and Naematelia quercina Coker 1920 (U.S.A., North Carolina), fide Bandoni (op. cit., p. 325) = Sparassis tremelloides. The following remark by Bandoni (op. cit., p. 326) on Sparassis tremelloides = Tremella tremelloides (Berk.) Mass. should be kept in mind; this species, he wrote, "does not seem to differ significantly from Tremella encephala in its microscopic characteristics. It is possible that the two represent different manifestations from two different hosts [Stereum spp.]."

(62). In some respects Tremella encephala is even more variable than other species of the genus, for instance, as to colour, there are at least three principal shades. First, hyaline-whitish, the white colour being mainly due to the white kernel that shows through. It was this condition, I believe, that received the name Tremella alabastrina.

A delicate flesh colour is very common. Neuhoff (1936b: 23) has suggested that Tremella fragiformis Pers. (which Persoon called 'ruber') was annotated by its German collector as stawberry (fraise) coloured and that Persoon misunderstood the information: "in der deutschen Tuchindustrie bedeutet fräsfarben ein milchiges Fleischrosa, das dem Farbton der T. encephala vollkommen entspricht." It may be pointed out that when Persoon published a coloured picture of his species he stated in the French version of the text: "sa couleur à l'extérieur est semblable à celle de la fraise; intérieurement elle est pâle." However, the accompanying figure shows the fruitbody as dingy pink rather than red.

Older collections, especially such as are received from correspondents, have often lost the above-mentioned original colours and have turned more or less dingy brown or alutaceous (cf. Fries, 1822: 227 "in vegetis semper carneo-pallidus, siccus rufofuscus").

Finally, yellowish fruitbodies have also been encountered, for instance in the one collection that Bourdot & Galzin referred to their interpretation of *T. rubiformis*, for which they recorded the colour as pale yellow. For typical *T. encephala* these authors also noted, "souvent teinté de crême orangé". This may explain why Link changed the name *Tremella encephala* Pers. into *Encephalium aurantiacum* when transferring that species to his new genus *Encephalium* (a synonym of *Naematelia*).

It may well be that much of the diversity in colour is due to the host species. Stereum sanguinolentum is one of the 'bleeding' stereums, and soluble substances that may undergo colour changes perhaps diffuse into the parasite.

It is just possible that *T. alabastrina* is a different species. Brefelds protologue is not quite sufficiently detailed to be decisive; he does not mention the kernel.

(63). Tremella foliacea.—Persoon's protologue (1799 O. 2: 98) contains some enigmas. On the whole it might be concluded that he was describing not too large specimens of what is now called T. foliacea: "Unc. 1½ lata, totidem fere alta, lin. 1 crassa". As a sort of afterthought he added as last words "forma pezizoidea", which suggests some species of Exidia, or perhaps even of Coryne Tul. (perfect state), or still more of Neobulgaria foliacea (Bres.) Dennis, not for the least part because of

a remark by Bresadola in connection with the original description of this last mentioned species: "Habitus omnio Tremellae foliaceae Pers., a qua tantum observatione microscopica tute distinguitur." If the true Tremella foliacea were really pezizoid in shape, it could hardly be anything but either Exidia saccharina or Neobulgaria foliacea. Identification with the first of these two is out of the question because of differences in colour and substratum: E. saccharina grows only on coniferous wood, while Persoon stated of Tremella foliacea: "ad truncos subputridos, praesentim Coryli Avellanae". The description that Persoon published in his succeeding mycological work (1801: 626) treated the fruitbody as compound ("magna cespitosa .... Singulum individuum unc. 1 latum est") and again called it "... concava .... Subpezizoidea"; however he added "... sed utroque latere fructificat." These last words, as well as the citation of "Bull. . . . t. 406 f. A. a?", turn the scale in favour of a true Tremella rather than some species of Exidia or Neobulgaria, for in these genera there is often an appreciable difference between the sterile outside and the hymenial disk. Fries simply left out any allusion to a pezizoid shape. I am more inclined to agree with him and Neuhoff (1933: 98) that what Persoon had in mind was after all the species of Tremella redescribed by Fries and Bresadola.

After this it is not surprising that some authors (Brefeld) confused Tremella foliacea with Exidia saccharina.

When Fries (1822: 212) accepted Persoon's species, not only did he leave out all allusions to a pezizoid form but he also shifted the emphasis somewhat (but not quite) toward the form of *T. foliacea* on conifers; although his phrase describes the colour exactly the same as Persoon's did ("cinnamomeo-carnea") his description contains, "Color constanter obscure rufus" and "Ad truncos vetustos abiegnos, pineos, betulinos, &c." When Bresadola (1900 F.t. 2: 97 pl. 209 f. 1) published the first modern account under the name of *T. foliacea* he conceived it inclusively as far as the colour and substratum were concerned: "ad ramos Laricis, Abietis et etiam arboreum frondosarum gregario obvia".

Most authors now consider T. foliacea a very variable species, especially with respect to the colour of the fruitbody. According to some authors it includes a few infraspecific taxa. It would appear desirable to collect more information on fresh collections from various substrata. The following discussions on the forms that have received specific and available names may prove to be of some use.

Tremella fimbriata.—Establishing the identity of this fungus turned out to be another puzzle. Neuhoff (1936b: 20) suspected that this species, as interpreted by Fries (1822: 212), was the form of T. foliacea from angiosperm wood. Fries would have made the distinction, because to him T. foliacea (see above) was in the first place the form on gymnosperm wood. The choice of the epithet 'fimbriata' is difficult to understand. Persoon's original description (1799 O. 2: 97) contains "latera incisa, margine undulata" and thus leaves the epithet insufficiently explained; Fries wrote "margine incisis undulato-fimbriatis" which can only be true if one accepts a very lenient interpretation of 'fimbriatus'. Still I believe that Neuhoff's

suggestion is perfectly acceptable as long as an extremely plastic form on angiosperm wood is postulated and, in these particular cases, an excessively moist habitat on branches on the ground: "Ad ramos rarissime ad terram dejectos" (Persoon, l.c., 1799), "in ramis dejectis ad marginam fluviorum rarius ..." (Persoon, 1801), "Ad truncos & ramos, praecipue alneos, locis humidis passim" (Fries, 1821). This would also explain why the fruitbody is (sub)erect.

Fries distinguished between two forms of *T. fimbriata*, the typical one and a form "b": "Color nigrescens, luci obversus olivaceus v. fuligineus, in b. purpurascens." However, his references are not distributed accordingly, *T. mesenteriformis* var. violacea Bull. and *T. tinctoria* being cited with the typical form even though the fruitbodies are vinaceous.

Tremella verticalis.—Fries referred Bulliard's species as "optime" to T. fimbriata, typical form. The erect habit ('verticalis') and the strongly and irregularly incised margins of the lobes agree; the substratum is indicated as "sur les vieilles souches". Bulliard himself (1791 H: 231-232) later referred this fungus to T. mesenteriformis var. violacea Bull., which suggests that it was slightly violaceous. In any case it seems to be conspecific with T. fimbriata and perhaps also with the purplish forms Fries referred to that species; these had previously received specific names of their own (T. undulata, T. violacea, T. tinctoria).

Tremella undulata.-Neuhoff (1936b: 20) wrote: "Eine purpurviolette Form der T. foliacea Bres. gibt es nicht; der Name violascens Alb. & Schw. bezieht sich auch keineswegs auf eine Tremella, sondern auf eine Bulgariacee aus der Gegend von Coryne." Although I agree about the identity of Tremella foliacea var. violascens A. & S. [presumably the common imperfect state, now called *Pirobasidium sarcoides* (Fr.) Höhn., I do not agree with the remark that no purplish-violaceous forms may exist. Tremella undulata is a point in case; Hoffmann described his species as "purpurea" and added: "colore adparet haec Tremella nigrescenti quidem, sed subdiaphana est et luci objecta purpurascens." Similar and apparently conspecific is T. mesenteriformis var. violacea Bull. = T. violacea (Bull.) Pers. = T. tinctoria Pers. It was to this form that Bulliard later reduced his T. verticalis (see above). The colours of his variety he described thus: "... dans la jeunesse d'une couleur vineuse mêlée d'une teinte de violet plus ou moins foncée; elles devient ensuite d'un rouge brun ou noirâtre ...; mise en infusion dans de l'eau simple, elle donne une couleur d'un beau bistre rougeâtre . . . ." This last point led Persoon to call it T. tinctoria.

Tremella succinea.—Apparently a rather pale-coloured form ("pellucida ... fuscescente succina") stated in the protologue to be "rarius ad ligna exsiccata". Neuhoff considered this to be the form typical of gymnosperm wood. This is doubtful; of neither T. succinea itself nor Tremella mesenteriformis Bull. (pl. 499 [f. T]), which Persoon referred to his species, do we know the exact nature of the substratum. Moreover, the form Neuhoff (1931: 73) had in mind was "rotbraun", darker, with at least part of the basidia having brown contents. Persoon's own fungus was rather

small ("magnitudine unciali"), but Bulliard's figure shows a large fruitbody, perhaps about 12 cm wide. The identity of Persoon's fungus is still doubtful.

Phaeotremella pseudofoliacea.—As the specific epithet indicates, Rea thought that his species resembled Tremella foliacea, but he considered the umber spores so important a feature that he even published a new genus to receive it. The text of the protologue is succint; it is not certain that a spore print was made. The spores are rather large for T. foliacea ( $12 \times 9-12 \mu$ ). Moreover, Rea reported conidia ("hyalina, elliptica,  $9 \times 6 \mu$ "); these, too, are too large to be hymenial conidia. Prompted by these indications, I hesitatingly suggest that Rea confused young basidia with the basidiospores and called the basidiospores conidia. It is a well known fact that in some dark forms of T. foliacea the basidia have quite distinctly brown coloured contents, a feature emphasized by Neuhoff (1931: 73) for his conception of T. foliacea var. succinea "Pers." It would not be surprising if occasionally the contents of the spores were also tinted brownish.

(64). Fries described Tremella frondosa as a member of Tremella trib. Mesenteriformes, characterized by cespitose fruitbodies "in plures lobos tenues flexuosos flaccidos partitae", and as three times as large as T. foliacea, from which species it was further distinguished by its substratum (oak trunks) and colour ("luteopallescens"). This no longer amounts to a satisfactory differential characterization, since T. foliacea may occur in very large and pale-coloured fruitbodies and it has also been reported from oak trunks. What is left is the colour and in this respect the hinge is "pallescens". Did Fries use the word in the strict sense (becoming paler: viz., fruitbody pale but 'pure' yellow) or does it stand for 'pale-coloured' (viz. fruitbody of some pale colour with yellowish shade)? Many authors have supported the second view, like, for instance, the Tulasnes (1872: 220): "Les beaux groupes de Tremella frondosa vivant ... sur le tronc desséché d'un Chêne ... ne mesuraient pas moins de 15 à 20 centimètres en diamètre; ils étaient d'un couleur de chair trèspâle, tirant sur le jaunâtre...." The correctness of the Tulasnes' interpretation might be defended by pointing out that Fries cited for his species "Bull. . . . t. 499 f. T" = Tremella mesenteriformis var. livida Bull. (1791 H.: 230), which is precisely one of these large, pale forms, "primâ aetate sordidè albescens dein dilutè carnea ...." If this interpretation were correct then T. frondosa might well be referred to T. foliacea as one of the many forms of the latter species.

On the other hand if the colour of T. frondosa in its original sense were yellow, and paling (bleaching) with arge, than it might well be a species recalling in colour the T. mesenterica group. Evidently this was how Quélet and Bourdot & Galzin interpreted the colour when they applied the name T. frondosa. If the existence of a pure yellow T. frondosa is accepted, two questions arise: (i) does such a fungus occur in Sweden, and (ii) is it conspecific with T. cerebrina (59)?

In search of an answer to question (i) I have come across only one solitary modern record (rather than a re-description). Neuhoff (1936b: 22) listed a collection from Femsjö for T. frondosa as a member of the "Gesamtart T. mesenterica Retz." and

characterized it as a "blassgelbe, grosse Art". No notes were added about the colour in the fresh condition.9

As to question (ii) I am not at all convinced that Fries's protologue warrants the identification of the Swedish fungus he called *T. frondosa* with the species Bourdot & Galzin described under the same name from France. Fries's fungus was said to be cespitose and divided into lobes connected at their base only, like in *T. foliacea*, while the French fruitbodies seem to start as a compact, gyrosely-sulcate, cerebriform cushion that grows out into lobes at a later stage.

It would seem that our knowledge of T. frondosa sensu stricto is still too incomplete for a well-founded opinion about its true status. Meanwhile T. frondosa is treated here as a distinct though little-known species. If it were to be demonstrated that it is to be fused with Bourdot & Galzin's interpretation, then the combination must be called T. frondosa.

Should the conclusion be drawn that T. frondosa and T. foliacea are expressions of a single species, then the correct name for the combination is T. foliacea; this is the oldest of the priorable names among those that were accepted by Fries in the starting-point book (revalidated by S. F. Gray in 1821), the other being T. fimbriata (revalidated by Persoon in 1822). Tremella frondosa was validly published at a later date. Moreover, if my notes go far enough, T. fimbriata was first reduced to the synonymy of one of the other names by Lundell [1941 (LNF 19-20): 16], who made the combination Tremella foliacea var. fimbriata. Neuhoff (1936b: 20) had previously suggested the reduction of T. foliacea to the rank of a variety of T. fimbriata but since this move was only a provisional suggestion it is here left out of consideration. Looney (1933: 24) accepted a broadly conceived species which she called T. frondosa instead of T. foliacea (apparently because of page priority in the "Systema"), but it is also evident that she did not definitely reduce T. foliacea to the synonymy of T. frondosa.

In addition to 'Bull. pl. 499 f. T' (discussed above) Fries also cited *Tremella quercina* Pollini, "non obstant". On the basis of this citation Saccardo later dropped the name *T. frondosa* and replaced it by the earlier-published (but now devalidated) name *T. quercina*. It is out of the question that Pollini's fungus has anything to do with *T. frondosa*; the protologue, as well as the figure from the following year, are very poor but, in my opinion, sufficient for referring the fungus to *T. mesenterica*.

<sup>9</sup> Neuhoff (1933: 99) once elaborated on the difference in colour between T. frondosa and T. foliacea: "Man denke sich T. frondosa Fr. von blassgelber Farbe (etwa von sahnefarbig = cremeus Saccardo, Chromotaxia Nr. 27 bis hellstrohfarben = stramineus Saccardo Nr. 26), dagegen T. foliacea Pers. in durchscheinendem Rot- oder Gelbbraun mit leichter fleischrötlicher oder violetter Farbbeimischung (... an entfärbten Lappenenden auch melleus Nr. 30)." Nevertheless, he seems to have had his difficulties in distinguishing between the two since he illustrated T. frondosa by a line drawing of a fruitbody (divided into lobes to the very base) which could have been expected to be pale yellow. Apparently this was not the case, since the same fruitbody was later on depicted on the coloured plate published under the name of T. foliacea (1936a: Ft. 9, description not published) with a quite different colour, typical of rather pale, large fruitbodies of T. foliacea.

(65). One of the many puzzles the mycologist encounters with regard to the genus *Tremella* is the identity of *T. intumescens*. The protologue consists of a coloured plate and a—for that time—rather full description, though without details of the spores. Fries did not know the species from personal collections, but he had apparently no misgivings as to its correct position and retained it in *Tremella*. Quélet [1872 (MMb II 5): 315] recorded the species for France; he kept it in *Tremella*, but never mentioned the shape of the spores.

The first author to interpret the species as belonging to Exidia was Bonorden [1868 (AbH 8): 120]. Under the name Tremella intumescens he published a fairly full description which shows that he had Exidia plana in mind. The next author, Britzelmayr [1887 (BAg 29): 291 & pl. 755 f. 6], apparently independently, called another species of Exidia 10 by the same name. It is difficult to decide what Karsten [1889 (BFi 48): 450] had in mind; the only description he gave was of the basidia and spores. The latter are undoubtedly Exidia-spores ("Sporerna aflånga, bödja, 13 = 4 mmm."). Rea (1922: 734) followed Karsten. However, although indicating that he had seen live specimens, his description contains no significant personal contribution; it is compiled almost exclusively from the protologue supplemented with Karsten's description of the spores. Finally, attention may be drawn to what Bourdot & Galzin ((1928: 31) called Exidia glandulosa f. intumescens ("formé de tubercules arrondis, pressés et confluent botryoïdes").

Neuhoff (1935: 33) expressed his opinion as follows: "Im ursprüngliche Sinne ist Tremella intumescens bei Smith and Sowerby ... ganz ohne Zweifel dasselbe wie Exidia glandulosa Fr." (spacing as in the original). I beg to disagree. Nothing in the protologue, except perhaps the colour, suggests a species of Exidia. The figure shows fruitbodies of the 'Mesenteriformes' type with rather thick folds (lobes) which are obtusely rounded at the edges. The dots of the "obscurely dotted" surface are spots rather than papillae, as may be seen from the details figured. There is no doubt in my mind that T. intumescens is a species of Tremella.

Bourdot & Galzin's description (1928: 20), published under the name T. nigrescens, drawn up from British material communicated to Bourdot by Pearson, strongly suggests that they were actually dealing with T. intumescens. Whether the species is the same as the original T. nigrescens or not, and whether or not the latter should be reduced to the rank of a mere form of T. foliacea, as was done by Neuhoff, are subjects particularly recommended for future observations.

In anticipation of the results of such observations and in view of the comment Fries added to his species ("Statura sequentium [T. foliacea, T. lutescens], sed lobi crassiores. Quoad colorem refert Exidiam glandulosam") I have reduced T. nigricans to the synonymy of T. intumescens. This is exactly the impression the study of the protologue of T. intumescens invokes!

<sup>&</sup>lt;sup>10</sup> Referred to Exidia recisa by Neuhoff (1935: 8) and to E. truncata (=E. glandulosa sensu stricto) by Ade [1923 (ZP 2): 63].

(66). A further difficulty is the question whether T. lutescens and T. mesenterica are conspecific or not. The two names have, for instance, been loosely applied by Brefeld (1888a: 109); what he called T. lutescens is typical T. mesenterica and apparently not specifically distinct from what he treated as T. mesenterica. Typical T. mesenterica is one of the few European species of Tremella that produces abundant minute and globular hymenial conidia. At present many mycologists would perhaps be inclined to follow Looney (1933: 26-31) in thinking that only one species is involved. It looks as though Neuhoff (1936b: 22) caught at a straw when he formulated his last-published opinion about T. lutescens: "Ich stelle hierher nur diejenige Stücke, die stets klein, blassgelb und ohne Konidien sind." Bjørnekaer (1944: 25, 33), after observations in the field, concluded that T. mesenterica was the winter stage and T. lutescens the summer stage of the same fungus. The difficulty in a case like this is that it is not always easy to establish precisely what was understood by T. lutescens.

Bourdot & Galzin (1928: 20) placed what they called T. lutescens among the 'Mesenteriformes' as a fungus with very soft, subliquescent and pale fruitbodies ("sulfurin ou crême citrin très pale, prèsque hyalin par les temps très humides"). In view of the habitat ("Assez commun sur branches de charme, souvent associé à Radulum laetum [= Peniophora laeta]") and the spores, which are larger than those of T. mesenterica, a species which they placed among the 'Cerebriformes', theirs may be a distinct taxon. For T. mesenterica they mentioned hymenial conidia. Bourdot & Galzin's description agrees closely with Persoon's, except for the substratum, which is given as Fagus branches in the protologue.

When Looney concluded that the two species could not be distinguished she maintained the name *T. lutescens* for the combination on the ground of page priority in Fries's "Systema". The Code does not recognize this principle and requires that the oldest legitimate name be retained. Luckily this is *T. mesenterica*.

(67). The protologue of T. moriformis describes this species as "sessile, . . . in roundish or oblong masses of various sizes, not unlike mulberries in appearance, except being coal-black. Internally however they are of a rich deep purple hue. . . . ." The accompanying figure shows the fruitbodies as semiglobular to oblong bodies and broadly appressed to the substratum, with the exposed surface thrown into close gyrose folds. The comparison with mulberries was suggested by the general shape and colour, and evidently did not imply that a fruitbody is composed of an agglomeration of globular part-bodies. Fries, when compiling the species, translated 'clustered' (meaning in this case, gregarious) by 'conglobatus'. It is not surprising that when a species of Tremella was found with a fruitbody that "représente une petite mûre des bois par la forme et la couleur" (Quélet), it was promptly identified with T. moriformis. This interpretation was followed by Bourdot & Galzin, who had to search for another name to describe what was apparently the true T. moriformis. This they did under the name of T. violacea (69).

This course of events has left the blackberry-like form without a name, if it is really different from typical T. moriformis. The two synonyms attributed to T.

moriformis, viz. T. colorata Peck and T. atroglobosa Lloyd, fide Bandoni [1959 (Ll 21): 148], would seem to represent the original fungus rather than that of Quélet.

In both forms the contents of the basidia are purplish, which is unknown in any other species of *Tremella*. Some published accounts indicate that the context of the fruitbody is not homogeneous (even if Favre's inconclusive notes are ignored).

- (68). Tremella obscura is an internal parasite growing in the fruitbody of species of Dacrymyces; in Europe D. deliquescens (= D. stillatus) has been reported as the host. The present note is intended to draw attention to a paper by Dangeard (1895) in which he described the occurrence of a tremellaceous fungus in the fruitbody of D. deliquescens. He had not been able to find the spores. Was this perhaps T. obscura?
- (69). When the binomial name *Tremella violacea* Relh. was published its author referred back to "Raii. Syn. 22. n. 4" and Ray, in turn, referred back to "C. Giss. 194". It may be useful to those who wish to form their own opinion about the identity of *T. violacea* sensu originario to quote these older authors.

Dillenius, Cat. Pl. Giss. 194. 1719: "Agaricus mesentericus violacei coloris. Super antiquos Carpini truncos". Type locality: Germany, Giessen.

Ray, Syn. meth. Stirp. brit., Ed. 3, 22. 1724: "4. Agaricus mesentericus violacei coloris C. Giss. 194. Fungus arboreus purpureus corrugatus Doody Syn. II App. 336. / (Substantia est inter gelatinosam & coriaceam media, varie sinuosus & rugosus, inferne laevis & plana superficie lignis & stipitibus putrescentibus innascens: color violaceus obscurior: odor non ingratus, ad Merulium Fungum accedens.)"

Relhan, Fl. cantabr. 442. 1785: "899. violacea. / Tremella sessilis, gelatinosa, rugosa, violacea, inferne laevis. Raii. Syn. 22. n. 4. / Violet Tremella. / On the decayed branches of Trees. A. I-XII. / Tartaro vini rubri perquam similis."

It will not be easy to prove satisfactorily precisely what fungus Dillenius had in mind. His description is too brief. Auricularia mesenterica, rather than Pirobasidium sarcoides (Fr.) Höhn., the imperfect state of Coryne sarcoides (Jacq. per Pers.) Tul., comes automatically to mind, but this is only guessing. Somehow, the impression that Auricularia mesenterica is involved is strengthened by Ray's more detailed description which I take to have been drawn up from that species. Also Relhan's description does not invoke a species of the modern genus Tremella but rather some pileate species ("sessilis . . . inferne laevis"). It is significant that in the supplement to his "Flora" Relhan (1786: 32) concluded that T. violacea had better be associated with Helvella, at that time a very inclusive genus comprizing inter alia the later genus Thelephora.

The name entercd a new life cycle when Persoon (1801: 623) published a Tremella violacea with a new description. He cited T. violacea Relh. as "hujus quoque loci", in this way perhaps making it clear that he did not actually revive Relhan's name but rather introduced a new species. When Fries (1822: 229, 606) published Dacrymyces violaceus, he ascribed the epithet to Relhan, but it was Persoon's species he had in mind. Compare the phrases: "subcompressa parva compacta gyrosa

violacea" (Persoon) with "minor [quam D. moriformis], compactus, subcompressus, gyrosus, violaceus" (Fries). Persoon gave as substratum "ad caudices Pyri communis", Fries added "Mali". It is this Persoonian species that mycologists have tried to interpret. If Fries's species is really a Tremella it must be rare; at least no modern report based on a Swedish collection has come to my knowledge. According to Neuhoff (1936a: 32) a collection sent to Persoon under the name of Tremella violacea by Delastre from Vienne, France (not "Wien") belongs to Coryne sarcoides.

Two interpretations of the Persoonian-Friesian fungus have been published. The first one goes back to E. L. Tulasne who ascribed to it sausage-shaped spores. Neuhoff reduced it to a form of Exidia gemmata (= Myxarium hyalinum) (45), the colour of which he described as "anfangs hyalin-grauweiss, später weisslich, zartrosa, lila-rosa, rosagrau, blassviolett oder schmutzigviolett", giving the substratum as "besonders auf Rosaceen ..." This form not only has a distinct colour but presumably it also consistently lacks the calcareous concretions of typical Myxarium hyalinum. It may be more than a mere form.

The other interpretation is from Bourdot & Galzin (1928: 23); they described as *T. violacea* a form that, judging from descriptions, agrees more closely with the original *T. moriformis* than the fungus they described under the latter name (67). It was found on branches of *Platanus*.

In view of the inadequacy of the descriptions by Persoon and Fries I share Neuhoff's opinion (1936a: 29) that apparently it is not certain whether the species described by Tulasne is the same. I am not convinced either that Bourdot & Galzin's species was correctly named. The net result is that the name T. violacea appears unacceptable in both its applications.

In disentangling the synonymy I prefer in this case to follow the intentions of the authors and, therefore, let truth prevail against nomenclative fiction: a distinction is made between T. violacea Relh. and T. violacea Pers., and the misapplications by Tulasne and Bourdot & Galzin are related to the latter name.

(70). Under the name Coryne virescens the Tulasnes (1865 C. 3: 193 pl. 18 fs. 12-15) described and depicted two states: the imperfect one (more or less distinctly, but shortly and broadly, stalked with small heads) they identified with Tremella virescens Schum. and T. cinereo-viridis Schum.; in the prefect state (sessile, pulvinate, often somewhat proliferous and bigger) they thought they recognized Peziza atrovirens Pers. [= Corynella atrovirens (Pers. per Pers.) Boud.]. After a careful comparison of both their text and figures this disposition of Schumacher's two species turns out to be unsatisfactory. Both these species were described as sessile: "gregaria, subconfluens, gelatinosa ... diaphana sessilis (minuta)". Referring Schumacher's species to the perfect state does not meet the case either; his original figure of T. virescens published by Hornemann in the "Flora danica" does not suggest the ascomycetous fruitbody of the known species of Corynella.

Schumacher's figure shows an agglomeration of a few small, rounded bodies, together forming a mass of about 3.5-6 mm in diameter; the individual fruitbody

he described as "... suborbiculata, depressiuscula, gyroso-tuberculosa, virescens ..." (in addition to the earlier quoted part of his phrase). This situation agrees better with Bourdot & Galzin's interpretation of *T. virescens*, which covers a species of the modern genus *Tremella*: "Tubercules 2–3 mm pulvinés, agglomerés par 3–6, plus ou moins plissés cérébriformes et chagrinées, vert clair à vert bouteille".

When Corda described a new species which he called Naematelia virescens, he added, "An Tremella virescens. Schumacher ...?", apparently without definitely identifying his species with Schumacher's. His question-mark is understandable if it is assumed that he relied on Fries's descriptions (1822: 299; 1838: 592; sub Dacrymyces), which do not mention that the original T. virescens was 'gregarious', or, rather, as appears from Schumacher's figure, an agglomeration of fruitbodies. It is not surprizing that Corda's and Schumacher's species were confused by a number of later authors.

There seems to be no choice but to accept *T. virescens* Schum. according to Bourdot & Galzin or to reject it as a nomen dubium. The first of these alternatives is the less disturbing and at the same time the more likely. It is here accepted. As to *T. cinereo-virescens* ("primo ... pezizaeformis"), this seems best treated as a nomen dubium.

(71). Some of the species of *Tremella* with smaller fruitbodies are somehow associated with pyrenomycetes. Thus Lundell & Nannfeldt [1936 (LNF 5-6): 30 No. 262] remarked of *T. atrovirens* [= *T. exigua*] that the fruitbodies "emerge normally from openings in the bark caused by the stromata of *Cucurbitaria berberidis* (Pers. ex Fr.) . . . . The association is so regular that it is an open question whether there may not exist some biological relation between the two fungi."

When Fries (1828 E. 2:33) admitted *T. indecorata* to the "Systema" he mentioned as synonym "*T. episphaeria*, Chaill.! in litt.", a name that also suggest a similar relationship.

Tremella pyrenophila was described and depicted as growing on stromata of Valsaria insitiva (Fr.) Ces. & De Not.; it was named accordingly. The protologue would suggest relationship with T. indecorata or T. tubercularia, but no spores were found and the assignment to Tremella is merely a guess, though it is supported, inter alia, by the habitat.

Sebacina globospora Whelden [1935a: 126 pl. 331; U.S.A., Kentucky] should be referred to Tremella rather than to Sebacina. Its author reported the "young fruit-bodies growing from ostioles of the perithecia of Diaporthe". Martin [1944 (SIa 183): 54] referred this species to Tremella tubercularia. I hesitate to accept this disposition because the fruitbody was described as "at first hemispherical... becoming... effuse bodies from 6 to 12 mm in extent, on drying becoming chalky, pressed against but not adnate to the substratum."

(72). Martin (1934: 147) thought he recognized one of Möller's original species of Stypella (57), viz. S. minor A. Möll., in what had previously been described as Tremella gangliformis Linder. Other authors have subsequently identified it with

Sebacina sphaerospora Bourd. & G. Martin further concluded that "the slender, branched hyphae ... which form the centers of the papillae [of Stypella minor] ... may be referred to as paraphysoids."

In my opinion Möller made it quite clear that these hyphae cannot be 'paraphysoids' (dendrohyphidia): "Anstatt der Schläuche [Gloeocystidien von S. papillata A. Möll.] finden sich hier . . . Bündel von stärkeren Hyphen, etwa 3  $\mu$  stark, welche, über die Fläche hinausragend, die feinen Papillen bilden." What Möller described were hyphae that occupy the axis of the papillae and protrude form the sterile tips of these pustules; consequently these can better be called 'teeth'. If this interpretation is accepted as correct, then S. minor strongly recalls a minute species of Protodontia, and for the time being I refer it to that genus.

These axial hyphae, which are at most very sporadically branched or not at all, should not be confused with the dendrohyphidia of such species as Sebacina sphaerospora (Tremella gangliformes). This second type of structures is found throughout the hymenial region between the basidia. The pustules are also different: they are blunt and fertile over their entire rounded surface and do not produce sterile tips of protruding hyphae.

#### TULASNELLACEAE

(73). This family was recently re-defined by Talbot (1965: 379) to include the holobasidious species with strictly effused fruitbody and repetitive basidiospores, therefore inclusive of the Ceratobasidiaceae. It is intermediate between the Tremellineae and the Aphyllophorales (Corticiaceae), differing from the former in its lack of metabasidial septa and from the latter in its repetitive spores. Its limits are to my mind artificial, but for the present purpose it is a convenient group.

Because of some border cases that wipe out the distinction between these two, the Tulasnellaceae in its new circumscription may be taken as a family, or even as a taxon of still lower rank, of the Tremellineae: *Metabourdotia* L. Olive (1957a: 429) has basidia that become only imperfectly cruciately septate apically, with the septa incomplete below; and *Pseudotulasnella* Lowy (1964) with similarly incompletely septate basidia, but with *Tulasnella*-sterigmata.

On the other hand, the Tulasnellaceae are separated from the Corticiaceae (Aphyllophorales) only by their repetitive spores. Donk [1964 (Pe 3): 227, 258] thought that some of the Tulasnellaceae might well be closely related to some genera of the Corticiaceae that lack the ability to produce repetitive basidiospores. If Talbot had found no repetitive spores in *Koleroga* Donk, he would perhaps have left it in the Corticiaceae instead of including it in *Ceratobasidium*.

Until the taxonomic arrangement within the Tremellineae and the Aphyllophorales has been worked out more satisfactorily it will continue to be difficult to know precisely what to do with the 'Tulasnellaceae'. It may appear that this is not even a natural group; perhaps it is a 'grade' composed of taxa of various origin.

For remarks on the Tulasnella sterigma, see (87).

## Ceratobasidium

(74). Recently Talbot (1965: 382) redefined this genus: on the one hand he reduced it by referring Corticium atratum to Oliveonia, thus excluding the element with broadly club-shaped basidia with a long tapering base (instead of more or less sphaero-pedunculate basidia); on the other he admitted the extra-European genus Koleroga, in which for the first time he was able to demonstrate the occurrence of repetitive basidiospores. His circumscription is adopted here.

### Exobasidiellum

(75). This genus is so far insufficiently known. Many years ago I studied its sole species from rather poor material [genotype: Syd., Mycoth. germ. No. 1207 (U)], but except for a stray block my notes were destroyed shortly after the last World War. The block shows rather slender basidia, several of which are somewhat constricted at about the middle, with 1-3, mostly 2, rather well-developed sterigmata, and among the spores a single one that had started to form what may have been the initial state of a secondary basidiospore on a sterigma-like outgrowth. This last detail would seem to confirm the remark by Bresadola, the author of Exobasidium graminicola, "sporis ... mox promycelium et conidiola germinantibus." On the strength of this slender basis, the genus is tentatively placed among the Tulasnellaceae rather than the Exobasidiaceae. — Exobasidiellum graminicola (Bres.) Donk, comb. nov.; basionym, Exobasidium graminicola Bres. in Krieger, Fungi saxon. exs. No. 664. 1891 (n.v.); in Hedwigia 32: 32. 1893.

## Oliveonia

(76). This genus is here accepted in a newly defined sense (Talbot, 1965: 381) by admitting a species lacking gloeocystidia, viz. its only European representatative. Now the main difference with *Ceratobasidium* consists in the shape of the basidia, broadly clavate with long tapering base in *Oliveonia*, and subglobose to obpyriform and abruptly narrowed toward the attachment (more or less sphaero-pedunculate) in *Ceratobasidium*.

# Thanatephorus

(77). The type species of this generic name, Hypochnus solani = Thanatephorus cucumeris, has gone through a complicated history. First, it proved to be the perfect state of a previously described imperfect fungus that is notorious as a plant pathogen, viz. Rhizoctonia solani. Secondly, its specific epithet was changed several times for nomenclative reasons (80). Thirdly, its generic position has become a much debated taxonomic issue. Fourthly, it has by now become clear that it will be difficult delimitating it by the traditional taxonomic methods from closely related forms. All this has led to much confusion and as a rule the taxonomist is blamed for excessive eagerness to change names. Plant pathologists, however, often forget that although they have produced an astonishingly wide range of knowledge about the

group, in doing so they have also created a considerable amount of chaos, not for the least part by arrogating nomenclature to their own sphere. The principal culprit, however, is the fungus itself; this behaves so inconsiderately that its various aspects and forms are difficult to pigeon-hole. Therefore, it goes without saying that the synthesis of taxonomic and nomenclative problems as presented on the check list should be taken as personal suggestions, provisional in nature and subject to alteration.

Hypochnus solani and its synonyms have done much travelling from one genus to another; the species has been placed in no less than six genera. These are as follows. Hypochnus Fr. per Fr. [cf. 1957 (Ta 6): 75; 1963 (Ta 12): 161] is now considered a synonym of Tomentella Pat. and (in my opinion) is impriorable on account of an earlier homonym (Hypochnus Fr. ex Ehrenb. 1820, Lichenes). The untenable conception of Hypochnus that accommodated the fungus was that of Schroeter and Brefeld, viz. for species with interrupted hymenium. — Corticium Pers. per S. F. Gray [cf. 1963 (Ta 12): 158] and Corticium Fr. [cf. 1957 (Ta 6): 25] have type species (respectively Corticium roseum Pers. and Thelephora velutina DC. per Fr.), that are no longer considered to be congeneric with Hypochnus solani. The first generic name corresponds to Laeticorticium Donk [cf. 1957 (Ta 6): 82; Donk 1956 (Fu 26): 16], the second, to Phanerochaete P. Karst. [cf. 1957 (Ta 6): 108; Donk 1962 (Pe 2): 223]. These two generic names Corticium are still often regarded as synonyms and accordingly used for a broadly conceived artificial genus. Those who prefer a conservative treatment are adviced to merge Thanatephorus into the inclusive genus Corticium Pers. per S. F. Gray. — Botryobasidium Donk [cf. 1957 (Ta 6): 22; 1963 (Ta 12): 157] was a segregate from the broadly conceived genus Corticium and intended for a set of species with deviating structure of the fruitbody. Later it was still thought to be too heterogeneous, so that it was divided into Botryobasidium sensu stricto, Uthatobasidium, and Thanatephorus (the last name based on Hypochnus solani). — Pellicularia Cooke was re-introduced by Rogers (1943) for a combination of Botryobasidium (still in a broad sense), Botryohypochnus Donk, a few odd species not referable to these two genera, and Pellicularia koleroga Cooke, the generic-name-bringing type species. For various reasons this resurrection of Pellicularia Cooke [cf. 1957 (Ta 6): 106] has been rejected. First, Rogers interpretation of the type species in such a way as to equal a hymenomycetous species is untenable (Donk, 1953: Talbot 1965: 374). Secondly, Pellicularia koleroga sensu von Höhnel and Rogers, the acting type of Roger's application of Pellicularia as a generic name, is not congeneric with Hypochnus solani. Donk (1958c: 35) excluded it as Koleroga noxia Donk and made it the type of a distinct genus, Koleroga Donk. Talbot (1965: 372) agreed that Pellicularia koleroga sensu D. P. Rog. was not congeneric with Hypochnus solani, but he thought the genus Koleroga superfluous and referred it to Ceratobasidium. — Thanatephorus was a segregate from Botryobasidium, introduced because of a combination of characters (shape of the basidia, repetitive basidiospores, &c.) that was taken to warrant generic separation. This genus has gradually become more widely accepted: it has been taken up, for instance, by Eriksson, Christiansen, Warcup & Talbot, Talbot (1965),

and other authors. — Ceratobasidium D. P. Rog. [cf. 1957 (Ta 6): 23; Donk, 1958c: 17; T. Talbot, 1965: 382]. Olive (1957a: 431) and Pilát (1957a: 81) considered this the proper genus to receive the species after it had been excluded from Botryobasidium and Pellicularia sensu D. P. Rog. and referred to Thanatephorus. Naturally whether or not to fuse Ceratobasidium and Thanatephorus is a matter of taste. Donk thought there were sufficient arguments to keep them apart and he was recently seconded by Talbot (1965) in a careful and beautifully illustrated study. I am convinced that the two genera are not very closely related.

(78). The species of Thanatephorus are usually found or else isolated in their imperfect states, which are referred to the form-genus Rhizoctonia DC. per Fr. This generic name is based on Sclerotium crocorum  $\equiv$  Rhizoctonia crocorum ( $\equiv$  R. violacea), the imperfect state of the auriculariaceous Helicobasidium brebissonii (syn., Helicobasidium purpureum; see p. 156). It has become more and more apparent that Rhizoctonia solani and many other rhizoctonias described as distinct species are related, or at any rate as a group easily distinguishable from R. crocorum. It would seem that the time has come to consider the question whether it would not be appropriate to combine R. solani and similar species into a form-genus of their own. Those who wish to do so are reminded that a generic name for the job is available, viz. Moniliopsis Ruhland [cf. 1962 (Ta 11): 89; & Donk 1958c: 30].

The form-genus Moniliopsis was published to accomodate the 'Vermehrungspilz' or 'maladie de la toile', Moniliopsis aderholdii Ruhland. The identification of this imperfect state with Hypochnus solani = Thanatephorus cucumeris has been open to controversy. The current consensus, however, would seem to be that Duggar (1916) was correct (or nearly so) when he identified it with Rhizoctonia solani. Actually the debate has boiled down to whether or not the two are specifically identical, rather than whether or not they are only distantly related, with their perfect states presumably not congeneric.

The number of rhizoctonias referable to 'Moniliopsis' is rapidly increasing. The strains are being isolated from various sources like diseased plants, soils, and orchids. That the perfect state of all will prove to be species of Thanatephorus I should not care to prophesy, but those that did produce basidia in culture seem to have been referable to that genus. On the present check list I have only entered the specific names of rhizoctonias recorded from Europe; possible synonyms from other parts of the world have been left out. It is likely that many of these so-called species will turn out merely to be strains of Rhizoctonia solani.

(79). Orcheomyces (sing.), Orcheomycetes (pl.) is a denomination introduced by Burgeff (1909: 16) for mycelia isolated from orchids. It was not intended as a generic name in the sense of the "Code": "... wollen wir die Gruppe einfach mit "Orchideenpilz" = Orcheomyces bezeichnen, ohne diese Namen eine systematische Bedeutung zu zuerkennen. However, other authors very soon started to cite 'Orcheomyces' as a generic name, even though dealing with it either as a synonym of

Rhizoctonia or else merely incidentally mentioning it. Burgeff (1911: 25) soon regretted this confusion and replaced it by "Mycelium Radicis", while still later, when he began distinguishing between various species, he preferred to take up the generic name Rhizoctonia. As far as I am aware 'Orcheomyces' was not validly published as a generic name of the binominal system until 1925, when Wolff [1925 (VsG 106²): 155], feeling obliged to describe a new species, took it for granted that Burgeff had published a true generic name, remarking: "Der Pilz gehört zur Gattung Orcheomyces (Burgeff), weshalb ich ihn Orcheomyces Neottiae benannte." He gave no generic description but as the reference "(Burgeff)" is to a previously published description the name was validly published. The next year Wolff (1926) admitted further species to the genus. So far I am not aware of any other authors who have accepted the generic name Orcheomyces taxonomically.

- (80). There is also disagreement about the correct name of the type species (perfect state) of *Thanatephorus*. The three competing epithets are 'solani' (Dec. 1891), 'filamentosus' (Sept. 1891), and 'cucumeris' (1883) in combination with various generic names; they came into use in this order. If 'solani' and 'cucumeris' are regarded as pertaining to the same species (cf. Donk, 1958c: 31) there is no escape from the adoption of 'cucumeris' since it is the earliest published of the three. Some authors have preferred 'filamentosus'. Even if this should eventually prove to be really synonymous with 'cucumeris', which is not self-evident (cf. Donk, 1958c: 34), its use would in any case be prevented by the earlier introduction of 'cucumeris'.
- (81). Hypochnus betae Schenck (1924) was described from beet as a new species, because the fungus 'could not be identified with any other described species occurring on the same host'. More particularly its author found that it differed from "Rhizoctonia violacea var. betae" (R. crocorum). After comparing perfect states (which as far as Hypochnus solani was concerned she judged from literature), conspecificity was thought unlikely, not so much on morphological grounds as because a solitary inefficient infection trial on the stem of a potato plant proved abortive. Schenck also appeared to be incompletely informed on other aspects of H. solani, especially on its variability, pathogenicity, and hosts, which had already been recorded in literature. Her paper contains no evidence that might lead to rejection of the thesis that H. betae is anything but typical H. solani = Thanatephorus cucumeris.
- (82). The name now universally and unanimously used for the imperfect state of *Thanatephorus cucumeris* is *Rhizoctonia solani* Kühn (1858). As discussed by Duggar (1915: 425), Kühn laid special stress upon the symptoms caused by the fungus; these are of a certain form of potato disease now ascribed to *R. solani*. Kühn's description of the fungus itself leaves much to be desired as it is very incomplete. Moreover, he attributed spores to it. Duggar remarked that "the spores mentioned were evidently those of contaminating organisms, or else the oval cells of the tufted stage of the fungus". If, therefore, the second suggested alternative for the 'spores'

is considered untenable it is tempting to reject the name R. solani as a nomen confusum. It is true that Kühn (1858: 225) mentioned spores: "... auch gelang es noch nicht, die Entwicklung der dunkel purpurfarbenen runden, dickwandigen, mit körnigem Inhalt gefüllten Sporen (Fig. 22) zu verfolgen, die ich häufig eingestreut fand." These spores, however, were not definitely taken to belong to Rhizoctonia solani; this follows from the explanation to figure 20 (Kühn, op. cit., p. xx) where they are mentioned as "die wahrscheinlichen Sporen von Rhizoctonia Solani." They can hardly be invoked as a basis for declaring the name of this fungus a nomen confusum.

It should be pointed out that Duggar (1915: 444) accepted Rhizoctonia rapae Westend. 1851 ( $\equiv R$ . napae West. & Wall. ex Kickx 1867) as synonym of R. solani, basing his conclusion on the study of the type distribution. If this identification is accepted the correct name for R. solani would be in any case R. rapae.

- (83). Rhizoctonia cavendishiani, R. lanuginosa, R. mucoroides, R. repens, ? R. sclerotica, R. sphacelati, and R. subtilis are all so-called orchid fungi. They were isolated mostly from exotic species of orchids growing in greenhouses in France and Germany. Since it has become apparent that most, if not all, orchid fungi can also occur saprobically and be isolated from soil, while furthermore they are not necessary tied specifically to the orchid species from which they are isolated, it is conceivable that the rhizoctonias had already been present in the greenhouses before they entered into their association with the orchids. From more recent researches (for instance by Curtis, 1939, in North America) it may be concluded that it is not impossible that these fungi also occur in the field and perhaps may be isolated from wild orchid species and still other plants like Ophioglossum. In any case, to treat them as true aliens would seem not to be wholly justified by our present incomplete knowledge of them.
- (84). Boerema (1964; & private communication) considers Rhizoctonia tuliparum a good species, clearly distinct from but related to R. solani, which makes it likely that it is also the imperfect state of some species of Thanatephorus.

#### Tulasnella

(85). Our knowledge of the European species of this genus is far from adequate. The number of species more carefully and extensively studied after their first publication is small. It would seem as though few mycologists have made any effort to interpret Johan-Olsen's species published by Brefeld. When examined their current disposition proves disappointing; in view of their poor protologues, however, this is not surprising (88, 90, 91, 94).

No less than 13 new species were published by Bourdot & Galzin (1924; 1928). When the genus was monographed by Rogers (1933) no study of their types was made; a number of the reductions he proposed resulted from the adoption of a

broad species concept or else from guesswork alone. Some of Bourdot & Galzin's species were taken up on the basis of North American collections, but these interpretations must still be confirmed by comparing them with material from Bourdot's herbarium (T. bifrons, T. pruinosa, T. araneosa). Many of the victims that fell because of a broad species concept are questioned here the species involved are listed in this paper as autonomous, awaiting future decisions (T. pallida, T. brinkmannii, and T. eichleriana Bres.; T. helicospora Raunk.; T. albolilacea, T. vernicosa, T. sordida, T. obscura, T. rosella Bourd. & G.; T. microspora Wak. & Pears.; T. griseorubella Litsch.). It would seem as though some of Christiansen's interpretations (1959) are also debatable (T. albida, T. lactea, and T. pruinosa Bourd. & G.; T. allantospora Wak. & Pears.; T. griseorubella Litsch.). Thorough revision of the European species is badly needed. For the time being it seems appropriate to keep an open mind and duly to list as autonomous all the species rejected on not too solid grounds.

- (86). In imitation of Rogers (1933) the genus is now often divided into two, Tulasnella and Gloeotulasnella. The distinction was not primarily based on the absence or presence of gloeocystidia. As principal characters he used the consistency of the context and whether or not the basidia were embedded. Embedded basidia usually produce longer and more irregular, rather tubular secondary sterigmata. This division has been questioned by Olive (1957b), who concluded that there were no sharp limits between the two taxa; he admitted only one inclusive genus, Tulasnella. In recognition of the force of his reasoning this conclusion is adopted here. It may be pointed out that Tulasnella inclusa, which is stated to have no fruitbody of its own, but to develop its basidia in the—non-gelatinous—fruitbody of Sistotrema brinkmannii, was referred to Gloeotulasnella, apparently simply on account of the more finger-shaped secondary sterigmata.
- (87). The Tulasnella basidium has caused much speculation, and divergent terms are used as regard its sterigmata. These structures have often been called sessile spores (Juel, 1897) or epibasidia (cf. Martin, 1957), and they were even homologized with the four part-cells of the Tremella metabasidial body. I am unable to accept these interpretations and am convinced (Donk, 1958a) that they are only sterigmata, even though they deviate from the usual type occurring in the Aphyllophorales in the protosterigmata; these become strongly developed and inflated and are later separated from the basidial body by a septum. They develop further by directly producing the spiculum or by emitting a more or less well developed tubular outgrowth (secondary sterigma) tipped by the spiculum (Donk, 1954; Talbot, 1954: 256 f. 1). There is no doubt in my mind that these sterigmata are completely homologous with those of Ceratobasidium, Agaricus, or Tremella. The recent discovery of a genus (Pseudotulasnella Lowy, 1964) with tremellaceous basidial body (apically longitudinally septate) and Tulasnella-sterigmata furnishes strong novel support.

- (88). When Brefeld (1888b: 5) published the genus Pachysterigma with four—all new—species, he remarked that it was "als neues Genus von Olsen unterschieden und untersucht worden". This association calls for special caution since much of Johan-Olsen's share in Brefeld's researches seems to be connected with doubtful or apparently erroneous conclusions. The four species are Pachysterigma fugax, P. incarnatum, P. rutilans, and P. violaceum. None of these species is readily recognizable from the protologue. The current application of the last mentioned name, in the form of Tulasnella violacea, is perhaps barely acceptable but it will not be disputed here. The other three are briefly discussed below (90, 91, 94).
- (89). Christiansen (1959), who inclines to a rather narrow species concept, recently maintained that T. helicospora is distinct from T. calospora. It is now assumed that the latter is extremely variable in the shape and development of its spores. It is just possible that contrary to current opinion the spirally-curved spores constitute a valid specific character. (Bourdot & Galzin, 1928: 58, called it T. calospora f. spirillifera Bourd. & G.) In order to stimulate further investigation T. helicospora is again listed above as a distinct species.

Tulasnella rosella has undergone la mort sans phrase and is now considered to be merely an insignificant colour modification of T. calospora. It may be recalled, however, that Bourdot & Galzin (1924: 264) emphasized that it also had a habitat of its own: "T. calosporae Boud. proxima, sed suis locis constans." It is recommended for renewed study.

Compare also T. rutilans (91).

- (90). Rogers (1933: 184, 186) reduces Pachysterigma fugax to the synonymy of Tulasnella violea (in a broad circumscription) "on the basis of coloration, texture, and form of various organs". In view of the protologue, which gives a different colour and no indication of texture it is difficult to agree unconditionally with this disposition. The protologue states that the fruitbody consists of "einem dünnen, gräulich-durchschimmernden, mit blossem Auge kaum erkennbaren Belag", no pinkish or violaceous tints being specifically mentioned for this species. The spores are stated to be 'schief eiförmig' ( $12 \times 10 \mu$ ) and are so drawn; they are of about the same size as those of Pachysterigma incarnatum (94). A dubious species; in my opinion there is for the moment no choice other than to list it as autonomous, leaving a more definite conclusion to a future monographer. See also (88).
- (91). I am unable to accept Roger's interpretation (1933: 184, 189) of Pachysterigma rutilans. The species he had in mind has evenly cylindrical, curved spores, viz. typically sausage-shaped. This shape he strongly emphasized in order to differentiate his species ("spores evenly curved, evenly cylindric") from Tulasnella allantospora ("spores evenly curved, tapering toward the ends"). The protologue of P. rutilans reveals the spores as "lang gezogen und sichelförmig gekrümmt" ( $16 \times 8 \mu$ ) and accordingly depicted as crescent-shaped with rather sharp-pointed ends of which

one may be decurved. They are too slender and perhaps also more variable in shape than the spores of T. allantospora, recalling those of T. calospora. On circumstantial evidence it might be concluded that the spores of T. rutilans are smaller than those of the latter species, but if their length (16  $\mu$ ) for once were correctly indicated then they would come close to the range of the spores of T. calospora. The shape of the basidia (cylindrically stalked globules) may also point in that direction. I feel compelled to consider P. rutilans (although still doubtful) as a species certainly distinct from Rogers's interpretation; the latter is therefore renamed: **Tulasnella curvispora** Donk, sp. nov.

Sporae cylindricae ut in Tulasnella allantospora Wak. & Pears. aequaliter curvatae, sed in extremis haud attenuatae itaque haud falcatae, potius allantoideae, maiores, 10–14 × 3–4  $\mu$ . — Carpophorum tenue, ceraceo-pruinosum, lilaceo-cinerascens. Hyphae 3–4–5  $\mu$  diam., fibulatae. Basidia pyriformia, sterigmatibus 2–4 primo subglobosis, 5–6–8  $\mu$  diam., denique filamentum conicum sporam producens formantibus. — Typus: Nederland, Bilthoven, leg. M. A Donk 1272, typus Tulasnellae eichlerianae var. lilaceo-cinereae Bourd. & Donk apud Donk = Tulasnella rutilans (J.-Ols. apud Bref.) Bres. sensu D. P. Rogers qui hanc determinationem confirmavit.

- (92). Tulasnella inclusa (M. P. Christ.) Donk, comb. nov.; basionym, Gloeotulasnella inclusa M. P. Christiansen in Dansk bot. Ark. 19: 41 f. 36.
- (93). The first species of *Tulasnella* in which the remarkable basidia, so characteristic for the genus, were encountered was originally published as "Corticium incarnatum Fr. (pinicola)". It was described too briefly for absolutely certain identification. Compare Burt (1919: 257): "It seems probable that Corticium incarnatum var. pinicolum Tul. must have been either [Tulasnella violea] or T. eichleriana on account of the subglobose spores which the Tulasnes figured, although unfortunately without stating spore dimensions or scale of magnification of their figures."

When Schroeter introduced the genus he considered his only species (T. lilacina) to be the same as the fungus described by the Tulasnes. He did not mention any microscopical details but contented himself with remarking, "Basidien und Sporen in derselben Art gebildet wie bei obigen von Tulasne beschriebenen Pilze." The macroscopic details of Schroeter's species suggest the common Tulasnella violea (fide Bourdot & Galzin, 1928: 56).

In view of all this, however, it would seem correct to accept the fungus of the Tulasnes, on which the names Corticium pinicola (Tul.) Sacc. and Tulasnella incarnatum Bres. are based, as well as T. lilacina, as belonging to T. violea.

(94). The two species Pachysterigma incarnatum  $\equiv$  Tulasnella incarnatum (J.-Ols. apud Bref.) Juel and 'Corticium incarnatum' sensu Tul. (93), which Bresadola and Bourdot also called T. incarnatum, have been often confused. This is testified to, for instance, by the denomination Tulasnella violea var. incarnatum "(Tul.) Juel' (Bourdot & Galzin, 1928: 57). Neither species is readily identifiable from its protologue.

Rogers (1933: 184) reduced Pachysterigma incarnatum to the synonymy of Tulasnella violea, which in his circumscription has an enormous spore range  $3.5-8\times 3-6.5~\mu$ . The spores of Pachysterigma incarnatum are given in the protologue as 'schief birn-förmig' (11  $\times$  8  $\mu$ ) and depicted as almost typically pip-shaped; two are drawn as distinctly adaxially flattened, but this may be a matter of overdrawing. Since we do not know their correct dimensions (Brefeld's microscopic measurements are notoriously unreliable) the spores may be of the size of those of T. violea sensu stricto, or else of T. microspora provided their recorded dimensions, as in several other cases, are reducible by more than fifty per cent; the latter species with its somewhat more ovoid spores, would then also agree in this respect. Tulasnella fugax (80) is listed on this check list under T. violea, according to custom but without conviction.

## DACRYMYCETALES

(95). The taxonomic position of the only family of this order is now the subject of controversy. The context and the shape of the fruitbody in many representatives have caused the Dacrymycetaceae to be considered as part of the Heterobasidiae (Patouillard, 1900: 4, 28, as "Calocéracés"); this is now the prevailing opinion. It is defended, for instance, by Martin (1952a) who treats the Dacrymycetaceae as a family of the Tremellales, his equivalent of the Heterobasidiae of this check list.

I do not share this view and regard the family as a series parallel with the Tremellales [Donk, 1964 (Pe 3): 227, 243]. The series is well delimited except perhaps for the genus *Cerinomyces* (105) which (in its typical species) falls more readily within the artificially conceived Corticiaceae. If suitably enlarged by a few additional species it forms an apparently uninterrupted bridge between the two families. Martin and, most recently, McNabb are convinced that this bridge is dacrymycetous territory, while I think that this is not yet fully justified for the most typical species of *Cerinomyces*, perhaps owing to our still incomplete knowledge of them.

Because collectors of the jelly fungi usually do not descriminate between the Tremellales and the Dacrymycetales the latter are included in this check list.

(96). The Dacrymycetales are very troublesome for the taxonomist, not in the least in connection with generic delimitations. Thus Patouillard & Lagerheim [1895 (BmF 11): 211] concluded that "Les genres de la série des Dacrymycètes étant établis presqu'exclusivement d'apres la forme de réceptacle, sont bien peu distincts les uns des autres et devraient peut-être être considérés comme de simples sections d'un type unique ...". About forty years later Neuhoff (1936b: 48) still held the same opinion: "Es gibt überhaupt bisher kein einziges Merkmal, das innerhalb der Familie zur Scheidung der Gattungen geeignet wäre; sämtliche gegenwärtig angenommenen Gattungen der Dacrymyceten sind durch Uebergänge mit einander verbunden." More recently, however, through the work of Kobayasi (1939b, c) and McNabb (1964, 1965a-e, publication in progress) the situation has improved, although in many cases the generic limits are still far from settled. These few remarks

are not an introduction to a better understanding of the systematics of the family but they are intended to serve as a warning that too much stability in the generic conceptions should not be expected in the near future.

#### Calocera

- (87). Calocera cavarae is known from a single collection so that its specific status is still difficult to assess. McNabb treats it as a variety of C. viscosa.
- (98). As understood here, Calocera cornea is a very variable species, accepted in almost the same circumscription alloted to it by McNabb. However, only some of his synonyms of those based on European material have been entered; Calocera cincta, C. brefeldii, and C. stricta are discussed separately below (99, 102, 103). All names based on extra-European collections and listed by McNabb as synonyms of Calocera cornea have been omitted. These names, all of which were reduced to synonymy without discussion, are: Calocera pilipes Schw. (U.S.A., North Carolina): C. nigripes Syd. (ex-Belgian Congo); C. rufa Lloyd (Tasmania); C. vermicularis Lloyd (U.S.A., New York), described as having cespitose fruitbodies which were pure white when soaked and pale yellow when dry; and Calopposis nodulosa Lloyd (U..S.A., Massachusetts) and Calopposis damae-cornis Lloyd (South Australia). Calopposis nodulosa is the type of the generic name Calopposis. The genus was characterized as having "a basal cushion-like body from which proceeds clubs like those of a Calocera." The nature of this basal cushion has not been disclosed. (The type specimen is in very poor condition.) Calopposis damae-cornis was stated by its author to have fruitbodies which are "pale white, with the slightest yellow tint" and spores as big as  $16 \times 8 \mu$ .
- (99). Clavaria cornea " $\beta$ . Cl. cincta" Pers. (1797 C.: 186/54) was very briefly described, the leading character being "basi tomento annulatim cincta." There is little to differentiate it from Calocera cornea. When Secretan published Clavaria cincta as a species of its own he specifically cited Persoon's  $\beta$ -variety as the epithet-bringing basionym. However, his description strongly suggests that he was dealing with Calocera furcata rather than G. cornea.
- (100). The specific status of Calocera striata is still under discussion. Bourdot & Galzin kept it distinct from C. cornea, and Neuhoff (1936b: 36, in obs.) called it a well-characterized and rare species. McNabb reported it as not uncommon in the British Isles, at the same time stating that there it is usually found in association with more typical fruitbodies of C. cornea. He reduced it to the latter species.
- (101). McNabb (1965a: 45, 46) merged Dacryomitra pusilla (including D. glossoides Bref.) in Calocera glossoides and ascribed to the resulting taxon spores which are usually 12–14.5  $\mu$  long and become three-septate. What he did not state

in so many words was that there could not be a taxon as conceived by Bourdot & Galzin under the name of Calocera glossoides with more or less flattened, lance- or tongue-shaped fruitbodies, not markedly divided into a stalk and a fertile portion, and with smaller spores (about  $8-12~\mu$  long) which are non-septate (and perhaps may be expected to become tardily one-septate). Although I do not deny that these two conceptions (a collection of each of which I have studied carefully) may not be connected by intermediates, I am not yet convinced of it. If these intermediates really exist, then the last barrier between Calocera sensu stricto and Dacryomitra as distinct taxa, even at the sectional level, would have been removed. It seems worth while to keep an open mind and await additional evidence before coming to a definite conclusion one way or the other. If the two conceptions should both prove to deserve specific rank, the epithet 'pusilla' must be recombined with 'Calocera'.

(102). McNabb (1965a: 41, 42) listed Guepinia brefeldii as a synonym of Calocera cornea without comment. Lloyd described the fruitbody as flattened with the hymenium on one side only. It had previously been determined by Saccardo as Calocera palmata. Lloyd's accompanying photographs are poor but they give me the impression that they show flattened fruitbodies with rounded, entire tops, not at all suggestive of Calocera cornea or its forma palmata.

(103). When Fries instated Calocera stricta he divided it into two forms, the typical one ("a. truncorum") and "b. epiphylla". The latter, by its size and its being compared with Clavaria brachyorrhiza Scop., seems best considered as simply an undivided form of Calocera viscosa rather than C. furcata. As for typical Calocera stricta, Neuhoff (1936a: 25) disposed of it as a form of C. viscosa, while McNabb (1965a: 42) referred it to C. cornea. Both authors studied a specimen in Fries's herbarium (collected in 1853) but since the specific name was published in 1838 this is evidently not the type. McNabb founded his opinion on circumstancial evidence: "In a later work Fries (1874, p. 680) cited Bonorden's illustration of C. fasciculata as representative of f. truncorum. The basidiocarps illustrated are typical of the simple form of C. cornea and are unlike any variants of C. viscosa encountered during this investigation."

The original description (of forma truncorum) by which Calocera stricta must be primarily judged runs: "simplex, solitaria, elongata, basi praemorsa, linearis, lutea, sicca, laevis. In pinetis ...,  $\frac{1}{2}$ -I unc. l. basi tomentulo albo cincta. Cl. cornea cincta Pers.?" There is little in this protologue to provide a satisfactorily choice between C. viscosa (simple forms), large C. cornea, and C. furcata, all of which occur exclusively, or may occur, on coniferous wood. For the time being I prefer to enter C. stricta as a nomen dubium, unlikely to represent a species of its own. For remarks on C. cincta, see (99).

(104). Calocera cornea var. subsimplex Bres. was raised to specific rank as Calocera subsimplex (Bres.) Britz. It is not known what the type represents. McNabb (1965a: 52) concluded from the original description that "Macrofeatures, spore size and

shape, and habitat all strongly suggest that this species is Calocera glossoides." It is evident that what he had in mind is entered on this check list as "Dacrymitra" pusilla rather than Calocera glossoides (101): the spores (12-18  $\times$  4-5  $\mu$ ) as well as several other features mentioned in the protologue suggest the former.

As to Britzelmayr's interpretation, both his figure and spore measurements  $(8-10 \times 4-5 \mu)$  are strongly suggestive of quite typical *Calocera glossoides*, as described by Bourdot & Galzin and as distributed by Fuckel (GRO).

McNabb acted as if two different names were involved, "Calocera cornea var. subsimplex Bres." (p. 52) and "Calocera subsimplex Bres. in Britzelm." (p. 55). In my opinion Britzelmayr raised Bresadola's variety to specific rank, (perhaps) with simultaneous misapplication of the basionym.

# Cerinomyces

(105). The inclusion of this genus in the Dacrymycetaceae has become a matter of debate. Cerinomyces and its predecessor Ceracea Cragin sensu Pat. have almost consistently been referred to this family, mainly because the basidia are regarded as typically Dacrymyces-like. On the other hand Eriksson [1958 (Sbu 161): 46] and Donk (1956: 375) suggested that the typical species of Cerinomyces could just as well be referred to the Corticiaceae (Aphyllophorales). Martin (1957: 25) called this view "utterly fantastic and completely without merit", without, however, offering any further comment. That was left to Kennedy (1959a: 880-881) who went into the matter more carefully, though not without a certain misinterpretation of precisley what had been stated. Still more recently McNabb (1964: 415) also decided that a strongly enlarged genus Cerinomyces were to be included in the Dacrymycetaceae.

The generic name Cerinomyces is based on C. pallidus G. W. Mart. (extra-European). Together with the European C. crustulinus this species produces completely effused fruitbodies which at no stage are attached to the substratum by root-like or narrowed bases, and which are not gelatinous. The basidia are comparatively plump and are not embedded in a matrix, so that the sterigmata protrude free into the air. The spores do not become septate nor are they known to be capable of producing the kind of small conidia so commonly met with among the Dacrymycetaceae. Not all of these features are matched by any of the Dacrymycetaceae; the others occur only sporadically in this family. On the other hand certain species of the Corticiaceae are known also to have stichic, mostly two-spored basidia (Clavulicium Boid.), strongly Dacrymyces-like spores as to shape, size, and septation (for instance, "Corticium" terrigenum Bres., cf. Talbot, 1965: 401 f. 19); and strongly developed sterigmata that in this respect do not yield to any species of the Dacrymycetaceae (Thanatephorus Donk) and at the same time may even be constantly at twos [T. sterigmaticus (D. P. Rog.) Talbot]. There can be no doubt that Cerinomyces pallidus is typically 'corticiaceous'. What is really needed to make this species 'dacrymycetaceous' is an improved definition of the Dacrymycetaceae, one that would draw a sharper line of distinction from the Corticiaceae.

As I have already intimated, and Corner has clearly expressed, the Corticiaceae is not a proper (natural) family, but only a grade, a receptacle originally conceived to include all effused holobasidious Hymenomycetes. It should gradually dwindle away, for instance by the exclusion of groups that can be attached to other families: thus Coniophora and Coniophorella have been transferred to the Coniophoraceae, Tomentella to the Thelephoraceae (emend.), and so on [cf. Donk, 1964 (Pe 3): 199-324]. I have no (and never have had any) a priori objection to removing Cerinomyces from the Corticiaceae and transferring it to the Dacrymycetaceae, provided the arguments for this are augmented and more precisely presented and prove convincing for the mycologist. It is, for instance, desirable to know more about the cytology (position of the division-spindle of the diploid nucleus) of C. pallidus and other species with more or less similar basidia.

The inclusion of *Tulasnella* in the Corticiaceae rather than the Tremellaceae (Donk, op. cit. pp. 227, 258) is another instance where a more satisfactory rearrangement of the effu. ed species of the Tremellineae and a revised appraisal of the limits of this taxon is needed. In this case much depends on a better understanding of the taxonomic value of the ability to produce secondary basidiospores. I would not be surprised if eventually *Tulasnella* were to be closely associated with tremellaceous genera.

McNabb (1964) assembled in *Cerinomyces* a series of species that would completely bridge the differences between *C. pallidus* and more typical Dacrymycetaceae. If one is disposed to interpret *C. pallidus* as a strongly 'reduced' species, the possibility must be faced that the parts of this bridge consists of 'reduced' members of various groups of Dacrymycetaceae rather than a clean series of 'missing links'.

## Dacrymyces

(106). Although most of the groups of Hymenomycetes have become impenetrable tangles to those wishing to sort out the taxa by the best current methods, some groups are more afflicted by man-made difficulties than others. Dacrymyces is one of the examples where mycologists are perhaps more to be blamed than nature for the troubles involved in peeling out the species and their correct names. Insufficient descriptions, erroneous observations, inexact measurements, hasty conclusions, not deigning to preserve material, imperfect knowledge of the literature, and erratic nomenclature have been liberally sown throughout the building up of our knowledge of the genus. To make matters worse there are the many difficulties presented by the objects themselves.

Among those who have unquestionably had an important share in increasing our knowledge of the genus was Brefeld. He elaborated the classification of the jelly fungi on the basis laid out by the Tulasnes and de Bary, although he tried too hard to inflate his own importance. In addition, he had an intimate knowledge of more species of *Dacrymyces* than any person before him. It was a pity, however, that he was not a well-trained taxonomist: as far as I know he did not preserve specimens;

his specific descriptions are often poor, overlooking important details, and they are usually drowned in a verbose text from which they can sometimes be rescued only by patient analysis. His microscopical measurements are almost always wrong, being usually much too large. The trouble is that it is not always possible to decide how far wrong his spore measurements are—if they are not perhaps in some cases, as an exception, correct after all.

All these factors have contributed to subsequent complications. Some of his species have been too easily suppressed, apparently because his 'hidden' descriptions were not read carefully enough (D. longisporus). Others are still problematic because of uncertainty about the true spore dimensions (cf. discussion under D. lutescens). To revaluate Brefeld's work on Dacrymyces I have tried below to distil the descriptions of some of his species from the prolixity and to indicate what has been said about them. All references to the blastoconidia are omitted.

(107). Karsten is another author who contributed to our knowledge of *Dacrymyces* in Europe by describing a relatively large number of new species. His descriptions, however, are usually poor and they are not accompanied by illustrations. In some respects his work is superior to Brefeld's; on the whole his spore dimensions have been found to be quite accurate, while moreover he preserved the types of his new taxa. This will enable the monographer to identify most of his species. If I am well informed, we shall hear more about them in the near future, so that no notes are appended to his names.

(108). Judging from the description of Ceracea aureofulva published by Bresadola, this species produces corticioid fruitbodies that may form rather extensive crusts so that he placed it in Ceracea Cragin as this genus was understood by Patouillard. The dacrymycetoid species referred to this genus at one time or another have now been distributed over Cerinomyces (105) and Arrhytidia. As now defined Cerinomyces has truly effused, often confluent fruitbodies that are never attached to the substratum by a definitely limited or root-like base. In Arrhytidia the corticioid appearence is the result of confluence of more or less distinctly rooted fruitbodies such as are typical of Dacrymyces. Whether Arrhytidia should be maintained as a genus or not is still an open question which will not be discussed here.

As to Ceracea aureofulva, it is not evident from the published descriptions which of the two 'resupinate' genera it could be referred to, but the odds are against referring it to Cerinomyces. Since I doubt that Arrhytidia is a good genus, I have entered the species in Dacrymyces.

von Höhnel [1908 (SbW 117): 1027] identified C. aureofulva with Dacrymyces confluens and he also thought of Dacrymyces corticioides Ell. & Ev. as a possible synonym. Coker [1928 (JMS 43): 237] and Brasfield [1938 (AMN 20): 214], who both indicated that they studied authentic material, listed C. aureofulva as a synonym of Arrhytidia involuta (Schw.) Coker, a species to which Coker and Martin also referred Dacrymyces corticioides. Bresadola [1911 (Am 9): 425] dissented from the identification of C. aureofulva with Dacrymyces confluens.

Recently Dr. R. F. R. McNabb kindly informed me that he intends to treat Ceracea aureofulva as a synonym of Dacrymyces corticioides. He is of the opinion that this species has usually been confused with Arrhytidia involuta, but he considers the two distinct, and, he added, most of the descriptions of A. involuta in fact apply to D. corticioides [1885 (JM 1): 149].

(109). The species is currently known as D. palmatus, but the corresponding basionym, Tremella palmata Schw., is pre-occupied. The next name to be considered is Dacrymyces rubiformis; this species has been redescribed in detail by Neuhoff. Kennedy suggested that it might be conspecific with D. palmatus, but Neuhoff, who knew them both, kept them apart. The spore dimensions of D. palmatus are practically the same in Kennedy's description [1959b: 907; 17-21(-25)  $\mu$  long] and that of Neuhoff's (1936b: 44; 18-28  $\mu$  long), while those of D. rubiformis are decidedly smaller: according to Neuhoff [1936b: 43; 16-18(-20)  $\mu$  long]. However, there seems to be some overlapping and the possibility that the correct name will appear to be D. rubiformis cannot be ruled out as improbable. The decision must be left to a later monographer, since I feel not competent to act at this stage. The next older name is Dacrymyces chrysosperma.

(110). Tremella pinicola Britz.  $\equiv T$ . britzelmayri was poorly described and depicted. Britzelmayr himself compared it with T. mesenterica: "... auch bezüglich der Sporen wie T. mesenterica", a species whose spores he simultaneously depicted as globose and stating them to be  $11-15 \times 9-10 \mu$ . It was inevitable that eventually T. pinicola would be referred to T. mesenterica, also in view of the fact that after all the latter species has very rarely been reported from coniferous wood. A collection from Picea abies made in Denmark was determined by Neuhoff as T. pinicola and considered by him a variety of T. mesenterica (cf. Bjørnekaer, 1944: 25, 33).

The original figures, however, plus the fact that it was not merely accidentally that Britzelmayr found *T. pinicola* but that he came across it repeatedly on diverse gymnosperm substrata ("aus der Rinde von Fichten, Föhren oder Latschen hervorbrechend") point into another direction. If Britzelmayr had said nothing about the spores, I would, without much hesitation, have suggested *Dacrymyces chrysosperma* [D. palmatus (Schw.) Bres. apud Höhn.], a species that Britzelmayr reported and depicted under the name *Dacrymyces multiseptatus* G. Beck simultaneously with the publication of *Tremella pinicola*.

The globular spores depicted (but not described) by Britzelmayr for T. pinicola are of about the same size as those of T. mesenterica on the same plate, or perhaps slightly smaller; therefore, (assuming that they were correctly recorded) they must be accepted as measuring about 10  $\mu$  in diameter, or somewhat larger. For this and other reasons I cannot agree with Ade [1923 (ZP 2): 63] who wrote about T. pinicola: "Es stellt m.E. [T. pinicola] nur Dacrymyces abietina mit den zahllos vorkommenden Konidien (3-4  $\mu$ , länglichrund), nicht Sporen, vor."

(III). One of Brefeld's neglected species is what he erroneously identified with *Dacrymyces chrysocomus*. As will appear from a comparison of Brefeld's account with the current interpretation of *D. chrysocomus* (sensu Fries) the two species have little in common. The following description was drawn up from Brefeld's data (1888a: 156 pl. 10 fs. 12-17):

Fruitbodies Tremella-like, closely resembling conidial states of Tremella lutescens [sensu Bref = T. mesenterica], often formed along the whole length of a branch, developing only during very wet weather, upon drying shriveling up to almost complete inconspicuousness, sessile, at first globosely vaulted, then upon enlarging developing several deep depressions,  $3-18 \times 3-10$  mm, 2-8 mm high (after figure), fierily yellow-orange, gradually becoming softer, finally diffluent into a colourless mucus which almost completely disappears upon drying; context soft, tremblingly jelly-like, colourless except for hymenial layer. Basidia huge, the base rounded,  $2.5-3 \times$  wider than the hyphae from which they arise (after figure), elongated club-shaped, then forked into two strongly developed sterigmata, with coloured contents; in young fruitbodies mixed with sterile hyphal ends. Spores short-thickset, adaxially slightly depressed, in dorsal view oblong, apiculate,  $35 \times 15 \mu$  [presumably incorrect measurements], becoming multiseptate immediately after being shed; septa up to 12-14 (after figures), in very large spores up to 19, closely set, some oblique; contents (in unseptate spores) dense, coloured, with hyaline central guttule. — The size of the spores as computed from the figures (pl. 10 f. 16: 4) is about  $30 \times 14 \mu$ .

On small, fallen branches of *Pinus silvestris*. Throughout the winter. Germany, presumably Westphalia, near Münster.

It is difficult to understand how Neuhoff (1936b: 39) could identify this Brefeldian species with D. conformis (P. Karst.) Neuh., which in its original sense and to all appearances in Neuhoff's conception is nothing other than Femsjonia pezizaeformis. In any case there is almost nothing in Brefeld's description to suggest the species Neuhoff described as Dacrymyces conformis.

- Dr. D. A. Reid (in litt.) feels sure that Brefeld's conception is identical with the species described some years ago under the name of *Dacrymyces estonicus* Raitv., a species characterized by basidia that have been termed urniform, viz. with a basal swollen portion and a narrower distal portion. The broadly rounded base Brefeld emphasized for the basidia and some of the basidia he drew support this view.
- (112). Since Brefeld's studies on *Dacrymyces* it has become customary to distinguish between a species occurring in both an arthrosporous and a basidiferous state, and one or more species that closely resemble the former in many particulars but that are not capable of producing arthrospores. Brefeld called the first *D. deliquescens*, but the correct name is *D. stillatus* (120). The others he called *D. cerebriformis* and *D. lutescens*. It is not easy to form a well-founded opinion about these latter species as to either their status or their correct names.

Keeping to the tradition that in Europe there is only one species which forms arthrospores and that similar fungi which do not produce them are specifically distinct (which is not altogether self-evident) I have assembled the latter crowd under the name Dacrymyces lacrymalis. From the following discussions it will be

seen that this group is nothing but a receptacle for several taxa that have so far not been adequately delimitated from one another and/or on which conflicting opinions have been published.

As to *D. lacrymalis*, Nees considered it one of the two intergrading forms (states) that he combined under the name of *D. stillatus*. This is the earliest disposition of the name. In the absence of sufficient contra-indications it is common practice to follow such a disposition, which in this case would amount to identifying *D. lacrymans* with the basidiferous state of *D. stillatus*.

Fries made D. lacrymalis a variety of D. stillatus (original sense) and as such it gradually evolved into D. latescens Neuh. =D. latescens Bref. sensu Neuh. the counterpart of D. stillatus never producing arthrospores. Donk (1964: 10) took Fries's variety as exclusively based on the fungus Persoon described in 1822 (p. 104) as D. lacrymalis, a conclusion supported by a comparison of Persoon's and Fries's diagnoses of 1822. (It is possible that the fungus Persoon described in 1801 is not the same as the one of 1822.)

As present I do not feel competent to decide between the two interpretations and in taking up the name D. lacrymalis I merely follow the main trend which looks on D. latescens Neuh.  $\equiv D$ . stillatus var.  $\beta$ . Fr.  $\equiv T$ remella lacrymalis Pers. as unable to produce an arthrosporous state, hence as different from D. stillatus (original sense).

Two further interpretations of D. lacrymalis are briefly mentioned above on the check list.

- (113). At first Fries (1822: 230) listed Dacrymyces deliquescens Bull. as synonym of the original D. stillatus (120). Duby (1830: 729) exchanged the two names of the taxon of Nees and Fries. This preference for the name D. deliquescens has become widely accepted. Donk (1964: 6) was not entirely convinced that the two species were in fact the same. He discussed Bulliard's protologue and the various conceptions of the species in some detail, in the end concluding that D. deliquescens was apparently not conspecific with D. stillatus. He regarded it a nomen dubium to be withdrawn from circulation. In any case, if one wishes to identify D. deliquescens with D. stillatus in a very inclusive sense, the former has in accordance with present rules of nomenclature a 'later' name, as it was revalidated after D. stillatus. Were I compelled to accept D. deliquescens, I would perhaps identify it with D. lacrymalis in the temporary sense adopted in this publication, rather than with D. minor (114).
- (114). Dacrymyces minor was described from North America. Although Coker had previously suggested that it might be the same as "D. deliquescens" it was not reported from Europe until Kennedy (1959b: 908) did this under the name D. deliquescens var. minor (Peck) L. Kenn. She listed it from England, Germany, and Sweden (specimens studied) and included in its synonymy "Dacrymyces deliquescens f. lutescens Fries, Syst. Myc. 2: 230. 1822 (teste Neuhoff)" (a variety, rather than a form, not named by Fries on this occasion), "Dacrymyces lutescens Bref. sensu Neuhoff, Arkiv för Bot. 28 A¹: 41 [= 43, 48]. 1936", and "Dacrymyces deliquescens f. [= var.] fagicola

Bourd. & Galz. Hymén. France 67 [= 68]. 1928". Thus, she actually identified *D. lutescens* sensu Neuh. with the North American *D. minor*. She did not explain the "teste Neuhoff". I am not aware that Neuhoff ever identified the two. Neuhoff's latest description (see p. 274 for an English translation) does not readily support this identification, although he described the individual fruitbodies as small (1–3 mm wide) and often becoming confluent at maturity.

The inclusion (without any comment) of D. deliquescens var. fagicola  $\equiv D$ . fagicola was apparently not the result of an inspection of authentic material. To judge from its original description ("tubercules lenticulaires, 0,5 mm diam., en groupes serrés") the fruitbodies of this species are not only differently shaped, but they are also much smaller and more densely crowded. In all these respects D acrymyces fagicola immediately brings to mind D. succineus sensu Boud. Since there is still a clear and apparently broad margin of doubt it seems wise to treat D. fagicola for the present as a species distinct from D. minor.

When I had to decide whether to merge *D. minor* in the complex of *D. lacrymalis* (as here delimited) or to keep it separate I chose the second alternative mainly to draw attention to it. Apparently the species had already been described from Europe under the name of *D. gallaicus*. This was found on gymnosperm wood, but although *D. minor* is nearly always reported from angiosperm wood it may be recalled that Kennedy gave the habitat as "angiosperm or rarely gymnosperm wood".

Compare Tremella guttata Bon. and Dacrymyces saccharinus Sacc. & Trav., both published at an earlier date than D. minor.

(115). Dacrymyces lutescens Bref.—Brefeld (1888a: 152 pl. 10 fs. 1, 2) compared this species with his D. deliquescens 11 and gave a description that was mainly differential and contained the following information.

Fruitbodies in comparison with D. deliquescens on an average somewhat larger and brighter in colour, viz. pale orange, when young showing only a few folds, the latter increasing in number while the spores are being shed and then developing into crater-like depressions, the two fruitbodies depicted 12 and 13 mm in diam.; context firmer and not diffluent during or after sporulaton, colourless with orange hymenial layer on section. Basidia wider and larger. Spores wider and larger,  $28 \times 10 \mu$  [presumably erroneous measurements, see below], but same kidney-shaped form and also becoming 3- (rarely 4-)septate. No arthrospores ('Gemmen') formed, at least these not observed either in nature or in cultures. — The size of the spores as computed from the figures (  $pl.\ 10\ f.\ 2:\ 3$ ) is  $17.8 \times 7.2\ \mu.$ 

<sup>11</sup> As conceived by Brefeld (1888a: 141 pl. 9) this is Dacrymyces stillatus sensu stricto (120). He described in great detail both its arthrosporous and its basidiferous state, as well as the behaviour of the spores in culture. It is surprising to find that in this case his measurements of the spores are correct:  $15 \times 5 \mu$ ; this also agrees with measurements computed from the figures, for instance,  $16.5 \times 5.7 \mu$  (pl. 9 f. 3: 3). In connection with Brefeld's statement that on an average D. lutescens has the larger fruitbodies it may be pointed out that this would hardly be true if the fruitbodies of D. deliquescens he depicted (pl. 9 f. 1) had been drawn correctly to scale ('natural size'); in that case the fruitbodies of D. lutescens would have been unusually large.

On dead wood of frondose trees. Winter. Germany, presumably Westphalia, near Münster (Brefeld).

There is a remarkable discrepancy between the statement that the basidia and spores are considerably larger than in *D. stillatus* and the measurements computed from the plate, the latter being much smaller than the measurements given in the text. This would lead to the conclusion that perhaps in none of the aspects mentioned are the spores of *D. lutescens* essentially different from those of Brefeld's interpretation of *D. stillatus*.

Neuhoff (1936b: 43, 49) has given a description and notes of his interpretation of Brefeld's species of which the following is a translation from the German:

Fruitbodies scattered or gregarious, at first almost orbicular, disk-shaped and appressed or with somewhat deflexed margins, soon forming few sharply contrasting folds then developing irregularly (often almost foliaceous), with age often confluent as in D. deliquescens [= D. stillatus] and with blunt-edged gyrose folds on the surface; individual fruitbodies 1–3 mm wide; colour pale yellow to golden yellow, in dried condition [fruitbody] often hardly visible. Spores  $10-14(-16) \times 4-5.5 \,\mu$ , usually indistinctly septate, some more or less distinctly 4-celled.

On frondose wood.

Observations.—Dacrymyces lutescens, which grows only on frondose wood, <sup>12</sup> is the most polymorphous one of all the species of Dacrymyces.... The flat disk-shaped young stages... are distinguishable not only by the kind of wood but also by a difference in colour; in older specimens the shape of the fruitbodies is mostly distinctly different from those of [D. stillatus]. The spores of D. lutescens show a more pronounced cell-formation more often than those in D. caesius and D. cerebriformis; in this respect they then frequently agree with [D. stillatus].

I have given full information on both Brefeld's fungus and Neuhoff's interpretation of it inter alia in connection with the opinion (Kennedy, 1959b) that Dacrymyces lutescens Bref. were merely a synonym of typical D. deliquescens [= D. stillatus sensu stricto] (p. 910), and D. lutescens Bref. sensu Neuh. a synonym of D. minor Peck (p. 908), the last a species originally described from North America and not previously reported from Europe (114). It is regrettable that Kennedy did not comment on these conclusions. It might have been expected that she would have invalidated Brefeld's dictum that his D. lutescens differed from his conception of D. deliquescens (=D. stillatus) by its inability to produce arthrospores even in culture, since, as one of the main features, she emphasized for D. deliquescens the production of "arthrospores in the basidiocarp or in separate sporocarps (rarely absent)"!

The general tendency is to disregard the size of the spores given by Brefeld  $(28 \times 10 \ \mu)$  as merely an error—an error of the unusually large magnitude of about one hundred per cent! The possibility remains that in reality the true D. lutescens also has larger spores than D. stillatus. After all, Brefeld did find some unusual species of Dacrymyces (cf. D. longisporus, D. ovisporus) and this may be one of them.

Summarizing, D. lutescens Bref. (sensu orig.) is either a species very close to D. stillatus—perhaps too close for convenient separation—, or, conceivably, a good

<sup>&</sup>lt;sup>18</sup> Implying that D. delinquescens sensu Neuh. (= D. stillatus) was restricted to coniferous wood, which is not the case (120).

species distinguishable from *D. stillatus* not only by its lack of arthrospore formation but also by its, on an average, considerably larger spores.

If this second alternative is not ruled out a priori, then the name D. lutescens Bref. must be reserved for this still hypothetical large-spored taxon, and in any case dropped for the species to which Neuhoff applied Brefeld's appellation. The name D. lutescens Neuh. (non Bref.), being a later homonym, is not available at all.

(116). Dacrymyces cerebriformis Bref.—The following description is drawn up from Brefeld's account (1888a: 153 pl. 10 fs. 4-8).

Fruitbody on wood, erumpent through the loose covering bark, 3–12 mm in diam. (from the figures), may reach considerable sizes, often gregarious, outstanding by the surface which is from the start thrown into abundant brain-like gyrose folds, when young pale yellowish; on hedges of birchwood the fruitbodies may cover inch-broad surfaces and then are somewhat more strongly coloured and occasionally showing a brownish tint in the centre of older portions, rather firm, not diffluent. Basidia still larger than in D. lutescens. Spores big, long,  $25-28\times 8~\mu$  [measurements presumably incorrect], more strongly curved and (from figure) more slender than in D. deliquescens [= D. stillatus] and D. lutescens, immediately after being shed becoming 3- (rarely 4–5-)septate. — The size of the spores calculated from the plate (pl. 10 f. 6: 3, 4) is different from that stated in the text, viz.  $20\times 6.6$ –7.2  $\mu$ , the length measured in a straight line from base to top.

Preferentially on dead wood of Betula. Winter, Germany, presumably Westphalia, near Münster (Brefeld).

As conceived by Neuhoff (1936b: 43) the spores of this species would be 10-14 (-16)  $\times$  4-4.5  $\mu$ . This shows that he considered Brefeld's spore dimensions to be one hundred per cent too large.

If the spore measurements given by Brefeld are ignored, then Neuhoff's interpretation (1936b: 43, 50) seems to agree very closely with Brefeld's description and may very well be taken as correct. Neuhoff was not quite sure, however, that the species could be maintained in the future, perhaps implying that it might be too closely related to *D. lutescens* Bref. sensu Neuh.

Kennedy (1959b: 911) reduced D. cerebriformis (with a question mark) and D. cerebriformis sensu Neuh. (without a question mark) to D. ellisii Coker without any comment. The latter species she interpreted as a taxon not producing arthrospores; this feature has been contested (121).

- (117). In publishing Dacrymyces harperi, Bresadola fell victim to Brefeld's spore measurements (if these are in fact incorrect, which is very likely). The description reads exactly like that of D. cerebriformis; Bresadola remarked of his new species, "Habitus Dacryomycetis cerebriformis et D. lutescentis, sed sporis duplo minoribus diversus" (115, 116).
- (118). Dacrymyces longisporus Bref. seems to be an extremely rare species which, as far as I am aware, has not been recorded since its description by Brefeld. Neuhoff (1936b: 39, 52) dismissed it casually as a synonym of Dacrymyces chrysocomus, but

this must be an error; apparently it was caused by a superficial likeness between the spores of the two species. In other respects *D. longisporus* is widely different, even in some important spore characters. The following description may serve to underline this conclusion; it was drawn up from Brefeld's original account (1888a: 158 pl. 10 fs. 18, 19).

Fruitbodies gregarious, closely resembling those of D. ovisporus, small, punctiform, hardly reaching the size of a small pin-head, vaulted, surface even, without any indication of folds, pale yellow. Spores oblong-cylindrical, adaxially flattened to depressed, the base somewhat attenuate, distinctly apiculate (after figures), 35–40  $\times$  15  $\mu$  [presumably incorrect measurements], becoming 11–14-septate, with some longitudinal walls in central portion. — The size of the spores as computed from the figures (pl. 10 f. 18: 6, 7) is about 31.3–34.7  $\times$  10–11  $\mu$ . Old hedges. Germany, presumably Westphalia, near Münster (Brefeld).

This species was found mixed with Dacrymyces ovisporus Bref. (119); the fruitbodies of the two species could be distinguished only by looking at the spores. This strongly suggests that the fruitbodies of D. longisporus are the same as in D. ovisporus, pin-head shaped, pustulate, rather than disk- to cup-shaped and fairly large like in full-grown fruitbodies of D. chrysocomus to which species Neuhoff reduced Brefeld's fungus. Moreover, in the latter species the spores become not more than 8-septate (according to Neuhoff himself). Not only is the number of septa smaller, but no longitudinal walls develop in the spores of D. chrysocomus.

(119). Dacrymyces ovisporus Bref. is a rare species of which only four collections are on record for Europe. These were described by Brefeld (1888a: 158 pl. 10 fs. 20, 21) from Germany (type apparently not preserved), Laurila [1930 (AVa 10<sup>4</sup>): 2] from Finland, and Neuhoff (1936b: 40, 44) and Kennedy (1959b: 899) from Sweden. The descriptions supplement and correct one another. The species is now relatively well known and highly characteristic.

The following is an attempt to drast an 'original' description from Breseld's account (1888a: 158 pl. 10 fs. 20, 21).

Fruitbodies apparently gregarious, closely resembling those of D. longisporus, no difference worth mentioning to be detected except microscopically. Basidia with vaulted top between the two sterigmata, which arise subapically instead of apically as in the other species of the genus. Spores (when shed) globose, resembling Tremella-spores,  $20-25 \times 15 \,\mu$  [presumably incorrect measurements] (according to the figures, broad ovoid, with subeccentric apiculus), tardily divided by walls in various directions into numerous small cells. — Spore measurements computed from the figures agree with the recorded ones, the largest dimensions being  $23 \times 16.7 \,\mu$ .

Old hedges, in the company of *D. longisporus*. Germany, presumably Westphalia, near Münster (Brefeld).

(120). In a previous paper (Donk, 1964) I discussed at some length most of the 'old' species of *Dacrymyces*. One of the conclusions is that the type species of the generic name, viz. *Dacrymyces stillatus* Nees, is the same as the fungus that has been quite often called *D. deliquescens*. This is the one European species with three-septate spores

that occurs in nature in two states usually formed in the neighbourhood to each other, generally on coniferous, but fairly often also on frondose, wood. In my opinion Nees's protologue is based mainly on the basidiferous state, but the arthrosporous state is also traceable in his account. When Fries revalidated the name D. stillatus in the starting-point book ("Systema") he relied completely on Nees's protologue (except for the variety he admitted). This will explain why I felt obliged to restore the name D. stillatus in its original sense. It could have been rejected on the ground that it is a nomen ambiguum, a name used in many different senses. Since, however, it is the type species of the generic name Dacrymyces and considering that many names in the genus could be rejected for the same reason, I found it preferable to maintain the correct denomination.

To replace the name D. stillatus by D. deliquescens (II3) would not be an acceptable solution; I feel obliged to dismiss the latter name as a nomen dubium and certainly not likely to be synonymous with D. stillatus in the present sense.

Neuhoff conceived *D. deliquescens* sensu auctt. [= *D. stillatus* sensu stricto] as a strictly "Nadelholz"-inhabiting species; when he was later confronted with arthrospore formation on frondose wood, he placed the "Laubholz" element of the species in a special form of *D. lutescens* Bref. (f. subdeliquescens). When he cited Brefeld's conception of *D. deliquescens* correctly in the synonymy of his own interpretation of *D. deliquescens* (Neuhoff, 1936b: 44) he must have overlooked that Brefeld stated that 'one looks hard'y ever in vain for *D. deliquescens* in winter during rainy weather in any place where dead frondose wood is copiously present.'

I wish to emphasize that arthrosporous fruitbodies often occur on frondose rather than only on coniferous wood, as N-uhoff originally believed: if there is only one arthrospore-forming species, then it occurs on both kinds of wood. This one species must then be called D. stillatus rather than D. deliquescens (cf. Donk, 1964: 2-6), while Dacrymyces lutescens f. subdeliquescens Neuhoff, later instituted for the arthrospore-forming forms on frondose wood, must be referred to D. stillatus as a synonym. The publication of this form shows that in practice Neuhoff eventually used only a single character to differentiate between D. stillatus and D. lutescens, the substratum being coniferous wood in the former, frondose wood in the latter.

The conception that *D. stillatus* is based *only* on the arthrosporous state goes back to Corda (1838 I. 2: 32); it was vigorously defended by Bonorden. Thus the fiction that *D. stillatus* was the correct name for the imperfect state was later on accepted by many authors.

(121). Neuhoff (1936b: 48) listed Dacrymyces ellisii Coker as a synonym of his conception of D. lutescens. This is at variance with Kennedy's views. She identified D. cerebrifomis sensu Neuh. with D. ellisii. Some years ago Olive [1958 (BTC 85): 108] examined the type of D. ellisii and found that it produced arthrospores ("catenulate oidia"). He concluded that in other respects also it compared favourably with D. deliquescens (= D. stillatus). A carefully study of Coker's protologue, supplemented with Olive's data, would seem to require the equation of D. ellisii with D. lutescens f. subdeliquescens Neuhoff and with D. stillatus Nees.

(122). After E. L. Tulasne (1853: 211-219 pl. 12 fs. 13-19) had misapplied the name Dacrymyces stillatus (120) to a species with many-septate spores, it was often used either for a mixtum compositum (details of these spores were engrafted on earlier published 'macroscopic' descriptions: Berkeley, Fries, Schroeter) or for other species with similarly septate spores. The confusion thus proliferated has not yet been adequately disentangled.

Dacrymyces stillatus Nees per Fr. sensu Bref.—The following description was compiled from Brefeld's somewhat lengthy account (1888a: 155 pl. 10 fs. 9-11) of the species he erroneously called D. stillatus.

Fruitbodies often gregarious and in rows, erumpent through bark, after removal of bark appearing to consist of a head and a stalk-like prolongation, not conspicuous because of colour which is duller and darker than in the other species of the genus (known to Brefeld), more reddish then yellowish; head as a rule globular with superficial folds, about 1.5–3.5 mm in diam. (after figures); stalk-like prolongation irregular, its length depending on the thickness of the bark, colourless; context solid, firm, cartilaginous-gelatinous; young fruitbodies sterile. Basidia large. Spores larger and less curved than in D. cerebriformis, 25–30 × 12  $\mu$  [presumably erroneous measurements], becoming 7–9-septate. — The single so far not-germinating spore depicted (pl. 10 f. 10: 1) measures about 20 × 6.6  $\mu$  (relying on the indicated magnification), hence considerably less than the text would suggest.

On fallen branches of *Pinus silvestris*. During the cold season. Germany, presumably Westphalia, near Münster.

Brefeld himself considered this species to be the same as that previously described by E. L. Tulasne (1853: 219) under the name Dacrymyces stillatus Nees (= D. tulasnei Neuhoff). Not only was the name D. stillatus misapplied in both cases (cf. Donk, 1964: 2-6) but the identity of the fungi described by Brefeld with D. tulasnei is also in doubt. A notable difference seems to be that the mature fruitbodies of Brefeld's species do not become concave and almost cyathiform when they form the hymenium.

The citation of "D. stillatus Bref." as a synonym of D. deliquescens (= D. stillatus sensu orig.) by Neuhoff (1936b: 44) is evidently a slip.

Both the consistency and the stalk-like prolongation as mentioned by Brefeld might be taken as pointing in the direction of *Ditiola*. As conceived by Kobayasi (1939b: 106, 107) this genus has thick-walled hyphae except for those of the sub-hymenial region, and a more or less pronounced stalk. Both characters of Brefeld's fungus may, however, also be encountered in *Dacrymyces*: a cartilaginous-gelatinous context (but thin-walled internal hyphae throughout) occurs in some species of the than genus *Dacrymyces*. The stalk might well be induced by the substratum, owing its existence and length to the presence of the bark through which the fruitbodies must grow.

There is a remote possibility that Septocolla stipitata Bon. is this species.

# Ditiola

(123). Recently Kennedy (1964) published a monograph of this genus in which she accepted a broadly conceived Ditiola radicata. She listed as synonyms Dacryopsis brasiliensis Lloyd, Dacryomitra brunnea G. W. Mart., Dacrymyces cupularis Lloyd sensu Brasf., Ditiola fagi Oud., Coryne gyrocephala Berk. & C., Ditiola nuda B. & Br., Tremella stipitata Peck, and Dacrymyces stipitatus (Bourd. & G.) Neuh., all names, except for Ditiola nuda and Dacrymyces stipitatus, based on extra-European material. As some of these identifications are very doubtful, if not outright erroneous, I have taken no account of names not based on European types. Ditiola nuda and Dacrymyces stipitatus are left in Dacrymyces until further evidence is published showing that they do really not belong to that genus.

# Femsjonia

(124). Cyphella friesii Weinm.  $\equiv$  Guepinia cyphella Fr. is a 'lost' species not recognized by recent mycologists who have refrained from giving an opinion. To me the description strongly suggests Femsjonia pezizaeformis; had the protologue called the hymenium yellow instead of 'fuscescent' I should not have entertained much doubt. Fries's remark is significant: "Non liquet utrum Guepinia an Cyphella, hujus forma, substantia vero cartilatineo-gelatinosae Guepiniae".

# Guepiniopsis

(125). Recently McNabb (1965c: 160-162) acted as if the names "Guepiniopsis torta Pat." and "Dacrymyces contortus Ces." were names based on specimens of Guepiniopsis buccina. From a nomenclative point of view this is misleading. I repeat what Donk (1964: 12-13) wrote about these names:

"For some time Fries (1849: 359, 470) believed most species of Dacrymyces to be mere states of discomycetes referable to Calloria Fr. Some years later, with this in mind, Cesati (1855 [in Rab. F.e.]: No. 1948) associated what was presumably a species of Dacrymyces (lacking in the copy I studied) with the pezizoid Guepiniopsis buccina, and referred both to a single species. His specimens were distributed by Rabenhorst with the following labelling: "1984. Dacrymyces contortus Fr. / Confer Fr. Summ. veg. p. 359 et 471 de evolutione D. contorti in Callorian deliquescentem, de qua vestigia reperiuntur in specimin. sub b adlatis." This accompanying reference also removes all doubt that 'contortus' was a mere error for 'tortus' which, however, resulted in such a different epithet that it seems advisable to consider it a misapplied isonym: Dacrymyces contortus Ces. = D. tortus (Willd.) per Fr. (No descriptive matter was added by Cesati.) De Bary (1884: 62) transferred "Dacrymydes contortus Rabenh. Herb. Mycol. Nr. 1984" to Guepinia Fr., however, without adequate explanation.

"There is no doubt that this was the source of Patouillard's misinterpretation which he perpetuated initially as "Tremella torta Willd. (Dacrymyces tortus Fr.)" (Doassens & Patouillard, 1883 [(Rm 5)]: 96), and, later on as Guepiniopsis tortus when he introduced the new genus Guepiniopsis for it (Patouillard, 1883 [T.a. 1]: 28 f. 62). However, some years afterwards he seems to have become convinced of having committed an error of determination and started

to call the fungus Guepiniopsis merulina (Patouillard, 1887: 159). . . . "

In my opinion 'Guepiniopsis torta Pat.' and 'Dacrymyces contortus Ces.' must both be cited in the synonymy of Guepiniopsis buccina as 'Guepiniopsis torta (Willd. per Fr.) Pat. sensu Pat.' and 'Dacrymyces contortus Ces. sensu Ces.' to indicate that the types of these names belong elsewhere. Moreover it is incorrect to cite 'Guepiniopsis contorta (Ces.) de Bary' as a "nom. nud." under Guepiniopsis buccina. The recombination was validly published by a reference to the basionym (as cited above), but simultaneously misapplied: hence, 'Guepiniopsis contorta (Ces.) Bary sensu Bary'. On this check list I have entered these names in accordance with the above conclusions.

### **EXOBASIDIALES**

### EXOBASIDIACEAE

### Exobasidium

(126). This genus proved to be a most difficult one to harness for the present check list, partly because of incomplete descriptions, partly because specific delimitations vary from author to author. Thus Fuckel, Burt (1915), and Savile (1959) have conceived E. vaccinii as an inclusive species, basing their conceptions mainly on the morphology of the spores and to a lesser degree of the basidia and sterigmata. Others have also devoted their attention to the different types of infection: for instance, Juel (1912) and Nannfeldt. I have allied myself with this second group.

The various symptoms may be classified thus:

- (i) Localized infections. (a) Small spots without hypertrophy of host tissue. If such spots appear thickened, this is caused by the thick hymenium developing beneath the cuticula. Examples, *Exobasidium ledi* and *E. dubium*. (b) Galls. These consist of more or less irregular spots to more general infections, even of whole shoots, resulting in deformations and/or excrescences. The affected portions always show considerable hypertrophy of tissue and are notably thickened when still fresh. Examples, *E. vaccinii*, *E. oxycocci*.
- (ii) Systemic infection, most often affecting whole shoots without causing considerable increase in thickness of the host organs. The shoots may be enlarged or develop more abnormally into witches' brooms. Examples, E. myrtilli, E. vaccinii-uliginosi.

Originally new specific names were usually based on macroscopic features (viz. the symptoms caused by the infection) and the identity of the host. A modern species conception should also take into account certain microscopical details (especially of the spores and the basidia) and when possible cultural characters as well. It is now generally accepted that at least some species may occur on different hosts and induce galls that may vary in appearance. Inversely, some host species may be infected by more than one species of *Exobasidium*.

(127). In Europe most species are restricted to Ericaceae. Those that occur on hosts of other families may well be congeneric, although this is not always even approximately certain. Some minor amputations of the genus were the exclusion of Exobasidiellum Donk (75), a monotypic genus on Gramineae; and more recently Articomyces Saville, which was introduced for Exobasidium warmingii parasitizing certain species of Saxifraga (Saxifragaceae), discussed below (141). In Europe there are only a few species that do not attack Ericaceae: these are found, except for those ones on Saxifraga, on Anacardiaceae, Lauraceae (148), Rutaceae, and (in the case of a doubtful species) Aquifoliaceae.

Outside Europe the genus is also known from Empetraceae, Theaceae, Epacridaceae, and Symplocaceae, and perhaps some other families, provided one wishes also to consider certain very insufficiently described species.

- (128). I seize this opportunity to plead for the adoption of some standardized method of measuring the spores for purposes of comparison. By some authors spores have been used as the most important source from which specific characters are derived. Usually the spores studied and measured have been taken directly from the galls and the like, and usually no mention was made of the medium in which the spores were studied; no doubt various media, such as water and KOH solutions have been used. Savile (1959: 644) observed the spores in lactophenol. A generally acceptable standard method for arriving at comparable results may be the one used by Sundström (1964: 55). He placed diseased portions of a host plant in petri dishes at 20° C in which the spores could be shed on malt agar. After three hours the spores were measured. (The spores with the shortest latent germination period germinated after three hours.) Mean values were based on 15-40 spores in each case. In some species the difference between Sundström's and Juel's findings are astonishingly large.
- (129). Savile (1959: 642, 646, 649) rejected Exobasidium angustisporum without really discussing it ("fully typical E. vaccinii"); he conceived E. vaccinii in a very broad sense.

The basis for entering the species as valid on the present check list is that it was recorded from Sweden by Sundström (1964: 10), who indicated that cultures were isolated from systemic attacks of Arctostaphylos alpina (= Arctous alpina).

(130). The number of species described in the genus Exobasidium from species of Rhododendron (inclusive of Azalea) is proportionately high. The following list enumerates these species on a world-wide basis; the entries consist further of the date of publication, the type locality (country), and the host. The names of host species that periodically shed their leaves (the so-called azaleas) are preceded by an asterisk (\*).

Exobasidium azaleae Peck 1873 (U.S.A., New York), on \*Rhododendron nudiflorum (L.) Torr., E. burtii Zeller 1934 (U.S.A., Oregon), on R. albiflorum Hook.,

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E. butleri H. & P. Syd. apud Syd. & Butl. 1912 (India), on R. arboreum Sm.,
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- E. canadense Savile 1959 (U.S.A., North Hampshire), on \*R. canadense (L.) Torr.,
- E. caucasicum Woronich. 1920 (U.S.S.R., Transcaucasia), on R. caucasicum Pallas,
- E. decolorans Harkn. 1884 (U.S.A., California), on \*R. occidentale A. Gray,
- E. discoideum J. B. Ell. 1874 (U.S.A., New Jersey), on \*R. viscosum (L.) Torr.,
- E. dubium Rac. 1909 (Poland), on Azalea pontica L. [= \*R. flavum G. Don] = \*R. luteum Sweet,
- E. hemisphaericum Shirai 1896 (Japan), on R. metternichii Sieb. & Zucc.,
- E. japonicum Shirai 1896 (Japan), on Azalea indica L. = \*R. indicum (L.) Sweet,
- E. magnusii Woronich. 1913 (U.S.S.R., Caucasia), on \*R. flavum = \*R. luteum Sweet,
- E. pentasporium Shirai 1896 (Japan), on \*R. indicum (L.) Sweet,
- E. rhododendri (Fuck.) Cramer apud Geyler 1874 (Switzerland), on R. ferrugineum L.,
- E. rhododendri Quél. 1886 (France), on R. ferrugineum L.,
- E. shiraianum P. Henn. 1902 (Japan), on R. metternichii Sieb. & Zucc.,
- E. vulcanicum Rac. 1900 (Indonesia, Java), on R. javanicum (Bl.) Bennett and R. retusum (Bl.) Bennett,
- E. yoshinagai P. Henn. 1902 (Japan), on R. tosaense Makino,
- E. zeylanicum Petch 1909 (Ceylon), on R. arboreum Sm.

The six names (epithets spaced) based on, or recorded from (E. discoideum), European material collected from indigenous hosts, are E. caucasicum, E. dubium, E. magnusii, E. rhododendri (twice), and E. discoideum. According to Siemaszko [cited by Trotter 1926 (SF 24): 1325] and Woronichin (1926: 296) E. dubium and E. magnusii are synonymous, a conclusion that, judging from the published descriptions, seems correct. Also synonymous are the two homonyms (E. rhododendri). This would leave the following four species as occurring wild in Europe: E. caucasicum and E. rhododendri (Fuck.) Cramer, both on evergreen species of Rhododendron, the first systemic, the second causing galls; and E. dubium (small spots) and E. discoideum (marginate galls) on deciduous-leafed species (azaleas). I have not gone deeply into the matter and do not know whether these names should not perhaps be synonymized with other names listed above or not. A priori it is not likely that they are to be taken as synonyms of E. vaccinii (see also below). The determination of the European material as E. discoideum is still in need of critical comparison with material from North America, where the type was found. For the alien E. japonicum, see (131).

Certain authors have considered E. japonicum and E. rhododendri as belonging to E. vaccinii. Graafland (1960: 364-365) found that Vaccinium vitis-idaea was not infected by E. japonicum, and that conversely azalea cultivars were not infected by E. vaccinii. This difference in pathogenicity, added to certain differences between their cultures, led him to regard the two as specifically distinct. He also found cultural differences between E. japonicum and E. rhododendri and between E. rhododendri and E. vaccini, which led him to assume that E. rhododendri "must also be considered as a physiological specialized form" (Graafland, 1960: 365).

(131). Exobasidium discoideum was described from North America where it was found on Rhododendron viscosum (L.) Torr. It was reduced to the synonymy of E.

vaccinii by Burt and Savile. In Europe the name has been applied to what may appear to be two different species of Exobasidium. Petri (1907) referred to it the species that produce galls in the form of deformed host portions on cultivated azaleas, viz. to what is considered an alien and called E. japonicum on this check list. Other authors (P. Magnus, Raciborski, Woronichin) have applied the name to the species that occurs on a horst indigenous to Europe, Rhododendron luteum Sweet (=Azalea pontica L. = Rhododendron flavum G. Don), on which it causes galls of a quite different habit, viz. more or less marginate and flattened excrescences attached to the leaves by a narrow, central base. The determination as E. discoideum would appear to be the correct one or at least the one expressing most closely the relationship of the wild European form. To settle this question comparison of specimens from the two continents is desirable. I have not come across reports of E. japonicum in its usual greenhouse expression as occurring on wild European azalea species.

(132). Exobasidium dubium has been reported only from Europe, where it occurs on Rhododendron luteum Sweet. One of the localities (Caucasia) coincides with the main distribution area of the host, the other (Sandomier forest, Poland) is an isolated and restricted locality. Like in E. ledi the fungus causes small yellow spots without hypertrophy of host tissue; critical comparison of the two species is recommended.

Raciborski (1909) hesitated to consider E. dubium distinct from E. discoideum (131), which was also found in the same locality and even on the same plant. He thought it conceivable that the two were merely different expressions of the same species, their microscopical details being much the same. In view of Richards's findings (1896) in connection with E. andromedae Peck (138) such a possibility should not be rejected without careful consideration. In the latter case, however, the differences are between two types of galls, viz. localized deformations of the type as it occurs in E. vaccinii against often enormous bag galls, while in the case of E. dubium and E. discoideum the differences are between non-hypertrophied small, yellow spots against galls in the form of quite notable and characteristically shaped excrescences.

The species was described twice, once from Poland (E. dubium) and once from Caucasia (E. magnusii). Woronichin (1926: 296), the author of the second name, considered E. dubium a nomen nudum, and, therefore, rejected it. This was not correct. When publishing E. dubium in his "Mycotheca polonica", Raciborski, it is true, did not accompany the name by a description, but he referred to his description of the fungus as Exobasidium sp. in another, previous publication (Raciborski, 1909: 388).

Exobasidium dubium was also called E. vaccinii f. rhododendri-flavi Bubák (nomen nudum).

(133). Exobasidium rhododendri is not rare in Europe on the native evergreen species of Rhododendron. Apparently, however, it does not easily invade the extraneous evergreen species so profusely cultivated in various regions of western Europe.

I have come across remarkably few records in which these extraneous species and hybrids were reported as being infected by *E. rhododendri*, and these records contained so few descriptive details that it is impossible to form a well-founded opinion about the parasite. An early record is by Cooke [1879 (GCh 12<sup>II</sup>): 119]: "small apple-like galls on the leaves and shoots of × *Rhododendron Wilsoni*." Another is by Fockeu (1894: 355), who found galls on *Rhododendron "dadouricum*" [R. dauricum L.]. — See also (130).

- (134). Exobasidium galls are also very common in Europe on cultivated, extra-European azaleas; they have been recorded from around the year 1900 on. Assuming that only one parasitic species is involved (which seems the most likely premise), the question of its correct name should now be discussed, but since the fungus is in all probability an alien this point will be only briefly touched upon here. The name now most often used is E. japonicum; its hosts are various cultivars generally referred to as Azalea obtusa and A. indica by horticulturists. Other names applied to this fungus are E. azaleae and E. discoideum, both earlier published names, but because the identity of these species with E. japonicum is still highly questionable for the present they are not taken into consideration. The use of the name E. pentasporium would appear an evident misdetermination; this name was given to a systemic parasite (causing witches' brooms) that produces the basidia on spots that are not accompanied by deformations of the leaves on which they appear, while E. japonicum produces true galls (deformations). See also (130).
- (135). The fact that two taxa were called Exobasidium andromedae has led to the assumption that they were identical and to an interchange of the author's citations (P. A. Karsten and Peck), for instance by Migula, Ulbrich, and other authors. Exobasidium andromedae Peck, originally described from Andromeda ligustrina from North America, produces (sometimes enormous) bag galls, while E. andromedae P. Karst. (= E. karstenii), originally described from A. polifolia from Finland, produces systemic infections. Burt (1915: 646, 647, 649) reduced both to the synonymy of E. vaccinii. In this he was followed by Savile (1959: 646). The fact that Nannfeldt [1939 (LNF 11-12): 34 No. 589; 1958 (LNF 51-52): 29 Nos. 2558, 2559] maintains E. karstenii as a distinct species, strongly supports the correctness of the separate treatment on this check list.
- (136). It would appear from Sundström's data (1964: 55-57 f. 19) that the size of the spores of Exobasidium vaccinii and E. myrtilli (each apparently comprizing several 'host-races') have different ranges, although there is considerable overlapping. That the two taxa are very likely different species is indicated not only by this but also by the behaviour of the basidiospores on a given agar substratum (forming only conidia in E. vaccinii and mycelia in E. myrtilli), plus the 'double infections' occasionally observed in Vaccinium vitis-idaea, bearing localized infections of the former species on leaves that also showed the systemic infection of the latter (Sundström, 1964: 10. 11, 53-54 f. 4), and also by several other arguments.

(137). When Rostrup first published the name Exobasidium oxycocci (1885) he had not yet made up his mind about the rank of the taxon, "Naermere Undersøgelser maa afgjøre om den rettest skal betragtes som en Varietet eller en egen Art: E. oxycocci." Hence, he published the name as a provisional name (nomen eventuale). The fact that Rosenvinge, in the French résumés at the end of the volume (separately paged; p. 26), rendered this as, "Sur l'Oxycoccus palustris j'ai observé une déformation particulière en grande quantité, née sans doute d'une espèce particulière: Exobasidium Oxycocci qui ...", apparently makes no difference since it would seem to be a clear case of 'incidental mention'. Another instance of 'incidental mention' is in my opinion that by von Tubeuf (1895: 440).

Nannfeldt [1958 (LNF 51-52): 30] considered Shear (1907) to be the author who first validly published Rostrup's name, but a year earlier Rostrup himself had again published the name, this time without evincing any doubt about the specific status of *E. oxycocci*.

(138). Exobasidium vaccinii has often been interpreted as a more or less inclusive species. This is not the place for an extensive discussion on this question. Suffice it to state that it would seem as if Burt (1915) and Savile (1959) went too far in lumping together a good number of the species treated as distinct on this check list. As to European species, pending further observations, E. japonicum Shirai (supposed to be an alien) (131, 134), E. angustisporum (129), E. cassiopes, E. karstenii (\equiv E. andromedae P. Karst.), E. ledi, E. myrtilli (including E. vaccinii-myrtilli) (136), E. oxycocci (137), and E. rhododendri (133) are all listed separately, while in agreement with these authors as well as with Juel and Nannfeldt only E. cassandrae is reduced to the synonymy of E. vaccinii. Several other names listed as synonyms by either Burt or Savile or both, based on extra-European collections and not reported from Europe, have been omitted from the synonymy of E. vaccinii: these are E. andromedae Peck (135), E. peckii Halst., E. agauriae P. Henn., and E. parvifolii Hotson. There are indications that at least some of these may also prove to be distinct species.

Following Fuckel, Brefeld (188%), too, favoured a rather inclusive conception of Exobasidium vaccinii. From the introductory remarks to this species it appears that apart from E. vaccinii he also included E. myrtilli and E. rhododendri under the first name. It was not stated from which of these elements his cultures were derived so that he is not cited on the check list proper, although it is most likely that he worked with E. vaccinii.

In a much-quoted paper by Richards (1896) the conclusion was advanced that Exobasidium vaccinii and E. andromedae Peck cannot well be distinguished, a conclusion based on infection experiments, and, as far as I am aware, never seriously questioned. It is not surprising that later the existence of two species of the same name (E. andromedae Peck and E. andromedae P. Karst.  $\equiv E.$  karstenii) led to confusion. Since E. andromedae Peck (like E. vaccinii) is based on a gall producing fungus, typically inducing large bag galls on Andromedae ligustrina (= Lyonia ligustrina), while E. andromedae P. Karst. is a systemic parasite, this has tended to make Richard's conclusion still more important.

What Richards's actually did was to demonstrate that one type of galls found on Andromeda ligustrina and closely resembling those caused by typical E. vaccini on Vaccinium vitis-idaea was produced by the same fungus that caused the other type of galls on the same host (bag galls). His infection experiments did not include spores derived from indisputable E. vaccinii in the strictest sense! From the data presented the only conclusion that appears justified is that "the form and extent of the hypertrophy depends both on the host and the age of the tissues affected. The older tissues do not respond so readily to the stimulation of the parasite, and the result is a more local hypertrophy [referred to as the E. vaccinii galls] or none at all." The identity of E. andromedae Peck with E. vaccinii sensu stricto was not proven, but strong evidence was furnished that the same fungus could produce different types of galls (inclusive of merely somewhat thickened spots). Spores from the 'vaccinii' type of galls experimentally transferred from Andromeda ligustrina also produced galls on Gaylussacia resinosa (= G. baccata). This second set of experiments tends to prove that one species or 'race' of Exobasidium may occur on more than one host species or genus.

(139). Exobasidium arctostaphyli was described from Arctostaphylos pungens from California, and originally stated to have spores  $10-12 \times 4-5 \mu$ . These measurements are apparently incorrect and material collected by Harkness, the author of the species, has yielded larger spores: compare Burt (1915: 647;  $12-18 \times 3-5 \mu$ ) and Linder (1947: 272 f. 5f, fide Savile, illustrated about  $15-20 \times 4-5 \mu$ ). Savile (1959: 649) retains the taxon as a variety of E. vaccinii, inter alia on the basis of some collections from Arctostaphylos uva-ursi, for a systemic parasite with spores measuring  $12.5-16.5 \times 3.3-5.0 \mu$ .

Lind (1913: 350, 352) reported *E. arctostaphyli* as common on *Arctostaphylos uva-ursi* in Denmark and in the neighbouring countries as well. He did not describe it in detail and it is possible that in reality he was dealing with either typical *E. vaccinii*, which species has been recorded from *A. uva-ursi* from central and northern Europe, or with other fungi quite different from *Exobasidium* (cf. Juel, 1912: 262-363, 369-370). Hence I am not prepared to record *E. arctostaphyli* as a European species.

(140). The curious galls formed on the stem of the species of Laurus in the Mediterranean and the Canary Islands are usually thought to be induced by the action of the fungus described as Exobasidium lauri Geyler. Similar associations are also known from Java, Ceylon, and Japan on other Lauraceae (Cinnamomum). Our knowledge of all these fungi themselves, however, is still too insufficient to decide whether or not they belong to Exobasidium. As for the European species, opinions differ about whether this fungus is really the causative agent of the galls; compare Geyler (1874), Baldini (1886), Baccarini (1913), von Tubeuf (1913). It would seem that the present concensus is that the galls are indeed caused by the fungus.

Previous to the publication of *Exobasidium lauri* Geyler the galls were also described by Brotero as *Clavaria lauri*. It is quite likely that he described not only the galls but also the fungus ("... tota planta demum Maio et Jul., polline albido tecta"), in

which case Clavaria lauri Brot. 1804 (d.n.)  $\equiv$  Calocera lauri (Brot.) per Fr. 1832 would be the first validly published name for the fungus. It cannot be recombined into a correct name because the recombination would be pre-occupied by Exobasidium lauri Geyler, but were the species to be removed from the genus, the name Calocera lauri should be taken seriously into consideration.

(141). It may well be doubted whether it was justifiable to segregate Articomyces (based on a single species, Exobasidium warmingii) from Exobasidium in its still current sense, which is rather wide if the range of its hosts is considered (127). Under these circumstances to be generally acceptable the segregation from Exobasidium of a species parasitizing Saxifragaceae should have a sound morphological foundation. This is so far hardly the case. Savile states that "in the present fungus the basidia arise from a stroma as in Kordyana, but merge in a fascicle either through a stoma or between two epidermal cells; the mycelium is both inter- and intracellular; paraphyses are lacking and conidia are present, as in Exobasidium". The 'stromata' alluded to are apparently little more than accumulations of little specialized hyphae (not further described) in the space allowed by the substromatal chambers. This condition of the mycelium, as well as that of basidia emerging in fascicles, is not truly unique, since in certain species of Exobasidium the same is true: E. hesperidum Maire (on a species of Anacardiaceae) and E. unedonis Maire (on a species of Ericaceae) are examples. Basidia, number and shape of the sterigmata, spores (shape, septation), and conidia also suggest only Exobasidium. The family to which the host belongs seems the strongest of the presented arguments for maintaining the genus, but in view of the series of families on which Exobasidium (as currently conceived) occurs this may not be sufficient.

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## Alphabetical index, including names omitted from the check list proper

The following list consists of two kinds of indices, (i) one of the names admitted to the check list proper (pp. 151-207), and (ii) one of names that were left out of it.

Ad (i). Names in roman type are those accepted on the 'Check list'. Author citations are quoted only when needed to avoid ambiguity. When two or more generic names follow a specific epithet, the one accepted on the 'Check list' comes first and is in roman type; the rejected generic names that were, or have been, combined with the epithet follow in alphabetical order and are in italics. Some of the latter are preceded by an asterisk (\*) which denotes that the combination was not validly published and is not mentioned on the 'Check list'. The genera are treated on the 'Check list' proper in alphabetical order, each in one of the six sections captioned, in this order, Septobasidiales, Auriculariineae, Tremellineae, Tulasnellaceae, Dacrymycetales, and Exobasidiales. The section in which a genus is placed is mentioned between brackets after the correct generic name.

Examples.—

"abietinus Pers., Dacrymyces, Tremella = Dacrymyces stillatus." This means that the epithet 'abietinus Pers.' in specific combinations with the succeeding generic names will be found listed on the 'Check list' as synonyms of Dacrymyces stillatus.

"adpressa, [Dacrymyces], Septocolla." This measn that Dacrymyces is the genus accepted for the species (the square brackets indicating that the specific combination has not actually been made), and that the combination with Septocolla is rejected as being incorrect.

"Achroomyces (Auriculariineae)" means that Achroomyces is listed as a genus of Auriculariineae.

Ad (ii). 'Omitted names'. These are interspersed between the entries of index (i). They form a very mixed lot given either (a) to taxa that have been placed wrongly in genera whose names are typified by species of the hymenomycetous Heterobasidiae or (b) to a selection of taxa that have been thought to belong to these Heterobasidiae. In each case some information is added (as far as available) on the current (not necessarily correct) name and the taxonomic position of the taxon.

Some exceptions are made. Specific combinations with Auricularia, Epidochium, Rhizoctonia, and Stilbum of taxa that are not now included in the Heterobasidiae are not listed. These combinations with Auricularia will be taken into consideration in the check list devoted to the Aphyllophorales now in preparation. The combinations with Epidochium, Rhizoctonia, and Stilbum that are left out do not belong to the Basidiomycetes (as far as is known). The pseudospecific (but essentially non-binomial) names given to 'Orcheomycetes' are also left out in contradistinction to combinations with the validly published generic name Orcheomyces.

abietina, -us Pers., Dacrymyces, Tremella = Dacrymyces stillatus; sensu J. Schroet. = Dacrymyces spp. (mixtum compositum; not listed); sensu P. Karst. = Dacrymyces stillatus sensu P. Karst.; sensu Coker = Dacrymyces sp. (not listed)

abietinus P. Karst., Dacrymyces, Hormomyces

= Dacrymyces stillatus

abietis, Corticium, Thelephora acerina forma = Sebacina calcea

abromeitii, Exidia, Neuh. 1935 (former East Prussia) (syn.) = Exidia cartilaginea f. abromeitii Neuh.

Achroomyces (Auriculariineae)

Acrospermum [Tode sensu Pers., exclusive of type = Acrospermum] Pers. 1797 C.: 220/88 (nom. anam.) (d.n.), not ~ Tode 1790 (d.n.) per Fr. 1822; not ~ S. Schulz. 1863; Tremella sect. ~ (Pers.) per Pers. 1822; lectotype: Clavaria galeata Holmskj., q.v.

acrospermum, Tremella, Nees 1816 (d.n.) = Acrospermum dubium Pers. (nom. anam.) = Tremella dubia (Pers.) Pers., q.v.

Actinomyce F. Meyen 1827 [1958 (Ta 7): 165]; monotype: A. horkelii F. Meyen, q.v.

aculeiformis, Calocera, Clavaria, Tremella = Calocera cornea

actuorum, Dacrymyces, Fautr. & Roum. in Roum. 1890 (Rm 12): 61 (France) (nom. anam.).—Fide Höhn. 1909 (SbW 118): 1238, 1239 = Linodochium hyalinum (Lib.) Höhn. — Deuteromycetes.

acuum, Dacrymyces, Lasch in Rab. 1844 Kl.: No. 571 (Germany).—Nomen dubium. aderholdii, Moniliopsis, Rhizoctonia = Thanatephorus cucumeris

admirabilis, Peniophora, Burt 1926 (AMo 12):
304 (U.S.A., New York) (nom. conf.).—
Fide Rog. & Jacks. 1943 (Fa 1): 310 =
Tulasnella bifrons Bourd. & G. (p. 191),
growing over the surface of overwintered
fructifications of one or more "thelephoraceous" fungi.

adnata, Tremella, L. 1755: 430 (Sweden) (generic name n.v.p.); Merrettia (L.) per S. F. Gray 1821.—Nomen dubium. Fide Ag. 1824: 28 = Chaetophora plana Ag., apparently another nomen dubium. Algologists also recognize a 'Tremella adnata Huds.' but this is in error because Huds. 1778: 565 merely records Linnaeus's species for England. Tremella adnata 'Huds.' became Gloeocystis adnata ("Huds.") Naeg., Chlorophyceae. Drouet & Dailey 1956 (BBU 12): 166-167 think that T. adnata L. = "Lichen?"

adpressa, [Dacrymyces], Septocolla

adpressus, Dacrymyces, Grogn. 1863: 200 (France), not ~ Y. Kobay. 1939.—Nomen dubium. Höhn. 1908 (SbW 117): 1026 thought of Tremella mesenterica Retz. per Fr. aequale, Exobasidium

affinis, Tremella, Retz. 1795: 294 (d.n.) per Steud. 1824.—A binomial name for "Agaricum lichenis facie aureum. Mich. p. 124, 11?" of O. F. Müll. 1780 (Fd 5 / F. 14): 8 pl. 840 f. 1, which Fr. 1821: 441 referred to Thelephora evolvens Fr. per Fr. ≡ "Corticium' evolvens (Fr. per Fr.) Fr., presumably thinking of the cucullate form of this species. This identification is doubtful.

Agarico-gelicidium = Auricularia

agaricoides, Tremella, Retz. 1769 (SVH 30): 250 (Sweden) (d.n.).—Fide Pers. 1801: 631 & Fr. 1822: 167 = Peziza|Bulgaria inquinans = Phaeobulgaria inquinans (Pers. per Pers.) Nannf. — Discomycetes.

Agyrium Fr. 1821 (nom. nud.) [1958 (Ta 7): 166], not ∼ Fr. 1822; holotype: Tremella cinnabarina Bull., q.v.

alabastrina, Tremella = Tremella encephala alba, Exidia, Oud. 1920 E. 2: 481 ("Bref.").

—An error for E. 'albida', q.v.

albescens, Tremella ('Microtremella'), Epidochium

albicans.—"[Tremella] albicans. A.S.", Steud. 1824: 414.—Apparently an error, no T. albicans being described by A. & S. 1805.

albida Huds., Exidia, Gyraria, Tremella; sensu Fr. = Exidia cartilaginea; sensu Bon. = Myxarium hyalinum; sensu Berk. 1873 = Ductifera pululahuana (not listed); sensu Bourd. & G. = Tremella candida

albida, Tremella, Mont. 1835 (syn.), not ~
Huds. per Hook. 1821; ≡ [Tremella lutescens "a. albida. Bull. . . . " Fr. 1822 (unnamed form) ≡] Tremella mesenteriformis var. alba Bull. 1791 H.: 230 [pl. 406 f. C] (France) (d.n.).—A 'foliaceous' species of Tremella, thus far not satisfactorily identified.

albida, Tubercularia = Tremella tubercularia albida, Tulasnella

alboglobosa, Exidia = Myxarium hyalinum albolilacina, Tulasnella

albus, Dacrymyces = Sebacina incrustans allantospora, Tulasnella

alliciens, Eichleriella, Exidiopsis, Stereum allii, Tremella, Dicks. 1785 P.c. 1: 14 (England) (d.n.) per Steud. 1824.—Dickson cited Helvella mesenterica Holm 1781 (Denmark) as synonym. Sclerotium sp., apparently an imperfect state of a species of Sclerotiniaceae (Discomycetes). — Deuteromycetes.

alni, Septobasidium

alpina, [Thanatephorus], Rhizoctonia alutacea, Sebacina = Sebacina helvelloides alutacea, Tremella, Schum. 1803: 439 (Denmark) (d.n.) per Pers. 1822.—Nomen dubium. Fide Fr. 1822: 228 = Naematelia rubiformis, but the original description does not support this identification.

alveolata, Tremella Scop. 1772: 402 (Yugoslavia, Carniola) (generic name n.v.p.) per Steud. 1824.—Apparently based on the plasmodium of a Myxomycete.

ambigua, Sebacina, Thelephora = Sebacina epigaea

amesii, Sebacina = ? Sebacina incrustans

amethystea, Tremella, Bull. 1791 H.: 229 [pl. 449 f. 5] (France) (nom. anam.) (d.n.) per St-Am. 1821.—Fide Fr. 1822: 217 = Tremella sarcoides Fr., q.v.

anceps, Ceratobasidium, Corticium, Tulasnella andromedae P. Karst., Exobasidium = Exobasidium karstenii

andromedae, Exobasidium, Peck 1873 (BBf 1):
63 & 1874 (RNS 26): 73, not ∼ P. Karst.
1881.—Reported from Europe through
confusion with E. andromedae P. Karst.
(135). — Sensu Mig. = Exobasidium
karstenii

angustisporum, Exobasidium

annulata, Tremella, Willd. 1788 (MB 2 / 4. Stück): 17 pl. 4 f. 15 (Germany) (d.n.).

—Nomen dubium. Algae.

anomala, Rhizoctonia = [Thanatephorus] Orcheomyces maculati

Aporpium (Tremellineae)

applanata, Exidia = Exidia plana

applanata, Tremella, (Schum.) Steud. 1824 (syn.) = Tremella subclavata var. Schum. 1803: 442 (Denmark) (d.n.) per Pers. 1822. —Nomen dubium.

aquaeductorum, Calocera, Auersw. (in litt. ad Heufl.), Poetsch & Schied. 1872 (Austria) (nom. nud.).

aquosa, Tremella, Bon. 1864 (AbH 8): 120 (Germany).—Nomen dubium.

araneosa, Tulasnella

arborea, Exidia, Tremella = Exidia glandulosa; sensu Hoffm. = Exidia plana; sensu Lloyd, see (37)

arbuti, Exobasidium, P. Karst. ("in sched. Mus. bot. berol.").—Fide P. Magn. 1905: 139 = Exobasidium vaccinii, but possibly E. unedonis Maire.

arctica, Tremella, Sommerf., Fr. 1849: 341 (nom. nud.).—Apparently in error for T. erecta Sommerf., q.v.

Arcticomyces = Exobasidium

arctostaphyli, Exobasidium, Harkn. 1884 (BCA 1): 30 (U.S.A., California).—Reported

from Europe, but this is questionble, cf. (139).

argillaceus, Polyporus, Poria = Aporpium caryae Arrhytidia = ? Dacrymyces

arrhytidiae, [Achroomyces], Platygloea

arundinis, Tremella, Pers. 1822: 109 (Switzerland) (nom. anam.); Hymenella Fr. 1822; Hymenula Fr. 1828.—This was excluded from Hymenella (q.v.) = Hymenula by Vestergren [1899 (OVS8): 840] who placed it in a genus of its own for which he used the name Hymenella, while the name Hymenula was reserved for the original genus, an inadmissible course. The transfer to Hymenopsis Sacc. is taxonomically unacceptable. There seems to be no correctly named genus available to receive this species. — Deuteromycetes.

asari, Exobasidium = Helicobasidium brebissonii

asclerotica, [Thanatephorus], Rhizoctonia asparagi, Rhizoctonia = Helicobasidium brebissonii

astroites, Fungus, Scop. 1772 P.s.: 117 pl. 45 f. 2 ('Hungary') (d.n.); Gomphus (Scop.) per Pers. 1825.—Nomen dubium. Fide Fr. 1822: 172 = Ditiola sulcata, q.v.

Atkinsonia Lloyd 1916 (LMW 5): 576 (not accepted: n.v.p.; "McGinty") [1958 (Ta 7): 167].—Introduced in connection with Sebacina amesii Lloyd which is probably only a form of Sebacina incrustans (p. 176), the type species of Sebacina Tul.

atra, Sebacina = Sebacina molybdea atra O. F. Müll., Tremella = Exidia glandulosa

atra Schrank, Tremella = ? Exidia plana Atractiella (Auriculariineae)

atrata, -um, Oliveonia, Ceratobasidium, Corticium

atrata, Sebacina = Sebacina epigaea

atroglobosa, Tremella = Tremella moriformis atrovirens Fr., Agyrium, Epidochium, Tremella = Tremella exigua

atrovirens, Tremella, Bull. 1783: pl. 184 & 1791
H.: 225 (France) (d.n.), G. F. Re 1827
(d.n.), not ~ Secr. 1833, not ~ (Fr.)
Sacc. 1888.—Fide Born. & Flah. 1888
(ASn VII 7): 203 = Nostoc commune Vauch.
per Born. & Flah. — Nostocaceae heterocysteae. — Sensu Schum. = Exidia plana
atrovirens, Tremella, Secr. 1833 M. 3: 282
["Schum. Saell. 2, p. 438. Tr. atrovirens

(excl. syn. Bull.)"], not ~ Bull. 1783 (d.n.), not ~ (Fr.) Sacc. 1888; = Tremella collematiformis Schleich., q.v.—By the reference quoted above T. atrovirens Secr. might be taken as a validly published 'new' name for T. atrovirens Bull. sensu Schum. = Exidia plana (p. 168). However, Secretan's own description shows that he simultaneously 'misapplied' the name to a species (Lichenes?) difficult to determine.

aurantia, Tremella, Schw. 1822: 114 (U.S.A., North Carolina): Fr. 1822; Dacrymyces Farl. 1883, misapplied; sensu Fr. 1828 E. 2: 33 (nomen) & Weinm. 1836: 530 (as Tremella) = Tremella elegans Fr., q.v., fide Fr. 1874: 691; sensu Farl. = Dacrymyces palmatus. aurantiaca, Sphaerocolla, P. Karst. 1892 (H 31): 294 (Finland) (nom. anam.).—Fide Höhn. 1917 (Am 15): 295, cf. Hormomyces aurantiacus Bon., q.v. — Deuteromycetes.

aurantiaca, Tremella, Grove 1918 (JBL 56): 286 (Scotland) nom. anam.).—Fide Grove, l.c., = imperfect state of Nectria magnusiana Rehm.— Deuteromycetes.

aurantiacum, Encephalium = Tremella encephala

aurantiacus, Hormomyces = Tremella mesenterica

aurea, Clavaria, Ehrh. 1791-3 P.c.: No. 279 (presumably nom. nud.) (n.v.), not ~ Schaeff. 1774 (d.n.) per Fr. 1838, not ~ Humb. 1793 (d.n.).—Fide Pers. 1797 C.: 185/53 & Fr. 1821: 486 = Clavaria viscosa = Calocera viscosa (p. 196).

aurea Humb., Clavaria = ? Calocera viscosa aurea, Peziza, Pers. 1796 O. 1: 41 (Germany) (d.n.) per Pers. 1822, not ~ (Bolt.) Sow. 1798 (d.n.).—Erroneously referred as synonym to Peziza chrysocoma Bull. [sensu Fr.] by Fr. 1822: 140; fide Donk 1964 (PNA 67): 14 = Orbilia sp. — Discomycetes.

Aureobasidium Viala & Boyer 1891 (nom. anam.) [1956 (Re 4): 114; 1963 (Ta 12): 156]; 

Chrysobasidium Clem. 1902; 

Aureobasis Clem. & Shear 1931; monotype: Aureobasidium vitis Viala & Boyer, q.v.

Aureobasis Clem. & Shear 1931 [1956 (Re 4):
114] = Aureobasidium Viala & Boyer, q.v.
aureofulva, Ceracea = Dacrymyces corticioides
Auricula O.K. 1891 (nom. nud.) [1958 (Ta 7):
167], not ~ Hill 1756 (Primulaceae), not
~ Spach 1840 (Primulaceae), not ~
Castr. 1873 (Bacillariophyceae), not ~

Lloyd 1922 (Punctulariaceae, Aphyllophorales); type: "Auricula Judae Batt." 

Auricula judae O.K. (n.v.p.) = Hirneola auricula-judae (p.158), the type of Hirneola Fr. auricula, Auricularia, Exidia, Helvella, Hirneola, Merulius, Peziza, Tremella = Hirneola auricula-judae

auricula-felis, Tremella, Paul. 1793 T. 2: 401 (descr.), Ind. [pl. 186 fs. 4, 5, as Omoriza carnosa Paul.] (France) (d.n.).—Perhaps Peziza (Galactinia) sp. — Discomycetes.

auricula-judae, Hirneola, Auricularia, Exidia, Peziza, Tremella; sensu Fr., in part = Exidia glandulosa

auricula-major, Conchites, Paul. 1793 T. 2: 398 (descr.), Ind. [pl. 185 fs. 1, 2, as Fungoides hyosotis Paul.] (France) (d.n.).—This has been referred to Polyporus varius (Pers.) per Fr. and P. melanopus Pers., but the figures suggest one of the large species of Pezizaceae: cf. Donk 1960 (Pe 2): 219. — Discomycetes.

auricula-minor, Conchites, Paul. 1793 T. 2: 398 (descr.), Ind. [pl. 184 f. 5, as Peziza leporina ?Paul.] (France) (d.n.) = Otidea sp. — Discomycetes

auricula-ursi, Conchites, Paul. 1793 T. 2: 399 (descr.), Ind. [pl. 185 fs. 3, 4, as Omoriza onosotis Paul.] (France) (d.n.) = Otidea sp. — Discomycetes.

Auricularia Bull. per Mérat (Auriculariineae); sensu Brogn. = Hirneola; sensu Fr. 1825 = Stereum (not listed); sensu Wahlenb., in part = Exidia

Auriculariella = Hirneola

auricularis, Auricularia, Gyraria, Hirneola = Hirneola auricula-judae

auriculatus, -um, Hydnum, Tremellodon = Pseudohydnum gelatinosum

auriformis, Tremella = ? Tremella mesenterica austriaca, Kordyanella, Höhn. 1904 (Am 2): 274 (Austria) (nom. anam.).—Originally regarded as closely related to Kordyana (Exobasidiaceae). Fide D. P. Rog. 1957 (M 49): 902 an unidentified imperfect state forming sporodochia. — Deuteromycetes.

azaleae, Exobasidium, Peck 1873 (BBf 1): 63 & 1874 (RNS 26): 72 (U.S.A., New York); sensu Ritz. Bos 1901 (LbT 9): 77 = E. japonicum Shirai, q.v., & cf. (131).

badia, Tremella = ? Tremella foliacea badio-umbrina, Exidia, Ulocolla

bagliettoanus, -um, Corticium, Hypochnus, Septobasidium, Stereum = Septobasidium quercinum

balbisii, Tremella, Bertola c. 1826 (n.v.) [cf. G. F. Re 1827: 324] (Italy).—Nomen dubium. Cf. Sacc. 1916: 1284: "Verosimilmente si tratta di un ammasso disseccato di micelii di Mucedinee saprogene."

banatica, Sebacina

basale, Corticium = Sebacina helvelloides
 basicola, Hypochnus = Thanatephorus cucumeris

Basidiodendron (Tremellineae)

betae, Rhizoctonia = Thanatephorus cucumeris betae, Hypochnus = Thanatephorus cucumeris betulae, Propolis, Fuck. 1871 (Jna 25-26): 327 (Germany) = Propolis faginea [= P. versicolor (Fr.) Fr.] var. betulae (Fuck.) Rehm 1888 (RKF 13): 150.—Fuckel erroneously included in this species Exidia repanda which he believed to be the conidiophorous state. — Discomycetes.

bifrons, Tulasnella

biparasitica, Tremella, Fr. 1822: 219; Phyllopta Fr. 1849; ≡ Sclerotium foliaceum Fr. 1815 (Sweden) (d.n.).—Based on an abnormal growth on the stalk of Nyctalis parasita Fr., perhaps an excrescense of a similar nature to what has been called Tremella mycetophila Peck, q.v.

boletiformis, Tremella = Exidia recisa borealis, Guepinia, P. Karst. 1895 (Finland) (nom. nud.).

Botryochaete Corda = Phleogena

botryoides, Tremella, (L.) Schreb. 1771 (generic name n.v.p.); Byssus L. 1753: 1169  $\equiv$ Phytoconis botryoides (L.) Bory, the correct name according to Drouet & Dailey 1956 (BBU 12): 145. These authors regarded Botrydinia vulgaris Bréb. [apud Menegh.] as an isonym. If this were correct, and Brébisson had correctly interpreted the Linnaean species, than Tremella botryoides is (i) either a nomen confusum if Jaag [1933] (Bsb 42): 169-185 6 fs.] is correct in interpreting Botrydinia vulgaris as a lichen-like association of moss protonema and various species of Coccomyxa Schmidle, or (ii) the name of a true lichen if Geitler [1956 (ObZ 103): 469-474 2 fs.] is followed.

Bourdotia (Tremellineae)

brachyorrhiza, Clavaria = Calocera viscosa brachyspora, Heterochaetella

brassicaecola, Tremella, B. & Br.—Mentioned by W. G. Sm. 1908: 452 as "probably a form of Hypocrea rufa Fr." brebissonii, Helicobasidium, Protonema

brefeldianum f. microsporum, Sirobasidium brefeldii, [Calocera], Guepinia

bresadolae, Sebacina = Sebacina incrustans

bresadolae, Typhula = Eccronartium muscicola brevieri, Exobasidium = Herpobasidium filicinum

brinkmannii, Tulasnella

britzelmayri, Tremella=? Dacrymyces palmatus britzelmayriana, Tremella, Ade 1923 (ZP 2): 63.—An error for T. britzelmayri, q.v.

brunaudiana, -um, Atractiella, Atractium brunnea, Tremella, Opiz 1852 (Czechoslovakia, Bohemia) (nom. nud.).—See Klášt. & al. 1958: f. 8 (on p. 37) for herbarium label.

brunneola, Exidia buccina, Guepiniopsis, *Helotium*, *Peziza*, *Phi*alea; sensu Fr., Quél. = species of discomycetes (not listed)

bucciea, Guepinia (see p. 335) = Guepiniopsis buccina

butyracea, Tremella, Timm 1788 (d.n.) = Tremella unctuosa, butyri colore et figura Wulff 1765: 36 (Germany).—Nomen dubium.

byssoides, Corynoides, (Bull. per Mérat) S. F. Gray 1821; Clavaria Bull. 1788: pl. 415 f. 2 & 1791 H.: 209 (France) (generic name n.v.p.) per Mérat 1821.—Fide Fr. 1832: 294 = Ceratium hydnoides (Jacq.) A. & S. [= Ceratomyxia fruticulosa (O. F. Müll.) Macbr.]. — Myxomycetes.

byssoides, Thelephora, Pers. 1801: 577 (Germany) (d.n.) per Fr. 1821 

byssoides (Pers. per Fr.) Jo. Erikss., Corticiaceae. — Sensu Bon. 

Sebacina incrustans

cabralii, Septobasidium

caesia Bres. & Torr., Bourdotia, Bourdotia pululahuana subsp., Sebacina = Bourdotia galzinii caesia Pat., Sebacina

caesia, Sebacina, (Pers.) Tul. 1871, misapplied, not/an ~ Pat. 1889; Corticium Pers. 1796 O.

1: 15 pl. 3 f. 6 (Germany) (d.n.) per Fr. 1821; Sebacina laciniata subsp. Bourd. & G. 1928, misapplied.—Nomen dubium & ambiguum. Sensu Tul. = ? Sebacina incrustans; sensu Bourd. & G. = Sebacina caesia Pat.; sensu M. P. Christ. = Sebacina sp. — Cf. (51).

caesiocarnea, [Tulasnella], Thelephora caesiocinerea, Thelephora, Killerm. 1922 (Dba 15): 6.— An error for T. caesiocarnea Britz. (p. 193).

caesiocinerea, -um, Basidiodendron, Bourdotia, Corticium, Gloeocystidium, Sebacina

caesius, Dacrymyces
calcea, -um, Sebacina, Auricularia, Corticium,
Exidiopsis, Thelephora; sensu Bourd. & G.
= Sistotremastrum suecicum Jo. Erikss. (not listed), Corticiaceae

calcea rimosa, Thelephora, Secr. 1833 M. 3: 223
(double epithet: n.v.p.) 

Thelephora calcea
Pers. 

Sebacina calcea (p. 174)

callae, [Thanatephorus], Rhizoctonia

Calloria Fr. 1835 [1958 (Ta 7): 173]; lectotype: Peziza fusarioides Berk., q.v.—Formerly treated as a genus of "Tremellinei". — Discomycetes.

Calocera (Dacrymycetales)
Calobosis = Calocera

calospora, Sebacina, Exidiopsis

calospora, Tulasnella, Gloeotulasnella, Prototremella

camelliae, Exobasidium, Shirai 1896 (BMT 10): 51 pl. 4 fs. 1-3 (Japan).—An alien. A collection from England referred here by Dennis & Wak. 1946 (TBS 29): 142 f. 1.

— Descriptions & illustrations: Akai 1939 (BMT 53): 118 fs. 1-6, pl. 1; S. Ito 1955: 48 f. 31; McNabb 1962 (TNZ 1): 261 f. 1: 1, pl. 1 f. 1.

Campylobasidium = Septobasidium candida Pers., Tremella

candida, Tremella, Timm 1788: 253 (Germany) (d.n.), not ~ Pers. per Pers. 1822, not ~ Lloyd 1919.—Nomen dubium. Apparently not a species of Basidiomycetes, cf. Endogone Link per Fr.?

canescens, Aporpium, Poria = Aporpium caryae capitata, Guepinia, Feltg. (Luxemburg).—A herbarium name, incidentally mentioned by Höhn. 1907 (SbW 116): 142 = "Tubercularia (vulgaris?)". — Deuteromycetes. caraganae, Tremella = Hirneola auriculaiudae

carbonacea, Tremella, Retz. 1769 (SVH 30):
250 (d.n.).—Fide Fr. 1832: 332 = Sphaeria
[= Hypoxylon] spp. — Pyrenomycetes.

carestiana, -um, Septobasidium, Mohortia carneola, Sebacina

carneum, Nostoc, (Lyngb.) Ag. 1824 (d.n.) per Born. & Flah. 1888 (ASn VII 7): 196; Nostoc commune var. carneum Lyngb. 1819 (d.n.) (Faeroes).—This was annotated by Steud. 1824: 297 with "cfr. Exidia glandulosa", evidently in error. — Nostocaceae heterocysteae.

carotae, Hypochnus, Rostr. (in herb.), Lind 1913 (Denmark) (nom. nud.).—Presumably = Thanatephorus cucumeris (p. 187).

carpinea, Tremella fragiformis var., A. & S. 1805: 301 (Germany) (d.n.); Dacrymyces fragiformis forma (A. & S.) per Fr. 1822; Mylittopsis Höhn. 1917, misapplied.—Nomen dubium. Sensu Höhn. = Mycogloea macrospora

cartilaginea, Exidia

cartilagineo-lenta, Exidia, Lundell (in litt.), Neuh. 1935 (syn.) = Exidia cartilaginea (p. 167).

caryae, Aporpium, Polyporus, Poria cassiopes, Exobasidium

castaneus, Dacrymyces, Rab. 1844: 53 (Italy).

—Nomen dubium. Neuhoff (1936a: 47) thought of Exidia badio-umbrina, Kennedy (1959b: 900) suggested Dacrymyces enatus sensu stricto.

caucasicum, Exobasidium

cavarae, Calocera

cavarae, Septobasidium

cavendishiani, [Thanatephorus], Rhizoctonia Ceracea Cragin 1885 [1958 (Ta 7): 174]; monotype: Ceracea vernicosa Cragin, q.v.; sensu Pat. = Cerinomyces; some species now referred to Arrhytidia. — Special literature: Martin, 1949. — Deuteromycetes.

ceranoides, Tremella, With. 1776 (generic name n.v.p.) = Tremella palustris gelatinosa, Damae cornuum facie Dill. 1741: 51 pl. 10 f. 10 (England).—Dillenius's species is now usually referred to Chaetophora incrassata (Huds.) Haz. — Chlorophyceae.

cerasi Tul., Craterocolla, Ditangium, Exidia, Ombrophila, Tremella

cerasi, Dacrymyces, Lib. ("in Herb."; Roum. 1880 & Cooke 1880, incidental mention) ex Sacc. 1888 (SF 6): 802 (Belgium).— Nomen dubium.

cerasi, Sirobasidium, Bourd. & G. 1909 (BmF 25): 19 (France) (nom. anam.) = Endostilbum cerasi (Bourd. & G.) Malenç. 1964 (BmF 80): 111, possibly the imperfect state of Coryne solitaria Rehm, cf. M. P. Christ. 1963 (Fr 7): 81 f. 4. — Special literature: Christiansen, 1963: Malençon,

1964. — The separation of Endostilbum Malenç. from Pirobasidium Höhn. may appear untenable. — Cf. also Hyaloria europaea Killerm. and Killermannia Neuh. —Deuteromycetes.

cerasi, Tremella, Schum. 1803: 438 (nom. anam.) (d.n.).—Nomen dubium (25). — Sensu Tul. = Craterocolla cerasi

cerasina, Helvella ("Elvela"), Wulf. 1786 (CoJ 1): 347 (Austria) (d.n.); Peziza Pers. 1801 (d.n.); Peziza (Wulf.) per Steud. 1824 ("Batsch. [error] / Elvela cerasina. Wulf."); Ombrophila rubella var. Quél. 1886, misinterpreted, cf. (26). — Discomycetes.

Ceratobasidium (Tulasnellaceae)

cerebriformis, Dacrymyces = Dacrymyces lacrymalis

cerebrina, Tremella, Ulocolla

cerina, Tremella, Rox. Clem. 1807: 321 (Spain)
(generic name n.v.p.) —Fide Ag. 1823
S.A. 1: 146 = Encoelium sinuosum (Roth) Ag.

= Colpomenia sinuosa (Roth) Derb. & Sol.
— Phaeophyceae.

Cerinomyces (Dacrymycetales)

chalybea.—["Tremella] chalybea Pers.", Steud. 1824 (syn.).—An error for Corticium ('Tomentella') chalibaea Pers.

chlorascens, Sebacina = Sebacina helvelloides Chrysobasidium Clem. 1902 (nom. nud. & anam.) [1956 (Re 4): 114] = Aureobasidium Viala & Boyer, q. v.

chrysocoma, Dacrymyces, Bulgaria, Calloria, Guepiniopsis, Hymenoscyphus, Orbilia, Peziza; sensu Sow. 1798: pl. 152 = Orbilia sp. (not listed), fide Donk 1964 (PNA 67): 13-14; sensu Sacc. 1878 (Mi 1): 429 (Calloria), Pat. 1884 T.a. 1: 130 f. 293 (Calloria), Sacc. 1889 (SF 8): 624 (Orbilia) = species of discomycetes (not listed); sensu Bref. = Dacrymyces estonicus; sensu Brasf. = Heterotextus sp. (not listed)

chrysocoma, Tremella = Tremella mesenterica chrysosperma, Dacrymyces = Dacrymyces palmatus

cincta, Clavaria, Clavaria cornea var. = ? Calocera cornea; sensu Secr. = Calocera furcata cinerea, -um, Basidiodendron, Bourdotia, Sebacina, Thelephora

cinerea, Tremella, (Batsch) With. 1792 (d.n.), not ~ Bon. 1851: Peziza Batsch 1786: 197 pl. 26 f. 137 (Germany) (d.n.) = Mollisia cinerea (Batsch per Pers.) P. Karst. — Discomycetes.

cinerea Bon., Tremella = Exidia plana cinerella, Bourdotia, Sebacina = Basidiodendron caesiocinereum

cinereoviridis, Tremella, Schum. 1803: 439 (Denmark)(d.n.) per Lind 1913.—Nomen dubium (70).

cinereus, [Sebacina], Hypochnus

cinnabarina, Tremella, Wulf. 1787 (SBe 8): 155 (Austria) (d.n.), not ~ Bull. 1789 (d.n.) & (Bull. per Mérat) Fic. & Schub. 1823, not ~ (Mont.) Pat. 1900; ≡ T. ruberrima Gmel. 1791.—Nomen dubium.

cinnabarina, Tremella, Bull. 1789: pl. 455 f. 2
(France) (nom. anam) (d.n.), not ~ Wulf.
1787 (d.n.), not ~ (Mont.) Pat. 1900; Tubercularia (Bull.) per Mérat 1821; Gyraria S.
F. Gray 1821; Tremella Fr. 1822: 233 ("cinnabarrina"; incidental mention), Fic. & Sch.
1823: 316 ("P."); = Tremella fucata Gmel.
1791 (d.n.).—Sometimes (Ferraris 1910:
24) referred to Tubercularia vulgaris Tode
per Fr., the imperfect state of Nectria cinnabarina (Tode per Fr.) Fr. Tremella cinnabarina "Spreng." is an application of the
present name. — Deuteromycetes.

cinnamomescens, Exidia citri, Exobasidium

citriforme, Uthatobasidium

clandestinum.—Hydnum "clandestinum Nees", J.
Schroet. 1888: 397 (syn.) = Hydnum
gelatinosum Scop. sensu Nees 1816: 234
pl. 32 f. 244 & 1817: 61 ("Pers.") = Hydnum gelatinosum var. clandestinum Pers., not
Hydnum clandestinum Batsch per Steud. 1824;
= Pseudohydnum gelatinosum (p. 173).

Note.—Persoon (1825: 172) adopted for his Hydnum gelatinosum var. clandestinum Nees's description of "Hydnum Apus gelatinosum Pers.", which was accompanied by a figure copied from Schaeffer's plate 145 (as Hydnum gelatinosum Scop.). The figure corresponds with the left hand fruitbody depicted by Schaeffer in his figure 4. Nees excluded Schaeffer's plate 144 from his concept of Hydnum gelatinosum (cf. Nees 1816: 234). Persoon cited in addition to Nees's figure also "Schaeff. 144": this may well be an error for '145'. The type (here chosen) of Persoon's varietal name is the fungus copied by Nees from Schaeffer. (Schaeffer's plates 144 and 145 made out part of the original conception of Hydnum clandestinum Batsch = Hydnum repandum L.) clavaeformis, see clavariaeformis

clavariaeformis, Tremella, Wulf. 1788 (CoJ 2):
174 (Austria) (d.n.); Steud. 1824 ("clavaeformis"; syn.); ≡ Gymnosporangium clavariaeformis (Wulf.) per DC. 1805. — Uredinales.
clavarioides, Thelephora, Thuill. (in herb.).—
Fide Tul. 1872(ASn V 15): 225 = Sebacina
incrustans (p. 176).

clavata, Tremella, (Pers.) Pers. 1801 (d.n.);
Acrospermum Pers. 1797 C.: 222/90 (Germany) (non. anam.) (d.n.); Coryne (Pers.)
per S. F. Gray 1821; Tremella Pers. 1822:
Fr. 1822: 218.—Description & illustration:
Pers. 1804 I.p.: 24 pl. 10 f. 2 (Tremella).
— Cf. Tremella sarcoides Fr., q.v.

coccinea, Naematelia, Wettst. 1885 (VW 35): 554 (Austria).—Nomen dubium.

coccinea, Tremella, Scop. 1772: 402 (Yugo-slavia, Carniola) (d.n.) per Steud. 1824.

—Nomen dubium.

cochlearis, Guepinia = Guepiniopsis buccina cochleata, Conchites, Paul. 1791 T. 2: 398 (descr.), Ind. [pl. 184 f. 6, as Peziza cochleata (Paul.) Paul.] (France) (d.n.).—Otidea sp. — Disomycetes.

cokeri, Sebacina = Sebacina epigaea collematiformis, Tremella, Schleich. 1821 (Switzerland) (nom. nud.) = Tremella atrovirens Secr., q.v.

colorata, Tremella = Tremella moriformis compressa, Tremella, Steud. 1824: 414, 425 ("Dillw."; syn.).—An error for Tremella marina tenuissima & compressa Dill. 1741: 48 pl. 8 f. 9 = Ulva compressa L. = Enteromorpha compressa (L.) Grev. — Chlorophyceae.

concha-marina, Conchites, Paul. 1793 T. 2: 397 (descr.), Ind. (d.n.) 

Concha saligna marina Sterb. 1712: 252 pl. 27 f. E (pre-Linnaean name).—The identity of the 'basionym' (Belgium) is doubtful; the species depicted by Paul. 1812-35: pl. 184 f 3 belongs to the Pezizaceae.

Conchites = Hirneola

confluens, Dacrymyces

conformis, Dacrymyces, Ditiola = Femsjonia pezizaeformis

conglobata, Tremella, Britz. 1893 (BCb 54): 105 [pl. 748 f. 15] (Germany).—Nomen dubium.

conglobatus, Dacrymyces = Craterocolla cerasi conica, Tremella, (Hedw. f. ex DC.) Poir. 1808 (d.n.) = Gymnosporangium conicum Hedw. f. ex DC. 1805: 216 (Europe) = Gymnosporangium sp.—A nomen ambiguum at the specific level, fide Hylander & al. 1953 (ObL 1<sup>1</sup>): 15. De Candolle, l.c., cited T. juniperina L. (g.v.) as synonym. Fide Kern 1911 (BNY 7): 461 = ? G. sabinae (Dicks.) per Wint. — Uredinales.

conigenus, Dacrymyces, Niessl 1881 (Czechoslovakia, Moravia) (nom. anam. & nud.) = Pseudopatellina conigena (Niessl) ex Höhn. 1908 (SbW 117): 1024, 1025. — Deuteromycetes.

conopeae, [Thanatephorus], Orcheomyces conspersa, Peniotulasnella, Bourd. & G. 1928: 65, in obs. (France) (nom. prov.).—
Nomen dubium.

contorta, -us, Polyozus, Thelephora = Tremellodendropsis tuberosa

contortus, Dacrymyces = Dacrymyces tortus; sensu Ces., in part = Dacrymyces palmatus

coralloides, Tremella, Scop. 1772: 402 (Yugoslavia, Carniola) (d.n.) per Steud. 1824. —Nomen dubium.

Corallomorpha Opiz 1856 [1958 (Ta 7): 174]; lectotype: Corallomorpha schoblii Opiz.—
Nomen dubium. Opiz thought that the genus "sich an die Fries'sche Gattung Calocera anschlieset", but it seems more likely that it belongs to the Deuteromycetes. cordylina, Poria = Aporpium caryae

coreacea, Tremella, Schleich. 1821 (nom. nud.)
ex Secr. 1833 M. 3: 286 (Switzerland),
not T. coriacea (Vauch.) Poir. 1808 (d.n.),
not Sacc. & Trott. 1912.—Nomen
dubium. Cf. Secretan, l.c.: "Sa teinte est
un vert obscur ...." — Lichenes?

coriacea Sacc. & Trott., Tremella = Tremella ('Microtremella') coriaria

coriacea, Tremella, (Vauch.) Poir. 1808 (d.n.), not T. coreacea Schleich. per Secr. 1833, not T. coriacea Sacc. & Trott. 1912; Nostoc Vauch. 1803: 226 pl. 16 f. 4 (Switzerland) (d.n.).—Fide Born. & Flah. 1888 (ASn VII 7): 204 = Nostoc commune Vauch. per Born. & Flah. — Nostocaceae heterocysteae.

coriaria, Tremella ('Microtremella') cornea, Calocera, Clavaria, Corynoides cornea, Tremella, Schleich. 1821 (Switzerland) (nom. nud.).

corniculata, Tremella, With. 1776: 733 (generic name n.v.p.) 

Lichenoides pellucidum

fuscum corniculatum Dill. 1741: 143 pl. 19 f. 30 (England) = Leptogium palmatum (Huds.) Mont. — Lichenes.

cornigera, Calocera

cornigerum, Ceratobasidium, Corticium

cornuta, Clavaria, Schaeff. 1774: 121 [pl. 289]
(Germany) (d.n.), not ~ Lam. 1778
(d.n.), not ~ Retz. 1779 (d.n.), not ~
Wulf. 1781 (d.n.).—Fide Fr. 1821: 486 =
Clavaria viscosa = Calocera viscosa, but this
identification is very doubtful. Perhaps an
abnormal growth of Lentinus sp.

cornuta, Tremella, Neck. 1768: 524 (generic name n.v.p.), not  $\sim$  (Pers.) per Pers. 1822.—From the synonyms cited this may be a species of Chaetophora; cf. C. incrassata (Huds.) Haz. — Chlorophyceae.

cornuta, Tremella, (Pers.) Pers. 1801 (d.n.), not ~ Neck. 1768 (generic name n.v.p.); Acrospermum Pers. 1797 C.: 222/88 (Germany) (d.n.); Tremella (Pers.) per Pers. 1822; Fr. 1822: 218 (not accepted).—Fide Sacc. 1888 (SF 6): 702 = Tremella sarcoides Fr., q.v.

corrugata Relh., Auricularia, Tremella = Auricularia mesenterica

corrugata With., Helvella = Auricularia mesenterica

corrugativa, Exidia = Myxarium hyalinum corticalis, Calocera, (Batsch per Steud.) Fr. 1828; Clavaria Batsch 1786: 231 pl. 28f. 162 (Germany) (d.n.) per Steud. 1824; = Lentaria corticalis (Batsch per Steud.) Corner 1950: 440 (in error as 'corticola Quél.'), Clavariaceae. — Sensu Bref. = Calocera cornea

corticioides, Dacrymyces, Ceracea

corticola, Muciporus, (Fr.) Juel 1897, misapplied; Polyporus Fr. 1821: 385; = Oxyporus corticola (Fr.) E. Komar., Polyporaceae. - Sensu Juel, in part = Tulasnella violea Coryne, Tremella "stirps" ~, Nees 1816: 157 & 1817: 40 (inadmissible term denoting rank) (nom. anam.); Coryne (Nees) Nees (nom. prov. & alternative name) ex S. F. Gray 1821 (nom. anam.) (nom. rejic. prop.), not ~ Tul. 1865 (nom. cons. prop.); Tremella sect. Coryne (Nees) ex Pers. 1822; Tremella subgen. Fr. 1822; Tremella [trib.] Fr. 1838; = Tremella sect. Clavaeformes Fr.; lectotype: Acrospermum dubium Pers.  $\equiv$  Tremella acrospermum Nees, q.v. -This form-genus is now known as Pirobasidium Höhn. (imperfect state of Coryne Tul., Discomycetes). — Deuteromycetes. Corynoides = Calocera
Craterocolla (Tremellineae)
crenata, Guepinia = Guepiniopsis buccina
crispa, Tremella, Schreb. 1771, Sibth. 1794;
(generic name n.v.p.), not ~ Lloyd 1922;
= Tremella terrestris tenera, crispa Dill. 1741:
52 pl. 10 f. 12 (England); = Ulva crispa
Lightf. 1777 (typonym), not ~ (L.) DC.
1805; Tremella With. 1776 (generic name
n.v.p.); = Prasiola crispa (Lightf.) Kütz.
(typonym). — Chlorophyceae.

cristata, -um, Corticium, Cristella, Merisma, Thelephora, Sebacina = Sebacina incrustans; sensu Pat. = Cristella fastidiosa (Pers. per Fr.) Brinkm., Corticiaceae

Cristella Pat. 1887 [1957 (Ta 6): 68].—D. P. Rog. 1944 (M 36): 78 stated that the type species "presumably is a Sebacina". This is incorrect, the type species "Crist. cristata" sensu Pat. is undoubtedly Corticium fastidiosum (Pers. per Fr.) P. Karst. = Cristella fastidiosa (Pers. per Fr.) Brinkm., cf. Donk 1952 (Re 1): 485-486. — Corticiaceae.

crocata, Hirneolina = Eichleriella alliciens croceotingens, Gloeocystidium = Basidiodendron evrei

croci, Tuber = Helicobasidium brebissonii crocorum, Rhizoctonia, Sclerotium, Thanatophytum = Helicobasidium brebissonii

crozalsii, Sebacina

cruenta, Tremella, Sm. 1807 (EB 25): pl. 1800 (generic name n.v.p.) per Hook. 1821; Olivia (Sm. per Hook.) S. F. Gray 1821 = Porphyridium cruentum (Sm. per Hook.) Näg. = P. purpureum (Bory) Drew & Ross. — Rhodophyceae.

crustulina, -us, Cerinomyces, Ceracea; sensu Brasf. = Cerinomyces pallidus G. W. Mart. (not listed)

crypta, Tremella, Lib. ("in Herb."), Roum. 1880 (syn.), Cooke 1880 (G 8): 82 (accepted?), Mussat 1901 ("cripta"; syn.).—Nomen dubium. Fide Roum. 1880 (Rm 2): 15 = Tremella unicolor Fr., q.v., almost certainly in error.

crystallina, Heterochaetella, Sebacina = Stypella

crystallinum, -us, Hydnum, Tremellodon = Pseudohydnum gelatinosum

cucullata, -us, Brond., Auricularia, Cantharellus,

Merulius = Hirneola auricula-judae cucumeris, Thanatephorus, Hypochnus culmorum, Tremella = Sebacina incrustans cuprina.—"Tremella cuprina Bory" is cited by Ag. 1824: 22 under Nostoc rufescens Ag. [= N. carneum (Lyngb.) Ag. per Born. & Flah.] as "huic videtur proxima". curvispora, Tulasnella

cylindrica, Tremella, (Vahl) Schum. 1803 (d.n.) per Pers. 1822; Acrospermum Vahl 1792 (Fd 6 / F. 18): 8 pl. 1076 f. 4 (Norway).— Fide Fr. 1822: 218 = Tremella sarcoides Fr. (var.), q.v.

cyphella, Guepinia = ? Femsjonia pezizaeformis cystidiophora, Exidiopsis = Basidiodendron cinereum

cystidiophora, Tulasnella, Gloeotulasnella, Tremella

Cystobasidium (Auriculariineae)

Dacrymycella Bizzoz. 1885 [1962 (Ta 11): 82]; monotype: Dacrymycella fertillissima, q.v.

Dacrymyces (Dacrymycetales); sensu Corda = Dacrymyces, imperfect state.

Dacryomitra = Calocera

Dacryomyces = Dacrymyces, q.v.

Dacryonaema (Dacrymycetales)

Dacryopsella Höhn. 1915 [1954 (Re 2): 457]; holotype: Dacryopsis typhae Höhn., q.v.— This genus, which has been merged in Pistillina Quél., does not belong to the Dacrymycetaceae as von Höhnel thought. dauci, Rhizoctonia = Helicobasidium brebissonii deciduum, Sclerotium = Ceratobasidium anceps decorticata, Onygena, Phleogena, \*Pilacre Lloyd 1925 = Phleogena faginea

deformans, Herpobasidium

deglubens, Corticium, Sebacina = Sebacina incrustans

deglubens, Eichleriella, Radulum

deliquescens, Calloria, Dacrymyces, Tremella = ? Dacrymyces lacrymalis; sensu Fr., Duby = Dacrymyces stillatus

deliquescens var. castaneus, Dacrymyces = Dacrymyces enatus

deliquescens (nom. conf.), Muciporus, in part = Tulasnella calospora

deliquescens, Tulasnella = Tulasnella calospora deminuta, -um, Basidiodendron, Bourdotia, Sebacina

dendroidea, Sebacina, (B. & C. apud B. & Br.) Lloyd 1915; Hymenochaete B. & C. apud B. & Br. 1873 (JLS 14): 69 (Venezuela).—Not a

species of Heterobasidiae. The precise identity and nature is still under discussion. Fide Petch 1912 (APe 5): 280 the collection from Ceylon represents mycelial growth on which the spores of the substratum (Ganoderma sp.) have been deposited and which is often parasitized by Hypomyces chrysocomus B. & Br. A similar growth has occasionally been reported from Europe; cf. Septocylindrium lindtneri Kirschst. 1936 (ZP 15): 118 pl. 15 f. 2. depressa, Exidia, Bon. 1851: 336 pl. 12 f. 244. -An error for Exidia impressa, q.v., described on p. 153 of the same work. Dermatangium = ? Tremella dichotoma, Tremella, With. 1776: 733 (generic name n.v.p.) = Lichenoides gelatinosum, foliis angustioribus tuniformibus Dill. 1741: 142 pl. 19 f. 28 (England) = Leptogium fluviatile (Huds.) Leight. — Lichenes. difformis, Tremella, L. 1755: 429 (Sweden) (generic name n.v.p.), not ~ With. 1776 (generic name n.v.p.); = Leathesia difformis (L.) per Aresch. — Phaeophyceae. difformis, Tremella, With. 1776: 733 (generic name n.v.p.), not ~ L. 1755 (generic name n.v.p.); \equiv Lichenoides maritimum gelatinosum ... Dill. 1741: 137 pl. 19 f. 19 (England). digitata, Tremella, Hoffm. 1787 V.c. 1: 33

onym. — Uredinales.
digitata, Tremella, Vill. 1789: 1007 (France)
(d.n.), not ~ Hoffm. 1787 (d.n.).—Fide
Kern 1911 (BNY 7): 464 = Gymnosporangium clavariaeformis, q.v. — Uredinales.

pl. 7 f. 2 (Germany) (d.n.), not ~ Vill.

1789 (d.n.); = Gymnosporangium sp.—Hoff-

mann cited Tremella sabinae Dicks. as syn-

dimitica, Sebacina

dimorphum, Septogloeum = Kriegeria eriophori disciforme, -is, Achroomyces, Cryptomyces, Epidochium, Platygloea, Tremella

discoideum, Exobasidium; sensu Petri = Exobasium japonicum, q.v. discoideum var. horvathianum, Exobasidium = Exobasidium discoideum

Ditangium = Craterocolla Ditiola (Dacrymycetales)

divisa, Pilacre = ? Phleogena faginea

dubia, Heterochaetella, Heterochaete, Sebacina dubia, Tremella, (Pers.) Pers. 1801 (d.n.); Acrospermum Pers. 1797 C.: 224/92 (Germany) (nom. anam.) (d.n.); Tremella (Pers. per S. G. Gray) Pers. 1822, not ~

Spreng. 1827; Tremella acrospermum Nees.

—Fide Pers. 1822: 321 = Peziza sarcoides
(Jacq.) per Pers.; fide Fr. 1822: 217 =
Tremella sarcoides Fr., q.v.

dubia, Tremella, Spreng. 1827, not ~ (Pers. per S. F. Gray) Pers. 1822; ≡ Phlebomorpha rufa Pers. 1822: 61 pl. 6 fs. 1, 2 (Europe).

—Nomen dubium. Possibly the plasmodium state of a Myxomycete.

dubium, Exobasidium

dubyi, Guepinia = Hirneola auricula-judae dufouri, Tremella, Brond. 1854 (AFA 1): 59 (France).—Nomen dubium.

dulciana, Tremella, Roum. 1890 (Rm 12): 1 (France) (nom. prov.?), Sacc. 1891.—
Nomen dubium. Perhaps abnormal growth produced by the 'host' [fruitbody of Clitocybe nebularis (Batsch per Fr.) Kumm.], similar to what has been called Tremella mycetophila, q.v.

Ecchyna Fr. 1819 (nom. nud.) & 1825 (nom. prov.), not ~ Fr. 1849 [1958 (Ta 7): 173]; monotype: an unnamed species.

Ecchyna Fr. ex Boud. = Phleogena

Echin-agaricus Haller 1742 (pre-Linnaean name) [1958 (Ta 7): 194].—By lectotypification = Pseudohydnum P. Karst. (p. 173). effusa, -us, Achroomyces, Platygloea

effusa, Exidia, (A. & S.) per Neuh. 1926; Tremella candida var. effusa A. & S. 1805: 302 (Germany) (d.n.).—Nomen dubium. effusa, Sebacina, Exidiopsis, Thelephora

effusus.—"D[acrymyces] effusus est Thelephora junior", fide Fr. 1822: 231.

eichleriana, Tulasnella

Eichleriella (Tremellineae)

elegans, Tremella, Fr. 1822: 214 (U.S.S.R., Russia, Kamchatka).—Reported from Petrograd [= Leningrad], Russia, by Fr. 1874: 691. The collection referred to was originally published as Tremella aurantia Schw. sensu Fr. 1828 E. 2: 33, Weinm. 1836: 530. Also reported from Bavaria by Allesch. 1889 [cf. 1890 (H 29): 301]. Nomen dubium.

elliptica, Tremella, Pers. 1822: 109 (Europe) (nom. anam.).—Fide Fr. 1822: 234 = Hymenella vulgaris Fr. ("etiam huc spectat"). ellisii, Dacrymyces = Dacrymyces stillatus elongata, Calocera, (Weinm.) Streinz 1861 (syn.); Calocera viscosa f. elongata Weinm. 1836: 517 (U.S.S.R., Russia).—Fide

McNabb 1965 (NZB 3): 53, cf. Calocera

enata, -us, Dacrymyces, Arrhytidia, Tremella encephala, Tremella, Naematelia

encephaliformis, Naematelia, Tremella = Tremella encephala

Encephalium (nom. conf.), in part = Tremella encephalodes, Tremella, Schum. 1803: 439 (Denmark) (d.n.), not/an T. encephaloides Gmel. 1791.—Nomen dubium. Fide Fr. 1822: 228 = Naemetelia rubiformis Fr., but this identification is improbable.

encephaloidea Spreng., Tremella = Tremella encephala

encephaloides Gmel., Tremella = Tremella encephala

Eocronartium (Auriculariineae)

epapillata, Exidia = ? Exidia plana

Epidochiopsis P. Karst. 1892 (H 31): 294 (nom. anam.); monotype: Epidochium atrovirens (Fr.) Fr. sensu P. Karst. = Epidochiopsis atrovirens P. Karst.-Originally based on a misinterpretation of Epidochium atrovirens q.v. — Deuteromycetes.

Epidochium = Tremella

epigaea, Sebacina, Sebacina laciniata subsp., Tremella

epilobii, Propolis, Fuck. 1870 (Jna 23-24): 253 (Germany).—Fide Rehm 1888 (RKF 18): 149 = Propolis faginea (Schrad.) per P. Karst. [= P. versicolor (Fr.) Fr.]. Fuckel erroneously stated that the conidiophorous state was a species of Exidia. — Discomycetes.

epimyces, Tremella, Pass. 1872 (NGi 4): 165 (Italy).—Nomen dubium. Perhaps abnormal growth produced by the 'host' [fruitbody of Hygrophorus hypothejus (Fr. per Fr.) Fr.], similar to what has been called Tremella mycetophila, q.v.

episphaeria, Tremella, Chaill. (in litt.), Fr. 1828 (syn.), Streinz 1861 ("epistatica", error; syn.), not ~ J. Rick 1958.—Fide Fr. 1828 E. 2: 33 = Tremella indecorata (p. 181) & cf. (71). epistatica, Tremella, Streinz 1861 (syn.).-

Error for T. 'episphaeria', q.v.

erecta, Tremella, ?DC., Steud. 1824: 415, not ∼ Sommerf. 1827; "Tremelle inédite, que l'on pourroit nommer Trémelle couchée" Girod-Chantr. 1802: 162 pl. 22 f. 57. — Algae.

erecta, Tremella, Sommerf. 1827 (MNv 7): 296 (Norway), not ~ ?DC., Steud. 1824.—

Nomen dubium. The description strongly suggests Tremiscus helvelloides (p. 185). Cf. Tremella arctica.

erikssonii, Corticium, Maubl.—Cited by Vienn-B. 1949: 1179 as synonym of Helicobasidium purpureum "(Tul.) Pat." = Helicobasidium brebissonii (p. 156).

eriophori, Kriegeria, Platygloea, Xenogloea estonicus, Dacrymyces

Eucronartium = Eocronartium

euphorbiae, Dacrymyces, Lasch 1846 (Germany) (nom. nud.).

euphrasiae, Corticium, Hypochnus, Monilia = Thanatephorus cucumeris

europaea, Hyaloria, Killerm. 1936 (BdG 54): 165 pl. 25 (Germany) (nom. anam.).—Cf. Killerm. 1940 (DrG 21): 81, "Sirobasidium cerasi Bourd. . . . scheint identisch zu sein." If this is correct then the protologue is misleading. See also Killermannia Neuh. Special literature: Killermann, 1936. — Deuteromycetes.

europaea, [Exidia], Heterochaete

exarata, Peziza, Phialea = Guepiniopsis buccina Exidia (Tremellineae)

Exidiopsis = Sebacina

exigua, Tremella

Exobasidiellum (Tulasnellaceae)

Exobasidium (Exobasidiales)

expallens, Calocera, Quél. 1888: 457 (France). —I would exclude this from the Dacrymycetaceae and for the present consider it a doubtful species of Clavariaceae. I cannot agree with McNabb's suggestion [1965 (NZB 3): 54], "possibly Calocera cornea". expansa, Tremella = Tremella mesenterica eyrei, Basidiodendron, Bourdotia, Gloeocystidium, Sebacina

fabarum, Corynoides, S. F. Gray 1821; == Clavaria fabae Sow. 1814 (EB 36): Ind. Engl. Fungi; \equiv Clavaria rugosa Sow. 1809: pl. 404 (England) (d.n.), not ~ Bull. 1789 (d.n.) per Fr. 1821, not ~ Sow. 1801 (d.n.).; = Merisma pusillum Pers. 1822.— Nomen dubium. Doubtfully heterobasidious.

facata.—"Tremella facata Buill.", Humb. 1793: 126, in obs.—An error for Tremella fucata Gmel. 

T. cinnabarina Bull., q.v.

fagi, Ditiola = [Dacrymyces] Ditiola nuda fagicola, Dacrymyces, Dacrymyces deliquescens var.

faginea, Phleogena, Botryochaete, Ecchyna, Onygena, Pilacre

faginea, Tremella, \*Exidia Neuh. 1936 (syn.) = Exidia plana

falcatispora, Clavaria = Eocronartium muscicola (& see p. 335).

farinacea, -um, Saccoblastia, Helicobasidium, Helicogloea

farinacea, Sebacina = Basidiodendron cinereum farinellum, -us, Corticium, Xerocarpus = Sebacina calcea

farinosa, Corynoides, (Holmskj.) per S. F. Gray 1821; Ramaria Holmskj. 1781 (SVS, Nye Samml. 1): 299 plate f. 6 (Denmark) (nom. anam.) (d.n.); = Paecilomyces farinosa (Holmskj. per S. F. Gray) Ag. Brown & G. Sm. 1957 (TBS 40): 50 f. 6. — Deuteromycetes.

farlowii, Protomerulius = ? Stypella papillata fasciculare, -is, ? Protodontia, Hericium, Hydnum, Mucronella, Mucronia, Protohydnum fasciculata, Clavaria, Pers. sensu Bon. = Calo-

fasciculata, Tubercularia, Tode 1790: 20 pl. 4
f. 32 (Germany) (nom. anam.) (d.n.) =
Cryptosporiopsis fasciculatus (Tode per Pers.)
Petr. 1923 (Am 21): 187 (with descr.).—
Fide Tul. 1865 C. 3: 182 = Peziza carpinea
Pers. (fruitbody not fully developed) =
Pezicula carpinea (Pers. per Pers.) Sacc.,
imperfect state. — Deuteromycetes.

Femsjonia (Dacrymycetales)

femsjoniana, Guepinia = Femsjonia pezizaeformis fendzleri, Microporus, Polyporus, Polystictus = ? Aporpium caryae

fenestratum, Corticium = Uthatobasidium ochraceum

fennicus, Dacrymyces

cera cornea

ferax (nom. conf.), Corticium, in part = [Achroomyces] Platygloea peniophorae

ferruginea, Tremella, Schum. 1803: 441 (Denmark) (d.n.) per Pers. 1822, not ~ Sm. 1805 (d.n.) per Hook. 1821.—Fide Fr. 1821: 478; 1823: 219; 1828 E. 1: 230 = Clavaria contorta Holmskj. per Fr. \equiv Clavariadelphus fistulosus var. contortus (Holmskj. per Fr.) Corner 1950: 273 f. 102. — Clavariaceae.

ferruginea Sm., Gyraria, Tremella = Tremella foliacea

fertillissima, Dacrymycella, Bizzoz. 1885 (AIv VI 3): 309 (Italy) (nom. anam.).—The author thought this to represent a conidial

state of Calloria Fr. or Dacrymyces, apparently in error. — Deuteromycetes.

filamentosa, -us, -um, Pellicularia (Pat. apud Pat. & Lag.) D. P. Rog. 1943, misapplied; Hypochnus Pat. apud Pat. & Lag. 1891 (BmF 7): 163 pl. 11 f. 2 (Ecuador) (80), not ~ Burt 1926; Ceratobasidium L. Olive 1957 (incomplete reference: n.v.p.), misapplied; sensu D. P. Rog., in part = Thanatephorus cucumeris

filicina, ? Protodontia

filicinum, Herpobasidium, Gloeosporium, Helicobasidium

fimbriata, Tremella = Tremella foliacea fimetaria, -um, [Achroomyces], Exobasidium, Helicobasidium, Platygloea, Tremella fimicola, Achroomyces, Platygloea = [Achroomyces] Platygloea fimetaria

fissa, Guepinia, Berk. 1843 (AM 10): 383 pl.
12 f. 15, in part ("Malacca and Siam").

—An alien, reported from a hothouse at
Berlin by P. Henn. 1899 (VBr 40): 118. —
Fide Bres. 1911 (Am 9): 273 & McNabb
1965 (NZB 3): 63, 64 = Guepinia/Dacryopinax spathularia, q.v.

flabellum, Dacrymyces = Dacrymyces palmatus flaccida, Tremella = Exidia glandulosa flammea, Schaeff., Calocera, Clavaria = Calocera viscosa

flavescens, Pellicularia, (Bon.) D. P. Rog. 1943, misapplied; Hypochnus Bon. 1851: 160 (Germany); Corticium Wint. 1882 & Botryobasidium D. P. Rog. 1935, misapplied.— Nomen dubium. Sensu Fuck. = Uthatobasidium fusisporum

flavescens, Tubercularia = Ditiola radicata flavida, Calocera = Calocera furcata flavidula, Tremella = ? Tremella lutescens flexilis, see fluxilis

fluviatilis, Tremella, Rox. Clem. 1807 (d.n.):

Tremella fluviatilis gelatinosa & uterculosa
Dill. 1741: 54 pl. 10 f. 16 (England);
Tremella Streinz 1861 (syn.).—Fide L. 1753:
1158 (as to 'basionym') = Tremella verrucosa
L., q.v.

fluxilis, Tremella, (Fr.) Streinz 1861 ("flexilis"; syn.) = Tremella sarcoides var. fluxilis Fr. 1822: 218 (Sweden) (nom. anam.).—
Tremella sarcoides Fr., q.v.

foliacea, Tremella, Exidia, Gyraria, Naematelia, Ulocolla; sensu Bref. = Exidia saccharina foliicola, Tremella, Fuck. 1870 (Jna 23-24): 402 (Germany) (nom. anam.).—Fide Sacc. 1884 (SF 3): 699 = Hainesia rubi (Westend.) Sacc. — Deuteromycetes.

foliodistortum, Herpobasidium, Gould apud Kent & Melh. 1943 (RIa 1942–3<sup>I</sup>): 136 (lacking Latin description: n.v.p.).—Fide Gould 1945 (IaJ 19): 317 = Herpobasidium deformans (p. 158).

fragiformis, Dacrymyces, Naematelia, Tremella = Tremella encephala

fraxini, [Thanatephorus], Rhizoctonia

friesiana Exidia = Exidia pithya

friesii Weinm., Cyphella = ? Femsjonia pezizaeformis

friesii, Pilacre, Weinm. 1834 (Li 9): 413 (U.S.S.R., Russia), not ~ Weinm. 1832.
—Nomen dubium. Listed by Shear & Dodge 1925 (JaR 30): 414, 415 as synonym of Pilacre faginea [≡ Phleogena faginea], but the original description does not agree with this determination.

frondosa Fr., Tremella, Naematelia; sensu Tul.

= Tremella foliacea; sensu Bon. = Tremella mesenterica; sensu Quél. = ? Tremella cerebrina

frondosa, Tremella, Roth 1806: 348 (Germany) (generic name n.v.p.), not ~ Fr. 1822; Palmella Lyngb. 1819. — Algae.

frustulosum, Corticium = Uthatobasidium ochraceum

fucata, Tremella, Gmel. 1791 (d.n.), Humb. 1793 ("facata", error); = Tremella cinnabarina Bull., q.v.

fuciformis, Tremella, Berk. 1856 (HJB 8): 277 (Brazil).—An alien, occasionally found in hothouses. — Descriptions & illustrations:
A. Möll. 1895 (BMS 8): 115, 170 pl. 1 f. 5, pl. 4 f. 13;
P. Henn. 1899 (VBr 40): 113, 117;
Pilát 1928 (MP 5): 86 fig.;
&c.

fugacissima, Sebacina, Exidiopsis; sensu Whelden = Sebacina sublilacina

fugax, Collema, Lichen, Parmelia = Exidia plana

fugax, Tulasnella, Corticium, Pachysterigma, Prototremella

fulva, Exidia

fungiformis, Tremella = Exidia recisa

furcata, Calocera, Clavaria

fusarioides, Dacrymyces, (Berk.) Bon. 1864 (syn.); Peziza Berk. 1837 (MZB 1): 46 pl. 2 f. 4 (England) = Calloria fusarioides (Berk.) Fr.—Cf. Dennis 1960: 121. — Discomycetes.

fusca, Rhizoctonia = Thanatephorus cucumeris

fusca, Tremella, (DC.) Poir. 1808 (d.n.), not ~ (With.) Steud. 1824 (n.v.p.), not ~ Lloyd 1917; = Gymnosporangium fuscum DC. 1805: 217 (basionym). — Uredinales.

fusca, Tremella, (With.) Steud. 1824 (syn.), not ~ (DC.) Poir. 1808 (d.n.), not ~ Lloyd 1917; Tremella arborea var. fusca With. 1792: 224 (England) (d.n.).— Steudel referred Tremella fusca as synonym to [T.] "ustulata" which is evidently an error for T. undulata Hoffm. — An Tremella foliacea.

fuscoviolacea, Tulasnella

fuscoviolaceum, Septobasidium, Helicobasidium fusispora, Tremella ('Microtremella')

fusispora, -us, -um, Uthatobasidium, Corticium, Hypochnus, Pellicularia, Peniophora; sensu Höhn. & L. = Jaapia ochroleuca (Bres. apud Brinkm.) Nannf. & Erikss. (not listed), Coniophoraceae

galeata, Tremella, (Holmskj.) per Pers. 1822; Clavaria Holmskj. 1799: 25 pl. [10] (Denmark) (nom. anam.) (d.n.). — Fide Fr. 1822: 218 = Tremella sarcoides Fr. (var.), q.v.

gallaicus, Dacrymyces — Dacrymyces minor galzinii, Bourdotia, Bourdotia pululahuana subsp., Exidiopsis, Sebacina

galzinii, Septobasidium

gangliformis, Dacrymyces = Dacrymyces enatus gangliformis, Tremella = [Tremella ('Microtremella')] Sebacina sphaerospora

Gausapia = Septobasidium

gelatinosa Bull., Exidia, Peziza = Exidia recisa gelatinosa, -us, -um, Scop., Pseudohydnum, Exidia, Hydnogloea, Hydnum, Steccherinum, Tremellodon

gelatinosa Holmskj., \*Clavaria Fr. 1821 (syn.), Ramaria = Calocera viscosa

gelatinosa, Thelephora = Sebacina incrustans gelatinosum, Hydnum, Latourr. = Pseudohydnum gelatinosum,

gemmata, Exidia, Naematelia, Tremella = Myxarium hyalinum

genistae, Tremella = Tremella exigua

gigaspora, Clavaria = Tremellodendropsis tuberosa

gilvescens, Poria, Bres. 1908 (Am 6 ): 40 (Europe), Polyporaceae. — Sensu Overh. — Aporpium caryae

glacialis, Tremella = Tremella ('Microtremella') grilletii

glaira, [Sebacina], Exidiopsis, Tremella

glandulosus, Agaricus, "Bull. . . . tab. 426" is cited by Oud. 1923 E. 4: 799 as synonym of Exidia glandulosa through confusion with Tremella glandulosa Bull. pl. 420. glandulosa (Bull. per St-Am.) Fr., Exidia, Auricularia, Spicularia, Tremella; sensu Fr., in part = Exidia plana glandulosa Neuh., Exidia = Exidia plana glauca, Tremella = ? Exidia albida glaucopallida, Exidia, P. Karst. 1868 (Nfe 9): 374 (Finland); Tremella P. Karst. 1889 .-Nomen dubium. Glenospora = Septobasidium globosa Hedw., see globulosa globosa, Tremella, Weiss 1770: 28 (generic name n.v.p.), not ~ (Farl.) Arth. 1901 (Uredinales); ≡ Ulva granulata L. 1753: 1164 (Sweden) = Botrydium granulatum (L.) Grev. — Xanthophyceae. globulosa, Tremella, Hedw. 1798: 217 pl. 36 fs. 1-6 (d.n.) (n.v.), Ag. 1824: 29 ("globosa"; syn.), not ~ Speg. 1880.—Fide Roth 1806: 338 = Rivularia dura Roth. — Nostocaceae heterocysteae. globulus, Naematelia, Corda 1837 I. 1: 25 pl. 7 f. 299 (Czechoslovakia, Bohemia); Tremella Quél. 1888, not ~ Bref. 1888.— Nomen dubium. Fide Neuh. 1936 (PM 2a): 29 = Dacrymyces sp., but I cannot follow him in this. — Sensu Lloyd = Myxarium hyalinum globulus Bref., Tremella gloeocystidiata, Sebacina = Basidiodendron cinereum gloeophora, Sebacina Gloeosebacina = Stypella Gloeotulasnella = TulasnellaGlomerularia Peck = ? Herpobasidium Glomopsis = ? Herpobasidium glossoides Pers., Calocera, Clavaria, Dacryomitra, Tremella; sensu Cost. & Duf. = [Calocera] Dacryomitra pusilla glossoides Bref., Dacrymyces, Dacryomitra = [Calocera] Dacryomitra pusilla; sensu Lloyd = Dacrymyces sp. (not listed); sensu Brasf. (not listed) goodyerae-repentis, [Thanatephorus], Rhizocgracilis, Rhizoctonia = [Thanatephorus] Rhizoctonia sphacelati gracillima, Calocera, Weinm. 1836: 517 (U.S.-

Russia)—Nomen

McNabb 1963 (NZB 3): 54.

dubium fide

grambergii, Exidia = Exidia glandulosa graminicola, Exobasidiellum, Exobasidium graminicola, Helicogloea, Saccoblastia graminis, Exobasidium; error (Pat. 1900: 36) for E. graminicola q.v. grandinioides, Basidiodendron, Bourdotia, Sebacina grandis, Tremella = Tremella foliacea grantii, Stereum = Tremellodendropsis tuberosa granulata, Tremella, (L.) Huds. 1778 (generic name n.v.p.); Ulva granulata L. 1753: 1164 (Sweden); = Botrydium granulatum (L.) Grev. — Xanthophyceae. granulosa, Tremella, Retz. 1769 (SVH 30): 250 (Sweden) (d.n.), not ~ Bull. 1791 (d.n.). -Fide Fr. 1823: 414 = Sphaeria conglobata Fr. per Fr. = Cucurbitaria conglobata (Fr. per Fr.) Ces. & Not. — Pyrenomycetes. granulosa, Tremella, Bull. 1791 H.: 227 [pl. 499 f. 2] (generic name n.v.p.), not  $\sim$  Retz. 1769 (d.n.).—Fide Zahlbr. 1925 C. 3: 97 = Collema pulposum Ach., but cf. Degelius 1954 (Sbu 132): 167, "description agrees rather well with [Collema pulposum] but the figure suggests ... probably a Nostoc ...." - Lichenes or Nostocaceae heterocysteae. granulosum, Trichoderma, Fuck. 1870 (Jna. 23-24): 364 (Germany).—Occasionally listed as synonym of Pilacre faginea [≡ Phleogena faginea], for instance by Lambotte 1884 F.m. 3: 257 because the type distribution had been issued under the name Onygena faginea. — Deuteromycetes. grilletii, Tremella ('Microtremella'), Exidia grisea.—"Naemaspora grisea Corda", Crouan 1867: 59 (syn.).—Listed as synonym of Tremella exigua. This is an error: Naemaspora grisea Pers. 1801: 110 (: Fr. 1832) sensu Corda 1839 I. 3: 26 pl. 4 f. 68 ("Nemaspora") seems to be a species of Melanconiales. griseorubella, Tulasnella, Gloeotulasnella grisea, Sebacina, Exidiopsis, Thelephora Guepinia Fr. = Tremiscus; sensu Bref. = Femsjonia; sensu Ulbrich = Guepiniopsis; sensu G. W. Mart. 1936 [1958 (Ta 7): 199, in obs.] = Dacryopinax (not listed) Guepiniopsis (Dacrymycetales) guttata, [Dacrymyces], Tremella guttifera, Exidia, Wallr. 1833: 558 (Germany). —Nomen dubium.

guttulatus, Aleurodiscus = Basidiodendron cinereum

Gyraria = Tremella

Gyrocephalus Pers. 1824 [1958 (Ta 7): 200]; lectotype: Gyrocephalus aginnensis Pers. ≡ Helvella sinuosa Brond. = Gyromitra esculenta (Pers. per Fr.) Fr.—A nomen rejiciendum v. Gyromitra Fr. — Sensu Bref. = Tremiscus gyrosa, Tremella, Hoffm. 1797-1811 V.s.: 30 pl. 17 f. 1 (Germany) (d.n.) per Streinz 1861.—Nomen dubium.

harperi, Dacrymyces = Dacrymyces lacrymalis helvelloides, Sebacina, Corticium, Thelephora helvelloides, Tremiscus, Guepinia, Gyrocephalus, Phlogiotis, Tremella

Helicobasidium (Auriculariineae)

Helicobasis = Helicobasidium

Helicogloea (Auriculariineae)

helicospora, Tulasnella, Gloeotulasnella

hellebori, Hypochnus = Thanatephorus cucu-

helleborines-latifoliae, [Thanatephorus], Orcheomyces

helleborines-palustris, [Thanatephorus], Orcheomyces

hemisphaerica, Tremella, L. 1753: 1158 (generic name n.v.p.), not ~ Schleich. ex Secr. 1833.—Fide Ag. 1824: 25 = Rivularia atra Roth. [per Born. & Flah.]. — Nostocaceae heterocysteae.

hemisphaerica, Tremella, Schleich. 1821 (nom. nud.) ex Secr. 1833 M. 3: 288 (Switzerland), not  $\sim$  L. 1753 (generic name n.v.p.). -Nomen dubium. Fide Bandoni 1961 (AMN 66): 327 = Tremella virescens Bref. This suggestion is not acceptable.

Herpobasidium (Auriculariineae)

Heterochaete (Tremellineae)

Heterochaetella (Tremellineae)

Heteromyces L. Olive = Oliveonia

Heteroradulum Lloyd 1917 (not accepted: n.v.p.; "McGinty") [1958 (Ta 7): 202]. -Introduced in connection with Radulum kmetii Bres. = Eichleriella deglubens Lloyd. (p. 166).

Hirneola (Auriculariineae)

Hirneolina = ? Heterochaete

hispanica, Tremella

holospirum, Helicobasidium

horkelii, Actinomyce, F. Meyen 1827 (Li 2): 442.—The true nature of this species has not yet been stablished: it can be accepted with confidence, I believe, as non-basidiomycetous and perhaps even as nonvegetable. Cf. also von Heyden 1839 (Li 13, Litt.): 51.

Hormomyces = Tremella

hyalina, -us, -um, Pers., Myxarium, Dacrymyces, Tremella; sensu Bourd. & G. = Dacrymyces caesius; sensu Lloyd = ? Dacrymyces tortus

hyalina.—"T[remella] hyalina Boud.", Cost. & Duf. 1895: 289.—An error for T. hyalina 'Pers'?

hyalina, Tulasnella, Gloeotulasnella

hyalinogriseum, Protohydnum, Romell herb."), Lundell 1932 (SSN 22): 33 (nom. nud.), Bourd. 1932 (BmF 48): 206 (syn.). -Fide Kühner apud Bourd., l.c. = Protohydnum piceicola = Protodontia piceicola (p. 172).

hyalinus, Dacrymyces, Lib. 1837 P.A.: No. 333 [cf. Matthieu 1853: 263] (Belgium) (nom. anam.)  $\equiv$  Linodochium hyalinum (Lib.) Höhn. 1909 (SbW 118): 1238, 1239. — Deuteromycetes.

Hydnogloea = Pseudohydnum

hydnoides, Tremella, Jacq. 1778 (MaJ 1): 145 pl. 16 (generic name n.v.p.).—Fide Lister 1911: 25 = Ceratomyxa fruticulosa (O. F. Müll.) Macbr. — Myxomycetes.

Hydrabasidium Park.-Rh. 1954 (nom. nud.) [1957 (Ta 6): 73]; holotype: Corticium atratum Bres. \equiv Oliveonia atrata (p. 186).

Hygromitra Nees 1816 ex Fr. 1821 [1958 (Ta 7): 205]; holotype, Tremella stipitata Bosc, q.v.—Fries originally included Hygromitra [= Leotia Fr.] in the Tremellini.

Hymenella Fr. 1821 (nom. nud.) (n.v.), 1822: 233 (nom. anam.), not ~ Moç. & Sessé ex DC. 1824 (Caryophyllaceae); lectotype: [Hymenella ebuli Fr. ≡] Hymenella vulgaris Fr.—Fries soon modified this generic name into Hymenula Fr. 1828 E. 2: 37, which name has come into general use. However, there is no nomenclative reason to reject the original form. The use of 'Hymenella' (with retention of Hymenula as a distinct genus) for an excluded species [Hymenella arundinis (Pers.) Fr., q.v.] resulted in the later homonym Hymenella Vestergr. — Deuteromycetes.

Hymenula Fr. = Hymenella Fr., q.v. hypnophila, Calocera, Saut. 1841 (Fl 24<sup>I</sup>): 317

("Caloceras hypnophilum") (Austria).-No-

men dubium. McNabb 1965 (NZB 3): 54 thinks of Eocronartium muscicola.

hypochnoides (nom. conf.), Stypella, in part = Helicobasidium sp.

hypogaeus, Irpex = Sebacina incrustans

ilicis, Tremella, Myxarium hyalinum

impressa, Exidia, Tremella = Exidia glandulosa; sensu Bourd. & G. = Exidia recisa

incarnata, -um, J.-Ols., Corticium, Pachysterigma, Tulasnella = ? Tulasnella violea

incarnata, Eichleriella, Hirneolina = Eichleriella alliciens

incarnata Bres., Tulasnella = Tulasnella violea incarnatum, Corticium, (Pers. per Fr.) Fr. 1838; Thelephora Pers. 1801: 573 (Germany) (d.n.) per Fr. 1821; ≡ Peniophora incarnata (Pers. per Fr.) P. Karst. 1889, Mass. 1889, Corticiaceae. — Sensu Tul. ["Corticium incarnatum (pinicola)"] = Tulasnella violea incarnatus, Dacrymyces, P. Karst. 1887 (Mfe 14): 83 (Finland).—Nomen dubium. inclusa, Sebacina

inclusa, Sebacina

inclusa, Tulasnella, Gloeotulasnella

inconspicuum, Helicobasidium = Helicogloea lagerheimii

incrustans, Clavaria = Sebacina incrustans incrustans, Sebacina, Corticium, Thelephora indecorata, Tremella, Exidia; sensu P. Karst. = Exidia sp. (not listed)

insigne, Ditangium = Craterocolla cerasi interna, Sebacina

intestinalis, Tremella, O. F. Müll. 1782 (Fd 5 / F. 15): 5 pl. 885 f. 2 (generic name n.v.p.).—Fide Ag. 1824: 19 = Nostoc muscorum Ag. [per Born. & Flah.]. — Nostocaceae heterocysteae.

intestiniformis, Tremella, Plan. 1788: 270 (Germany) (generic name n.v.p.) [cf. 1788 (BM 2 / 4. Stück): 165].—Nomen dubium. Nostoc sp.? (but cf. 'albida' in the description).

intumescens, Tremella, Exidia, Gyraria; sensu Bon. = Exidia plana; sensu Britz., P. Karst. = Exidia spp. (not listed)

invisibilis, Sebacina

involucrum, Corticium = Basidiodendron deminutum

involuta, -us, Dacrymyces, Schw. 1832: 186 (U.S.A., North Carolina); Arrhytidia Coker 1928. — Sensu auctt. nonn. = Dacrymyces corticioides japonica, Naematelia, Tremella = Tremella encephala

japonicum, Exobasidium, Shirai 1896 (Japan)
(131, 134). — Shirai 1896 (BMT 10): 52
pl. 4 fs. 9-11; A. L. Sm. 1912 (TBS 3):
374; Laubert 1925 (GwB 29): 429 fs. 1, 2;
1932: 287 fs. 72, 73; Vienn.-B. 1949: 1187
fs. 539, 540; S. Ito 1955: 53 f. 40; Graafland 1957, 1960 (Abn 9): 352 fs. 1-6,
pl. 1, fs. A, B (Exobasidium); McNabb 1962
(TNZ 1): 267 f. 2: 1, pl. 1 f. 2 (Exobasidium vaccinii var.).

M.—Exobasidium azaleae Peck sensu Ritz. Bos 1901 (LbT 9): 77 (perhaps first record for Europe). — Maubl. in Bourd. & G. 1928: 76; Göttgens 1960 (PhZ 38): fs. 8, 9 (on p. 409).

M.—Exobasidium discoideum J. B. Ell. sensu Petri 1907. — Petri 1907 (Am 5): 341 fs. 1-8; Eftimiu & Kharbush 1927 (RPv 14): 62, 75 fs. 1, 6, 7, tplate fs. 1-13. judae, Auricula = Hirneola auricula-judae judae, Auricularia = Hirneola auricula-judae juglandis, Exobasidium, (Béreng.) Pat. 1900; Fusidium Béreng. 1847 (MTr 5): 49 (Italy) nom. anam.); 

Microstroma juglandis (Béreng.) Sacc. — Deuteromycetes.

juniperi, Tremella, (Pers.) Streinz 1861 (svn.; error); Puccinia juniperi Pers. 1794 (NMB 1): 118/1797 T.: 38 pl. 2 f. 1 (Germany) (d.n.) per Pers. 1801 = Gymnosporangium fuscum DC. — Uredinales.

juniperina, Tremella, P. Karst. 1869 F.F.: No. 812 (with description), not ~ L. 1753 (generic name n.v.p.; Uredinales); Exidia P. Karst. 1889.—The following note is by Dr. R. W. G. Dennis (in litt.): The material [K] is quite good, yellowish when dry, hyaline when soaked up, with abundant basidia, some empty and cruciately septate, others with sterigmata but I can find no spores. The small basidia, only about 9  $\mu$  diameter, small carpophores and colour suggest Exidia grilletii (Boud.) Neuh. to me as to [Dr. D. A. Reid]. The host is odd if so but Karsten's hosts were often wrong. I suspect the 'sporae sphaeroideae' were the basidia." — This last supposition agrees with Karsten's own conclusion: in later work [1889 (BFi 48): 452] he replaced 'spores' by 'basidia', 10-12  $\mu$  in diam. — Tremellineae.

juniperina, Tremella, L. 1753: 1157 (Sweden)

(d.n.), Pers. 1801: 625 (generic name n.v.p.), not  $\sim$  P. Karst. 1869; Gyraria (L. per Mart.) S. F. Gray 1821;  $\equiv$  Gymnosporangium juniperina (L.) per Mart. 1817.—Fide Hylander & al. 1953 (Obl. 1<sup>1</sup>): 15 a nomen ambiguum in as much the precise identity within Gymnosporangium cannot be established. Often identified with Gymnosporangium tremelloides Hartig. Tremella juniperina emend. Huds. included also Tremella mesenterica, fide Fr. 1822: 214. — Uredinales.

juratensis, Gyrocephalus = Tremiscus helvelloides

karstenii Lind, Exobasidium = Exobasidium karstenii

karstenii Sacc. & Trott., Exobasidium

Killermannia Neuh. apud Killerm. 1940 (DrG 21): 81 (nom. anam.; incidental mention: n.v.p.); monotype: Hyaloria europaea Killerm., q.v.

killermannii, Helicobasidium, Stypinella = Saccoblastia farinacea

klebahnii, Moniliopsis = Thanatephorus cucu-

kmetii, Eichleriella, \*Heteroradulum Lloyd 1917, Hirneolina, Radulum = Eichleriella deglubens

Kordyanella Höhn. 1904 [1956 (Re 4): 117; 1963 (Ta 12): 156] (nom. anam.); monotype: Kordyanella austriaca Höhn., q.v.

Kriegeria (Auriculariineae)

kruchii, Exobasidium, "Wuill.", Sacc. & Trav. 1910 (SF 19): 693.—An error for Exoascus kruchii Vuill. 1891 (Rm 13): 141 = Taphrina kruchii (Vuill.) Sacc. — Taphrinales.

laccata, Sebacina, Exidiopsis

lacera, Tremella, (Sw. apud Ach.) Streinz 1861 ("Roth" in error; syn.) ≡ Lichen lacerus Sw. apud Ach. 1795 (SVH 16): 18, not ~ Gmel. 1791.—Fide Zahlbr. 1925 C. 3: 136-137 (for L. lacerus) = Leptogium lichenoides (L.) Zahlbr. Streinz's recombination apparently originated through confusion with 'Lichen tremella Roth'. — Lichenes.

laciniata, Sebacina, (Schaeff. per St-Am.) Bres. 1903, misapplied; Clavaria Schaeff. 1774: 122 [pl. 291] (d.n.) per Mérat 1821, misapplied, not ~ Ehrenb. apud Fic. & Sch. 1823; = Clavulina cristata (Holmskj. per Fr.)
J. Schroet., Clavulinaceae. — Sensu Bull.,
Bres. = Sebacina incrustans. — Cf. (54).
laciniata, Tremella, Bull. 1791 H.: 226 [pl. 499
f. 1] (generic name n.v.p.), not ~ With.
1776 (generic name n.v.p.).—Fide Degelius 1954 (Sbu 13²): 167 "probably a
species of Collemataceae (Collema cristatum?)". — Lichenes?

laciniata, Tremella, With. 1776 (generic name n.v.p.), not ~ Bull. 1791 (generic name n.v.p.); = Tremella terrestris cornuta Dill. 1741: 52 pl. 10 f. 13 (England).—Dr. R. A. Maas Geesteranus suggested (private communication): detached thalli of Evernia prunastri (L.) Ach. that were collected on the ground. — Lichenes.

lacrymalis, Dacrymyces, Gyraria, Tremella; sensu Corda = Dacrymyces stillatus; sensu Sommerf. = Dacrymyces tortus

lactea, Auricularia, Auricularia auricula-judae var.

= Hirneola auricula-judae

lactea, Tremella, Hedw. f. 1802 O.: pl. 2.—An error for T. nivea Hedw. f. (q.v.), the name used in the text.

lactea, Tulasnella

laevis, Dacrymyces

laevisporum, Dermatangium = ? Tremella steidleri

lagerheimii, Helicogloea, *Platygloea* lanuginosa, [Thanatephorus], *Rhizoctonia* Laschia Fr. = Hirneola

lasioboli, Cystobasidium, Iola

lauri Brot., Calocera, Clavaria = Exobasidium lauri

lauri Geyler, Exobasidium

ledi, Exobasidium

lentiformis, Ditiola, Helvella = ? Ditiola radi-

letendreana, Heterochaete, Thelephora, Sebacina = Sebacina calcea

leucophaea, Eichleriella, Exidiopsis, Hirneolina leveillei, Peziza = Tremiscus helvelloides lichenoides, Merulius = Tremella foliacea

lichenoides, Tremella, L. 1753: 1157 (generic name n.v.p.); Conchites Paul. 1793 (generic name n.v.p.), misapplied?; = Leptogium lichenoides (L. per Wulf.) Zahlbr. 1935 C. 3: 137. — Lichenes. — Sensu Paul., cf. Lév. 1855: 99.

ligularis, Tremella, Bull. 1788: pl. 427 f. 1 (France) (d.n.) per Pollini 1824.—Fide Kern 1911 (BNY 7): 464 = Gymnosporangium clavariaeforme (Wulf.) per DC. — Uredinales.

ligulata, Tremella, Schum. 1803: 442 (Denmark) (d.n.) per Pers. 1822.—Fide Fr. 1822: 219 = Pistillaria quisquiliaris (Fr.) per Fr. = Typhula quisquiliaris (Fr. per Fr.) P. Henn. — Clavariaceae.

lilacea = lilacina (Wulf.) Schrank, Tremella lilacina, Helvella, Ombrophila, sensu Quél. = Craterocolla cerasi

lilacina, Rhizoctonia, Sappa & Mosca 1954 (All 2): 184 f. 6 (Somalia) (nom. anam.). —Saks. & Vaart. 1961 (CJB 39): 632 erroneously stated that this was found in Italy.

lilacina, Tremella, (Wulf.) Schrank 1789 (in error as "lilacea"; d.n.); Helvella ("Elvela") Wulf. 1786 (CoJ 2): 347 (Austria) (d.n.); Craterocolla Sacc. 1888, misapplied; Ditangium Pat. 1900, misapplied; — Ombrophilia lilacina (Wulf. per Fr.) P. Karst., Discomycetes. — Sensu Quél. — Craterocolla cerasi (26)

lilacina, -um, J. Schroet., Tulasnella, Corticium, Prototremella = Tulasnella violea

lilacinum, Corticium, Post (in herb.).—Fide Neuh. 1936 (ABS 281): 54 = Tulasnella violea (p. 193).

lilacinum, Quél., Corticium, Corticium sanguineum var. = Helicobasidium brebissonii

lilacinus, Dacrymyces = Myxarium hyalinum limbata, Tremella, O. G. Costa 1857: 261 (Italy, Sicilia) [cf. Trott. 1925 (SF 23): 580].—Nomen dubium.

linearis, Tremella, Pers. 1822: 109 (Europe) (nom. anam).; Hymenella Fr. 1822; Hymenula Fr. 1832.—The correct name seems to be Hymenella linearis (Pers.) Fr. See also under Hymenella. — Deuteromycetes.

lithophila, Tremella, Willd. 1788 (MB 2 / 4. Stück): 17 pl. 4 f. 16 (Germany) (d.n.).

—Nomen dubium. — Algae?

livescens, Dendrodochium, Bres. 1898 F.t. 2: 64 pl. 174 f. 1 (Italy) (nom. anam.).—Fide Bres., l.c., "vix dubie" the imperfect state of Sebacina livescens. — Deuteromycetes.

livescens, Protohydnum, Bres. (in litt.) apud Bourd. 1932 (BmF 48): 205 (syn.) = Protohydnum lividum Bres. = Protodontia subgelatinosa (p. 172).

livescens, Sebacina, Exidiopsis, Thelephora lividum, Protohydnum, \*Protodontia Park.-Rh. 1956 = Protodontia subgelatinosum

lobata, Auricularia, Exidia, Patila = Auricularia mesenterica

loeselii, Orcheomyces, B. Huber 1921 (SbW 130): 323 plate fs. 3-5 (Austria) (generic name not definitely accepted, "Er gehört zur Sammelgattung Rhizoctonia repens Bernard ...": n.v.p.). — Deuteromycetes.

longisporus, Dacrymyces

lonicerae, Glomerularia, Glomopsis = Herpobasidium deformans

lupini, [Thanatephorus], Rhizoctonia

lutea, Tremella, Plan. 1788: 270 (Germany) [cf. 1788 (BM 2 / 4. Stück): 165].—Nomen dubium. Dacrymyces sp.?

luteo-alba, Ditiola, Femsjonia, Guepinia = Femsjonia pezizaeformis

luteogriseum, Basidiodendron = ? Basidiodendron eyrei

lutea mesenterica, Tremella, Secr. 1833 M. 3: 285 (double epithet: n.v.p.) ≡ Tremella mesenterica var. lutea Bull. = Tremella cf. mesenterica Retz. per Fr.

lutescens Bref., Dacrymyces = Dacrymyces lacrymalis

lutescens Neuh., Dacrymyces = Dacrymyces lacrymalis

lutescens, Tremella, Tremella mesenterica var.; sensu Quél. = Guepiniopsis buccina; sensu Bref. = Tremella mesenterica

lycoperdoides, Tremella, Humb. 1793: 125 pl. 2 f. 3 (Germany) (d.n.) per Steud. 1824. —Nomen dubium. Cf. Endogone Link per Fr.

lythri, Dacrymyces, Desm. 1846 [cf. Desm. 1847 (ASn III 8): 190] (France) (nom. anam.) = Hainesia lythri (Desm.) Höhn. 1918 (H 60): 164 [& cf. Höhn. 1906 (SbW 115): 687], the imperfect state of Discohainesia oenotherae (Cooke & Ell.) Nannf. — Deuteromycetes.

macrochaete, Heterochaete
macrospermum, see megaspermum
macrospora, Mycogloea, Dacrymyces
maculati, [Thanatephorus], Orcheomyces
magnusii, Exobasidium = Exobasidium dubium
major, Clavaria, (Pers.) Steud. 1824 (syn.);
Clavaria cornea var. Pers. 1801 (d.n.); =
Clavaria flava, gelatinosa ... O. F. Müll.
1777 (BbG 3): 351 pl. 9 fs 5, 6 (Denmark)
(non-binomial phrase-name).—This is apparently a species of Calocera.

marianii, Septobasidium

medicaginis DC., Rhizoctonia, Sclerotium = Helicobasidium brebissonii

medicaginis, Sclerotium, Biv. 1816 S. 4: 26 pl. 6 f. 2 (Italy, Sicilia) (generic name n.v.p.), not ~ (DC. per St-Am.) Spreng. 1827.—Listed by some authors (Oud. 1921 E. 3: 855) as synonym of Rhizoctonia medicaginis, but this is certainly not correct. — Apparently root-tubercles.

medularis, \*Clavaria Fr. 1821 (syn.), Ramaria = Calocera furcata

megaspermum, Exobasidium, Lagerh. "in litt. et sched." apud Briosi & Cavara 1896 F.p.: No. 261 as synonym of Exobasidium vacciniiuliginosi (p. 207); A. Blytt 1905: 140 ("macrospermum") as synonym of Exobasidium myrtilli "Thuem.", misinterpreted.

menthae, Rhizoctonia, B. & Br. 1861 (AM III 7): 455 (England).—The protologue suggests Rhizoctonia crocorum, but the type does not bear this out: compare Buddin & Wak. 1927 (TBS 12): 137.

merulina, Ditiola, Guepinia, Guepiniopsis, Peziza — Guepiniopsis buccina

mesenterica, -us, -um, Dicks., Auricularia, Helvella, Merulius, Oncomyces, Patila, Phlebia, Stereum, Thelephora

mesenterica Schaeff., Helvella = Tremella mesenterica

mesenterica Pers., Tremella = Tremella mesenterica

mesenterica Retz., Tremella

mesenterica Steud., Tremella = Tremella mesenterica

mesentericus, Dacrymyces = Femsjonia pezizaeformis

mesenteriformis, Auricularia = Auricularia mesenterica

mesenteriformis, Helvella = Auricularia mesenterica

mesenteriformis, Tremella, Gilib. 1792: 606 (d.n.), not/an ~ Jacq. 1778 (d.n.).

mesenteriformis Jacq., &c., Tremella = Tremella mesenterica

mesenteriformis, Ulocolla = Tremella foliacea mesenteroides, Tremella = Tremella mesenterica

mesomorpha, Sebacina = Sebacina laccata
mespili, Tremella, Arth. 1901 (PIA 1900): 135

= Gymnosporangium mespili (Arth.) Kern
1911 (BNY 7): 462 f. 24. — Uredinales.

— This name was originally a recombina-

tion of Aecidium mespili DC. 1815: 98 (Belgium) (nom. anam.), but since it also included the perfect state [= Gymnosporangium confusum Plowr.], it is now to be dissociated from its 'basionym'.

metachroa, Gloeotulasnella = Tulasnella hyalina metallica, Tulasnella = Oliveonia atrata

meteorica, Tremella, Pers. apud Gmel. 1791: 1446 (Germany) (d.n.).—Nomen dubium. mexicana, Eichleriella = Eichleriella alliciens michelianum, -us, Corticium, Hypochnus, Septobasidium = Septobasidium orbiculare

micra, [Achroomyces], Platygloea microbasidia, Sebacina

microspora, [Achroomyces], Platygloea microspora, Tulasnella

microsporus, Dacrymyces, P. Karst. 1889 (BFi 48): 459 (Finland).—Nomen dubium.

Microstroma Niessl 1861 [1956 (Re 4): 117; 1963 (Ta 12): 156] (nom. anam.); Exobasidium sect. ~ (Niessl) Pat. 1900; monotype: Fusisporium pallidum Niessl, q.v. — Currently considered to be a genus of Deuteromycetes. — Special literature: Maire, 1913; Wolf, 1929.

miculacea, Tremella, Wallr. ("olim"), 1833: 260 (syn.) = Myxarium nucleatum Wallr. = Myxarium hyalinum (p. 171).

miedzyrzecensis, Platygloea = [Achroomyces] Platygloea sebacea

miliaria, Dacrymyces = ? Dacrymyces stillatus miniata, Tremella, Reb. 1804: 284 (Germany) (nom. anam.), not ~ Trog. 1844.—Fide Fr. 1822: 231, in part = Dacrymyces urticae, q.v. ("cum Tuberc. Acaciae confusa"). Reb., l.c., cited "Tremella urticae Pers." [= Cylindrocolla urticae (Pers. per Mérat) Bon.] as synonym.

miniaia, Tremella, Trog 1844 (MiB): 62 (Switzerland), not ~ Reb. 1804 (d.n.). —Nomen dubium.

minor, Dacrymyces

minor, Stypella, A. Möll. sensu G. W. Mart.

= [Tremella ('Microtremella')] Sebacina
sphaerospora. — Cf. (72).

minuta, Tremella, Schleich. 1821 (Switzerland)
(nom. nud.).—See under Tremella viridis
muscorum Secr.

minutissima, Exidia = Tremella ('Microtremella') grilletii

minutula, Exidia = Tremella exigua Mohortia = Septobasidium molybdea, Sebacina, Exidiopsis moniliformis, Tremella, Willd. 1787: 420 (Germany) (generic name n.v.p.).—Algae.

Moniliopsis = Thanatephorus

moriformis, Tremella, Dacrymyces, ?\*Phyllopta Fr. 1849

mucida, Calocera, (Pers.) Wettst. 1885, misapplied, not  $\sim$  Sacc. 1916; Clavaria Pers. 1797 C.: 187/55 pl. 2 f. 3 (d.n.) per Fr. 1821, Clavariaceae. — Sensu Hornem. = an unidentified species; sensu Wettst. = Calocera furcata

mucida, Calocera, Sacc. 1916: 1221 (Denmark).

—Nomen dubium. Name introduced for Clavaria mucida Pers. sensu Hornem. 1806 (Fd 8 / F. 22): 8 pl. 1305 f. 1 to replace Calocera furcata with which Fr. 1838: 581 had identified it. Wettstein (see preceeding entry) had done the same but in contradistinction to Saccardo he did not expressly exclude Persoon's species from the conception. — Sensu Sacc. — Calocera furcata

mucida, Ditiola, S. Schulz. 1860 (VW 10): 322
pl. 1 fig. (Yugoslavia, Slavonia) (nom. anam.). — Fide Juel 1922 (ABS 186): 10,
12 = Crinula caliciiformis (Fr.) per Fr.,
"jedenfalls nahestehend". — Deuteromycetes.

Muciporus ((nom. conf.), in part = Tulasnella mucovoides, [Thanatephorus], Rhizoctonia

mucoroides, Tremella, Bull. 1791 H.: 228 [pl. 499 f. 4] (France) (d.n.) per Pollini 1824, Steud. 1824, not T. mucoroidea Pat. 1897.

—Fide Link 1824: 34 & Fr. 1832: 433 = Bactridium flavum Kunze per Fr. — Deuteromycetes.

mucosa, Bourdotia = Basidiodendron deminutum

multiseptatus, Dacrymyces = Dacrymyces palmatus

murina, Sebacina, Basidiodendron cinereum
Musciclavus = Eocronartium

muscicola, Eocronartium, Ceratella, Clavaria, \*Cronartium Pilát 1957 (syn.), Pistillaria, Typhula

muscigena, Anthina, Atractiella = Eocronartium muscicola

muscigena, Clavaria, Eocronartium, Typhula = Eocronartium muscicola

muscigena, Protopistillaria = Eocronartium muscicola

muscorum, Tremella, Schleich. 1821 (Switzer-

land) (nom. nud.).—See under T. viridis muscorum Secr.

mycetophila, Tremella, Peck 1876 (RNS 28): 53
pl. 1 f. 4 (U.S.A., New York); Exobasidium
Burt 1901 (BTC 28): 287 pl. 23.—Fide
Burt 1915 (AMo 2): 656, "a teratological
production of Collybia dryophila". — Descriptions & illustrations: Peck 1901 (RNS
54): 172 (Tremella); Burt, 1.c., 1901; Boud.
1917 (BmF 33): 13 pl. 2 f. 2 (Exobasidium).
— Also reported from Europe: Ramsb.
1933 (TBS 18): 253; O. Rostr. 1916 (DbA
28): 24, 1935 (DbA 88): 27; Boud., l.c.;
&c. — Special literature: Ramsbottom,
1933.

Mycogloea (Auriculariineae)

mycophaga, Tremella

mycophagum, Ceratobasidium, M. P. Christ. 1959 (DbA 19): 45 f. 39 (Denmark).— Excluded; probably a species of Galzinia Bourd.— Corticiaceae.

myosurus, Tremella, (Ducluzeau) Hornem. 1818 (generic name n.v.p.); Batrachyospermum Ducluzeau 1805: 76 (France); Palmella myosurus (Ducluzeau) Lyngb., 1819. — Algae. myriadeus, Dacrymyces, (Bourd. & G.) Neuh. 1936 (syn.); Dacrymyces deliquescens var. Bourd. & G. 1909 (BmF 25): 33 (France). —Nomen dubium. Cf. Neuh. 1936 (ABS 281): 39, 45 ("pr. p.?") = Dacrymyces punctiformis Neuh. [= D. tortus (Willd.) per Fr.].

myricae, Tremella = ? Exidia plana myrtilli Siegm., Exobasidium

myrtilli Thüm. ex P. Karst., Exobasidium, Exobasidium vaccinii f. & subsp. = Exobasidium myrtilli

Myxarium (Tremellineae)

Myxoporus Clem. 1902 (nom. nud. & conf.) [1957 (Ta 6): 84]  $\equiv$  Muciporus Juel, q.v.

Naematelia (nom. conf.), in part = Tremella Nakaiomyces (nom. conf.), in part = ? Tremella

napae / napaeae / napi, Rhizoctonia = Thanatephorus cucumeris

natans, Tremella, Hedw. 1798: 218 pl. 36 fs. 7-10 (d.n.) = Gloeotricha natans (Hedw.) per Born. & Flah. 1886 (ASn VII 4): 369.

— Nostocaceae heterocysteae.

neglecta, Exidia = Exidia plana

neglecta, Tremella, Tul. 1871 (JLS 13): 34; 1872 (ASn V 15): 222 (France); Naematelia Lloyd 1922 (LMW 7): 1150 (incidental mention: n.v.p.).—Nomen dubium: basidia and spores unknown. I do not believe that the following suggestions are correct: Neuh. 1936 (PM 2a): 46, cf. Exidia grilletii; Bandoni 1961 (AMN 66): 327 = Tremella exigua.

neottiae, [Thanatephorus], Orcheomyces, Rhizoctonia

nigra, Exidia, Opiz 1852 (Czechoslovakia) (nom. nud.).—Cf. Svrček in Klášt. & al. 1958: 81.

nigra Bon., Tremella = Exidia plana nigra, Tremella, With. 1776 (d.n.), not ~ Bon. 1851; = "Lichenoides tuberculosum compressum nigrum, lignis putridis adnascens [leg.:] D. Richards. [Ray 1724:] Syn. St. Br. III. p. 71. n. 51" Dill. 1741: 127 pl. 18 f. 7 (England).—The last mentioned name has been (apparently erroneously) listed as synonym of Sphaeria tuberculosa Lightf. and Lycoperdon nigrum Huds.

nigrescens, Achroomyces, Höhn. 1904 (Am 2): 273 (nom. prov.) 

Stictis betuli Fr. "... varietas nigrescens in Tilia" Fr. 1822: 193 (unnamed var.) (Sweden).—Nomen dubium. Höhn., l.c., thought that this variety might possibly belong to Achroomyces tiliae (Lasch) Höhn. 

A. disciformis.

nigrescens Fr., Exidia, Tremella = Tremella intumescens; sensu P. Karst. = Exidia sp. (not listed)

nigrescens, Tremella, S. Schulz. 1866 (Yugo-slavia, Slavonia) (nom. nud.).

nigricans, Dacrymyces, Dacrymyces deliquescens var.

nigricans, Epidochium, (Fr.) Fr. 1849; Agyrium Fr. 1822: 232 (Sweden) (nom. anam.); Tremella Sacc. 1888, not ~ With. 1776 (d.n.), not ~ Poir. 1808 (generic name n.v.p.), not ~ Bull.1789 (d.n.) & (Bull. per Mérat) G. F. Re 1827.—Mentioned here because the specific epithet was borrowed for Platygloea nigricans J. Schroet. (6).

nigricans, Platygloea = Achroomyces disciformis

nigricans, Tremella, Bull. 1789: pl. 455 f. 1 & 1791 H.: 217 (France) (nom. anam.) (d.n.), not ~ With. 1776 (d.n.), not ~ Poir. 1808 (generic name n.v.p.); Tubercularia (Bull.) per Mérat 1821: Fr. 1822, not ~ (Fr.) Spreng. 1827; Tremella (Bull.)

per Mérat) G. F. Re 1827, not  $\sim$  (Fr.) Sacc. 1888;  $\equiv$  Tubercularia nigrescens St-Am. 1821.—Sometimes (Ferraris 1910: 24) referred to Tubercularia vulgaris Tode per Fr., the imperfect state of Nectria cinnabarina (Tode per Fr.) Fr. — Deuteromycetes.

nigricans, Tremella, Poir. 1808 (generic name n.v.p.), not ~ With. 1776 (d.n.), not ~ Bull. 1789 (d.n.) & (Bull. per Mérat) G. F. Re 1827, not ~ (Fr.) Sacc. 1888; = Nostoc lichenoides Vauch. 1803: 227 pl. 16 f. 5 (Switzerland).—Fide Born. & Flah. 1888 (ASn VII 7): 222 = Collema sp. — Sensu Kütz. = Nostoc sphaericum Vauch. fide Degelius 1954 (Sbu 13<sup>2</sup>): 50. — Lichenes.

nigricans With., Tremella = Exidia plana nitidus, Dacrymyces, (Lib.) Sprée 1870; Agyrium Lib. 1834 P.A.: No. 235 (n.v.) [cf. Matthieu 1853: 261]; = Agyriella nitidum (Lib.) Sacc. 1884. — The combination Dacrymyces nitidus is often ascribed to Coem. 1858 (BAB II 5): 22 (reprint pagination) but he did not actually make it. — Deuteromycetes.

nivalis, Tremella, (F. Bauer) R. Br. "in Ross.
Voy. Suppl. p. 44" fide Cooke 1882-4: 54;
Uredo F. Bauer 1819 [cf. R. Br. 1825: 344,
578-590 for German translation] = Protococcus nivalis (F. Bauer) Ag. 1824 (type of Protococcus Ag.). — Chlorophyceae.

nivea, Tremella, Hedw. f. 1802 O.: 8, 17 pl. 2 (on pl. as T. lactea) (Germany) (generic name n.v.p.), not ~ With. 1776 (d.n.).— Either Chaetophora pisiformis (Roth) Ag. (fide Ag. 1824: 27) or C. elegans (Roth) Ag. — Chlorophyceae.

nivea, Tremella, With. 1776 (d.n.), not ~ Hedw. f. 1802 (generic name n.v.p.); = Fungus niveus aqueus ... Ray 1724: 26 (England).—Fungus mycelium. — Deuteromycetes.

nostoc, Tremella, L. 1753: 1157 (d.n.) = Nostoc commune Vauch. per Born. & Flah. 1888 (ASn VII 7): 203. — Nostocaceae heterocysteae.

nucleata, Tremella, Schw. 1822: 115 (U.S.A., North Carolina); Naematelia Fr. 1822; Exidia Burt 1921; = Myxarium sp. (46). — Sensu Berk. 1860, in part = Myxarium hyalinum

nucleatum, Myxarium = Myxarium hyalinum

nuda, [Dacrymyces], Dacryomitra, Dacryopsis, Ditiola

obliqua, Guepinia, Mass. 1892 B.F. 1: 418 (Great Britain); Ditiola Rea 1922.—Nomen dubium.

obscura, Tremella, Tremella mycophaga var. obscura, Tulasnella

obtusum, Fusarium, Fusisporium = Mycogloea macrospora

ochraceum, Uthatobasidium, Botryobasidium, Coniophora

olivaceonigra, Tremella = Exidia pithya Oliveonia (Tulasnellaceae)

Ombrophila Fr. 1849: 357 [1958 (Ta 7): 237, in obs.]; lectotype: Ombrophila violacea Fr. 

≡ Peziza clavus var. violascens A. & S. 1805 (d.n.), not Octospora violacea Hedw.; not 

Quél. 1892. — Sensu Quél. 1883 = Craterocolla (26). — Ombrophila Quél. 1892 came into being by exclusion of the type species.

Ombrophila Quél. 1892, not ~ Fr. 1849 (26). Oncomyces = Auricularia

onygena, Cribaria = Phleogena faginea opalea, Gloeotulasnella = Tulasnella traumatica opalea, Sebacina = [Sebacina] Exidiopsis glaira orbiculare, -is, Septobasidium, Thelephora orbicularis, Tremella, Retz. 1769 (SVH 30):

249 (Sweden) (d.n.) per Steud. 1824.—
Nomen dubium. Possibly not a fungus ("orbiculata concava viridis . . . arb.").
Orcheomyces Burgeff 1909 (n.v.p.) [1962 (Ta 11): 93].—Apparently first validly published by Hch. Wolff (79). — Almost invariably citations like Orcheomyces insignis, O. ludigi, O. mascula [!], and O. sambucina "Burgeff" [Ramsbottom 1923 (TBS 8): 37] are given as if they were binomials; they are to be treated as names 'mentioned

incidentally' in the sense of the "Code".

Orcheomyces = Thanatephorus

Ordonia = Septobasidium

ovisporus, Dacrymyces

oxycocci, Exobasidium

Pachysterigma = Tulasnella
pallens, Dacrymyces = Achroomyces disciformis
pallida, Tulasnella
pallidum, Microstroma, (Niessl) Niessl 1861;
Fusisporium Niessl 1858 (VW 8): 329 pl. 8

f. 2 (Austria) (nom. anam.).—Fide Sacc.

1886 (SF 4): 9 = Microstroma juglandis (Béreng.) Sacc. — Deuteromycetes.

palmata, Tremella, Hedw. f. 1798: 70 pl. (1) fs. 4-7 (Germany) (generic name n.v.p.) (d.n.), not  $\sim$  Schum. 1803 (d.n.) per Pers. 1822, not  $\sim$  Schw. 1832.—Fide Lyngb. 1819: 191 = Chaetophora endiviaefolia (Roth) Ag. [= C. incrassata (Huds.) Haz]. — Chlorophyceae.

palmata Schum., Calocera, Tremella = Calocera cornea

palmata, -us, Schw., Dacrymyces, Dacryopsis, Tremella

Palmellodon Fr. 1867 (nom. prov.) [1963 (Ta 12): 166] = Tremellodon, q.v.

palustris, Tremella, Web. 1778 (generic name n.v.p.) 

Tremella palustris, vulgari marinae similis . . . Dill. 1741: 44 pl. 8 f. 2 (England).—Fide Ag. 1823 S.A. 1: 414 = Ulva bullosa Roth 
Monostroma bullosum (Roth) Kütz. — Chlorophyceae.

palustris.—"[Tremella] palustris Dill. Fl. d.", Steud. 1824 (syn.), not ~ Web. 1778 (generic name n.v.p.); = (abbreviated form of the phrase-name) Tremella palustris, vesiculis sphaericis fungiformibus Dill. 1741: 55 pl. 10 f. 17 = Ulva granulata L. 1753 sensu O. F. Müll, for which see under Tremella pisum. — Tremella palustris "Wigg.", cited by Steud., l.c., as synonym of Gastridium lubricum (Roth) Lyngb. [= Tetraspora lubrica (Roth) Ag.] is evidently an error.

papaveris, Tremella, Quél. 1892 (Rm 14): 65 pl. 126 f. 4 (France).—Nomen dubium. Apparently based on an imperfect fungus, doubtfully basidiomycetous.

papillata, Auricularia, Exidia, Tremella = Exidia glandulosa

papillata, Stypella, Sebacina

paradoxa, Ditiola, (Hedw. f.) per Fr. 1822;
Octospora Hedw. f. 1802 O.: 13, 19 pl. 9
(Germany).—Fide Tul. 1865 C. 3: 183
(sensu Rab. 1862 F.e.: No. 470) = Peziza
carpinea Pers. [= Pezicula carpinea (Pers. per
Pers.) Rehm]. However, Hedwig gave the
habitat as "in frustulo corticis fagi" rather
than Carpinus.

paradoxus, Dacrymyces, P. Karst. 1886 (H 25): 232 (Finland).—Nomen dubium.

parasiticum, Tuber = Helicobasidium brebissonii

parasiticus, Dacrymyces, Kavina (in herb.).

-Fide Pilát 1953 (Sy 7): 316 = Tremella mycophaga (p. 183).

parmastoensis, [Dacrymyces], Dacryopinax patavinum, Exobasidium

Patila = Auricularia

pearsonii, Ceratobasidium, (Bourd.) M. P. Christ.
 1959; Corticium Bourd. 1921 (TBS 7): 51
 f. 1 (England); = Paullicorticium pearsonii
 (Bourd.) Jo. Erikss. — Corticiaceae.

Pellicularia Cooke 1876 [1957 (Ta 6): 107] (nom. conf.) (77). — Special literature: Donk, 1953. — Sensu D. P. Rog., in part = Ceratobasidium

pellucens, Peziza, Schum. 1803: 413 (Denmark) (d.n.) per Pers. 1822; Bulgaria Fr. 1822.—
Referred with doubt by Lind 1913: 346 to Exidia recisa. May be a species of Exidia, but rather a nomen dubium. Original drawing, published by Hornem. 1830 (Fd 12 / F. 34): 12 pl. 2031 f. 2.

penicillata, -um, Merisma, Thelephora = Sebacina incrustans; sensu Fr. = Thelephora

sp.

penicillata, Tremella, Arth. 1901 (PIA 1900):
135 (excl. of 'basionym' based on an imperfect state).—Fide Hylander & al. 1953
(ObL 1¹): 17 = Gymnosporangium tremelloides Hartig. — Introduced as a new combination for Lycoperdon penicillatum O. F. Müll. 1780 (Fd 5 / F. 14): 8 pl. 839 (nom. anam.) (d.n.), but through simultaneous inclusion of perfect state, Tremella penicillata [= "Gymnosporangium" tremelloides A. Br.] is to be treated as a new name. — Uredinales. peniophorae, [Achroomyces], Platygloea

Peniotulasnella Bourd. & G. 1928: 65 (nom. prov.); monotype: Peniotulasnella conspersa Bourd. & G., q.v.

peritricha, Exidiopsis, Sebacina = ? Sebacina effusa

persistens, Tremella, Bull. 1786: pl. 304 & 1791 H.: 223 (France) (d.n.) per St-Am. 1821.—Listed by Oud. 1919 E. 1: 647 as synonym of Gymnosporangium sabinae (Dicks.) per Wint., q. v.— Uredinales.

petersii, Ecchyna, Pilacre = Phleogena faginea peziza, Guepinia, Guepiniopsis = Guepiniopsis buccina; sensu J. Schroet. = Ditiola radicata

peziza, Tremella — Ditiola radicata pezizaeformis, Femsjonia, Exidia pezizaides. Tremella, Cumino 1805

pezizoides, Tremella, Cumino 1805 (MAT, Mém. prés.): 240 (Italy) (d.n.) per

Pollini 1824.—The description suggests Coryne sarcoides (Jacq. per Pers.) Tul.

phaseoli.—"Dacryomyces phaseoli, Dur." is mentioned by Cooke 1891 (G 20): 15 as "not to be traced in Saccardo Sylloge".

Phleogena (Auriculariineae)

Phlogiotis = Tremiscus

phragmitidis, Dacrymyces, Westend. 1860 (BAB II 11): 652 (Belgium) (nom. anam.); Sacc. 1888 ("Phragmitis").—Fide Sacc. 1886 (SF 4): 670 = Hymenella rubella Fr. ("verisimiliter huc spectat"). — Deuteromycetes.

phragmitis, see phragmitidis

Phyllopta Fr. 1819 & 1821 (nom. nud.); Tremella subgen. ~ Fr. 1822; Phyllopta (Fr.) Fr. 1825 [1958 (Ta 7): 239]; lectotype: Tremella biparasitica Fr., q.v.

picea, Tremella = Exidia plana piceicola, Protodontia, Protohydnum

Pilacre Fr. 1825: Fr. 1829 [1958 (Ta 7): 239].
—A discomycetous genus, the name of which has for some time been misapplied to Phleogena. — Cf. Boudier, 1888. Sensu Bref. = Phleogena

Pilacrella (Auriculariineae)

pilatii, Aporpium, Poria = Aporpium caryae pini, Platygloea, Höhn. ("i. litt."), Strass. 1910 (Austria) (nom. nud.).

pini, Tubercularia = Ditiola radicata

pinicola, Corticium, Corticium incarnatum var. =
Tulasnella violea

pinicola, Helicogloea, Saccoblastia = Saccoblastia farinacea

pinicola, Tremella = ? Dacrymyces palmatus pinicola, Tulasnella, Gloeotulasnella

pini-insignis, [Thanatephorus], Rhizoctonia pisiformis, Tremella, Scop. 1772: 402 (Yugoslavia, Carniola) (d.n.) per Steud. 1824, not ~ Velen. 1922.—Nomen dubium.

pisiformis, Tremella, Velen. 1922: 791 [cf. Pilát 1948: 285], not ~ Scop. 1772 (d.n.).
—Fide Pilát 1957c: 175 = Endogone pisiformis Link per Fr. — Mucorales.

pisum, Tremella, (O. F. Müll.) Gmel. 1791 (generic name n.v.p.); Conferva O. F. Müll. 1775, misapplied; Ulva granulata L. sensu L. 1767: 136 (Sweden) Ulva granulata L. 1753: 1164 Botrydium granulatum (L.) Grev. — Sensu O. F. Müll. Nostoc sphaericum Vauch. per Born. & Flah., fide Ag. 1824: 20 ("quoad partam"). — Xanthophyceae.

pithya, Exidia, Tremella auricula-judae var. pithyophila, Poroidea = Craterocolla cerasi plana Wigg., Exidia, Tremella; sensu Schleich. apud Secr. = Exidia pithya plana, Tremella, With. 1776 (d.n.), not ~ Wigg. 1780 (d.n.) per Steud. 1824; == Fungus rotundus planus ligno putrido adnescens gelatinae instar Ray 1696: 19 & 1724: 17 (England).—Nomen dubium, perhaps a species of Exidia. Platygloea = Achroomyces plicata, Exidia, Tremella = Exidia plana plumbea Bres. & Torr., Sebacina plumbeum, Ceratobasidium = Oliveonia atrata poae, Dacrymyces, Lib. 1832 P.A.: No. 135 (Belgium) [cf. Matthieu 1853: 263]  $\equiv$ Ephelis poae (Lib.) Sacc. 1888 (Ma 2): 25 (revised description). — Deuteromycetes. podlachica, Sebacina, Exidiopsis poeltii, Bourdotia = Basidiodendron rimulentum *Polyozus* = Tremellodendropsis polytricha, Exidia, Mont. 1834 B.: 154 (India); Hirneola Fr. 1848; Auricularia Sacc. 1885; = Hirneola nigricans (Sw. per Hook.) Graff. -An alien. Recorded from the British Isles by Rea 1922: 728. populina, Exidia = ? Exidia albida populina, Tremella, Moug. (in litt.).—Fide Fr. 1828 E. 2: 33 = Tremella indecorata (p. 181).poricola, Ecchyna, Pilacre = ? Phleogena faginea Poroidea = Craterocolla praticola, Thanatephorus, Ceratobasidium, Corticium, Pellicularia prostrata, Tremella, ?DC., Steud. 1824: 416; "Tremelle inédite, que l'on pourroit nommer Trémelle couchée" Girod-Chantr. 1802: 162 pl. 22 f. 57 .— Algae. Protodontia (Tremellineae) Protopistillaria = Eocronartium Prototremella = Tulasnella pruinosa, Tulasnella pruniformis, Tremella, (L.) Web. 1778 (d.n.); *Ulva* L. 1753: 1164 (Sweden) (d.n.);  $\equiv$ Nostoc pruniforme (L.) per Born. & Flah. 1888 (ASn VII 7): 215. — Nostocaceae Tremella pruniformis heterocysteae. — "Huds. Gmel" cited by Steud. 1824 are both errors.

pseudocornigerum, Ceratobasidium

Pseudohydnum (Tremellineae)

pseudofoliacea, Phaeotremella = Tremella foliacea

pulposa, Tremella, Wallr. 1833 (Germany) (syn.).—Fide Wallr. 1833: 527 = Tremella frondosa Fr. [sensu Wallr.]. pululahuana, Tremella, Pat. apud Pat. & Lag. 1893 (BmF 9): 138 (Ecuador); Bourdotia Bourd. & G. 1928, misapplied; Sebacina D. P. Rog. 1935, misapplied; = Ductifera pululahuana (Pat. apud Pat. & Lag.) Donk, Tremellineae. — Sensu Bourd. & G. = Bourdotia galzini pumila, Hirneola, Grogn. ("in Herb.") .--Listed by Roum. 1884 (Rm 6): 224 as synonym of Hirneola auricula-judae (forma) (p. 158). punctiformis, Dacrymyces = Dacrymyces tortus punctiformis Tremella = ? Dacrymyces stillatus pura, Peziza, Pers. 1796 O. 1: 40 (Germany) (d.n.) per Pers. 1822; Bulgaria (Pers. per Pers.) Fr. 1822.—Variously interpreted (40). — Discomycetes. purpurea, -um. Pat., Helicobasidium, Stypinella Helicobasidium brebissonii purpurea, -um, -us, L. Tul., Helicobasidium, Helicobasis, Hypochnus, Stypinella = Helicobasidium brebissonii purpurea, Tremella, L. 1753: 1158 (Sweden) (nom. anam.) (d.n.); Sphaeria tremelloides Weig. 1772 (d.n.); = Tubercularia vulgaris Tode per Fr., the imperfect state of Nectria cinnabarina (Tode ex Fr.) Fr. — Deuteromycetes. purpureus, Dacrymyces, Tul. 1871 (JLS 13): 40 & 1872 (ASn V 15): 231 (France).— Nomen dubium. Doubtfully basidiomycepusilla, [Calocera], Dacrymyces, Dacryomitra pyrenophila, Tremella quercicola, Dacrymyces, P. Soss. 1960 (BMs 13): 214 (U.S.S.R., Ukraine).—Nomen dubium. quercina, Exidiopsis, Sebacina = Sebacina effusa quercina, Tremella = Tremella mesenterica

psilochaete, [Heterochaetella], Heterochaetella

psychodis, Rhizoctonia, Simon Th. 1925 (in-

cidental mention) 

Orcheomyces psychodis

Burgeff 1909: 19 pl. 2 fs. 11, 12 (Ger-

many, greenhouse), a non-binomial name

(79); fide Simon Th. 1925: 65 = Rhi

zoctonia solani [= Thanatephorus cucumeris

pubescens, Achroomyces, Myxosporium = Achroo-

dubia var., Sebacina

myces disciformis

(p. 187), imperfect state].

quercinum, -us, Septobasidium, Hypochnus quercus, [Thanatephorus], Rhizoctonia

radicata, -um, Ditiola, Dacrymyces, Guepinia, Helotium; sensu Quél. = Femsjonia pezizaeformis

radicatus, Macroscyphus (Reichard) per S. F. Gray 1821.—Listed in error (as M. "radiculatus") by G. W. Mart. 1952 (SIa 193): 36 as synonym of Femsjonia radiculatus (Sow. per Fr.) G. W. Mart. sensu G. W. Mart. = F. pezizaeformis. — Discomycetes. radicellatus, Dacrymyces = Femsjonia pezizaeformis

radiculata, Femsjonia, (Sow. per Fr.) G. W. Mart. 1952 (SIa 19³): 36, misapplied; Peziza Sow. 1797: pl. 144 (England) (d.n.) per Fr. 1822; ≡ Sowerbyella radiculata (Sow. per Fr.) Nannf. 1938 (SbT 32): 119 f. 1, Discomycetes. — Sensu G. W. Mart. = Femsjonia pezizaeformis

ramosa, Dacryomitra = Dacrymyces palmatus ramosa, Guepinia, Currey 1876 (TLS II 1): 127 pl. 21 fs. 2, 3 (Burma).—An alien. Reported from a hothouse at Berlin by P. Henn. 1899 (VBr 40): 118. Fide McNabb 1965 (NZB 3): 63, 64 = Dacryopinax sphathularia, q.v.

rapae, Rhizoctonia = Thanatephorus cucumeris recisa, Exidia, Tremella; sensu Bref. = Exidia glandulosa

repanda, Exidia, Tremella, Ulocolla; sensu Bref. = Exidia plana

repens, [Thanatephorus], Rhizoctonia

resedae, Hypochnus, Rostr. ("in herbario"), Lind 1913 (Denmark) (nom. nud.).—Presumably = Thanatephorus cucumeris (p. 187). Rhizoctonia = Helicobasidium

rhizoctoniae, Thelephora = Helicobasidium brebissonii

rhizoctonon, Helminthosporium = Helicobasidium brebissonii

Rhizogona Fr. 1825 (nom. prov.) [1962 (Ta 11): 97] = Rhizoctonia DC. per Fr., q.v.

rhizogonum, Sclerotium, Pers. 1818 (Europe) (nom. nud.).—Listed by Oud. 1921 E. 3: 855 as synonym of Rhizoctonia medicaginis but no information supporting this is available. — Apparently root-tubercles. rhododendri Fuck., Exobasidium, Exobasidium vaccinii f.

rhododendri Quél., Exobasidium = Exobasidium rhododendri

rimulenta, -um, Basidiodendron, Bourdotia rivalis, Clavaria = Sebacina incrustans robusta, Rhizoctonia = [Thanatephorus] Rhizoctonia cavendishiani

romellii, Dacrymyces = Dacrymyces tortus rosae, Propolis, Fuck. 1870 (Jna 23-24): 254 (Germany).—Fide Rehm 1888 (RKF 18): 149 = Propolis faginea (Schrad.) per P. Karst. [= P. versicolor (Fr.) Fr.]. Fuckel erroneously thought that Exidia saccharina was the conidiophorous state. — Discomycetes.

rosea Höhn., Tremella ('Microtremella')
rosea, Tremella, Plan. 1788: 270 (Germany)
(d.n.), not ~ Höhn. 1903.—Nomen
dubium. Identified by "h.v." [1788 (BM
2 / 4. Stück): 165] with Lichen roseus
Schreb., but this is not at all evident from
the descriptions.

rosella, Tulasnella

roseolilacina, Tulasnella, Litsch. (in herb.).—
Fide Neuh. 1936 (ABS 281): 55 = Tulasnella fuscoviolacea (p. 191).

roseus, Dacrymyces, Fr. 1828 E. 2: 35 (France), not  $\sim$  Lloyd 1923 (n.v.p.).—Nomen dubium. Doubtfully basidiomycetous.

rubella, Peziza, Pers. 1801: 635 (Germany) (d.n.) per Pers. 1822: Fr. 1822; Ombrophila Quél. 1883, misapplied; Craterocolla Sacc. 1888, misapplied; Ditangium Pat. 1900, misapplied; = Hyalina rubella (Pers. per Pers.) Nannf. 1932 (NAu IV 82): 252 f. 40e, Discomycetes. — Sensu Quél. = Craterocolla cerasi (26)

rubella, Propolis, Fuck. 1870 (Jna 23-24): 254 (Germany).—Fide Rehm 1888 (RKF 13): 149 = Propolis faginea (Schrad.) per P. Karst. [= P. versicolor (Fr.) Fr.]. Fuckel erroneously thought that Exidia recisa was the conidiophorous state. — Discomycetes. rubella, Tremella, Gmel. 1791 (d.n.) = Helvella purpurea Schaeff. 1774: 114 [pls. 323, 324] (Germany) (d.n.), cited by Gmelin as "Ulva purpurea".—Fide Tul. 1865 C. 3: 191, 192 (as to Helvella purpurea Schaeff.) = Coryne sarcoides (Jacq. per Pers.) Tul., pl. 323, imperfect state, pl. 324, perfect state. — Discomycetes.

rubella var. cerasina, Ombrophila, see Helvella cerasina

ruberrima, Tremella, Gmel. 1791 (d.n.) = Tremella cinnabarina Wulf., q.v. rubescens, see rufescens

rubiae, Rhizoctonia = Helicobasidium brebissonii

rubiformis, Dacrymyces, Naematelia, Tremella; sensu Bourd. & G. = Tremella encephala rubiginosa, Rhizoctonia, Sappa & Mosca 1954 (All 2): 185 f. 5 (Somalia) (nom. anam.). —Erroneously stated by Saks. & Vaart. 1961 (CJB 39): 634 to be described from Italy.

rubra, Calocera, S. Schulz. 1866 (Yugoslavia, Slavonia) (nom. nud.).

rubra, Exidia = Exidia glandulosa

rubra, Tremella, O. F. Müll. 1777 (BbG 3): 354 pl. 9 fs. 7, 8 (Denmark) (nom. anam.) (d.n.).—Fide Fr. 1822: 234, "nil nisi status siccus Tr. c. sarcoides" = Tremella sarcoides Fr., q.v. Erroneously ascribed to "Willd." by Fr. 1832, Ind.: 192.

rubropallens, Tulasnella = Tulasnella allantospora

rubroviolacea, Tremella, Britz. 1893 (BCb 64):
105 [pl. 748 f. 20] (Germany).—Nomen dubium. Identified by Neuh. 1938 (PM 2a): 56 with Naematelia encephala [Tremella encephala], certainly in error. The allantoid spores, 6-7 × 2 μ suggest, rather, Craterocolla but the fruitbodies depicted do not show any trace of the 'pycnidia'.

rufa, -us, Guepinia, Gyrocephalus, Phlogiotis, Tremella, \*Tremiscus Lloyd 1922 = Tremiscus helvelloides

rufescens, Tremella, Ehrenb. ("ined."), Pers. 1822 (syn.); Fr. 1822 ("rubescens"; syn.) 

Tremella impressa, q.v.

rufo-aurantiacus, Dacrymyces, Romell (in herb.).
—Fide Neuh. 1936 (ABS 281): 5 = Ditangium cerasi f. insignis = Craterocolla cerasi (p. 165). rufum, Dacryonaema, Sphaeronema

rugulosa, Tremella, Rox. Clem. 1807: 321 (Spain) (generic name n.v.p.).—Fide Ag. 1823 S.A. 1: 146 = Encoelium sinuosum (Roth) Ag. = Colpomenia sinuosa (Roth) Derb. & Sol. — Phaeophyceae.

rupincola, Tremella, Schleich. 1821 (Switzerland) (nom. nud.), Steud. 1824: 416 ("rupicola"; nom. nud.).

rutilans, Tulasnella, Corticium, Pachysterigma, Prototremella; sensu D. P. Rog. = Tulasnella curvispora

sabinae, Tremella, Dicks. 1785 P.c. 1: 14 (generic name n.v.p.) per Hook. 1821 = Gymnosporangium sabinae (Dicks. per Hook.)

Wint. 1880.—Fide Nylander & al. 1953 (ObL 1<sup>1</sup>): 16 = Gymnosporangium fuscum, q.v. — Uredinales.

saccharina, Exidia, Tremella, Tremella spiculosa var., Ulocolla; sensu Bon. = Dacrymyces saccharinus

saccharinus, Dacrymyces

Saccoblastia (Auriculariineae)

Saccogloea (Bourd. & G.) Arnaud 1951 (nom. nud.) [1958 (Ta 7): 242]; Saccoblastia sect.
Bourd. & G. 1928: 5; monotype: Saccoblastia sebacea.—A not validly published synonym of Helicogloea (p. 157).

saepincola, see sepincola

sagarum, Auricularia, Exidia, Tremella = Exidia recisa

salicina, Tremella, Schleich. 1821 (Switzerland) (nom. nud.).—Fide Fr. 1832, Ind.: 193 = Exidia recisa (p. 170).

salicum, Tremella = Exidia recisa

saligna, Tremella, A. & S. 1805: 303 pl. 9 f. 7 (Germany) (d.n.); Stictis (A. & S.) per Pers. 1822; Tremella Schw. 1822.—Fide Fr. 1822: 198 = Stictis versicolor (Fr.) Fr. — Discomycetes.

sambuci, Auricularia = Hirneola auricula-judae sambucina Mart., Auricularia = Hirneola auricula-judae

sambucina Scop., Auricularia, Helvella = Hirneola auricula-judae

sarcoides, Tremella, Fr. 1822: 217 (England) (nom. anam.).—This is the imperfect state of Coryne sarcoides (Jacq. per Pers.) Tul., a discomycete. Fries ascribed the name to "With. Arr. IV. p. 78" [With. 1796: 78] who described both states under the name Tremella sarcoides (Jacq.) With. By excluding the ultimate type of this name (\equiv Lichen sarcoides Jacq., which is based on the perfect state) as Bulgaria sarcoides (Jacq. per Pers.) Fr., Fries actually restricted the application of Withering's recombination to the imperfect state and in this way published a 'new' species. When von Höhnel [1902 (SbW 111): 1002] provided a distinct generic name for the imperfect state he called its type species "Pirobasidium sarcoides (Jcqn.) v.H." and added, "Est status conidiophorus Corynes sarcoidis (Jcqn.)." If one could agree that von Höhnel, too, excluded the type of this name and that, therefore, the reference to Jacquin after 'Pirobasidium sarcoides is an error, than this reasoning

would provide a legal basis for citing the name of the imperfect state as Pirobasidium sarcoides 'Höhn.' or '(Fr.) Höhn.' sarcoides, Tremella, (Jacq.) With. 1796 (d.n.), not ~ Fr. 1822 (nom. anam.); Lichen Jacq. 1781 (MaJ 2): 378 pl. 22 (Austria) (d.n.): 

Coryne sarcoides (Jacq. per Hook.) Tul. — Discomycetes.

saxatilis.—"[Tremella] saxatilis Dill.", Streinz.

1861 (syn.) ≡ (erroneous and abbreviated form of the phrase-name) Tremella fluviatilis gelatinosa et uterculosa Dill. 1741: 54 pl. 10 f. 16 = Nostoc verrucosum Vauch. per Born. & Flah. — Nostocaceae heterocysteae.

scarlatina, Tremella, Schum. 1803: 438 (Denmark) (generic name n.v.p.) per Streinz. 1861.—Fide Fr. 1822: 231, "larva Gastromycis". This qualification may be translated as 'an early state of a species of Myxomycetes', the latter group being included in the Gastromycetes at that time. schinzianum, Exobasidium, P. Magn. 1891 (VjZ 36): 251 plate (Switzerland) = Entyloma schinzianum (P. Magn.) Bubák 1906 (Am 4): 106 (conidial state). — Special literature: Magnus, 1891.

schrenkii, Eichleriella, Hirneolina = Eichleriella leucophaea

sclavonica, Hirneala, S. Schulz, apud Cooke & Quél., Clav. syn. Hym. europ. 234. 1878.
—Nomen dubium. An Herneola auricula-judae.

sclerotica, [Thanatephorus], Rhizoctonia sebacea, -us, [Achroomyces], Dacrymyces, Platygloea

sebacea, -um, \*Acrotamnium Steud. 1824, Corticium, Thelephora = Sebacina incrustans
 sebacea, Saccoblastia = Helicogloea lagerheimii
 Sebacina (Tremellineae)

Seismosarca = Hirneola

semivestitum, Lachnocladium = Tremellodendropsis tuberosa

sepincola, Dacrymyces, Tremella = Dacrymyces stillatus; sensu Bon. 1864 (AbH 8): 116 = Tremella sepincola Willd. in part (var. β; cf. Pers. 1801: 629, syn.) = Dacrymyces urticae (Pers.) Mart. (cited as synonym by Bon., l.c.) = Cylindrocolla urticae (Pers. per Mérat) Bon., fide Tul. 1865 C. 3: 195, the imperfect state of Calloria fusarioides (Berk.) Fr., q.v.

Septobasidium (Septobasidiales)
Septocolla = Dacrymyces

sergentiorum, Podoscypha = ? Tremellodendropsis tuberosa

serpentina, Tremella, Schum. 1803: 438 (Denmark) (generic name n.v.p.) per Streinz 1861.—Fide Fr. 1832, Ind.: 193 = "Alga". serrata, -um, Clavaria, Merisma, Thelephora = Sebacina incrustans

simplex, Tremella

Sirobasidium (Tremellineae)

solani, Botryobasidium, Ceratobasidium, Corticium Corticium vagum subsp., Hypochnus = Thana tephorus cucumeris

solani, Pilacrella, Ecchyna, Pilacre

solani, Rhizoctonia = Thanatephorus cucumeris; sensu Thüm. = Helicobasidium brebissonii Soppittiella Mass. 1892 [1957 (Ta 6): 113]; lectotype: "Thelephora cristata, Fr." sensu Mass. = presumably Corticium fastidiosum (Pers. per Fr.) P. Karst. = Cristella fastidiosa (Pers. per Fr.) Brinkm., Corticiaceae.—The identification of the type species with Thelephora cristata (Pers.) per Fr. = Sebacina incrustans by D. P. Rog. 1944 (M 36): 78 is not acceptable, cf. Donk 1952 (Re 1): 486.

sordida, Tulasnella, Gloeotulasnella

sowerbea, Peziza, Pers. 1801 (d.n.); Macroscyphus (Pers.) per S. F. Gray 1821 ("Sowerbei"); Peziza Pers. 1822; = Peziza radiculata Sow. 1797: pl. 114 (England) (d.n.); = Sowerbyella radiculata (Sow. per Fr.) Nannf. 1938 (SbT 32): 119 f. 1.— Erroneously identified with Femsjonia pezizaeformis by G. W. Martin (1952: 36). — Discomycetes.

spartii.—"Tremella" spartii Ces., Oud. 1921 E. 3: 835 (syn.).—This is an error for 'Trullula' spartii Ces. in Rab. 1858 Kl. II: No. 752. The reduction of this species to Tremella atrovirens by Oud., l.c., is apparently not correct — Deuteromycetes.

spathularia, Guepinia, (Schw.) Fr. 1828; Merulius Schw. 1822: 92 pl. 2 fs. 1-3 ("spathularia") (U.S.A., North Carolina); Guepiniopsis Pat. 1900; Dacryopinax G. W. Mart. 1948.—An alien, reported from Europe from hothouses as Guepinia fissa, q.v., and G. ramosa, q.v. — For a recent description and illustration, see McNabb 1965 (NZB 3): 63 f. 1b (Dacryopinax). — The inclusion of this species in the genus Dacrypinax G. W. Mart. is, in my opinion, debatable. — Special literature: Bodman, 1938.

spermofora, Tremella, Strøm 1788 (n.v.) is mentioned by C. Christ. 1926: 657.-Presumably an alga. sphacelati, [Thanatephorus]. Rhizoctonia sphaerica, Tremella, Streinz 1861 (syn.), not ~ (Vauch.) Poir. 1808 (d.n.); ≡ Tremella sphaerica, sessilis, gregaria, nigra Gled. 1766 V. 2: 346 (Germany).—Tremella sphaerica "&c. Gled. Act. II p. 346" is cited by Fr. 1822: 249 as synonym of Sclerotium semen var. brassicae (Berg.) per Fr., but this is not acceptable. sphaerica, Tremella, (Vauch.) Poir. 1808 (d.n.); Nostoc Vauch. 1803: 223 pl. 16 f. 2 (Switzerland) (d.n.) = Nostoc sphaericum Vauch. per Born. & Flah. 1888 (ASn VII 7): 208. Nostocaceae heterocysteae. Sphaerocolla P. Karst. 1892 [1962 (Ta 11): 99] (nom. anam.). monotype: Sphaerocolla aurantiaca P. Karst., q.v. Sphaerospora Bon. 1870 (nom. nud.) [1963 (Ta 12): 167], not ~ Sweet 1826 (nom. nud.) & Klatt 1863 (Iridaceae), not ~ (Sacc.) Sacc. 1889 (Pezizaceae); monotype: Thelephora byssoides Pers. sensu Bon. = Sebacina incrustans.—A not validly published, earlier synonym of Sebacina (p. 173). sphaerospora, [Tremella ('Microtremella')], Sebacina spicata, Tremella Spicularia Chev. = Exidia spiculata, Exidia = ? Exidia plana spiculosa Pers., Exidia, Gyraria, Tremella = Exidia glandulosa spinulosa, Eichleriella, (B. & C. apud Berk.) Burt 1915, in part misapplied; Radulum B. & C. apud Berk. 1873 (G 1): 146 (U.S.A., Alabama), cf. (29). — Sensu Burt, in part = Eichleriella deglubens spongiosa, Sebacina = ? Sebacina incrustans spongiosum, Hydnum = Pseudohydnum gelatinosum squamosa, Tremella, Schum. 1803: 440 (Denmark) (generic name n.v.p.) per Steud. 1824.—Fide Fr. 1822: 219 (as "subsquamosa"), "ad Gastromycetes [= Myxo-

mycetes] referenda".

stahlii, [Thanatephorus], Rhizoctonia

J. Schroet. — Uredinales.

steidleri, Tremella, Tremella encephala var.

stellariae, Exobasidium, P. Syd. 1899 (H 38):

(134) (Germany).—Fide Savile 1959 (CJB

37): 643 = Melampsorella caryophyllacearum

stellata, Tremella, Chaill. (in litt.).—Fide Fr. 1828 E. 2: 80 = Sphaeria aurora Fr. ≡ Nectria aurora (Fr.) Sacc. — Pyronomycetes. sterigmaticum, -us, Thanatephorus, Ceratobasidium, Corticium stictis, Tremella, Pers. 1801 (d.n.); = Stictis rufa Pers. 1799 O. 2: 74 pl. 6f. 6 (Germany) (d.n.) per Pers. 1822 
Agyrium rufum (Pers. per Pers.) Fr. — Discomycetes. Stilbum (Auriculariineae) stillatus, Dacrymyces, Calloria; sensu Corda Dacrymyces stillatus, arthrosporous state; sensu L. Tul. = Dacrymyces sp.; sensu Berk., Fr. 1874 = Dacrymyces spp. (mixtum compositum; not listed); sensu P. Karst. = Dacrymyces sp.; sensu Bref. = Dacrymyces sp.; sensu Bourd. & G. = Dacrymyces sp. stillatus var. lutescens Steud. = Dacrymyces lacrymalis stipitata, [Dacrymyces], Septocolla stipitata, Tremella, Bosc 1811 (MBe 5): 89 pl. 6 f. 14 (U.S.A., South Carolina) (d.n.) per Schw. 1822, not ~ Willd. 1787 (d.n.), not ~ Peck 1875; Leotia J. Schroet. 1894; ≡ Leotia viscosa Fr. — Discomycetes. stipitata, Tremella, Willd. 1787: 420 (Germany) (nom. anam.) (d.n.), not ~ Bosc 1811 (d.n.) per Schw. 1822, not ~ Peck 1875. —Fide Fr. 1822: 218 = Tremella clavata (Pers.) Pers., q.v. stipitatus, Dacrymyces, Dacrymyces deliquescens var. = [Dacrymyces] Ditiola nuda straminea, Exidia = Exidia recisa stratosa, Sebacina, Seismosarca = Basidiodendron cinereum striata, Calocera, Clavaria = ? Calocera cornea striata, Guepinia, Bary (in herb.).-Fide Lloyd 1919 (LMW 6): 922 = Guepenia peziza Tul. [= Guepiniopsis buccina, p. 204]. striatus, Dacrymyces, Oud. 1919 E. 1: 546 ("Fr."; error) = Dacrymyces stillatus (p. 200). stricta, Calocera strigosa, Exidia, Exidia glandulosa subsp. = Exidia glandulosa strigosa, Sebacina struthiopteridis Rostr., Herpobasidium, Gloeosporium, Uredinopsis Stypella (Tremellineae) Stypinella = Helicobasidium suavis, Rhizoctonia, Simon Th. 1932 (incidental mention) = Orcheomyces suavis

Burgeff 1909: 27 (Germany; greenhouse),

a non-binomial name (79); fide Simon Th. 1932: 65 = Rhizoctonia solani [= Thanate-phorus cucumeris (p. 187), imperfect state]. subardosiaca, Helicogloea, Saccoblastia, Saccoblastia sebacea subsp.

subclavata, Tremella, Schum. 1803: 442 (Denmark) (d.n.) per Pers. 1822.—Nomen dubium. Fries 1822: 217 identified this with Tremella mesenterica, but this is, in my opinion, not acceptable (at least as to the main variety).

subgelatinosa, -um, Protodontia, Hydnum, Protohydnum

subhyalina, Sebacina = Sebacina podlachica subiculoides, Ptychogaster = Sebacina incrustans sublilacina, Sebacina, Exidiopsis

subplana, Peziza, Schum. 1803: 416 (Denmark) (d.n.) per Pers. 1822.—Fries (1822: 140) listed this name ("ex icon. Auct.") as synonym of Peziza chrysocoma Bull. sensu Fr. = Dacrymyces chrysocoma, in my opinion a doubtful identification.

subrepanda, Exidia, (P. Karst.) Oud. 1920;
 Exidia albida subsp. E. subrepanda P. Karst.
 1891 (Mfe 18): 73 (Finland).—Nomen dubium.

subrotunda.—"[Tremella] subrotunda L.": Streinz 1861 (syn.) ≡ (an abbreviated form of the phrase-name) Tremella subrotunda sinuosa difformis gelatinosa L. 1747 (Sweden) ≡ Tremella verrucosa L. 1753 (d.n.) ≡ Nostoc verrucosum Vauch. per Born. & Flah. — Nostocaceae heterocysteae.

subsimplex, Calocera, Calocera cornea var.; sensu Britz. = Calocera glossoides

subsquamosa, Tremella, Fr. 1822: 219 (incidental mention) ex Steud. 1824 ≡ (an error for) Tremella squamosa Schum., q.v.

subtilis, [Thanatephorus], Rhizoctonia succina = succinea

succinea, Tremella = Tremella foliacea succinea.—"Peziza succinea Pers. Comm. Schaeff.

p. 23". Fr. 1822: 223 (syn.); Tremella Steud.
1824 ("succinea" & "succina"; syn.), an
T. succin(e)a Pers. 1822.—Fide Fries, l.c.,
Exidia recisa. I have been unable to locate
the place of publication of this name.

succineus, Dacrymyces, (Fr.) Fr. 1874, not ~
Sprée 1864; Calloria Fr. 1849: 359
(Sweden) (nom. anam.); = Sirocyphella
succinea (Fr.) Höhn. 1918 (SbW 127): 337,
374. — Deuteromycetes. — Sensu Boud.
= Dacrymyces fagicola

succineus, Dacrymyces, Sprée in Rab. 1864 F.e.:
No. 680 (with description, citing "Calloria succinea Fr. summ. p. 359?") (Netherlands) (nom. anam.), not ~ (Fr.) Fr. 1874.—Fide Höhn. 1918 (SbW 127): 372-375 = Dacrymyces succineus (Fr.) Fr. = Sirocyphella succinea (Fr.) Höhn. — Deuteromycetes.

sulcata, Ditiola, (Tode) per Fr. 1821; Tubercularia
Tode 1790: 21 pl. 4f. 34 (Germany) (nom. anam: ?) (d.n.).—Nomen dubium. Tode cited as synonym "Fungus Astroides Scop." syringae, Tremella, Schum. 1803: 440 (Denmark) (d.n.) per Pers. 1822; Dacrymyces (Schum. per Pers.) Fr. 1822.—Nomen dubium. — Description & illustration: Hornem. 1825 (Fd 11 / F. 31): 14 pl. 1857 f. 3 (Dacrymyces), presumably Schumacher's original drawing.

Tachaphantium = Achroomyces tenax, Exidia = Exidia plana

tenerrima, Tremella, With. 1776 (generic name n.v.p.) = Tremella crispa Schreb. (typonym), q.v.

terminalis, Tremella, (O. F. Müll.) Röm. & Ust. 1789 (incidental mention); Lichen O. F. Müll. 1782 (Fd 5 / F. 15): 5 pl. 879 f. 1 (Denmark or Norway).—Nomen dubium. Fide Hornem. 1827: 39 = Verrucaria maura "Flörke"; fide Zahlbr. 1931 C. 7: 780 = "Alga videtur". The combination with Tremella was made in the index to volume 2 of the "Magazin für die Botanik" edited by Römer & Usteri. On the page referred to this combination was not made by Müller [1789 (MB 2 / 5. Stück): 180], who forgot to mention the generic appellation; his reference shows that it should have been 'Lichen' rather than 'Tremella'. terrestris.—"Tremella terrestris Dill.", Ag. 1824: 19 (syn.), Kütz. 1849: 298 ("Dillw."; syn.),

restris.— I remetia terrestris Dill., Ag. 1624:
19 (syn.), Kütz. 1849: 298 ("Dillw."; syn.),
not ∼ Grev. 1830 ("Dill."; syn.); ≡ (an
abbreviated form of the phrase-name)
Tremella terrestris sinuosa, pinguis & fugax
Dill. 1741: 52 pl. 10 f. 14 = Tremella
nostoc L. ≡ Nostoc vulgare Vauch. per Born.
& Flah. — Nostocaceae heterocysteae.

terrestris.—"Tremella terrestris, Dill.", Grev. 1830: 175 (syn.), not ~ Ag. 1824 ("Dill."; syn.); = (an abbreviated form of the phrase-name) Tremella terrestris tenera, crispa Dill. 1741: 52 pl. 10 f. 12 = Tremella crispa Schreb., q.v.

- Bacteria.

Thanatephorus (Tulasnellaceae)
Thanatophytum = Helicobasidium
thelephoreus, Muciporus corticola forma, Tulasnella = Tulasnella violea

thermalis, Tremella, Thore 1803: 448 (France) (generic name n.v.p.), not ~ Opiz 1823.

—"... nous savons que le Tremella thermalis de Thore ... [est] presque entièrement [composé] de Leptothrix lamellosa Kützing": Born. & Flah. 1887 (ASn VII 5): 59. — Thore, l.c., refers to a more detailed description in the "Journal de santé et d'Histoire naturelle, t. 2, p. 162" (n.v.).

thermalis, Tremella, Opiz 1823 ("Springfels" [!]), not ~ Thore 1803 (generic name n.v.p.); = Tremella thermalis, gelatinosa ... Springfeld? 1754 (HAB 1752 [vol. 8]): 102 (Czechoslovakia, Bohemia).—Cf. Born. & Flah. 1887 (ASn VII 5): 59. Perhaps a mixture of several species, but cf. Hapalosiphon laminosus (Kütz.) per Born. & Flah. = Mastigocladus laminosus (Kütz. per Born. & Flah.) Kirchner. — Nostocaceae heterocysteae?

thuretiana, Exidia, Tremella = Exidia albida tiliae, Achroomyces, Stictis = Achroomyces disciformis

tiliae, Platygloea, Tachaphantium = Achroomyces disciformis

tinctoria, Tremella = Tremella foliacea

torta, -us, Dacrymyces, Guepiniopsis, Tremella; sensu Bon. = Dacrymyces stillatus; sensu Doass. & Pat. = Guepiniopsis buccina; sensu Brasf. = Dacrymyces sp. (not listed) totarae, Auricula = Pseudohydnum gelatinosum translucens, Tremella ('Microtremella')

transversalis, Propolis, Fuck. 1870 (Jna 23-24): 254 (Germany).—Fide Rehm 1888 (RKF 18): 149 = Propolis faginea (Schrad.) per P. Karst. [= Propolis versicolor (Fr.) Fr.]. Fuckel erroneously considered Exidia glandulosa to be the conidiophorous state. — Discomycetes.

traumatica, Tulasnella, Gloeotulasnella trechispora, Sebacina, Bourd. & G. 1913 (France) (nom. nud.).—Afterwards published as Bourdotia cinerella var. trachyspora Bourd. & G. Bourdotia cinerella is now referred to Basidiodendron caesiocinereum

(p. 162).

Tremella [Dill.] L. 1753: 1157 & 1754: 491 (d.n.), not ~ Pers. per St-Am. 1821; ≡

Nostoc Vauch. per Born. & Flah. — Nostocaceae heterocysteae. — For this name Tremella and its various applications, see Donk 1958 (Ta 7): 245, in obs.

Tremella Pers. per St-Am. (Tremellineae) tremellae, Auricularia = Hirneola auriculajudae

Tremellochaete = Exidia

Tremellodendropsis (Tremellineae)

Tremellodon = Pseudohydnum

tremelloides, Auricularia, Thelephora = Auricularia mesenterica

tremelloides, Dacrymyces = Dacrymyces palmatus

tremelloides.—"[Tremella] tremelloides Huds.",
Streinz 1861 (syn.), not ~ (Berk.) Mass.
1889; = (an error for) Lichen tremelloides
(L.) Huds. = L. tremelloides (L.) Weiss =
Leptogium lichenoides (L.) Zahlbr.—A contamination of 'Tremella lichenoides L.' and
'Lichen tremelloides Huds.' — Lichenes.

tremelloides, Tulasnella, Gloeotulasnella Tremiscus (Tremellineae)

tremula, Tremella, (Holmskj.) Nees 1816 (d.n.); Clavaria Holmskj. 1799: 27 pl. [11] (Denmark) (d.n.).—Fide Pers. 1822: 201 & Fr. 1822: 29 = Leotia lubrica (Scop.) per S. F. Gray. — Discomycetes.

truncata, Auricularia, Exidia, Tremella = Exidia glandulosa

tuberculata Clavaria, With. 1796: 364 (England) (d.n.).—Because With. cited "Schaeff. 289" [Clavaria cornuta Schaeff.] as a representative figure, C. tuberculata was considered a synonym of Calocera viscosa, but this conclusion is unacceptable to me. The original description suggests Podostroma alutaceum (Pers. per S. F. Gray) Atk., but only imperfectly so. Nomen dubium.

tuberculata, Leotia = ? Ditiola radicata

tuberculata, Tremella

tuberculosa, Sebacina

tuberosa, Calocera, (Sow. per Fr.) Loud. 1829: Fr. 1832; Clavaria Sow. 1799: pl. 199 (England) (d.n.).—Currently referred to Clavariadelphus fistulosus (Holmskj. per Fr.) Corner. — Clavariaceae.

tuberosa, -um, Tremellodendropsis, Aphelaria, Merisma, Stereum, Thelephora

tubiformis, Guepinia = Guepiniopsis buccina tulasnei, Dacrymyces = ? Dacrymyces stillatus sensu L. Tul.

tulasnei, Prototremella, Tulasnella = Tulasnella

violea; sensu P. Karst. = Tulasnella cystidiophora

Tulasnella (Tulasnellaceae)

tulipae, Sclerotium, Therry ("in litt."), Roum. 1887 (France) (nom. nud. & anam.), not ~ Lib. 1830, not ~ Weinm. 1836.—Fide Whetzel apud Boerema 1964: 180 = Rhizoctonia tuliparum (p. 190).

tuliparum, [Thanathephorus], Rhizoctonia, Sclerotium

tumidum, -us, Achroomyces, Myxosporium = ? Achroomyces disciformis

turbinata, Tremella, Huds. 1778 (d.n.), not Schum. 1803 (d.n.) & (Schum. per Corda)
Opiz 1856; = Peziza polymorpha Oed. (d.n.)
= Phaeobulgaria inquinans (Pers. per Pers.)
Nannf. — Discomycetes.

turbinata, Tremella, Schum. 1803: 441 (Denmark) (d.n.), not ~ Huds. 1778 (d.n.); Coryne (Schum.) per Corda 1838, misapplied?; Tremella Opiz 1856 ("Schrad.").

—Nomen dubium.

turbo, Peziza = Ditiola radicata

typhae, Dacryopsis, Höhn. 1909 (SbW 118): 291 (Germany)); Dacryopsella Höhn. 1915; = Pistillina typhae (Höhn.) Donk. — Clavariaceae.

typhina.—"[Tremella] typhina Willd.": Streinz 1861 (syn.) = (an error for) Stemonitis typhina Wigg. 1780: 110 = Comatricha typhoides (Bull.) Rost. fide Lister 1911: 157.

— Myxomycetes.

typhuloides, Eocronartium, Helicobasidium = Eocronartium muscicola

ubatubensis, Hirneolina = Eichleriella alliciens uda, Protodontia

ulicis, Dacryopsis, Ditiola = Femsjonia pezizaeformis

uliginosa, Clavaria, Wallr. 1815: 141 (Germany) (d.n.) per Pers. 1822.—Kunze apud Fr. 1821: 498 referred this to Pistillaria muscicola [≡ Eocronartium muscicola], but the protologue does not support this. Rather one of the small species of Clavariaceae.

uliginosa, Tremella

Ulocolla = Exidia

umbilicalis, Tremella, (L.) Steud. 1824 (syn.)

= "F[ucus] Tremella umbilicalis S. G. Gmel.
1768 = Fucus umbilicalis L. 1753: 1163 =
Porphyra umbilicalis (L.) J. Ag. — Rhodophyceae.

umbilicata, Tremella, Schrank 1789: 559 (Germany) (d.n.) per Streinz 1861.—Nomen dubium.

umbrina, Sebacina, Bourdotia

umbrina Schum., Tremella = Exidia plana umbrinella, Exidia

umbrosa, Tremella, Opiz 1852: 148 (Czechoslovakia) (nom. nud.).—Cf. Svrček in Klášt. & al. 1958: 90, "probabiliter Nostoc sp." — Nostocaceae heterocysteae? undulata Hoffm., Tremella = Tremella foliacea undulata Paul., Tremella = Tremella mesenterica

unedonis, Exobasidium

unicolor, Tremella, Fr. 1822: 218 (Sweden); Calocera Fr. 1874.—Nomen dubium. Doubtfully basidiomycetous. Sensu Corda 1838 I. 2: 34 pl. 14 f. 121 (Coryne), apparently a quite different species.

urticae, Tremella, Pers. 1801: 628 (Germany) (nom. anam.) (d.n.); Dacrymyces Mart. 1817 (d.n.); Tremella Pers. per Mérat 1821; Dacrymyces Fr. 1822; E Cylindrocolla urticae (Pers. per Mérat) Bon., fide L. Tul. 1853 (ASn III 20): 167, the imperfect state of Peziza fusarioides Berk. E Calloria fusarioides (Berk.) Fr., q.v. — Deuteromycetes.

ustulata, Tremella, Bull. 1788: pl. 420 f. 2 (France) (d.n.) per St-Am. 1821; Gyraria S. F. Gray 1821.—Fide Fr. 1822: 258 = Sclerotium pyrinum (A. & S.) per Fr. Apparently still a nomen dubium.

Uthatobasidium (Tulasnellaceae)

utriculata, Tremella, Huds. 1778: 564 (England) (d.n.).—Fide Ag. 1824: 26 = Rivularia angulosa Roth = Gloeotrichia natans (Hedw.) per Born. & Flah. — Nostocaceae heterocysteae.

uvae-ursi, Exobasidium, Exobasidium andromedae forma

uvida, Sebacina, (Fr.) Bres. 1891, misapplied; Thelephora viscosa var. Fr. 1828 E. 1: 218 (Sweden); Exidiopsis Bourd. & L. Maire 1920 (nom. nud.), misapplied.—Fide Lundell 1947 (LNF 29-30): 20 No. 1432 = Corticium lividum (Pers. per Fr.) Fr. = Phlebia livida (Pers. per Fr.) Bres., Corticiaceae. — Sensu Bres. = Sebacina effusa

vaccinii, Exobasidium, Fusidium; sensu Fuck., in part = Exobasidium myrtilli; sensu Cavara, in part = Exobasidium rhododendri vaccinii-myrtilli, Exobasidium = Exobasidium myrtilli

vaccinii-uliginosi, Exobasidium

vaga, Coniophora = Uthatobasidium ochraceum

vagum, Ceratobasidium, (B. & C. apud Berk.)
Pilát 1957, misapplied; Corticium B. & C. apud Berk. 1873 (G 1): 179 (U.S.A.,
South Carolina); Pellicularia D. P. Rog. apud Linder 1942; ≡ Botryobasidium vagum (B. & C. apud Berk.) D. P. Rog. 1935,
Corticiaceae. — Sensu Burt, in part =
Thanatephorus cucumeris; sensu Pilát =
Ceratobasidium anceps

vagum var. solani Rolfs, Corticium = Thanatephorus cucumeris

vermifera, Sebacina

vermiformis, Dacrymyces, B. & Br. 1878 (AM V 1): 25 pl. 3 f. 1 (England).—Nomen dubium.

vernicosa, Ceracea, Cragin 1885 (BWb 1): 82 [cf. 1885 (JM 1): 58] U.S.A., Kansas).—
An imperfect fungus, fide G. W. Mart. 1949 (M 41): 78-79, and apparently non-basidiomycetous. Reported from Finland by P. Karst. 1889 (BFi 48): 461 as a dacrymycetous species. A doubtful record. vernicosa, Tulasnella

verrucosa, Tremella, L. 1753: 1158 (Sweden) (d.n.) = Nostoc verrucosum Vauch. per Born. & Flah. 1888 (ASn VII 7): 216. — Nostocaceae heterocysteae.

versicolor, Tremella

verticalis, Tremella = Tremella foliacea

vesicaria, Tremella, Bull. 1788: pl. 427 f. 3 & 1791 H.: 224 (France) (d.n.) per Spreng. 1827.—Nomen dubium. Sensu Sm. 1812 (EB 35): pl. 2451 = ?; sensu Peck 1879 (RNS 28): 53 = Tremella reticulata (Berk.) Farl., an extra-European species.

vestita, [Achroomyces], Platygloea

villosa, Exidia

villosum, Agarico-gelicidium = Auricularia mesenterica

violacea, Auricularia, (Bull. per Mérat) Streinz 1861 (syn.) = Auricularia tremelloides var. violacea Bull. 1791 H.: 278 (France) (d.n.) = Auricularia tremelloides (typonym); = A. mesenterica (p. 154).

violacea With., Helvella = Auricularia mesenterica

violacea, Ombrophila, Fr. 1849, not ∼ (Hedw.) per Rehm 1891 (erroneous recombination misapplied to Fries's species); = Peziza clavus var. violascens A. & S. 1805: 303 (Germany) (d.n.). — Discomycetes. — Sensu Quél. = Craterocolla cerasi (26)

violacea, Rhizoctonia = Helicobasidium brebissonii; sensu auctt. nonn. = Thanatephorus cucumeris

violacea Bull., Tremella, Tremella mesenteriformis var. = Tremella foliacea

violacea, Tremella, Pers. 1801: 623 (d.n.; "Tremella violacea ... Relh. ... huius quoque loci"), not ~ Relh. 1785 (d.n.), q.v., not ~ Schrank & Moll 1785 (d.n.), not ~ (Bull.) Pers. 1818 (d.n.); Dacrymyces Mart. 1817 (d.n.); Gyraria (Pers.) per S. F. Gray 1821; Tremella Pers. 1822; Dacrymyces Fr. 1822.—Cf. "Sirobasidium" cerasi Bourd. & G., q.v., or else a nomen dubium. — "Dacrymyces violaceus, Schwein. Syn. Car. 1148" (nom. nud.), cited by Cooke [1891 (G 20): 15] refers to a mere application of T. violacea Pers. — Sensu Tul. = Myxarium hyalinum; sensu Bourd. & G. = Tremella moriformis — Cf. (69).

violacea Relh., Tremella = Auricularia mesenterica

violacea, Tremella, Schrank & Moll 1785 N.B. 2: 316 (Germany) (d.n.), not ~ Relh. 1785 (d.n.), not ~ Pers. 1801 (d.n.) & (Pers. per S. F. Gray) Pers. 1822, not ~ (Bull.) Pers. 1818 (d.n.).—Nomen dubium. Schrank (1789: 563) cited Helvella mesenterica Dicks. 1785 P.c. 1: 20 ("Discon. Magaz. für d. Bot. II. 60") as synonym. Dickson's species is now known as Auricularia mesenterica. The original description of this T. violacea does not support this identification.

violacea, -um, Tulasnella, Corticium, Pachysterigma

violaceum, Oidium, Harting 1846 (ASn III 6): 47 pl. 6 f. 16 (Netherlands) (nom. anam.). —This has been listed by Sacc. & Trav. 1911 (SF 20): 679 under Rhizoctonia violacea, but the protologue is so brief and vague that there is little reason to accept this.

violaceus, Hypochnus = Helicobasidium brebissonii

violascens, Tremella, (A. & S. per Fr.) Streinz 1861 (syn.) = Tremella foliacea var. violascens A. & S. 1805: 303 (Germany) (d.n.) per Fr. 1822: 213.—Fide Neuh. 1936 (ABS 281): 20-21 = "eine Bulgariacee aus der Gegend von Coryne"; cf. Tremella sarcoides Fr., q.v. — See also (63).

virens, Tremella, Schw. 1822: 115: Fr. 1822: 216 (U.S.A., North Carolina).—This was recorded form Belgium by Westend. 1852 (BAB 19): 124 ("Fr. Syn. myc."). It was later described as Epidochium virens Westend. — Deuteromycetes.

violea, -um, -us, Tulasnella, Corticium, Hypochnus

virescens Corda, Naematelia, Tremella = ? Tremella exigua

virescens Schum., Tremella, Dacrymyces viridis, Tremella, Retz. 1769 (SVH 30): 251 (Sweden).—Nomen dubium. Not a fungus it would seem.

viridis muscorum, Tremella, Secr. 1833 M. 3: 288 (Switzerland) (double epithet: n.v.p.). —Instated for Tremella muscorum Schleich., q.v. & T. minutum Schleich., q.v. Nomen dubium. Cf. Nostoc sp., spp.?

viridissima—"[Tremella] viridissima Hall.",

Streinz 1861 (syn.) ≡ (an abbreviation of
the phrase-name) Tremella viridissima, corniculis palmatis Haller no. 2125.—Fide Haller,
l.c. ≡ Tremella palustris gelatinosa Damae
cornuum facie Dill. [≡ Chaetophora incrassata
(Huds.) Haz.]. — Chlorophyceae.

viscaria, Tremella, Neck. 1768: 523 [cf. Pers. 1797 C.: 221/89] (d.n.).—Nomen dubium. Persoon, I.c., thought of Acrospermum cornuta 

Tremella cornuta (Pers.) Pers., q. v., ("sed forte tamen diversa"); fide Fr. 1822: 217 = 
Tremella sarcoides Fr., q.v., but this seems not acceptable, no more than Hoffmann's

identification (1787 V.c. 1: 23) with T. digitata Hoffm., q.v.

viscosa, -um, Pers., Calocera, Clavaria, Corallium Hahn 1883, Merisma

viscosa, Tremella, (Pers. per Fr.) B. & Br. 1848, misapplied; Corticium Pers. 1799 O. 2: 18 (Germany) (d.n.); Thelephora (Pers.) per Fr. 1821, not Pers. 1822; Exidia P. Karst. 1889 & Rea 1922, misapplied; = Phlebia livida (Pers. per Fr.) Fr., Corticiaceae.— Sensu Schum. = Thelephora viscosa Pers., q.v. (not listed); sensu B. & Br. = Exidia albida; sensu Britz. = Sebacina incrustans, fide Neuh. 1935 (PM 2a): 24 (not listed) viscosa, Thelephora, Pers. 1822: 149, not Pers.) per Fr. 1821.—Nomen dubium. This has been referred to Tremella viscosa Fr. (33).

viscosa Fr., Tremella = Exidia albida vitis, Aureobasidium, Viala & Boyer 1891 (CrP 112): 1150 (France) (nom. anam.); Exobasidium Prill. & Del. 1894; = Aureobasidium pululans (Bary) Arnaud. — Deuteromycetes. volvata, Ditiola, (Tode) per Fr. 1822: Tubercularia Tode 1790: 20 pl. 4f. 33 (Germany) (d.n.).—Nomen dubium.

vulgare, -is, Stilbum, Botryonipha vulgare, Tremellodon, Quél. 1877 (BbF 23): 316 (nom. nud.), presumably Pseudohydnum gelatinosum (p. 173).

warmingii, Exobasidium, Arcticomyces

Xenogloea = Kriegeria

Zonaria Roussel = Auricularia