

LETTER No. 56.

Report of specimens received since last report. My best thanks are extended to those who have favored me with specimens.

In my printed letter I do not give authorities for names, believing that the binomial should represent a plant name, but in acknowledging the specimens to my correspondents, I give the "authority" in event they desire to use the same. All specimens are acknowledged by personal letter as soon as they come into my hands. Foreign correspondents may send specimens to my English address and they will reach me promptly, although in countries which have direct parcel post arrangements with the United States, it is best to send them by parcel post direct to me. Specimens may be sent to either of the following addresses:

C. G. Lloyd,
224 West Court St.
Cincinnati, Ohio.

C. G. Lloyd,
95 Cole Park Road,
Twickenham, England.

ABBOTT, DR. E. K. California:

Polyporus aduncus. (See Note 228.)—*Calvatia lilacina*.—*Polyporus volvatus*.

AMES, F. H. New York:

Myriadoporus (form).

ARCHER, W. A., New Mexico:

Panus. I do not know any native *Panus* that develops from a sclerotium, but I am not informed on the Agaric subject. I am sure it is not an Eastern species.—*Polyporus texanus*.

BOSTON MYCOLOGICAL CLUB, Massachusetts:

Hydnum septentrionale.—*Polyporus salignus*.—*Porothelium fimbriatum*.—*Hydnum reticulatum*.—*Hydnum velutinum*. (See Note 229.)—*Polyporus hispidus*.—*Polyporus cuticularis*.—*Hydnum Schiedermayeri*.—*Trametes piceina*.—*Polyporus Curtisii*.—*Polystictus versicolor*.—*Lenzites trabea*.—*Polyporus Spraguei*.—*Trametes hispida*.

BRENCKLE, DR. J. F., North Dakota:

Polyporus adustus.—*Lenzites betulina*.—*Polyporus gilvus*.—*Polyporus fumosus*.—*Fomes leucophaeus*.—*Xylaria polymorpha*.—*Polyporus cuticularis*.—*Polystictus hirsutus*.—*Stereum fasciatum*.

BROWN, GEORGE, New Zealand:

Cordyceps Robertsii. (See Note 230.)—*Paurocotylis pila*. (See Note 231.)—*Lycoperdon piriforme*.—*Stereum hirsutum*.

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Polystictus versicolor. Three color forms, pale, bright colored, and dark. The bright colored form is almost smooth and might be held as distinct.

BURKE, DR. R. P., Alabama:

Lycogala epidendrum.

CLELAND, DR. J. B., Australia:

Lachnocladium congesta.—*Polyporus dryadeus*. (See Note 232.)—*Polyporus decipiens*.—*Polystictus cichoriaceus*.—*Polyporus portentosus*.—(See Note 233.)—*Stereum (Hymenochaete) villosa*.—*Stereum illudens*.—*Calvatia Gardneri*.—*Battarrea phalloides*.—*Phellorina Delastrei*.—*Stereum nitidulum*.—*Thelephora dentosa*.—*Thelephora terrestris*.—*Polyporus arcularius*.—*Polyporus gilvus*.—*Stereum membranaceum*.—*Peniophora cinerea*.—*Peniophora crustosa*(?)—*Phlebia strigoso-zonata*.—*Laschia caespitosa*.—*Polystictus elongatus*.

DEARNESS, JOHN, Canada: Collected Vancouver Island.

Odontia? A beautiful thing and no doubt something quite peculiar and curious if its microscopic structure was studied.

Trametes cervina.—*Polyporus crispus*.—*Polystictus Macounii*.—*Stereum varicolor*.

DEARNESS, J., Ontario:

Tremellodon gelatinosum.

EVANS, I. B. Pole, South Africa:

Polyporus rufescens.—*Scleroderma aurantiacum*.—*Stereum hirsutum*.—*Trametes*. Unknown to me and probably unnamed.—*Bovistella aspera*, (Myc. Notes, page 285.) See Note 234.

FORBES, C. N., Hawaii:

Polyporus lignosus.—*Fomes Hawaiensis*.—*Fomes fasciatus*.—*Fomes robustus*.—*Polyporus dryadeus*. (See Note 235.)—*Trametes Persoonii*.—*Polyporus gilvus*.—*Tylostoma Leveilleanum*. (See Note 236.)—*Hydnum rawakense*.

GRIFFITHS, DAVID, Oregon:

Fomes pini.—*Lenzites trabea*.

LATHAM, ROY, New York:

Trametes sepium.—*Polyporus dichrous*.—*Fomes pini*.—*Hydnum imbricatum*.—*Polyporus gilvus*.—*Schizophyllum commune*.—*Polyporus giganteus*.—*Lenzites betulina*.—*Irpex lacteus*.—*Catastoma circumscissum*.—*Polystictus cinnabarinus*.—*Scleroderma verrucosum*.—*Daedalea unicolor*.—*Fomes annosus*(?)—*Poria radula*.—*Collybia velutipes*.—*Irpex tulipifera*.—*Daedalea quercina*.—*Fomes applanatus*.—*Poria pinea*.—*Poria ferruginosa*.—*Stereum complicatum*.—*Fomes rimosus*.—*Hymenochaete corrugata*.—*Panus rudis*.—*Polystictus versicolor*.—*Hydnum ochraceum*.—*Irpex cinnamomeus*.—*Stereum (Hym.) tabacinum*.—*Stereum (Hym.) Curtisii*.—*Dacryomyces stillatus*.—*Leotia lubrica*.—*Trogia crispa*.—*Stereum spadiceum*.

LEEUWEN, DR. VAN., Java.

Fomes (Gan.) australis.—Fomes (Gan.) Koningsbergii.—Polyporus (Gan.) Japonicus.—Polyporus bicolor. This was named from Java=also vulneratus Lévillé from Java.—Polystictus xanthopus.—Polystictus fumigatus.—Polystictus obovatus.—Polystictus occidentalis.—Polyporus spadiceus.—Polystictus affinis.—Stereum (Hymenochaete) tenuissimum.—Lentinus Sajor Caju.—Polystictus elongatus.—Fomes pectinatus.—Hirneola auricula Judae.

MAIRE, R., Algeria:

Specimens mostly from Algeria.

Polyporus giganteus.—Hexagona nitida. (See Note 237.)—Daedalea unicolor.—Polystictus ochraceus.—Polyporus arcularius.—Poria pyropora. (As named).

NELSON, N. T. L., Florida:

Polystictus abietinus.—Polyporus arcularius.—Tremella mesenterica.—“Ozonium aurantium”.—Polystictus biformis.—Polyporus (Gloeoporus) dichrous.—Trametes lactea.—Stereum frustulosum.—Schizophyllum commune.—Merulius Corium.—Trametes hydroides.—Stereum cuneatum.—Hypochnus rubro-cinctus.—Bovistella (unnamed I think).—Polystictus versicolor.—Stereum strumosum. (See Note 238.)—Stereum subpileatum.—Stereum australe.—Stereum lobatum.—Guepinia spathulata.—Fomes marmoratus.—Polystictus sanguineus.—Polyporus lucidus.—Stereum complicatum.—Geaster hygrometricus.—Stereum bicolor.—Bovistella Ohiensis.—Calvatia rubro-flava.—Lenzites betulina.—Stereum (Hymenochaete) tenuissimum.—Merulius incarnatus.—Lentinus strigosus.—Trametes lactea.—Stereum albobadium. (See Note 239.)—Tremella mesenterica.—Lentinus velutinus.—Peniophora purpurea.—Aegerita Webberi.—Polystictus.—Polyporus supinus.—Caeoma pinitorquum.—Stereum fasciatum.—Lenzites saepiaria.—Stereum (Hymenochaete) rubiginosum.—Pyrenomyces, genus unknown to me.—Lenzites striata.—Stereum sericeum.—Trametes rigida, (or Polystictus rigens).—Hirneola auricula Judae.—Polyporus gilvus.—Stereum albobadium.—Hydnum ochraceum.—Rhizopogon rubescens.—Thelephora griseo-zonata.—Polyporus adustus.—Lycoperdon piriforme.—Polyporus rhipidium.—Polystictus pergamenus.—Lentinus strigosus, young.—Xerotus lateritius.—Polystictus Friesii.—Polyporus supinus.

OLESON, O. M., Mississippi:

Phallus gracilis(?)—Polyporus (or Trametes). (See Note 240.)—Polyporus (Gan.) Curtisii.—Polyporus sulphureus.—Polystictus abietinus.—Polystictus versicolor, (pale form).—Poria versipora.—Polystictus hirsutus.—Radulum pallidum.—Irpex pachydon.—Polyporus (Ganodermus) sessilis.—Polyporus gilvus.—Laternea columnata. (See Note 241.)—Polyporus (Ganodermus) Curtisii.—Stereum bicolor.—Fomes igniarius.—Geaster hygrometricus.—Poria punctata.—Polyporus adustus.—Lentinus strigosus.—Bovistella Ohiensis.—Fomes fomentarius.—Thelephora cinereo-grisea.—Scleroderma flavidum.—Lenzites betulina.—Hydnum erinaceum.—Lenzites rhabarbarina.—Stereum complicatum.—Polystictus pergamenus.—Lenzites saepiaria.—Polyporus adustus.—Polystictus sanguineus.—Favolus europaeus.—Polyporus supinus.—Stereum australe(?).

OVERHOLTS, L. O., Missouri:

Fomes Bankeri.—*Polystictus pergamenus*.—*Polyporus leucospongia*. From Tolland, Colorado, Alt. 10,000 feet, on coniferous log.—*Polyporus alboluteus*, (See Note 242.)—*Polyporus varius*.—*Polystictus abietinus*.—*Trametes protracta*.—*Polyporus ursinus*.

OWENS, C. E., Oregon:

Polyporus (*Ganodermus*) *Oregonensis*. Only a "species form" of *Polyporus lucidus*, same in every respect, except more obese and stipe grows in same plane as the pileus. Cfr. Letter 54, Note 221.—*Polyporus corruscans*. (See Note 243).

PARISH, S. B., California:

Polystictus hirsutus.—*Tylostoma albicans*.

PECKOLT, G., Brazil:

Calvatia lilacina.—*Cladoderris dendritica*.

PETCH, PROF. T., Ceylon:

Polyporus anebus.—*Polystictus Blumei*.—*Polyporus semilaccatus*.—*Polyporus ochroleucus*.—*Fomes geotropus*.—*Polyporus sulphureus*.—*Fomes senex*.—*Polystictus perennis*.—*Fomes endotheius*.—*Fomes Sanfordii*.—*Polyporus gilvus*.—*Panus coriaceus*. (See Note 244.)—*Polyporus adustus*.—*Polyporus sideroides*.

ROMEIL, L., Sweden:

Sebacina incrustans.—*Tremellodendron* (?) *contorta*.—*Thelephora spiculosa*. In sense of Fries for me, not Burt.

SPAULDING, PERLEY, Vermont:

Trametes cervina.

TORREND, REV. C., Brazil.

From Brazil: *Fomes endotheius*.—*Fomes pectinatus*.—*Trametes Feei*.—*Stereum* (*Hym.*) *tenuissimum*.—*Polyporus undatus*.—*Polystictus ochraceus*.—*Hirneola polytricha*.—*Hydnum rawakense*.—*Stereum nitidulum*.—*Polyporus Lepreurii*.—*Fomes Niaouli*.—*Lachnocladium compressum*. (As named.)—*Lachnocladium spadiceum*. (As named.)—*Stereum lobatum*.—*Hymenochaete simulans*.—*Cladoderris dendritica*.—*Polystictus gracilis*. (See Note 245.)—*Polyporus fumosus* (?).

From South Africa: *Hirneola auricula Judae*.

From Holland: *Daedalea quercina*.

From Africa: *Polystictus florideus*.

From Isle of Timor: *Polystictus affinis*.—*Hirneola auricula-Judae*.

From Madagascar: *Laschia papulata*. (See Note 246).

UMEMURA, JINTARO, Japan:

Lenzites betulina.—*Polyporus ochroleucus*.—*Stereum hirsutum* (?)—*Polysaccum crassipes*.—*Polysaccum tuberosum*.—*Calvatia Gardneri*.—*Calvatia caelata* (?)—*Polyporus illicicola*.—*Polystictus polydactylis*.—*Calvatia versipora*. (See Note 247.)—*Hydnum melaleucum*.—*Lenzites saepiaria*.—*Stereum spectabile* (?)—*Calvatia rubroflava*.—*Hydnum albidum*.—*Polyporus adustus*.—*Irpex concers*.—*Fomes annosus*.—*Polyporus* (unnamed.)—*Thelephora papillosa*. (See Note 248.)—*Daedalea gibbosa*. (See Note 249.)—*Cordyceps nutans*. (See Note 250).

YASUDA, PROF. A., Japan:

Xylaria hypoxylon.—*Hydnum* (should be renamed). (See Note 251).—*Lycoperdon umbrinum*.—*Polyporus pubetatis*—*Polyporus scaurus*. (See Note 252).

NOTE 228.—*Polyporus aduncus*. Pileus dimidiate, 1 cm. thick, unicolorous, brown. Surface with coarse, brown, hispid hairs. Context brown. Pores small, round, brown. Setae few, large, 8-10 x 60-75 mic. deep colored, with peculiar, hooked points. Spores hyaline, smooth, 4 x 5-6 mic. not guttulate. To the eye the plant resembles *Polyporus cuticularis* from which it differs entirely in microscopic features. The latter are same exactly as the rare *Polyporus leporinus* from which the plant differs in its coarse, strigose surface. It grew on roots of pine tree. The habitat and the specimen in a general way suggest *Polyporus Schweinitzii* which does not have these peculiar setae.

Specimen from E. K. Abbott, Cal.

NOTE 229.—*Hydnum velutinum*, from the Boston Mycological Club, Mass. This is a common plant in our country, discovered by Peck to be a new species and called *Hydnum spongiosipes*. It is also frequent in Southern Europe where it is known as *Hydnum velutinum* ascribed to Fries, although there is no possibility of it being the plant originally described by Fries, nor the figures that Fries cites. We use the name applied to the plant in France though should we cite an authority it would be "French, erroneous traditions."

NOTE 230.—*Cordyceps Robertsii* from George Brown, New Zealand. At the time we wrote our pamphlet on Australian *Cordyceps* we had no specimen, this being the first we have received. The perithecia are brown, easily rubbed off the axis, and measure 225 x 450 mic. The spores are tardily broken into secondary spores, and are mostly entire in the asci. The secondary spores are about $2\frac{1}{2}$ x $2\frac{1}{2}$ mic.

NOTE 231.—*Paurocotylis pila*, from George Brown, New Zealand. This is the second collection we have gotten from Mr. Brown (Compare *Lyc. Australia*, page 42). It is a very ample collection with fine specimens 3-4 cm. in diameter. There has been some doubt of the proper classification of the genus *Paurocotylis*, and it is included in *Lycoperdaceae* in Saccardo. The original figure in *Flora*, New Zealand, is quite inaccurate. The spores are borne not as shown by Berkeley on pedicels but in asci. There is a young specimen in this lot with the spores still all in asci. The ascus is hyaline, and measures 7 x 40 mic. with eight globose spores in a row. The walls of the asci disappear in the ripening of the plant to which no doubt is due the erroneous view that Berkeley had. The plant should be included in *Tuberaceae* but I judge from the specimen they are not hypogaeal.

NOTE 232.—*Polyporus dryadeus*, from Dr. J. B. Cleland, Australia. This grew on *Eucalyptus* and is the first specimen known from Australia. It appears at first to the eye a little different from the European plant, surface with a pale, more pronounced crust but microscopic features agree exactly. There is an indication on the specimen of a mycelial core, a feature only known on the related species, *Polyporus corruscans* in Europe.

NOTE 233.—*Polyporus portentosus*, sent by J. B. Cleland, Australia. I believe this specimen is *portentosus* though it is somewhat doubtful. I have the plant from Geo. K. Hinsby, which agrees exactly with the type at Kew. The tissue of the pores is white, same as the context. In Mr. Cleland's specimen the pores are discolored. The cuticle of the type is thin but distinct. The surface of the Cleland specimen is similar as to color but does not have a distinct cuticle. Spores allantoid, $1\frac{1}{2}$ x 7 in the Cleland specimen. Not found by me in the previous specimens.

NOTE 234.—*Bovistella aspera* (from I. B. Pole Evans, South Africa), (*Myc. Notes*, page 285), *Bovista aspera*, as named by Léveillé. This collection agrees with the original excepting the color of gleba is more olive, due no doubt to being younger, and most of the spores are exactly same, viz. globose, 4-5 mic. smooth, with slender pedicels. There are a few spores however, mixed with the normal ones of a type I never saw before in a puff-ball. They have no slender pedicel, but taper to the base on the order of some *Puccinia* spores. I am at a loss to explain why a few spores should take this aberrant form for it is contrary to our ideas of the way spores are borne on the basidia.

NOTE 235.—*Polyporus dryadeus*. The color of the spores. For a long time I had the impression that *Polyporus dryadeus* had colored spores and kept the specimens on the shelf in the section with colored spores. Then Prof. Long came along and in conversation assured me that the spores were hyaline, and that he had noted the white spore deposits on leaves, etc., in the vicinity of the growing plant. Then I found hyaline spores in my specimens and moved them to the section with white spores. I have just gotten this plant from C. N. Forbes, Hawaii, with abundant pale colored spores, and on re-examining the European material I find while most of the spores are hyaline (probab'y immature) occasionally I note a faint indication of color. I think the truth is they are hyaline when young, but faintly colored when mature.

NOTE 236.—*Tylostoma Leveilleanum*, from C. N. Forbes, Hawaii. Gaudichaud made two voyages around the world, as botanical collector. The first in Uranie 1817-1820 and the (few) fungi were worked up by Persoon and published 1826 in the account of the botany of the voyage. They were the only foreign fungi that Persoon ever published,

The fungi of the second voyage of Gaudichaud in the Bonita 1836-1837, were distributed (unnamed) by Gaudichaud and I have found them in three museums; viz. at Paris, at the British Museum and in Delessert's herbarium at Geneva. *Tylostoma Leveilleanum* from Hawaii is found in all three of the museums, and all unnamed by Gaudichaud. L  veill   found the specimens unnamed (or rather named simply as "fungus" by Gaudichaud) in the museum at Paris and had the nerve to publish it as *Tylostoma Leveilleanum* and misrepresent that it was named by Gaudichaud. It is an example of the little tricks to which so called "scientists" will stoop to gain a little notoriety, and feed their egotism. And "science" in eiting the name stands for this fraud to this day. These three collections (all same) made in Hawaii about eighty years ago are all that I have found in the museums. It has never been collected in any other country and never re-collected until this lot from Mr. Forbes.

NOTE 237.—*Hexagona nitida*, from R. Maire, Algeria. Fine specimens and the only ones I have ever received. I believe Prof. Maire is the only one who has collected it in recent years. He finds it in Northern Algeria on the live oak, *Quercus Ilex*, and the species is only known from the Mediterranean region and on this host. It is found in most museums of Europe as *Hexagona Mori*, having been distributed years ago by Marcucci under this mislabel. When young the plant has a smooth, polished crust, but Prof. Maire sends also a very old specimen with a rough rimose crust and the pores all filled in with tissue. The hymenial elements are hyaline, and there are no cystidia. I do not find spores. It is needless to say we are very glad to get this rare plant in our museum.

NOTE 238.—*Stereum strumosum*, received from N. L. T. Nelson, Florida. This was originally from Mexico, and a little piece of the type is at Kew, also from Cuba at Kew (Wright 411) but as far as I know this is the first collection from Florida. It is a resupinate, bright yellow species, forming little patches like *S. frustulosum*.

NOTE 239.—*Stereum albebadium*, from N. L. T. Nelson, Florida. With a narrow, reflexed, plicate margin. It is a common plant around Cincinnati, but usually entirely resupinate. I have collected these pliate forms in Florida however, and think they are more frequent in the South.

NOTE 240.—*Polyporus* (or *Trametes*). From O. M. Oleson, Biloxi, Miss. I judge it is unnamed. It has a peculiar, truncated, globose hyaline, spore about 7-8 mic. *Fomes Ohiensis* is the only other plant we have with a similar spore and this cannot be resupinate of that. To the eye the pore tissue color is much like *Fomes connatus*. Underwood proposed a species *Polyporus Meliae* (cfr. *Fomes* Syn. p. 283) in this region and I should want to compare it with that.

NOTE 241.—*Laternea columnata*, sent by O. M. Oleson, Biloxi, Miss. A teratologic specimen having the arms not united at the apices as usual, but united to a ring at the top, resembling to some extent a *Clathrus*. It is the first abnormal specimen of this species we have noted, and in former days would have been eagerly described as a "new species."

NOTE 242.—*Polyporus alboluteus*, from L. O. Overholts. Mr. Overholts writes: "This beautiful plant is certainly a fine species when in fresh condition, and is extremely common in Colorado at altitudes ranging from 10,000 to 11,000 feet. It is at this altitude that the heavy Englemann spruce forests are found, and many of the old logs have the fungus growing on them. I have seen it effused for several feet along the under side of such a log and its bright color makes a very attractive fungus. It is almost entirely resupinate and is very soft to the touch when growing." There is but one collection known of this species from our Eastern States, viz. Adirondack Mountains, Peck, (cfr. *Myc. Notes*, p. 379). What a pity this fine species was so bunglingly named!

Since above was written we have a scanty collection of the plant collected by Dr. Kauffman in Michigan.

NOTE 243.—*Polyporus corruscans*?, sent by C. E. Owens, Oregon, = *Polyporus Friesii*, Bres. = *Polyporus dryophilus* Berkeley (cfr. Note 149). While I am confident this is an old, indurated specimen of *Polyporus corruscans* there is an element of doubt about it. I have gone through all my specimens from Europe and the United States and found none with the clear (chestnut) context color. They are all more yellow. Also this has not the "mycelial core" characteristic of *Polyporus corruscans* but that may be from it not being an entire specimen. The inner surface and hard context indicate this is an "old" timer, but it is not a *Fomes*. There are no annual layers.

NOTE 244.—*Panus coriaceus*, from Prof. T. Petch, Ceylon, "=*Panus Berkeleyi* Sacc. Vol. 5, p. 628. Compared at Kew.—T. Petch." I have never worked over the *Panus* at Kew. I have this same plant however, recently from Philippines labeled "*Elmeria cladophora*" supposed to be same as *Hexagona cladophora*. If that is true "*Elmeria coriacea* Berkeley McGinty" is prior. If the genus *Elmeria* was based on this species alone, I should be in favor of maintaining it, for it must be admitted it is not a good "*Panus*" nor a good "*Hexagona*." But to include in the genus, *Hexagona alba* and *Polystictus setulosus* because they have multicelled hairs on the hymenium is for me making an artificial genus in which *Fomes connatus* and *Poria nitida* could be included on this same character.

NOTE 245.—*Polystictus gracilis*, from Rev. C. Torrend, Bahia, Brazil. This is the second collection we have received from Father Torrend (Nos. 42 and 89). We are in considerable doubt in referring it to *Polystictus gracilis* which Berkeley classed as *Hexagona* and Patouillard classed as *Amaurodermus*. These specimens are correctly classed as neither, but should form a section in *Lentus* (46 d) with brown context. (All the species in 46c have pale or white context). *Polystictus gracilis* has heretofore been

known only from the old collection of Spruce, all specimens of which have pleuropodial stems. Both of Rev. Torrend's collections have mesopodial stems and thinner context. Hence it is not sure that they are the same species, but considering that they came from same region and have same stems, and same pores, and same context I believe this is where it should be referred. I find spores globose, hyaline, smooth, 8 mic. in one of Rev. Torrend's specimens (smaller 4-5 mic. in the other). I have hunted often for spores but never found them in the Spruce collection. I classed *Polysticus gracilis* (with doubt) in section *Amaurodermus*, but if these specimens are correct that classification was a mistake.

NOTE 246.—*Laschia, papulata*, from Rev. C. Torrend, Madagascar. *Laschia* is a tropical polyporoid genus with gelatinous tissue. They are mostly small and we get very few collections for the usual collector does not see these things. Ninety different species have been named but I doubt if there are more than a dozen or twenty good ones. Of 24 collections that reached Hennings, he discovered 21 to be "new species."

Laschia papulata came to Montagne originally from Chili and I think it was the first foreign true *Laschia* to be named (the original *Laschia delicata* not being a *Laschia* in the present sense). Montagne published it as *Favolus pusillus* (afterwards corrected it) and both Montagne and Berkeley at first mistook *Laschia* of the present day to be *Favolus* of Fries and named their first species in accordance. The microscopic characters are not recorded for the early species named, and the material preserved in the museums is so scanty one does not wish to cut it. Hence I am most glad to get *Laschias* in order to study them in section.

Laschia papulata is a small species, varying from 2-6 mm. Stipe lateral, slender. Color white, drying pale flesh. Surface pustulate with the translucent pores. Surface cells large, not muricate, deep colored. Hymenium cells (cystidia?) obovate, deep colored, 12 x 30. Basidia club shaped, forming a palisade layer. Spores hyaline, smooth, subglobose, 8 x 10 mic. with granular contents.

The following plants according to my photographs and notes of the types, agree in the main macroscopic features with *Laschia papulata*. Whether they differ or not in microscopic characters I cannot say.

Laschia brasiliensis, Brazil, described as pellucid yellow, spores not given. Seems same as *papulata* to me.

Laschia Selloana, Brazil, surely same as above.

Laschia Volkersii, Africa, described as citrine, spores "luteolus" elliptical, 6-7 x 10-11.

Laschia tonkinensis, China, white, spores subglobose, 8-10 x 10-12.

All the above are probably the same species. Rev. Torrend's specimen from Africa is no doubt *Laschia Volkersii* but probably also, *Laschia papulata*. No dependence whatever can be placed on Henning's microscopic records, and as to "new species" everything was "new" that reached him.



Fig. 707. *Calvatia versipora*. Photograph from Prof. J. Umemura.

NOTE 247.—*Calvatia versipora*, (Fig. 707). Globose, two to three inches in diameter, growing caespitose on a dead tree. Peridium white, smooth, or faintly pubescent, breaking irregularly in dehiscence. Sterile base none. Gleba pale isabelline color, friable, powdery, with no indication to the eye of capillitium. Spores varying much in shape and size, globose, elliptical, piriform, etc. 8 to 12 mic. in diameter, smooth, with granular contents, very pale colored. Capillitium indefinite, scanty, represented by irregular shreds of tissue rather than the usual, definite threads. If we had any way of knowing the early structure of this plant, I opine it would be found to have little resemblance to that of *Calvatia*. The absence of true capillitium and the pulverulent nature of gleba remove it from all *Calvatias*. Some of the spores appear to me to have two apiculi, one at each end, but I am not sure of it, and if it is true we cannot explain it by the usual supposed basidial origin of all "puff ball" spores. There is something mysterious about it.

Specimen from J. Umemura, Japan, (No. 131) on dead tree. I reproduce Mr. Umemura's collection notes as follows:—

大正三年秋
八事山?
例、小沢村、二十全一?

NOTE 248.—*Thelephora papillosa*, from J. Umemura, Japan. This is the second specimen I have received from Japan. It was named in Letter 54, Note 222. Mr. Umemura sends a perfect specimen and a photograph (fig. 707) showing its manner of growth. It is imbricate, rosetted from a short, central stem. In its manner of growth it resembles *Thelephora vialis* of this country. This specimen accords with the type in the permanent papillate hymenium.

NOTE 249.—*Daedalea gibbosa*, from J. Umemura, Japan. Called *Trametes* in Fries' Hym. Europe but always a good *Daedalea*, never a *Trametes* for me. It occurs in Europe, Philippines, Japan, but is absent from the United States. This is the second European species that has come to my notice that occurs in Japan but not in the United States. The other species is *Trametes odorata*.

NOTE 250.—*Cordyceps nutans*, from J. Umemura, Japan. We are particularly pleased to get this specimen for we have seen none in any museum in Europe. It was originally well described and figured in Bull. Myc. France, 1887, page 127. It came from Japan, and we believe is only heretofore known from the original. It is peculiar in several things. It is the only *Cordyceps* recorded on a Heteroptera or "True Bug" as entomologists designate them. The insect belongs to the Pentatomidae, I am advised by Prof. Osborn, but does not appear in list of Japanese Hemiptera published by Uhler. Mr. Umemura sends a colored figure (fig. 709) which shows the club erect, not "nodding" as its name would indicate. He sends two specimens and two figures and all four show a branching stem as shown in the figure. Whether this represents another club that has been broken off or a sterile branch I cannot say. The stem is black, but the club and upper portion of the stem is orange rather than "violet" as originally described. As the material is scanty I do not wish to cut the specimen. The secondary spores were described as $1-1\frac{1}{2} \times 10-15$ mic. which are unusually long. We hope our Japanese friends who find this will send us more ample material, as we should like to examine it under the microscope, and should also like an explanation of that branching stem.

NOTE 251.—*Hydnum*, sent by Prof. A. Yasuda, Japan. It is quite close in coloration and texture, also spores to *Hydnum aurantiacum* of Europe. It is the same as *Hydnum conigenum* as named by Peck, which was based on a single specimen growing (no doubt accidental) on a pine cone and misnamed in consequence. I think these names based on mistakes should have no validity, and were I publishing the Japanese plant I would give it a suitable name.

NOTE 252.—*Polyporus scaurus*, from Prof. A. Yasuda, Japan. A fine specimen from which we are enabled to draw a better description than from previous sendings. (Cfr. Note 63, Letter 44). Stipe thick, irregular, 3-4 cm. thick, with hard, woody, brown context and minutely velutinate surface. Usually pleuropodial, often deformed. Pileus 10-12 cm. with rugolose, zonate, minutely pubescent, brown surface. Context thin, 3-8 mm. dark brown, hard, zonate, Hyphae deep colored. Pores minute, brown, with concolorous mouths. Setae none. Spores elliptical, $3-4 \times 5-8$ hyaline, smooth. This is the fourth collection we have received from Prof. A. Yasuda. It is close to *Polyporus Cummingii* and should be entered in Section 36 (*Pelloporus*).

NOTE 253.—*Polyporus Patouillardii* in the East. This species came from Brazil and was only recently named by Rev. Rick. It is beginning to show up in the East. I have specimens from E. Yamada, Japan, and have just gotten it from Philippines under the mss. name *Trametes fusco-badius*. (Why *Trametes*, I cannot say.) On comparison I am quite sure now that the Japanese plant, the Philippine plant and the Brazilian plant are all the same thing.

NOTE 254.—*Polyporus Henningsii* in Brazil. We received some time ago from Rev. Rick, a fine specimen that to the eye looks like *Polyporus lucidus*, but growing in the earth, apparently from a rhizome which *lucidus* does not. It was labeled "formissimus = renidens." I considered it Note 90, Letter 47, as being *renidens* which I included in section 66 of *Amaurodermus* in my *Stipitate Polyporoids* and suggested that the species should be moved to the section *Ganodermus*. On my last trip to Berlin I brought home a type fragment of *Polyporus renidens*, and on examining the spores I find them as described in the pamphlet "globose, 7-8 mic. rough," and I believe now the plant is correctly classed in our *Stipitate Polyporoids*. The spores of Rev. Rick's plant were essentially different, piriform, with distinct, hyaline apicuff (typical *Ganodermus*) 10-12 mic. large, and distinctly rough. In looking over the description in Section 3 (*Ganodermus*) where Rev. Rick's plant belongs, I find it exactly same in all characters as *Polyporus Henningsii* except that it is pleuropodial and *Polyporus Henningsii* is mesopodial. On this difference I would not

base a species in this section, for while stipe insertion is generally uniform in a species, I know cases of *Polyporus lucidus*, usually pleurospodial, with mesopodial stipes, and I have a collection of *Polyporus auriscalpium* with both stem insertions in specimens of same collections. I should therefore consider Rev. Rick's plant as a pleurospodial specimen of *Polyporus Henningsii* of Africa.

NOTE 255.—**The spores of *Fomes graveolens*.** It was to be expected that Murrill would find *Fomes graveolens* to be a "new genus" and hence there was no necessity for this purpose to further invent that it had "globose, ferruginous spores." I have never found the spores although Overholts writes me that in a specimen he has recently gotten the spores are abundant. "They are cylindrical, hyaline and measure 9-10 x 2½-3½ mic. They are very abundant in the sections, attached to the basidia, so there was no possibility of getting them wrong."

Now that this fairy story about the colored spores of *Fomes graveolens* has been interned, I think there is another delusion regarding it that should be investigated by some one who has an opportunity to watch its development. It has always passed unquestionably as a *Fomes*, but I have an idea it is a *Polyporus* and it is developed from a "mycelial core" in the same manner as *Polyporus corruscans*. My first impression regarding *Fomes graveolens* was that it was a plant of very slow growth, persisting for years, but since the nature of the "mycelial core" of *Polyporus corruscans* has been shown, I expect it will be found that instead of being of slow growth, *Fomes graveolens* is of very rapid growth as is *Polyporus corruscans*. *Polyporus corruscans* becomes hard and indurated in its later stages and has been taken for a *Fomes*. In fact it is one of the six different plants that have been called "*Fomes fulvus*, Scop."

In a subsequent letter Mr. Overholts writes me that he has observed the fruiting bodies of *Fomes graveolens* persisting for three seasons, hence it must be a perennial, but its manner of growth is as much a mystery as ever. Certainly it does not increase by addition of pore layers as most *Fomes* do, and I cannot understand how it can grow by enlargement of the core without disarranging the pileoli.

NOTE 256.—***Polyporus (Amaurodermus) costatus*.** Pileus mesopodial, 8 cm. broad, 2-3 cm. thick. Surface dull, reddish brown, slightly laccate. Stipe slender, with smooth, laccate surface, hollow, with pale isabelline context. Pileus context very scanty, the pores reaching the crust. Pores medium small, ½ mm. with thin walls, 3 cm. long, pore tissue pale buckthorn brown. Spores (fig. 710) most peculiar, globose or slightly elongated 12 mic. with longitudinal ribs, which are connected by a few smaller transverse ribs.

This was received from the Philippines, No. 20289, collected Prov. Neuva Viscaya, Luzon by R. C. McGregor. It was labeled *Gandodermis renidens*, which is a very different species of Brazil. Polypores characterized by peculiar spores are rare. We only know three species and each of them is known from a single collection, viz. *Polyporus Lloydii* Africa, *Polyporus longipes*, South America, and this from Philippines.

At our request Miss E. M. Wakefield at Kew has prepared the accompanying figure and notes on the spores:

"The spores are very curious. I enclose a sketch in which I have endeavored to give my idea of them, but they are most difficult to draw properly. The thickening appears to me to be chiefly in the form of ribs running the long way of the spore, which is somewhat lemon-shaped. These longitudinal ribs are connected here and there by small transverse ones so as to form a net work. Thus if you look down on the spore end-wise, you see the ribs radiating out from the center, as I have shown in one figure, and at the margin a series of hyaline blocks, due to the transverse bands which are seen at various levels connecting the ribs. Seen from the side, the long ribs appear running from end to end, and owing to the roundness of the spore, the center and sides are not in focus at the same time, so that you may only have the central bands clear and the spore would appear keeled. I have also drawn one other view which shows both end and sides—the spore being half turned over."

NOTE 257.—***Isaria atypicola*.** Regarding *Isaria* unnamed in Letter 54, Note 223, we have received advice from Prof. Yasuda, as follows.—

"I will propose the name *Isaria atypicola* as it is a new species, taking *Atypus* the host as its specific name. I will publish this name in the Botanical Magazine at Tokyo of next month.

Isaria atypicola grows on *Atypus Karschi* Doenitz, which makes a long tube under the ground. The spider lives at the bottom of a tube. At first *Isaria* attacks the living *Atypus*, which falls sick and soon dies. After the death of the animal, the mycelium of *Isaria* reaches to its perfect development, growing as well on the inner side as on the outer side of the host. At last the mycelium envelops the animal body like a white down, and then produces a club-shaped stroma, which projects its top 1 cm. or more from the mouth of the tube. The upper part of the stroma is light purple, and shows a velvety appearance, bearing many cylindrical conidia."

There probably occurs in Japan a *Cordyceps* corresponding to this *Isaria* form. We trust our Japanese friends will look out for it. It is rather unusual that the *Isaria* form of a species should be known and the *Cordyceps* form unknown, for it is usually the other way.

NOTE 258.—***Laschia auriscalpium*.** A tiny, little species with pileus about 1 mm. in diameter and slender hair like stem, 3 mm. long. The pileus surface and stem brown, large, ovate, deeply colored cellular glands which give the plant the color. There are no crested hyaline cells. Spores 5 x 8 ovate. Basidia hyaline, 8 x 20.

I am pleased to get this little species from Rev. Torrend, Brazil, for examination and photograph (Fig. 711). The material in the museums of Europe is so scanty I never dared to cut it. Our figure is enlarged six diameters which shows graphically how small the plant is in natural size. *Laschia rubra* (type at Belin) is for me a synonym.

NOTE 259.—*Laschia Gaillardii*. Pileus very small, 1-1½ mic. sessile, appearing resupinate but really attached by a point. When soaked pale yellow, surface with deeply colored cellular glands, also peculiar hyaline, cellular hairs 8 x 40, the surface beautifully crested. I have a suspicion that *Laschia Gaillardii* is same plant as *Laschia pezizoidea*. It looks same to the eye, and came from same region, but material of the latter is so scanty I never sectioned it.

NOTE 260.—*Changes at Kew*. Information has been received that Professor Massee having reached the age limit, has been retired from the position of First Assistant at Kew. I am also informed that Mr. A. D. Cotton has been promoted to the grade of First Assistant and is engaged in pathological work in the laboratory and that Miss E. M. Wakefield is in charge of the taxonomic work in the herbarium. Having a very close acquaintance with Mr. Cotton and Miss Wakefield, I am gratified that these departments have been placed in their charge. They both impress me as being workers of rare ability and thoroughness and the Directors of Kew can be congratulated in having the mycological departments in such good hands.

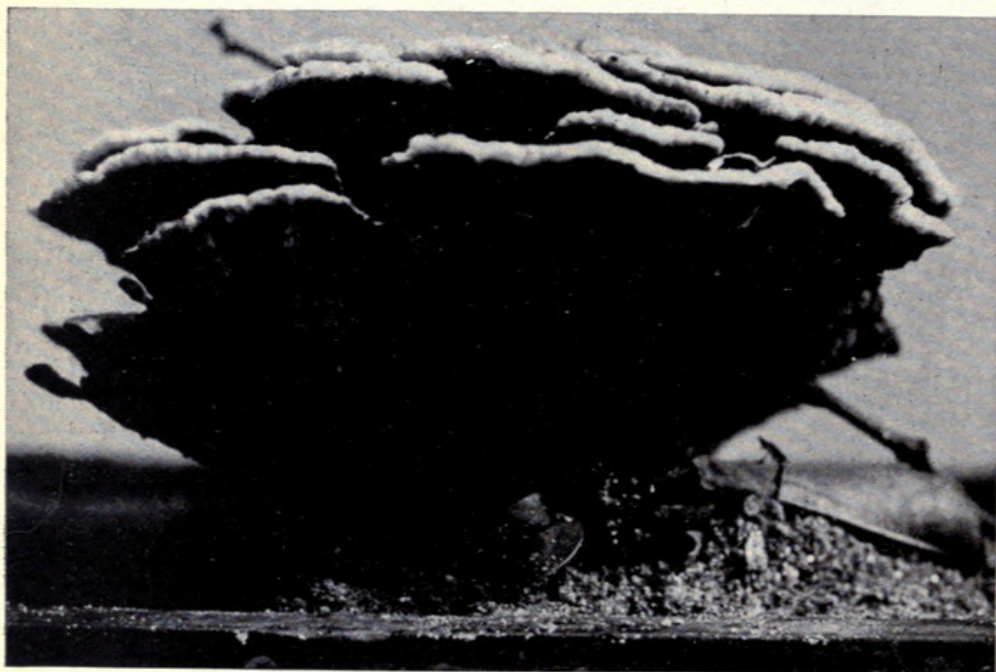


Fig. 708. *Thelephora papillosa* (Note 222 and 248).
Photograph from Prof. J. Umemura.

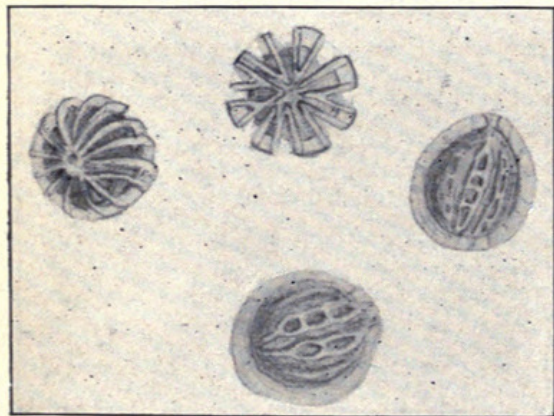


Fig. 710. Spores of *Polyporus costatus*.
Drawing by E. M. Wakefield.

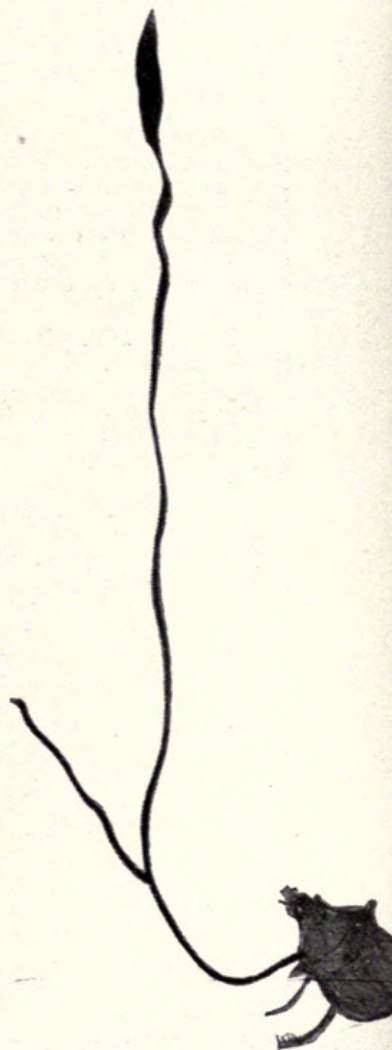


Fig. 709.
Cordyceps nutans (Note 25).

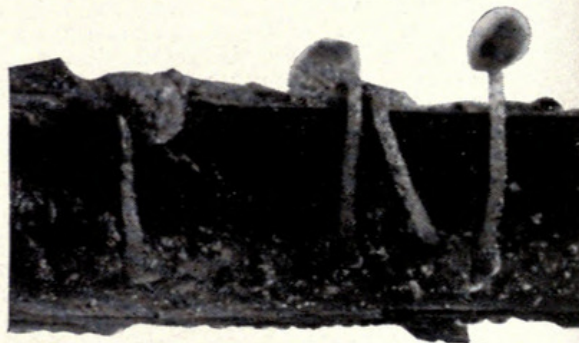


Fig. 711. *Laschia auriscalpum*.
(X 6). (Note 258).

ADDENDUM.

(Crowded out of the Stipitate Stereums.

THE GENUS MYCOBONIA.

This is a Thelephoraceous genus that has been confused with the Hydnaceæ. The hymenium borne on the lower surface has, under a lens, minute teeth-like projections, which consist of bundles of sterile hyphæ. (Fig. 713.) These "teeth"

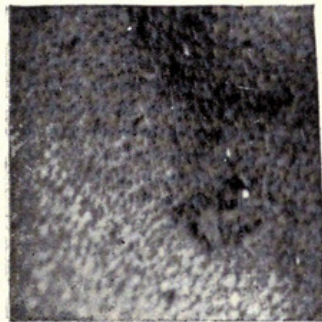


Fig. 712.

Fig. 712 hymenium surface enlarged. Fig. 713 hymenium magnified. (Cut from Eng. & Prantl.)

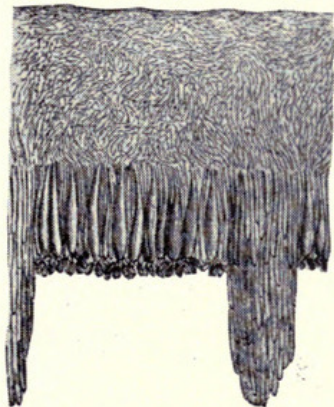


Fig. 713.

led Berkeley to class the plant in the genus *Hydnum*—an obvious error, as all Hydnaceæ have the basidia and spores borne on the teeth. At the time Berkeley so referred it he questioned the reference. Spegazzini was the first to note that the teeth were sterile, and suggested putting it in *Hymenochaete* (Cfr. Sacc., 9, 211); but the "teeth" have no resemblance or analogy to the setæ of the section *Hymenochaete*. Then Patouillard discovered that it was a "new genus," and called it *Bonia*, afterwards, when this was found to be preoccupied, changed to *Mycobonia*. It is

probably best classed as a section of *Stereum*. Recently an American (Mr. Banker), engaged in juggling the Hydnaceæ, also proposed for it a "nov. gen." "*Grandiniodes*" in blissful innocence, first, that the plant does not even belong to the general class of plants that he was engaged in juggling, and that had he known the elementary, essential characters of a hydnaceous plant he would have known he had nothing to do with this. And, second, had there been any occasion to call it a "gen. nov.," the same thing had been done twice before, and a genus based on the *same species* ("*Hydnum*" *flavum*).

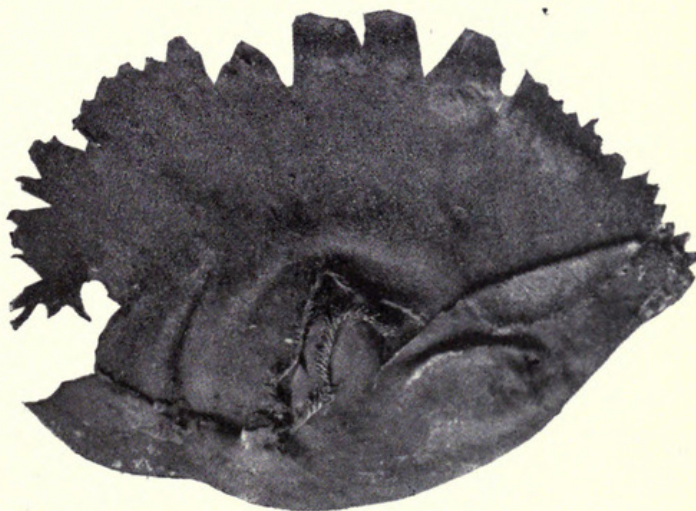
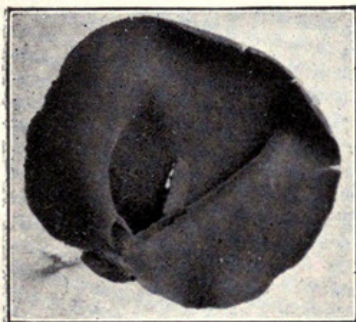


Fig. 714.

Mycobonia flava.

MYCOBONIA FLAVA (Fig. 714).—Pileus glabrous, sessile, attached by a reduced base or rarely with a short lateral stipe. Color of dried plant, pale yellow when fresh. The old museum specimens are reddish brown, under surface, paler yellowish brown. Hymenium

covered with minute teeth (Fig. 712) visible to the eye, which the microscope shows are bundles of sterile hyphæ, the base of the bundles imbedded in the hymenium (Fig. 713).

This is not a rare plant in tropical America, and one of the first foreign species to reach Europe, having been labeled *Peziza flava* by Swartz, from Jamaica, over a hundred years ago. It has been found by Langlois in Southern United States, and I have recently collected it in Florida.

SYNONYMS.—Originally named *Peziza flava* by Swartz, it was changed to *Hydnum flavum* by Berkeley, who also called a pale form of it from Brazil, *Hydnum brunneoleucum*.



Fig. 715.
Hydnum reticulatum. (Letter 54, Note 224).

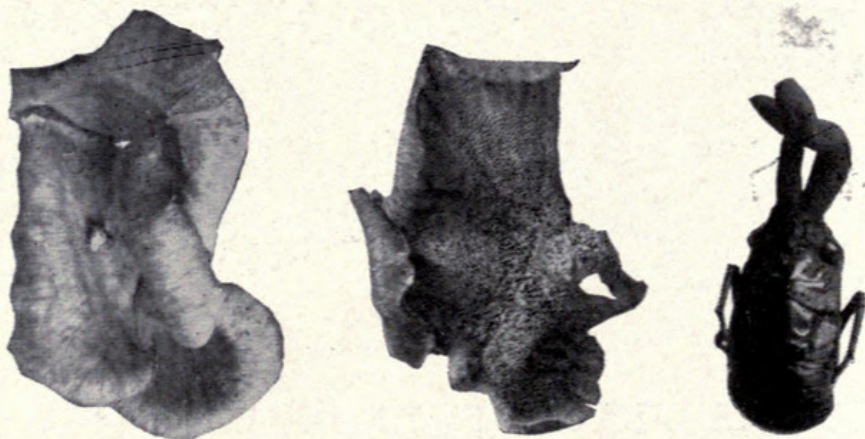


Fig. 716.
Polyporus Mikawai.
(Note 214, Letter 54).

Fig. 717.
Cordyceps sobolifera.
(Note 167, Letter 53.)



Lloyd, C. G. 1898. "Letter No. 56." *Mycological writings of C. G. Lloyd* 4, 1–12.

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