

# REINWARDTIA

BEING A CONTINUATION OF THE  
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Rogers, in addition, concluded: "Ergo, *Cristella* = *Sebacina*."<sup>6</sup>

Patouillard published, first, a new generic name, *Cristella*, for a new taxon accompanied by a description drawn up from the specimens he actually studied; among these the type specimen of *Merisma cristatum* Pers. was not represented. Secondly, he published a new combination ("*Crist, cristata*") for an 'old' species, basonym, *Merisma cristatum* Pers.<sup>6</sup>; this recombination has to be treated as a synonym of Persoon's name given to the species of *Sebacina*. These two simple and easily extricable facts would seem a very slender basis for confusion.

EXAMPLE 3.—Following the same unsupportable line of reasoning, Rogers identified the species he selected as the type of *Soppittiella* Mass. (Brit. Fung. Fl. 1: 106. 1892) not according to what Masee understood by that name, but what he, Rogers, understood by it, and so *Soppittiella* became to him another synonym of *Sebacina* Tul.

The fungus described and illustrated by Masee as *Soppittiella cristata* Mass. ("*Thelephora cristata*, Fr.") is presumably also the same as *Corticium fastidiosum* (*Cristella cristata sensu* Pat.), although some allowances for errors in his description should be made: for instance, the spores are not "pale vinous." The generic diagnosis of *Soppittiella* does not agree well with Masee's description of this selected type. It states that the fruit-body is "soft, fleshy, and subgelatinous when growing, collapsing when dry" and (in the general discussion) "soft, fleshy, and subgelatinous when moist." On the other hand, Masee's accounts of the genus and the species he attributed to it are so confused, inaccurate, and even evidently erroneous that the proper selection of a different species agreeing more closely with the generic description would be a complicated matter with a subjective and debatable result. I, therefore, wholeheartedly support Rogers' choice of the indicated species, which makes, to me, *Soppittiella* a later synonym of *Cristella*, but not of *Sebacina* as was concluded by him!

<sup>6</sup>He proceeds to draw attention to the later name *Phlebiella* P. Karst. which he considers the correct one for the genus in an emended circumscription. There are signs that some other mycologists are inclined to accept this view; compare H. S. Jackson (*in* Canad. J. Res. 26 C: 144, 155. 1948) and John Eriksson [*in* Symb. bot. upsal. 10 (5): 6. 1950]. This unexpected development induced the present note.

<sup>7</sup>Rather than *Thelephora cristata* (Pers.) ex Fr. Whether or not the new recombination *Cristella cristata* was validly published is again a different matter.

## NOTES ON MALESIAN FUNGI—II\*

### On the genera *Auricularia*, *Hirneola*, and *Laschia*

M. A. DONK\*\*

#### SUMMARY

1. After discussing the outer characters of the three genera *Auricularia* Bull, ex Merat, *Hirneola* Fr. (1848), and *Laschia* Fr., now often combined into a single genus, the author concludes that there is every reason to follow Bresadola and to keep *Auricularia* and *Hirneola* apart as distinct genera, and to enter *Laschia* into *Hirneola*.
2. It is pointed out that in *Hirneola* the hymenophore is not invariably inferior.
3. The author once more discusses the desirability of conserving the name *Hirneola* Fr. 1848. He withdraws his previous proposal for conservation of *Auricularia* Bull, ex Brongn. 1824.
4. The new combination *Hirneola nigricans* (Sw. ex Fr.) Donk is proposed.
5. It is possible that the correct name for the Judas' ear is *Hirneola auricula* (L. ex Mexat) H. Karst.

HISTORICAL OUTLINE.—The three auriculariaceous genera *Auricularia* Bull, [ex Merat 1821], *Laschia* Fr., and *Hirneola* Fr. (1848), kept apart by Fries, are now often combined into a single genus under the name of *Auricularia*. When introduced, the earliest of these three names, *Auricularia*, covered various fungi now considered not closely related, among which *Auricularia mesenterica* (Dicks, ex Fr.) Fr. (as *Au. tremelloides* Bull.) and *Stereum hirsutum* (Willd. ex Fr.) S. F. Gray (as *Au. reflexa* Bull.) were the most noteworthy representatives. Bulliard did not include *Tremella auricula* L. = *T. auricula-judae* Bull. = *Hirneola auricula* (L. ex Merat) H. Karst. (see p. 499), the well-known Judas' ear. In fact there was not much difference between *Auricularia* Bull, and *Thelephora* Ehrh. as the latter genus was emended by Persoon. Certain authors even replaced the name *Thelephora* by *Auricularia*, retaining the Persoonian genus unaltered (Merat, see p. 498).

The first to combine *Au. mesenterica* and *H. auricula* into one genus, exclusive of other species (like *Stereum hirsutum*), was Link (1809), who was followed by a respectable line of mycologists such as Persoon, Duby, Secretan, Link himself, and others. This genus, too, was called *Auricularia*;

\*The first part appeared in Bull. bot. Gdns Buitenzorg III 17: 473-482, 1948.  
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it has been interpreted as an emendation of *Auricularia* Bull, or as a new genus with a new (though homonymous) name.

Fries on the other hand was not willing to follow Link's course. From the first he considered the two elements of Link's genus as non-related. For a long time he kept *H. auricula*<sup>1</sup> and some tropical species in *Exidia* Fr., but when he learned more about these tropical species he instituted for them a special genus *Hirneola* Fr.<sup>2</sup> in 'Tremellinei'; he then supposed that it should also include the true Judas' ear.<sup>8</sup>

At first Fries did not know what to do with the other element of Link's genus, *Au. mesenterica*. After having placed it with doubt in *Phlebia* Fr., he soon afterwards transferred it to an other special genus for which he took-up the name *Auricularia* Bull.<sup>4</sup> (fig. 1); he included this genus in 'Thelephorei,' thus indicating that he considered it fundamentally different from *Hirneola*. Due to Fries' enormous authority the names *Auricularia* and *Hirneola* became fixed in these applications for a long period and still survive.

The genus *Laschia* Fr.<sup>5</sup> (fig. 2) was compared by its author at first with sessile *Merulius* although he included it in 'Tremellinei' (1830), but Fries afterwards placed it in 'Polyporei' next to *Favolus* (Summ. veg. Scand. 325. 1849); he never compared it with *Hirneola*. It is characterized by its strongly gelatinous substance and by the alveolate-meruloid hymenophore. Subsequent authors (following Montagne) have made *Laschia* very heterogeneous; in the following discussion only the restricted, original, sense is considered.

However, when it was fully appreciated that *Auricularia* and *Hirneola* possess transversally septate basidia and do not really belong to different orders (families) as Fries thought, the scale turned and Patouil-

<sup>1</sup>Fries confused this species with one of *Exidia*; compare Donk (*in* Bull. bot. Gdns Buitenz. III 17: 161-162. 1941). Recently the first preserved collection on record of the Judas' ear was made in Sweden; compare Lundell (*in* Lundell & Nannfeldt, Fung., exs. suc. [15]: 16 no. 1426. 1947).

<sup>2</sup>*Hirneola* Fr. 1848, not *Hirneola* Fr. 1825 which is now called *Mycobonia* Pat.  
<sup>3</sup>The actual transfer to *Hirneola* was effected by Berkeley in 1860, as *H. auriculari-judae* (Bull.) Berk.

<sup>4</sup>Fries (1825) had used the name *Auricularia* Bull, before in quite a different circumscription, corresponding with what he later on called *Stereum*, but exclusive of *Hymenochaete* Lev. The appearance of "*Auricularia*" as an example of Tremellinae in Fries' "Conspectus ordinum" of 1821 (Syst. mycol. 1: 2), I rather interpret as the precursor of *Exidia* Fr., the latter name published in 1822 [Fries, Syst. mycol. 2 (1): 220]. This would mean that Fries originally intended to accept *Auricularia* [sensu] Link with *Au. auricula* as the type species, emended to what he called *Exidia* the next year; in 1825 he emended *Auricularia* Bull, with *Stereum hirsutum*<sup>^</sup> as the type species; and in 1835, finally, he settled down on *Auricularia* Bull, with *Au. mesenterica* as the type species.

<sup>5</sup>*Laschia* Fr. (*in* Linnaea 5: 533. 1830), not *Laschia* Jungn.

lard (Hym. d'Eur. 159. 1887) threw the two genera together under the name of *Auricularia*. After Patouillard (1887) had found out that *Laschia* Fr., too, had the same kind of basidia, that genus followed *Hirneola* and was also included in *Auricularia*.<sup>0</sup> This treatment received considerable support, for instance from Brefeld, Lindau, and Lloyd (1918), while some now living mycologists look at any other course with ill disguised contempt.

All the same, Fries' views in this respect were kept alive by a number of mycologists, for instance by Saccardo (who kept the heterogeneous genus *Laschia* intact) and by Bressadola, who maintained *Auricularia* and *Hirneola* as distinct genera, but included *Laschia* Fr. in *Hirneola*. This disposition has been followed by Killermann, and I, too, believe that it is preferable to the Patouillardian course.

THE DIFFERENCES BETWEEN AURICULARIA AND HIRNEOLA.—Fries (Hym. europ. 1874) distinguished between *Auricularia* and *Hirneola* as follows:—

*Auricularia* (Thelephorei).—Hymenium definite inferum, remote et vage costato-plicatum, udum tumens gelatinoso-tremulum, siccum collabens. Habitus exacte *Sterei*.

Genus inter *Thelephoreos* et *Tremellinos* medium, sed meo sensu illis proxime affine, quum siccum a *Stereo* vix discerni possit et pileo coriaceo a *Tremellis* recedat.

*Hirneola* (Tremellinei).—Fungi cartilagineo-gelatinosi, udi mollis, tremuli sed nulla gelatina distendi; excipulum cupuliforme, siccum coriaceo-corneum, humectatum reviviscens, sed vix tumescens. Callus hymeninus superus, discoideus, discolor et diutius maceratus ab excipulo integer solubilis. Sporophora gelatina haud involuta; sporis oblongis, curvatis.

Genus eximum, tarn ab *Auricularia*, quam *Exidia* clare distinctum.

One of the distinctions Fries emphasized was the position of the hymenophore, which was supposed to be inferior in *Auricularia* and superior in *Hirneola*. This is only partly correct: in certain species of *Hirneola* the hymenium may well be directed downwards, although in others it may often be directed upwards. This distinction is of little generic value and may be discarded as of primary importance in the following discussion. Yet it seems useful to point out that a categorical statement to the effect that in *Hirneola* the hymenium is undoubtedly inferior is certainly incorrect, as is known to many mycologists with field-experience in the Asiatic tropics. Such statements were made by Lloyd (1918: 784) and by G. W. Martin:—

"Because of the gelatinous texture of these fungi [*Hirneola*], the hymenium may at times be forced into a more or less superior position by the swelling of the substance, particularly when the basidiocarps are densely clustered, but morphologically it is nearly always inferior. The few well-authenticated exceptions may reasonably be

<sup>0</sup>Patouillard continued to use the name *Laschia* Fr. for homobasidious fungi.

explained on the basis of a disturbance of the substratum after the fructifications had started to develop."—G. W. Martin (1943: 80).

D. P. Rogers (*in* Farlowia 3: 449. 1949) is even still more positive:—

"As Martin . . . and others have pointed out, and as anyone situated where auricularias occur can confirm, this upside-down auriculariaceous genus [*Hirneola*] is a myth."

I have been living for many years in a part of the world where several species of *Hirneola* are common and I have been in the position to pay some attention to this question. Premising that I do not want to stress the position of the hymenium as a first-rate generic feature, I should like to point out the incorrectness of this sweeping formulation. There are forms of *Hirneola* which have rather the superior hymenophore, while there are also forms (those with typically merulioid hymenophore, *Laschia*) that have the strictly inferior one, whereas still others are almost indifferent in this respect. I prefer to let somebody else speak. The witness to be quoted is Petch, who acquired an enormous field-knowledge in Ceylon.

"The habit of the two species also differs; in [*H.*] *polytricha*,<sup>7</sup> the fungus frequently, one might almost say usually, grows with the hymenial surface directed upwards, though when growing in clusters on dead stumps, it is directed upwards or downwards or laterally indifferently; but [*AU.*] *tremellosa*<sup>8</sup> always projects horizontally from the substratum, with the concave hymenial surface directed downwards."—Petch (1910: 419).

Further, Burt (1921: 390-391), when describing *Au. rosea* Burt<sup>9</sup> which he could study for two months in the Missouri Botanical Garden where it was kept growing on a log, remarked that the fruit-bodies were either erect or pendant.

Having disposed of the position of the hymenophore, Rogers proceeds to declare that the genus *Hirneola* is worthless and taxonomically superfluous. I do not grudge him this opinion, but would certainly not subscribe to it because the fungi in question speak a different language, difficult to misunderstand, I believe.

What Fries really emphasized, and what Martin and Rogers and many other mycologists ignore, is the resemblance of *Auricularia* to *Stereum* (more in particular to *S. purpureum*, Fries said), and of *Hirneola* to *Exidia*, some forms of the latter genus so strikingly resembling the common Judas' ear that this similarity has been repeatedly commented

<sup>7</sup> *Hirneola nigricans* of the present paper.

<sup>8</sup> Rather *Hirneola affinis* (Jungb.) Bres. This is a member of *Laschia* Fr.

<sup>9</sup> *Auricularia* [= *Hirneola*] *fuscosuiceina* (Mont.) Farl. according to Lowy (1951a: 352).

upon and even led Fries to confuse an exidia with it. That the basidia in both *Auricularia* and *Hirneola* are alike is no reason to reject *a priori* the other, external, features as unimportant. It is worth while, before making up one's mind, to analyse some of the characters that reminded Fries of *Stereum* in the case of *Auricularia*, and of *Exidia* in the case of *Hirneola*. The differences in substance, often unduly stressed, may be left out of account.

(i) In both genera the fruit-bodies are peziza- or cyphella-like in origin, i.e. only attached by a central abhymenial point. But in *Auricularia* they become soon either wholly adpressed to the substratum (and loosely connected with it, 'resupinate'), or reflexed, or even almost wholly laterally 'sessile,' depending on their position and that of the substratum—just as in typical species of *Stereum*,<sup>10</sup> which show exactly the same kind of development. In *Hirneola*, however, there is not the slightest tendency of the fruit-bodies to become adpressed ('resupinate') in the sense of *Stereum* and they more and more develop the cup- or ear-like or conchate shape so characteristic for them; they retain this shape to old age, like some of the larger exidias.

(ii) In *Auricularia* neighbouring fruit-bodies become confluent over often extensive areas. In the reflexed portions this unification may be as perfect as in the resupinate parts. This is exactly what we see so often in *Stereum*. In *Hirneola* there is no tendency to become confluent, although numerous fruit-bodies may be densely clustered. This reminds one of certain of the larger species of *Exidia*.

(iii) The upper surface of the reflexed portions and the surface adpressed to the substratum in *Auricularia* are distinctly zonate as in the typical species of *Stereum*. In *Hirneola* all indications of zonation of the sterile surface are lacking, as in *Exidia*.

(iv) In *Auricularia* the reflexed portions grow strictly horizontal in the same manner as they do in typical species of *Stereum*. In *Hirneola* the direction of the fruit-bodies often depends on their accidental position in relation to the substratum and in some species there is no well-marked tendency to adjust the hymenophore horizontally downwards; on the contrary, besides species that strictly do so, there are others that show a pronounced inclination towards the upwards directed hymenophore. Such a lack of a fixed rule within the genus as a whole is to be found, too, in *Exidia*, and is worthy of some note since in *Auricularia* the rule of the inferior hymenophore in the reflexed portions is strictly observed.

<sup>10</sup> I take *Stereum* in a much restricted sense, its main parts being Bourdot & Galzin's sections *Luteola* and *Cruentata*.

The hymenophore in *Auricularia* (fig. 1) is 'smooth'; the few, rather pronounced ribs that may be present in herbarium specimens are a result of desiccation. In *Hirneola sensu stricto* the hymenophore is usually smooth, too; some ribs are rather folds of the wall of the fruit-body (with corresponding depressions at the outside); a more complicated venation

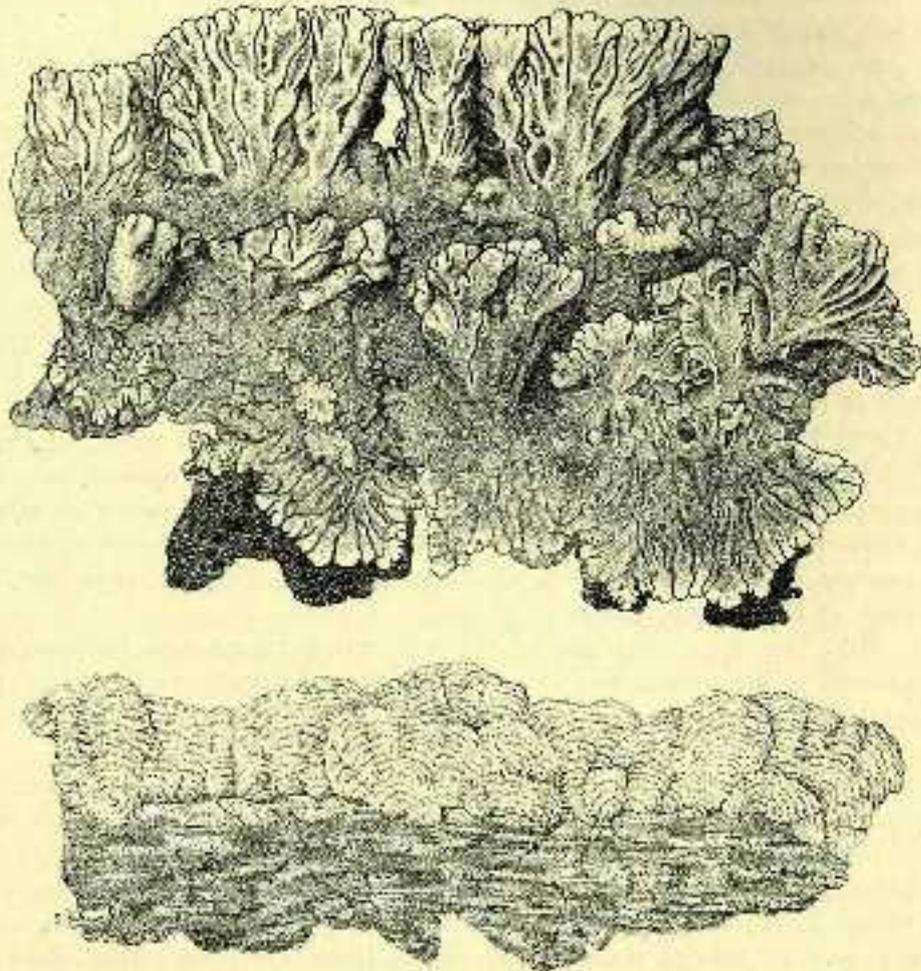


FIG. 1. *Auricularia ornata* Pers.: fruit-bodies seen from below and reflexed portions seen from above, X 0.5. — After specimens from Java.

or even merulioid condition may appear as a result of vigorous growth, but is, first, not a specific character, and, secondly, disappears when the fruit-bodies are dried, except for a few prominent ridges that may remain. In *Laschia* (here included provisionally in *Hirneola*) the strongly reticu-

lately venose condition of the hymenophore is structural and well preserved in dried fruit-bodies.

For all these reasons, I would say that Fries was quite correct in keeping the two genera apart and in comparing *Auricularia* with *Stereum*, and *Hirneola* with *Exidia*. Such a comparison is fully justified, facilitates characterisation of the genera, and recognition of their distinguishing features. Both have the same kind of transversally septate basidia which shows them to belong to one family (Auriculariaceae), rather than to two as Fries supposed, but this can hardly be a reason, I believe, to combine the two, so different in other respects. The consequences would be the incorporation of still more genera, like *Achroomyces* Bonord., *Myliotopsis* Pat., and, perhaps, the rest of the family. In some tribes of agarics and in Dacrymycetaceae, for instance, genera are recognized on the basis of less salient features!

This conclusion is not new. Bresadola already vented his exasperation in this regard:—

"We admit . . . the genus *Hirneola* as distinct from *Auricularia*, because, when the characters of the shape of the fruit-bodies are taken into consideration, the species of *Hirneola* are certainly not at home in the genus *Auricularia*. This latter genus has entirely the appearance of the caps as it occurs in *Stereum*; in addition the medial layer is not as soft and the hairy indument is differently disposed, viz. in concentrical zones.

"By the microscopical features affinities have become clearer to us, so that species, which formerly were not brought into connection with each other, are now classed systematically on their natural place, but this is no reason to neglect the external features, for these, too, may help to acquire a good insight into the objects of nature and to distinguish between related species and genera. Let us, therefore, prevent the extremes from meeting. The earlier authors neglected the microscopical features; the later ones, to the contrary, do not only neglect the external features, but even hold them in contempt. Does this mean progress in science?"—Bresadola (*in* Hedwigia 35: 291. 1896; translated from the Latin).

THE DIFFERENCES BETWEEN *HIRNEOLA* AND *LASCHIA*.—Patouillard recognized that *Laschia* has auriculariaceous basidia and he merged it, like *Hirneola*, with *Auricularia*. As to the features exposed above, *Laschia* agrees with *Hirneola* rather than with *Auricularia*. In their most typical development *Laschia* and *Hirneola* look very different indeed; compare, for instance, *Hirneola nigricans* (Sw. ex Fr.) Donk with *H. (Laschia) affinis* (Jungh.) Bres. With its typical hymenial configuration, *Laschia* must have seemed well worth generic separation to Fries. Genera are, even now, often based on less telling characters.

However, the generic limits between *Hirneola* and *Laschia* are somewhat effaced by species intermediate in certain respects, for instance,

some forms in the tropics (still difficult to assign to their proper species) which, when fresh and moist (in extremely wet weather), look like *Laschia*, with strongly alveolate hymenophore, but dry up like *Hirneola*, with smooth hymenophore, at most showing some stellately radiating folds ('*Auricularia stellata* Lloyd'). This has induced me to follow Bresadola and combine *Laschia* with *Hirneola* for the present, though I may retain sectional status for *Laschia*, or even restore it to generic rank, in the future.

The main difference between *Hirneola sensu stricto* and *Laschia* is to be found, if only the outer characters are taken into consideration, in the hymenophore, in *Laschia* "furnished with distinct ribs which are just as much a constant structural feature as the gills of an agaric; and there are no corresponding depressions on the upper surface"—Petch (1910: 419, for "*A. tremellosa*"). In *Hirneola sensu stricto* any approach to this reticulate-alveolar configuration is merely an expression of a more vigorous growth than is usual. Upon drying this extreme type of reticulation disappears again, while in *Laschia* it remains perfectly preserved after drying. The fruit-bodies in *Laschia* are always strictly horizontal with inferior hymenophore. "Hymenium definite terram spectat," Fries (Novae Symb. mycol. 89. 1851) already remarked, and he added "nine ad Tremellinos, structura proximos, non referatur."

Certain authors even went much further: they denied specific status to the species of *Laschia* and considered them extreme variations of *H. auricula*. Exponents of this view were A. Möller (1895) and Holtermann (1898); both could point to field-knowledge in the tropics, the first in South America and the second in Asia (Ceylon, Java). Möller considered *L. delicata* Fr. (the type species of *Laschia*) merely a form of *H. auricula*,<sup>11</sup> "ihre höchst entwickelte Form." Holtermann (whose observations and cultural experiments are often unreliable, if not faked) even claimed that *L. tremellosa* and *L. velutina*, as well as "*A. purpurascens*" (= *H. nigricans*) and other species all passed into each other without a break and were merely extreme variations of *H. auricula*.<sup>12</sup>

Such views were opposed by Bresadola (*I.e.*); he asserted that *L. delicata* was decidedly a good species. Petch came to a similar conclusion

<sup>11</sup>Möller and Holtermann spoke of *Au. auricula-judae*, but they dealt with other species of *Hirneola*.

<sup>12</sup>Holtermann said that Fries reduced *L. delicata* to a synonym of *L. tremellosa*. The reverse is true. Holtermann alternated these names by the erroneous forms '*A. delieiosa*' and '*A. tremulosa*.' "*Auricularia polytricha* Mont." [*Au. polytricha* (Mont.) Sacc] Holtermann called "*A. purpurascens*" in the next pages of his treatise. This is a new combination. '*Auricularia Auricula Judae*' he also called '*A. Judae*'; '*Auricularia*' was also written '*Auricula*.' The other species Holtermann included are '*Auricularia porphyrea* (Lev.) Fr., *A. pellucida* (Jungh.) Fr. und viele andere."

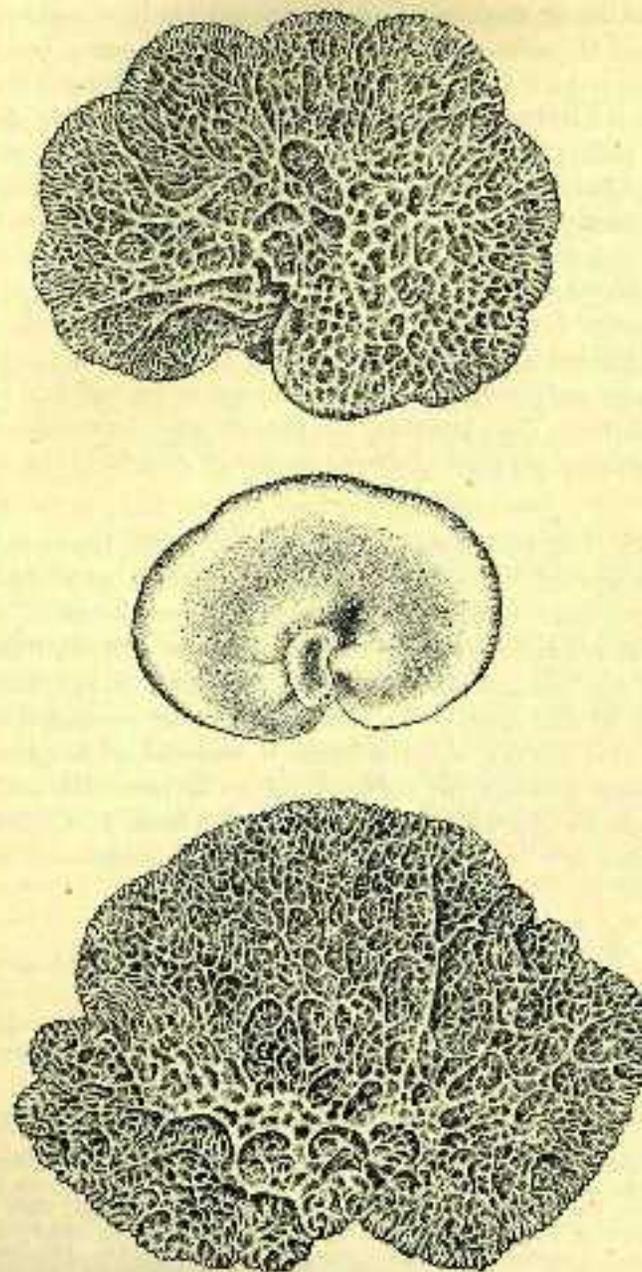


FIG. 2. *Hirneola (Laschia) affinis* (Jungh.) Bres.: fruit-bodies showing lower and upper surface, x 0.75. — After specimens from Java.

as to the situation in Ceylon. It appears from his discussion that he did not come across *H. auricula* and some other allied species, but saw plenty of *H. nigricans* (which he called *H. polytricha*). The fungus he identified with *Au. delicata* is the one I call *H. affinis* (Jungh.) Bres. for the time being. Lloyd (1918), too, kept *Au. delicata* apart from what he called *Au. auricula-judae* and *Au. moellerii* Lloyd (which was to him merely a form with strongly reticulate hymenophore of *Au. auricula-judae* = *H. auricula*). To me the Samoan fungus he called *Au. delicata* is again *H. affinis*. In Java, where *H. affinis* and *H. nigricans* as well as other species occur abundantly, I never had any reason to doubt that *H. affinis* is a good species, although specimens of what I believe to be another species developing under extremely moist conditions may be baffling—only when collected fresh.<sup>12-13</sup> The lumping of the species formerly referred to *Laschia* as forms of species of *Hirneola sensu stricto* is, in my opinion, unwarranted.

STRUCTURAL DIFFERENCES.—An interesting preliminary report on the internal structure of the fruit-bodies was recently published by Lowy (1951a). This author retains the broadly conceived genus *Auricularia*. His first key character is the absence or presence of a distinct medullary layer through the context. Since he published only a key and not yet a full treatment of the species he recognizes (nine) we must postpone a discussion of this matter. All the same it looks as if his investigations will furnish some support for differentiation between *Hirneola*, *Laschia*, and *Auricularia* on characters of internal structure. The following is an extract from his key to the species; the specific names are replaced by generic names.

1- Context with a distinctly differentiated medullary layer.

*Hirneola* (except *H. auricula*)

1. Context without a distinctly differentiated medullary layer.

2. Context composed of a loose reticulum of hyphae whose elements are clearly distinguishable and not arranged in discrete parallel bands. *Laschia* (*delicata*)

<sup>13</sup>When cooked in side-dishes the several species are always easily distinguishable.

"Several authors have lumped *H. delicata* and *H. affinis*, but Bressadola kept the two apart. I do not know the typical *Laschia delicata* described from the American tropics, yet from the descriptions and figures consulted I feel that it would be premature to combine them without renewed comparative study. It would seem that the Javan plants, belonging to a species common throughout the Asiatic tropics (and judging from Lloyd's photograph, on Samoa, too), is paler and has decidedly thicker fruit-bodies and even, perhaps, a still more typically merulioid hymenophore. For this fungus, *H. affinis* is a certain name, which I prefer until the identity with *H. delicata* will be established beyond doubt. Is the true *H. delicata* possibly the same as *Au. moellerii*?

2. Context always more compact, with hyphae frequently parallel; medulla inconspicuous or lacking or weakly differentiated.

*Auricularia*  
*H. auricula*

It would be interesting to investigate systematically the possible correlation between the presence of a well developed medullary layer and the separability of the hymenophore from the rest of the fruit-body, a feature so strongly emphasized by Fries when he published the genus *Hirneola*:—

"Fungus . . . e duabus membranis quasi compaginatus, quarum exterior sistit excipulum, interior callum hymenium. . . . Callus hymeninus superus, discoideus, excipulo discolor et maceratum ab eodem separabile! . . ."—Fries (18<sup>88</sup>: 144).

THE CORRECT GENERIC NAMES.—It was pointed out elsewhere (Donk in Bull. bot. Gdns Buitenz. III 17: 170, 173. 1941; 194-9) that mycologists, who follow the "International Rules of Botanical Nomenclature" as closely as possible, and who want to distinguish between the two genera, *Auricularia* and *Hirneola* (inclusive of *Laschia*), are in need of the name *Auricularia* with *Au. mesenterica* as the type species, and of *Hirneola* Fr. 1848 conserved "against *Laschia* Fr. 1830 and *Hirneola* Fr. 1825 (the latter covering a quite different, homobasidious, genus, now called *Mycobonia* Pat.). Otherwise *Hirneola* (1848) would have to be called *Laschia*, a name already confusingly applied, and *Hirneola* (1825) would have to be taken up for *Mycobonia*. Rogers (in Farlowia 3: 449, 1949) was against this proposal, first, because he considered *Hirneola* Fr. 1848 a mere application of *Hirneola* Fr. 1825,<sup>15</sup> and, secondly,—mind, this was in a nomenclatural discussion!—because he considered *Hirneola* "taxonomically superfluous." It may be so to him, but I hope sufficiently to have explained my reasons why I cannot agree and why there are mycologists who prefer the continued use of these traditional genera and names. I trust that other mycologists sharing Rogers' taxonomical view will be more broad minded and will not hinder their colleagues who adhere to a different taxonomical view and at the same time detest nomenclatural disturbances of the kind indicated. They are asked to extend their help in maintaining the name *Hirneola* for the genus currently so called.

The proposal (Donk, 1949) for conservation of the name *Auricularia*, with *Au. mesenterica* as the type species, became superfluous when Rogers (in Mycologia 43: 376-378. 1951) drew attention to a booklet by Merat (Nouv. Fl. Paris, 2e Ed. 1821); Lowy (1951b) discussed its bearing on *Auricularia*. Merat adhered to *Auricularia* Bull. in a broad sense and

<sup>15</sup>Rogers had to withdraw his opinion that, legally, misapplications cannot be conserved, although he is still opposed to this kind of procedure. Even if *Hirneola* 1848 were a misapplication of *Hirneola* 1825, there is nothing in the Rules to oppose its conservation; several misapplications have already been conserved.

with the exclusion of *Hirneola auricula*.<sup>16</sup> His genus is heterogeneous, but if it would be conceded that the explicit mentioning of "*Auricularia mesenteriformis* de Link." (= *Au. mesenterica*) as the type species of *Auricularia* by Brongniart (in Diet. Sci. nat. 33: 577) in 1824, is acceptable as a valid typification of *Auricularia* Bull, ex Merat (neither Bulliard nor, of course, Merat were cited), this would save the name in the sense striven after in my proposal. This would be the first typification (we know of) and prior to Fries' restriction of Bulliard's generic name to *Stereum* in 1825 (Syst. Orb. veg. 82) ! Merat's publication of the name *Auricularia* Bull, is prior to the first re-publications of *Auricularia* [sensu] Link 1809 by Persoon and Brongniart, both in 1822, which should be considered as only correctly typifiable by *H. auricula*,<sup>17</sup> reason why the proposal was moved. Trusting that the conclusions just outlined will appear acceptable I herewith withdraw the proposal.

ON THE CORRECT NAMES OF SOME SPECIES OF HIRNEOLA.—Anticipating the conservation of *Hirneola* Fr. (1848), the correct name of the well-known *H. polytricha* would appear to be:

*Hirneola nigricans* (Sw. ex Fr.) Donk, *comb. nov.*

*Peziza nigrescens* Sw., Nov. Gen. Sp. PL (Prod.) 150. 1788 (devaluated name). — *Auricularia nigrescens* (Sw.) ex Farl., Bibl. Index 1: 308. 1905 (validly published?). — *Peziza nigricans* Sw., Fl. Ind. occ. 3: 1938. 1806 (devaluated name). — *Peziza nigricans* Sw. ex Fr., Syst. mycol. 2 (1): 81. 1822 [as "*P. nigricans* (Swartzii)"]. — "*Pleziza* • *niffra* Swartz": Fr., Syst. mycol. 2 (1): 81. 1822 (as a synonym). — *Hirneola nigra* Fr. in K. svenska VetenskAkad. Handl. 1848: 147. — *Auricula nigra* (Fr.) O.K., Rev. Gen. PI. 2: 844. 1891 (not validly published<sup>18</sup>). — *Auricularia nigra* (Fr.) Earle in Bull. Torrey bot. Cl. 26: 633. 1899.

<sup>16</sup>"La Flore française de M. Decandolle m'a aussi été d'un très-grand secours; j'ai même suivi, autant que possible, cet ouvrage, afin qu'on puisse s'y retrouver pour des descriptions plus détaillées, ou une synonymie plus étendue. . . . Les meilleurs auteurs m'ont d'ailleurs servi de guide, tels que Bulliard, mon parent . . ."—Merat (p. ii). The genus is called "*Auricularia* Bull. (*Thelephora* Dec.)." (p. 33) and the following remark added: "*Nota*. Nous avons conserve le nom & *Auricularia*, qui est celui qui donne le premier à ce genre par Bulliard, de préférence à celui de *Thelephora*, de Persoon . . ." (p. 36). I am very much indebted to Dr. D. P. Rogers for kindly lending me Merat's booklet.

<sup>17</sup>Explicitly indicated as the type species of *Auricularia* of Link (1809) by Brongniart (in Diet. Sci. nat. 1: 85. 1822) as "*Peziza Auricula* (Bull. T. 427 fig. II)." Brongniart (in 1822) referred *Auricularia* Bull, to the synonymy of *Thelephora* and favoured the other genus "auquel Link a donné depuis ce nom [*Auricularia*]." In this he followed Persoon who already before 1821 (*Traite Champ, comest.* 13. 1818) had indicated the type in precisely the same notation, but without mentioning the author of the name *Auricularia* he applied; the circumscription adopted by Persoon leaves no doubt that his *genus* is the same as the one defined by Link. This evidence supports the thesis that *Auricularia* of Persoon of 1822 cannot be typified by *Au. mesenterica*. It is difficult if not impossible, I believe, to reconstruct Brongniart's indication of a type species in 1822 as binding for *Auricularia* Bull, ex Merat. In 1824 (see above) Brongniart returned to *Auricularia* Bull.

<sup>18</sup>Since the generic name "*Auricula* Batt." was not validly published by O. Kuntze, the combinations with that name are not validly published either.

*Tremella auricula-canis* G. Meyer, Prim. Fl. essequib. 306. 1818 (devaluated name; n.v.). — *Exidia auricula-canis* (G. Meyer) ex Fr., Syst. mycol. 2 (1): 222. 1822.

*Exidia purpurascens* Jungh. in Verh. Bataviasche Genoots. 17 (2): 25. 1838. — *Auricularia purpurascens* (Jungh.) Holterm., Mykol. Unters. Tropen 38. 1898 (as a synonym).

*Exidia hispidula* Berk, in Ann. Mag. nat. Hist. I 3: 396. 1839. — *Hirneola hispidula* (Berk.) Berk. & Br. in J. Linn. Soc. Bot. 14: 76. 1874. — *Auricula hispidula* (Berk.) O.K., Rev. Gen. PI. 2: 844. 1891 (not validly published<sup>18</sup>). — *Auricularia hispidula* (Berk.) Farl., Bibl. Index 1: 307. 1905.

*Exidia polytricha* Mont, in De la Sagra, Hist. Cuba, Bot., PI. cell. 365. 1842 (n.v.). — *Hirneola polytricha* (Mont.) Fr. in K. svenska VetenskAkad. Handl. 1848: 146. — *Auricularia polytricha* (Mont.) Sacc, Misc. mycol. 1 (in Atti Ist. veneto VI 2): 12. 1884. (n.v.). — *Auricula polytricha* (Mont.) O.K., Rev. Gen. PI. 2: 844. 1891 (not validly published<sup>18</sup>).

*Exidia rufa* Berk, in Ann. Mag. nat. Hist. I 10: 384 pi. 12 f. 17. 1842. — *Hirneola rufa* (Berk.) Fr. in K. svenska VetenskAkad. Handl. 1848: 147. — *Auricula rufa* (Berk.) O.K., Rev. Gen. PI. 2: 844. 1891 (not validly published<sup>18</sup>).

HIRNEOLA AURICULA (L. ex Merat) H. Karst.

The establishing of the correct name of the Judas' ear has already been an intricate puzzle for several years, since it was pointed out that Fries' publication of *Exidia auricula-judae* ("L.") ex Fr.<sup>19</sup> in "Systema" [2 (1): 221. 1822] is accompanied by a diagnosis drawn up from an exidia rather than from the true Judas' ear (cf. Donk in Bull. bot. Gdns Buitenz. III 17: 161-162. 1941). As the Rules are interpreted to-day by many mycologists the epithet 'auricula-judae' became transferred to the exidia when Fries committed his error.

Martin (1943) considered *Auricularia auricularis* (S. F. Gray) G. W. Mart, (basinym, *Gyraria auricularis* S. F. Gray) the correct name. Donk (1949: 89), accepted the epithet, but recombined it with *Hirneola*. This latter recombination is untenable in view of the earlier homonym *H. auricularis* Fr. (1848: 148), which was overlooked. Thus, under *Hirneola*, the epithet 'auricularis' cannot be applied to the present fungus either. Even if this were not the case, it seems likely that a still earlier epithet has to be taken up.

The earliest name validly published for this fungus after January 1, 1821 seems to be *Peziza auricula* (L.) ex Merat (Nouv. Fl. Paris, 2e Ed., 26. 1821). It was published in the same year as *Gyraria auricularis*. D. P. Rogers (in Mycologia 43: 378. 1951), who discussed the relative dates of the second edition of Merat's "Flore" and of S. F. Gray's "Arrang-

<sup>19</sup>Fries erred when he cited Linnaeus as the author of *Tremella auricula-judae*. Linnaeus' epithet is 'auricula'; the epithet as used by Fries was coined by Bulliard. Since Fries cited Bulliard for his forma b (without distinguishing an equivalent forma a) it may be concluded that Fries wanted to recombine *Tremella auricula* L.

merit," concluded that "Mérat's work . . . quite certainly antedates Gray." The accompanying diagnosis leaves no doubt about the fungus Mérat described as *Peziza auricula* L.: this is the Judas' ear.

In case (i) it be permissible to typify the name as published by Mérat by the type (or its substitute) of *Tremella auricula* L. (Sp. Pl. 1625. 1753), and (ii) if this type really represents the hirneola under consideration (rather than an exidia), the correct name of the hirneola is either *Hirneola auricula* (L. ex Mérat) H. Karst. or *Auricularia auricula* (L. ex Mérat) Underw., according to the genus in which one wants to place this fungus. In the negative case the situation becomes quite complicated and, in view of the unsatisfactory and incomplete formulation of the Rules, not easy to solve. For the present I resort to the name *H. auricula* without being convinced that it is the correct name, or that the full authors' citation as used is admissible in all its parts. Those who defend the thesis that a name misapplied when validly re-published ought to be typified in its original sense will perhaps continue to regard *H. auricula-judae* as the correct name, the epithet having been published in the starting-point book.

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C. G. C. REINWARDT

# REINWARDTIA

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