

NOTES ON EUROPEAN POLYPORES—VIII¹

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In an analysis of the history of the names *Polyporus frondosus* (Dicks.) per Fr. and *P. intybaceus* Fr. the author delves back as far as 1552; he concludes that the two taxa were introduced for a single species. — The genus *Oligoporus* Bref. is restored and its type species (*O. farinosus* Bref.) identified with both *Polyporus rennyi* B. & Br. and *Ptychogaster citrinus* Boud. — One new specific combination is made in each of the following genera: *Oligoporus* Bref., and *Pycnoporellus* Murrill. — 15 specific names are discussed for different reasons.

References to literature citations listed at the end of this paper are by means of year dates printed in italics. Nomenclative details about generic names of polypores were given in previous papers (Donk, 1960, 1962).

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To Dr. Elizabeth Helmer van Maanen I am indebted for improving the English text.

Fomes

foliaceum. — *Agarico-igniarium foliaceum* Paul. 1793: 87 (descr.), Index (Latin name) (devalidated name).

It is evident that *Agarico-igniarium foliaceum* Paulet is hopelessly confused. Its author cited as synonyms *Arborum fungi auriculae Iudae facie* Lobel (1581: 308 fig.) and *Lignosus aureus querci Fungus* van Sterbeeck (1675 & 1712: 245 pl. 27 f. B, Gout geile houte eycke Fungi). The story of misunderstanding and misstatement aroused by the former name is briefly touched upon in the discussion on *Grifola frondosa* (p. 207). It is likely that Paulet's use of the epithet "foliaceum" was inspired by the figures just cited. The personal part of Paulet's description however is concerned with the context of a polypore fruitbody stripped of its crust and tubes, as is expressly

¹ Part I appeared in *Persoonia* 4: 337-343. 1966; Part II in *Persoonia* 5: 47-130. 1967; Part III in *Persoonia* 5: 237-263. 1969; Part IV in *Proc. K. Nederl. Akad. Wet. (C)* 72: 273-282. 1969; Part V is entitled "On the typification of *Hexagonia*" and appeared in *Taxon* 18: 663-666. 1969; Part VI in *Proc. K. Nederl. Akad. Wet. (C)* 74: 1-24. 1971; Part VII in *Proc. K. Nederl. Akad. Wet. (C)* 74: 25-41. 1971.

stated on the plate (Paulet, 1812-35: pl. 7 fs. 2, 3) where the name *Pyreium fomentarium* replaces the earlier Latin name *A.-i. foliaceum*. It looks as though Paulet did not realize that when he wrote the text he was describing an incomplete fruitbody. The colour of the artifact as rendered on the plate is too dark for the natural context of *Fomes fomentarius* but it is quite likely that it was chemically treated before it reached Paulet. I would conclude that the name *A.-i. foliaceum* should be cited in the synonymy of *Fomes fomentarius*. Compare also Donk (1960: 178).

Grifola

frondosus. — *Boletus frondosus* Dicks. 1785: 18 (devalidated name), not *B. frondosus* Schrank 1789 (devalidated name); *Polyporus frondosus* (Dicks.) per Fr. 1821: 355, 518 ("Schrank" in error), not *P. frondosus* Secr. 1833 (not validly published), not *P. frondosus* Fr. 1838; *Grifola frondosa* (Dicks. per Fr.) S. F. Gray 1821: 643.

[*"Polyporus (Boletus) imbricatus, squamosus . . . Gleditsch Meth. fung."* (unpublished) *apud* Boehm. 1750: 325; ≡ *IX. Boletus; imbricatus, squamosus . . . Gled. 1753: 75;*] ≡ *Boletus frondosus* Schrank 1789: 616 (devalidated name); ≡ *Boletus intybaceus* Baumg. 1790: 325 (devalidated name), not *Polyporus intybaceus* Fr. 1838.

Polyporus frondosus Secr. 1833: 56-57 (as a species of *Boletus*: not validly published), not *P. frondosus* (Dicks.) per Fr. 1821, not *P. frondosus* Fr. 1838.

Polyporus frondosus Fr. 1838: 446, not *P. frondosus* (Dicks.) per Fr. 1821.

Polyporus intybaceus Fr. 1838: 446, not *Boletus intybaceus* Baumg. 1790 (devalidated name).

The early history of the several binomials *Polyporus frondosus* is complicated and difficult to rationalize. Fries (1821: 355, 518) ascribed the basionym *Boletus frondosus* to "Schrank" without supplying any bibliographic reference to complement the author's citation. This is a strong indication that he copied it from the author he mentioned next, and whom he emphasized above the others: "Schrad. p. 159!" (observe the exclamation point!). The species that Schrader (1794: 159) had in mind was *Boletus frondosus* Dicks. 1785, to which he had reduced *B. frondosus* Schrank 1789 as a mere synonym. These last two specific names are apparently homonyms, published independently of each other (see below). By accepting that the reference to Schrader was in reality the principal one I suggest changing the author's citation of the name *Polyporus frondosus* from "(Schrank)" per Fr. to "(Dicks.)" per Fr. This obviates a great deal of trouble that harnessing the nomenclature might otherwise have caused.

Schrader's conception of *Boletus frondosus*, to which Fries referred in 1821, may perhaps be too broad but in my opinion it certainly included the modern interpretation of *Grifola frondosa*. Schrader cited not only Dickson but also von Haller no. 2276, *Florum fasciculus* Sterb., and *Fungi esculenti. Genus XXI* Clus. When Fries in 1838 redefined *Polyporus frondosus* (see also below) he expressly stated, "Hic est primarius *B. frondosus* et Clus. esc. g. 21. 5. Bauh. hist. XL. c. 46." He also wrote "Sterb. t. 28.

A. optima." Although he entered simultaneously "*B. frondosus* Schrad. spic. n. 21 aliorumque" under *Polyporus intybaceus* (see below), the just-mentioned facts could be taken as supporting the following partly hypothetical synonymy, which would logically lead to selecting the plate to be mentioned presently as the ultimate (lecto)type of the name *Polyporus frondosus* (Dicks.) per Fr. 1821:

Fungi esculenti. Genus XXI Clus. 1601: cclxxv

≡ *Fungus maximus Ungaricus; multis laciniis squamatim incumbentibus* C. Bauh. 1623:

372

≡ *Florum fasciculus* Sterb. 1675 & 1712: 269 pl. 28 f. A ("*fasciculus*")

≡ *Agaricus esculentus* Tourn. 1700: 562

≡ (by lectotypification) *Polyporus frondosus, cespitosus, imbricatus, spadiceus, poris albidis* Haller 1768: 139 (no. 2276) & 1769: 202 (in both works citing *Florum fasciculus* Sterb.)

≡ (by lectotypification) *Boletus frondosus* Dicks. 1785

≡ *Polyporus frondosus* (Dicks.) per Fr. 1821.

The 'type specimen' I have in mind is represented by a beautiful plate that is part of the "Codex Clusii", which is in the possession of the Library of the University at Leiden. van Sterbeeck had the plate at his disposal and he was the first to publish it in the form of the copperplate that was cited by Fries as "*optima*"! (Note the italics!) An excellent reproduction in colour of the original plate will be found in Istvanffi's book on Clusius's "Fungorum . . . historia" [1900: 79 (original description reproduced), Codex pl. 67]. The reproduction of the plate is an only very slightly reduced version; the colours in the original are somewhat less dark and more greyish. The copy published by van Sterbeeck is a strongly reduced one and by its size could perhaps suggest *Grifola frondosa* of modern authors rather than *Polyporus* [*Meripilus*] *giganteus* (Pers.) per Fr. That the plate belongs to Clusius's "Codex" and that it corresponds to '*Fungi esculenti. Genus XXI* Clus.' can hardly be doubted.

When Dickson introduced the binomial *Boletus frondosus* he gave a brief phrase ("*cespitosus fuscus frondibus imbricatis planiusculis reflexis, poris albis*") and three references, one of which is to "*Polyporus frondosus* . . . Haller". This last citation is of the phrase-name that supplied the epithet of Dickson's binomial. The other references are to Schaeffer's plates 128, 129; and to *Agaricus intybaceus* Tourn. as treated by Ray (1724: 23), the latter is a mixture of two or more species. Dickson's conception may not have been 'pure' but in any case he also cited van Sterbeeck's figure, which was the only illustration retained by von Haller in his strongly condensed and abbreviated "Nomenclator" (1769: 202, no. 2276). By taking this plate as representing the 'lectotype' of von Haller's and Dickson's names, the connection with Clusius's fungus would remain unbroken.

However, this solution which urges itself upon the mind would not serve stability in nomenclature. There can be no doubt at all that Clusius's text deals with *Meripilus giganteus* (Pers. per Fr.) P. Karst.; and although the plate has been traditionally referred to '*Polyporus frondosus*' there can be no doubt either that it represents also *M. giganteus*. The dimensions of the fruitbody as it appears on the plate (39 cm wide,

29 cm high, tuberous base 9 cm across) and of some of the separate caps (6.5, 6.5, 9, and 12 cm across) are telling enough to support this conclusion, even if it is assumed that the plate shows the fruitbody at a strongly reduced scale. The net outcome of accepting the preceding hypothetic lectotypification would be reducing the name *Polyporus frondosus* (Dicks.) per Fr. 1821 to the synonymy of *Meripilus giganteus*.

This unexpected result prompted another approach to the selection of the type of *Polyporus frondosus* as revalidated by Fries in 1821. Although von Haller cited van Sterbeeck's figure it would appear that he confused two species, *Meripilus giganteus* and *Polyporus frondosus* of modern authors; for instance, the remark in his description "Caro succulenta, fragilis, Fungorum lamellatorum" favours this conclusion. "Succulentus" might perhaps agree better with *M. giganteus* but "fragilis" can hardly be taken to stand for 'fissilis, with tough fibers', especially in view of the addition ". . . Fungorum lamellatorum." Dickson is less verbose but he maintained "Caro succulenta, fragilis" in an observation. This points to *P. frondosus* of modern authors.

When Schrader accepted Dickson's taxon and name he did not want to admit *Meripilus giganteus* to his conception. He excluded it as *Boletus elegans* Bolt. and characterized it with remarkable explicitness ". . . poris tamen contactu ex albedo in sordide fuscum colorem transeuntibus et substantia a pilei margine ad basin usque facile in fibras tenacissimas irritabiles separanda . . ." He was also careful to exclude *Boletus ramosissimus* Scop. = *Grifola umbellata* (Pers. per Fr.) Pilát.

In my opinion it is preferable to typify the name *P. frondosus* as re-validated by Fries (1821) by a specimen of the current conception which I identify with Schrader's who remarked, "Schaefferi icon. [pl. 128, 129] habitum optime refert".

In later work Fries (1838: 446) broke up his *Polyporus frondosus* into two species, *P. frondosus* and *P. intybaceus*. Under *P. frondosus* he neither retained nor mentioned any citations of the binomials of 1821 except one, "Fl. Dan. t. 952". This plate (as *Boletus frondosus* Dicks.; no description) could be the fungus that is currently called *P. frondosus*. Although Fries cited "*B. frondosus* Schrad. spic. n. 21 aliorumque" under *P. intybaceus* he retained the binomial *Polyporus frondosus* for a revised taxon for which he emphasized Clusius's plate: "Hic est primarius *B. frondosus* et Clus. esc. g. 21. s. Bauh. hist. XL. c. 46." By acting in this manner Fries actually changed the application of the name *Polyporus frondosus* which he revalidated in 1821, and he misapplied it with exclusion of the type if the second typification suggested above is accepted. This would make *Polyporus frondosus* Fr. 1838 a 'new' but homonymous (and impriorable) name. Fries himself provided a sound basis for this line of reasoning by emphatically transferring to *Polyporus intybaceus* the crucial references (and with that the 'type'), viz. "Schrad. spic n. 21. aliorumque" which in my opinion also comprises 'Dickson' (not cited by Fries) and 'Schrank', both mentioned by Schrader who excluded the *M. giganteus* element from Dickson's taxon (although his synonymy was insufficiently purified, for instance by still citing van Sterbeeck's *Florum fasciculus*).

In the interest of stability in nomenclature I prefer to follow the second typification of the name *Polyporus frondosus* Fr. 1821. This not only rescues the current application

of the name *P. frondosus* and its isonyms but also prevents the possibility that the generic name *Grifola* has to be redefined to equal *Meripilus* and which in its turn would necessitate the re-introduction of an other name for *Grifola* in the present sense; these would not be the only consequences of a typification by a specimen belonging to *M. giganteus*.

I am at a loss to suggest what fungus Fries had in mind when he published his revised conception of *P. frondosus*, which was stated to be common ("saepissime"). There are several indications that point to *Meripilus giganteus*: (i) "fibroso-carnosus, tenacellus" and (ii) the citation "Rostk. t. 18" (= Rostkovius, 1830: 39 pl. 18, as *Polyporus frondosus*), a plate that certainly represents *Meripilus giganteus*. (iii) Later Fries (1863a: 28 pl. 44) published as *Polyporus frondosus* a plate that could have been drawn rather schematically after a not too big fruitbody of *Meripilus giganteus*. (It is not unlikely that Fries did not see the fruitbody itself. The plate was produced under the supervision of O. Robert Fries; it is doubtful whether both the plate and the accompanying descriptive text were drawn up from the same material.)

Fries credited Secretan as being the first author in his time to distinguish correctly between *Polyporus frondosus* and *P. intybaceus*. What Secretan (1833: 56-57) actually did was to introduce a *Polyporus frondosus* of his own (as a species of *Boletus*) by excluding the type, which he cited as "Dickson fasc. 1, p. 18" under his (erroneous) conception of *P. ramosissimus*. As a curiosity it may be recalled that he cited Schaeffer's plate 128 for his *P. ramosissimus* and Schaeffer's plate 129 for his *P. frondosus*. Both plates seem to have been drawn from a piece of a bigger specimen (as Fries concluded), one showing the upper surface, the other the lower. Fries thought that both plates should be referred to *P. intybaceus*. As to *P. frondosus* Secr. I am not prepared to suggest its identity should it prove to be different from the true *P. frondosus* and not to represent a small fruitbody of *Meripilus giganteus*.

When Fries (1838: 446-447) published *Polyporus intybaceus* he had seen it in the flesh only once, in contradistinction to his revised version of *P. frondosus* ("saepissime"). The collection was found in the south of Sweden, in Halland (Fries, 1849: 319; 1863b: 252). He was never to come across a second collection: "Unicum in vivo trunco vidimis formae a" (Fries 1874: 539; for the form "b. truncigenus..." he merely cited an old Italian author, Boccone, without supplementary details). He concluded his account with the statement, "Hic est verus *Fung. intybaceus* Bauh. [hist. XL.] c. 45 et Veter." This claim will be discussed below. He did not specify any particular binomial basionym but confined himself to the indefinite reference, "*B[oletus] intyb.* Auctt. pr. p." In later work he was sufficiently consistent to cite himself as the author of the name *Polyporus intybaceus*; therefore the type of this name ought rather to be the single (lost) collection mentioned above which he had seen himself.

Fries did not separately cite the much earlier published binomial *Boletus intybaceus* Baumg. 1790 which was introduced for a taxon previously defined under a non-binomial name by Gleditsch (*apud* Boehmer 1750; Gleditsch 1753). Like Fries these

authors identified their taxon with *Agaricus intybaceus* Tourn. 1700, Dill. 1719 = *Fungus intybaceus* Bauh. & Cherl. 1651, both non-binomial names.

In the quest for the correct interpretation of *Polyporus intybaceus* Fr. (exclusive of "b. truncigena") a careful inspection of the plates and descriptions cited by Fries was thought to be possibly helpful.

(i). "*B. frondosus* Schrad. spic. n. 21 aliorumque" [Schrad. 1794: 159]. I cannot see why this should not be the *Grifola frondosa* of modern mycology.

(ii). "*P. giganteus*. Fl. Dan. t. 1793" [Hornem. 1823: 12 pl. 1793]. This is a copy of a plate by Schumacher; it is to be interpreted in connection with that author's text (1803: 383, as *Boletus giganteus*). There is little doubt in my mind that Schumacher's plate was correctly named and represented *Meripilus giganteus*; compare, *inter alia*, "Grex hujus fungi ad latit. 2 ped. & ultra altitudin. 1-1½ ped. crescit. Singulus pileus 3-5-6 poll. latus." Such a fungus had of course to be depicted on a reduced scale (which may have misled Fries) and to be drawn somewhat schematically. The caps show no zonation, but this is accounted for in Schumacher's description. Schumacher referred here *Clavaria aequivoca* Holmskj., a name also listed by Fries as a synonym of *Polyporus* [*Meripilus*] *giganteus*.

(iii). "Secr. n. 7" (*Polyporus ramosissimus*, Secr. 1833: 56, citing "Schaeff. t. 128. *Bol. ramosissimus*"). The plate referred to by Secretan is to me a good illustration of *Grifola frondosa*. In Secretan's description however there is too much that does not agree with that of Fries, like for instance: "La chair . . . est filamenteuse, humide, molle et cependant élastique, ferme, cassante". Fries wrote, "carnosus, subfragilis", a qualification that must be understood in contrast to "fibro-carnosus" in the revised description of 1838 of *Polyporus frondosus* preceding that of *P. intybaceus*. Much in Secretan's account suggests *Meripilus giganteus* rather than a species of *Grifola* but I am not prepared to be more positive.

It is difficult to evaluate these references. The last two especially are no aid in evoking a species that is different from but nevertheless similar to both *Grifola frondosa* and *Meripilus giganteus*. If such a fungus really exists, I do not know it or have not recognized it as such.

Fries (1838: 447) identified his *Polyporus intybaceus* with a fungus (or rather, fungi) described in the pre-Linnean era: "Hic est verus *Fung. intybaceus* Bauh. [hist. XI.] c. 45 et Veter." The 'name' referred to is *Fungus intybaceus, et alius interaneis vituli similis, cinereus* J. Bauhin & Cherler (1651: 839 with fig.), a denomination later altered into *Agaricus intybaceus* Tournefort (1700: 562). Bauhin & Cherler's phrase strongly calls to mind Tragus's brief description (1552: 562) of his "Hasenörlin", which they included in their conception: ". . . forman interaneorum vituli representans, incani & plumbeicoloris . . ." Tragus (= Bock) gave no figure. In addition it may be pointed out that Bauhin & Cherler's phrase clearly indicates that they had in mind not a single fungus but rather a group of fungi (" . . . et alius . . .").

Is Fries's identification correct? The word "intybaceus" is an allusion to the chicory plant, particularly to the vegetable with strongly lobed and waved to twisted

leaves; the words "interaneis vituli" invoke the convolutions of the intestines of a calf. The accompanying woodcut in Bauhin & Cherler's herbal is in agreement and shows a strongly lobed and convoluted membrane, reminiscent of the fruitbody of one of the foliaceous species of *Tremella* but then on a gigantic scale if it is compared with the tree trunk on [!] which it is shown to grow. If the fruitbody was not drawn entirely out of proportion however a species of *Tremella* is to be excluded; in view of its size another genus comes to mind, viz. *Sparassis* Fr. (*Masseoia* O.K.), particularly specimens with a very loosely built fruitbody of *S. laminosa* Fr. If this second guess should be correct it must be assumed that the artist of the woodcut gave an oversimplified version of what he saw—if it was really drawn at all from an actual fruitbody. Bauhin & Cherler's figure in no way suggests a species of *Grifola* or *Meripilus*.

Actually their figure was an altered version of an earlier published woodcut accompanying a paragraph in a work by Lobel (1581: 308 with fig.)² dealing cursorily with an assemblage of very different tree fungi; the paragraph is captioned, "Boom-Campernoellë Judas-ooren gelijkende", *Arborum fungi auriculæ Judæ facie*. Lobel's figure was carefully reproduced by Clusius (1601: fig. on p. cxlii, with a Latin translation of a good portion of the Dutch text). Especially the upper two-thirds of the fruitbody depicted by Lobel is reminiscent of the one in Bauhin & Cherler's figure. Inexact copying was not rare at that time. In this connection I would call to mind van Sterbeec (1675 & 1712: 124 pl. 15 f. E), who published a figure of *Fungus intybaceus* stated to be drawn from nature ("hier naar het leven in print staet"). The fruitbody itself however is obviously copied from Lobel's woodcut while the tree trunk is a modified rendering adapted from Bauhin & Cherler's woodcut. The artistic addition of a few oak leaves seems therefore to be wholly original.

The question now arises as to how this convoluted, continuous and membranous fruitbody could have been taken as representing a polypore of the genera *Grifola* or *Meripilus*. The preceding analysis leads inevitably to the conclusion that Bauhin & Cherler's "*Fungus intybaceus, et alius* [!]. . ." is a mixture. One of its elements is in any case a polypore; it is Tragus's "Hasenörln", which I would prefer to identify with *Grifola frondosa*. Of the rest an important constituent is the fungus rendered in Lobel's figure. As discussed above this is difficult to place.

I have looked into the possibility of interpreting *Boletus frondosus* Schrank 1789 as an application of *B. frondosus* Dicks. 1785 but have found no evidence for such a solution. On the contrary von Schrank's German phrase points in a different direction; it is only too evident that it is a translation from the one in Latin published by Gleditsch (1753: 325) and cited in his synonymy. *Boletus intybaceus* Baumg. 1790 is another binomial introduced for Gleditsch's taxon. The epithet chosen by Baumgarten

² Following the reference "An arborum Fungi Auriculæ Judæ facie, Lobelio?", Bauhin & Cherler wrote, "Eius Iconem nimis imitatus est pictor, nostrâ plantâ neglectâ cui cristatæ & crispæ oræ."

was apparently suggested by Gleditsch's mention of "*Agaricus intybaceus* Tourn." as a synonym.

It is not surprising that after Fries had split up his *Polyporus frondosus* into two taxa European mycologists have tried to account for both of them. It may be said that at present continental mycologists rarely record *P. intybaceus* and seem either to have abandoned the idea that it really exists or else regard it as no more than a form of *P. frondosus*. British mycologists, on the other hand, usually record *P. intybaceus* and say little about *P. frondosus*. *Polyporus intybaceus* is said by them to have a smell of mice and *P. frondosus* to differ in the larger size and greyish colour of the pilei (Wakefield & Dennis, 1950: 228 pl. 93 f. 2).

Both in western Europe and the British Isles I have repeatedly collected or seen fruitbodies of what I call *P. frondosus*. These varied considerably according to age and humidity and after drying they all smelled of mice. The colour is a saturated soot-colour (fuligineous) when fresh and moist but upon drying it often changes to lighter colours, from pale brownish to light grey, especially in not completely full-grown specimens.

POSTSCRIPT.—Dr. J. A. Nannfeldt, Uppsala, has kindly read most of the preceding discussion on *Grifola frondosa*. His comment reads as follows:

I have tried in vain to find any trace of *Polyporus intybaceus* in our collections. *Polyporus frondosus*, *P. giganteus*, and *P. umbellatus* are all very rare species in Sweden and certainly were so also in Fries's time. His knowledge of them was to be sure not too good . . .

The plate of *P. frondosum* was drawn in Femsjö, when O. Robert Fries was there accompanied by the artist, and so it is certain that Elias Fries did not see the fruitbody himself but as he published the plate as *P. frondosus* and in the text gave the differences from *P. giganteus* it is evident that he approved the plate as representing *P. frondosus*. I have no opinion myself. I have seen *P. frondosus* only once—many years ago, and have never seen *P. giganteus* in nature.

After all, I find it most probable that *P. intybaceus* was an unnecessary duplication of *P. frondosus*.

Hirschioporus

abietinus. — *Boletus abietinus* Anon. 1790: 19 (devalidated name).

Boletus abietinus Pers. *apud* Gmel. 1792: 1437 (devalidated name), not *B. abietinus* Anon. 1790, not *B. abietinus* Cumino 1805; *Polyporus abietinus* (Pers.) per Fr. 1821: 370; *Hirschioporus abietinus* (Pers. per Fr.) Donk 1933: 168; ≡ *Boletus purpurascens* Pers. 1796: 24 (devalidated name), not *B. purpurascens* DC. 1815 (devalidated name) per Steud. 1824, not *B. purpurascens* Hook. 1822.

It has rarely been realized that there are two names *Boletus abietinus* published for the same species, now often called *Hirschioporus abietinus*.³

(i) *Boletus abietinus* Anonymus 1790 was published in a paper for which no author was indicated. Since the paper was sandwiched in between two papers by von Paula von Schrank, he has occasionally been cited as the originator of the name. The association is still highly conjunctural and I shall not follow it. Dickson referred back to the anonymously published name. Citation of "Dicks." is to be regarded as an indirect reference to "Anon." and must be corrected accordingly.

(ii) *Boletus abietinus* Pers. apud Gmel. 1792 stands for the same species as (i) but it was evidently published without knowledge of the earlier name. Once Persoon was aware of this he changed the name he had introduced as a later homonym into *Boletus purpurascens* Pers. 1796. Later he concluded (Persoon, 1801: 541) that *Boletus abietinus* Anon. as redescribed by Dickson (1793: 21 pl. 9f. 9) and his own *B. abietinus* stood for one and the same species; for this he adopted the name "*Boletus abietinus*. . . [Pers.,] Obs. myc. 1. p. 24 *Bol. purpurascens*" [≡ *B. abietinus* Pers. 1792], citing *B. abietinus* Dicks. [≡ *B. abietinus* Anon. 1790] as a synonym.

When Fries published the recombination *Polyporus abietinus* he cited both Dickson and Persoon ("Obs. 1 p. 24. [1796] Syn. p. 541. [1801]") but in the index (1821: 518) he made it clear that of the two he considered "Pers." as the author of the basionym; his citation was "[*Polyporus*] *abietinus* Pers. sub *Boleto*". Hence, *Polyporus abietinus* "(Pers.)" per Fr. 1821, rather than *P. abietinus* "(Dicks.)" per Fr. 1821.

I do not believe that any later mycologist has ever fully realized that there were two taxa with the same (devalidated) basionym involved. Apparently, even Fries lost sight of the complication when, many years later, in the index (p. 55) to the completed "Systema" (1832) he cited only *B. abietinus* "Dicks." as synonym of *Polyporus abietinus*. This might be taken as the publication of a later homonym "*P. abietinus* (Anon.) per Fr. 1832, not *P. abietinus* (Pers.) per Fr. 1821". Sorting out the recombinations in order to refer each of them to the correct basionym is therefore a hazardous task and no two mycologists will ever completely agree. A proposed solution is that if an author cites only Dickson directly after, or in conjunction with, his recombination, this is to be associated with *B. abietinus* Anon.; if he cites only Persoon, or only Fries, his recombination is to be associated with *B. abietinus* Pers.; if he cites "Dicks. ex Fr." "Dicks." should be considered the less important of the two and taken as an error to be dropped, which leaves "Fr." and the recombination is also to be associated with *B. abietinus* Pers.

Inonotus

r u b i g i n o s u s. — *Polyporus rubiginosus* Fr. 1838: 460, not *P. rubiginosus* Wallr. 1833, not *P. rubiginosus* Berk. 1839.

³ The foot-note appended to this name by Donk (1960: 227) is an error, caused by telescoping inadvertently two remarks, one dealing with *Polyporus frondosus*, the other with *P. abietinus*.

When Fries introduced the name *Polyporus rubiginosus* for *Polyporus cuticularis* sensu Rostkovius (1830: 67 pl. 32) he had thought of *Boletus rubiginosus* Schrad. but did not definitely include it: "Schrad. sp. p. 168 bene convenit, praeter substantiam pallidam quae sq. [*Polyporus resinosus* (Schrad.) per Fr.] sitaneum indicat." When typifying the name *Polyporus rubiginosus* Fr., Schrader's species should therefore be left out of account. The name is clearly based on Rostkovius's interpretation of *P. [Inonotus] cuticularis* (Bull.) per Fr., although Fries assumed that he had collected the same species: compare, "etiam a me lectus, sed ex Rostk. recipio, cum induratum pro *P. dryadei* forma neglexerim." No material collected by Rostkovius is now known to be in existence so that for an interpretation attention is forced to his (poor) plate.

Romell (1912: 636) mentioned an "authentic" specimen from Fries in Kew Herbarium; he thought that it represented *Polyporus [Amylocystis] lapponicus* Romell. Bresadola (1897: 72) identified *P. rubiginosus* Fr. "nec. Schrad." with what is now called *Polyporus [Tyromyces] fissilis* B. & C. Lloyd (1915: 284) thought that the "type" from Fries at Kew was *Polyporus [Inonotus] cuticularis*.

I would advance a still different suggestion: *Inonotus rheades* (Pers.) P. Karst. [*I. vulpinus* (Fr.) P. Karst.]. The arguments in favour of this are (i) the shape of the fruitbody depicted by Rostkovius; it shows two caps sessile on a tuberous body. Although this tuberous part and the caps in section show no difference in substance in the figure nevertheless the whole strongly suggests *I. rheades*. Compare, for instance, Overholts figures (1953: pl. 50 fs. 302, 303) of *Polyporus [Inonotus] dryophilus* Berk., a closely related species. (ii) The indicated colours agree with those found in the European species of *Inonotus*; this would exclude both *Amylocystis lapponica* and *Tyromyces fissilis* but it might indicate that Lloyd's determination comes nearest the truth. (iii) Rostkovius mentioned, "Die Haut welche den Hut überzieht, ist sehr dick, und wird beim trocknen hart." This is a condition also encountered incidentally in old and weathered, poorly conserved specimens of *Inonotus vulpinus*. This implies that the original strigose hirsuteness of the cap had already disappeared as such when the plate was drawn. Fries's figure of what he called *Polyporus fulvus* (1884: pl. 184 f. 3, now taken to represent *I. vulpinus* = *I. rheades*), shows a well developed core with three sessile fruitbodies on it, and the strigose indumentum still intact. The sectioned fruitbodies drawn by Rostkovius and Fries show an undeniable similarity. (iv) Rostkovius gave beech (*Fagus*) as the substratum ("an alten Buchenstubben"), which would exclude *I. dryophilus*. In this case I distrust the habitat indicated but if it is taken to be correct (instead of dead *Populus* stumps) it is most likely that *Polyporus cuticularis* Fr. sensu Rostk. is the same as *Inonotus rheades*.

Oligoporus

rennyi. — *Polyporus rennyi* B. & Br. 1875: 31; *Poria rennyi* (B. & Br.) Cooke 1886: 112; *Strangulidium rennyi* (B. & Br.) Pouz. 1967: 206.

Ptychogaster citrinus Boud. 1887: 8 pl. 1 f. 1 (nomen anamorphosis).

Oligoporus farinosus Bref. 1888: 118 pl. 7 fs. 12-22.

Polyporus rennyi B. & Br. (the original specimens of which came from Scotland) had long been insufficiently known; recently Pouzar restored it as a distinct species. The original description runs:

“Subiculo crasso, pulvinato, pulverulento; poris parvis, elongatis; dissepimentis tenuibus. / On wood, and running on to the ground. . . / Forming a thick, at first somewhat frothy, then pulverulent mass, white turning to lemon-coloured when dry; pores sparingly produced, white elongated. . .” — Berkeley & Broome (1875: 31).

According to Reid & Austwick (1963: 310), “the type material is an imperfect fungus producing an abundance of subglobose or oval chlamydo-spores measuring 5–6(–7) × 4–4.5 μ . The fructification consists of a thin membranous film spreading over soil and vegetal débris. There is no indication of the development of pores.” A still more recent examination of the type by Kotlaba & Pouzar (1965: 76) led to the conclusion that it was identical with the acystidiate fungus that Romell had confused with the true *Polyporus sericeo-mollis* Romell. Recently Pouzar (1967: 208) gave some additional details: “the type is a very small fragment and only a few tubes have been observed. But the tubes have the essential characters of the acystidiate species: there are thick-walled, dextrinoid chlamydo-spores, no cystidia and a few typical basidiospores.”

It is perfectly evident that Pouzar does not hesitate to identify *Polyporus rennyi* with the element formerly included in *Polyporus sericeo-mollis* that is normally accompanied by a citrin-yellow chlamydo-spore state and which is different from the species represented by the type of this specific name (cystidia-bearing; no chlamydo-spore state known).

This conception of *Polyporus rennyi* provides a name for a species that has been found sporadically all over northern Europe and was recently reported from Germany by Jahn (1970) who stated that the fungus “wächst offenbar recht häufig im Herbst und Spätherbst bis zum ersten Frost in geschlossenen, feuchten Fichtenforsten des Teutoburger Waldes und Egge-Gebirges.” A still earlier record of this species from Germany was published by Kallenbach (1934: 66 *pl.* 10) under the incorrect name *Polyporus apalus* Lév. He arrived at this name because he thought his material agreed with Bourdot & Galzin’s interpretation of Lévillé’s species but I have no doubt that *Polyporus rennyi* is specifically distinct from the original species and from Bourdot & Galzin’s interpretation of it, both of which I know only from their published descriptions. The popular German name proposed by Kallenbach is “Mehlstaub-Porling”, an excellent suggestion.

The publication of *Polyporus sericeo-mollis* Romell (1911: 20 *f.* 7) covered several elements which during the last decennium have been disentangled. The type specimen with which the specific name must remain associated represents a species with a (mostly) effused fruitbody, hymenial cystidia and as far as is known lacking a chlamydo-spore state accompanying it in nature; compare Lowe (1959: 107; 1966: 84 *f.* 66) and Kotlaba & Pouzar (1965: 76).

A second element was mentioned in Romell's protologue: "Some specimens which seem to belong to this plant are partly or totally reduced into a floccose-pulveraceous state of sulphureous or pallid color, which contains abundant . . . chlamydo-spores. . . , not unlike those of *Ptychogaster albus*, though more hyaline." In a later publication Romell (1926: 17) thought that "The specimens [of *P. sericeo-mollis*] accompanied by sulphurous conidia . . . should probably be referred to *Ptychogaster citrinus*." I would suggest that Romell hooked this imperfect state to *P. citrinus* Boud. In any case it is this element that was identified by Pouzar with *Polyporus rennyi*. More will be said about Boudier's species below.

In passing it may be mentioned that Romell (1911: 22) included still a further element in his original conception. Material collected at Femsjö, and which he referred to as a variety, was associated with "a fibrous-pulveraceous *Ptychogaster* of about isabelline color, still more like small specimens of *Ptychogaster albus*." Moreover in a later publication he introduced a fourth element which ultimately he segregated under the name *Polyporus subsericeo-mollis*. These last two elements will be left out of discussion here.

The fungus described by Boudier as *Ptychogaster citrinus* consisted of a chlamydo-spores-producing state that also formed a polyporoid perfect state. Boudier himself expressed the view that the polypore looked like *Polyporus* [*Skeletocutis*] *amorphus* Fr. per Fr. Brefeld however emphatically denied this identification. I agree that Boudier's description and figures contain no evidence to support his view. On the contrary he recorded the basidiospores as ovoid, $4-4.5 \times 2.5 \mu$; this does not agree with the narrow-cylindrical, slightly curved spores of *Skeletocutis amorphus* (Fr. per Fr.) Kotl. & P. On the other hand they do agree with the spores of *Polyporus rennyi*, or at least with material associated with a chlamydo-spore state and erroneously referred to *P. sericeomollis*.

Above I have listed *Ptychogaster citrinus* Boud. as a nomen anamorphosis because in the formal Latin diagnosis of the protologue no mention was made of the basidiferous state; what Boudier wished to name was clearly the imperfect state in order to contrast it with the perfect state. Of the latter he remarked in the French text following the Latin diagnosis that the species may form portions with tubes "ayant bien l'aspect général du *Polyporus amorphus*, dont il est probable [!] qu'elle est l'état conidifère." In Boudier's opinion it was likely that the perfect state had already been provided with a name.

It is now none too soon to introduce into this discussion an at present much neglected fungus that was described as *Oligoporus farinosus* Brefeld (1888: 118 pl. 7 fs. 12-22) and which is the lectotype of the generic name *Oligoporus* Bref. (cf. Donk, 1960: 248). It was found in the Teutoburger Wald, the same region from which Jahn recently reported *Polyporus rennyi* as "offenbar recht häufig" (see further the quotation near the beginning of this discussion). There can be little doubt about the correctness of Brefeld's identification with *Ptychogaster citrinus* Boud. The section of a fruitbody of *Oligoporus farinosus* depicted by Brefeld (1888: pl. 7 f. 14: 2) is somewhat

reminiscent of the sectioned fruitbodies depicted for *Leptoporus revolutus* (Bres.) Bourd. & G. by Bourdot & Galzin (1928: f. 157) but a study of the accompanying description of the latter leaves little doubt that the two species are different. It must now be decided whether Brefeld's fungus is to be identified with *Polyporus rennyi*.

On the basis of the available material and descriptions of the taxa reviewed above I find it impossible to suggest any distinguishing characters in connection with the imperfect states. The same is true for the perfect state. There is, for instance, much agreement on habitat: "on wood, and running on to the ground" (*Polyporus rennyi*); "Ad cortices emortuos *Pini sylvestris*. . . s'étend aussi sur les feuilles et la terre avoisinant les souches de pins" (*Ptychogaster citrinus*), "in einem Nadelholzwalde auf der Erde, wo er mit Fichtennadeln, einigen Laubblättern und etwas Moos zusammengewachsen war. Bei näherer Besichtigung ergab sich ein abgehauener Stumpf von *Abies excelsa* als Unterlage . . . Auf dem Stumpfe, sowie auch an der seitlich noch erhaltene Rinde der Fichte zeigte sich der Pilz in zusammengehängende Partien. . ." (*Oligoporus farinosus*).

The general shape of the spores seems to offer little if any variation, although if all taxa are taken together there is rather wide variation in size. However, all the following measurements combined result in $3-6 \times 2-3.5 \mu$.

Bourdot & Galzin (1928: 548), for "*Leptoporus destructor* subsp. *sericeo-mollis*", $4-5(-6) \times 2-3(-3.5) \mu$;

Wakefield & Pearson (1918: 75), for "*Poria sericeo-mollis*" (Romell) Lloyd, $4-6 \times 2-3 \mu$;

Boudier (1887: 10), for *Ptychogaster citrinus* Boud., $4-4.5 \times 2.5 \mu$;

Litschauer *apud* Jahn (1970: 15), for "*Polyporus sericeomollis*" with *Ptychogaster citrinus* "Romell", $4-5(-5.5) \times 2.5-2.75 \mu$;

Kallenbach (1934: 66), for *Polyporus apalus* Lév. sensu Kallenb., $3-5 \times 2-3 \mu$.

The agreement between the shape, colour, and size of the chlamydospores as given by various authors is really surprising: Reid & Austwick (1963: 310) for the type of *Polyporus rennyi*, $5-6(-7) \times 4-4.5 \mu$; Boudier (1887: 9) for *Ptychogaster citrinus*, $6-7 \times 4-5 \mu$; Romell (1911: 22) for the sulphur-coloured chlamydospores mentioned in the original description of *Polyporus sericeo-mollis*, $5-7.5 \times 4-5 \mu$; Wakefield & Pearson (1918: 75) for "*Poria sericeo-mollis*", $5-7.5 \times 4-5 \mu$; Litschauer *apud* Jahn (1970: 15) for "*Polyporus sericeo-mollis*" with *Ptychogaster citrinus*, $5-7 \times 3-5 \mu$; Kallenbach (1934: 66) for *Polyporus apalus* Lév. sensu Kallenb., $4-8 \times 4-5 \mu$.

In one respect a significant difference may exist between *Polyporus rennyi* and *Oligoporus farinosus* (inclusive of *Ptychogaster citrinus* Boud.). The former has been described as resupinate, while according to the figures of it published the latter forms cap-like portions. I have been able to study the three collections studied by Dr. Z. Pouzar and now in PR; in this set no indications of cap-like portions were evident. In the very fine set of specimens kindly submitted by Dr. H. Jahn, however, there are certain fruitbodies intimately associated with the imperfect state that possess narrow cap-like rims of chlamydospore-forming tissue with tubes formed below the rims,

precisely matching the depiction by Boudier for *Ptychogaster citrinus* except that these characteristics are not so strongly developed.

Although we do not know whether or not the wall of the basidiospores of the original collections of *Oligoporus farinosus* and *Ptychogaster citrinus* Boud. are cyanophilous (as they are in *Polyporus rennyi*), with our present knowledge I have little hesitation in assuming that at least all three are congeneric and that *Polyporus rennyi* may well be entitled to be placed in a distinct genus. This view requires the following new combination: **Oligoporus rennyi** (B. & Br.) Donk, *comb. nov.*, basionymum, *Polyporus rennyi* M. J. Berkeley & C. E. Broome in *Ann. Mag. nat. Hist.* IV 15: 31. 1875. In addition I shall assume for the present that unless they can be adequately separated again all three taxa are conspecific.

Strangulidium Pouzar (1967: 206) was published for a genus with two species, viz. *Polyporus sericeo-mollis* Romell sensu stricto (type) and *P. rennyi*. Both are usually considered to be consistently effused and are then placed in the genus *Poria* but in both narrow cap-like portions have been reported. The main features of *Strangulidium* are the 'resupinate' (or, rather, effused) fruitbody, the 'suburniform' basidia (apparently, rather, 'utriform') and the cyanophilous walls of the spores. In this circumscription and if the identity of *O. farinosus* with *Polyporus rennyi* be accepted *Strangulidium* must be considered synonymous with *Oligoporus*.

After a careful study of good material of the two original species of *Strangulidium* however I hesitate to accept them as congeneric. *Polyporus rennyi* I would refer to *Oligoporus* as discussed above; *P. sericeo-mollis* would then become the only species of *Strangulidium* or, if more inclusive genera are preferred, for the time being it could be left in either *Poria* sensu lato or *Tyromyces* P. Karst. sensu lato.

POSTSCRIPT.—The following annotations were received from Drs. F. Kotlaba & Z. Pouzar after they had kindly read the above discussion on *Oligoporus*.

We received from Dr. Jahn (Heiligenkirchen über Detmold, West Germany) new rich material collected [last] autumn in Westfalen, Teutoburger Wald (the type-region of *Oligoporus farinosus*). The material is very variable in size and shape of the fruitbodies and includes very small and thin as well as thick and big ones—therefore very useful for comparative study. We compared this material with Brefeld's plate 7 and arrived at the conclusion that these fungi may well be identical (especially in regard to figures 12–16). As to figure 14: 2, the section of the fruitbody shown has tubes—up to 11 mm! This is too long for *Strangulidium rennyi* in which we have found in Dr. Jahn's material (as well as in other material previously studied) that the tubes reach at most 5 mm in length.

The identity of *Oligoporus farinosus* with *Strangulidium rennyi* may be admitted provided that the magnification of figure 14: 2 on page 300 was indicated incorrectly (viz. not "Nat. Grösse"!) and should really be 1.5–2 times enlarged. Perhaps Brefeld omitted to indicate the correct magnification of figure 14: 2. The artist (Istvánffy) liked to magnify the sections of polypore fruitbodies, see e.g. in the same volume, plate 9

figure 2: 3 (*Heterobasidium annosum*) where the magnification was correctly stated (" $\frac{3}{1}$ "). If the above suggested rectification is correct, then we can admit the identity of *Strangulidium rennyi* with *Oligoporus farinosus*.

Polyporus

e l e g a n s. — *Boletus elegans* Bull. 1780: pl. 46 (devaliated name), not *B. elegans* Bolt. 1788 (devaliated name), not *B. elegans* Schum. 1803 (devaliated name) per Fr. 1838; *Polyporus elegans* (Bull.) per Trog 1832: 553.

The name *Polyporus elegans* was discussed in a previous note (Donk, 1969: 248), where it was considered to belong to *Polyporus varius* (Pers.) per Fr.

At first glance it looks as though the name *Boletus elegans* Bull. was first validly published by Purton (1821: 524). The epithet will be found in the index of the cited work, not printed in italics, followed by the reference "ii. 668" (= Purton, 1817: 666). This reference revealed that the page-number should be "666"; there *Boletus calceolus* Bull. is treated, with *B. elegans* cited as a synonym. Since in the above-mentioned index "calceolus" is printed in italics, it would seem as though Purton had changed his mind and in the index restored *B. elegans* as the correct name with *B. calceolus* as a synonym. However, I believe that it was due to a typographical error that "elegans" was not printed in italics; in the same volume he (Purton, 1821: 437) in fact listed both *B. calceolus* and *B. elegans* as synonyms of *B. nummularius* Bull.

Poria

l i n d b l a d i i. — *Polyporus lindbladii* B. & Br. 1865: 319 (nomen provisorium) ex Berk. 1872: 54; *Poria lindbladii* (B. & Br. ex Berk.) Cooke 1886: 111.

Polyporus cinerascens Bres. apud Strass. 1900: 361, not *P. cinerascens* (Schw.) Steud. 1824, not *P. cinerascens* Lév. 1844; *Poria cinerascens* (Bres. apud Strass.) Sacc. & Syd. 1902: 161 ("*cinerascens*").

Polyporus lindbladii originally received its name provisionally. When recording *Polyporus* "*subfuscus-flavidus*" Rostk. for Great Britain Berkeley & Broome remarked, "The species appears to be the same with one received from Lindblad [from Sweden], marked 'Pol. n.s.'; and if we had not a supreme dislike to alter names, we should propose the name of *P. lindbladii* instead of the barbarious name given above from Rostkovius." However this dislike was later overcome by Berkeley; he validly published the name *Polyporus lindbladii* when he believed that the same species had to be recorded from the U.S.A.: on that occasion he added the remark, "The North Carolina specimens are a little darker than those originally received from Sweden." This all goes to show that the name *P. lindbladii* was actually based on a Swedish specimen sent by Lindblad. At first English material was identified with it and later the North American material followed. The latter, which came from North Carolina (M. A. Curtis 1623), has been incorrectly used to interpret the species; Murrill

(1919: 244) stated, "It is only a resupinate form of *Polyporus floridanus* Berk., which is a small-pored variety of *Coriolus* [*Hirschioporus*] *sector* [(Ehrenb.) per Fr.]", a non-European species. Lowe (1959: 111) concluded from an "isotype" (FH) that it was a pileate species and later referred it (Lowe 1966: 134, K, FH) to resupinate *Polyporus* [*Hirschioporus*] *versatilis* (Berk.) Romell, another extra-European species.

Accepting Lindblad's specimen as the correct type of the name *Poria lindbladii* brings this name back into circulation; Lowe (1966: 134) concluded that "the Swedish specimen mentioned in the original description is *P[oria] cinerascens*", which name thus becomes a later synonym.

Pycnoporellus

fulgens. — *Hydnum* Fr. 1852: 130; Lindblad 1853: 15; Fr. 1863b: 278; 1867: 10 pl. 10 f. 2. — Monotype: Sweden, Östergötland, Mount Omberg.

Polyporus fibrillosus P. Karst. 1859: 30. — *Pycnoporellus fibrillosus* (P. Karst.) Murrill 1905: 489.

Hydnum fulgens has remained an enigmatic species for a long time. I had the type specimen on loan around 1931 but my notes on it were destroyed during the war and I forgot all about it, until my memory was refreshed by a note by Dr J. A. Nannfeldt in a letter to Maas Geesteranus (1967: 5) in which it was stated that the late Dr S. Lundell, upon revising the type collection, had found it to be identical with *Polyporus fibrillosus*. The literature on the species cited above (with a coloured picture) is in complete agreement with this conclusion. Hence, ***Pycnoporellus fulgens*** (Fr.) Donk, *comb. nov.*; basionymum, *Hydnum fulgens* E. M. Fries in Öfvers. K. VetAkad. Förh., Stockholm 9: 130. 1852.

The genera *Pycnoporellus* Murrill and *Aurantioporellus* Murrill (1905: 489, 486) were published simultaneously. Authors wishing to combine the two should retain the name *Pycnoporellus*; *Aurantioporellus* was made a synonym of *Pycnoporellus* by Kotlaba & Pouzar (1963: 184–185).

Nomen dubium

morganii. — *Trametes morganii* Lloyd 1919: 15.

Trametes rigida B. & Mont. sensu Morg. 1889: 2.

The species that Lloyd called *Trametes morganii* was published with a description which, "excepting the spores, is largely taken from Morgan's description, [who] misreferred it to *Trametes rigida* [B. & Mont.]" It has been thought that the specimens that induced the publication of *T. morganii* were the two listed by Stevenson & Cash (1936: 145) from Lloyd's herbarium, "53852 (Type), 53853, A. P. Morgan, Preston, Ohio". Lloyd found no spores but on comparison he was "sure it is the same as European material which has abundant spores. . . . Romell distributed it as *Polyporus albo-carneo-gilvidus*", a (validly published) name that was not acceptable to Lloyd because, as he wrote, "we feel that such naming is a reversion back to pre-Linnean

days." Romell's species is now included in *Pachykytospora tuberculosa* (Fr.) Kotl. & P.

Bresadola (1920: 69) considered *T. morgani* to be a synonym of *Trametes micans*, which in Bresadola's conception was the same as Romell's species. It is practically certain that this was done on the basis of the citation of Romell's species. There can be no doubt however, that Lloyd misinterpreted the species Morgan described when he thought it to belong to the same species as that of Romell. Morgan wrote, "Pileus corky, undulate, by far the greater part resupinate . . . Often all resupinate . . . the narrow margin seldom projecting half an inch"; this convincingly excludes *Pachykytospora tuberculosa*, which has strictly resupinate fruitbodies. Moreover Lloyd stated that "Fungi columbiani No. 5094 misnamed as *T. serialis*" was *T. morgani*. Overholts's conception (1953: 143) of Lloyd's species is based on this collection and "it is the plant long referred by Peck to *T[rametes] Trogii* Berk. and earlier considered by Murrill and many others, myself included, to be a thin, light-colored, often resupinate condition of *T[rametes] hispida*." Overholts also remarked that a specimen under the name *T. morgani* at NY was sent by Morgan to Ellis from Ohio, and that it is a resupinate form of *Trametes [Antrodia] serialis*.

From this survey of the literature I would conclude that it is very likely that *Trametes morgani* as originally published by Lloyd is a thorough mixtum compositum; the validating description being taken from Morgan's work might perhaps be *Trametes trogii* sensu auctt. amer. (if it is not based on a mixture of species that includes this species and *Antrodia serialis*), to which some details of the spores of *Pachykytospora tuberculosa* ("6 × 12") were added. If this view is accepted as correct then the name *Trametes morgani* should be properly lectotypified before it can be duly relegated to the synonymy.

It is not evident that one of Morgan's specimens in the Lloyd herbarium should be selected as type, as was done by Stevenson & Cash. Since the validating description "is largely taken from Morgan's description" it would seem reasonable to select the type from material on which Morgan's description was based, viz. on specimens he collected and named before 1889.

I have not tried to understand what Baxter (1940: 147, in obs., *pl. 1*; 1942: 142) called *Trametes morgani*.

REFERENCES

- ANONYMUS (1790) in *Magazin Bot.* 4 / Stück 12.
 BAUHIN, C. (1623), *Pinax Theatri bot.*
 BAUHIN, J. & J. H. CHERLER (1651), *Hist. Pl. univ.* 3.
 BAUMGARTEN, J. C. G. (1790), *Fl. lips.*
 BAXTER, D. V. (1940) in *Pap. Michigan Acad. Sci.* 25. — (1942) in *Pap. Michigan Acad. Sci.* 27.
 BERKELEY, M. J. (1872) in *Grevillea* 1.
 BERKELEY, M. J. & C. E. BROOME (1875) in *Ann. Mag. nat. Hist.* IV 15.
 BOUDIER, J. L. E. (1887) in *J. Bot.* (ed. Morot), Paris 1.
 BOURDOT, H. & A. GALZIN (1928), *Hym. Fr.* "1927".
 BREFELD, O. (1888), *Unters. Gesamtgeb. Mykol.* 8, "1889".
 BRESADOLA, G. (1897) in *Atti I.R. Accad. Agiaii, Rovereto* III 3.
 — (1920) in *Annls mycol.* 18.

- BULLIARD, J. B. F. (1780), *Herb. Fr.* [Plates].
- CLUSIUS, C. (1601), *Fung. Pannon. obs. brev. Hist.*
- COOKE, M. C. (1886) in *Grevillea* 14.
- DICKSON, J. J. (1785), *Fasc. Pl. crypt. Brit.* 1. — (1793), *Fasc. Pl. crypt. Brit.* 3.
- DONK, M. A. (1933), *Rev. niederl. Hom.-Aphyll.* 2. — (1960) in *Persoonia* 1: 173-302. — (1962) in *Persoonia* 2: 201-210. — (1969) in *Persoonia* 5.
- FRIES, E. M. (1821), *Syst. mycol.* 1. — (1832), *Syst. mycol.* 3 (Ind.). — (1838), *Epicr.* — (1849), *Summa Veg. Scand.* — (1852) in *Öfvers. K. VetAkad. Handl.* 9. — (1863a), *Sver. ätl. gift. Svamp.* — (1863b), *Monogr. Hym. Succ.* 2. — (1874), *Hym. europ.* — (1867), *Ic. sel. Hym.* 1. — (1884), *Ic. sel. Hym.* 2.
- GLEDITSCH, J. G. (1753), *Meth. Fung.*
- GMELIN, J. F. (1792), *C. Linn. Syst. nat.*, Ed. 13, 2 (2). "1791".
- GRAY, S. F. (1821), *Nat. Agr. Br. Pl.* 1.
- HALLER, A. VON (1768), *Hist. Stirp. indig. Helv. inch.* 3. — (1769), *Nomencl. Hist. Pl. ind. Helv.*
- HORNEMANN, J. W. (1823) in *Fl. dan.* 10 / Fasc. 30.
- ISTVÁNFFI DE CSÍK-MADÉFALVI, G. (1900), *Clusius-Codex.*
- JAHN, H. (1970) in *Westfäl. Pilzbr.* 8.
- KALLENBACH, F. J. (1934) in *Z. Pilzk.* 13.
- KARSTEN, P. A. (1859), *Sydv. Finl. Polyp.*
- KOTLABA, F. & Z. POUZAR (1963) in *Česká Mykol.* 17. — (1965) in *Česká Mykol.* 19.
- LINDBLAD, M. A. (1853), *Syn. Fung. hyd. Succ. nasc., Hydna pil.*
- LLOYD, C. G. (1915), *Mycol. Writ.* 4 (*Fomes*). — (1919), *Mycol. Writ.* 5 (Letter 69).
- LOBEL, M. [M. LOBELIUS] (1581), *Kruidtboeck* 2.
- LOWE, J. L. (1959) in *Lloydia* 21. "1958". — (1966), *Polyp. N. Am. Poria* (Techn. Publ. St. Univ. Coll. For. Syracuse No. 90).
- MAAS GEESTERANUS, R. A. (1967) in *Persoonia* 5.
- MORGAN, A. P. (1886) in *J. Cincinnati Soc. nat. Hist.* 9.
- MURRILL, W. A. (1905) in *Bull. Torrey bot. Cl.* 32. — (1919) in *Mycologia* 11.
- OVERHOLTS, L. O. (1953), *Polyporac. U.S., Alaska, & Canada* (Univ. Michigan Stud., Sci. Ser. 19).
- PAULET, J. J. (1793), *Traité Champ.* 2. — (1812-35), *Traité Champ.*, Atl.
- PERSOON, C. H. (1796), *Obs. mycol.* 1. — (1801), *Syn. Fung.*
- POUZAR, Z. (1963) in *Česká Mykol.* 17. — (1967) *Česká Mykol.* 21.
- PURTON, T. (1817), *Bot. Descr. Br. Pl. Midl.* 2. — (1821), *App. Midl. Fl.*
- RAY, J. (1724), *Syn. meth. Stirp. brit.*, Ed. 3. [ed. Dill.].
- REID, D. A. & P. K. C. AUSTWICK (1963), in *Glasgow Nat.* 18.
- ROMELL, L. (1911) in *Ark. Bot.* 11 (3). — (1912) in *Svensk bot. Tidskr.* 6.
- ROSTKOVÍUS, F. W. T. (1830) in *Sturm* (ed.), *Deutschl. Fl. (III. Abt., Pilze)* 4.
- SACCARDO, P. A. & P. SYDOW (1902) in *Syll. Fung.* 16.
- SCHRADER, H. A. (1794), *Spic. Fl. germ.*
- SCHRANK, F. VON PAULA VON (1789), *Baier. Fl.* 2.
- SCHUMACHER, H. C. F. (1803), *Enum. Pl. Saell.* 2.
- SECRETAN, L. (1833), *Mycogr. suisse* 3.
- STERBEECK, F. VAN (1675) *Theatr. Fung. & (1712), Theatr. Fung., 2den Druck.*
- STEVENSON, J. A. & E. K. CASH (1936), *New Fungus Names prop. Lloyd* (Bull. Lloyd Libr. Mus. No. 35).
- STRASSER, P. (1900) in *Verh. zool.-bot. Ges. Wien* 50.
- TOURNEFORT, J. PITTON DE (1700), *Institutiones.*
- TRAGUS, H. [H. BOCK] (1552), *Stirp. Germ. nasc.*
- TROG, J. G. (1832) in *Flora* 15.
- WAKEFIELD, E. M. & R. W. G. DENNIS (1950), *Common Br. Fungi.*
- WAKEFIELD, E. M. & A. A. PEARSON (1918) in *Trans. Br. mycol. Soc.* 6.