*in* Farlowia 2: 243-244. 1945).

The identity of *Boletus sistrotema* (orignally called *B. sistotremoides*) has not yet been settled, although some authors are disposed to identify it with *Boletus lividus*; compare Singer's note just quoted and a later one (*in* Sydowia 5: 449. 1951) in which he reported that "the specimen in the Fries Herbarium was sent from France by Quélet and was determined by Fries himself as *Boletus* (*Gyrodon*) *sistotremoides* Fr. It has the characteristic small and short spores of *Gyrodon lividus*, viz. 5.5—6 × 3.7—4.5 μ; clamp connections are present." In a later work Fries (Hym. europ. 519. 1874) cited "Karst. Finl. Polyp. p. 14. Quélet Jur. p. 243. *B. brachyporus* Rostk. t. 11 (colore recedens)" as belonging to *B. sistotrema*. Singer (*in* Farlowia 2: 243. 1945) thinks that Karsten's fungus is nothing but *Boletus bovinus* Fr. since that author indicated the spores as being elongate. However, Quélet's fungus (as we have also seen from the specimens in Fries's herbarium) is clearly *B. lividus* and the same applies to Rostkovius's (" . . . in der Nähe van Elsbrüchern"). Thus it may be concluded that, apart from some errors, Fries at the end of his life attributed to *B. sistrotrema* specimens of a species (*B. lividus*) he kept apart from it in his then remote youth. *Boletus sistotrema* he collected only once about 1815!

On the other hand Fries, who knew *Boletus lividus*, never *consciously* admitted their conspecificity! He strongly doubted that *B. sistotrema* was a normal growth-form: "An vero monstrosa progenies? Nullo vero fungo a me viso similis" (Obs. mycol. 1: 120. 1815); "Valde similis *B. volvato* Pers. . . . ; ceterumque unica vice observatus, quare haud recepimus"

(Boleti 6. 1835); "Typus generis *Gyrodontis* Opat., sed omnes ejus species sunt modo *Boleti* deformes" (Epicr. 414. 1838). From his descriptions, too, it would appear to differ from *B. lividus* in several important characters: ". . . Hymenio gyroso-poroso venoso denticulato, gyris a pileo separabilis . . . margine interdum poris angulatis integris: tubulis . . . a substantia propria formatis et a pileo liberis, et medio in dentes difformo compressos obtusos lacerum" (1815); "Hymenium *Merulii* fere *lacrimantis*" (Syst. mycol. 1: 389. 1821)[10]; "Caro . . . albida immutabilis" (1815); and "Pinet. raro" (1935), "In silvis siccis inter *Vaccinia*" (Hym. europ. 519. 1874). All these items make it very difficult, if not quite impossible, to identify it with *B. lividus*, and I would reject Singer's conclusion that *B. sistotrema* is a form of *B. lividus* with more elongated stipe, whitish context, and the configuration of the hymenophore of old stages.

If only really wants to retain the name *Gyrodon* as it is now generally applied, it might appear more satisfactory not to play ostrich policy but to put the name on a secure basis by proposing it as a nomen conservandum with *Boletus lividus* as the type. This could be done by conserving, for instance, *Gyrodon* sensu Gilbert (Bolets 102. 1931) against *Gyrodon* Opat. Otherwise, it will be only a matter of time before *Uloporus* Quél. is revived to take the place of *Gyrodon* in its present application. The genus, even when enlarged by the incorporation of *Boletinellus* Murrill (1909), is only a small one containing hardly more than about eight species. This consideration coupled with the fact that there is a priorable name available for the group (*Uloporus*) are the reasons why I do not think a case can be made for formally moving such a proposal. — VARIANT SPELLING: "*Girodon*"; *in* Rev. mycol. 5: 127. 1883.—An unintentional error.

Gyroporus Quél., Ench. Fung. 161. 1886. — ETYMOLOGY: γῦρος, ring; πόρος, pore. Gender: m. — TYPE SPECIES (selected): *Boletus cyanescens* Bull. ex Fr. — SCOPE. Introduced with seven species, of which *Boletus cyanescens* is the first. — TYPIFICATION. Murrill (*in* Mycologia 1: 14. 1909; *in* N. Amer. Fl. 9: 133. 1910) indicated the first species as the type. He was followed by Gilbert (Bolets 101. 1931), Singer (*in* Ann. mycol. 34: 325. 1936; *in* Farlowia 2: 231. 1945; *in* Lilloa 22: 643. 1951), and Maire [*in* Publ Inst. bot., Barcelona 3 (4): 42. 1937]. — Konrad (*in* Schweiz. Z. Pilzk. 12: 178. 1934) selected *Boletus castaneus* Bull. "ex Fries" and this species was also listed by W. B. Cooke (Gen. Homobas. 42. 1953) for *Gyroporus* "Quél. em. Pat. . . . 1887." — TYPONYMS: *Suillus* P. Karst.

[10] For excellent photographs of the hymenial configuration of *B. lividus*, see Kallenbach (*in* Pilze Mitteleurop. 1: *pl. 10 fs. 5, 7, pl. 44 fs. 74*).

(1882; preoccupied), *Lactisuillus* O.K. (1898; not validly published), *Coelopus* Bataille (1908), and *Leucoconius* (Reichenb.) ex Beck (1923).

Heimiella Boedijn *in* Sydowia 5: 216. 1951. — ETYMOLOGY: R. Heim. Gender: f. — TYPE SPECIES (only original species): *Boletus retisporus* Pat. & C. F. Baker.

"*Heterosarcus*."—See under "*Chlorosiphon*."

"*Holosiphon*."—See under "*Chlorosiphon*."

"*Homosarcus*."—See under "*Chlorosiphon*."

Hypolepia Rafin.—See Deuteromycetes.

Ixechinus Heim *in* C.R. Acad. Sci., Paris 208: 375. 1939 (nomen nudum); *in* Rev. Mycol. 4: 20. 1939 (nomen nudum). — Introduced with two species, *Ixechinus majus* Heim (selected here as the type species) and *I. minus* Heim. — No Latin description. When in the same year Heim (*in* Rev. Mycol. 4: 5-20. 1939) dealt more fully with the genus, he published Latin descriptions for the two species, but not for the genus. This omission has not yet been made good by subsequent authors like Singer (*in* Ann. mycol. 40: 46, 1942), who accepted the genus, or Singer (*in* Lilloa 22: 687. 1951), when he placed it among the "genera incertae sedis."

Ixocomus Quél., Fl. mycol. France 411. 1888. — ETYMOLOGY: ἰξός, bird-lime, glue; κόμη, hair. Gender: m. — TYPE SPECIES (selected): *Boletus luteus* L. ex Fr. — BASINYM: *Viscipellis* Quél., Ench. Fung. 155. 1886.— *Ixocomus* is an undeniable and mere name change for *Viscipellis* Quél. (1886), q.v., although this was not especially stated. — TYPIFICATION. Acceptance of the foregoing conclusion makes *Boletus luteus* the correct type species; it was already proposed by Singer (*in* Farlowia 2: 258. 1945). — Murrill (*in* Mycologia 1: 140. 1909) regarded Quélet's first species under *Ixonomus*, *Boletus badius* Fr., as the type. There is no indication that when Quélet changed the name of his genus, he also changed its type. — The same argument can be invoked to reject *Boletus granulatus* L. ex Fr., selected by Gilbert (Bolets 92. 1931) and Singer (*in* Ann. mycol. 34: 325. 1936). — TYPONYMS: *Suillus* S. F. Gray (1821), *Cricunopus* P. Karst. (1881), *Viscipellis* Quél. (1886), *Peplopus* (Quél.) Quél. apud Moug. & Ferry (1887), and *Boletopsis* P. Henn. (1989; preoccupied). And compare *Boletus* L. ex Fr.

Krombholzia P. Karst. *in* Rev. mycol. **3** (No. 9): 17. 1881. — ETYMOLOGY: J. von Krombholz. Gender: f. — TYPE SPECIES (selected): *Boletus versipellis* Fr.—This species (cf. Lundell *in* Lund. & Nannf., Fungi exs. suec. No. 1305. 1946) is very common in Sweden, where *Boletus aurantiacus* Bull. ex Hook. has not been found as yet. It was correctly interpreted by Karsten (cf. *in* Bidr. Känn. Finl. Nat. Folk **37**: 17. 1882). There is not much room for doubt as to which species Fries called *B. versipellis*. — In France both *B. versipellis* and *B. aurantiacus* are common and have been confused in such a manner that even now many French authors (Gilbert is an exception) prefer to list *B. versipellis* as a synonym of *B. aurantiacus* or to reject the name altogether. This may explain why Maire mentioned the type species of his name change for the present generic name, *Krombholziella*, q.v., as *B. aurantiacus*. — As to the correct name of *B. versipellis* Fr., this problem does not need to be solved in the present paper, but it can already be confidently stated that the name *B. versipellis* ought not be listed as a synonym of *B. aurantiacus* s. str. as has been done by Singer (*in* Amer. Midl. Nat. **37**: 123. 1947). — SCOPE. Two species were mentioned, *Boletus versipellis* and *B. scaber* Bull. ex Fr. Although this was not explicitly indicated, the genus was introduced for *Boletus* sect. *Versipelles* Fr. (Epicr. 423. 1838; Hym. europ. 514. 1874). — TYPIFICATION. It is difficult to choose between the two mentioned species: *B. versipellis* has its epithet in common with that of Fries's section name of the group which Karsten had in mind when establishing the genus; on the other hand Fries (Summa Veg. Scand. 2: 318. 1849) once called the same group "Stirps *B. scabri*." The first species, *Boletus versipellis*, was considered the type by Murrill (*in* Mycologia **1**: 140. 1909) and Maire (see under *Krombholziella*); it was also selected by Singer (*in* Amer. Midl. Nat. **37**: 110. 1947). — Gilbert (Bolets 98. 1931), Konrad (*in* Schweiz. Z. Pilzk. **10**: 149. 1932; *in* Bull. mens. Soc. linn. Lyon **1**: 117. 1932; for the name reduced to subgeneric rank), and Singer (*in* Ann. mycol. **34**: 325. 1936) selected *Boletus scaber*. — HOMONYM: *Krombholzia* Rupr. ex Galeotti (1842; nomen nudum) ex Fourn. (1876; Gramineae).— Also spelt *Krombholtzia* [Bentham *in* J. Linn. Soc. (Bot.) **19**: 121. 1881, in synonymy]. Compare also Snell (*in* Mycologia **34**: 406. 1942).[11] — ISONYM: *Krombholziella* Maire (1937). — TYPONYMS. Compare *Leccinum* S. F. Gray (1821) and *Trachypus* Bataille (1908; preoccupied). — STATUS. Impriorable on account of the earlier homonym, and, therefore, changed into *Krombholziella*.

[11] Singer's remarks on this subject (*in* Ann. mycol. **40**: 32. 1942) are partly erroneous.

Krombholziella Maire *in* Publ. Inst. bot., Barcelona 3 (4): 41. 1937.[12] — ETYMOLOGY: diminutive of *Krombholzia*. Gender: f. — TYPE SPECIES (selected for basinym): *Boletus versipellis* Fr.—Listed by W. B. Cooke (Gen. Homobas. 52. 1953) as "*K. versipellis* (Fr.)." Called "*K. aurantiaca* (Roques ex Bull.) Maire" by Maire (*l.c.*) and "*K. aurantiaca*" by Singer (*in* Amer. Midl. Nat. 37: 110. 1947). — BASINYM: *Krombholzia* P. Karst. (1881), q.v. — VALID PUBLICATION. No description. *Krombholziella* was validly published by the reference "*Krombholzia* Karst. 1881," thus as a mere name change; it must have the same type species as its basinym. — TYPONYMS. Compare *Leccinum* S. F. Gray (1821) and *Trachypus* Bataille (1908; preoccupied).

Lactisuillus O.K., Rev. Gen. Pl. 3 (2): 536. 1898 (nomen provisorium). — A provisional name and hence not validly published: "Wollte man *Suillus* Karsten [q.v.] aufrecht erhalten, so musste man dieser Gruppe einen neuen Namen z.B. *Lactisuillus* geben." — Typonyms: *Coelopus* Bataille (1908) and *Leucoconius* (Reichenb.) ex Beck (1923).

Leccinum S. F. Gray, Nat. Arrang. Brit. Pl. 1: 646. 1821. — ETYMOLOGY: leccino, Italian fungus name. Gender: n. — TYPE SPECIES: (selected): *Boletus aurantiacus* Bull. — SCOPE. The genus, as introduced by Gray, almost covers Persoon's *Boletus* "A. Pileo pulvinato carnoso, a tubis elongatis facile se disuingeste. (SUILLI *veterum*)" (Syn. Fung. 503. 1801). It may be recalled in this connection that Persoon at that time combined the polypores and the boletes into a single genus, *Boletus* L., the whole of the boletes making up his group A. Only in one regard does *Leccinum* differ in circumscription from Persoon's group A: the first two species, possessing a ring, were excluded and each was placed in a genus of its own, *Suillus* S. F. Gray and *Pinuzza* S. F. Gray, and *Leccinum* was thus reserved for all boletes without a ring. Shortly before, in the same year, Fries had restricted *Boletus* L. by excluding the polypores; except for the ringed species (not excluded by Fries), *Boletus* Fr., too, and *Leccinum* are the same. Gray treated ten (British) species, the first being *Boletus aurantiacus* Bull. Certain modern mycologists who apply a narrow generic concept in Boletaceae distribute the species dealt with by Gray over several genera: (i) *Boletus* Fr. restr. (actual type species, *Boletus edulis*), four species; (ii) *Krombholzia* P. Karst. = *Krombholziella* Maire, two species, one of which is Gray's first; (iii) *Suillus* S. F. Gray emend. Snell, two

[12] In the text of this publication, *Krombholziella* is dated 1935, and Singer (*in* Amer. Midl. Nat. 37: 110. 1947; *in* Lilloa 22: 683. 1951) also gave 1935 as the date of publication. However, the actual date is 1937.

species; (iv) *Xerocomus* Quél. (= *Versipellis* Quél.), one species; and (v) *Gyroporus* Quél., one species. Thus about half the number of Gray's species form a coherent group, corresponding to Gilbert's *Boletus* Fr. *sensu stricto*. — TYPIFICATION. Gray's generic description reveals only one feature from which *Leccium* differs from his genera *Suillus* and *Pinuzza*, "collar o," and none of the original species agrees better with it than any of the others. All and all together, one cannot escape the conclusion that the selection of a species of the *Boletus* element in its strictest and current sense would have been a judicious choice. However, another species has already been chosen. — Murrill (*in* Mycologia 1: 140. 1909), acting in accordance with the first-species rule, indicated *Boletus aurantiacus* Bull. and treated *Leccinum* as a synonym of *Ceriomyces* "Battar." Snell (*in* Mycologia 34: 405-406. 1942) chose Gray's second species, "*L. scabrum* (Bull. ex Fr.) S. F. Gray." Simultaneously he "also proposed that *Leccinum* S. F. Gray . . . be adopted for [*Boletus* sect.] *Versipellis* of Fries and Peck in place of *Trachypus* Bataille (1908)." He was apparently unaware of Murrill's previous selection. Singer (*in* Amer. Midl. Nat. 37: 111. 1947) reverted to "*B. aurantiacus* Bull.," which he afterwards selected again [Singer *in* Lillon 22: 683. 1951; as "*L. aurantiacum* (Bull. ex) S. F. Gray"]. Both species, *B. aurantiacus* and *B. scaber*, represent the *Krombholziella* element. — REMARK. Gray gave Micheli as the author of the name. The latter (Micheli, Nov. Pl. Gen. 128. 1729) mentioned the popular Italian name leccino under his tenth species of *Suillus* Mich.[18]: *Suillus esculentus, crassus, superne fulvus, inferne luteus, pediculo concolore, rugoso, & aspero* Mich. — TYPONYMS. Compare *Krombholzia* P. Karst. (1881; preoccupied) and *Krombholziella* Maire (1937), and *Trachypus* Bataille (1908; preoccupied).

Leucobolites Beck *in* Z. Pilzk. 2: 142. 1923. — ETYMOLOGY: *λευκός*, white; *βωλίτης*, ancient fungus name (see under *Boletus*). Gender: m. — TYPE SPECIES (selected): *Boletus castaneus* Bull.—When validly re-publishing Bulliard's name in the starting-point book, Fries (Syst. mycol. 1: 392. 1821) misapplied it. He himself detected his error and in 1838 (Epicr. 420, 426) used Bulliard's name in its original sense, renaming his own species of 1821 *Boletus vaccinus* Fr. It is not precisely known what the latter name really covers. — There is no doubt about the species Beck von Mannagetta had in mind: Bulliard's species. — SCOPE. Introduced

[18] In Micheli's "Index italicus" leccino is listed for page 171 only. On the page cited "Leccino giallo" is given under one of the species of *Fungus* Tourn.; the mushroom involved is an agaric.

with five species. — TYPIFICATION. The species indicated is the best known representative. It has already been selected: "The genus *Leucobolites* Beck is obviously framed around the characters of *Gyroporus castaneus*, the first species cited . . . ."—Singer (*in* Farlowia 2: 231. 1945). The same species had been suggested before by Clements & Shear (Gen. Fung. 346. 1931).

Leucoconium.—See *Leucoconius*.

Leucoconius (Reichenb.) *ex* Beck *in* Z. Pilzk. 2: 146. 1923. — ETYMOLOGY: *λευκός*, white; *κονία*, dust. Gender: m. — TYPE SPECIES (only original species): *Boletus cyanescens* Bull. ex Fr. — PROTONYM: *Boletus* sect. *Leucoconius* Reichenb., Repert. Herb. s. Nomencl. 12. 1841.—Nomen nudum. Introduced for *Boletus* sect. *Leucosporus* Fr. — REMARK. When Beck von Managetta introduced the genus he explicitly excluded *Boletus castaneus* Bull. ex Fr., the only species admitted being *Boletus cyanescens*. — VARIANT SPELLING: "*Leucoconium*"; W. B. Cooke, Gen. Homobas. 57. 1953. — TYPONYMS. *Gyroporus* Quél. (1886) and *Coelopus* Bataille (1908).

Leucocricos (J. Schroet.) Smotlacha *in* S.B. böhm. Ges. Wiss., Math.-nat. Cl. 1911 (8): 32. 1912 (in synonymy). — Smotlacha listed the generic name ". . . *Leucocricos* Karsten 1882, Schroeter 1889, Schenk 1890" as a synonym of *Boletopsis* P. Henn. What he referred to should have been cited as *Boletus* [sect.] *Leucocricos* J. Schoet *in* Cohn, Krypt.-Fl. Schles. 3 (1): 498. 1888. Schroeter's only species is "*B*[*oletus*] *viscidus* Linné 1755," which, in his interpretation, may well be *Boletus viscidus* "L." ex Fr. 1835 = *Boletus aeruginascens* Secr. 1833.

Leucogyropus Snell *in* Mycologia 34: 408. 1942. — ETYMOLOGY: *λευκός*, white; the genus *Gyroporus*. Gender: m. — TYPE SPECIES (by original designation): *Gyroporus pisciodorus* Murrill.—Singer (*in* Amer. Midl. Nat. 37: 99. 1947) reduced this species to a synonym of *Boletus tabacinus* Peck. — SCOPE. Introduced with four species. — REMARK. The name *Leucogyroporus* was coined on the base of an erroneous statement communicated to its author, viz., that the spore prints were white in the type species. The name *Aeruginospora* Höhn. ("Agaricaceae") represents a similar case.

Mison Adans.—See "Polyporaceae." Cited by Steudel [Nomencl. bot. Pl. crypt. 76. 1824; as "*Mison*. Adans. (ex parte)"] as a synonym of *Boletus* L., Fr.

Mycenoporella Overeem.—See "Agaricaceae."

Oedipus Bataille *in* Bull. Soc. Hist. nat. Doubs No. 15: 13 (reprint pagination). 1908. — ETYMOLOGY: οἰδίνους, swollen footed. Gender: m. — TYPE SPECIES (selected): *Boletus edulis* Bull. ex Fr. — SCOPE. Introduced for the largest part of *Boletus* L. ex Fr., q.v., with 25 species distinguished in a key. — TYPIFICATION. Its best known representative was selected by Singer (*in* Amer. Midl. Nat. 37: 20. 1947). — VARIANT SPELLING: "*Oedopus* Pat."; W. B. Cooke, Gen. Homobas. 67. 1953. — TYPONYMS: *Tubiporus* Paul. ex P. Karst. (1881), *Dictyopus* Quél. (1886), and *Ceriomyces* Murrill (1909; preoccupied). Compare also *Boletus* L. ex Fr. and *Suillus* [Haller] O.K. (1898; preoccupied).

Oedopus.—See *Oedipus*.

Paragyrodon (Sing.) Sing. *in* Ann. mycol. 40: 25. 1942. — ETYMOLOGY: παρά, next to; the genus *Gyrodon*. Gender: m. — TYPE SPECIES (by original designation and only original species): *Boletus sphaerosporus* Peck. — BASINYM: *Gyrodon* subgen. *Paragyrodon* Sing. *in* Rev. Mycol. 5: 7. 1940, "subgen. (an gen.?) nov."—Latin description.

Peplopus (Quél.) Quél. *apud* Moug. & Ferry, Champ. *in* L. Louis, Départ. Vosges, Fl. Vosges 476 (108, reprint pagination). 1887. — ETYMOLOGY: πέπλος, garment, veil; πούς, foot. Gender: m. — TYPE SPECIES (selected): *Boletus luteus* L. ex Fr. — BASINYM: *Viscipellis* [subgen.] *Peplopus* Quél., Ench. Fung. 155. 1886.[14]—Including the ringed species of *Viscipellis* Quél. — SCOPE. Same as of basinym. — TYPIFICATION. Because *Viscipellis* was divided in 1887 into two new genera (*Peplopus* and *Gymnopus*) representing the two original subdivisions of the genus, and the type of *Viscipellis*, q.v., belongs to the *Peplopus* part, it is here also selected as the type species of *Peplopus* (infrageneric as well as generic name). — The indication as the type of Quellet's first species of 1886 by W. B. Cooke (Gen. Homobas. 71. 1953), viz., of *Boletus sphaerocephalus* Barla, is an example of a rigid application of the first-species rule and shows that the author did not even take the trouble to gather some basic information about his "choice." About this species, compare Gilbert [Bolets 123-129. 1931, under *Ixocomus sul[f]ureus* (Fr.) E. J. Gilb.]. This species must be rejected as non-eligible because it does not answer to the subgeneric description, "stipite annulo membranaceo vestito." It does not have a ring that remains attached to the stem as in the other species

[14] Kallenbach (*in* Pilze Mitteleur. 1: 37, etc. 1928, etc.) cited "*Peplopus flava* (With.) Quél. . . . 1886," etc., as synonyms. This is evidently an error. See also under "*Chlorosiphon*."

included by Quélet: as Gilbert writes, "Il n'y a d'autre anneau que la prolifération de la marge piléique," a structure not attached to the stem and evidently accidental at that. Not only in this respect is *Boletus sphaerocephalus* atypical: it also has spores agreeing with those of *Uloporus* Quél. ("*Gyrodon* Opat."), while those of the other (eight) original species are rather fusiform. — REMARKS. About the author of the name, see under *Gymnopus*. — *Peplopus* has sometimes been taken as published as a generic name in 1886: compare Karsten (*in* Bidr. Känn. Finl. Nat. Folk **48**: 277. 1889; as a synonym of *Cricunopus* P. Karst.) and W. B. Cooke (*l.c.*). This is incorrect since in 1886 Quélet did not use *Peplopus* in generic rank. — TYPONYMS: *Suillus* S. F. Gray (1821), *Cricunopus* P. Karst. (1881), *Viscipellis* Quél. (1886), *Ixocomus* Quél. (1888), and *Boletopsis* P. Henn. (1898; preoccupied). And compare *Boletus* L. ex Fr. (1821).

Phaeogyroporus Sing. *in* Mycologia **36**: 360. 1944. — ETYMOLOGY: φαιός, dusky; the genus *Gyrodon*. Gender: m. — TYPE SPECIES (by original designation): *Boletus braunii* Bres. — SCOPE. Introduced for two species.

Phaeoporus Bataille *in* Bull. Soc. Hist. nat. Doubs No. 15: 11 (reprint pagination). 1908. — Etymology: φαιός, dusky, "gris brun"; πόρος, pore. Gender: m. — TYPE SPECIES (only original species): *Boletus porphyrosporus* Fr. = *Boletus pseudoscaber* Secr. — HOMONYM: *Phaeoporus* J. Schroet. (1888; "Polyporaceae"). — ISONYM: *Porphyrellus* E. J. Gilb. 1931, q.v. — TYPONYM: *Porphyrosporus* (Smotl.) ex Konr. & Maubl. (1937; not validly published) and compare *Rhodobolites* Beck (1923). — STATUS. Impriorable on account of the earlier homonym, and, therefore, changed into *Porphyrellus*.

Phlebopus (Heim) Sing. *in* Ann. mycol. **34**: 326. 1936; *in* Ann. mycol. **40**: 25. 1942. — ETYMOLOGY: φλέψ, φλεβός, vein; ποῦς, foot. Gender: m. — TYPE SPECIES (only original species of basinym): *Boletus colossus* Heim. — BASINYM: *Boletus* subgen. *Phlebopus* Heim *in* Rev. Mycol. **1**: 9. 1936 (with Latin description).—Introduced for one species, *B. colossus*. — SCOPE & VALID PUBLICATION. The valid publication as a generic name by Singer in 1936 (*l.c.*) is somewhat doubtful. He accepted the taxon in generic rank, but hardly anything amounting to a German, and no Latin, description was added. Thus, all depends on whether or not one agrees to find a valid reference to a description of the taxon as a subgenus in "*Phlebopus* (Heim 1936) Singer (1936) Char.: Heim." Heim's paper is not mentioned in the list of literature appended to Singer's publication. In 1942 there is no omission of this kind: "Was die Gattungsdiagnose . . . betrifft, verweise

ich auf Heim, Revue de Mycologie 1936, no. 1, p. 6-10." In any case the original scope is the same as of the basinym. — TYPIFICATION. The only species of the basinym has been explicitly indicated as the type by Singer (*l.c.*, 1936; *in* Amer. Midl. Nat. 37: 2. 1947; *in* Lilloa 22: 671. 1951).

Phorima Rafin.—See "Polyporaceae."

Phylloboletellus Sing. *apud* Sing. & Digil. *in* Lilloa 25: 438. 1952. — ETYMOLOGY: φύλλον, leaf; the genus *Boletellus*. Gender: m. — TYPE SPECIES (by original designation and only original species): *Phylloboletellus chloephorus* Sing. apud Sing. & Digil.

Phyllobolites Sing.—See "Agaricaceae."

Phylloporus Quél., Fl. mycol. France 409. 1888. — ETYMOLOGY: φύλλον, leaf; πόρος, pore. Gender: m. — TYPE SPECIES (only original species): *Agaricus pelletieri* Lév. apud Crouan = *Paxillus paradoxus* (Kalchbr.) Quél. = *Phylloporus rhodoxanthus* (Schw.) Bres. — HOMONYM. Compare *Phylloporis* Clem. (1909; Strigulaceae, Lichenes).

Pinuzza S. F. Gray, Nat. Arrang. Brit. Pl. 1: 646. 1821. — ETYMOLOGY: pinuzzo, Italian fungus name. Gender: f. — TYPE SPECIES (only original species): *Boletus flavus* With. ("Bolt.").[15] — REMARK. Gray indicated Micheli as the author of the name *Pinuzza*. Micheli (Nova Pl. Gen. 127-129. 1729) only mentioned pinuzzo as a vernacular name under a number of species of *Suillus* Mich.

Polyporellus "Gilbert" (non P. Karst.).—See *Porphyrellus*.

Polyporoletus Snell.—See "Polyporaceae."

Porphyrellus E. J. Gilb., Bolets 75, 99. 1931. — ETYMOLOGY: πορφυροῦς, purple. Gender: m. — TYPE SPECIES (only original species of basinym; by original designation for isonym): *Boletus porphyrosporus* Fr. = *Boletus pseudoscaber* Secr. (an earlier name). — BASINYM: *Phaeoporus* Bataille (1908), q.v.—*Porphyrellus* is an avowed isonym; the basinym is preoccupied (cf. Gilbert, *op. cit.* p. 75). — SCOPE. Gilbert included the type and three other species. — VARIANT SPELLING: "*Polyporellus*"; W. B. Cooke, Gen. Homobas. 80. 1953.—Evidently a slip; not *Polyporellus* P. Karst. ("Polyporaceae"). — TYPONYM: *Porphyrosporus* (Smotl.) ex Konr. &

[15] Not *Boletus flavus* Pollini (Fl. veron. 3: "507" [607]. 1824), a species cited by Murrill (*in* N. Amer. Fl. 9: 86. 1908) as a synonym of *Inonotus hirsutus* (Scop.) Murrill = *I. hispidus* (Bull. ex Fr.) P. Karst. (Hymenochaetaceae or "Polyporaceae"). Apparently the name *Boletus flavus* Pollini was not validly published: "*Boleti ignarii* varietas memorabilis, vel distincta forte species est: *Boletus* (*Polyporus*) *flavus* . . ."

Maubl. (1937; not validly published) and compare *Rhodobolites* Beck (1923).

Porphyrosporus (Smotl.) *ex* Konr. & Maubl., Ic. sel. Fung. 6: 451. 1937 (in synonymy). — This name is sometimes cited as a generic synonym. Smotlacha [*in* S.B. böhm. Ges. Wiss., Math.-nat. Cl. **1911** (8): 31. 1912] introduced only a subgenus *Porphyrosporus* of *Boletus*. That Gilbert (Bolets, 1931, cf. p. 75) had used it also as a generic name as was stated by Singer (*in* Farlowia 2: 115. 1945) is not correct. "*Porphyrosporus* Smotlacha (1911)" was first cited as a generic synonym by Konrad & Maublanc (*l.c.*). And see under "*Chlorosiphon*." — Typonyms: *Phaeoporus* Bataille (1908; preoccupied), *Porphyrellus* E. J. Gilb. (1931), and compare *Rhodobolites* Beck (1923).

Poromycena Overeem.—See "Agaricaceae."

Porotheleum Fr.—See "Cyphellaceae."
Porothelium Fr.—See *Porotheleum*.

Psiloboletinus Sing. *in* Farlowia 2: 250. 1945. — ETYMOLOGY: ψιλός, naked; the genus *Boletinus*. Gender: m. — TYPE SPECIES (by original designation and only original species): *Phylloporus lariceti* Sing.

Pulveroboletus Murrill *in* Mycologia 1: 9. 1909. — ETYMOLOGY: pulvis, -eris, dust; the genus *Boletus*. Gender: m. — TYPE SPECIES (by original designation and only original species): *Boletus ravenelii* Berk. & C.— For a re-description of this species, see Singer [*in* Amer. Midl. Nat. 37: 7. 1947, as *Pulveroboletus ravenelii* (Berk. & C.) Murrill].

Rhodobolites Beck *in* Z. Pilzk. 2: 147. 1923. — ETYMOLOGY: ῥόδον, rose; βολίτης, ancient fungus name. Gender: m. — TYPE SPECIES (only original species): *Boletus roseus* Wint. — Winter's specific name is based on *Boletus alutarius* Fr. sensu Rostk. *Boletus roseus* Wint. has been interpreted with doubt either as *Boletus porphyrosporus* Fr. (= *B. pseudoscaber* Secr.) for instance by Gilbert (Bolets 217. 1931) and Gilbert & Leclair (*in* Bull. Soc. mycol. France 58: 185. 1944), or as *B. felleus* Bull. ex Fr. for instance by Kallenbach (*in* Pilze Mitteleurop. 1: 136. 1938). Rostkovius gave three descriptions. (i) A Latin one copied from Fries (Epicr. 425. 1838), except for "[tubulisque . . .] albis, tritis fuscescentibus," which was replaced by "subroseis, fractis roseis." (ii) The next description is a German translation from the foregoing, with some grave errors, "pileo . . . velutino" being translated into, "Der Hut . . . mit einem Velum ver-

sehen"! This translation was apparently not made by Rostkovius. In any case it is evident that the veil (which induced the publication of the genus *Rhodobolites* Beck) is non-existent! (iii) Finally, there is a more extensive and presumably 'personal' description. It rather points to *B. roseus:* pores "hell rosenfarben, werden nach dem Durchschneiden immer röther," but the net on the stem is not mentioned ("Der Stiel . . . ist höckerig-uneben"). The indicated taste of the flesh has to be left out of account because it is notoriously unreliable throughout Rostkovius's treatment of the boletes. Although figure 1 of Rostkovius's plate 42 slightly reminds one of *B. pseudoscaber*, figure 2 (section of fruit-body) cannot be anything else but a representation of *B. felleus* and I reduce *B. roseus* with some confidence to a synonym of that species. — TYPONYMS: *Tylopilus* P. Karst. (1881) and *Rhodoporus* Quél. ex Bataille (1908). — STATUS. It seems best, however, to regard *Rhodobolites* as a nomen dubium.

Rhodoporus Quél. *ex* Bataille *in* Bull. Soc. Hist. nat. Doubs No. 15: 11 (reprint pagination). 1908. — ETYMOLOGY: *ῥόδον*, rose; *πόρος*, pore. Gender: m. — TYPE SPECIES (selected): *Boletus felleus* Bull. ex Fr. — PROTONYM: *Rhodoporus* Quél., Fl. mycol. France 421. 1888.—A provisional name placed after the description of *Dictyopus* group b as "(*Rhodoporus*, Quél.)." The description of Quélet's only species of this group, *Boletus felleus*, is accompagnied by the footnote: „Il peut être considéré comme le type du genre *Rhodoporus*, analogue au genre *Rhodophyllus*." — SCOPE. When Bataile validly published Quélet's name he included two species, *Boletus felleus* and *B. alutarius* Fr. — TYPIFICATION. *Boletus felleus*, indicated as the type species by Quélet (see quotation) and Murrill (*in* Mycologia 1: 15. 1909) for the provisional name, was also selected by Singer (*in* Amer. Midl. Nat. 37: 89. 1947) for *Rhodoporus* as validly published by Bataille. — TYPONYM: *Tylopilus* P. Karst. (1881), and compare *Rhodobolites* Beck.

Rodwaya H. & P. Syd. *in* Hedwigia 40 (Beibl.): 2. 1901. — ETYMOLOGY: L. Rodway. Gender: f. — TYPE SPECIES (selected for basinym): *Merulius infundibuliformis* Cooke & Mass. — BASINYM: *Campbellia* Cooke & Mass. (1890), q.v. — REMARKS. A name change, the basinym being preoccuppied. — Murrill (*in* J. Mycol. 9: 101. 1930) and Imazeki (*in* Bull. Tokyo Sci. Mus. No. 6: 65. 1943) indicated *C. infundibuliformis* as the type species; Clements & Shear (Gen. Fungi 348. 1931) suggested *Campbellia africana* Cooke & Mass. — HOMONYM: *Rodwaya* F. MUELL. (1890; Burmanniaceae). — STATUS. Imporiable on account of the earlier homonym.

Rostkovites P. Karst. *in* Rev. mycol. 3 (No. 9): 16. 1881. — ETYMOLOGY: T. W. T. Rostkovius. Gender: m. — TYPE SPECIES (selected): *Boletus granulatus* L. ex Fr. — SCOPE. Four Finnish species were mentioned, the first being *Boletus granulatus*. — TYPIFICATION. Murrill (*in* Mycologia 1: 12. 1909; *in* N. Amer. Fl. 9: 153. 1910) took the first species as the type; Clements & Shear (Gen. Fungi 347. 1931), Maire [*in* Publ. Inst. bot., Barcelona. 3 (4): 41. 1937], and Singer (*in* Farlowia 2: 257. 1945) followed. — TYPONYM: *Gymnopus* (Quél.) Quél. apud Moug. & Ferry (1887; preoccupied).

Scutiger Paul. ex Murrill.—See "Polyporaceae."

Solenia "Hoffm."—See "Cyphellaceae."

Solenia [Hill] O.K., Rev. Gen. Pl. 3 (2): 521. 1898. — ETYMOLOGY: σωλήν, pipe. Gender: f. — TYPE SPECIES (selected): *Solenia pediculo crasso, punctato, brevi* Hill.—This has been incorrectly identified with *Boletus luteus* L. ex Fr.; it, rather, represents *Boletus bellini* Inz. (see below). — PRE-LINNEAN NAME: "*Solenia* John Hill 1751 und 1773 Nat. Hist. of Plants II: 38."[16]—O. Kuntze (*l.c.*). Introduced for a genus of Hill's Fungi, Class the Second ("such as grow erect, and consist of pedicels crowned with Heads"); the taxon included the species with separable tube-layer, i.e. the boletes in general. Kuntze took 1735 as the starting-point date for generic names and, therefore, he considered Hill's name as validly published. — SCOPE & VALID PUBLICATION. Kuntze did not give a generic description and the valid publication of the name depends exclusively on the citation of *Solenia* Hill as quoted above.[17] The scope, therefore, would be exactly that of Hill's genus. However, Kuntze simultaneously restricted the genus to the ringed species, delimitating it in agreement with *Boletopsis* P. Henn., q.v.[18] — TYPIFICATION. Kuntze distinguished between two categories among Hill's species, such as were "lateinisch diagnosticirt" and such as were "nur englisch benannt" and "als nomina nuda nicht mitzählen." Of the first category Kuntze mentioned two species, *Solenia petiolo* [= *pedicu-*

[16] The second date stands for "eine andere Auflage von 1773 in Berlin vorhanden, welche aber nur für pag. 643/4 . . . und pag. 645-671 . . . und dazu gehörigen Abbildungen ein Neudruck ist."—O. Kuntze (Rev. Gen. Pl. 1: cxxx. 1897). As in other similar cases (cf. *Hypochnus* Fr., "Thelephoraceae"), unchanged re-issues and new impressions are better not considered separate publications, and consequently I would rather not regard *Solenia* as re-published in 1773 (which would make it a devalidated name). The same applies to translations that do not contain altered or new matter (see also under *Xyloglossum* Pers. ex Link, "Clavariaceae").

[17] The present Code admits valid publication by means of a reference to pre-starting-point descriptions.

[18] "Ich will nicht die Berechtigung der Gattung behandeln, . . . das mögen die Mycologen unter sich ausstreiten."—Kuntze.

lo] *bulboso* Hill and *Solenia pediculo crasso, punctato, brevi* Hill, and a third, which he excluded. The two admitted, he identified with "*Boletus flavidus* Fries" (according to Streinz, Nomencl. Fung. 148. 1862) and "*Boletus luteus* L." respectively. He did not appoint the type species. This identification of Hill's two species with ringed bolets is a palpable error. For none of the two did Hill mention a ring; both his descriptions, although they impress one at first as orginal (Hill cited British localities), are evidently taken from two of Micheli's illustrated species of *Suillus* Mich. (the boletes in general) and in none is a ring drawn or mentioned by Micheli; both are rather more readily identifiable with species not characterized by a ring. The first of Hill's species corresponds to *Suillus esculentus, superne pulchre fulvus, inferne citrinus, & subtilissimo perforatus, pedilo concolore* Mich. (Nov. Pl. Gen. 128 *pl. 68 f. 1.* 1729), although this is not mentioned; the second, to *Suillus esculentus, crassus, magnus, vernus, pileola supina parte fulvo, prona luteo, pediculo crassiore, concolore, punctis, & lituris rubris notata* Mich. (*op. cit.* p. 129 *pl. 69 f. 2*). Persoon (Mycol. europ. 2: 143. 1825) introduced the name *Boletus leoninus* Pers. for the first of these species and *Boletus circinans* var. *leptopus* Pers. (*op. cit.* p. 127), for the second. It is possible that *B. leoninus* may be identified with *Boletus impolitus* Fr., as has been occassionnally done; while *B. circinans* var. *leptopus* is likely to be synonymous with *Boletus bellini* Inz. [cf. Gilbert, Bolets 115, 129. 1931, as *Ixocomus leptopus* (Pers.) E. J. Gilb.]. The second species is here selected as the type. The erroneous identification of this species with *Boletus luteus* by Kuntze is apparently due to Hill's remark, "Dillenius calls it, *Boletus luteus*." — W. B. Cooke (Gen. Homobas. 90. 1953) listed "*Solenia* Hill. ex O. Kuntze" with "*Solenia caripes* (Kalchbr.) O. Kuntze" as the type species. Evidently *Boletus cavipes* Opat. was meant; it was not explained on what grounds this species could be taken as eligible. — Homonyms: *Solena* Lour. (1790; Cucurbitaceae), *Solena* Willd. (1797; Rubiaceae), *Solenia* Agardh (1822; Ulvaceae, Chlorophyta), and *Solenia* Pers. (1794) ex Fr. (1822; "Cyphellaceae").

Strobilofungus "McGinty": Lloyd, Mycol. Writ. 4 (Lett. No. 59): 7. Oct. 1915; 4: 538. Dec. 1915. — Compare Stevenson & Cash (*in* Bull. Lloyd Libr. No. 35: 142. 1936):

"Based on *Strobilomyces pallescens* Cke. & Mass. Lloyd uses the specific name *pallidus*, but in error, and later (Myc. Writ. 5: 663, April 1917) corrects it. The new genus was suggested on ground of a difference in spore shape from typical *Strobilomyces* spp. Lloyd did not actually use the name in his herbarium and it might well be deleted."

Not validly published. For some general considerations on the McGinty names, see Part I of the present series (Donk *in* Reinwardtia 1: 205. 1951). — Singer (*in* Farlowia 2: 123. 1945; *in* Lilloa 22: 695. 1951) identified *S. pallescens* Cooke & Mass. with *Boletus* (= *Boletellus*) *ananas* Curt., the type species of *Boletellus* Murrill (1909).

Strobilomyces Berk. *in* Hook. J. Bot. II 3: 78. 1851. — ETYMOLOGY: *στροβίλος*, fir cone; *μύκης*, fungus. Gender: m. — TYPE SPECIES (selected): *Boletus strobilaceus* Scop. ex Fr. = *Boletus floccopus* Vahl ex Fr.; compare Singer (*in* Farlowia 2: 108. 1945). — SCOPE. The name was introduced on the occasion of the publication of *Strobilomyces polypyramis* Hook. f. apud Berk. and *S. montosus* Berk., both Asiatic species. "*Strobilomyces strobilaceus*" was only mentioned as being allied to each of the two. — TYPIFICATION. Although only casually mentioned when the generic name was published, it can be safely accepted that *Boletus strobilaceus* stood foremost in Berkeley's mind when he introduced the genus; this species has been generally accepted as the type: Murrill (*in* Mycologia 1: 8. 1909; *in* N. Amer. Fl. 9: 157. 1910[19]), Clements & Shear (Gen. Fungi 347. 1931), Gilbert (Bolets 111. 1931), Konrad (*in* Schweiz. Z. Pilzk. 10: 149. 1932; *in* Bull. mens. Soc. linn. Lyon 1: 116. 1932), Singer (*in* Ann. mycol. 34: 324. 1936; *in* Farlowia 2: 108. 1945; *in* Lilloa 22: 691. 1951), and Maire [*in* Publ. Inst. bot., Barcelona 3 (4): 42. 1937]. — REMARK. The place of publication is often incorrectly cited as "Berk., Outl. Brit. Fungol. 236. 1860." — VARIANT SPELLING: "*Strobylomyces*"; Pat., Hym. Eur. 132. 1887. — TYPONYM: *Eriocorys* Quél. (1886).

Strobylomyces.—See *Strobilomyces*.

Suillellus Murrill *in* Mycologia 1: 16. 1909. — ETYMOLOGY: diminutive of *Suillus*. Gender: m. — TYPE SPECIES (by original designation): "*Boletus luridus* Schaeff." — SCOPE. Introduced with two certain species and a doubtful one.

Suillus S. F. Gray, Nat. Arrang. Brit. Pl. 1: 646. 1821. — ETYMOLOGY: an ancient name used by the Romans for what was apparently *Boletus edulis* Bull. ex Fr. and perhaps, other boletes; of a swine. Gender: m. — TYPE SPECIES (only original species): *Suillus luteus* S. F. Gray = *B. luteus* L. ex Fr.—The species Gray called *Suillus luteus* he published with a *description* faithfully translated from that of *Boletus annulatus* Pers., Syn. Fung. 503. 1801; the latter name in its turn is nothing but a name change (or error) for *Boletus annularius* Bull.; and hence both *Suillus*

[19] Murrill thought 1860 the date of publication.

luteus S. F. Gray and *B. annulatus* Pers. must be considered typonyms of *B. annularius* Bull. The *name*, Gray derived from "*Boletus luteus*, Schaeff. Fung. 114 . . . not of Linnaeus," but this does not alter the above conclusion about the typication of *Suillus luteus*. The point is of accademic interest only as long as *B. annularius* is placed in the synonymy of *B. luteus*, as is currently done. — SOME HISTORICAL NOTES:

" . . . *Suillus* is an ancient name. According to Pliny (77 A.D.), the Romans used it (not in a generic sense, of course) for what was apparently *Boletus edulis* and perhaps other *Boleti*, while calling *Amanita caesarea* by the name *Boletus*. Caesalpino (1583) and Porta (1592) used both words in the same manner. Micheli (1729) first used *Suillus* as a generic name, applying it to the *Boleti* and using *Boletus* as did Tournefort (1694 & 1700) for the morels and phalloids.[20] He was followed by Haller (1742, and in part, 1768), Müller (1763) and Adanson (1763); Vaillant (1727) and Battarra (1755) used *Boletus* but not *Suillus*.

"Up to this point, a majority had referred to the *Boleti* under the name *Suillus*, the notable exception being: Tournefort, who used *Fungus* for at least a part, and his follower, Vaillant; Dillenius (1719) who first used *Boletus* for this group[21] and some of the Polypores; and Battarra, who coined a new name, *Ceriomyces*[22] It was Linnaeus (1753) who definitely turned the tide away from *Suillus*, for which he substituted *Boletus* in Dillenius' sense, just as he changed the senses of all the names used by the Romans. . . . Poiret (1806) resurrected Micheli's name *Suillus*[23] for the *Boleti* and one polyporaceous species, *betulinus*. . . . Then Gray . . restricter *Suillus* to one group of the *Boleti*. . . ."— Snell (*in* Mycologia 34: 404-405. 1942).

PRE-LINNEAN NAME: *Suillus* Mich., Nov. Pl. Gen. 126 *pls. 68, 69.* 1729. —An inclusive genus of boletes; 25 species. — DEVALIDATED NAME: *Suillus* [Mich.] Adans., Fam. Pl. 2: 10. 1763; Haller, Hist. Stirp. indig. Helv. inch. 2: 29. 1768.—Adanson referred to "Mich. *t. 68, 69.*" Although Adanson's nomenclatorial system is neither Tournefortian nor Linnean, his name would have been considered validly published if the starting-point date 1753 for these fungi had not been changed. — SCOPE. Gray divided the boletes (that is, *Suillus* Mich.) over three genera: *Suillus*, *Pinuzza* S. F. Gray, and *Leccinum* S. F. Gray. The first two comprised one, collared, species each; the remaining, ringless, species went into the third genus. The only (British) species of *Suillus* treated by Gray is *Boletus luteus* "Schaeff." — REMARKS. Gray cited Micheli as the author of the name *Suillus* he adopted. Since the one species he retained under it is at least very doubtfully acceptable as the type of *Suillus* Mich., his emendation should rather be considered a misapplication which by the introduction of the later starting-point for these fungi acquired the status of a 'new'

[20] See also under *Boletus* L. ex Fr.
[21] See under *Boletus* L. ex Fr.
[22] See under *Ceriomyces* Murrill.
[23] Snell appended Poiret's two pertinent paragraphs *verbatim* in a footnote.

genus; hence it is preferable to drop the author's citation Micheli in connection with *Suillus* S. F. Gray. — J. S. Presl (Vseobecny Rostlinopsis 2: 1917. 1846) also had a genus *Suillus* for veiled species. I have not seen the book, but Dr. A. Pilát kindly informs me that three species were well described in Czech and he has been good enough to translate the Czech generic description for me: "Pileus et hymenophor ut in *Boletis*. Velum in iuventute partem pilei inferioren claudit, dein rumpens et reliquiae eius in pilei margine vel in stipite relinquens." Species: *Suillus annulatus* (Pers.) J. S. Presl (with *Boletus luteus* L. as a synonym) and *S. flavidus* (Fr. ex Fr.) J. S. Presl, in the first section; and *S. aurantiacus* (Bull. ex Hook.) J. S. Presl. in a second section. — HOMONYMS: *Suillus* P. Karst. (1882) and *Suillus* [Haller] O.K. (1898). — TYPONYMS: *Cricunopus* P. Karst. (1881), *Viscipellis* Quél. (1886), *Peplopus* (Quél.) Quél. apud Moug. & Ferry (1887), *Ixocomus* Quél. (1888), and *Boletopsis* P. Henn. (1898; preoccupied). And compare *Boletus* L. ex Fr. (1821).

Suillus [Haller] O.K., Rev. Gen. Pl. 3 (2): 534. 1898. — ETYMOLOGY: see under *Suillus* S. F. Gray. — TYPE SPECIES (selected): *Suillus fulvus inferne ex flavo virescens* Haller (with as a synonym, *Suillus esculentus crassus superne fulvus, inferne initio albidus, deinde e flavo subvirescens, pediculo ventricoso, & supernae pilei parti concolore* Mich., Nov. Pl. Gen. 127. 1729).—Von Haller's species is evidently a mixture of several representatives of *Boletus sensu stricto* of modern authors, and it may be interpreted in agreement with the first synonym he cited, the phrase of which doubtlessly inspired his own. In my opinion Micheli's species belongs to the group of *Boletus edulis* Bull. ex Fr., although I find it difficult to suggest to which of the many forms (or related species) it may be referred. — PRE-LINNEAN NAME: "*Suillus* Hall. 1742 En. Helv.: 29—31, ‚Micheli'."—O. Kuntze (*l.c.*). Introduced as a scientific name for the boletes by Micheli (Nov. Pl. Gen. 126. 1729) and applied by Von Haller (Enum. meth. Stirp. Helv. indig. 29. 1742) in the same sense. The latter author "führte 1742 unter *Suillus* 11 Arten auf, die, soweit ich sie identificiren konnte, alle zu *Boletus* auct. rec. gehören."—O. Kuntze (*l.c.*). Because he took 1735 as the starting-point date for generic names, Kuntze considered the first use after that date the one validly published. — SCOPE & VALID PUBLICATION. Kuntze did not give a description and the valid publication of the name by him depends exclusively on the citation of the pre-Linnean name *Suillus* Haller as quoted above.[24] He took up the name in a somewhat restricted sense, as equivalent to *Boletus* as compiled by Saccardo, but

[24] See also footnote 17.

with the exclusion of the ringed species, *Boletopsis* P. Henn., q.v., for which he 'restored' *Solenia* Hill, q.v. — TYPIFICATION. Kuntze did not select a type species. — Murrill (*in* Mycologia 1: 10. 1909), following a nomenclatorial code with 1753 as the general starting-point date (not 1735 as in Kuntze's code), ascribed the first valid publication of *Suillus* to Poiret ("Encycl. Méth. Bot. 7: 496. 1806"), indicating "*Suillus annulatus* Poir." (*Boletus annulatus* Pers.) as the type species.[25] He overlooked previous uses from between 1753 and 1806 (see under *Suillus* S. F. Gray) or apparently looked upon them as 'hyponyms.'[26] — In any case Murrill's indication can not be transferred to *Suillus* as published by Kuntze, since the latter, simultaneously with the publication of the name, excluded the ringed species. This fact also prevents an attempt to identify Kuntze's name with *Suillus* S. F. Gray, q.v. — The selection of the type species of *Suillus* P. Karst., q.v., viz., *Boletus cyanescens* Bull. ex Fr., is out of order, too, since it seems not to be represented among Von Haller's species. — It is suggested to select Von Haller's first species which includes one of the boletes described by Micheli, the author to whom he ascribed the generic name. — REMARK. It is difficult to interpret *Suillus* O.K. as a monadelphous homonym of *Suillus* S. F. Gray because both names go back to *Suillus* Mich., a name from before the introduction of the binomial system. — HOMONYMS: *Suillus* S. F. Gray (1821) and *Suillus* P. Karst. (1882; preoccupied). — TYPONYMS. Compare *Tubiporus* Paul. ex P. Karst. (1881), *Dictyopus* Quél. (1886), *Oedipus* Bataille (1908), and *Ceriomyces* Murrill (1909; preoccupied); and compare also *Boletus* L. ex Fr. (1821).

Suillus P. Karst. *in* Bidr. Känn. Finl. Nat. Folk 37: v, 1. 1882. — ETYMOLOGY: see under *Suillus* S. F. Gray. — TYPE SPECIES (selected): *Boletus cyanescens* Bull. ex Fr. — SCOPE. Introduced for three species and one more added with a note of interrogation; first species, *Boletus cyanescens*, one of the others being *Boletus castaneus* Bull. (non Fr. 1821). — TYPIFICATION. The first author to indicate a type species for *Suillus* "Karst." was Murrill (*in* Mycologia 1: 14. 1909), who listed *Boletus cyanescens* Bull. This species has also been chosen by Singer (*in* Farlowia 2: 231. 1945). — I know of no valid reason to alter this indication and to replace it by *Boletus castaneus* as was done by Clements & Shear (Gen. Fungi 347. 1931). Since both the generic subdivision of *Gyroporus* Quél., q.v., to which *B. cyanescens* belongs, and *Suillus* P. Karst. are nothing but

[25] Poiret did not definitely accept the genus (" . . . les suilles . . . ne sont qu'une division des bolets & . . . ne peuvent pas en être séparé comme genre").

[26] Also published in 1806, "*Suillus*, Hall." by Roussel, Fl. Calvados, 2e Ed., 69. Compare also De Jussieu (Gen. Pl. 4. 1789), etc.

one and the same already previously introduced taxon, viz., *Boletus* trib. *Carioni* Fr. (as delimited in Fries, Hym. europ. 517. 1874), it is logical to typify all names given to this taxon by the same species. This should be *B. cyanescens*, indicated first for both the generic names involved. This also applies to *Coelopus* Bataille. — REMARK. Karsten did not indicate any previous author as the originator of the name: he ascribed it to himself. — ISONYM: *Lactisuillus* O.K. (1898), q.v., a provisional name. — HOMONYMS: *Suillus* S. F. Gray (1821; Boletaceae) and *Suillus* [Haller] O.K (1898; Boletaceae). — TYPONYMS: *Coelopus* Bataille (1908) and *Leucoconius* (Reichenb.) ex Beck (1923). — STATUS. Impriorable on account of the earlier homonym.

Trachypus Bataille *in* Bull. Soc. Hist. nat. Doubs No. 15: 12 (reprint pagination). 1908. — ETYMOLOGY: τραχύς, rough; πούς, foot. Gender: m. — TYPE SPECIES (selected): *Boletus rufus* Schaeff.—Bataille conceived this species broadly, apparently inclusive of *Boletus versipellis* Fr. and *B. aurantiacus* Bull. He ascribed the name to Schaeffer (cf. Bataille, *op. cit.* p. 27) and I select Schaeffer's plate as representing the basis of his conception of *B. rufus*. — SCOPE. Introduced with four species described in a key: *Boletus scaber* Bull. ex Fr., *B. rufus*, *B. umbrinus* Pers., and *B. rugosus* Fr. — TYPIFICATION. Choice should be made between *B. scaber* and *B. rufus*. On the correct identity of the first of these species wars are waging. — Singer (*in* Amer. Midl. Nat. 37: 110. 1947) proposed *Boletus rufus* as the type species — Kühner (*in* Bull. Soc. Nat. Oyonnax 2: 44. 1948) considered *Boletus scaber* the type species; it was also listed by W. B. Cooke (Gen. Homobas. 95. 1953). — REMARKS. "*Trachypus* Batt. ex Snell (1941)" as listed by Ainsworth & Bisby, Dict. Fungi 300. 1943, is an error. — HOMONYM: *Trachypus* Reinw. & Hornsch. (1829; Musci frondosi). — TYPONYMS. Accepting *Boletus rufus*, the earliest choice, as the correct type species, *Trachypus* becomes a typonym of *Krombholzia* P. Karst. (1881) and *Krombholziella* Maire (1937), both names based on *Boletus versipellis* Fr.; and if *B. rufus* is broadly conceived, also of *Leccinum* S. F. Gray (1821), which is based on *B. aurantiacus* Bull. — STATUS. Impriorable on account of the earlier typonym.

Tramaporus Kalchbr.—See under *Boletinus* Kalchbr.

Tubiporus Paul. ex P. Karst. *in* Rev. mycol. 3 (No. 9): 16. 1881. — Etymology: tubus, tube; πόρος, pore. Gender: m. — TYPE SPECIES (selected): *Boletus edulis* Bull. ex Fr. — PROTONYM: *Tubiporus* Paul., Iconogr. Champ. *pl. 166bis-183bis*. 1812-35.— Some general remarks on Paulet's generic names will be given on a later occasion. *Tubiporus* was not validly

published by Paulet. It being a nomen nudum, I would not even consider it a devalidated name. It was for the first time validly published when Karsten took it up. Murrill (*in* Mycologia 1: 10. 1909) indicated "*Tubiporus annulatus* (Bull.) Paul." = *Boletus annularius* Bull. = *Boletus annulatus* Pers. = *Boletus luteus* L. ex Fr. as the type species of *Tubiporus* Paul.; he considered *Tubiporus* P. Karst. a different genus. — SCOPE. When reintroduced by Karsten, four species were mentioned as examples, *B. edulis* being the first enumerated. — TYPIFICATION. *Boletus edulis* has been considered the type species of Karsten's generic name by those authors who indicated one: Murrill (*in* Mycologia 1: 140. 1909), Maire [*in* Publ. Inst. bot., Barcelona 3 (4): 40, 41. 1937], and Singer (*in* Amer. Midl. Nat. 37: 20. 1947). — REMARK. This name has been used by some authors, in the place of *Boletus* Fr., for a restricted genus including *B. edulis*; some of these authors consider *B. luteus* L. ex Fr. the correct type species of *Boletus* L. ex Fr., q.v., while others, like Romagnesi (*in* Bull. Soc. mycol. France 66: 56, 62. 1950), want to drop the name *Boletus* for a restricted genus and to substitute for it *Tubiporus* (or *Dictyopus*). — VARIANT SPELLING: "*Tubisporus*"; O.K., Rev. Gen. Pl. 3 (2): 534. 1898 (in synonymy).— Evidently an unintentional error. — TYPONYMS: *Dictyopus* Quél. (1886), *Oedipus* Bataille (1908), and *Ceriomyces* Murrill (1909; preoccupied); and compare *Boletus* L. ex Fr. (1821) and *Suillus* [Haller] O.K. (1898; preoccupied).

Tubisporus.—See *Tubiporus*.

Tylophilus.—See *Tylopilus*.

Tylopilus P. Karst. *in* Rev. mycol. 3 (No. 9): 16. 1881. — ETYMOLOGY: τύλος, knot; πῖλος, cap. Gender: m. — TYPE SPECIES (only original species): *Boletus felleus* Bull. ex Fr., — VARIANT SPELLINGS: "*Tylophilus*"; Clem. & Shear, Gen. Fungi 347. 1931 (in synonymy).—An unintentional error. — "*Tylopus*"; A. A. Pears., Brit. Bol. 19. 1950 (in synonymy). —An error: compare page 3. — TYPONYM: *Rhodoporus* Quél. ex Bataille (1908). And compare *Rhodobolites* Beck (1923).

Tylopus.—See *Tylopilus*.

Uloporus Quél., Ench. Fung. 162. 1886. — ETYMOLOGY: οὖλος, crisped; πόρος, pore. Gender: m. — TYPE SPECIES (selected): *Boletus lividus* Bull. ex Fr. — SCOPE. Introduced with three species and one entered with a mark of interrogation; the first species is *Boletus placidus* Bonord. In Quélet's circumscription the name was 'superfluous' for he cited the earlier name *Gyrodon* Opat., q.v., as a synonym. However, it might well be

accepted that he considered *B. lividus*, which he knew well, as the leading species rather than *Boletus sistotrema* Fr. (the type species of *Gyrodon*). — TYPIFICATION. *Boletus lividus* is the obvious choice; it was already selected as the type species by Singer (*in* Farlowia 2: 243. 1945). The indication of "*U. volvatus* (Pers.) - or *U. placidus* (Bon.)" by W. B. Cooke (Gen. Homobas. 97. 1953) must be rejected.

Veloporus "Quél." ex Killerm. *in* Engl. & Pr., Nat. PflFam., 2. Aufl., 6: 205. 1928 (in synonymy). — Killermann cited "*Veloporus* Quél., Fl. myc. 1888" as a generic synonym of *Boletus* Dill.; the name is accordingly registered by Ainsworth & Bisby (Dict. Fung. 316. 1943). As far as I am aware Quélet never published either a genus of this name or an infrageneric group with '*Veloporus*' in its name. Perhaps an error for *Ixonomus* subgen. *Peplopus* Quél. (1886) = *Peplopus* (Quél.) Quél. apud Moug. & Ferry (1887)?

Versipellis Quél., Ench. Fung. 157. 1886. — ETYMOLOGY: changeable in appearance. Gender: f. — TYPE SPECIES (selected): *Boletus subtomentosus* L. ex Fr. — SCOPE. This generic name (which has no relation whatever with *Boletus* sect. *Versipelles* Fr.) was introduced for a combination of two Friesian groups: (i) *Boletus* sect. *Subtomentosi* Fr. (Epicr. 415. 1838; Hym. europ. 501. 1874; *Boletus* stirps *B. subtomentosi* Fr., Summa Veg. Scand. 2: 316. 1849) and (ii) *Boletus* sect. *Subpruinosi* Fr. (Hym. europ. 504. 1874). Although Quélet dit not explicitly state the connection between his genus and these two sections, it does nevertheless undeniably exist. His two subdivisions "a. Pileus villosus, raro demum glabratus" and "b. Pileus glaber, saepius pruinosus" correspond with those of Fries's as to both their characters and contents! Fries's characterization of '*Subtomentosi*' contains, "Pileus . . . villosus, raro demum glabratus," and of '*Subpruinosi*,' "Pileus glaber, sed saepius pruinosus." — TYPIFICATION. The type species of the Friesian section names, which automatically must also become the leading species of Quélet's subdivisions, are, in my opinion, the only really eligible ones. The first section name, '*Subtomentosi*,' has to be typified, without reserves, by *Boletus subtomentosus*, a conclusion already expressed by Singer (*in* Farlowia 2: 297. 1945), when he indicated that species as the type. The other section did not include a species bearing a name from which the section epithet was derived. Of its species, one (*Boletus pruinosus* Fr.) was known to Fries from living material, one (*B. parasiticus* Bull. ex Fr.) from dried specimens, and the others only from descriptions and figures. It will, therefore, be easily understood why *Boletus pruinosus* has been proposed as the type species of '*Subpruinosi*'

by Donk (*in* Bull. bot. Gdns Buitenzorg III 18: 147. 1949).[27] From these two species thus singled out and considered eligible for Quélet's generic name, Donk (*l.c.*) selected *B. subtomentosus*. — Perhaps the first indication of a type species for *Versipellis* is one by Murrill (*in* Mycologia 1: 140. 1909), who adhered to the first-species rule and thus took Quélet's first species, *Boletus variegatus* Sw. ex Fr. He was followed by Maire [*in* Publ. Inst. bot., Barcelona 3 (4): 41. 1937] and by Singer (*in* Farlowia 2: 258. 1945). The latter author proposed to follow Murrill, apparently in order to get rid of the name *Versipellis* as a rival of *Xerocomus*, because *B. variegatus* is at present no longer considered representative of '*Subtomentosi*' and seems better classed in *Ixocomus* Quél. = *Suillus* S. F. Gray emend. Snell. As will pointed out below, this species is not eligible! — NOMEN REJICIENDUM (proposed). *Versipellis* and *Xerocomus* Quél., q.v., are two names for one taxon. Of the two, *Versipellis* is the earlier and, thus, the correct one. However, it has not been taken up, and *Xerocomus* is now generally used in its place by those authors who divide the Friesian genus *Boletus* into several smaller ones. An additional motive for the rejection of *Versipellis* has been emphasized by Snell (*in* Mycologia 34: 407. 1942): confusion is to be feared with *Boletus* sect. *Versipelles* Fr., which covers quite a different group of boletes. Rejection of *Versipellis* Quél. as a nomen ambiguum (Art. 75) as suggested by Snell and afterwards Rogers (*in* Farlowia 4: 35. 1950), is definitely out of the question because *Versipellis* Quél. and *Boletus* sect. *Versipelles* Fr. are undoubtedly two quite different names (rather than one name "used with different meanings"); however, confusion has not as yet occurred at all, and it seems doubtful if it ever will, or, if so, would really "become a long-persistent source of error." If one wants to retain *Xerocomus*, the only solution is to conserve *Xerocomus* against *Versipellis*. This proposal was moved by Donk (*l.c.*).[28] Singer is against it:

[27] Singer (*in* Amer. Midl. Nat. 37: 38. 1947; *in* Lilloa 22: 678. 1951) indicated Fries's first species as the type, *Boletus bovinus* Fr., one of the species Fries knew only from literature.

[28] The Secretary of the Special Committee for Fungi (*in* Taxon 2: 29. 1953; *in* Mycologia 45: 314. 1953) disposed of this proposal as one that aimed at conservation of a name that would be retained without conservation. When Donk protested, the Secretary asked the Committee to decide whether or not the proposal was to be admitted to a vote and later reported (Circular to Members) as the majority opinion that it was not. This procedure is not acceptable, simply because there is as yet no way to force upon the public a debatable lectotype, except under certain circumstances by the simultaneous adoption of a proposal for conservation. In my opinion the correct application of the Code leads to a different lectotype from the one backed by the Secretary. If the proposal is rejected in the future, I shall feel obliged to take up the name *Versipellis*, if I feel inclined to accept the corresponding genus, unless, of course, convincing arguments to the contrary are published; there are others who agree in this respect. The present discussion has already been published in a mimeographed paper (Donk, Proposal Conserv. *Xerocomus* v. *Versipellis*. 4 pp. 1953; and *in* Taxon 3: 25. 1954, proposal without discussion). The proposal still stands.

"Da kein formeller Grund vorliegt, *Versipellis* als basonym von *Xerocomus* zu betrachten, liegt auch kein Grund vor, die Lectotypenart von *Xerocomus* auf *Versipellis* zu übertragen. Folglich liegt weiterhin kein Grund vor, die erste Wahl eines Lectotypus (Singer 1945[29]) zu ignorieren wie es Donk tut, und statt dessen einen neuen Lectotypus zu wählen und die Gattung *Xerocomus* als nomen conservandum vorzuschlagen . . .. Ich wünsche aber zu unterstreichen, dass mit meiner absolut legitimen Typifizierung (*V. variegata*) *Versipellis* ein vom praktischen Standpunkt harmloses Synonym von *Xerocomus*[30] wird . . .. "—Singer (*in* Schweiz. Z. Pilzk. 29: 216. 1951; see also p. 226).

Singer's 'absolutely legitimate typification' is in reality one easy to dispose of. (i) To one with a very formal attitude there may perhaps be no ground to consider *Versipellis* basinym of *Xerocomus*, but this does not necessarily imply that considerations of logic, moral obligations, and the spirit of the Code must be ignored. I doubt whether even Singer would go so far as to maintain that Quélet had two *different* genera in mind, which was the point I raised. If he believes *Xerocomus* as conceived by Quélet to be the group centering around *X. subtomentosus* (to use his own words), one would certainly like to know his reasons why the same should not also hold good for *Versipellis*! Quélet retained the genus, he only changed its name. (ii) Specialists (including Singer) agree at present that *B. variegatus* is rather a member of *Ixocomus* = *Suillus*. Does Singer really believe that this species might have stood foremost in Quélet's mind when he coined the name *Versipellis*? The original generic description contains "Pileus villosus vel pruinosus," and stated nothing else about the surface of the cap. *Boletus variegatus* ("Pileo . . . squamulis fasciculato-pilosus . . . adsperso") does not agree with the generic description and, therefore, must be ruled out as eligible. (iii) Quélet himself did not act in such a way as to justify Singer's view. Only two years later (Quélet, Fl. mycol. France 414. 1888) he transferred *B. variegatus*, with "Peridium . . . humide, *lubrifié* . . .,"[31] to *Ixocomus*. Thus this species had already been excluded long before anybody chose it as the type. For this reason also it appears difficult to maintain it, if one does not want to ignore the regulations for the determination of types. (iv) For my reasons to prefer *B. subtomentosus* even regardless of the two foregoing considerations, see above under "Typification." (v) The abuse of the type-method to dispose of a name by juggling cannot be too severely condemned. Every validly published name, even the most embarrassing one, ought to have a fair trial. — TYPONYMS: *Xerocomus* Quél. apud Moug. & Ferry (1887; rather, isonym) and *Xerocomopsis* I. Reichert (1940).

[29] Already indicated before by Murrill; see above.
[30] Apparently *Ixocomus* = *Suillus* is meant.
[31] Italics as in the original!

Viscipellis Quél., Ench. Fung. 155. 1886. — ETYMOLOGY: viscum, birdlime; pellis, skin. Gender: f. — TYPE SPECIES (same as selected for basinym): *Boletus luteus* L. ex Fr. — BASINYM: *Boletus* sect. *Viscipelles* Fr., Epicr. 409. 1838; Hym. europ. 496. 1874 = *Boletus* stirps *Viscipellis* Fr., Summa Veg. Scand. 2: 315. 1849.—The avowed basinym: Quélet called the genus "*Viscipellis*, Fr." — SCOPE. Quélet did not change the limits of Fries's group as he found it dealt with in "Hymenomycetes europaei." — TYPIFICATION. The type species accepted here hardly needs comment. *Boletus luteus* was already proposed by Singer (*in* Farlowia 2: 258. 1945). — *Boletus sphaerocephalus* Barla should be rejected. It is Quélet's first species and was indicated as the type by Murrill (*in* Mycologia 1: 10. 1909), but is not among Fries's original species of the basinym, it being described at a later date than 1838. — ISONYM. *Ixocomus* Quél. (1888) may be regarded as a mere, and superfluous, name change. — TYPONYMS: *Suillus* S. F. Gray (1821), *Cricunopus* P. Karst. (1881), *Peplopus* (Quél.) Quél. apud Moug. & Ferry (1887), and *Boletopsis* P. Henn. (1898; preoccupied). And compare *Boletus* L. ex Fr.

Volvoboletus P. Henn. *in* Engl. & Pr., Nat. PflFam. 1 (1**): 196. 1898. — ETYMOLOGY: volva, wrapper; the genus *Boletus*. Gender: m. — TYPE SPECIES (only original species): *Boletus volvatus* Pers.—Compare the following note:

"Ce *B. volvatus* ne paraît pas être un [*Ixocomus*] *viscidus*, dont l'anneau serait resté, accidentellement, comme volve à la base du pied, ainsi que le pensait Fries (1838), ni *Amanita vaginata* parasité, dont le port est trop différent, comme le supposait Quélet (1888[32]), mais plutôt une forme tératologique de l'*Amanita gemmata*, seule espèce volvée dont une poussée vernale semble possible, en avril, dans la région du Mans (Sarthe). J'ai reçu de Chauvin, en provenance aussi de la région mancelle, une petite Amanite volvée et exannulée, mais cueillie en automne, qui appartient à l'*A. gemmata* au sens large, et qui pourrait bien être la base de ce Bolet fantôme."—Gilbert (Bolets 121-122. 1931).

REMARK. For a discussion on this genus, see Ulbrich (*in* Ber. dtsch. bot. Ges. 57: 389-396. 1939. — ISONYM: *Boletium* Clem. (1909), q.v. — STATUS. It may be assumed that *Volvoboletus* is either a nomen monstrositatis, or if the type were a parasitized fungus, a nomen confusum. In either case it would be impriorable.

Xanthoconium Sing. *in* Mycologia 36: 361. 1944. — ETYMOLOGY: ξανθός, yellow, blond; κονία, dust. Gender: n. — TYPE SPECIES (by original

[32] Quélet (Fl. mycol. France 411. 1888): "Lusus d'*A. vaginata* dont l'hymenium est transformé par un *Hypomyces*."

designation) : *Gyroporus stramineus* Murrill. — SCOPE. Introduced to accommodate two species.

Xerocomopsis I. Reichert *in* Palest. J. Bot., Rehovot Ser. 3: 229. 1940. — ETYMOLOGY: the genus *Xerocomus*; ὄψις, appearance. Gender: f. — TYPE SPECIES (by original designation) : *Boletus subtomentosus* L. ex Fr. — SCOPE. This is almost the same as *Xerocomus* Quél. (1887), q.v., and practically it is an isonym of that name. Reichert was of the opinion that *Boletus impolitus* Fr. (Quélet's first species of that author's use in 1888) ought to be taken as the type of *Xerocomus*, and considering it not congeneric with the rest of *Xerocomus*, he coined the name *Xerocomopsis* for the taxon exclusive of *B. impolitus*, retaining *Xerocomus* for that one species. — TYPONYMS: *Versipellis* Quél. (1886) and *Xerocomus* Quél. apud Moug. & Ferry (1887).

Xerocomus Quél. *apud* Moug. & Ferry, Champ. *in* Louis, Départ. Vosges, Fl. Vosges 477 (109, reprint pagination). 1887[33]; Fl. mycol. France 417. 1888. — ETYMOLOGY: ξηρός, dry; κόμη, hair. Gender: m. — TYPE SPECIES (selected) : *Boletus subtomentosus* L. ex Fr. — SCOPE. *Xerocomus* is a name given to exactly the same taxon as *Versipellis* Quél. (1886), q.v., and there can be no doubt that it is a mere change for the latter name, although this was not expressly stated. Why Quélet made the change is not altogether clear. (It may be noted in this connection that shortly afterwards he changed *Viscipellis* Quél. into *Ixocomus* Quél., q.v.). — TYPIFICATION. In regarding *Xerocomus* as virtually being an isonym of *Versipellis*, one may automatically accept for it the (selected) type species of the latter name, viz., *Boletus subtomentosus*, already selected for *Xerocomus* by Singer (*in* Ann. mycol. 34: 325. 1936; 40: 46. 1942; *in* Farlowia 2: 285. 1945; *in* Lilloa 22: 665. 1951).[34] — *Boletus impolitus* Fr. was indicated as the type species at an earlier date by Murrill (*in* Mycologia 1: 140. 1909). It was accepted by Gilbert (Bolets 95. 1931), Maire [*in* Publ. Inst. bot., Barcelona 3 (4) : 41. 1937], and I. Reichert (*in* Palest. J. Bot., Rehovot Ser. 3: 225. 1940), it being the first species in 1888.[35] It is untenable. When introducing the generic name (1887!) Quélet listed *B. impolitus* not as a distinct species, but (erroneously) as a variety under *B. fragrans* Vitt. — Gilbert, when still retaining *B. impolitus* as the type species, tentatively suggested Quélet's fifth species of 1888 :

[33] See also note on this publication under *Gymnopus* Quél.
[34] See also under *Versipellis*!
[35] The publication of *Xerocomus* in 1887 has been universally overlooked; the first species there is *Boletus variegatus* Sw. ex Fr., which species should have been adopted by those who followed the 'first-species rule.'

"En créant ce genre, Quélet n'a pas désigné l'espèce type. Il faut donc adopter la première du genre, soit le *X. impolitus*; elle n'est pas encore parfaitement connue; il eut mieux valu prendre le *X. chrysenteron*."—Gilbert (Bolets 95. 1931).

As far as I am aware Kühner (*in* Bull. Soc. Nat. Oyonnax 2: 44. 1948) was the first definitely to adopt *Boletus chrysenteron* Bull. ex Fr., after *B. subtomentosus* had already been selected by Singer (*l.c.*). — REMARK. Believing *Boletus impolitus* worthy of an isolated position, Reichert (*l.c.*) restricted *Xerocomus* to this one species and introduced the name *Xerocomopsis* I. Reichart for the remainder of *Xerocomus*: "[*Boletus subtomentosus*] according to the rules of nomenclature cannot occupy [the position of type of *Xerocomus*] because it was mentioned by Quélet after *B. impolitus*." Singer (*in* Farlowia 2: 285, footnote. 1945) already criticised Reichert's conclusions. — VARIANT SPELLING: "*Aerocomus*"; Léon March., Enum. méth. Mycogr. 203. 1896.—Apparently an error. — TYPONYMS: *Versipellis* Quél. (1886; rather, basinym) and *Xerocomopsis* I. Reichert (1940). — NOMEN CONSERVANDUM (proposed). See under *Versipellis*.