

INDEX
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C. G. LLOYD

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ARRANGEMENT

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(Please correct pages 593 to 953.)

CORRECTIONS

Thamnomycetes Chamissonis, page 907, was figured by Ehrenberg, not Chamisso.

A number of typographical errors occurred, particularly in the last issue (65), which was typed by a "new girl" not familiar with the work. Thus *Xylaria* "pores," page 1030, should be spores. It is not necessary to list them as they are very evident.

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List of Mycological Writings of Curtis G. Lloyd

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A compilation of the Volvae of the United States, 1898.
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The above publications comprise those that have been issued to date. We can not supply sets of back numbers, but are often able to furnish a few missing numbers to complete sets.

C. G. LLOYD,
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MYCOLOGICAL NOTES

BY C. G. LLOYD

No. 61

CINCINNATI, OHIO.

OCTOBER, 1919.

The appearance of this publication in mimeographed form is due to the High Cost of Printing. In order to meet the arbitrary and unreasonable demands of organized labor the price of printing has advanced until it has become prohibitive for a publication of this kind. In future we shall therefore issue as mimeographed sheets at about one quarter the cost and in a manner more effective and convenient than to bother with printers. The illustrations will be printed as plates and sixteen plates will accompany each number of the publication.

The separate sheets may not be as convenient for our readers as a bound pamphlet, but their more rapid production will complete volumes more frequently and they may then be bound and be just as convenient for permanent use.

GYROMITRA ESCULENTA, FROM W. A. SCARFE, NEW ZEALAND (Fig. 1497).— We present a figure of this plant from New Zealand, not because of its rarity nor (since Boudier's beautiful plate) that there is any need to further figure it. We wish to show a successful way Mr. Scarfe has of sending such things, for the specimen was photographed just as received, as plump and characteristic as if just collected. Mr. Scarfe simply wraps his specimens in cotton moistened with formalin. This is much better than to send them in liquid which softens them and gets them all out of shape. We believe fresh phalloids could be sent in this way successfully. We hope some of our Australian friends will try sending in this way *Pseudocolus Rothii*, *Colus hiruquinus* and particularly *Clathrus pusillus*, which are the three well authenticated Australian phalloids that have never been photographed as far as I know.

Plants of a soft, fleshy nature, such as *Morchellas*, *Helvellas*, *Phalloids*, *Pezizas*, may be successfully sent in this manner. Most fungi, however, such as *Polypores*, *Hydnus* and even *Tremellas*, make more satisfactory specimens if simply dried.

As a general rule it is better to dry specimens than to send in formalin. And if one wishes to use the formalin it is preferable to simply wrap the specimens in cotton moistened with formalin rather than to send in liquid.

POLYSTICTUS ACULEIFER, FROM REV. J. RICK, BRAZIL (Fig. 1498).— This is a frequent species in the American tropics and abundant collections are in the New York Garden. We have only gotten it scantily from our correspondents. It is unusual. The pores are large, pale, 2-3 mm. long, with thin, flaccid development, but it

bears on the pileus rigid, reddish-brown tufts of seta-like spreading hairs. These hairs have been likened to *Ozonium*, but I think are of similar appearance to those of *Trametes hydnoidea*. Miss Wakefield has noted that they bear conidial spores. They are therefore spore-bearing organs rather than true hairs. We know of no similar case.

Berkeley named this from Cuba in 1873 as *Trametes aculeifera*. Spegazzini first called it *Daedalea Trametes*, then after a few years he changed his mind and called it *Trametes Daedalea*. To my mind it is neither. It is a *Polystictus*. Rev. Rick sent me a resupinate specimen (without pileate hairs) some years ago, and I have seen it in his exsiccatae, but I never associated it with the Cuban plant until the receipt of this specimen. Patouillard has published that *Polystictus Hariotianus* is the same as *Polystictus aculeifer*. When I saw it at Paris I made a note that it was *Polystictus versatilis*, but from the description I now think I was wrong.

POLYPORUS (AMAURODERMUS) SUBRENATUS, FROM REV. J. RICK, BRAZIL (Fig. 1499).— We have considered a number of "*Amaurodermus*" in the past, usually as "new species", for it seems to us that Nature rarely makes two *Amaurodermus* alike. This, however, we are happy to say is not a new species. It was named by Murrill and is the first collection we have received. The spores are the most characteristic feature of most *Amaurodermus*, and in this are globose, pale, 12 mic. and appear rough. In reality they are finely reticulate. The color of the moist plant is rich chestnut brown, but it fades out when dried. The stipe is darker, almost black when moist. Since we wrote our *Stipitate Polyporoids* the known species have almost doubled. We should like to monograph this fascinating section, but to make a success of it we must first learn to successfully microphotograph spores, and that we have never been able to do. *Polyporus subrenatus* is very similar to *Polyporus auriscalpium* excepting in the spore character.

HYDNUM PERGANENEUM, FROM PROFESSOR A. YASUDA, JAPAN (Fig. 1500).— Pileus pure white, thin as parchment paper, rigid when dry, attached (it appears) by a reduced base. Surface pure white, glabrous, wrinkled in drying. Teeth slender, flaccid, slightly discolored but almost white. Cystidia none. Spores small, cylindrical, 2 X 5-6, hyaline, smooth.

The comparison to a piece of parchment paper is not inapt. We never noted a similar *Hydnum*. The slender teeth have no tendency to turn red in drying as they do in related species.

HYDNUM SPATHULATUM, FROM Dr. CH. BERNARD, JAVA (Fig. 1501).— Considering how common the genus *Hydnum* is in the temperate regions it is surprising how few of them come in from the tropics.

Pileus petaloid with a short, lateral, rooting stipe. Texture cartilaginous. Surface smooth, dark brown. Context thin, brown. Teeth short, drying almost black. Spores irregular, globose, 6-7 mic., hyaline, strongly tubercular.

The name jugglers will have to invent a new genus for this plant for it belongs to none of their "established genera". It is analagous to "Phellodon" but the stipes are not "mesopodous".

LENZITES ALBOLUTEA, FROM DR. CH. BERNARD, JAVA (Fig.1502).-- Pileus surface white (or a little greyish) smooth, hard, polished. Context pure white, soft, stuppeus. Gills yellowish, contrasting with the white context, thin, close, rigid, somewhat daedaloid. Hymenial surface pubescent with projecting hyphae, not specialized. Spores and basidia not found by me.

The contrast of white context and yellowish gills is found also in Lenzites Beckleri (Myc. Notes, page 295) which differs in having broad, distant gills as does Lenzites nivea or platyphylla as it has been called from Java. The latter on account of the thin context and distinct gills hardly suggests the plant.

POLYPORUS ELATINUS, FROM DR. CH. BERNARD, JAVA (Fig.1503).-- Lower, the type at Kew, upper specimens from Dr. Bernard).-- We only knew this species from our notes on the type at Kew and our description given on page 295 of Apus Polyporus. Dr. Bernard's specimens agree in characters, in every character excepting the shape and spores. The shape may have been caused by these specimens growing on the under side of the host, and as to spores, while we do not find the large, 6-7 mic. spores of the type, there are abundant, small, globose, hyaline spores, about 4 mic. and the same as we found in the type. The features of the species are the reddish brown color of the surface, the white context and pore tissue and dark pore mouths. If this is not exactly the same as Berkeley named from India, it is very close.

MUTINUS SIMPLEX, FROM MISS A. V. DUTHIE, SOUTH AFRICA (Fig. 1504).-- It is difficult to point our characters to distinguish the species of Mutinus, but there are two types. In one the gleba-bearing portion is strongly distinct from the stem and the cells much smaller. In the other section the gleba portion is not distinct and the cells uniform in size. Mutinus simplex belongs to the latter section, and the only other known species is Mutinus elegans of the United States, which is of a different shape as shown in our Fig.24, Phalloid Synopsis, page 29. In addition the cells of the stem in Mutinus elegans are many of them open. In Mutinus simplex (Fig. 1504) they are all closed. There were no color notes accompanying the specimen which was sent in alcohol, but we presume it was red as all known species are. Our figure will tell all the remainder of the story.

PHALLOID EGGS

Miss A. V. Duthie, South Africa, sends some phalloid eggs in alcohol which reached me in perfect condition. (Fig.1506). They are a Mutinus, probably Mutinus simplex, a mature specimen of which she also sends. The gleba of a young phalloid is cellular, the cavities visible under a hand glass. Our figure (Fig. 1505 enlarged sixfold) will show them. The basidia are readily seen under the

microscope. They do not form a palisade layer but are irregularly borne on the ends of the hyphae. The spores, usually five or six on each basidia, are sessile. They are quite well represented in Thaxter's drawing of *Phallo-gaster*, reproduced, page 308, Engler and Prantl.

POLYSTICTUS MICROLOMA, FROM OTTO A. REINKING, PHILIPPINES (Fig. 1507).— This species is distinguished by its dark color but these are unusually dark, the surface almost jet black, the pores pure white with a slightly creamy tinge. The species runs into *Polystictus affinis* which only differs in being of a lighter color. We have a collection from Madagascar of which part could be called *Polystictus microloma* and part *Polystictus affinis*. The stems in these specimens are very short but sometimes they are an inch or more long.

POLYPORUS MOLLITEXTUS, FROM T. HUNTER, WEST AFRICA (Fig. 1508).— Sessile, the entire plant (dried) pale isabelline color. Surface smooth with a very thin crust, spotted brown evidently where bruised when fresh. Context very soft. Pores small (to medium) concolorous, somewhat irregular. Spores elliptical, $4 \frac{1}{2} \times 3$, hyaline, guttulate. We would enter this in Section 80B. It is one of those plants remarkable for its soft flesh. Similar in color and general nature to *Trametes floccosus*, my first impression until I compared was that it was this species, but the soft pores and spores are entirely at variance.

MUCRONELLA ALBA, FROM J. M. GRANT, WASHINGTON (Fig. 1509).— Plants white, about 5 mm. long, caespitose, growing in clusters on bark, subiculum none. Basidia clavate, persisting on dried specimen. Spores sub-globose, 6×3 .

This little species is exactly the same as *Mucronella aggregata*; figured on page 531, excepting it is about six times as large. Our enlargement sixfold (Fig. 725) could be taken for this species natural size. There is a diversity of opinion as to the proper classification of *Mucronella*. Fries held that the fruit body consisted only of teeth (no subiculum) and included the genus in Hydnaceae. Hennings considers each "tooth" as a separate and distinct plant, and classes it in Clavariaceae. We are inclined to lean toward Hennings' view.

GUEPINIA FISSA, FROM DR. W. DOCTERS VAN LEEUWEN, JAVA (Fig. 1510).— This is a frequent species from the tropics, usually known as it was illustrated by Berkeley under the above name. It is, however, only a narrow tropical form of *Guepinia spathularia*, originally named and very common in the States. It has a Javanese history. Junghuhn named it *Cantharellus redivivus* two years before Berkeley named it but Berkeley did not know that Junghuhn's specimens are still preserved at Leiden. In early days *Guepinias* were called *Cantharellus*. The color of our American plant is yellow or slightly orange yellow. Dr. Docters van Leeuwen's specimens are more orange than usual. Whoever is responsible for the statement in Saccardo that *Guepinia rediviva* has the color of *Auricularia mesenterica* was either color blind or doing some bad guessing, or probably referred to the other *Auricularia*.

LENTINUS BLEPHARODES, FROM T. HUNTER, WEST AFRICA (Fig. 1511). - This fine species of *Lentinus* is originally from the American tropics, and it is rare in the East. It is quite close to *Lentinus velutinus*, often confused with it but is a larger plant, the pileus margin striate and the pileus not so velutinate as the stipe. We present an underview to show the enlarged stipe where confluent with the gills. This, however, we think is not a constant character. We also present a figure (1512) of *Lentinus similis*, an Eastern species only similar as to pileus but different entirely as to its stipe covering. Berkeley, however, confused his own species and his Ceylon determination and records of *Lentinus blepharodes* were based on specimens of *Lentinus similis*. Our photograph of *Lentinus similis* is made from a dried, pressed Philippine specimen, to show the stipe character, but the species is not recorded in the Philippines. It is doubtless confused in the "velutinus" records. The spores of *Lentinus blepharodes* are cylindrical, 3 X 6 and the edges of the gills which appear even to the eye, have numerous smooth, hyaline projecting cystidia under a lens.

POLYPORUS (AMAURODERMUS) NIGER, FROM DR. G. ZENKER, WEST AFRICA (Fig. 1513). - Entire plant, glabrous, black. Stipe pleuropodial with a dull, black surface, often branching above and bearing two pilei. Pilei thin, glabrous, black with uneven but not zoned surface. Context isabelline. Pores very minute and pore tissue black. Spores globose, 6-7 mic., smooth, pale colored. This is the only really black *Amaurodermus* known. It should be added to Section 7b. The spores are smaller than those of most species. Dr. Zenker collected it on wood.

CANTHARELLUS BUCCINALIS (Fig. 1514). - This was named from Ceylon as *Trogia infundibuliformis*. The tropical *Cantharelli* which are thin have been called *Trogia*, but this is a perversion of the original idea when the name was based on channeled gills. I have not seen the type of *Trogia infundibuliformis*, which was loaned when I was at Kew. However, I have but little doubt of its accuracy and it fits the description. It seems to occur in the tropics generally I found it common in Samoa and the photograph was made from fresh specimens. I have it also from the West Indies. It was previously recorded from the Philippines as *Cantharellus partitus*, which may be true but if it is the "type" is depauperate. It was from New Zealand and about the size of your finger nail, with a very short stipe, and not much can be told of it. Nor is it parted, hence the name has no application if it is correct. In the American tropics it was named *Cantharellus buccinalis*. Patouillard's figure has the base of the stipe largely exaggerated, and Montagne's figure represents a plant too large, thick and fleshy. The species can not be reconciled to either figure. As I found it growing in Samoa it was gregarious on logs. At first white, it soon became pale brown and the old dried specimens turn very dark. The stipe was very slightly expanded at the base and had a small, white, mycelial pad. Our figure represents the fresh plant from Samoa, also a dried and a soaked plant from the Philippines.

ESSICCATI

The utility of distributed sets has always been largely vitiated by the mis-naming of the specimens. A copy of Baker's recent "Fungi Malayana" has fallen into our hands.

Auricularia tenuis (402) is made up of two species, *Auricularia polytricha* and *Auricularia auricula-Judae*, both common, cosmopolitan species.

Xylaria tuberiformis (498) is *Xylaria anisopleura* (*Xylaria* Notes, page 24). The type of *tuberiformis* from Australia may be the same plant but it is sessile and appears to have smaller, more protruding perithecia. (Cfr. Fig. 1010, *Myc.* Notes, page 678.)

Polyporus rhombiporus (480) Fig. 1515 is *Polyporus Cantharellus* (Letter 54, Note 221). It is a rare species only known from Japan and the Philippines.

Ptychogaster nodulosus (481). There is doubtful utility in distinguishing any *Ptychogaster*, for all are anomalies.

Polystictus squamaeformis (464) is *Polystictus affinis* represented by hundreds of specimens so named in various museums. What good it does to send it out under another and unauthentic name (Cfr. *Stip. Polyporoids*, page 148) I do not know.

Hypoxylon microsporum (439). If correctly named and described this is a misdetermination for the spores are 5 X 12 instead of 3 X 6-7. I believe if specimens of *Hypoxylon serpens* were substituted, no one would ever know the difference.

Xylaria varians (499). Certainly has not the slightest suggestion of the figure that was published of this species from Java. The spores 4-5 X 8-10 are smaller also.

Nummularia repandoides var. *singaporensis* (469). I do not know much about *Nummularias*, but see little difference between this and the common species we have in our Southern States called *Nummularia punctulata* by Ellis, which no doubt has other names in the museums of Europe.

GLONIUM STELLATUM, FROM REV. A. BOUTLOU, WEST VIRGINIA (Fig. 1516 enlarged).— We had this plant from Rev. Boutlou last season but were not familiar with it and were unable to determine it from our books. We learned it this season from Professor Fitzpatrick, when we found it on a collecting trip near Ithaca. We never worked with the small *Pyrenomycetes*, and all species of *Glonium* appear to be small except this. It covers the log for a wide extent and to the eye, or to my eye at least, appears simply as a black crust. Under the lens the surface is resolved into most beautifully arranged radiating perithecia as shown in our figure (1516) enlarged.

Glonium stellatum is one of the first fungi named in the United States. It was so called in Muhlberg's Catalogue, 1813, as

a lichen. It was crudely figured in Schweinitz' Synopsis, 1822, and more accurately in Kunz' Myc. Hefte, 1817.

THE GENUS BOVISTOIDES

The genera of puff balls are largely based on capillitium characters. Morgan was really the first who worked it out. Most genera, such as *Lycoperdon*, *Calvatia*, etc. have long, intertwined threads. There are three genera with short, separate distinct threads, viz: *Bovista* (and *Bovistella* in part) which have short, much branched threads, the branches running out into points in all directions, and *Mycenastrum*, which has a simple, short thread with spiny points. The plant received from Miss Duthie (Fig. 1517) is a new type of thread (Fig. 1518) with short, simple (rarely branched) threads running out into points. It is a rare capillitium. A very common genus, *Catastoma*, has simple short threads in the mature gleba but the threads do not have pointed ends. They have abrupt ends. While never proven I have no doubt but that the threads of *Catastoma* are long and septate when young, and that they break up into short pieces in ripening. *Calvatia caelata* has a similar thread and could be made into a new genus on that character. We dislike to make new genera but we know not what else to do with this plant from Miss Duthie. We first inclined to *Bovista*, but when we consider it has neither the threads, peridium nor spores of a *Bovista*, it would be stretching the characters too far. Then we considered *Catastoma*, but this is now a uniform and almost unique genus as to its capillitium characters, and we dislike to disturb it by the introduction of discordant features.

Bovistoides simplex, from Miss A. V. Duthie, South Africa (Fig. 1517).— Plants 1 - 1 1/2 cm. in diameter. Peridium smooth, soft papery brown. Gleba brown. Sterile base none. Capillitium of simple, short, wavy, colored threads, with acute ends. About 6 mic. thick at the thickest portion. Spores globose, 8 mic. strongly tubercular, having somewhat the appearance of *Scleroderma* spores. Type from Miss A. V. Duthie, South Africa.

POLYPORUS VENULOSUS, FROM DR. W. DOCTERS VAN LEEUWEN, JAVA, (Fig. 1519).— These are the first specimens we have seen from the "type locality". The old types from Java are at Leiden (Cfr. Letter 37). These are surely the same plant and the first record of a collection since Junghuhn published it years ago. We have received from A. Yasuda, Japan, two collections that we referred (with doubt) to this species. We are convinced now we were in error, and are under the necessity of re-naming the Japanese species. We are particularly glad to get these specimens from Dr. Docters van Leeuwen. While we had notes and photographs of the type at Leiden there is nothing like having the "real thing". Given that it is a pure white species our photograph tells all the story.

POLYPORUS ZONATULUS, FROM PROFESSOR A. YASUDA, JAPAN (Fig. 1520).— Pileus white, drying white, effused, reflexed. Surface glabrous, white, very faintly zoned. Context thin. Pores minute white or slightly alutaceous, collected in nodules on the resupinate portion. Cystidia none. Spores small, hyaline, 3 X 5. Digitized by Google

We determined this with doubt on receipt several years ago as *Polystictus venulosus* (named from Java) but a correct knowledge of the Javanese species shows we were mistaken. It is a question whether a *Polystictus* or a *Polyporus*, but we think it is better classed as the latter in Section 83. It is quite close to *Polystictus glabratus*, figured from Japan, *Myc. Notes*, page 626.

TRAMETES VARIIFORMIS (Fig. 1521 and 1522 resupinate).— On comparison with the Australian *Trametes epitaphra* I believe that our American plant is the same species. In Australia, however, from two collections (all that are known) it is a diminutive little fellow as shown, page 858, Fig. 1434. Our plant is sometimes effused over a large extent and is so variable as to form — resupinate, reflexed, pileate, nodular, etc. that Peck named it as above. The spores are $3\frac{1}{2} \times 7$ straight. Murrill gives it as a synonym for *Trametes serialis*, a species of Europe with minute pores, hardly visible to the eye, but Murrill was so busy getting up new names that he did not pay much attention to any other details.

ISARIA PECKOLTII, FROM GUSTAVO PECKOLT, BRAZIL (Fig. 1523).— *Isarias* should not be named excepting as a convenience in the museum. I hope Mr. Peckolt will find a *Cordyceps* growing on this host so we can get the life history. Moeller found this same *Isaria* and gave a characteristic photograph but did not name it. He called it "Isaria auf einer Morpho-Puppe". It is very curious but we can add nothing to the photograph other than to give the spore measure, about $2\frac{1}{2} \times 4$ mic. We hope every entomologist and mycologist will pick up every fungus they find growing on a cocoon or a larva or on an insect of any kind. By this means we hope in time to correlate the *Isaria* and *Cordyceps* forms.

POLYSTICTUS SUBREFLEXUS, FROM OTTO A REINKING, PHILIPPINES (Fig. 1524).— We have to give this a name as we are unable to place it. The specimen is resupinate with only indications of forming a reflexed pileus. The color is cervine but it appears to have been a white plant that discolored in drying. The pores are large and hiascent, probably from growing in a vertical position. Spores are abundant, 4×6 , hyaline. We have a strong impression that we have a photograph of this plant named as a *Poria* or *Trametes* or something by Cooke, but we are unable to find it. The plant suggests such species as *Trametes versiformis* but the texture is soft and better classed in *Polystictus* or *Polyporus* than *Trametes*. We would class it in Sect. 107 by the side of *Polystictus biformis*. Indications of a pileus are seen on our photograph.

HEXAGONA LIGNOSA, FROM PROFESSOR T. PETCH, MAURITIUS (Fig. 1525).— Pileus appanate, an inch thick at the base. Context hard, woody, cinnamon brown. Surface strongly strigose with coarse black hairs arranged in zones. Pores small, round, regular, glaucous. Setae none, but projecting hyphae. Spores not found.

There is no similar species in the museums, and a new "Group" (1a) will have to be made for it. From its surface hairs it would go in Group 1, *Setosus*, but there is no woody species in

that group. It reached Professor Petch from Mauritius. I do not know the collector.

STEREUM DURUM, FROM T. HUNTER, WEST AFRICA (Fig. 1526).—
Fleus formed of several evidently coalescent specimens, but the lines of coalescence not marked. Surface glabrous, rugulose, pale cervine color, with a thin crust, distinguishable from the context. Context thick (1/2 cm.) rigid, hard, woody, pale almost white. Hymenium fuliginous. Cystidia none. Basidia colored, forming a pallid layer, apparently with but two sterigmate each. Spores globose hyaline, 4 mic. We know no other species to compare. It is entirely different from *Stereum princeps* which is the common, thick, woody *Stereum* of the East.

POLYPORUS TEPHROLEUCUS VAR. **SCRUPOSUS**, FROM JAS. R. WEIR, MONTANA (Fig. 1527).— This has the same color, texture, pores, spores and every feature of the usual form excepting the rugulose surface as shown in our figure. Mr. Weir found it on *Picea Canadensis*, while the usual plant generally grows on frondose wood.

FOMES SAN JANII (Fig. 1528).— The island of San Jan is a little speck in the West Indies, so small that it does not appear in the Century Atlas. It is known, however, in mycological records for in the early days a *Hexagona* was collected there and sent to Fries and named *Hexagona leprosa*. The specimen is at Upsala, and pieces of it are at Kew and New York. We have also gotten it from Rev. Torrend, Brazil, but these two specimens are all that are known. We figured it in our *Hexagona* pamphlet, page 20. We saw at New York a specimen referred to Fries' species from "St. Jan" which we presume is the same island. It was collected by Messrs. Britton and Shafer in 1913. We knew at once there was something wrong, for the pores are only about one-sixth the size, and the context color and texture are entirely different. In a trip to Cuba (1915) we collected a single specimen of a *Fomes* which we thought was unnamed on account of its large pores. But on our return home we found it had exactly the same context color and spores as *Fomes badius* (Cfr. Letter 60, Note 383) and we considered it a large pored form of this species. A second specimen from San Jan however, exactly the same large pores (500 - 600 mic.), about double the size of the pores of any other known *Fomes*, we feel entitles it to a name. On the pore size alone it could be called a *Hexagona*, but it has in great abundance small colored spores, the same as those of *Fomes rimosus* and *Fomes badius*, and no true *Hexagona* has colored spores.

MITRULA ROSEA, FROM G. H. CAVE, INDIA (Fig. 1529 and enlarged sixfold).— This is the neatest little fungus that has reached me for some time. A colored figure should be used to illustrate it for it is a fine rose color, both stem and head. It grew on bare earth and I presume in a wet situation, that being the habit of our most frequent species, but we have no red species, yellow and brown being the colors of those known. The little heads are gyrose, inflated and resemble a *Physalacria*. The stem is glabrous and slightly paler color than the head. Paraphyses linear,

hyaline, slightly exceeding the asci. Spores fusiform, hyaline, about $3 \times 8-10$, smooth. Our photographs have been made from specimens that are soaked out but the plant does not change much in drying.

LENZITES REPANDA (WITH LONG STIPE), FROM T. HUNTER, WEST AFRICA (Fig. 1530).— We have probably seen in our own collection and in the museums of Europe five hundred specimens of *Lenzites repanda* but we never before noted one with a long stipe. Usually it has a short stipe or disk-like attachment, rarely it has no stipe at all. Why this particular specimen concluded to develop a long stem I do not know. As to every other feature excepting the long stem it is exactly the common *Lenzites repanda*.

PTYCHOGASTER AFRICANUS, FROM T. HUNTER, WEST AFRICA (Fig. 1531).— We question the utility of naming *Ptychogaster*s for they are all inexplicable abnormalities or conditions of species of *Polyporus*. Still as it is not always possible to refer them to the normal species the only thing to do is to give them a name. In *Ptychogaster* the trama is usually resolved or replaced by a mass of spores, usually pulverulent or dusty. The spores of this, however, are cohesive and brittle and at first I did not notice it was different from the ordinary trama. But I could not account for its crumbly nature and the microscope shows it is simply a mass of spores. As to the normal species, I believe it is only the *Ptychogaster* form of *Polyporus* (Gan.) *Japonicus*, a normal specimen (No. 240) which Mr. Hunter sends. The *Ptychogaster* spores form a mass of peculiar color, about Mikado brown of Ridgway. The spores are subhyaline, vary much as to shape and size from globose, 8 mic. to irregular oblong, 8×12 . Another collection from Mr. Hunter with same conidial spores has the surface coloring of *Polyporus mangiferae*.

The prolificacy of Nature in the production of spores in these *Ptychogaster* forms is almost beyond comprehension. As the spores measure about 8 mic., a little calculation shows that this specimen has about a million and a half spores.

LENZITES HUELLERI, FROM DR. J. BURTON CLELAND, NEW SOUTH WALES (Fig. 1533).— (Aberrant *Lenzites repanda*). We have perhaps a hundred collections of this common, tropical *Lenzites repanda* with hymenium exactly the type as shown at the left (Fig. 1532). The species is remarkably uniform in this respect, unlike its brother *Lenzites flavida* which never develops two specimens of the same hymenial form. But this specimen from Dr. Cleland (on the right Fig. 1533) is so different from the usual form that Berkeley may be excused for naming it a new species as *Daedalea huelleri*. It must not be confused, however, with *Trametes huelleri* which may be a variant of the same thing, but has small round pores and is more frequent and constant.

STEREUM NIGROPUM, FROM OTO A. REINKING, PHILIPPINES (Fig. 1534).— Infundibuliform, with a short stipe. Color (when dried) both surface and hymenium dark, almost black. Cystidia numerous, hyaline, mostly blunt, varying as to shape, projecting but little.

This little plant has the general aspect of being a small specimen of *Polystictus nigropus* and until sectioned was so taken by me. It belongs to Section 4+++ of my *Stipitate Stereum* pamphlet but does not suggest *Stereum Mellisii*, the only other species in that section.

LENZITES CLELANDII, FROM DR. J. BURTON CLELAND, NEW SOUTH WALES (Fig. 1535).-- This is the same as to context color and gills as *Lenzites abietinus*, but the surface is pale, almost white, of a different color than the context and it takes dark zones in areas where this pale surface layer is not developed. The upper view is the same as *Polystictus Friesii*. Dr. Cleland sent two collections. One figure is evidently normal, the other has the surface developing hydroid processes. We never saw another *Lenzites* where the context color and surface layer were not uniform.

POLYSTICTUS SUBCROCATUS, FROM OTTO A. REINKING, PHILIPPINES (Fig. 1536).-- In my work (MS.) on the Philippine Polypores I referred this as a synonym for *Polystictus byrsinus*. I am convinced on comparison of this specimen it was an error. It is very close but slightly different. The surface is paler and not "puffed" as in the American species. The pores are not as minute. Spores are $3\frac{1}{2} \times 8$, cylindrical, straight. Some of the Philippine collections (Merrill 3694) have a slightly puffed surface but this specimen does not. It is very close to our American plant but I think now sufficiently distinct.

POLYPORUS INTACTILIS, FROM T. HUNTER, WEST AFRICA (Fig. 1537).-- We received this plant several years ago from Congo Belge and it was referred with doubt to *Polyporus auriculariformis*. We do not know whether that is correct or not. The old type at Leiden from Java is an abnormal specimen which may be this plant and probably is not (Cfr. Letter 36). At any rate if it is this plant it is misnamed, misdescribed and misreferred in Saccardo to *Poria* (sic).

These are fine specimens. It is a plant of the gilvus alliance that may be described in a few words as of same texture, color and thickness as *Polyporus lichnoides*, with a finely velutinate surface, an unusual feature in this group of plants. The pores are impalpably fine and are not visible to my eye even with a hand glass. The mouth of the pores is soft to the touch. It is quite close to *Polyporus velutinosus* as to color and pores.

THE GENUS SEPTOBASIDIUM

This is one of the modern genera based on the shape of the basidia. A collation of forty-six species as given in *Mycological Notes*, page 720, and about fifteen have since been added. However, I should not like to say how many are the same. The original definition of *Septobasidium* confined it to resupinate species, and that is the sense in which Burt takes it. But all plants that have these basidia are not resupinate. When the basidia of the tropical fungi are known there will be more "new genera" than is dreamed of

in our classification now. Recently I examined one of the tropical "Pterulas" which had the basidia of this type, and Atkinson's genus *Eucronartium* is only a pistillate *Septobasidium*. All species of *Septobasidium* known to me are resupinate, excepting the following three, for which McGinty proposes the name *Rudetum*, viz: *Rudetum ramealis* (*Lachnocladium*, (sic) *ramealis*, Berkeley); *Rudetum fisso-lobatum* (*Hymenochaete* (sic) *fisso-lobatum*, Hennings); *Rudetum alatum* (*Septobasidium ramealis*, Bres. not Berk.). *Rudetum*, in the sense of McGinty, is a pileate *Septobasidium* and the genus has just as much validity as *Eucronartium* which is a pistillate *Septobasidium*, or *Tremellodendron* which is a clavate *Sebacina*, or *Lloydiella* which is a pileate *Peniophora*.

SEPTOBASIDIUM ALATUM, FROM E. D. MERRILL, PHILIPPINES (Fig. 1538).— Largely resupinate with pileate margin. Color dark brown. Surface of pileus corrugate with appressed fibrils. Hymenium soft, papillate, in color and appearance like that of *Thelephora terrestris*. Hyphae "pillars" none. Basidia hyaline, cylindrical, septate, curved. Spores not seen. This species is based on McGregor 20385, misreferred to *Septobasidium rameale*, of which it has hardly a suggestion. The general appearance of the plant is much like that of the common *Stereum tabacinum*. It appears to be rare in the Philippines, and is known from but one collection.

SEPTOBASIDIUM RAMEALIS (Fig. 1539).— Resupinate but sending out dense hydroid processes. Color dark brown with a purplish tinge. This grows over the stems and leaves of plants and is only known to me from the type at Kew which was from Ceylon. I believe though that Petch finds it abundantly. It was named by Berkeley as *Lachnocladium* but at that time the genus *Septobasidium* had not been born.

SEPTOBASIDIUM FISSO-LOBATUM (Fig. 1540).— Pileus thick, coriaceous, flabellate, radiate-striate, cut into lobes. Color dark cinnamon-brown. This forms irregular, confluent masses on the living stems in Brazil. It was collected by Ule and referred to *Hymenochaete* (doubtful) by Hennings who apparently mistook the basidia for setae. I never examined it but do not question its genus. While only known from the type collection it is found at Kew, Paris and the British Museum. None of my Brazilian correspondents seem to have collected it nor is it mentioned by Moeller.

CALVATIA BRESADOLAE, FROM E. D. MERRILL, PHILIPPINES (Fig. 1541).— Plant obovate to a contracted base. Peridium thin, glabrous, shiny, breaking up in fragments in dehiscence. Gleba pale, olivaceous with a slight pinkish cast. Capillitium pale colored, much branched, 3-4 mic. thick. Spores compressed, globose, smooth, pale colored, $3\frac{1}{2}$ - $4\frac{1}{3}$ mic. While the type is only a slice (Fig. 1541) it is quite distinct in its thin, shiny peridium and spores and capillitium differences. It was named as *Calloglossum* (?) *saccatum* but has no analogy or relation to *Calloglossum* whatever. It is said to have a columella, a feature not shown on the slice, but its existence is extremely improbable from its relationships. Its transfer to *Calvatia* necessitates changing the specific name which is now occupied in this genus. The genus *Calloglossum* is a monotypic

genus, known only from southern United States and its erroneous record from the Philippines is unfortunate.

POLYPORUS (AMAURODERMUS) COSTATUS, FROM E. D. MERRILL, PHILIPPINES. Pileus mesopodial, 3-12 cm. broad, 2-3 cm. thick. Surface dull, reddish brown, slightly laccate. Stipe slender with smooth, laccate surface. Pileus context scanty, pale cinnamon color. Pores medium, small, round, 2-3 cm. long with pale cinnamon tissue and concolorous mouths. Spores (Fig. 1542) most peculiar, globose or slightly elongated, 12 mic. in diameter, and the surface with the spines arranged in longitudinal ribs, which are connected by a few transverse ribs.

This is known from but one collection, R. C. McGregor, No. 20289. It was referred to *Polyporus renidens* but if the spores be compared they will be found to be quite different. The spores of *Polyporus renidens* do not have the spines arranged in ribs. The general features of the plant to the eye are the same as *Polyporus leptopus*, one of the first foreign species named by Persoon from the East Indies and to this day only known from the type at Paris. I thought they might be the same and that I had failed to observe the spores correctly at Paris. (Cfr. Stip. Polyporoids, page 115). A comparison just made with the spores of *Polyporus leptopus* from a piece kindly forwarded to me by Professor Patouillard shows the same difference between the spores as found on comparison with those of *Polyporus renidens*. I believe now that *Polyporus renidens* from Brazil, the only specimen known to me at Berlin, is the same as *Polyporus leptopus*, although the former is pleuropodial and the latter mesopodial. The only other species with these peculiar ridged spores is *Polyporus longipes*, known from a collection at Paris from French Guiana. Perhaps they are the same, but the collection differs much in general size and stipe insertion.

HYMENOGASTER AREMARIUS, FROM MISS A. V. DUTHIE, SOUTH AFRICA (Fig. 1543).— We determined this from Tulasne's monograph which seems to agree though all such determinations should be confirmed by comparison. The peridium is white, unchangeable. Gleba argus brown (Ridgway). Spores smooth, lemon shaped as shown by Tulasne for *Hymenogaster Bulliardii*. We present in our figures the plant natural size and a section. Also the spores of *H. Bulliardii* (Fig. 1544) which are the same as this plant. The basidia are hyaline and each bears two spores. Tulasne does not figure the spores and they are not the same as shown by Bucholtz. Hence the determination is not sure. We are very glad indeed to get the specimens however, and some day we may learn whether Bucholtz or we made the best guess as to its determination.

RHIZOPOGON CEREBRINUM, FROM PROFESSOR A. YASUDA, JAPAN (Fig. 1545).— Peridium thick, hard, strongly tubercular, convolute. Surface pale with a reddish cast, minutely reticulate. Gleba hard, greenish olive, compact, no cavities visible to the eye. Sporophore drying hard and solid, though when fresh or soaked it is hollow, the gleba forming a layer within the peridium. A section shows alternate layers of brown and hyaline tissue, but specimen may

not be ripe. Spores 3 X 5, hyaline. The genus to which this should be referred is doubtful to me, though it is surely co-generic with the plant I published in Mycological Notes, page 611, as *Hysterangium Phillipsii*, which Dodge refers to *Rhizopogon violaceus*. Both collections have little resemblance to the genus *Rhizopogon* in Europe, and new genera should be based on them. It may be the same plant as *Rhizopogon violaceus* and I should prefer to confirm the determination before saying much about it. We present in our figure (1545) the dried plant, also soaked and a section soaked.

THELEPHORA GELATINOIDEA, FROM G. H. CAVE, INDIA (Fig. 1546).— It would be the simplest matter in the world to make a new genus of this, perhaps the best, but we dislike to multiply the genera. It is a *Thelephora* excepting its context is gelatinous. Questions arise nowadays in considering the host of tropical plants that come in of which Fries knew nothing. The genus *Thelephora*, as known today, at least in the temperate regions, is a very consistent genus with fleshy, cartilaginous texture and colored, angular or tubercular spores. This agrees excepting that it has gelatinous texture and permanent granules on the hymenium. Another species, *Thelephora papillosa* of Japan has permanent granules and European species have granules on the growing hymenium. But this plant could be put in *Hydnaceae* with as good reason as *Grandinia* is so classed. Perhaps the best way is to call it a "new genus" and Professor McGinty designates it as *Pseudothelephora gelatinosa*.

Pileus sessile, thin, fuliginous, zoned with appressed fibrils. To the eye the upper surface of the pileus is the same as *Polystictus Friesii*. Context thin, gelatinous, pale when moist but consisting of hyaline hyphae of the usual gelatinous type. Hymenium fuliginous, very dark when moist, densely covered with obtuse granules which are permanent when dried. Basidia cylindrical, hyaline, 6 X 30. Spores irregularly angular, globose, about 6-7 mic. The spores are typically those of *Thelephora* and the dried plant has the general appearance and habits of the usual *Thelephora* excepting its granular hymenium. It grew on the ground. Whether it would simplify matters to call it a new genus or to include it in *Thelephora* is the question.

LACHNOCLADIUM CRISTATUM, FROM MISS A. V. DUTHIE, SOUTH AFRICA (Fig. 1547).— Stems branched from the base and cristated at the summit. Surface pubescent to the eye. Texture rough. Color pale, ochraceous. Hairs under the microscope hyaline, sharp, smooth projecting about 20 mic. Spores abundant hyaline, subglobose but irregular, 3-4 mic. I have compared all my photographs of *Lachnocladium* and find none to correspond but of course it may have a name as a *Clavaria*.

POLYSTICTUS STRIATULUS, FROM E. D. HERRILL, PHILIPPINES (Fig. 1548).— Pileus sub-reniform with a short, concolorous stipe. Surface dark reddish brown, glabrous, non-zonate, strongly radiate with raised striations. Context thin, rigid. Pores small, shallow but larger than most in this section.

This is the first collection of *Micropus* I have seen that is striate. Excepting the strongly striate surface and larger pores it is close to the common *Polystictus affinis*. Based on Curran 19285 which was referred to *Polystictus squamaeformis* but does not appear to me to answer the description at all and no type exists.

POLYSTICTUS SQUAMAEFORMIS, FROM E. D. MERRILL, PHILIPPINES (Fig. 1549).— This collection (6998) was so determined and seems to me to answer the description fairly well, and can well be compared to a fish scale. No type exists and I have at present no access to the figure. It is very close to *Polystictus affinis*, differing in the concentric, raised zone which gives it a close resemblance to a fish scale. The color, shape, thickness and pores are all the same as those of *Polystictus affinis*.

XEROTUS PHILIPPENSIS, FROM E. D. MERRILL, PHILIPPINES (Fig. 1550).— This is something unusual and I do not know it. It is liable in the past to have been named either as a *Panus*, *Lentinus* or a *Xerotus* and until these three genera are thoroughly worked over and each species located it is not safe to name "new species". In the meantime, as a convenience in our collection we have labeled it *Xerotus Philippensis*. We have worked *Xerotus*, not thoroughly, however and the only species we have noted that is at all close is *Xerotus afer*, named by Fries from South Africa and preserved at Upsala. The usual *Xerotus* species of the museums are about all the same thing, known in the Philippine lists as *Xerotus nigricans*, but have no resemblance to this.

CALOCERA CORTICALIS, FROM PROFESSOR M. BARBIER, FRANCE (Fig. 1551).— This grows caespitose on branches and is evidently rare. I never saw it before. It has shorter clubs, is paler yellow and grows fasciculate. Otherwise it is like the common *Calocera cornea*.

POLYPORUS NONGRAVIS, FROM PROFESSOR T. PETCH, CEYLON (Fig. 1552).— Largely resupinate with a reflexed, narrow pileus. Surface smooth ochraceous buff. Context pale ochraceous, soft, light weight, spongy. Pores bright ochraceous, small to medium, unequal in size. Cystidia none. Spores small, 3 mic., globose, hyaline.

This grew on a rotten branch and impresses one at once by its light weight. It reminds me in this respect of a similar plant from Japan, *Polyporus sambucus*, but on comparison I find them entirely different. We would enter it in Section 30b, though not white.

CATASTOMA DUTHIEI, FROM MISS A. V. DUTHIE, SOUTH AFRICA (Fig. 1553).— Exoperidium forming a cup. Endoperidium brown with a purplish cast. Gleba dark purplish brown. Capillitium of short pieces, very pale color (sub-hyaline). Spores small without apiculus, globose, 3-4 mic. very slightly rough.

The species of *Catastoma* are increasing at an alarming rate. They differ mainly in microscopic characters. The feature of this is the small, very slightly rough spores without apiculus or pedicels. Also the subhyaline capillitium. It is a true *Catastoma* and evidently grew with its mouth down.

POLYPORUS EUZONATUS, FROM L. J. K. BRACE, BAHAMAS (Fig. 1554)-

Pileus sessile, about Sudan brown. Surface appressed, fibrillose, strongly zoned with raised zones. Context brown. Pores minute, fuliginous brown. Setae none. Spores hyaline.

Owing to the very extensive collections of polypores made in the West Indies and preserved in the New York Botanical Garden, I was hardly expecting anything novel from this region. With its strongly marked fibrillose zones I know but one plant that suggests this, *Trametes heteroporus* of the East, but this is not a *Trametes*. It goes in Section 95 and from the color there is a suggestion of the *gilvus* crowd, but this has no setae. The spores I do not find surely but what I do take to be spores are small and allantoid.

XYLARIA SCHWEINITZII, FROM W. A. SCARFE, NEW ZEALAND (Fig. 1555).- Xylarias of the polymorpha group are characterized by the hard, solid, white stroma, rugulose (in drying) surface, medium to large spores (6-9 X 20-32). The perithecia do not protrude at all, which is the difference between it and the anisopleura group. There is a form common in warm countries that was named *Xylaria Schweinitzii* by Berkeley and could be considered a form of *Xylaria polymorpha*. It is so constant in its general shape as shown in our figures that it merits a name.

Xylaria anisopleura is similar excepting the perithecia are slightly moriform and the spores average larger, reaching 40 mic.

Xylaria castorea is the same as *Xylaria Schweinitzii* but has small spores, about 3-10 mic.

Xylaria rugosa, named by Saccardo from Africa, *Xylaria curta* by Fries from Hawaii, *Xylaria favosa* by Cooke from Cuba, *Xylaria ellipsospora* by Cooke from Tasmania and *Xylaria corrugata* by Patouillard from New Caledonia, all appear to me to be *Xylaria Schweinitzii*. Our previous figure (page 635) as *Xylaria Schweinitzii* we now think is an error and should have been named *Xylaria anisopleura*.

Xylaria polymorpha, so common in Europe and the States, is absent or at least is rare in the tropics in its usual shape. We are convinced however that *Xylaria Schweinitzii* represents the form it takes in the tropics.

The figure to the left is the type of *Xylaria Schweinitzii*, the middle figure, specimens from P. Van der Bijl, South Africa, that to the right, somewhat unusual as to shape, from W. A. Scarfe, New Zealand.

XYLARIA FURCATA, FROM PROFESSOR T. PETCH, Ceylon (Fig. 1556).- This was named *dichotoma* by Leveille, but being a duplicate was changed to *furcata* by Fries. It seems to be a strongly characterized species and was well illustrated by von Höhnell. Professor Petch advises me that it grows with *Xylaria nigripes* on termite nests. It is an Eastern species, unknown from the American tropics. It has very small spores, like those of *Xylaria nigripes*, hardly over 4 mic. long (2-3 thick).

We present on the left a figure of the characteristic specimen from Professor Petch; next above the type of *Xylaria scoparia* from China but which is the same thing; next below a single specimen named *Xylaria nigripes* var. *trifida* but which appears to be a form of *Xylaria furcata* and with no suggestion of *Xylaria nigripes*. On the right a thick form of *Xylaria furcata* collected by von Höhnell in Java.

Xylaria dichotoma, the original of Montagne from the American tropics (Fig. 1557) is we believe a closely related but different species, and *devaricata* of Fee, from the description seems the same.

XYLARIA NIGRIPES, FROM PROFESSOR T. PETCH, CEYLON (Fig. 1558). A fine collection and we are glad to get it as the first we have received of this common Eastern species. We believe it does not occur in the American tropics. We gave in *Xylaria Notes*, pp. 10 and 11, a full consideration of the plant and there is little to add to it. Professor Petch in his exhaustive account of the species has recorded the peculiar, conidial form that occurs abundantly but never develops the asciferous form. He also sends me young, conidial plants, figured on the right, of the asciferous form and a fine collection of the mature plant. The spores of *Xylaria nigripes* are the smallest we ever noted in a *Xylaria* excepting *furcata*, being rarely over 4 mic. long.

XYLARIA BRASILIENSIS, FROM REV. J. RICK, BRAZIL (Fig. 1559).—Plants with a strong rooting base growing on termite hills. Clubs cylindrical or flattened or irregular as shown in our figure, normally acute. Surface black. Perithecia small, slightly but distinctly protruding. Spores 4-3, rarely 10 mic.

This appears in Theissen's paper as *Xylaria scotica* var. *brasiliensis*, but it has nothing in common with *Xylaria scotica* which is not a species but an anomaly based on a distorted specimen that grew in a hothouse and should never have been named. Probably it is an anomaly of the rare *Xylaria Guepinia* of Europe.

Xylaria brasiliensis grows in "sandy earth and termite nests" or rather Rev. Rick advises us in grassy places where there are indications of old ant hills. It has been suggested that it may be the same as *Xylaria nigripes*, the ant hill species of the East. Fine collections of the latter species recently received from Prof. Petch show it is entirely different. (Cfr. *Xylaria Notes* pp. 10 and 11). As far as evidence exists the Eastern plant does not occur in our American tropics. We present a photograph of four clubs and of one enlarged sixfold.

The figure of *Xylaria Guepinia* that Theissen gives (Fig. 3) appears similar to our figure of *Xylaria brasiliensis*. I have a very imperfect idea of this species of Europe for it is extremely rare and I have only seen it in an old exsiccata from Italy. There is a specimen at Kew which according to my photograph does not agree with the figure that Cesati gave, and the species is not clear to me and I think has been confused in Europe. From all accounts it is a species that grows only on manure and in manured places.

XYLARIA MUSCANDAE, FROM PROFESSOR T. PETCH, CEYLON (Fig. 1560).— Club with slender, black, smooth stem. Fertile portion tapering from base to slender, prolonged apex. Color grey. Surface rugulose (in drying) but not moriform. Ostioles minute black points on the grey background. Spores 5 X 10. Based on Petch, Ceylon, No.3946. The species is characterized by its grey color and long, tapering club. It is close evidently to *Xylaria similis* of Brazil but the latter has a blunt club and dark color, from figure and description.

XYLARIA BRACHIATA, FROM REV. HYACINTHE VANDERYST, CONGO BELGE (Fig. 1561).— This was named by Saccardo from Africa, and as he gave a good figure of it there is no trouble whatever in recognizing it. The spores are about 6 X 16 and all the other features are shown in our figure. The species is quite close to *Xylaria apiculata*, but appears to be sufficiently distinct in its more slender habits and the absence of lines on the clubs. *Xylaria venustula* of the same paper appears to be *Xylaria apiculata*.

TREMELLA SPARASSOIDEA, FROM DR. M. S. WHETSTONE, MINNESOTA (Fig.1562).— It is evident that this must be an unusual species or it would have come to my notice before. It is a white plant and our photograph presents all its features. The portion sent to me and photographed was I judge about one-fourth of the specimen. The plant evidently grows from the ground. A section is made up of hollow, confluent lobes and reminds one of a *Sparassis*. The surface is tubercular, something like a coral. Spores are 5-6 X 3-10, hyaline with a large gutta. Basidia I find but scantily but appear to be hyaline and of the globose, cruciate type. In general nature the plant is similar to *Tremella vesicaria*, illustrated (Fig.1486) on page 871.

I am informed this plant has been referred to *Tremella clavarioides* (Myc. Notes Old Species, p.10, fig.224). For me it is more close to *Tremella vesicaria*. But as different as these plants are they may be the same species. *Tremella clavarioides* was named by Berkeley as *reticulatum* a variety (sic) of a *Corticium* (sic). There is about as much relation between a *Corticium* and a *Tremella* as there is between the sheets of this pamphlet and a box of safety matches, and in addition the plant has no suggestion of being reticulate. Such careless and absurd naming has no validity for me (nor for our friend McGinty who renamed it).

XYLARIA ALLANTOIDEA, FROM REV. J. RICK, BRAZIL (Fig.1563).— To show how *Xylarias* will differ as to shape we show two specimens of the same collection. The one on the right is the normal shape and both are surely the same species. *Xylaria allantoides* is characterized by a thin, brown pellicle. It is not as bright color as that of *Xylaria tabacina* nor as thick. The spores are 5-6 X 12-14. The stroma is white, soft, pithy and it finally becomes hollow. These are nice specimens and definitely fix the species for me.

XYLARIA NIGRESCENS, FROM T. HUNTER, WEST AFRICA (Fig.1564).— This collection is of a more globose shape than the plant we figured, p. 3, fig. 1213. The curious way in which the old clubs split seems to be characteristic. There are several similar species

In this group and when enough collections accumulate it may be possible to draw a distinction between them. The Eastern plant is quite similar to *Xylaria cubensis* of the American tropics, but the spores (8 X 20-24) are larger and it has no pellicle.

XYLARIA COMOSA, FROM REV. RICK, BRAZIL.— We are particularly glad to get mature specimens which are the first we have received. We gave an account of the plant on page 726, from specimens of Rev. Rick's collection that we had seen in Paris. When Montagne named the species he had a lot to say about the perithecia being "soft, flaccid, collapsing". The perithecia of this collection are firm, carbonaceous and do not differ from those of other *Xylaria* species. The spores are large, fusiform and measure about 8 X 38. *Xylaria comosa* is an exceptional species (as explained in detail p.726) in having the conidial spores borne above the asciferous clubs.

We are pleased to receive also from Rev. Rick a specimen that we present (Fig. 1565) showing the manner in which these conidial spores are borne. This specimen, however, bears a tuft of conidial spores at the base of the club. Usually we believe the tufts are terminal only.

XYLARIA CARPOPHILA, FROM REV. J. RICK, BRAZIL.— These specimens were sent to me as *Xylaria palmicola*, which it surely is, and the name under which it passes in Brazilian mycology. But we have always suspected that it was our *Xylaria carpophila*, and on comparison we find it exactly the same, with the same spores, same habits and same clubs and can not be different.

Xylaria carpophila always grows on fruit of some kind. In Europe on beechnuts, haw berries and *Carpinus* fruit. In our country on the tulip tree cones, sweet gum fruit, peach stones, hickory nuts and on the fruit of dogwood. In Brazil on the palm seeds. Several names have been given to it according to the host (Cfr. Note 428, Letter 62) but we are convinced they are all the same. If there are those who hold that *Xylaria palmicola* differs from *Xylaria carpophila*, we invite them to designate in our figure (Fig. 1566) which is the Brazilian species and which that of the States.

XYLARIA PYRAMIDATA.— T. Petch, Ceylon, advises me that he has never found this little species which is only known from the original collection by Thwaites many years ago in Ceylon. There is one specimen at Kew (Fig. 1567) which is all that is really known but it seems to be something quite characteristic. A portion of the type is also at Peradeniya, and Professor Petch advises me he measures the spores 3-4 X 5-7. It has been confused in Brazil with *Xylaria discoidea* (*Xylaria* Notes, p. 13) but there is no possibility of its being that plant. The peculiarity of the species seems to be that it has a tapering stem as if it grew in the ground and there are little scales on the stem which I am not able to explain as I never saw anything similar on any other species.

XYLARIA GRAPHICA, FROM T. HUNTER, WEST AFRICA.— We considered this plant (immature) on page 3636 as *Xylaria variabilis*. These are the first ripe specimens we have received and they fix

the identity of the African plant with the South American species, a fact that we suspected at the time. Compared they are surely the same and same spores, 6 X 12. The only difference we can note is that the cortex of the African plant (Fig. 1568 enlarged) does not crack so strongly as it does in our American specimens (cfr. Fig. 926, p. 643) but this may be only a condition of age. In supplying specimens that decide this old problem Mr. Hunter has done a real service.

XYLARIA CRANICA (ALBIDA), FROM REV. J. RICK, BRAZIL.— Surely the same species and still a very pale color, almost white. It shows how these things vary. Any one would be justified in calling this a new species.

XYLARIA CINNABARINA, FROM WALTER W. FROGGATT, AUSTRALIA (Fig. 1569).— Clubs irregular, globose, lobed. Surface uneven, partially covered with a thin, reddish coat. Perithecia imbedded, not protruding. Stroma white, soft, solid, much more fleshy than the usual stroma of Xylarias. Spores small, elliptical, 5 X 8.

This departs from the usual idea of a Xylaria in its general shape and soft flesh, and also the thin, reddish coat that covers the surface. It might be set aside as a new genus, but I feel it is best included in Xylaria. The type of this is at Kew and our specimen from Mr. Froggatt is the second we have seen. The spores of this specimen are much smaller and broader than originally published (3-4 X 10-12) but there is no question as to its identity. The reddish coat is quite a character but it is overnamed.

XYLARIA TIMORENSIS, FROM REV. TORREND FROM THE ISLAND OF TIMOR (Fig. 1570).— Clubs cylindrical or varicosely shaped, small, from a thick, pannose, black base. Surface reddish brown with a thin coat, probably only the conidial condition. Spores not formed in these specimens.

We have had these specimens several years but have held them back, hoping to find a name for them. Xylarias in a conidial state should not be named, but the unusual feature of a thick, pannose base and reddish surface warrants its publication. Besides we need a name for it in our museum.

XYLARIA ANISOPLEURA, FROM PROFESSOR T. PETCH, CEYLON (Fig. 1571).— This is surely the same as our American plant considered (I now think probably in error) in Myc. Notes, p. 635 as *Xylaria Schweinitzii*. Theissen gives several good figures of it under the name *Xylaria anisopleura*. Petch sends it as a form of *Xylaria haemorrhoidalis*, growing from buried wood, and that is probable, but if it is so it will not be practicable to consider *Xylaria anisopleura* and *Xylaria haemorrhoidalis* as distinct. *Xylaria anisopleura* in its type form (*Xylaria* Notes p. 24) is a smaller plant and grows on wood. The large spores (10 X 40 in these specimens) and every other feature are the same.

XYLARIA LUTEOSTROMATA, FROM E. D. MERRILL, PHILIPPINES (Fig. 1572).— Clubs globose or obovate to a short (not pannose)

stipe. Surface black, uneven, but the perithecia not protruding. A section through the perithecia is variegated yellow and black, from the carbonous walls of the perithecia and the interposed yellow stroma. Stroma solid, hard, pale yellow. Spores 4-5 X 8-9.

Except in its yellow stroma, unknown to me in any other species, this has all the characters of *Xylaria castorea*, and I have a Philippine collection that connects it to *Xylaria castorea*. Based on Elmer 7217 and determined as *Xylaria corniformis* with which it agrees in no feature.

Another collection from the Philippines (Merrill 10549) agrees in every essential with *Xylaria luteostromata* excepting form which is cylindrical, club shaped. It may be different but we suspect it is the same. We have labeled it with the same name. Both collections had been referred to "*Xylaria corniformis*", the namer having apparently not the slightest familiarity with characters of the *Xylaria* species.

POLYSTICTUS HOUSTONII FROM GEORGE L. FISHER, TEXAS (Fig. 1573).— Pileus sessile, imbricate, ochraceous-tawny (of Ridgway). Surface glabrous, zoned with puffed zones. Context dry, thin colorous. Pores minute, hardly visible to the unaided eye, cinnamon brown, glancing as viewed by side light. Setae none. Spores abundant, small, globose, 3 mic., sub-hyaline.

This grew on an oak stump (?). As to color it strongly reminds one of *Lenzites saepiaria* but the resemblance stops there. It is such a plant as could be expected to have setae. We would enter it in Section 119. The spores appear to have a faint tint of color.

THE MYCOLOGICAL CLASS AT CORNELL (Fig. 1574).— We present a Kodak snapshot of Professor Fitzpatrick's class at Cornell (1919). Professor Fitzpatrick is not in the picture. We believe it was he who snapped it.

CATASTOMA UPLANDII FROM DR. I. M. JOHNSTON, CALIFORNIA (Fig. 1575).— Dr. Johnston, by diligent collecting at Upland, California, is increasing our *Catastoma* species at an alarming rate. Formerly we had but four in the United States but he has added five in the last year.

Catastoma Uplandii. Globose, about 2 cm. in diameter, purplish brown. Exoperidium thin, rough with adherent sand, persisting at the base (top) of the specimen. Endoperidium thin, dull purplish. Gleba olive with slightly reddish tint when ripe. Capillitium of short pieces pale, about 4 mic. in diameter. Spores 8 mic., rough, tubercular, with very minute apiculus.

This is quite close to *Catastoma Muelleri* from Australia, known only from types at Kew. The spores are the main difference. While both have rough spores, the spines of those of *Catastoma Muelleri* are three or four times as long as those of *Catastoma Uplandii*. These are the only two species in the purplish series with apiculate spores. All others are pedicellate.

CATASTOMA BRANDEGEEI FROM T. S. BRANDEGEE, MEXICO (Fig. 1576).— Globose, from 1/2 to 3/4 inches in diameter. Exoperidium

pale, smooth, thin, peeling away from the endoperidium, not forming a cup. Endoperidium thin, pale with somewhat glaucous surface. Gleba when young bright yellow, at length olive with no tint of purple. Capillitium pale, short pieces with abrupt ends, unbranched, about 4 mic. in diameter. Spores globose, 5-6 mic., pale, smooth with minute apiculus.

This first reached me from T. S. Brandege, Caliacan, Mexico, in 1905. I have since received specimens from P. B. Kennedy, Reno, Nevada, W. A. Archer, Columbus, New Mexico and I. M. Johnston, San Antonio Mts., southern California.

The species differs from most *Catastomas* in its smooth spores, and from *Catastoma levispora* in having no purplish tint to the gleba, and from *Catastoma Johnstonii* in pale (sometimes glaucous) endoperidium, shape and nature of the exoperidium.

CATASTOMA JOHNSTONII FROM DR. I. M. JOHNSTON, CALIFORNIA.

Depressed, globose. Exoperidium thick, rough. Endoperidium thin, dark brown, becoming cracked when old. Gleba dark reddish brown but no shade of purple. Capillitium of short, pale, unbranched pieces, about 4 mic. in diameter. Spores globose, 5-6 mic., smooth with a very small apiculus.

Mr. Johnston sends five collections, each a single specimen. To the eye it is very similar to the common species, *Catastoma circumscissum* but readily distinct in its smooth spores. I can not so state but I think it grows in the same way with its "mouth down".

EXIDIA UVA PASSA FROM H. G. BEARDSLEE, OHIO (Fig. 1577).-

Sessile, cushion shape, gyrose lobed. Color of a raisin. Flesh same color. Papillae none. Basidia globose, 8-10 mic. very pale color. Spores hyaline, $\frac{3}{4} \times 10$, slightly curved, unilateral, apiculate.

Were we to determine this from books we should call it *Exidia saccharina* but we know this in Europe and it is not that species. The color might be compared to brown sugar but better to a raisin. We do not find it in Ridgway, but pecan brown is not far away. While it has no papillae we put it in *Exidia* on the spores. As previously stated the line between *Tremella* and *Exidia* is hard to draw. In general appearance this is rather a *Tremella*. The color is somewhat like that of *Naematelia nucleata* when old. It dried away leaving hardly a trace on the bark. It grew on frondose bark.

POLYSTICTUS SUBCONGENER FROM DR. J. B. CLELAND, NEW SOUTH WALES (Fig. 1578).- We can not consider this as other than a form of the common *Polystictus occidentalis* with scabrous rather than hirsute surface and larger pores. It was one of Berkeley's "left-overs", dug up by Cooke and named *Daedalea* subcongener. The pores of the type are somewhat daedaloid which is not unusual in *Polystictus occidentalis*. The surface, however, as shown by our photograph of the type, is short and sub-scabrous (not velutinate as described) and this is the important factor to us. The pores are also much larger than in *Polystictus occidentalis* but in this specimen are round, not daedaloid.

TRAMETES BURCHELLII FROM OTTO A. REINKING, PHILIPPINES (Fig. 1579).- I hardly think such specimens should be named at all.

though this or similar plants have been named four times. Berkeley named in mss. a specimen from India, *Trametes Burchellii*, which was dug up and published by Cooke. Currey published the same thing from India as *Polyporus incertus* and gave a figure of it. Berkeley published *Trametes Mexicana* from Mexico on a very poor specimen which is similar if not the same. And *Daedalea Bowmanii* from Australia is a plant in the same order. All these collections are inadequate. They are probably the resupinate portion of some pileate species. All are of the same nature characterized by the large pores and thin but rigid walls. As to context color the specimen is more isabelline than white, but for the present we would class it in the resupinate white section (140).

ARRHYTIDIA FLAVA FROM MISS ANN HIBBARD, MASSACHUSETTS (Fig. 1580).— As far back as 1850 Berkeley so named a plant on pine from Curtis, North Carolina. These are the first we have ever seen excepting the types in Europe (Fig. 1581). It is really an effused (resupinate) species but the margin had loosened and turned up and Berkeley conceived that it was related to *Peziza*, stating, however, "without asci". It is an evidently gelatinous plant and I found it the simplest proposition to see the forked basidia in the type. But the two words — "without asci" are a graphic example of Berkeley's troubles with the microscope at that date. He sent a specimen to Fries (still preserved at Upsala) and he examined it under the microscope and correctly classed it as close to *Dacryomyces*, stating, however, "sporis in apice solitariis". It seems strange to us that Fries did not notice the furcate basidia for they are objects most easily seen nowadays, but of course the imperfections of microscopes then must be taken into account. Although Fries published it Berkeley did not know it apparently, for in his last work he places *Arrhytidia* next to *Merulius* (sic).

Arrhytidia has the basidia and spores of *Dacryomyces* and can be best defined in two words as effused *Dacryomyces*. It is not so effused when soaked up (Fig. 1580) and it is doubtful if it can be held as different from *Dacryomyces*. In 1885 Cragin, a Kansan amateur, who got a little smattering of mycology and then proceeded to exhibit it in the usual way by discovering new genera and species, discovered the genus *Ceracea*. We have not seen the specimen but there is no doubt it is the same genus as *Arrhytidia*. *Ceracea Lagenheimii*, named from South America, is evidently *Arrhytidia flava*. The "structure", basidia and spores of *Arrhytidia*, *Guepinia*, *Dacryomyces* and all this class of plants show little difference, and given that it is pale yellow color, our figures are all that is necessary to describe it. We present a figure (1581) of the type, dried, and photographs of specimens (Fig. 1580) soaked and dried, from Miss Hibbard.

XYLARIA CORNIFORMIS (Fig. 1582).— Club cylindrical, obtuse, black with an even surface; wrinkled in drying. Stipe short from a thick, pannose base. Stroma solid, white. Ostioles not visible to the eye. Spores 4-5 X 10-12, sometimes specimens with spores shorter and broader, 5 X 8, and I have specimens with spores 6-7 X 12-14.

It usually grows singly on logs and sticks. Rarely caespitose. Usually cylindrical, sometimes flattened. Usually simple

club, rarely two from a stem. Generally obtuse, rarely acute. It is frequent in the States, rare in Europe. In the tropics it is generally smaller than in the temperate regions and more flattened and irregular. Then it is called *Xylaria rhopaloides* but is really the same species.

Isaria flabelliformis is supposed to be the conidial form of *Xylaria corniformis*. We have long contended that it was an error but of late years specimens that seem to confirm it have reached me from three correspondents.

Xylaria corniformis has a general resemblance to *Xylaria polymorpha* and Fries admits that he confused them at first. It may be recognized by its pannose base, smaller spores and by its habits. It usually grows singly (sometimes gregariously but very rarely caespitose) on logs and even small branches.

In American mycology Peck recorded *Xylaria corniformis* as *Xylaria castorea*. My statement that he somewhere so called *Xylaria fusca* was an error due to relying on a faulty memory instead of looking up my notes. Schweinitz recorded the species as *Xylaria bulbosa*, a rare species in Europe that I do not know excepting from books, but which differs in habits growing in the ground in fallen pine needles. It has never been found with us. Rehm determined *Xylaria corniformis* for Dearness as "*Xylaria leprosioides*", I suppose a "new species" although he determined *Xylaria biceps* for Rick under the same name. For Atkinson, Rehm determined the same species or rather the slender form of it (*X. rhopaloides*) as "*Xylaria aphrodisiaca vel approxima*". Rehm's ideas of *Xylaria* species was very vague.

We present in Fig. 1582 the extreme forms that *Xylaria corniformis* takes, but it is misleading for as a rule *Xylaria corniformis* is a rather uniform species. Rarely it takes misshapen forms as shown, Fig. 1583 from Rev. Rick.

XYLARIA VIOLACEO-PANNOSA (Fig. 1584).— While it has a distinct violaceous color, surely it should be referred as Theissen refers it to *Xylaria corniformis*. Spores 4 X 8.

XYLARIA RHOPALOIDES (Fig. 1585).— In the tropics *Xylaria corniformis* takes slender forms and usually is irregular in shape and more flattened and the pannose base is not so strongly developed. These are called *Xylaria rhopaloides*. It was so distributed (as *Sphaeria*) in the old Kunze *exsiccata*, and the name was used by Montagne but it was not described. It is the common form in the tropics and rarely specimens are collected in the States which are better referred to it than to the usual form.

ADDITIONAL DALDINIAS

Since our article on this genus was published we have noted two species in the New York Botanical Garden that we had not seen before.

DALDINIA CLAVATA. When our article was printed we had no specimen suitable for illustration, but we found one at New York among the unnamed *Xylarias*. We present a photograph (Fig. 1586) and a section. It is the only cylindrical *Daldinia* known.

DALDINIA HIBISCUS (Fig. 1587).— This is the smallest *Daldinia* we have noted. Globose, sessile, about a half cm. in diameter. Surface black, laccate. Context soft, white with narrow carbonous zones. Spores 6 X 12.

This plant was collected in the Philippines (Merrill 4115) and named and published by Hennings as *Hypoxylon Hibiscus*. Of course it would be unkind to comment on the facility with which Hennings discovered "new species" without knowing the elementary differences between the "old genera". We do not know whether it is a valid "new species" or not, as we have not worked over the foreign *Hypoxylons* in the museums and the plant is liable to have been named as "*Hypoxylon*" by others besides Hennings.

DALDINIA MURRILLII (Fig. 1588).— Plant with a globose head and a slender, distinct stipe. Surface black, laccate. Context dark with darker, carbonous zones. Spores 6 X 12. Among the *Daldinias* this is unique in its slender stipe, the only species known with a globose head and slender stipe. There are two collections at New York (Nos. 292 and 295) made by Dr. Merrill in Mexico. In addition I found in the Ellis herbarium a single specimen without locality which Ellis had referred to *Daldinia loculata* from "America". But *Daldinia loculata* was one of Leveille's discoveries, known to every one else as *Daldinia concentrica* and the type at Paris has no stipe at all.

DIPLODERMA PARVISPORA FROM DR. J. B. CLELAND, NEW SOUTH WALES (Fig. 1589).— The genus *Diploderma* was considered *Myc. Notes*, page 641. The species are of rare occurrence and only known from Australia. The proper classification of the genus is in much doubt. The spores and greenish gleba suggest phalloids. The general habits are hypogaeal but the spore mass without cells removes it from the true *Hymenogasters*.

Plant 2-3 cm. in diameter. Exoperidium about 1 mm. thick, rigid, the surface covered with adhering clay. Endoperidium thinner, about 1/2 mm. Gleba greenish olive, composed chiefly of a mass of spores with scanty, cobwebby, hyaline capillitium. Spores 6 X 8, elliptical, subhyaline, smooth. This species differs from those previously considered in its small spores and greenish gleba.

HYPOXYLON MALLEOLUS, FROM CHAS. H. BAKER, FLORIDA (Fig. 1590) We dislike to publish on *Hypoxylons* for we have never looked up the historical specimens, and the current names are liable to be wrong. However, this very peculiar species was supposed to have been named by Berkeley as above and was so known to Ellis, we judge from the description correctly. The reason we publish now is to place on record the interesting work Mr. Baker has done in tracing it from the conidial into the ascus state. The stroma of the conidial state is carbonous, not zoned, and the surface is covered with dark, olivaceous, conidial spores. Potash solution is colored decidedly green by them in mass. Under the microscope they appear hyaline, globose, apiculate, 4 mic. in diameter. The surface of the conidial species is even and gives no indications of the peculiar markings of the mature plant.

Hypoxylon Malleolus was named from Carolina by Berkeley and specimens were distributed both in Ellis' and Ravenel's exsiccatae. It is a large *Hypoxylon* and the carbonous stroma is sub-zonate, hence has been called *Daldinia*. The surface is very characteristically marked with little, circular depressions around the papillate ostiole, as shown in Fig. 1591, enlarged. The spores as we measured them are 6 X 20. The species is southern only and we have specimens from Florida from N. L. T. Nelson and of our own collecting. In Fig. 1590 the conidial state, from Mr. Baker, is on the left, the ripe specimens on the right. Fig. 1591, surface of mature plant enlarged, shows the very characteristic ostioles.

HYPOXYLON THOUARSIANUM. This is the same as Ellis named from California, *Hypoxylon occidentale*. It was named by Leveille from Galapagos as *Daldinia Thouarsiana* but it was never a *Daldinia*. I have always thought it the same as *Hypoxylon Malleolus*, but on comparison I now think they are different but they are very close. *Hypoxylon Thouarsianum* has paler stroma and more prominent perithecia. The general nature and size of the plants, spores (5 X 16-20) and peculiar depressions around the ostioles are the same. Our enlargement of the surface (Fig. 1592) will show the most prominent difference, in contrast with Fig. 1591.

Specimen from S. C. Edwards, California, which we referred to *Hypoxylon Malleolus* should have been referred to *Hypoxylon Thouarsianum*.

AURICULARIA DISCENSA FROM REV. J. RICK, BRAZIL (Fig. 1593).— Since it has become the fashion to base a genus of tremellaceous plants on each type of basidia found, the genera have increased at an alarming rate. The genus *Auricularia*, based on the common "Jew's ear" has cylindrical basidia with several septa and a sterigma at each septum. So it is said and so shown in the familiar figure. But we have never seen them as shown. This plant, however, appears to us to have different basidia. They are cylindrical and rarely septate, but we find no sterigmata except the terminal one. In addition the general nature of the plant is not that of any known *Auricularia* but is cerebriform, gelatinous and simulates a *Tremella* rather than an *Auricularia*. The color is pale brown. The spores are 8 X 10, unilateral, with granular contents and are shorter than the usual auricular spores.

EXIDIA DUTHIEI FROM MISS A. V. DUTHIE, SOUTH AFRICA (Fig. 1594)— There are evidently several tremellaceous species in South Africa that do not occur in Europe. We considered two from Miss Duthie on page 536. There is a third one in the consignment.

Exidia Duthiei (Fig. 1594).— Subapplanate with gyrose lobes. Color when soaked almost white, with pale pinkish cast. Papillae numerous but not easily seen being of the same pale color. I do not know another *Exidia* with subhyaline papillae. In addition to the papillae the surface under the microscope is scurfy. Basidia are globose, hyaline, deeply imbedded and when mature deeply four-parted. The slender sterigmata have a broken effect under the glass. Spores hyaline, 8 X 16, cylindrical, curved with granular contents. Its nearest relation is *Exidia albida* of Europe.

POLYSTICTUS FLAVUS (OR IRPEX FLAVUS) FROM OTTO A. REINKING, PHILIPPINES (Fig. 1595).— A rather common species in the tropics takes *IrpeX* and *Polystictus* forms which are very puzzling but are connected by many intermediate collections. We present in our figure the *IrpeX* form (Fig. 1596) and the *Polystictus* form (Fig. 1595). The beginner would hardly consider them the same, but in practice so many intermediate forms are received that it is impossible to hold them as other than the same species.

The history is also interesting. Junghuhn in early days gave a fine figure, from Java, of *Polystictus flavus*, and as the usual plant is a *Polystictus* it appears to us that on its merits his name should be used. Klotzsch named the *IrpeX* form as *IrpeX flavus*, a coincidence as to the specific name, but he made a mistake and attributed it as an arctic species. It is a tropical species and does not even grow in temperate regions, much less in the Arctics. As the specific name is the same it does not matter much whether one writes Junghuhn or Klotzsch after it, excepting that it is misleading to apply a name to a tropical plant that was proposed only for a supposedly arctic plant. Those who follow it should justify their selection by some other argument than a display of dates.

CORDYCEPS SINENSIS

We are indebted to Prof. N. Gist Gee for additional notes on the Chinese history of *Cordyceps sinensis*, as follows: Reference to this insect is found in Chinese botany as long ago as two thousand years. As a medicine it is used only as a tonic. It is said by the Chinese that the grass-like growth from the top of the head is a tonic for the upper part of the body, and that the body of the worm is a tonic for the lower part of the body. It is used by the Chinese in three ways: First when dry it is beaten into a powder and taken in that form. Second, the powder is mixed with other tonics and put into water and taken in that form as medicine. Third, this powder is also stuffed into ducks' stomachs and thus eaten. This is considered a delicacy and sometimes served to guests. In this form it is called Tsong Tsao Yah dz. When gathered the worm is sold to shopkeepers who handle it in the regular way. It is found in level, grassy spots, whether down between the mountains or higher up. I am told it is not found in Chinese Szechuen but is found only in the mountainous highlands of Chinese Tibet. That is as far as Szechuen is concerned. In what other parts of Tibet or China this insect may be found I do not know. I am told that the worm is gathered in the third and fourth Chinese month. It is found with the fungus grass-like growth projecting above the ground. This is said to be greenish and resemble grass. The worm is beneath the ground. So the Chinese say a grass seed has by some chance dropped on the head of this worm and that it has taken root and grown there. They suppose the fungus is a sort of grass. Those who gather this worm, whether natives or Chinese, carry a little instrument along and when they see this fungus growth above the ground they simply scoop worm and all out bodily. Then the worms are sold to the shops, being dumped into a bag or anything convenient. They are then carefully cleaned with a brush, put into proper shape to dry, and are thus ready for the market.

MYCOLOGICAL NOTES—C. G. LLOYD—PLATE 124.



Fig. 1497. *Gyromitra esculenta*.



Fig. 1498. *Polystictus aculeifer*.



Fig. 1499. *Polyporus subrenatus*.



Fig. 1500. *Hydnum pergamenum*.

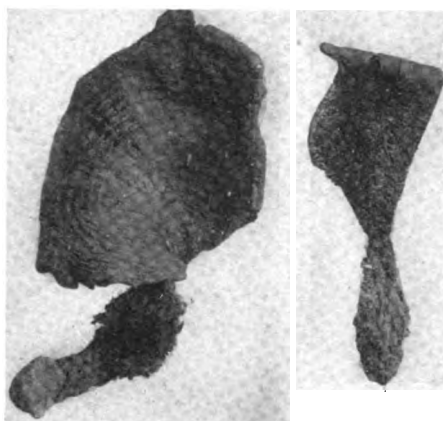


Fig. 1501. *Hydnum spathulatum*.

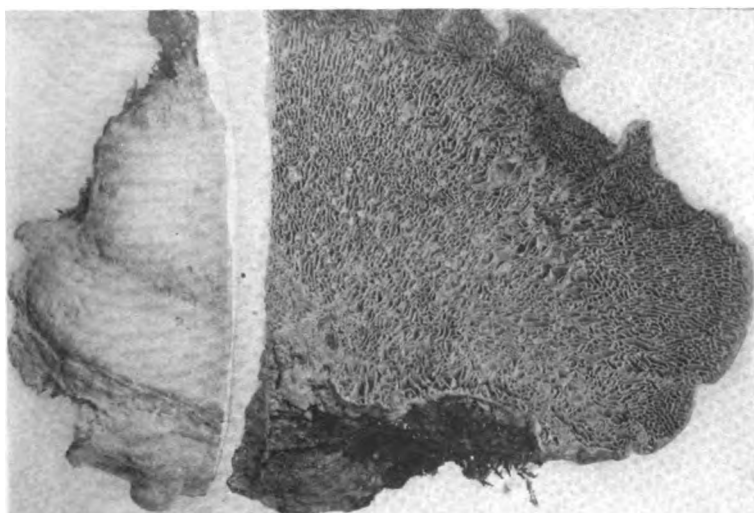


Fig. 1502. *Lenzites albolutea*.

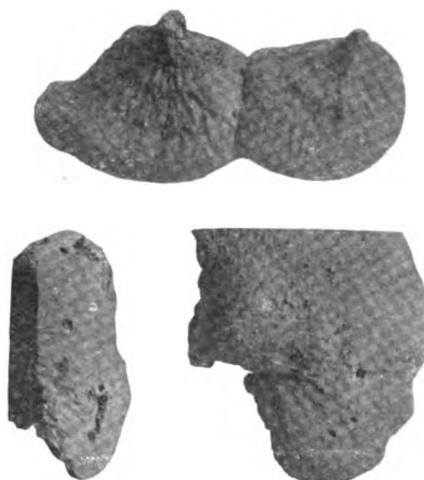


Fig. 1503. *Polyporus elatinus*.

MYCOLOGICAL NOTES—PLATE 125.

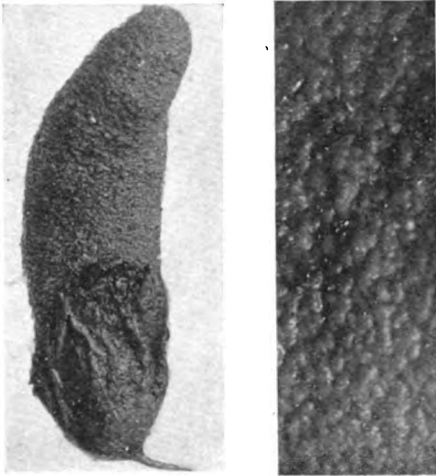


Fig. 1504. *Mutinus simplex*.

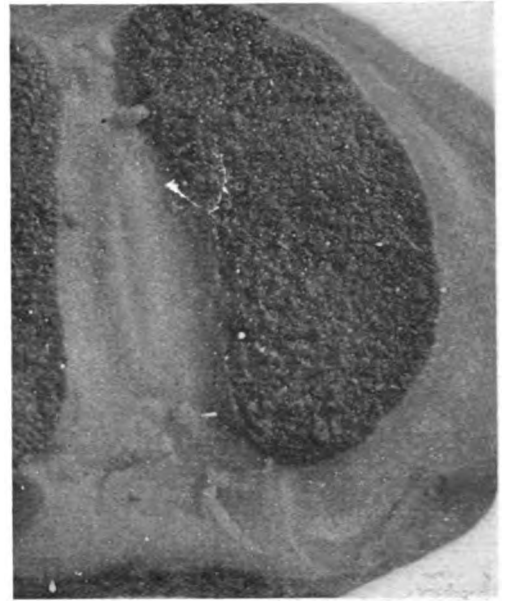


Fig. 1505. Phalloid egg (enlarged).



Fig. 1506. Phalloid egg (section).



Fig. 1507. *Polysicctus microloma*.

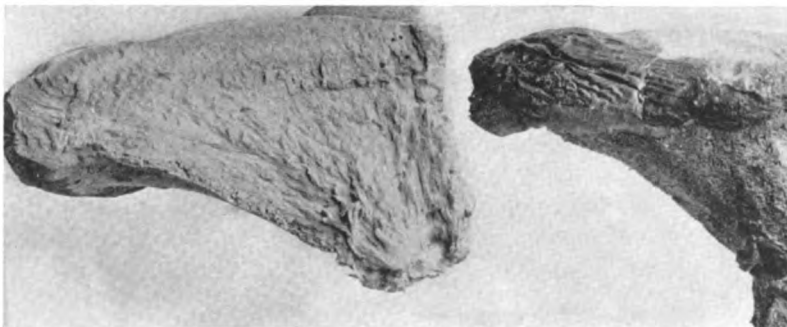


Fig. 1508. *Polyporus mollitextus*.



Fig. 1509. *Mucronella alba*.



Fig. 1510. *Guepinia fissa*.

MYCOLOGICAL NOTES—PLATE 126.



Fig. 1511. *Lentinus blepharodes*.



Fig. 1512. *Lentinus similis*.



Fig. 1513. *Polyporus (Amaur.) niger*.

MYCOLOGICAL NOTES—PLATE 127.



Fig. 1514. *Cantharellus buccinalis*.

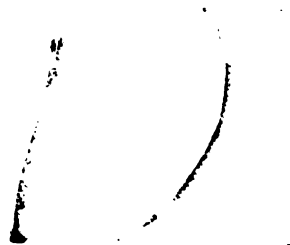


Fig. 1515. *Polyporus Cantharellus*.

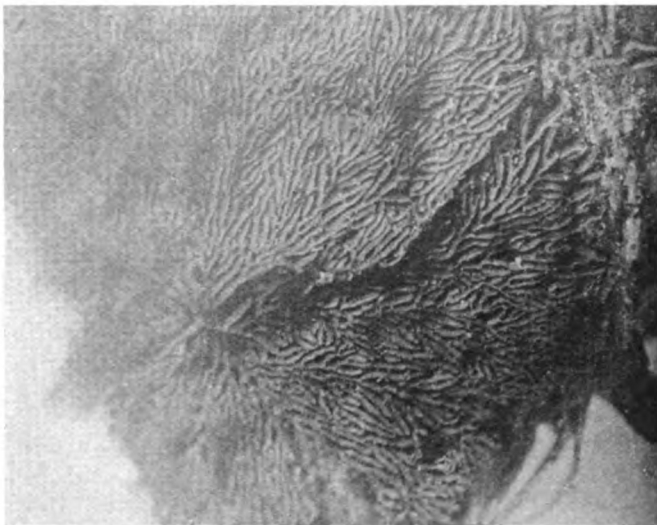


Fig. 1516. *Glonium stellatum* (enlarged).



Fig. 1517. *Bovistoides simplex*.



Fig. 1518. *Capillitium*.

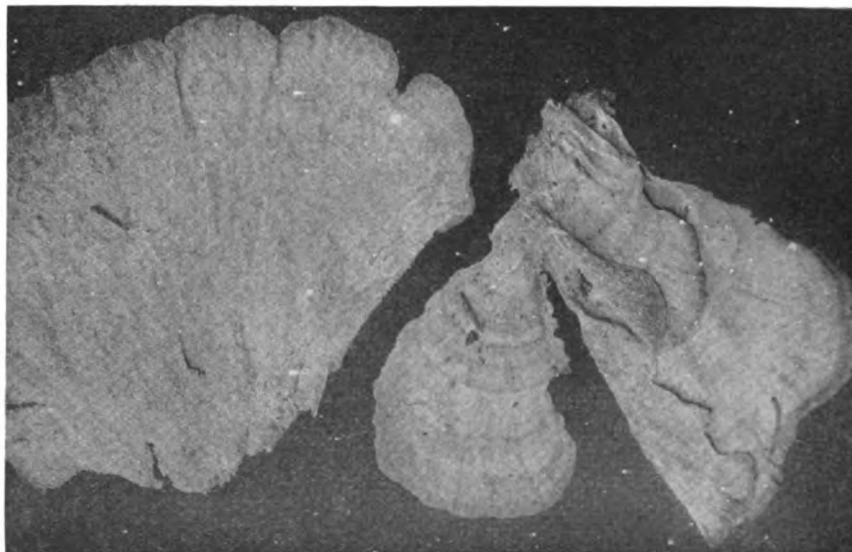


Fig. 1519. *Polyporus venulosus*.

MYCOLOGICAL NOTES—PLATE 128.

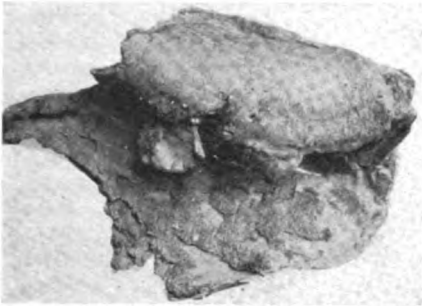


Fig. 1520. *Polyporus zonatus*.



Fig. 1521. *Trametes variiformis*.

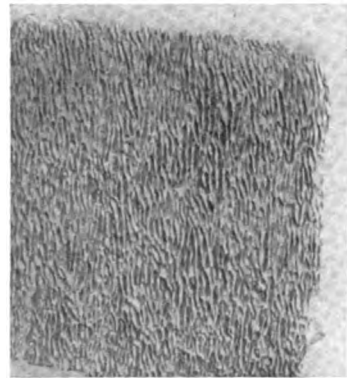


Fig. 1522. *Trametes variiformis* (resupinate).



Fig. 1523. *Isaria Peckoltii*.



Fig. 1524. *Polystictus subreflexus*.



Fig. 1525. *Hexagona lignosa*.



Fig. 1526. *Stereum durum*.

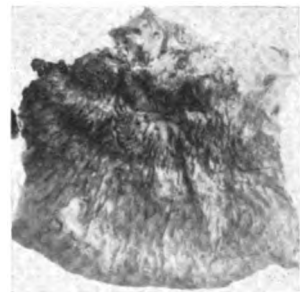


Fig. 1527. *Polyporus telphroleucus* var. *scruposus*.

MYCOLOGICAL NOTES—PLATE 129.

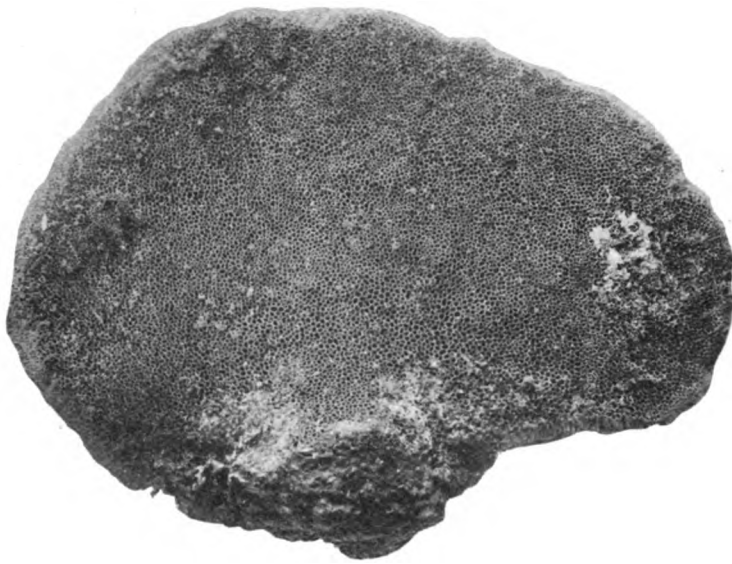


Fig. 1528. *Fomes San Janii*.



Fig. 1529. *Mitrula rosea*.

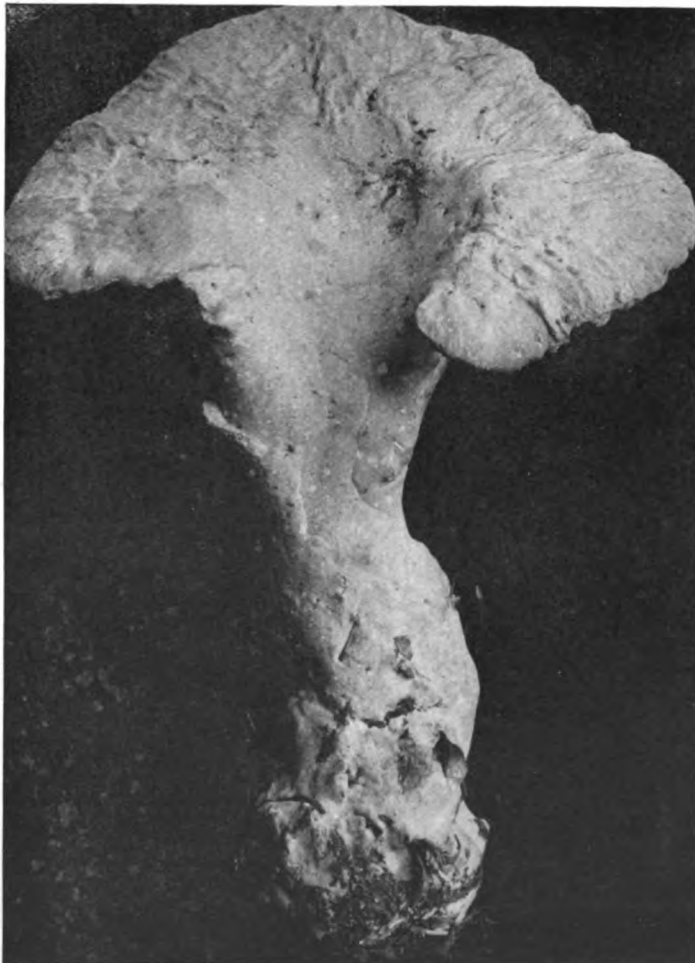


Fig. 1530. *Lenzites repanda* (long stem.)

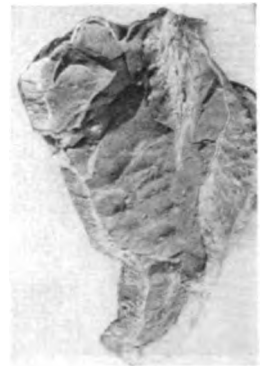


Fig. 1531.
Ptychogaster africanus.

MYCOLOGICAL NOTES—PLATE 130.

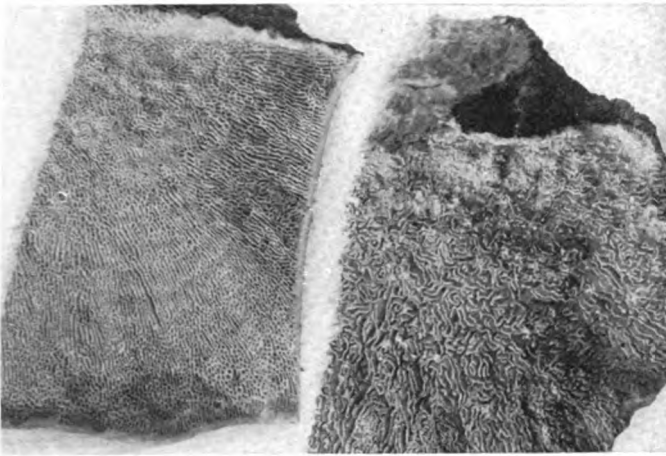


Fig. 1532. *Lenzites repanda*.

Fig. 1533. *Lenzites Muelleri*.



Fig. 1534. *Stereum nigropum*.

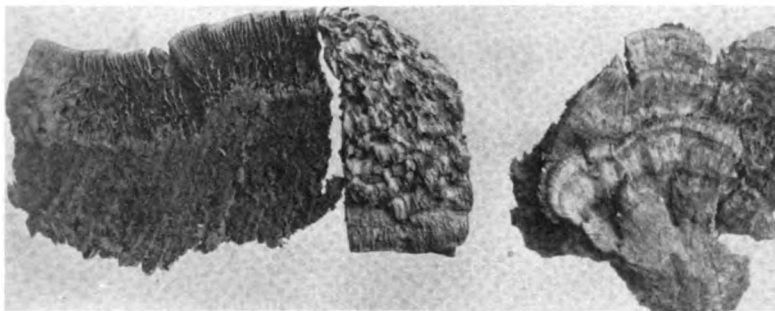


Fig. 1535. *Lenzites Clelandii*.

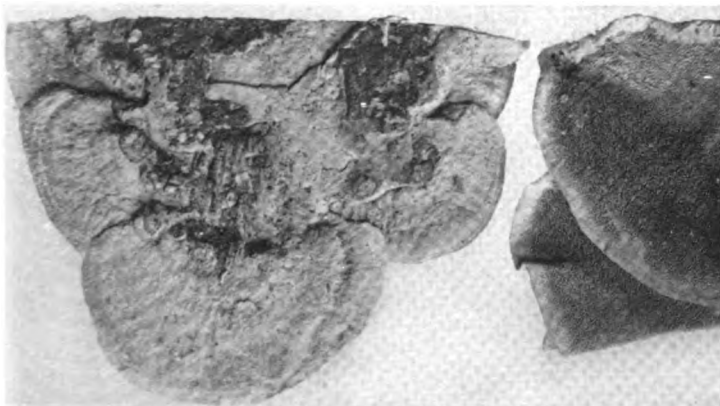


Fig. 1536. *Polystictus subcrocatus*.



Fig. 1537. *Polyporus intactilis*.

MYCOLOGICAL NOTES—PLATE 131.



Fig. 1539.
Septobasidium ramealis.



Fig. 1540. *Septobasidium fissolobatum.*



Fig. 1538. *Septobasidium alatum.*



Fig. 1541. *Calvatia Bresadolae.*

MYCOLOGICAL NOTES—PLATE 132.

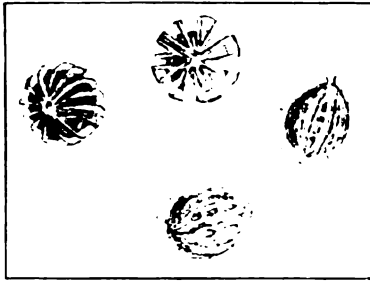


Fig. 1542. Spores of *Polyporus costatus*.



Fig. 1543. *Hymenogaster arenarius*.



Fig. 1544. Spores of *Hymenogaster*.

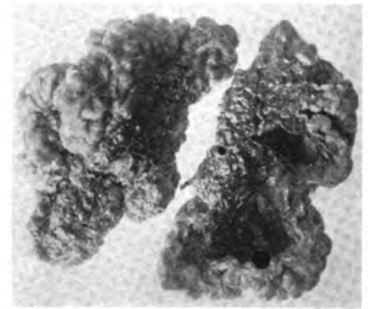
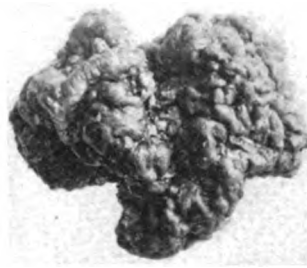


Fig. 1545. *Rhizopogon cerebrinum*.



Fig. 1546. *Thelephora gelatinoidea*.



Fig. 1547. *Lachnocladium cristatum*.

MYCOLOGICAL NOTES—PLATE 133.



Fig. 1548. *Polystictus striatulus*.



Fig. 1549. *Polystictus squamaeformis*.



Fig. 1550. *Xerotus Philippensis*.



Fig. 1551. *Calocera corticalis*.



Fig. 1552. *Polyporus nongravis*.



Fig. 1553. *Catastoma Duthiei*.



Fig. 1554. *Polyporus euzonatus*.

MYCOLOGICAL NOTES—PLATE 134.



Fig. 1555. *Xylaria Schweinitzii*.



Fig. 1556. *Xylaria furcata*.



Fig. 1557. *Xylaria dichotoma*.

MYCOLOGICAL NOTES—PLATE 135.



Fig. 1558. *Xylaria nigripes*.



Fig. 1559. *Xylaria Brasiliensis*.

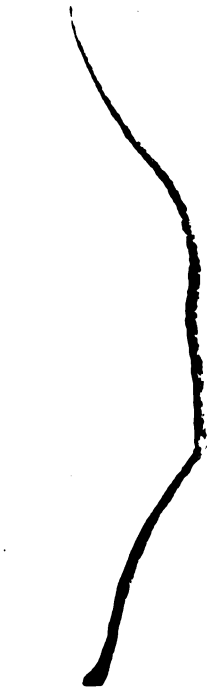


Fig. 1560. *Xylaria muscandae*.



Fig. 1561. *Xylaria brachiata*.

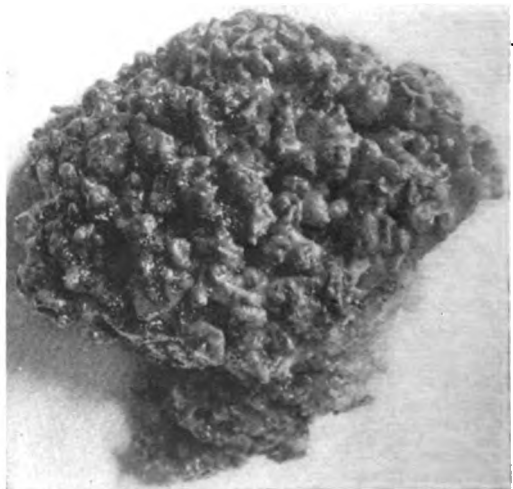


Fig. 1562. *Tremella sparassoides*.

MYCOLOGICAL NOTES—PLATE 136.

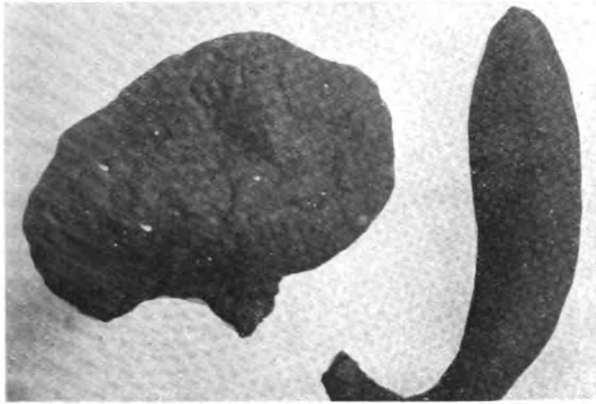


Fig. 1563. *Xylaria allantoidea*.



Fig. 1564. *Xylaria nigrescens*.



Fig. 1565. *Xylaria comosa* (conidial).



Fig. 1566. *Xylaria carpophila*.



Fig. 1567. *Xylaria pyramida:a*.



Fig. 1568. *Xylaria grammica* (surface enlarged).



Fig. 1569. *Xylaria cinnabarina*.

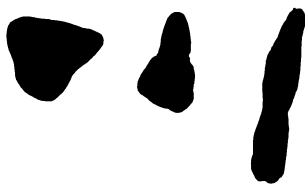


Fig. 1570. *Xylaria Timorensis*.



Fig. 1571. *Xylaria anisopleura*.

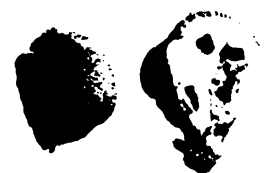


Fig. 1572. *Xylaria luteostromata*.

MYCOLOGICAL NOTES—PLATE 137.



Fig. 1573. *Polystictus Houstonii*



Fig. 1574. Cornell Mycological Class.

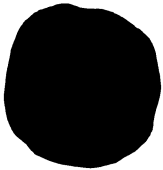


Fig. 1575. *Catastoma Uplandii*.



Fig. 1576. *Catastoma Brandegeei*.



Fig. 1577. *Exidia Uva passa*.



Fig. 1578. *Polystictus* subcongener.

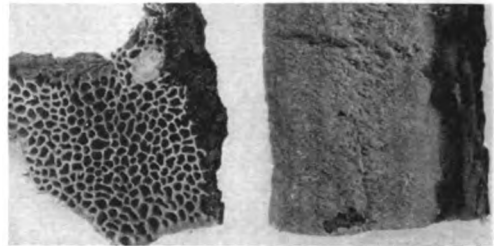


Fig. 1579. *Trametes Burchellii*.

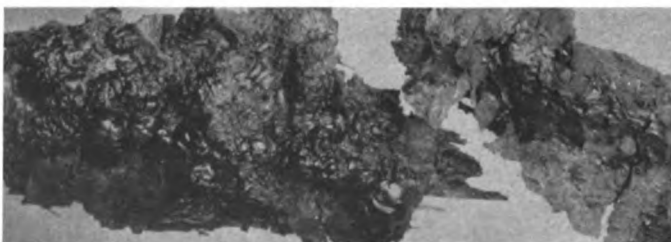


Fig. 1780. *Arrhytidia flava*.



Fig. 1781. Same type.

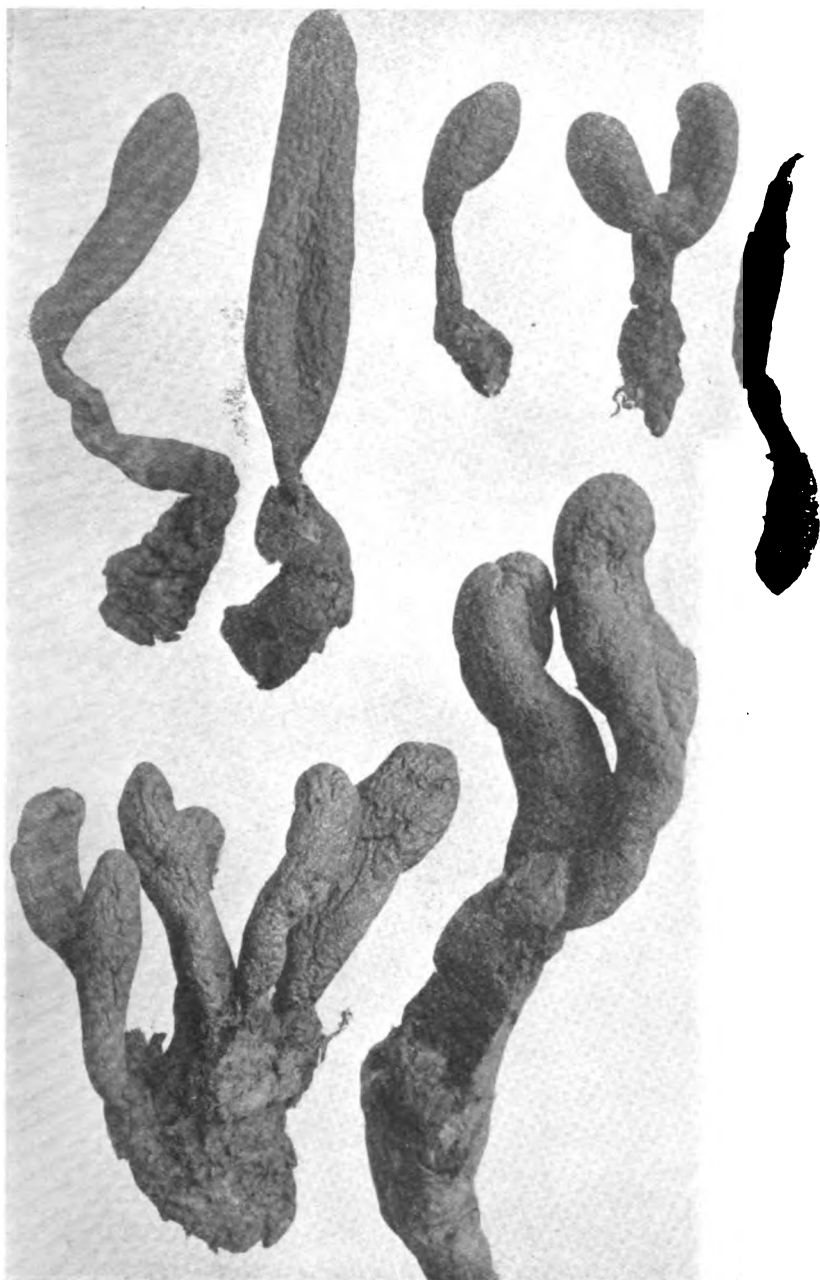


Fig. 1582. *Xylaria corniformis*.



Fig. 1783.
Xylaria corniformis misshapen.

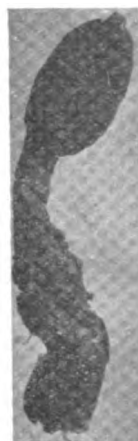


Fig. 1584.
Xylaria violacea-pannosa.

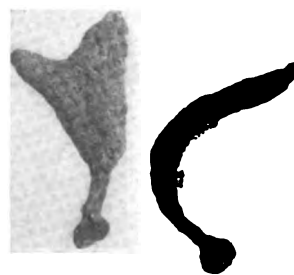


Fig. 1585.
Xylaria rh. paloides.

MYCOLOGICAL NOTES—PLATE 139.



Fig. 1586.
Daldinia clavata.

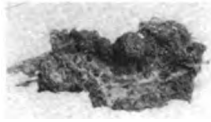


Fig. 1587.
Daldinia Hibiscus.



Fig. 1588.
Daldinia Murrillii.

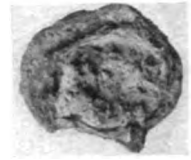


Fig. 1589.
Diploderma parvispora.



Fig. 1590. *Hypoxylon Malleolus*.



Fig. 1591. Same, surface enlarged.

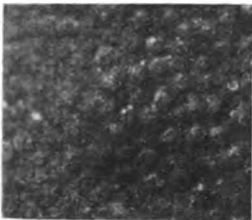


Fig. 1592. *Hypoxylon Thouarsianum*
(surface enlarged).

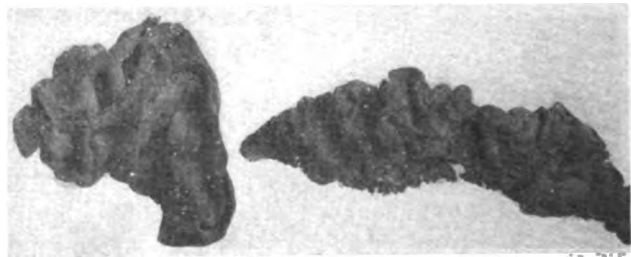


Fig. 1593. *Auricularia discensa*.



Fig. 1594. *Exidia Duthiei*.



Fig. 1595. *Polystictus flavus*.



Fig. 1596. Same.

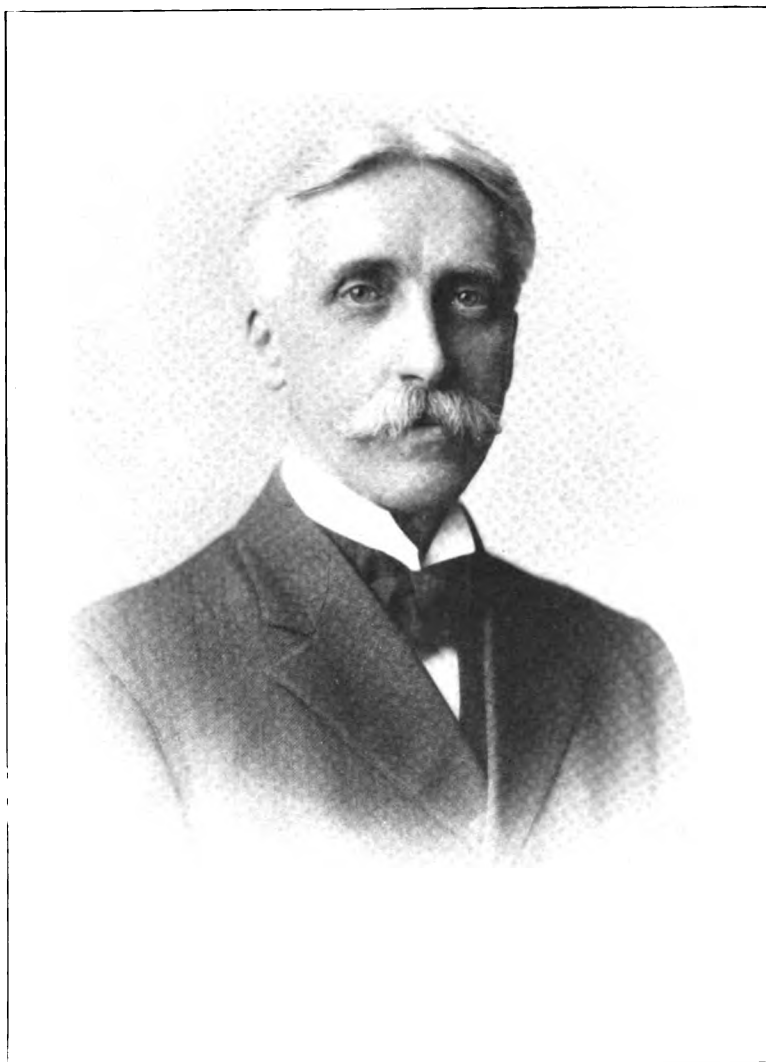
MYCOLOGICAL NOTES.

By C. G. LLOYD.

Plates for No. 62.

CINCINNATI, O.

FEBRUARY, 1920.



PROFESSOR J. C. ARTHUR

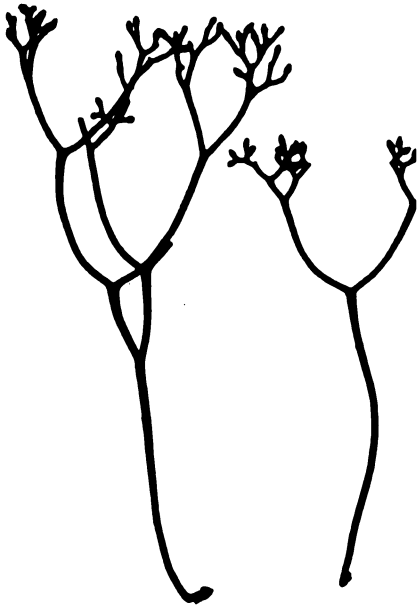


Fig. 1598. *Thamnomycetes Chamissonis*.



Fig. 1599. *Thamnomycetes Chamissonis* X sixfold.

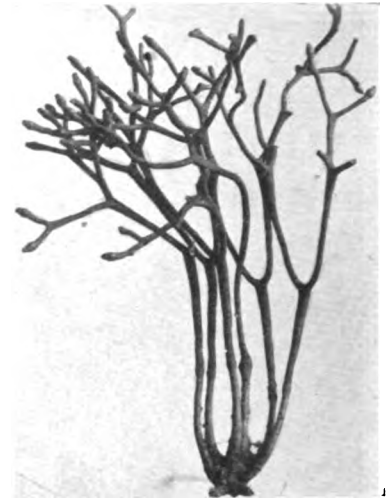


Fig. 1603. *Thamnomycetes dendroidea*.



Fig. 1600. *Thamnomycetes camerunensis*.

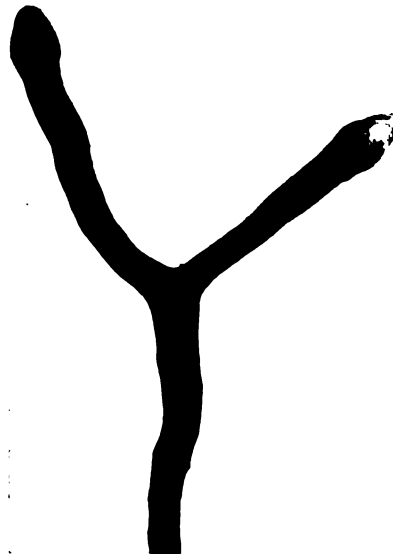


Fig. 1601. *Thamnomycetes camerunensis* X sixfold.



Fig. 1602. *Thamnomycetes camerunensis* X sixfold.



Fig. 1604. *Thamnomycetes audina*.



Fig. 1605. *Polyporus cyathoides*.



Fig. 1606. *Laschia Chippii*.



Fig. 1607. *Lenzites abietis*.

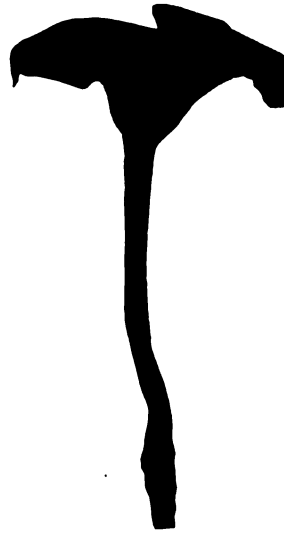


Fig. 1609. *Polystictus perennis*.

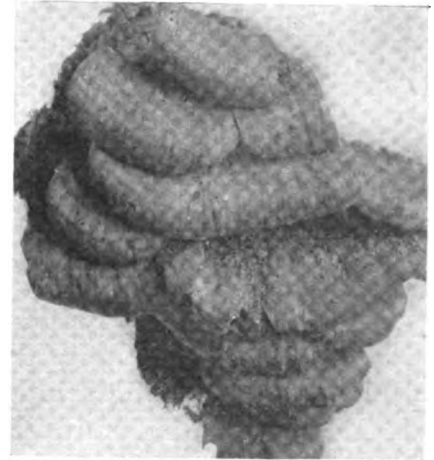


Fig. 1610. *Polystictus dilatatus*.



Fig. 1608. *Polystictus perennis*, minor.

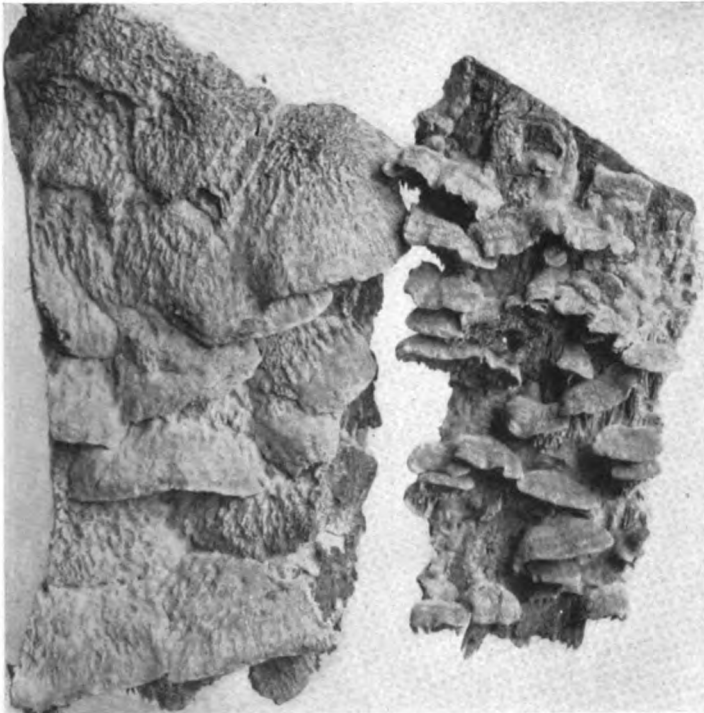


Fig. 1611. *Irpex crassitatus*.



Fig. 1612. *Irpex lacteus*.



Fig. 1614. *Xylaria Kedahae*.



Fig. 1615. *Schizophyllum commune*.



Fig. 1616. *Glaziella splendens*.



Fig. 1617. *Xylaria myrosurus*.



Fig. 1618. *Cordyceps Scotianus*.



Fig. 1619. *Cordyceps crinalis*.



Fig. 1622. *Cordyceps Gryllotapae*.



Fig. 1621. *Cordyceps Japonica*.

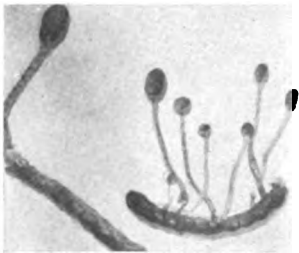
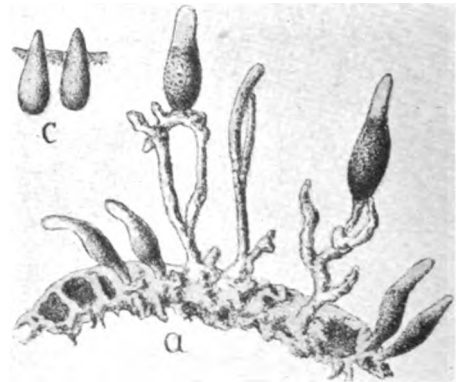


Fig. 1620. *Cordyceps gracilis*.



Figs. 1623 and 1624. *Cordyceps Klenei*.



Fig. 1625. *Cordyceps Klenei* (enlarged).

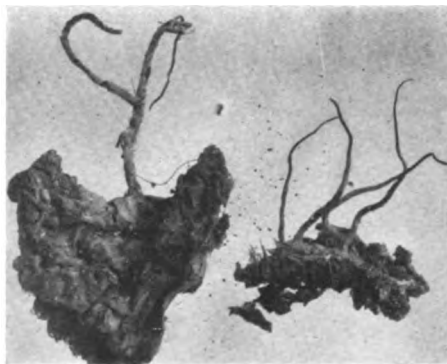


Fig. 1626. *Cordyceps Bombi*.



Fig. 1627. *Cordyceps Bombi* (enlarged).



Fig. 1628. *Cordyceps Rickii*.

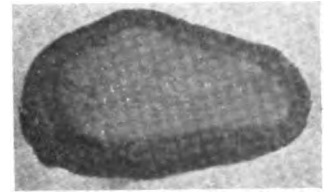


Fig. 1629. *Cordyceps Rickii* (enlarged).



Fig. 1630. *Cordyceps Rickii* (enlarged).



Fig. 1631. *Cordyceps flavella* (enlarged).



Fig. 1632. *Cordyceps flavella* (nat. size).

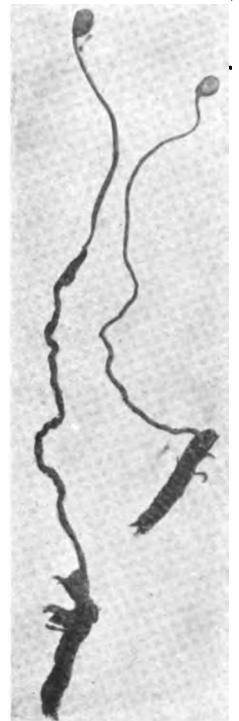


Fig. 1633. *Cordyceps entomorrhiza*.



Fig. 1637. *Isaria Myrmicidae*.



Fig. 1635. *Cordyceps armeniaca*.



Fig. 1634. *Cordyceps bicephala* (enlarged).



Fig. 1636. *Isaria Myrmicidae* (enlarged).

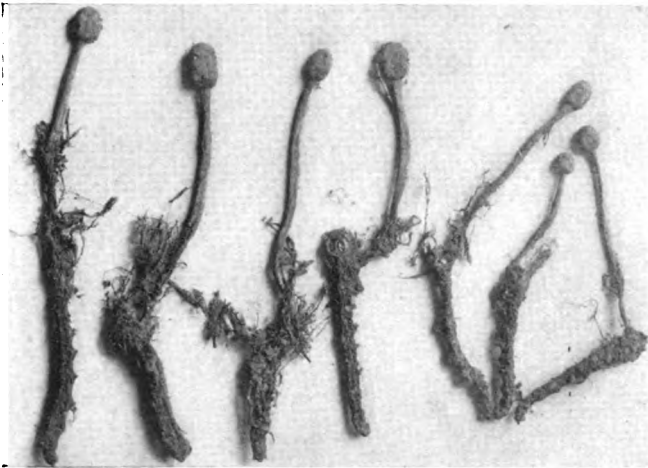


Fig. 1638. *Cordyceps gracilis*.

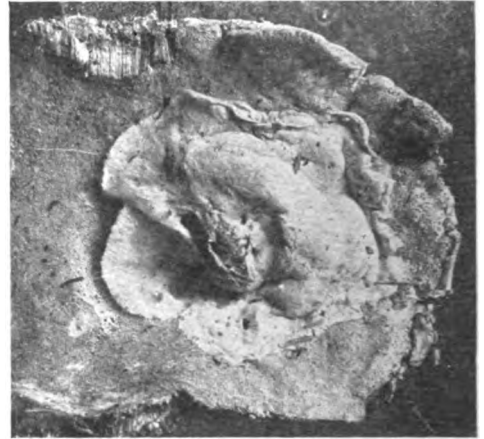


Fig. 1639. *Institale alba*.



Fig. 1640. *Broomeia ellipsospora*.



Fig. 1641. *Hydnum pulcher*.



Fig. 1642. *Polystictus Gleadowii*



Fig. 1643. *Polyporus arenosobasus*.



Fig. 1644. *Sarcoscypha cruciata*.



Fig. 1645. *Isaria crinita*.

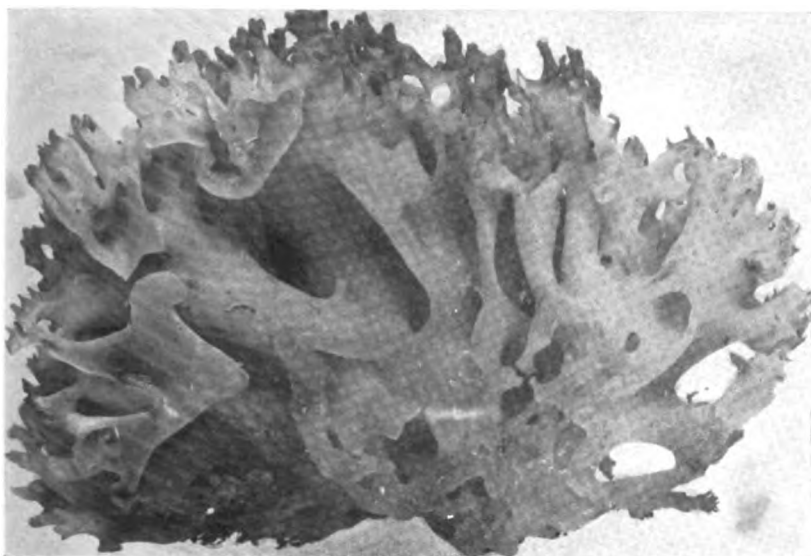


Fig. 1646. *Tremella sparassoidea*.



Fig. 1647. *Polystictus pavonius*.

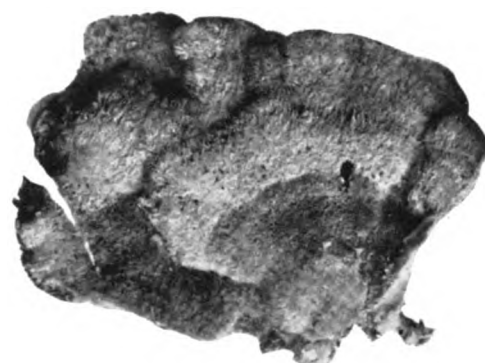


Fig. 1649. *Irpex unicolor*.



Fig. 1648. *Favolus Junghuhnii*.



Fig. 1650. *Irpex unicolor*.



Fig. 1651. *Guepinia Peziza*.



Fig. 1652. *Aleurodiscus apiculatus*.

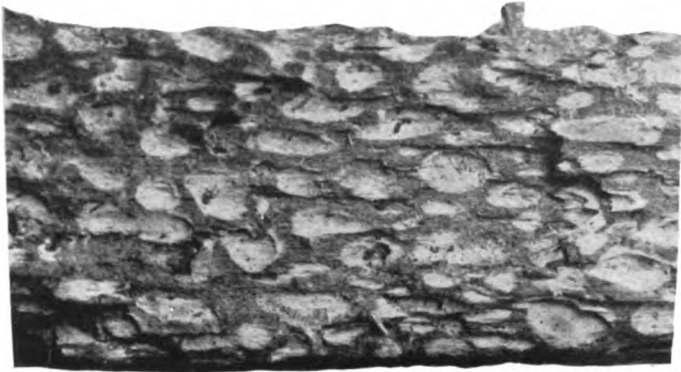


Fig. 1653. Wood rot of *Stereum princeps*.



Fig. 1654. *Echinodothis tuberiformis*.



Fig. 1655. *Echinodothis Orchideacearum*.

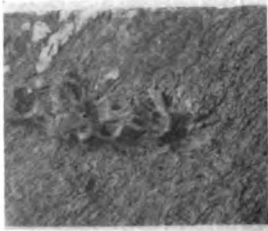


Fig. 1656. *Calocera palmata*.



Fig. 1657. *Calocera palmata* enlarged.



Fig. 1658. *Calocera cornea*.



Fig. 1659. *Dacryomyces australis*.

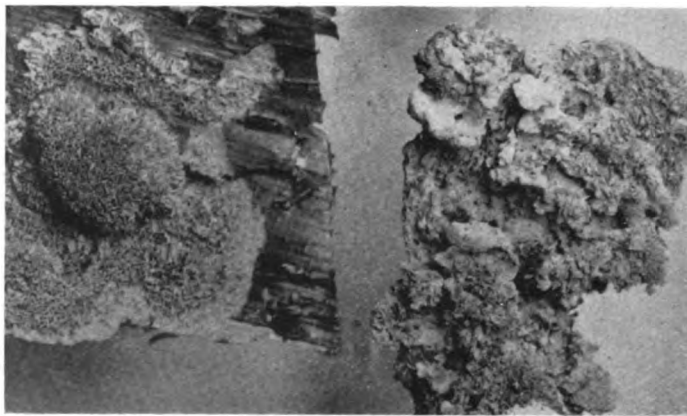


Fig. 1660. *Irpex paradoxus*.

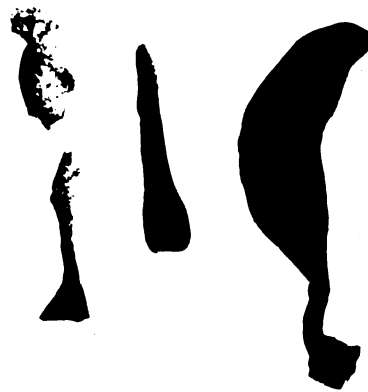


Fig. 1661. *Isaria flabelliformis*.



Fig. 1662. *Botrytis*.



Fig. 1663. *Isaria Cocoa*.



Fig. 1664. *Polyporus nigrolucidus*.



Fig. 1665. *Xylaria botuliformis*.



Fig. 1666. *Aleurodiscus amorphus*.



Fig. 1667. *Aleurodiscus amorphus* enlarged.



Fig. 1668. *Aleurodiscus Grantii*.

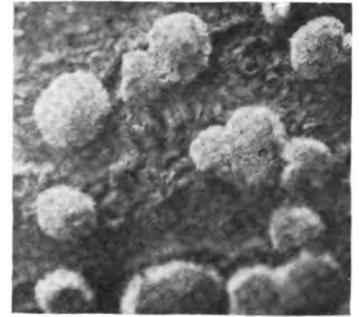


Fig. 1669. *Aleurodiscus Grantii* enlarged.

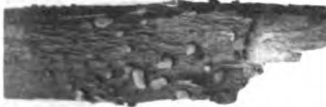


Fig. 1670. *Aleurodiscus Farlowii*.

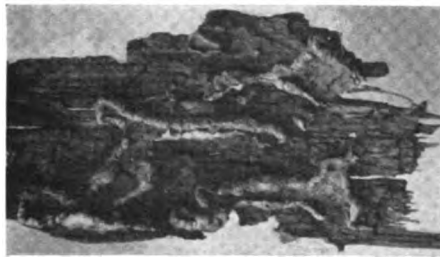


Fig. 1671. *Aleurodiscus Oakesii*.

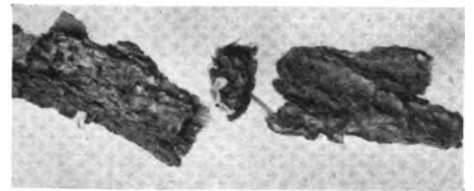


Fig. 1672. *Aleurodiscus Japonicus*.



Fig. 1673. *Aleurodiscus orientalis*.

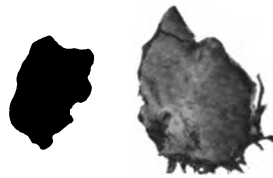


Fig. 1674. *Aleurodiscus disciformis*.



Fig. 1675. *Aleurodiscus candidus*.



Fig. 1676. *Aleurodiscus nivosus*.

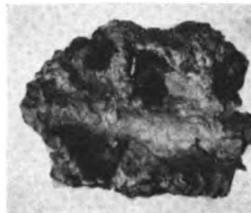


Fig. 1677. *Aleurodiscus strumosus*.



Fig. 1678. *Aleurodiscus crassus*.



Fig. 1679. *Aleurodiscus seriatus*.



Fig. 1680. *Aleurodiscus penicillatus*.

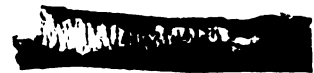


Fig. 1681. *Aleurodiscus macrosporus*.

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Fig. 1682. *Aleurodiscus aurantius*.



Fig. 1683. *Aleurodiscus cerussatus*.



Fig. 1684. *Aleurodiscus tenuis*.



Fig. 1685. *Aleurodiscus Weirii*.



Fig. 1686. *Aleurodiscus vitellinus*.

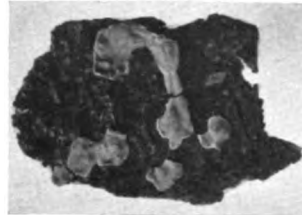


Fig. 1687. *Aleurodiscus capensis*.



Fig. 1688. *Aleurodiscus cornea*.

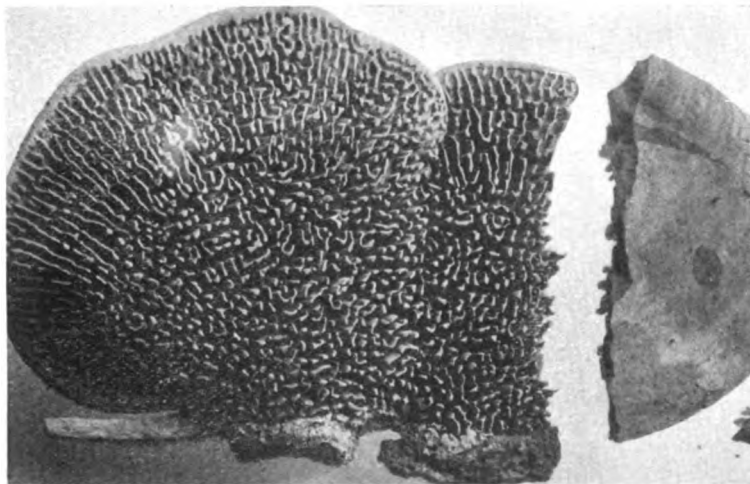


Fig. 1689. *Daedalea Ridleyi*.



Fig. 1690. *Stereum tuberculosum*.



Fig. 1691. *Exidia Zelleri*.



Fig. 1692. *Hydnum sclerodontium*.



Fig. 1693. *Xylaria biceps*.



Fig. 1694. *Xylaria consociata*.



Fig. 1695. *Cordyceps Aemonae*.



Fig. 1696. *Polystictus aequus*.



Fig. 1697. *Polyporus peakensis*.



Fig. 1698. *Trametes variiformis*.



Fig. 1699. *Midotis Heinricherii* (dry).



Fig. 1700. *Midotis Heinricherii* (soaked).



Fig. 1701. *Wynnea Americana*.



Fig. 1702. *Cantherellus multiplex*.

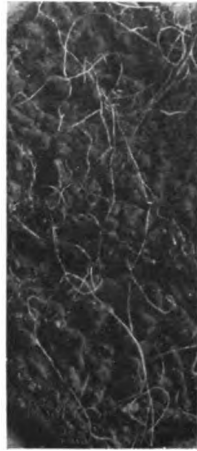


Fig. 1703. *Cantherellus multiplex*, hymenium enlarged.



Fig. 1704. *Echinodia theobromae*.

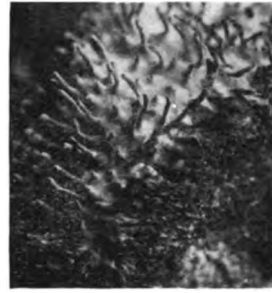


Fig. 1705. *Echinodia theobromae*, stilboid hairs enlarged.



Fig. 1706. *Dacryomyces digressus*.

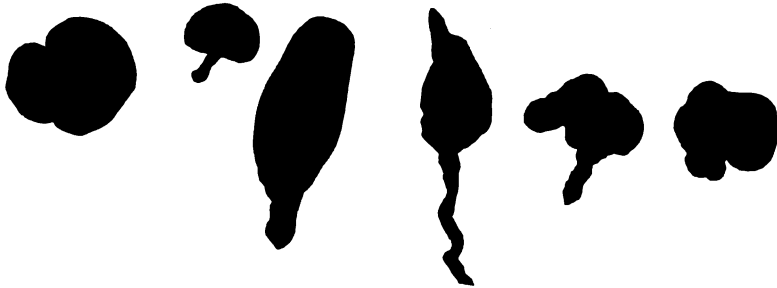


Fig. 1707. *Xylaria Schweinitzii*.

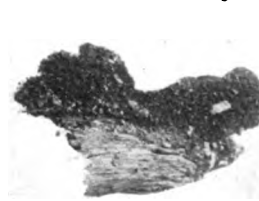


Fig. 1708. *Auricula Totarae*.



Fig. 1709. *Auricula Totarae*, surface enlarged.



Fig. 1710. *Polystictus subcogener*.

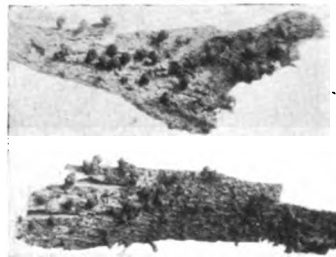


Fig. 1711. *Xylaria ramulata*.



Fig. 1712. *Xylaria ramulata* enlarged.



Fig. 1713. *Xylaria rhizophila*.



Fig. 1714. *Xylaria graminicola*.



Fig. 1715. *Xylaria cupressiformis*.



Fig. 1716. *Lenzites striata*.



Fig. 1717. *Poronia punctata*.

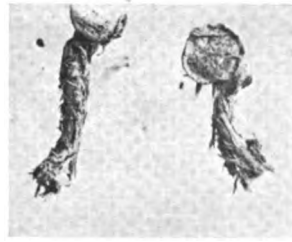


Fig. 1718. *Poronia punctata*.

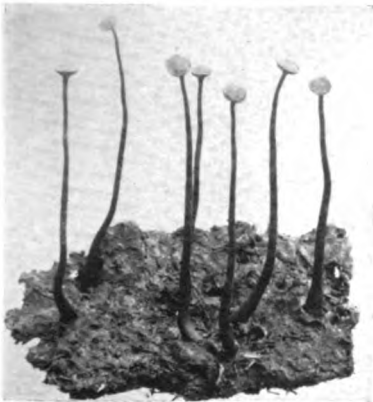


Fig. 1719. *Poronia oedipes*.

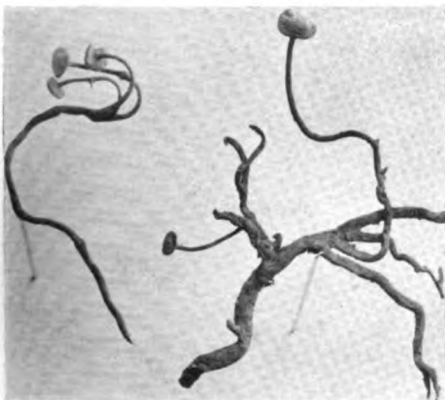


Fig. 1720. *Poronia oedipes* (branched).



Fig. 1721. *Poronia pileiformis*.



Fig. 1722. *Poronia macrorhiza*.



Fig. 1724. *Poria Ehrenbergii*.

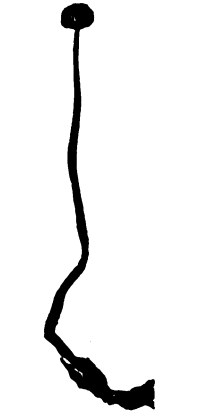


Fig. 1723. *Poria hemisphaerica*.

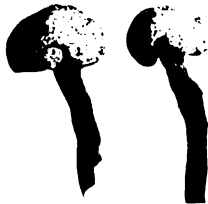


Fig. 1726. *Poria agariciformis*.



Fig. 1725. *Poria Doumetii*.



Fig. 1727. *Poria ustorum*.



Fig. 1728. *Fomes longoporus*.



Fig. 1731. *Fomes Gossweileri*.



Fig. 1729. *Fomes applanatus* Pores X sixfold.

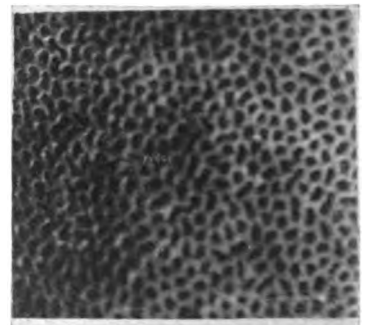


Fig. 1730. *Fomes longoporus* Pores X sixfold.



Fig. 1732. *Polyporus molliculus*.



Fig. 1733. *Polyporus pseudogilvus*.

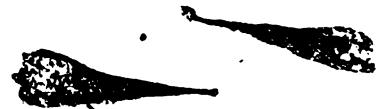


Fig. 1734. *Hydnum luteolum*.

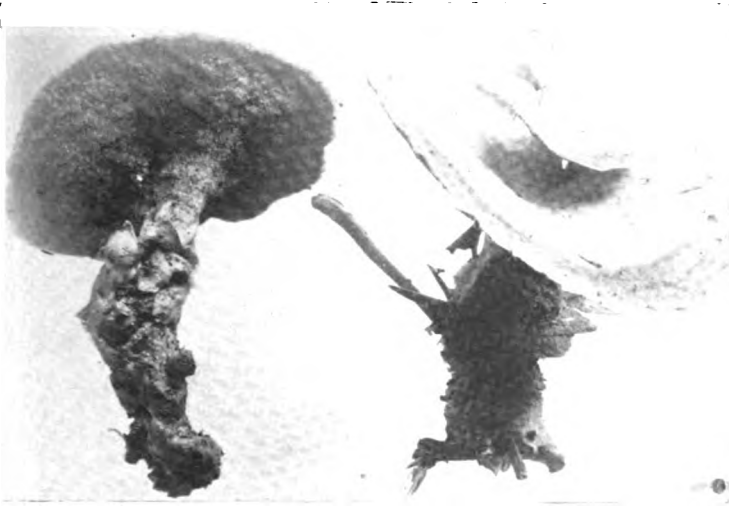


Fig. 1735. *Hydnum adustum*.



Fig. 1737. *Hydnum glabrescens*.

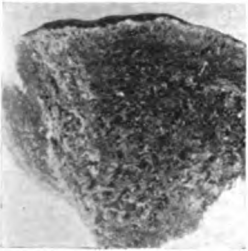


Fig. 1736.
Hydnum adustum (abnormal).



Fig. 1738. *Polystictus expansus*.

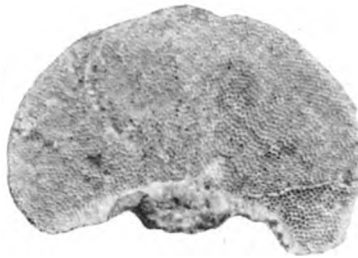


Fig. 1739.
Dendrocladium fruticola.

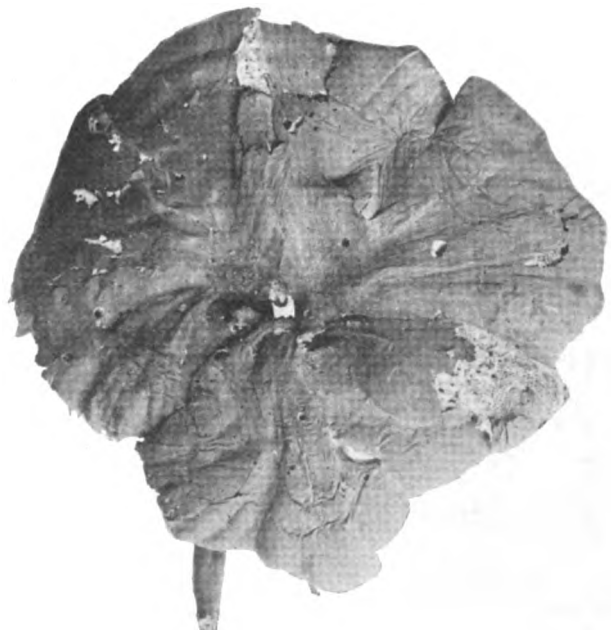
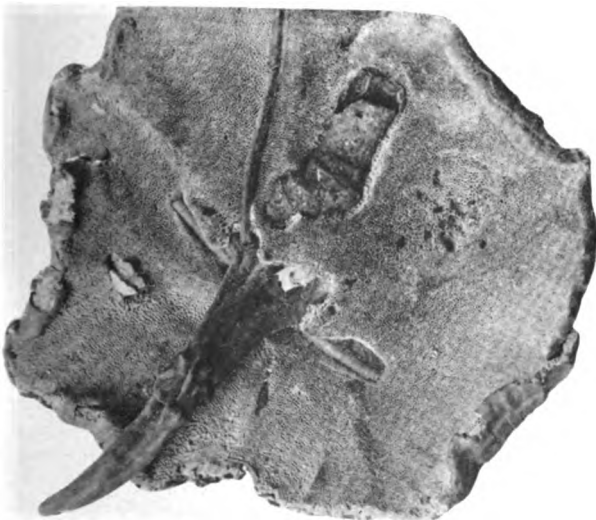


Fig. 1740. *Polyporus (Amaur.) fuscatus*.

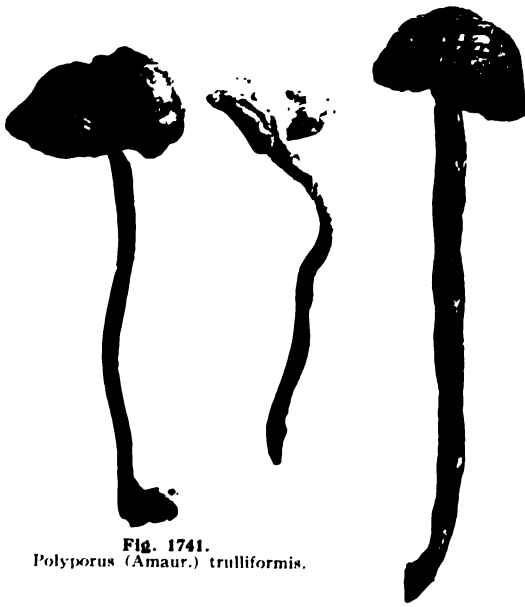


Fig. 1741.
Polyporus (Amaur.) trulliformis.

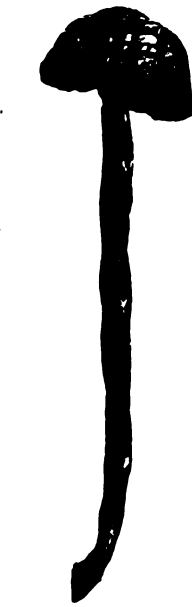


Fig. 1742. *Polyporus (Amaur.) longipes*.

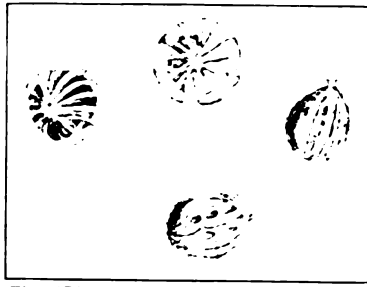


Fig. 1743. Spores of *Polyporus longipes*.



Fig. 1745. *Polyporus luteo-olivaceus*.



Fig. 1744. *Polyporus biogilvus*.

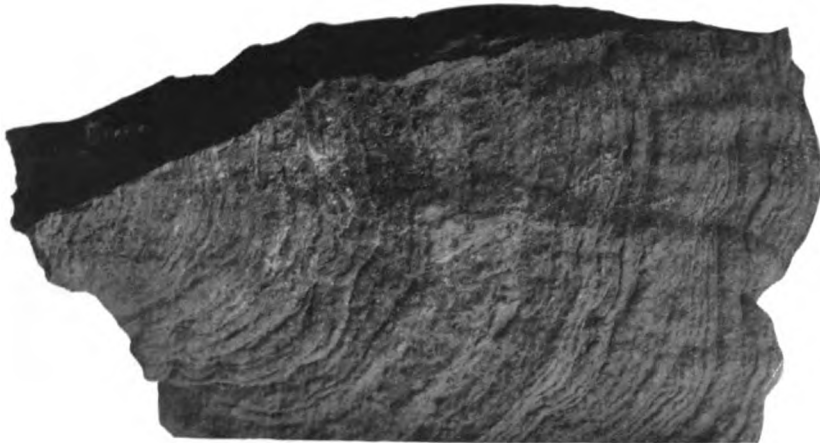


Fig. 1746. *Fomes durissimus*.

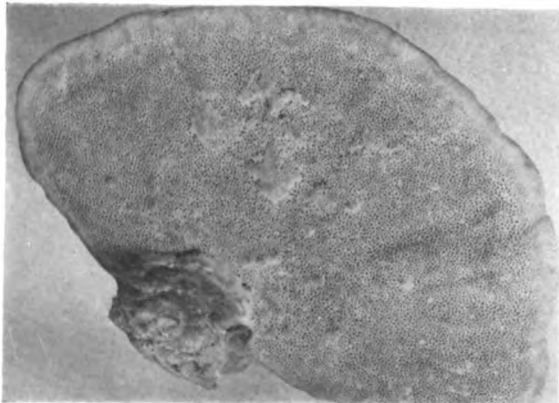


Fig. 1747. *Polyporus Vandykei*.



MYCOLOGICAL NOTES

BY C. G. LLOYD

NO. 62

CINCINNATI, OHIO

JANUARY, 1920.

Our last issue of Mycological Notes in mimeographed form, No. 61, turned out to be far more satisfactory to us than the old method of printing them, and at about one-fourth the cost. We think the future numbers will undoubtedly be issued in this manner as it is far more convenient and we believe better than to be bothered with the printers.

JOSEPH CHARLES ARTHUR

In presenting the photograph of Professor J. C. Arthur, we append a chronological arrangement of the principal events of Professor Arthur's life, which was prepared by Mr. John Hendley Barnhart. Recently while in New York we asked Mr. Barnhart, whom we knew was well informed in such matters, to give us a memorandum of a few of the leading events in Professor Arthur's life in order to prepare an article to accompany his photograph. The following list is the one he submitted, and it seems to us so full and complete that it should be placed on record in its entirety. Mr. Barnhart wrote us that he had submitted the list to Professor Arthur who gave it careful revision, without knowledge of the use to which it was to be put. It is not necessary for us to add anything; in fact, there is nothing we can add. Professor Arthur is one of our leading American botanists and has participated in everything of importance that has taken place in American botany in the last fifty years.

- | | |
|--------------------------|--|
| 1850 | Born January 11, at Lowville, N. Y. |
| 1856 | Parents moved to Charles City, Iowa. |
| 1869 | Entered Iowa State (Agricultural) College. |
| 1872 | Graduated (B. S.) Iowa State College. |
| 1872-1883 | Member, American Association for the Advancement of Science. |
| 1876 | Exhibited herbarium of Iowa plants at Centennial Exhibition, Philadelphia, receiving bronze medal. |
| 1876-1878 | Instructor in botany, Iowa State College. |
| 1877 | Received Master's Degree (M. S.) Iowa State College. |
| 1879 | Graduate student, Johns Hopkins University and Harvard University. |
| 1879-1881 | Instructor in botany, University of Wisconsin. |
| 1882 | Instructor in botany, University of Minnesota. |
| 1883 | Published first papers on Uredinales. |
| 1883-1885 &
1900-1904 | Associate editor, Botanical Gazette. |
| 1883-present | Fellow, American Association for the Advancement of Science. |
| 1884-1887 | Botanist, New York Agricultural Experiment Station, Geneva, New York (first "Station botanist"). |
| 1884-1889 | Original member, Societe Mycologique de France. |
| 1885-1886 | Botanist, Minnesota Geological and Natural History Survey. |

- 1886 Doctor's Degree (Sc. D.) Cornell University.
- 1886 Secretary, section F (biology), American Association for the Advancement of Science.
- 1886-1900 Joint editor and publisher, Botanical Gazette.
- 1886-present Member, Society of the Sigma Xi.
- 1886-present Member, Society for the Promotion of Agricultural Science.
- 1887 Assistant General Secretary, American Association for the Advancement of Science.
- 1887 Published Handbook of Plant Dissection (with C. R. Barnes and J. M. Coulter).
- 1887-1888 Professor of Botany, Purdue University.
- 1887-1893 Member, Indiana Academy of Science.
- 1888-1915 Professor of Vegetable physiology and pathology, Purdue University, and Botanist, Purdue University Agricultural Experiment Station.
- 1888 Spent summer in Europe visiting chief botanical centers (England, France, Germany, Holland and Switzerland).
- 1892 Spent summer in Europe.
- 1892-1893 President, Indiana Academy of Science.
- 1893 Organizer and secretary of the Madison Botanical Congress.
- 1893 Introduced the term ecology into English use for a department of botany.
- 1893 Exhibited physiological apparatus of original design, Columbian Exposition, Chicago, receiving medals and diplomas.
- 1893-1906 Charter member, Botanical Society of America.
- 1893-present Fellow, Indiana Academy of Science.
- 1894-present Corresponding member, Iowa Academy of Science.
- 1895 Vice-president, section G (botany), American Association for the Advancement of Science.
- 1896 Spent summer in Europe; student at Bonn University.
- 1897 Vice-president, Botanical Society of America.
- 1897 Introduced formaldehyde as a fungicide for potato and other plant diseases.
- 1898 Published Living Plants and their Properties (with D. T. MacDougal).
- 1899-1917 Conducted and reported a series of experiments with Uredinales.
- 1901 Married, at Lafayette, Ind., June 12, Emily Stiles Potter.
- 1901 Spent two months in Europe.
- 1901-1902 President Botanical Society of America.
- 1901-present Original member, Association Internationale des Botanistes.
- 1903-1906 Member, American Mycological Society, throughout its brief existence.
- 1903-present Member, Torrey Botanical Club.
- 1904 Speaker, International Congress of Arts and Sciences, St. Louis.
- 1905 Member, International Botanical Congress, Vienna (delegate of the Smithsonian Institution and Botanical Society of America).
- 1905 Traveled in Europe (Austria, England, France, Germany, Hungary, Holland, Italy and Switzerland).
- 1905 Introduced new terminology for spore structure of the Uredinales.
- 1905 Formulated a new classification for the Uredinales.
- 1905-1912 Member, Washington Academy of Sciences.

- 1906-1908 Research scholar, New York Botanical Garden, January of each year.
- 1906-present Original member, newly federated Botanical Society of America.
- 1909-present Member, American Phytopathological Society.
- 1909-present Associate editor, Mycologia.
- 1910 Member, International Botanical Congress, Brussels (delegate of Botanical Society of America, American Phytopathological Society, Torrey Botanical Club, Academy of Natural Sciences of Philadelphia, Washington Academy of Sciences and Indiana Academy of Sciences).
- 1910-present Member, Deutsche Botanische Gesellschaft.
- 1915 Research scholar, New York Botanical Garden.
- 1915-present Professor emeritus of botany, Purdue University.
- 1916 Doctorate (LL.D.), University of Iowa.
- 1917 Research scholar, New York Botanical Garden.
- 1919-present Member, American Philosophical Society.
- 1919-1920 President, Botanical Society of America.

Author of more than two hundred contributions to botanical literature.

In recent years a large part of his time has been devoted to the investigation of plant rusts; he began to specialize in this group of fungi as early as 1833.

THE GENUS THAMNOMYCES

Just about a hundred years ago (1820) Ehrenberg proposed the genus *Thamnomycetes* for specimens collected in Brazil by Chamisso. He gave a characteristic figure and named the species *Thamnomycetes Chamissonis*. Saccardo compiled *Thamnomycetes* as a section of *Xylaria* but to our mind it is quite a different genus. We considered the genus in our first issue of the *Pyrenomycetes* pamphlet, but at that time supposed there was but one species in the section with *Thamnomycetes Chamissonis*. We have now three quite distinct but similar species.

Thamnomycetes as figured and described by Ehrenberg has a carbonous stem, black, repeatedly dichotomously branched, each branch terminating in ovate fruiting bodies. The structure of these bodies as shown both by Ehrenberg and Moeller is that each is hollow and forms a simple carbonous perithecium. Cooke, it is true, proposed and figured a "new species" from British Guiana and showed numerous perithecia in the walls of the fruiting bodies, but it appears from his remarks - "a remarkable species uniting *Thamnomycetes* more intimately with *Xylaria*" that he did not know what the genus *Thamnomycetes* is, for a photograph of his plant can hardly be told from the original species *Thamnomycetes Chamissonis*, and we believe is the same genus notwithstanding the "remarkable" figure he gave, showing perithecia imbedded in the walls.

It is apparent that there are two (probably three) species in Brazil, one with small spores and one with very large spores, and that the small spored species (about 4 x 16) which we received in abundance from Gustave Peckolt, is the original of Ehrenberg. We have not examined Ehrenberg's type at Berlin but Rehm shows a small spore from a specimen from Uhl which he states was "compared with the type". Moeller attributed to *Thamnomycetes Chamissonis*

spores 6-7 X 40-50, but Moeller it appears had a different species.

The genus *Thamnomycetes* may be divided into three sections (four if Cooke was right) as follows:

Section 1, Stem dichotomously branched. Fruiting body hollow of a single perithecium.

Thamnomycetes Chamissonis (spores 4 X 8-12) Fruiting body short, stalked.

Thamnomycetes dendroidea (spores 4-5 X 12) Fruiting body long, stalked.

Thamnomycetes camerunensis (spores 8-9 X 16-28) Fruiting body long, stalked.

Section 2 (*Xylobotryum* in part). As Section 1 but branched compact and spores septate.

Thamnomycetes andinus (as *Xylobotryum*).

Section 3, Stems unbranched. Fruiting body and spores as in Section 1.

Thamnomycetes chordalis.

Thamnomycetes fuciformis.

THAMNOMYCES CHAMISSONIS FROM GUSTAVO PECKOLT, BRAZIL (Fig. 1598 and Fig. 1599, end of branch enlarged).— Stem rigid, black, entirely carbonous, repeatedly dichotomously branched, each branch terminating in a pair of sessile, ovate fruiting bodies. Each fruit body is hollow and contains numerous spores. No trace of the asci is found in the mature plant. Spores mostly 4 X 8, oblong with obtuse equal ends. *Thamnomycetes Chamissonis* was the first species of the genus named and was well figured by Chamisso from Brazil in 1820. It is jet black when wet but dries slightly brownish. A pair of sessile fruiting bodies terminate each branch. Moeller attributes to *Thamnomycetes Chamissonis* a species which in its grosser aspect seems the same but must be different as he gives its spores as 40-50 mic. long.

THAMNOMYCES CAMERUNENSIS FROM T. HUNTER, WEST AFRICA (Fig. 1600 and Fig. 1601 ends of branches enlarged).— Stem rigid, carbonous jet black (both wet and dry) repeatedly dichotomously branched, each branch terminating in a single, ovate fruit body. Spores 8-9 X 16-28. There are also small, subglobose, colored spores, 4-5 X 6 which are probably conidial. We received this plant fresh from R. H. Bunting, Gold Coast, Africa, and referred it to *Thamnomycetes Chamissonis* (cfr. Fig. 850, Large Pyren. page 11). A correct knowledge of the Brazilian plant shows it to be a different species. Of course we do not know with certainty that it is the same that Hennings named from Africa for he gave a crude figure and did not record its spores but we have little doubt of it. Then we received eight specimens from T. Hunter, West Africa. Five of these correspond exactly to Bunting's plant but three have in addition to the usual terminal fruit, axillary fruit of an apparently different type, viz. of several perithecia confluent (Fig. 1602 enlarged). At first we thought it a new type of *Thamnomycetes* but finally concluded that these axillary fruit were not normal and they now appear to me to have grown when the plant had been injured. On general appearance the African plant appears the same as the Brazilian, but a close comparison shows two marked differences, the way the fruit are borne and the great difference in the spore size. *Thamnomycetes camerunensis* of Africa is the

same to the eye as *Thamnomycetes dendroidea* of South America and probably best held as a larger spored form of it.

THAMNOMYCES DENDROIDEA (Fig. 1603).— To the eye this is the same as *Thamnomycetes camerunensis* and probably is the same but the spores (4-5 X 12) are given considerably smaller. It came from British Guiana. Cooke, who named it, gave a figure showing the perithecia imbedded in the walls of the fruiting bodies, but that is contrary to the structure of other species that we know. While we did not examine the type as to this point our photograph (Fig. 1603) gives no indication of it and we have little doubt that its structure is the same as other species, and was shown as different by Cooke simply from his habitual inaccuracy.

THAMNOMYCES MACROSPORA.— Hoeller's figure appears to the eye the same as *Thamnomycetes Chamissonis*, but his spore record, 6-7 X 40-50 is about four times too large for that species.

THAMNOMYCES ANDINA (Fig. 1604 copied from Patouillard).— This is a small species from South America, which in its mode of bearing the fruit is, for me, a *Thamnomycetes*. The spores are septate, hence was erected into a genus, *Xylobotryum* for Patouillard. We do not know the plant but presume the figure tells all that can be told about it.

THAMNOMYCES CHORDALIS and **THAMNOMYCES FUGIFORMIS**.— We can add nothing to our account of the unbranched *Thamnomycetes* given in *Large Pyrenomycetes*, page 12, Figs. 851 and 852.

Thamnomycetes similis, mss., from Brazil, sent to Ravenel by Berkeley is *Thamnomycetes chordalis*. In this connection, we saw in the New York Botanical Garden a specimen of *Thamnomycetes chordalis*, correctly determined (as *Xylaria*, however) collected in the Philippines by J. B. Sture, probably years ago. It has not been collected by recent collectors in the Philippines and does not appear in recent Philippine lists. As far as I have noted this is the only collection excepting from the American tropics.

POLYPORUS CYATHOIDES FROM BURTT LEEPER, OHIO (Fig. 1605).— (Cfr. *Hym. Europaei*, page 534).— This answers the description exactly but must be exceedingly rare as it is the first specimen we have seen either from Europe or the States. We fully agree with Fries that it is only a small form of *Polyporus melanopus*, although of paler color and quite different at first view. In this connection *Polyporus melanopus* is reaching me quite frequently from the Northwest. (Mrs. Whetstone, Dr. Stocker). It was called by Murrill *Polyporus subradiatus* which was a misnomer, however, as the plant has no suggestion of and little resemblance to *Polyporus radiatus*.

LASCHIA CHIPPYI FROM T. F. CHIPP, STRAITS SETTLEMENTS (Fig. 1606 enlarged).— Pileus small, 2-3 mm., dimidiate (it appears to me) pale, almost white (when soaked). Pores about 200 mic., shallow. Color glands and cristated cells none. Spores 4 X 6, hyaline, slightly rough.

Having recently considered the species of *Laschia* (Myc. Notes No. 57) and disposed of most of the proposed species, we rather dislike adding to them but we can not do otherwise as to this. It belongs to Group 5 of our paper and we believe it is the

only very small species known devoid of both cristated cells and color glands. The color of the dried specimen is isabelline but it soaks up pale, almost white. Mr. Chipp found it on dead palm stems. Collection No. 4698.

LENZITES ABIETIS FROM I. M. JOHNSTON, COLORADO (Fig. 1607).— I presume I should herald this as a "new species", but with the same surface, color, thickness, texture and microscopic features as the common *Polystictus abietinus* and the same general appearance excepting it has lenzitoid hymenium, I think it best to consider it an hymenial variant. *Polystictus abietinus* is with us a fairly dependable species, although we get some puzzling forms from Japan. This is the first American collection I have seen that strongly departs from the usual plant. As there is now a *Lenzites abietina* we slightly change the name for this lenzitoid form of *Polystictus abietinus*.

POLYSTICTUS PERENNIS, MINOR, FROM J. E. LANGE, DENMARK (Fig. 1608).— One who can discover a new species of *Polyporus* in Denmark now deserves a medal and when we first saw this collection we thought one would have to be awarded to Mr. Lange. But when we came to observe it closely we found the same color, surface, context, pores and spores as the common *Polystictus perennis*, and notwithstanding the great difference shown in our photograph we are forced to the conclusion that Mr. Lange's collection is a depauperate form or condition of *Polystictus perennis*. Our figure shows Mr. Lange's plant (1608 and 1609) the usual *Polystictus perennis*.

POLYSTICTUS DILATATUS FROM DR. CH. BERNARD, JAVA (Fig. 1610).— This appears to correspond to our photograph of the types at Leiden, and it was named from Java. We referred it in Letter 35 to *Polystictus Blumoi* but the pores of *Blumoi* are large and shallow and these are smaller and more irpicoid. The reference is doubtful of course but it is better to utilize an old name than to invent a new one. We would enter it in Section 105 on account of its nearly smooth pileus but it should be cross indexed in 109 from its irpicoid pores.

IRPEX CRASSITATUS FROM O. M. OLESON, IOWA (Fig. 1611).— Adnate to the host with a thick, white, hard context, 1-1 1/2 cm. thick. Pilei imbricate, white, with strigose, hirsute surface. Teeth thin, white, foliaceous. Spores 4-5 mic. Globose, hyaline, smooth. We base a new name on this specimen for we know no old name for it. It might be held as a thick form of the common *IrpeX lacteus* (Fig. 1612) but our photographs in contrast will demonstrate the improbability of this view. Besides *IrpeX lacteus* has different spores. The proper name for the plant would be *IrpeX crassus*, but this was applied to a species common with us which occurs also in Europe, and was called by Persoon *Sistotrema pachydon*. The name *IrpeX crassus* is still applied to it, however, by those who are not familiar with the European plants. Fig. 1611 represents *IrpeX crassitatus*. Fig. 1612 the common *IrpeX lacteus*.

SPARASSIS CRISPA FROM REV. A BOUTLOU, WEST VIRGINIA (Fig. 1613).— I am satisfied this is a plant that has a wrong reputation. It is supposed to be common and any popular work on mushrooms will tell you how frequent it is and how valuable as an edible species. Many thousands of fungi reach me but this must be rare for I have not received it a half dozen times. The specimen from Rev. Boutlou is a small specimen and is developed from a rhizome, a feature I have not seen noted before. It sometimes reaches a large size. At Leiden I saw some specimens in alcohol that were a foot in diameter. The genus Sparassis, as defined by Fries, and the popular opinion, I am satisfied from this specimen is an error. The hymenium is not "amphigenous". It is not "composed of two plates fertile on both sides". The hymenium is on the under side only (of this specimen) and the plant does not belong in the Clavariaceae but in the Thelephoraceae. In short Sparassis is only a fleshy Stereum. It has no cystidia and the spores are hyaline and about 4 X 5.

XYLARIA KEDAHAE FROM T. F. CHIPP, STRAITS SETTLEMENTS (Fig. 1614).— Clubs cylindrical, obtuse, strongly carbonous, black, 4 mm. thick, 6-8 cm. long, with a rugulose stem, rooting in the ground. Surface minutely moriform with the protruding perithecia. Spores 4 X 8.

Xylaria nigripes, the "termite nest" species was suggested but a comparison showed this as a black plant while nigripes is of much lighter color. The spores are also very different. Xylaria Brasiliensis (cfr. page 893) and Xylaria radicans (page 725) are very close species but a comparison of the figures shows to me essential differences. Xylaria Kedahae was collected (No. 4932) on Kedah Peak, Straits Settlements.

SCHIZOPHYLLUM COMMUNE FROM T. F. CHIPP, STRAITS SETTLEMENTS (Fig. 1615).— It is rare that this common and cosmopolitan plant takes such decided stalks as shown in our figure. They should call it a "new species". There are now fifteen so called species recorded in Saccardo. We have about three hundred different collections from probably every country in the world and we are able to see but one species in the whole lot.

GLAZIELLA SPLENDENS FROM REV. J. RICK, BRAZIL. The dried specimen (Fig. 1616, left) appears collapsed and "hollow" but when soaked (same figure, right) it is solid and the flesh is not "gelatinous" but soft, fleshy. In fact if this represents "Glaziella" then the genus is not essentially different from Sarcocylon. The specimens were sent as "Entonaema lignescens" but do not have the appearance to me of Moeller's figure on page 248 and are only about one-sixth as large, and surely have no suggestion of a Tremella". I presume they were the basis of Entonaema mesenterica of Moeller, but in that event they are neither "hollow" nor "gelatinous". The genus Glaziella was one of Berkeley's imperfectly known proposals and Moeller did not improve matters much when he called it Entonaema. The spores I measure as 6 X 12. In this connection we wish to correct our previous statement that Berkeley probably intended to use the word sporophore instead of perithecia in his original "description" of Glaziella. "Stroma subglobose, bright colored; perithecia pale, filled with hyaline

gelatine". It was set up by some foreign compositor who did not understand English or Pidgin Latin. We have already commented on the vagaries of the individual who habitually cited Fries as "J". What Berkeley probably wrote was - "Stroma subglobose, bright colored: perithecia pale: filled with hyaline gelatine". While we might excuse a foreign printer for getting his punctuation wrong we feel there was no excuse for Cooke to base his classification on a typographical mistake when he had the specimen before him. Plants of this family with the "perithecia filled with gelatine" would be about as curious a phenomenon as an apple tree bearing apples like potatoes.

XYLARIA MYOSURUS FROM JAS. R. WEIR, CUBA (Fig. 1617).- The types both at Kew and Paris are immature but the species is marked by its simple form and absence of stipe. I do not think the spores given in Saccardo as 10 mic. could have been found in the "types". I make them from Mr. Weir's specimens short and broad, about 5 X 7. The mature plants (Fig. 1617) are not as sharp pointed as the types. *Xylaria microceras* is close if not the same species.

ADDITIONAL NOTES ON CORDYCEPS

Mr. Edwin Cheel has called our attention to a valuable article on Australian *Cordyceps* written by A. S. Olliff and published in the *Agricultural Gazette of New South Wales*, June, 1895. We had not previously seen this article and it has also been missed by the *Cordyceps* compilers, Masee and Saccardo. Mr. Olliff gives excellent figures of the species he considers and from the entomological side corrects what were no doubt erroneous views of the classification of the hosts.

The large burrowing larvae of Australia on which *Cordyceps* are developed are probably all the larvae of the Lepidopterous genus *Pielus*, which pupate in burrows in the ground, and not of the genus *Charagia*, which live and undergo their metamorphoses in wood. From the systematic account of *Cordyceps*, however, Mr. Olliff seems to us to be very local in his view and his species, we believe, should mostly be referred to others.

CORDYCEPS SCOTTIANUS (Fig. 1618).- This which was named by Mr. Olliff, or Berkeley in manuscript it is said, appears to be good. The *Cordyceps* itself in its attachment to the host and general appearance is that of *Cordyceps ophioglossoides* and probably could not be told apart if sent separate from the host. It is the same apparently as "*Cordyceps ophioglossoides* on a locust", *Myc. Notes*, p. 809. As the plant in Australia, from a larva, has a name, it is best to use it and consider it different from *Cordyceps ophioglossoides* which is known in Europe and with us only on *Elaphomyces*.

The above, however, is the only one of Mr. Olliff's species that appears good to us, judging only from his figures and descriptions.

Cordyceps Cranstonii has the appearance of being *Cordyceps militaris* although the Australian host is evidently different from the English host. *Cordyceps pieli* appears to be a broken specimen of *Cordyceps Gunnii*. *Cordyceps trictenae* is surely the same as the original specimen of *Cordyceps Taylori* in Berkeley's herbarium at

Kew and which was figured in Hooker's Journal. It differs apparently very much from the plant now known as *Cordyceps Taylori* and has 15 to 20 branches in a Medusa-like head. I have already published my doubts that *Cordyceps Taylori* as now known is the same as the original species, and the publication of the original as *Cordyceps trictenae* tends to confirm them. Mr. Olliff's figure is "from an unpublished drawing, once the property of G. R. Gray". I think it is the original of *Cordyceps Taylori*.

Mr. Cheel sends me a specimen of *Cordyceps Robertsii* from New South Wales. I had only received it from New Zealand and all the specimens I saw in London were from New Zealand. From Australia it had been named and figured as *Cordyceps Selkirkii*, small specimen but surely the same. Also I see no difference in Olliff's account and figure of *Cordyceps Coxii* excepting it grew on a different host.

In addition to the new names that Olliff gives to old species he records a species, *Cordyceps Melolonthae* from Australia, which I think is recorded from very uncertain material.

CORDYCEPS HENLEYAE.— Mr. Cheel suggests in a letter that our Fig. 622 suggests a branched specimen of *Cordyceps Robertsii*, and as we come to think about it that is possibly the case although it had not occurred to us.

In Mr. Olliff's paper is a local synonym of *Cordyceps* that we did not know at the time we wrote our pamphlet, viz: *Cordyceps crassa* Mandsley (as *Clavaria*) = *Cordyceps Gunnii*.

THE CORDYCEPS AT NEW YORK BOTANICAL GARDEN

We recently looked over the *Cordyceps* material at the New York Botanical Garden, where are preserved the specimens on which Ellis and Seaver, for the most part, based their work.

CORDYCEPS CRINALIS.— The specimen (Fig. 1619) on which Ellis based his record of *Cordyceps Sphingum*, is interesting. Ellis found at Newfield a single specimen (cocoon) from which slender *Cordyceps* clubs were growing from the larva. He cut it in half as shown in our photograph (Fig. 1619) and named it in manuscript *Cordyceps crinalis* but afterward concluded it was *Cordyceps Sphingum*. Its habits of growth and the clubs are not the same as those of *Cordyceps Sphingum*, and to my view Ellis' manuscript name should stand. This is the only specimen of this species known.

CORDYCEPS GRACILIS (Fig. 1620).— There are only two collections of this known to me from the States. One is in Peck's collection and he found only a single specimen and the other was developed from culture at New York from material sent from Indiana. Our figure (1620) is a photograph made of a drawing at New York. Both collections were referred to *Cordyceps entomorrhiza*, as the species so common in England is generally mis-known (Cfr. Letter 47, Note 94). It is somewhat misleading that the plant is only illustrated in the States by copying Dickson's old figure from England, which is an entirely different species and has never been collected in the United States.

CORDYCEPS CANADENSIS.— The type specimen from Dearness is only the common *Cordyceps capitata* as correctly referred by Seaver. Ellis' name was only based on the mistake in Saccardo where the spores of *Cordyceps capitata* are recorded (in error) as "25-40 mic." long. Hence when Ellis found them "10-20" he concluded at once "a new species". In this connection *Cordyceps capitata* is only known on species of *Elaphomyces*. The record "on *Scleroderma* (?)" is a mistake, for the host on which this record was based while not the usual species is an *Elaphomyces* and not a *Scleroderma*. Another mistake is my reference (*Myc. Notes* p.609, Fig. 860) of a Japanese collection to *Cordyceps capitata* var. *Canadensis*, supposing it to be the same as Ellis had named, and which he described as elliptical. As soon as I saw Ellis' type I realized there was no connection between them. This will necessitate the re-naming of the Japanese plant from Mr. Umemura, which I have now labeled *Cordyceps Japonica*. We reproduce the figure (1621) in our plate.

Cordyceps Langloisii. The type from Langlois on the larva of a mason wasp is of the same size, stature and appearance as *Cordyceps armeniaca* which Berkeley named from scanty material on debris, "supposed to contain insect remains", from South Carolina, and I have no doubt it is the same species.

CORDYCEPS GRYLLOTALPAE (Fig. 1622).—There are several specimens of this on "ground puppies" or "sand moles" as Curtis calls them. They were sent to the Garden by E. C. Wurzlów, Houma, La. All are immature, but I have no doubt are young *Cordyceps*. Curtis lists the name but nothing further and I did not find at Kew that he had sent any specimen to Berkeley. This is evidently the same that Hennings named *Cordyceps joaquiensis* from Brazil, and his figure of the host which he calls "einer grosser Coleoptera? Larve" looks more like a "ground puppy" or some kind of a "puppy" than it does like an insect. The *Gryllotalpa* belongs to the Orthoptera and is given in entomological works as the mole cricket.

CORDYCEPS STYLOPHORA.— A specimen of this rare species is at the New York Garden, sent by G. H. Hicks, Michigan. Otherwise it is only known from Ravenel's collection.

CORDYCEPS FROM REV. RICK, BRAZIL

CORDYCEPS KLENEI FROM REV. J. RICK, BRAZIL (Fig. 1623, 1624 and 1625).— Clubs about a cm. long with sterile apices, attached to the host by a branching stem. Color (dried) orange red, same as *Cordyceps militaris*. Perithecia deeply imbedded with long ostioles, piercing the crust and slightly protruding. We give in Fig. 1625 an enlargement of the surface. Spores hyaline, filiform. We saw no sign of breaking into secondary spores.

We received a nice specimen of this from Rev. Rick but the clubs were very fragile and broke away when we tried to mount it to photograph. Hence we present also Patouillard's drawing (Fig. 1624) which shows the habits of the plant better than our photograph. The host, teste Rick, is the larva of a Melous. The sterile apices of the clubs which are a feature of the species are much shorter on the specimen sent to me than on those Father Rick sent to

Patouillard. We have little doubt this is the plant Moeller has as *Cordyceps rubra*, but we adopt Patouillard's name, not that we love Patouillard more or Moeller less, but we are sure about Patouillard's and there is more or less doubt as to Moeller's.

CORDYCEPS BOMBI FROM REV. J. RICK, BRAZIL (Fig. 1626).— As named by Rev. Rick. Clubs simple, a few branched, long, slender, tapering to slender, filiform tip, brown, tough. The surface appears powdery but under the microscope is resolved into thick (8 mic.) pale colored, septate hyphae, no doubt conidial. Perithecia dark, free, borne on upper portion of the club, but only one of my specimens is fertile. Spores with but few septa and long, secondary spores but they may not be mature. This grew on a larva in a cocoon, a species of *Bomba* (teste Rick). Our photograph is characteristic and no similar species has been illustrated. Figure 1627 is a portion of the fertile club enlarged sixfold. There are but very few species of *Cordyceps* with free perithecia and none known to me at all like this.

CORDYCEPS RICKII FROM REV. J. RICK, BRAZIL (Fig. 1628).— We are very much pleased to record a fine collection of *Cordyceps* from Father Rick growing from the head of some larva. Simple or compound, the clubs which in the dried specimen were Mars yellow were probably more orange when fresh. They are about 2 cm. long and strongly distinct from the pale stipe. Perithecia (as shown in our section, Fig. 1629 enlarged) are very minute and entirely imbedded. Secondary spores 2 mic. long.

We tried to fit this to *Cordyceps submilitaris* as illustrated by Moeller, and which has the same general appearance but the discrepancies are too great. The shape of the club, complete imbedding of the perithecia so that the surface (Fig. 1630 enlarged) is smooth, the mouths not protruding at all and the very small spores, 2 mic. instead of "8-9", all forbid. We have a feeling that it is *Cordyceps hormospora* of Moeller but if so Moeller's specimen was imperfect and his illustration not characteristic of the plant.

CORDYCEPS FLAVELLA FROM REV. J. RICK, BRAZIL (Fig. 1631, right enlarged).— There are but few *Cordyceps* with globose heads. This one was named from Cuba about fifty years ago. I believe Moeller also found a single specimen in Brazil and called it *Cordyceps incarnata*. The specimen at Kew which originally had five clubs is mostly gone, but we found a nice specimen with two clubs at Paris (Fig. 1631, left enlarged) that Berkeley had sent to Montagne. Rev. Rick's collection is the third one made and consists of a single head which we photograph (enlarged sixfold, Fig. 1631, right). Fig. 1632 is natural size. The stem is about half broken off and the host is a Geometrid (teste Rick). The color both of the head and the stem is pale yellow, ostioles slightly protruding, secondary spores I did not examine owing to scantiness of material.

While there is little doubt in my mind but that the three collections are all the same there are discrepancies in the records. Originally grew on a bug, secondary spores 3 mic. (teste Masee). Moeller collection on a "Raupe", secondary spores 12-15 mic. long. Rick collection on a Geometrid, secondary spores not examined.

CORDYCEPS ENTOMORRHIZA (Fig. 1633).- In connection with *Cordyceps flavella* we present a figure of *Cordyceps entomorrhiza*, the true species in its original sense as well figured by Dickson from England one hundred and twenty-five years ago. No specimen has been found in England since and the name has been universally misapplied there, as in this country, to *Cordyceps gracilis*, a very different plant. While never since found in England it occurs, not rarely apparently, on the continent. Tulasne found it near Paris (1860) and following the traditions in England, called it a new species, *Cordyceps cinerea*. Tulasne was not often tripped up like this. Rabenhorst distributed it from Leipsic as *Cordyceps cinerea* and Rehm also used this name. Durieu collected it in the Pyrenees and his specimen is at Paris correctly named, *Cordyceps entomorrhiza*. Quelet found it and of course also found it was a "new species". He called it *Cordyceps Carabi* and shows it with a collar at the base of the head, but collars occur only on species of *Cordyceps* that Quelet found. No one else ever saw them and his were probably only imagination. It has never been found in the United States, notwithstanding Seaver reproduced Dickson's figure, and our records are all mistakes for *Cordyceps gracilis*. This species as far as known always occurs on the same larva, a species of *Carabus*. It is a dark reddish brown species with a long, tortuose, slender stipe and a subglobose head, the ostioles protruding and quite prominent. Our figure (Fig. 1633) is natural size, made at Paris, and the specimen on the right is the same as used by Tulasne in his illustration.

CORDYCEPS BICEPHALA (Fig. 1634 enlarged).- As an indication of how much is known in "Science" we present a figure of the only specimen in existence of this species which was named from Brazil seventy years ago and known to this day from this single specimen. The host never was known. It does not seem to have been illustrated by Moeller but he would not have known it if he had found it. Maseo drew a picture with perfectly globose heads, but the more pictures Maseo drew the less is known about things. He records the secondary spores as 3 mic. long and states "it closely resembles a *Xylaria*". It has about as much resemblance to a *Xylaria* as it has to a stick of candy.

CORDYCEPS ARMENIACA (Fig. 1635).- Also to illustrate the scanty material on which our knowledge of *Cordyceps* species is sometimes based, we present (Fig. 1635) the type of this species, only known from this collection for sixty years. However, Ellis got a scanty collection which he called *Cordyceps Langloisii*, which I believe to be the same thing.

ISARIA MYRMICIDAE FROM REV. J. RICK, BRAZIL (Fig. 1636 enlarged).- This is not a *Cordyceps* as would appear from the photograph but an *Isaria* which is only named for convenience in the museum. Our figure enlarged sixfold tells all to be told about it. Fig. 1637 is natural size. The stem is about a centimeter long, slender and black. The head is cylindrical and white. Spores are "pip-shape", 2 X 8. Rev. Rick reports the host as a species of *Myrmicae* which the Century Dictionary gives as the red, stinging ant of the tropics.

CORDYCEPS GRACILIS (Fig. 1638).— Universally misknown for eighty years or more in English and American traditions as *Cordyceps entomorrhiza*, which was due originally to Berkeley's mistake. It should not have been confused with the Dickson figure but no one seems to have looked up the original excepting Seaver and Cocke, and they were not familiar enough with the species to note the error. Even Tulasne who was not often taken in with such things, slipped up on it, but he had a specimen of Broome's English collection labeled by Broome "*Sphaeria entomorrhiza*, Dickson" and naturally inferred that the English knew their own species. *Cordyceps gracilis* was well illustrated by Greville. It is the most frequent species in England and abundant specimens are in both the London museums misnamed *Cordyceps entomorrhiza*. It seemed to me more rare on the continent. Tulasne made a collection at St. Cloud in 1860. Montagne figured and named it correctly from Algiers, and Moeller from Brazil probably has it figured though he gives the secondary spores as 12 mic. and Currey shows them 7 1/2 mic. A single collection from Australia was named *Cordyceps Menesteridis*. In the United States it is extremely rare. Peck made a collection of a single specimen, and in the New York Botanical Garden are several specimens which were developed in culture from Indiana material. There is nothing to substantiate Schweinitz's record but from his comments his plant was *Cordyceps gracilis*. Ravenel's collection on which Ellis and Seaver based their publication is *Cordyceps ophioglossoides* (sic). I judge from the specimen in Ravenel's herbarium, surely not *Cordyceps gracilis*. In America the records are all in error as *Cordyceps entomorrhiza* as in England. All the specimens I have seen or figures of *Cordyceps gracilis* always develop on the same (or similar) host, which is the larva of some species of Lepidoptera. Usually only one *Cordyceps* grows from each larva and is attached near the head of the insect. The specimen with several clubs (Fig. 1620), grown in culture is not normal. The stem is an inch or a little longer, short and thick compared to the species for which it is generally mistaken. The club is globose or subglobose, smooth, for the perithecia are all included and the ostioles do not project. Spores 7 1/2 teste Currey. We present in our figure 1638 a photograph made at Kew where there are abundant collections.

INSTITALE ALBA FROM BURTT LEEPER, OHIO (Fig. 1639).— A soft, pure white fungal growth occurs very rarely on the face of polyporoids. This is on a *Poria* called *Poria ochraceus* in traditional mycology but *Porias* have no definite names. I gathered probably this same species once on *Fomes Ohiensis*. I was glad to get fresh material from Mr. Leeper for examination for I neglected to examine it at the time I gathered it. A section shows a mass of hyaline, oblong, smooth spores about 3 1/2 X 4 mic. and rather scanty, hyaline hyphae about 3 mic. in diameter. There are no basidia or any organs suggestive of basidia. I can not see any order or attachment to the spores. It belongs to that indefinite group called *Hyphomycetes* and I believe in old times they called the "genus" *Institale* a kind of convenient name for everything they did not know. We use it in the same sense.

INSTITALE BOMBACINA (Fig. 742, p.539).— A very similar plant and probably co-generic, is well known and far more common on the face of *Fomes applanatus*. We gave a photograph of the plant from Mr. Leeper on page 539, Fig. 742, under the name *Sebacina dendroidea*, but it has since been proven that it is not a *Sebacina*. It is still a mystery, but as Bourdot shows that it has spores direct on the hyphae we shall include it in the convenient "genus" *Institale*. Bourdot suggests that it is an outgrowth of the *Fomes*, an "expansion myceliale conidifere". We doubt it for it is always loosely growing on the *Fomes*, never ingrowing to it. We gave in detail on page 538 the "taxonomic" history as known to Berkeley and Cooke which were very much bulls. They called it *Thelephora dendritica*, *Stereum dendritica*, *Hymenochaete dendroidea*, but I can not see any suggestion of or connection with either genus.

While working in the New York Garden herbarium recently I found a new clue to it. A specimen collected in the West Indies by Murrill was indorsed as being a *Hypomyces*, by Burt. We have often wondered how Burt classed it for he side-stepped it in his account of the genus *Thelephora* and the plant has mostly so passed in traditional American mycology. Then we found a specimen from Karsten, named "*Hypomyces bombacinus*, Karsten". Surely the plant is no *Hypomyces*, and Karsten has apparently mistaken the spores of the host as being the perithecia. That is about as bad a bull as Berkeley made when he apparently mistook the same spores as being setae. From Karsten's account of "*Hypomyces bombacinus*" it appears that the plant was known to Fries as "*Institale bombacina*", but we are unable to find any mention of it in Fries' writings other than the bare name in his *Summa vegetabilium Scandinaviae*.

Since the above was written we have a letter from Annie Lorrain Smith, who is probably the best informed on *Hyphomycetes*, and she refers with doubt what we have called above *Institale alba* to *Cephalosporium humicola*, which Oudemans records as growing on ground.

DIPLOCYSTIS AND BROOMEIA

We wish to acknowledge our indebtedness to Mr. I. B. Pole Evans for a fine specimen (Fig. 1640) of *Broomeia ellipsospora*. It completes the collection of these two rare genera for there are only three species. *Broomeia congregata* we have from Dr. Kurt Dinter, Southwest Africa, and *Diplocystis Wrightii* we have abundantly from L. J. K. Brace, Bahamas. The genera have been much confused and they are so close it would be better if they were held as one genus, particularly as it is in evidence that three men have discovered "new species" without knowing the difference between these two old genera. We contrasted the genera on page 194, but the main difference is that *Diplocystis* has a separate exoperidium for each individual of the cluster, and *Broomeia* has a common exoperidium that encloses the entire cluster. *Broomeia* is only known from South Africa and *Diplocystis* from the American tropics. There are three species, as follows:

BROOMEIA CONGREGATA (Compare *Myc. Notes*, pp. 193 and 318, Plate 21 and Fig. 152) It was named and finely figured by Berkeley in 1844. A good account of it was given by George Murray

in the Journal of the Linnean Society, Vol. 20, and recently I. B. Pole Evans published a fine lot of illustrations in the Transactions Royal Society of South Africa, Vol. 7, 1919. The spores are globose, echinulate and the stroma is thick. This was the original species of *Broomeia* and Mr. Evans reports it as fairly common near Pretoria. It grows on the ground, usually at the base of *Acacia Karoo* and not on rotten wood which was the old tradition about it.

BROOMEIA ELLIPSOSPORA (Cfr. Fig. 1640, specimen from I. B. Pole Evans, which came originally from Rev. H. A. Junod, Lourenco Marquez. Also compare Myc. Notes, p. 436, fig. 249).— This is congeneric with the preceding from which it differs in thinner stroma, more conical peridia, and markedly in the spores which are elliptical and smooth. It has been collected in Portuguese and what was formerly German East Africa, but not as yet in Natal or Cape Colony.

DIPLOCYSTIS WRIGHTII (Cfr. Myc. Notes, p. 141, Pl. 15).— The genus *Diplocystis* differs from *Broomeia* as previously stated in having individual exoperidia for each individual puff ball, not a universal exoperidium for the entire cluster. It is the American analogue of the African genus and it would probably be better if they were united. The mouths are not as distinct as in the *Broomeia* species. The spores 4-5 mic. are smooth or slightly punctate, and the stroma is rather thin. It grows on the ground, not on rotten wood as Berkeley stated. Mr. Brace sent it to me years ago in quantities from Bahamas, and it is also known from Cuba and Guadeloupe. Also Spegazzini has probably misrecorded it from Argentina as a variety of *Broomeia congregata*.

Synonyms.— *Broomeia guadalupensis*, Leveille, Guadeloupe. No specimen exists but no doubt it is *Diplocystis Wrightii*. *Broomeia argentinensis* (as a var. of *congregata*, Spegazzini). Not known to me but the odds are a hundred to one that it is *Diplocystis Wrightii*. *Diplocystis guadalupensis* (Lev.) McGinty, a juggle for *Diplocystis Wrightii*. *Diplocystis Junodii*, Pole Evans, Africa, is *Broomeia ellipsospora*. *Diplocystis compacta*, *collabascens* and *mollis* as found in Saccardo are unknown species of *Catastoma* with no more resemblance or suggestion of *Diplocystis* than an English walnut has of a lily pad.

HYDNUM (GYRODONTIUM) PULCHER FROM P. VAN DER BIJL, SOUTH AFRICA (Fig. 1641).— The section of *Hydnum* with colored spores is rare. No species occurs in Europe or the States and this is the fifth one that has come to my notice.

Pileus dimidiate, thin, probably white when fresh, but reddish dried. Teeth short, about 1 mm., blunt, dark reddish brown when dried. Cystidia none. Spores abundant, $3\frac{1}{2} \times 4\frac{1}{2}$, smooth, colored.

There is another species of this section in South Africa (Cfr. Myc. Notes, p. 597) which differs much from this. Excepting in the colored spores this reminds one of *Hydnum pulcherrimum*. A section shows the teeth of a subgelatinous nature, a feature unknown to me in other *Hydnium*s. The trama is pale, compact and the hymenium much darker color.

POLYSTICTUS GLEADOWII FROM TAKEVO HEMMI, JAPAN (Fig. 1642).— This is the first time we have seen it excepting Masee's type

(Fig. 1642) at Kew which came from India. It is a pure white species with soft pubescence and minute pores. It is close to *Polystictus velutinus* but is more rigid, more on the order of *Trametes*. I believe it is a good species.

POLYPORUS ARENOSOBASUS FROM P. VAN DER BIJL, SOUTH AFRICA (Fig. 1643).— Pileus about three inches in diameter, globose with a thin cuticle. Color (dried) dark, fuliginous. Flesh firm, pale isabelline. Stem short, prolonged underground into a sclerotium-like body of agglutinate sand. Pores small, round, trametoid.

This must be rare as I judge that Mr. Van der Bijl found only one specimen as he sent me only a half specimen. It should be added to Section 38 of *Ovinus*. Another similar plant has been collected in Africa, *Polyporus Goetzii* (Cfr. Synopsis, *Ovinus*, page 74, Fig. 496) but that has a true sclerotium and large pores. The false sclerotium of this is only sand agglutinated and the only other known specimen with such a body is *Polyporus tuberaster*, Fig. 509 in our *Ovinus* pamphlet.

SARCOSCYPHA CRUCIATA (Fig. 1644).— In Clinton's herbarium there is a very interesting plant from Dr. Torrey. It was found on the old Doctor's table after his death, and the source is unknown. It was sent to Clinton and it is certainly very rare. I have misplaced my notes but I think Clinton referred it as to genus to *Tremella*. I supposed it to be a yellow *Guepinia*, but when I came to examine the little frustule I brought home I found it to be an Ascomycete. I sent the photograph and frustule to Dr. Seaver and he advises me that he refers it to *Sarcoscypha cruciata*, which Fries named from Sweden, and that the only American record known to him is a plant from Bethel, Colorado, which Ellis named *Sarcoscypha alpina*. It is also recorded from Minnesota by Miss Hone, under the name *Sarcoscypha prostrata*. The photograph was kindly made for me by direction of Mr. W. L. Bryant. This, in connection with the main feature that it is yellow and appears tremellaceous, will enable it to be recognized if found again. But if it is gelatinous as I thought it was, I can not see how it can be classed as *Sarcoscypha*.

But how strange it is that old Dr. Torrey should find this rare plant forty-seven years ago and that it should remain practically unknown all these years. Dr. Torrey was very prominent in early American botany but he left few footprints in mycological sands. He sent a few fungi to Schweinitz and I believe a few to Muhlenberg. Two of the plants he sent to Schweinitz are unknown to this day, or rather one is probably misknown. Another is the unique little *Polyporus poculus* which for so many years passed as a *Sphaeria*. I only recall one of Berkeley's records based on Dr. Torrey. He reports the rare *Xylaria pedunculata* from near St. Louis and I believe there is no other record in America, and the specimen is not found in Berkeley's herbarium. I now know three additional collections of *Xylaria pedunculata* but as yet they have not been published.

ISARIA CRINITA FROM DR. CH. BERNARD, JAVA (Fig. 1645).— I imagine these wasps with slender filaments are not rare in warm countries, and were figured about one hundred and fifty years ago. But it has no name in mycology for the author took it for a "new

species" of wasp and called it *Vespa crinita*. I trust the adoption of the specific name will meet the approval of the most rabid priorist. Wasps that are so affected (Fig. 1645) have numerous black filaments proceeding from all portions of the body. They are a fungus growth no doubt but what they are no one knows. They are not *Isaria* for they do not have conidial spores. Neither is there any probability that they are young clubs of *Cordyceps* for they have not that appearance nor is there any *Cordyceps* known that they could develop into. For the present then we shall have to pass them under the provisional name, *Isaria crinita*, until some one in the tropics where they occur works out their life history. I am informed by Dr. Bernard that this *Isaria* was named in manuscript by Kocders, *Cordyceps Roepkiana*, but I feel that the name should be preserved for it that was given so many years ago.

I will add that not having seen the old entomological work where *Vespa crinita* was named I have taken the data from Cooke. I always feel disposed to give Cooke full "credit" for any statement taken from him, for it is so often incorrect.

TREMELLA SPARASSOIDEA FROM L. O. OVERHOLTS, PENNSYLVANIA (Fig. 1646 and Myc. Notes p. 394, Fig. 1562).— We present a figure of a section of this plant from a photograph of Mr. Overholts who sends it as *Tremella vesicaria*. Whether it differs from the usual form of *Tremella vesicaria* with blunt lobes as illustrated page 871 Fig. 1486, to the extent of being a different species is a question. But it appears very different and is entitled to a name either as a form or a species. Mr. Overholts sent the usual form in a previous lot and as both occur with him he is in a better position to decide than I as to whether one or two species are involved.

POLYSTICTUS PAVONIUS FROM DR. JAS. R. WEIR, CUBA (Fig. 1647).— The identity of the plant Hooker so named about eighty years ago from South America is not sure although the type is still preserved in good condition at Kew. It would be convenient to take it in the sense of Dr. Weir's plant which answers most of the description and is close if not the same. The bright colored zones might be compared to a peacock, but of course that idea is overdrawn. It reminds one of *Polystictus versicolor* excepting that this is almost glabrous with the faintest indications of a minute pubescence. In this feature it differs from the original. The surface color, white context and minute white pores are all those of *Polystictus versicolor*.

Murrill has made two stabs at the identity of *Polystictus pavonius*, neither of them very happy ones. First he mistook it for *Polystictus tabacinus* to which it has no relation worth mentioning. Then he took it in the sense of *Polystictus arenicolor* which is nearer the truth, but *P. arenicolor* is a dull, unicolorous species, and if it has any suggestion of a peafowl it must have been the female that Hooker had in mind and it is strange he should have referred to its bright, variegated colors. Hooker should have known that when the bright colors of a peafowl are mentioned it is the male that is meant. In this sense *Polystictus pavonius* is a rare plant, no specimens having been noted by me in the extensive collections from the West Indies at the New York Gardens or elsewhere

FAVOLUS JUNGHURNII FROM DR. CH. BERNARD, JAVA (Fig. 1648).— Eighty years ago this was named from a specimen found in the island of Bantam by Junghuhn and still preserved in good condition at Leiden. Not another specimen ever reached Europe from Java or any other country and this from Dr. Bernard is the second I have seen. It must not be inferred necessarily that it is such a rare plant. It is only an evidence of the relatively scanty collections that have been made in Java when only two specimens of this peculiar species have been collected in eighty years. *Favolus Junghurnii* is quite different from every other *Favolus*. The marked, raised, scabrous striations on the upper surface, as shown in our photograph (Fig. 1648) we do not know in connection with any other species. The pores are rather small and firm. Under the microscope they have hyaline, glandular cystidia that are rare in other species. Dr. Bernard's specimen is exactly the same plant as I saw at Leiden.

IRPEX UNICOLOR FROM TAKEWO HEMMI, JAPAN (Fig. 1649).— This for me is the *IrpeX* form of the common *Daedalea unicolor* although it appears so different that ordinarily one would hardly see the connection. *Daedalea unicolor* is rather uniform in Europe and America. This irpicoid form was collected some years ago around Berlin by our friend, the late Dr. Magnus. He sent it to Fries (at that time a very old man) who thought it a new species of *Hydnum* related to *Hydnum strigosum*. Dr. Magnus also sent it to Karsten who called it a new genus and named it *Phyllodontia Magnusii*. It did not take much provocation for Karsten to discover a new genus. Hennings called it *Daedalea unicolor* var. *hydnoidea*. We present (Fig. 1650) the lower surface of the Berlin plant which is the same as the Japanese and the upper surface of the Japanese plant (Fig. 1649) which is more strongly pubescent than the German plant. Compare *Myc. Notes* page 451.

GUEPINIA PEZIZA FROM D. W. WEIS, MASSACHUSETTS (Fig. 1651).— Ever since we have been working on the subject we have known *Guepinia Peziza* scantily. We have an old scanty collection from E. B. Sterling, New Jersey, and we made one collection in Florida of two little cups. That is as far as we know it in America, although it is recorded by Peck, Morgan and McClatchie. In Europe it is equally rare in the museums. The best collection we saw was at Berlin misnamed "*Dacryomyces contorta*, Fries". Fries never saw it and so states. It is not included in the exhaustive work of Brefeld. Schroeter reports that he found it but once and then scantily.

Guepinia Peziza is usually a concave cup with a short, often recurved stalk, and a discoid hymenium on the under side. The color is clear yellow but those I got in Florida tend toward brown. The impression I had from the illustrations, until I collected it, and from the descriptions and the separate specimens I had seen, was that it was a pezizoid plant with the cup face up. That is a mistake as shown by these specimens from Mr. Weis. If growing near the top of the limb the stipe curves over bringing the hymenium under. Our photograph (Fig. 1651) showing the cup faces is the under side of the limb. The basidia of *Guepinia* are of the usual forked form of this group of plants. The spores are 7 X 14, pale colored, curved, septate in germination. Tulane gave a fine illustration and dissection of the plant but his figure of its habits is an error as

showing that the plant grows with the face up. He described it in 1853 but did not illustrate it until twenty years later and he made a mistake in describing and showing it with the face superior.

Every time the continental mycologists found this rare plant they usually discovered it was a new species. Patouillard called it *Guepinia tostus* and in addition found that it is a "new genus". Saccardo misreferred it evidently to *Peziza buccina* of Persoon and called it *Guepinia buccina*. Quelet first referred it to *Tremella lutescens* (sic) and gave a poor figure in an inverse position and records that the "hymenium is exterior formed of fine nerves". He evidently did not know what was the hymenium. Afterward he referred it to *Peziza merulina* of Persoon. He was surely guessing on Persoon's short record but he may have guessed rightly. He also described it as having the hymenium "supere", which I suppose is French for the under side as it grows on the under side. Leveille is said to have left a figure of it as a *Cantharellus* which with other "precieuse collection iconographique" was destroyed by the naughty Germans during the siege of Paris.

De Bary gathered the plant and sent a specimen to Montagne labeled *Guepinia striata*. His collection was distributed, however, by Rabenhorst as "*Dacryomyces contorta*, Fries" but Fries as far as I learned never proposed such a name and it seems to have originated with Cesati. Montagne got two little specimens from Chile which he described as "*coccinea*" and called *Guepinia crassipes*. I did not cut them but I thought they were *Guepinia* *Peziza*. Masseur got this rare plant from Jamaica, discovered it was a new species and called it *Guepinia venosa*. Cooke records it from Australia as *Guepinia merulina*. Take it altogether this rare little plant has had quite an enjoyable time being named.

We present in our Fig. 1650 a photograph of this fine collection from Mr. Weis.

ALEURODISCUS APICULATUS FROM C. N. FORBES, HAWAII (Fig. 1652)
 The genus *Aleurodiscus* of the most recent writers (Hoehnel, Bourdot and Burt) is incongruous and very embarrassing for it embraces *Corticiums*, *Stereums* and *Cyphellas* of the older workers. However, it is easily recognized from a section for the large spores and basidia are noticeable at once and in addition most species have "paraphyses" which assume bizarre shapes. Burt designates them as "moniliform", "bottle brush", "aculeate pronged", "slender branched", "spirally twisted", "racemose" and "cockroach shape". They hardly seem to be alike in any two species according to the figures they draw of them. The genus *Aleurodiscus* was based on the old *Peziza amorpha* as named by Persoon. Fries put it in *Thelephora*, afterwards in *Corticium*. They cite Rabenhorst for the genus *Aleurodiscus* but the citation while "legal" is misleading for Rabenhorst was only the first fellow who had wrong ideas of it. Mycological advertisers pay no attention to mistakes as long as they get their dates right. Peck made the same mistake that Rabenhorst did but as it was a year or two later he does not get any credit for it in the advertisements. All the earlier workers with the microscope who worked with *Aleurodiscus*, Berkeley, Broome, Rabenhorst, Cooke, Peck, had various delusions. Most of them thought the basidia were asci. I think it was De Bary who first showed a correct figure of the basidia and spores on

which the genus is now maintained but as he did not belong to the advertising crowd they do not cite him in connection with it. If the custom of writing personal names after plants had any meaning and were other than a senseless form they would write Schroeter after *Aleurodiscus* for it was he who gave the genus the meaning it now has.

We refer Mr. Forbes' plant to the species named by Burt with much misgiving. It is ochraceous buff rather than pinkish buff. The spores same shape are tubercular, not echinulate, but Burt states some of his collection "had many of the spores even". The aculei of the paraphyses are like those shown on the flexuose paraphyses rather than on those with "aculeate prongs". There are in the tropics several similar species (so named) supposed to be distinguished by minor structure features, principally of the paraphyses and roughness or smoothness of the spores. The paraphyses vary much in the same mount and the spores according to age, and the fact that Hoeknel's and Burt's figures of the paraphyses of the same species sometimes do not look anything alike only emphasizes the difficulties of microscopic features.

STEREUM PRINCEPS FROM DR. CH. BERNARD, JAVA (Fig. 1653 of the rot caused by the fungus).— We present a photograph of a piece of wood sent by Dr. Bernard which shows the characteristic rot known as "pocket rot" produced by the mycelium of *Stereum princeps*. Somewhat similar rots are caused in this country by *Stereum frustulosum*, *Stereum subpileatum*, *Hymenochaete unicolor* and *Fomes putearius* which are all that are known to me though there may be other species that produce this rot. *Stereum princeps* is the largest *Stereum* that grows and is common in Java and occurs in India, Philippines and other Eastern countries. I saw a specimen at Leiden from Java that was a foot in diameter and a cm. thick. It was named from Java by Junghuhn in 1839. Junghuhn published a number of species and well illustrated most of them, but Berkeley who named many tropical fungi did not seem to be in touch with Junghuhn's work and re-named several. This plant he called *Stereum scytale* and *Stereum contrarium*. We have in our Southern States an analogue of *Stereum princeps* named *Stereum subpileatum*. It is a much smaller plant and often largely resupinate though it develops pilei an inch wide and the name "subpileatum" is not very applicable to the usual collection. It is similar in its microscopic features and it produces the same peculiar "pocket rot" as *Stereum princeps* of the East.

THE GENUS ECHINODOTHIS

The genera of the Hypocreaceae appear to me to be in much confusion. The data is not at hand to straighten them out until the original specimens are hunted up and studied. In old times the genus *Hypocrea* embraced about all the large, effused, pulvinate or globose species. Then they began to base the genera on the spores, and the *Hypocreas* that had filiform spores were called *Hypocrella*. Then Atkinson proposed *Echinodthis* for *Hypocrea tuberiformis*, a globose species on *Arundinaria* in our Southern States, which has sessile, free perithecia. Rev. Rick published his species as *Dussiella Orchideacearum*, but *Dussiella* if maintained it appears to me should be restricted to species with imbedded perithecia. It appears originally to have been a very bad genus based on two plants that

probably have no connection, and ascribed as being "*Hypocrea tuberiformis*" which is a quite different plant from either as Atkinson has shown. Rev. Rick's plant, having the perithecia on the surface should on this view fall in *Echinodothis*.

ECHINODOTHIS TUBERIFORMIS (Fig. 1654).— Plant globose, 1-2 cm. in diameter, yellowish, becoming black when old. It grows on the stems of *Arundinaria* in our Southern States. Stroma yellowish, consisting of three layers in a section, the inner white and more pithy than the outer. Perithecia quite large, about one mm. long, seated on the surface in groups and giving the head an echinulate appearance which may be likened to the fruit of the sycamore. Spores are hyaline, filiform, septate and at maturity separate into many secondary spores.

This plant is quite common on the cane reed of our Southern States. It was first collected by Ravenel, named *Hypocrea tuberiformis* and distributed in Rav. Exsiccatae, Nos. 723 and 52. When Atkinson noted the spores were filiform he first proposed to call it *Hypocrealla tuberiformis* and some years afterward when he noted the perithecia are free he proposed for it the genus *Echinodothis*. Our photograph (Fig. 1654) is from a fine specimen in the New York Botanical Garden of Atkinson's collection.

ECHINODOTHIS ORCHIDEACEARUM FROM REV. J. RICK, BRAZIL (Fig. 1655).— Globose, 1 cm. in diameter, bright yellow color. Surface tubercular, stroma consisting of a central, soft, white pith and a hard, yellow outer layer. The perithecia are very minute, hardly visible to the eye and are seated in patches only on the tubercles. They are obovate or pear-shaped, obtuse, partially imbedded and little over half free. Spores hyaline, filiform, septate. This species is only known from Rev. Rick's collection in Brazil. It grows on the dead stem of epiphytal orchid. In working with it I note a curious color change of the tissue, changing to purple in potash solution. I have but little doubt but that "*Hypocrealla Schizostachyii*", named by Hennings from the Philippines, is exactly the same thing though Hennings claims that this has imbedded perithecia. I saw a specimen at New York but did not cut or examine it. Probably also "*Dusiella tuberiformis*", as illustrated by Hennings, is the same thing but not as named by Berkeley. And probably it has other names in the museums.

CALOCERA PALMATA FROM MISS ANN HIBBARD, MASSACHUSETTS (Fig. 1656).— If this is other than a dilated form of the common *Calocera cornea*, which I doubt. *Calocera cornea* (Fig. 1658) is usually simple though sometimes branched. As to color, habits, etc. *Calocera palmata* is exactly the same as *Calocera cornea*. As the figure does not show the shapes well, of the clubs, we present a figure (Fig. 1657) slightly enlarged to show this feature. Every one will find the common little *Calocera cornea* for it is frequent but the dilated form is rare. *Calocera* is liable to be mistaken for a *Clavaria*, but it is gelatinous in its nature and it has runcate basidia. It is very closely related to *Dacryomyces*, *Guepinia*, etc. and not at all except in form to the *Clavarias*.

DACRYOMYCES AUSTRALIA FROM P. VAN DER BIJL, SOUTH AFRICA (Fig. 1659).— Cerebriform with gyrose lobes. Color clear egg yellow.

Basidia forked. Spores 7 X 20, slightly curved, mostly septate. It is so close to *Dacryomyces digressus* (Gr. Myc. Notes p.620) that we hesitate to name it otherwise, and yet when soaked out it is a very different plant. This specimen has a yellow, fruiting surface borne on a pale, almost white base which may have been shielded from the light in growing. We can not say that this is a constant character, but if normal the plant could well be named *Tremellia bicoloris*. This is the third species of *Dacryomyces* that simulates a *Tremella* that we know.

IRPEX PARADOXUS FROM MISS ANN HIBBARD, MASSACHUSETTS (Fig. 1660).— This is not a species but a "paradox" or rather a distortion of *Irpelex lacteus*, due probably to abnormal position of growth. The name was based on Schrader's old figure, published in 1794, which quite well represents the figure on the right. Most fungi are rather particular about their position of growth. If a plant starts to grow in a normal way and then the position of the host is changed, the plant assumes abnormal and bizarre shapes. I think that the explanation of *Irpelex paradoxus*.

ISARIA FLABELLIFORMIS FROM PROFESSOR T. PETCH, CEYLON (Fig. 1661).— Professor Petch has succeeded in getting the *Xylaria* from *Isaria flabelliformis* and sends a mature specimen and those partially developed (Fig. 1661). The *Xylaria* is *Xylaria allantoidea*. Father Rick has shown that a similar *Xylaria* develops into *Xylaria corniformis*, hence there are two species that have similar *Isaria* forms.

BOTRYTIS FROM EDWIN CHEEL, NEW SOUTH WALES (Fig. 1662).— Growing on *Cordyceps Robertsii* and noteworthy from the host. I find none recorded on a *Cordyceps*. It is probably the earlier stage of some *Hypocrea*, *Hypocrella* or related genus and should not be named until its asciferous stage is formed. It consists of a few hyphae bearing masses of minute, hyaline, subglobose spores, 3 mic. in diameter. To the eye it is pure white and of soft texture.

ISARIA COCOA FROM OTTO A. REINKING, PHILIPPINES (Fig. 1663 enlarged).— As often stated *Isarias* should only be named as a convenience in the museum. They are all probably preliminary stages of other forms. This grew on coconut sheaths and is pure white. Spores varying from 2 X 3 to subglobose, 4 mic. Our enlarged figure tells the whole story otherwise. We do not know that it is unnamed but it makes such a fine figure that we can not refrain from publishing it.

POLYPORUS NIGROLUCIDUS FROM P. VAN DER BIJL, SOUTH AFRICA (Fig. 1664).— The European form of *Polyporus lucidus* was not even suggested to us when we first saw this specimen but when we came to "analyze" it we concluded that it is only a "species form". Plant is mesopodial with the surface shiny and jet black. Trama, pores and pore mouths isabelline. The interior of the stem is so soft that it could be called pithy. Spores 6 X 8 of the usual type. There is a black form of *Polyporus lucidus* in Japan that corresponds to the European plant except as to color. This does not exactly agree in any feature.

XYLARIA BOTULIFORMIS FROM E. D. MERRILL, PHILIPPINES (Fig. 1665).— (Based on Baker 61). This was named by Rehm. It is good as far as I know, but it is inadvisable to base species on such scanty material. The features are the short, cylindrical, sessile, obtuse clubs, strongly protruding perithecia, solid white stroma and small spores, $4 \times 6-7$. The clubs are not sterile at the apex as stated, nor has it for me any suggestion of *Xylaria subgracillima* as illustrated. It is needless to say it is "only known from the type locality".

ARRANGEMENT OF ALEURODISCUS OF OUR MUSEUM

The genus *Aleurodiscus* which has been pretty well established by the recent work of Höhnelt, Bourdot and Burt is based on large spores and basidia. It is about as illogical a genus as could be invented and embraces *Stereums*, *Corticiums*, *Peniophoras*, *Cyphellas* and *Cytidia* of the older workers, and as here considered even includes a plant that was misclassified as *Exidia*. Purely artificial in my opinion, it has been consistently ignored in Saccardo, but I expect in view of its extensive employment now he will be forced to recognize it. The name was proposed by Rabenhorst (or more likely Winter) but he had no idea of it in its present sense and Schroeter is really the man who first defined it as at present employed. The large spores and basidia are the essential idea, but in addition it has an assortment of paraphyses, cystidia, gloeocystidia of various shapes and characters. The texture is membranaceous, ceraceous or firm, hard or subligneous, and in the sense of one author fleshy, and I believe in being logical and adding those that are gelatinous in order to make the inconsistency complete. Höhnelt gave an elaborate paper with figures, some of them very inaccurate, of the species (12) with which he was acquainted. Burt has given a full and careful account of the (14) American species with emphasis on the microscopic characters. These characters while easily seen in some species are very difficult to make out in others, and it is hard to associate in one's mind species of fungi with microscopic characters mainly. As we have had only a confused idea of the species that have accumulated in our museum we have worked them over in the light of Burt's paper and present photographs of those we have, twenty-two in number. Given that a plant is an *Aleurodiscus*, which rests on only two characters "large spores and basidia" it is easier to determine them from microscopic characters and there are none we have that can be confused with each other to the eye. I think the tendency of modern mycology to base classification on difficult anatomical dissections, while perhaps theoretically correct, is practically doing a great deal to depopularize the subject or rather to prevent the subject from ever becoming popular. The genus *Aleurodiscus* differs so much in the grosser aspect of the species that we have divided it into six sections, each of which could be made a "new genus".

Section 1. Fruit bodies small, gregarious but usually distinct, attached by small point with free margin, cup shaped or discoid.

ALEURODISCUS AMORPHUS (Fig. 1666).— Forming little flat cups with raised margins. Grows on the bark of fir, spruce and probably other acerous trees. Spores 20×23 , oval, smooth to dry

eye but said to be minutely spinulose. Paraphyses slender, hyaline, 6 mic. thick, flexuous, moniliform.

This is rather frequent both in Europe and the States. The specimen we photograph is from G. U. Hay, New Brunswick. We also present (Fig. 1667) an enlargement, sixfold, of a single cup.

ALEURODISCUS GRANTII (Fig. 1668).— Formed of little convex sporophores with free but not raised margin, growing caespitose on bark. Microscopic characters as in *A. amorphus*. This, by those who rely on the microscope, would probably be referred to *Aleurodiscus amorphus* but the fruiting bodies are entirely different in shape. Our figures 1669 and 1667 enlarged in contrast will show this. Based on two collections, 970 and 529, from J. M. Grant, Washington state, also John Macoun, Canada.

ALEURODISCUS FARLOWII (Fig. 1670).— Forming little disc shaped sporophores with free, upturned margin, dark on under side. Spores elliptical, hyaline, 12 X 20. Paraphyses with spiny processes, "brush shape" as called. Growing on the small branches of the hemlock. I have three collections from Stewart H. Burnham, New York.

Section 2. Fruiting bodies broadly attached, resupinate with free, upturned margin.

ALEURODISCUS OAKESII (Fig. 1671).— Forming irregular, confluent patches with free, strongly incurved margins. Color isabelline. Spores 12 X 20, hyaline, smooth. Paraphyses very numerous, some smooth and constricted, others with spiny processes. A frequent species in the United States on frondose wood with preference for the hornbeam.

ALEURODISCUS JAPONICUS (Fig. 1672).— Thin, soft, of the general nature of *Aleurodiscus Oakesii* but smaller and pure white. At first little, flat, white cups with erect, tomentose edges. Spores 14 X 28, pale, smooth. Paraphyses very numerous, "bottle brush" with slender spines, well shown in Hchnol's T. 4, fig. 3.

This was received so named from A. Yasuda, Japan (No. 440). It is very close to *Aleurodiscus Oakesii*, but differs in pure white color, larger spores and different paraphyses.

ALEURODISCUS APICULATUS (Fig. 1652).— Effused, resupinate, with a narrow, upturned margin. Color ochraceous or pinkish buff. Spores hyaline, unequilateral, lemon shape with acute ends, minutely tubercular (under my lens) but Burt states echinulate when highly magnified. Paraphyses cylindrical, flexuous, aculeate at base or entirely covered with aculeate prongs. I have a collection (Fig. 1652) from C. N. Forbes, Hawaii, that I refer here with some misgivings.

ALEURODISCUS ORIENTALIS (Fig. 1673).— Forming large plaques with upcurved margins, thin, effused. Color cream-buff. Spores globose, 16-18, smooth, hyaline. Basidia hyaline, wavy, cylindrical, 10 mic. thick. Paraphyses filiform, hyaline, branched.

The elements of the hymenium are easily seen as there are no incrustated granules. Based on a collection from A. Yasuda, Japan,

(No. 519) growing on *Quercus* bark.

Section 3. Hard, thick resupinate. Plants formerly referred to *Stereum*. A section usually shows the large basidia and spores plainly but is so filled with incrusting, granular matter that the shape of the paraphyses is difficult to make out, a matter of not much moment, however, for all appear to be much alike.

ALEURODISCUS DISCIFORMIS (Fig. 1674).— Forming little, thick, adnate sporophores, the margin usually free and incurved. Color (dried) pale greyish. A section shows abundant spores, hyaline, smooth 12 X 16, large basidia and filiform paraphyses are readily seen.

Well known in Europe as *Stereum disciforme*, it is absent from the States. Cooke put it in *Peniophora* (where found in Saccardo) and grossly misfigured it as having metuloids which it has not any more than it has thyroid glands. Specimens, H. Bourdot and Victor Dupain, France.

ALEURODISCUS CANDIDUS (Fig. 1675).— Sporophores pure white, thick, hard, scattered, resupinate. Spores subglobose, 16 X 18, hyaline, smooth. Paraphyses so incrustated that they are not easily seen.

A frequent species in the States on bark of frondose trees. Similar in size and habits to *Aleurodiscus disciforme* of Europe which it replaces. There is a species in Europe, *Aleurodiscus acerinus* (*Stereum acerinum* of old) unknown to me, that is evidently close to this species.

ALEURODISCUS NIVOSUS (Fig. 1676).— Forming little, elongated, hard, cracked, thin, white, resupinate patches on the bark of the red cedar. Spores subglobose, hyaline, even, about 14–18 mic.

There is probably not a red cedar tree from the Gulf to Canada that does not have its bark covered with splotches of this little, white, adnate fungus that looks like spots of whitewash. This, for me is its best specific diagnosis. The "structure" I am unable to make out excepting I can see that Höhnell's figure does not represent anything at all in its section.

ALEURODISCUS STRUMOSUS (Fig. 1677).— Forming small, yellow patches on bark in the American tropics. It is the only bright yellow species known. Its microscopic features are hard to make out and it has mostly passed as a *Stereum*. Leveille named a specimen from Colombia (S. Am.) that he saw in the Paris Museum *Stereum vitellinum*. Saccardo, finding the name a duplicate, changed it to *Stereum Mancianum* in honor of an Italian who had no more to do with it than Dr. Cook (the Arctic, not the mycological exploiter). Patouillard published that it was an *Aleurodiscus* (still retaining the Italian's name) and Burt decided it was the same as *Stereum strumosum* as the plant was well known in the Berkeleyan and American traditions. I have a nice specimen from H. L. T. Nelson, Florida. Our figure does not come out very well but yellow does not photograph to advantage.

ALEURODISCUS CRASSUS (Fig. 1678).— Sporophores large, an

inch or more in diameter I judge from the specimen received, or it may be effused over greater extent, thick (3 mm.) hard, rigid. Color white or rather slightly alutaceous. Spores 16 X 20, thick walled, even with granular contents.

Received from H. C. Gilbert, Oregon. I have no doubt it is *Aleurodiscus* from its evident relationships to *A. disciformis* and *A. candidus* and its large spores. A section shows me only irregular, incrustated hyphae and I am unable to make out different paraphyses nor do I see basidia, usually so easily seen in *Aleurodiscus*.

ALEURODISCUS SERIATUS (Fig. 1679).— Fruiting bodies orbicular or oblong, forming scattered patches, resupinate, adnate, pale isabelline, probably white when fresh. Spores globose, hyaline, smooth, $9\frac{1}{2}$ - 13 X 11-18. Paraphyses filiform, flexuose, strongly incrustated. Imbedded in the tissue are globose organs, 6-16 mic. in diameter with wrinkled surface.

A rare species only known from the West Indies. The above structure is taken from Burt's paper. The material I have is very scanty.

ALEURODISCUS PENICILLATUS (Fig. 1680).— Resupinate, effused ochraceous, thin, cracked when dry, the margin adnate. Spores subglobose, 18-20 mic., appearing smooth to me but minutely echinulate teste Burt. Paraphyses curiously shaped as shown by Burt, a few only penicillate at the top. It seems to me I can also see filiform paraphyses. A western species on *Tsuga*. Specimen from J. M. Grant.

ALEURODISCUS MACROSPORUS (Fig. 1681).— Forming elongated, thin, cracked, white plaques on bark, and resembling a *Corticium*. Basidia numerous, hyaline, somewhat constricted, 7-8 mic. thick. Cystidia rare, straight, hyaline, emerging 40-50 mic. Paraphyses filiform, flexuose.

This is a species said to be common in France though only recently named, originally as *Corticium*, hence the name which loses its meaning in *Aleurodiscus*. I have a specimen from Rev. Bourdot.

ALEURODISCUS AURANTIUS (Fig. 1682).— Resupinate, flesh color to reddish yellow when fresh, drying drab. Basidia colored. Paraphyses (teste Höhnelt) smooth, moniliform at top. Spores (teste same) finally echinulate.

This occurs usually on *Rubus* in Europe and is not known from the States. It was first placed on *Aleurodiscus* by Schroeter.

ALEURODISCUS CERUSSATUS (Fig. 1683).— This is a thin, effused, white species of Europe, figured in Bresadola, T.144. It is shown as having pinnate paraphyses. My specimen from Rev. Bourdot is so thin it will hardly be seen in the photograph.

ALEURODISCUS TENUIS (Fig. 1684).— Forming a thin, pure white, resupinate layer like a *Corticium*. Teste Burt, spores are 9-12 X 12-15, smooth, and paraphyses bushy bottle shape. It was recently collected in Cuba and is evidently close to *Aleurodiscus cerussatus* of Europe.

ALEURODISCUS WEIRII (Fig. 1685).— Forming a thin, white, effused layer on wood of Thuja, cracking into little areas when old. Teste Burt, spores are $9-10\frac{1}{2} \times 10-12$ and paraphyses are "cockroach" shape.

This is a western species, known only from Dr. Weir's collections. To the eye it is a Corticium.

Section 5. Fleshy cup shape, resembling a Peziza

ALEURODISCUS VITELLINUS (Fig. 1686).— This is an anomalous species, if it is possible to have an anomalous species in such an incongruous genus. It resembles a Peziza in flesh, form and habits but it has large basidia and spores, which in the final analysis are the only character common to the genus. It is only known from Chile and we gave on p.736 its history in connection with a specimen from M. R. Espinosa.

Section 6. Soft, gelatinous with tremellaceous, typical structure. When dry hard and horny.

ALEURODISCUS CAPENSIS (Fig. 1687).— Fruiting body pale with a slightly ochraceous tint, adnate with appressed margin, orbicular or elongated. Hymenium a well defined layer distinct from the subgelatinous context. When soaked the context is white and composed of gelatinous tissue. Spores with a faint color, subglobose, 16-18 mic., smooth. Cystidia few, fusoid, hyaline, with thin, smooth walls, projecting 40 mic. Paraphyses slender, branched flexuose, hyaline.

This reaches me from P. van der Bijl, South Africa (No.833). The general appearance reminds one of Aleurodiscus Grantii. Imbedded in the hymenium and very abundant in the layer of the context next to the host are perfectly globose, (20 mic.) hyaline, thick walled bodies without any attachment as far as I can see and the nature of which I can not understand. They do not appear to be spores. If this proves to be the same as Aleurodiscus cornea I shall not be much surprised, although on comparison the plants do not seem to be the same and I am unable to make out crested cystidia on this specimen.

ALEURODISCUS CORNEUS (Fig.1688).— (Compare Myc. Notes p.656 and figures 935, 936, 937.) A gelatinous plant, soft, white when soaked. Very similar to the preceding species but appears to me to differ as stated. Specimen from Miss A. V. Duthie, South Africa. Detailed description and figures given in l. c. where it appears as Cystidia cornea.

Since this article has been written we have received co-type specimens through the kindness of Professor Burt of Aleurodiscus botryosus and Aleurodiscus cremeus, thus completing our collection of American known species.

DAEDALEA RIDLEYI FROM T. F. CHIPP, SINGAPORE (Fig. 1689).— Dimidiate, four to six inches in diameter, 1-2 cm. thick. Color of surface and context light brown (ochraceous-tawny of Ridgway). Surface dull, soft to touch. Context friable. Hymenium daedaloid

or subirpicoid with thick, rigid, distant teeth. Surface of teeth paler color than context, minutely pubescent to the eye, under a lens pubescent with projecting hyphae. Spores not seen but doubtless hyaline. This plant was collected in 1900 by H. N. Ridley and sent to me labeled *Hexagona ochroleuca*. I do not know who named it but I presume Masee, as Ridley sent his specimens to Kew, and Masee mis-named most of them. However, it does not occur in his next records (1901) and I am sure it is not at Kew now. It differs from everything I ever saw in this line, in having friable, brown context. The context is made up of uniform, tubular hyphae, about 6 mic. in diameter and has not the ligneous hyphae usually found in such plants. It has a similar chemical test to *Polyporus rutilans*. A drop of potash solution instantly turns it black, leaving an apparently permanent stain. I never saw anything at all similar to it. While the photograph resembles *Daedalea Sprucei*, the nature of the plant is entirely different. (Specimen 4920, Section 148).

STEREUM TUBERCULOSUM FROM MISS ANN HIBBARD, MASSACHUSETTS (Fig. 1690).— These are the first pileate specimens I have seen for usually it is resupinate and is found in the resupinate section in our books. The species is one that "bleeds" and seems to replace in the States *Stereum rugosum* of Europe. It is well characterized on a section with a layer of large, globose, vesicular organs that have no special name as far as I know in terminology. *Stereum rugosum*, recently named, is a very similar species but lacks these organs.

EXIDIA ZELLERI FROM S. M. ZELLER, OREGON (Fig. 1691).— I wish every collector who finds a tremellaceous plant would pick it up abundantly and dry it. There have been so few collected that they are practically unknown except a few of the common species that grow in Europe and even the European species are imperfectly known. Plant gyrose or when not developed applanate with even surface, about a mm. thick. Color when soaked pale purplish grey, sub-translucent with faintly violaceous cast, drying dark. Papillae few, scattered, globose. Basidia globose, hyaline, 12-14 mic. imbedded in a thin layer, close to the surface. Spores 6 X 20, hyaline, curved or rarely straight. Growing on *Sambucus glaucus*. No. 1775.

This is so close to Tulasne's figure and account of *Tremella violacea* which we only know from his work, that we hesitate to propose it as different. The plant is much larger, spores are larger and it has papillae not on the European species. The feature of the plant is the basidia which are only imbedded in a thin, surface layer, rather unusual in these plants. This has scattered papillae but we include it in *Exidia* on its spore characters.

HYDNUM SCLERODONTIUM FROM T. F. CHIPP, SINGAPORE (Fig. 1692). As named, and certainly correctly. A peculiar species, but for me not a resupinate *Hydnum* as it appears at first view. The subiculum is thin, rigid, closely adnate, reddish brown and appears to be of a sclerotoid nature, as inferred from the name Berkeley gave it. The teeth are irregular, rigid, brown when moist, changing but little on drying and appears to me as separate plants growing on the subiculum rather than teeth of a resupinate *Hydnum*. In this view

they are better classed as *Pterula*. The teeth of a *Hydnum* always have a regularity of arrangement and relation to each other not at all in evidence here. The plant should be studied fresh as to its structure and spores and is liable to turn out something entirely different from what it passes.

XYLARIA BICEPS FROM E. D. MERRILL, PHILIPPINES (Fig. 1693).- For me this is a tropical form of *Xylaria Hypoxylon*. It was named by Spegazzini, and Balansa's collections are in several museums. It has the essentials of *Xylaria Hypoxylon* but differs in shorter clubs and longer stem. Also the clubs have sometimes short, dilated branches at the apex. The Philippine collections were determined as *Xylaria tuberosa* by Sydow. No one knows what *Xylaria tuberosa* is. The old Persoonian type at Paris is immature and may be most anything. In my opinion it is the young of *Xylaria scopiformis*. I have a specimen of *Xylaria biceps* from Father Rick named "*Xylaria leprosoides*, Rehm" as no doubt named for him. I do not know that it was published.

XYLARIA CONSOCIATA (Fig. 1694) as illustrated by Starbäck is for me a branched form of *Xylaria biceps*. It was distributed (Theiszen 67a) as *Xylaria biceps* var. *botryosa* but this according to Rehm's crude figure appears to be *Xylaria arbuscula*.

CORDYCEPS AEMONAE FROM G. H. CUNNINGHAM, NEW ZEALAND (Fig. 1695 enlarged sixfold).- Fertile clubs, short, stipitate, 2-3 mm. long, tipped with sterile apices. Growing fasciculate (3-5) from the head of the host. Color light brown. Perithecia contiguous, hemispherical, obtuse, almost free. Spores breaking into short, secondary spores about 2 X 2.

This grows on the larva of *Aemona hirta*, teste Mr. Cunningham. But one other *Cordyceps* is known similar in its manner of growth, viz *Cordyceps Dovei* of Tasmania. (Cfr. *Cordyceps* of Australasia, Fig. 620), and that is only similar in its manner of growth.

Specimen No. 51 from G. H. Cunningham, New Zealand. Mr. Cunningham sends a most interesting account of the plant as follows:

"The fructifications project above the surface of the log to a height of from 3 to 10 mm. The conidial stage appears to be more abundant than the later; these are usually single, club shaped and a mealy white in color. Perithecial stage; from one to four or more clubs of a dark brown to light grey in color. Perithecia superficial. The host larvae are only found in rotting logs of *Melicytus ramiflorus*, Forst. This is a small tree that is fairly common in this locality. The Maori name for it is "Mahoe". It is brittle, white wood and soon decays on contact with the ground. It is of no service as a building timber. The larvae (from which fructifications have appeared) are all found with their heads towards the surface of the log in which they are found. The fungus appears to have to make its way through about 5 mm. of solid wood before it comes to the surface to fructify. Frequently, however, it follows the old, larval tunnels for some distance until it comes to an opening.

The host is a native species of beetle which has become a pest in the larval stage to growers of lemon trees in the Dominion.

It attacks and destroys lemon trees by tunneling through the pith and also more or less by barking the tree. Commonly known as "the flat headed lemon tree borer" and is scientifically known as *Aemona nirta* (Syn. *A. humilis*). This information regarding the beetle and its habits I have obtained from Mr. D. Miller, Government Entomologist.

POLYSTICTUS AEQUUS FROM L. RODWAY, TASMANIA (Fig. 1696).— Perhaps this is best considered as a form of *Polystictus versicolor* of which it has the surface zones and coloration and the pores. But it is a firm, rigid form with a small attachment and has much the aspect of *Polystictus flabelliformis*. I tried to fit it to *Polystictus poecilius*, named by Berkeley from Ceylon, the types of which are in the British Museum. It is surely close but from my notes and Berkeley's description this has a uniform brown surface with faint zonations. Both plants are best considered as forms of the polymorphic *Polystictus versicolor* and yet these very distinct forms should have names. This plant is also very close, perhaps too close to *Polystictus Macounii* of our country.

POLYPORUS PEAKENSIS FROM GEO. G. HEDGCOCK, COLORADO (Fig. 1697) This is a novelty as far as our records in the States. Pileus orbicular, spathulate to a short stipe. Color of entire plant brown. Context thin, fragile. Pores minute, darker than the context. Setae few but large, 10 mic. at base and projecting 40 mic. Spores scanty if correctly seen, hyaline, 3 X 5.

Dr. Hedgcock collected this on Pike's Peak, attached to dead twigs of what was probably the Douglas fir. When received it was familiar to me and while I have misplaced the specimen, if I mistake not, I have it from South Africa misnamed by Kalchbrenner. On the classification adopted in our Stipitate Polyporoids it would fall in Section 17 but its structural affinities are close to plants in Section 35 excepting as to stipe insertion. The plant was broken in transit, hence the figure is not very satisfactory.

TRAMETES VARIIFORMIS FROM RALPH G. PALMER, NEW YORK (Fig. 1698).— We considered this plant in detail on page 884 and it is well named *variiformis*. It is virtually the same as *Trametes heteromorpha* (Cfr. Myc. Notes, page 848) but it has a reddish brown pileus surface and *heteromorpha* is white. This specimen from Mr. Palmer has a pale reddish surface and tends to connect the two "species". There is no such thing as a species in nature, if intermediate forms are taken into consideration. Nor genus either for that matter. This "species" has been called *Lenzites*, *Trametes* and *Polystictus*, and has almost as much claim to one as to the other, excepting I never saw a true *Lenzites* form.

MIDOTIS HEINRICHERII FROM DR. CH. BERNARD, JAVA (Figs. 1699 and 1700).— This was named from Java as late as 1905 and it is the only species that is recorded from Java. A half dozen are reported from the American tropics but how they differ or how many are the same I have not looked up and do not know. This Javanese species is hard and rigid when dry. The pilei are confluent into a thick stem and they are strongly incurved when dry. The plant can readily be known from our figure which we show both dry and soaked. The color of the surface is dark, reddish brown, the flesh pinkish white but the flesh soaks up brown. It is said to be orange when fresh but as

to that I can not say. No figure was given of the plant but it is the only one named from the East and while we have not seen the original we have no doubt it is correct. This genus was called Wynnea by Berkeley and changed in Saccardo on an old Friesian record to Midotis. Whether that was right or not I do not know but I question it for I doubt if Saccardo knew any more about the original Friesian species of Midotis than I, but the probabilities are that it is not Wynnea. When soaked the plant has a general resemblance to Berkeley's figure of *Wynnea gigantea* from Mexico and the color of *Wynnea macrotis* as shown by Cooke. This specimen is young and the spores evidently not mature. Asci are large, hyaline and abundant, paraphyses are filiform, hyaline, slightly thickened above and mostly one septate. The probabilities are that it is *Wynnea macrotis* which Berkeley records from India.

WYNNEA AMERICANA FROM BURTT LEEPER, OHIO (Fig. 1701).- In connection with the preceding plant we present a figure of the rare American species which was named as above. The photographs show but little difference and we rather suspect they are both about the same thing. We use the name *Wynnea*, proposed by Berkeley, and not the name *Midotis* as found in Saccardo. While we do not know as to its merits we suspect the substitution of *Midotis* for *Wynnea* in Saccardo is very much of a juggle.

Wynnea Americana is said to have a sclerotium. I trust Mr. Leeper when he finds it again will dig it up. It is the only *Discomycete* supposed to have a large sclerotium.

CANTHARELLUS MULTIPLEX FROM L. RODWAY, TASMANIA (Fig. 1702).- This originally came and is only known from Mr. Rodway's collections in Tasmania. The Australian and New Zealand collectors have not found it as yet and it has never been collected elsewhere. It was published as *Craterellus* but the veined hymenium would put it in *Cantharellus* if *Cantharellus* is to be maintained. However, there are other plants like this that are intermediate. Mr. Rodway's specimens to me have evidently veined hymenium, but the specimen preserved at Kew has a peculiar "blistered" appearance. I made a photograph of it enlarged (Fig. 1703) and thought it would some day be the type of a "new genus". The fibrils shown on the figure are cotton threads and have no connection with it. *Cantharellus multiplex* is a yellow plant. Spores are globose, $3\frac{1}{2}$ -4, hyaline. It is peculiar in itself as no similar "multiplex" species is known. Underwood named a *Cantharellus multiplex* from Maine, but the figure he gives has no resemblance to this plant and he questions if it belongs to the genus.

ECHINODIA THEOBROMAE FROM T. F. CHIPP, SINGAPORE (Fig. 1704). We are glad to get nice specimens from Mr. Chipp of this plant for we had not seen it before. It was recently named by Patouillard who considered it a derivative from some *Polyporus*, taking a stilboid form, and analogous to *Ptychogaster*. Mr. Chipp's specimens sent to us are further advanced and the pores are well formed and we think it will prove to be a preliminary, conidial condition of a *Polyporus* rather than an anomalous condition. Many other fungi such as *Pyrenomycetes*, tremellaceous genera, etc. habitually have preliminary, conidial forms. Why not (rarely) a *Polyporus*? At any

rate it is very curious and we are pleased to be able to present a figure of the plant and an enlargement (Fig. 1705) of the curious stilboid hairs. Miss Wakefield has pointed out recently (Cfr. Myc. Notes p. 877) a somewhat similar case. She found that the hairs of *Polystictus aculeifer* are conidial bearing. We hope Mr. Chipp will continue to observe *Echinodia* and we have little doubt he will learn the *Polyporus* into which it develops.

DACRYOMYCES DIGRESSUS FROM P. VAN DER BIJL, SOUTH AFRICA (Fig. 1706).— We give another figure of this, as the original on page 620 was not very good. As stated when named it has the aspect of a *Tremella* and structure of a *Dacryomyces*. Mr. Van der Bijl's specimen confirms the species which was named from South Africa.

XYLARIA SCHWEINITZII (Fig. 1707).— In the past when the names of *Xylaria* "species" were based mostly on single collections, the character was largely drawn from shape, size and length of stipe. Of how much value such features are may be inferred from Fig. 1707 which represents a single collection of *Xylaria Schweinitzii* that I found in the New York Botanical Garden, and of which no two specimens had the same size, shape or stipe. While these features have a general value in relation to species, they are not specific.

The early namers of *Xylarias*, Fries, Berkeley and Montagne had definite ideas as to the species or rather the collections they named. Cooke, who came after them, did careless and inaccurate work on the subject and any one who draws his conclusions from Cooke's records and figures will get more species wrong than he will right. Hence the work of Hennings, Rehm and Sydow and apparently Spegazzini, who all depended on Cooke, only makes matters worse. Theissen had the best knowledge of species but naturally he could not interpret correctly such work as had gone before him.

AURICULA TOTARAE FROM G. H. CUNNINGHAM, NEW ZEALAND (Fig. 1708).— There is a quite frequent and widespread plant which we now call *Auricula reflexa*, but which has been called *Phlebia reflexa* and a great many other names. Recently it was put in *Auricularia* as *Auricularia reflexa*, and it is presumed to have cylindrical basidia which we have never been able to see.

Auricula Totarae is a plant evidently closely related to this more frequent species. It is dark, black when dried. The surface (Fig. 1709, enlarged) appears to the eye nodular, tomentose, but a section shows the nodules as solid protuberances. The hymenium on lower surface is dark and distinct from the subhymenial tissue. Imbedded in it are globose bodies, I presume basidia, which would place it in a different genus from *Auricula reflexa*. Spores appear to be hyaline, straight, $1\frac{1}{2} \times 4$ mic. Collection, G. H. Cunningham, (No. 23) Weraroa, New Zealand, growing on dead Totara stump.

POLYSTICTUS SUBCOGENER (Fig. 1710).— We present another figure of this plant as the one we published (Fig. 1578) was not good. Cfr. Myc. Notes, p. 898.

XYLARIA RAMULATA FROM G. H. CUNNINGHAM, NEW ZEALAND (Fig. 1711 and Fig. 1712 enlarged).— This was published in Theissen's work on Brazilian *Xylarias*, and I have specimens from Father Rick, Brazil.

Otherwise it is unknown to me, but as it occurs in New Zealand it may have other names as *Hypoxylon* probably. It may be the plant Fries named from Brazil as *Xylaria parvula*, but no one knows what that was and only one man has guessed at it and he guessed a different plant. Startäck's figure, from Brazil, of *Xylaria bertiioides*, could be a misrepresentation of it for it is no doubt a misrepresentation of something, for there is not one chance in a million that any *Xylaria* ever grew covered from head to foot with perithecia, as shown.

Xylaria ramulata is the smallest *Xylaria* known. It is jet black, all carbonous, distinctly stiped, usually apiculate with several perithecia, surface moriform, and spores 8×24 , unusually large for a *Xylaria*, particularly such a little *Xylaria*.

The Brazilian plant grows scattered on twigs and spores are about 6 mic. smaller. The New Zealand plant as shown in Fig. 1711 is closely gregarious on bark. It is possible this plant may have been named as *Hypoxylon* but not probable, as the old namers considered *Hypoxylons* as sessile plants. But there are good reasons for calling it *Hypoxylon* for it is all carbonous and a typical *Xylaria* has a white stroma.

XYLARIA RHIZOPHILA (Fig. 1713).- The *Xylarias* with brown, not carbonous crusts are few and we would base a section on them. The only two we have seen are the above from Australia and *Xylaria graminicola* from the States, and curiously enough both grow on grass roots. *Xylaria rhizophila*, in size and shape, is shown in our figure. The color is brown and there is no carbonous crust under the cuticle as in most other brown species. The perithecia when developed are strongly moriform and the spores are $5-6 \times 10-14$, much larger than described. It is peculiar in its habits (roots of grass) and but one collection is known, "Bailey, Australia". It is advertised as Cooke and Masee, but I think it was Masee as I have no record of seeing it in Cooke's collection, but recently found it with specimens sent by Masee to New York. In addition it was published in *Grevillea*, Vol. 22, the only volume Masee issued.

XYLARIA GRAMINICOLA (Fig. 1714).- Similar to the Australian species as to habits, attached to grass roots, this also has a brown crust, not truly carbonous but more so inclined than the Australian plant. It has a short stem, a tapering, strongly moriform club, with a sterile apex. Spores are $5 \times 8-10$. It was collected by Gerard at Poughkeepsie, N. Y. forty years ago and was named and published by Peck. Although I believe this is the only collection known the plant is found in several museums, having been widely distributed by Gerard. We have a fine collection.

XYLARIA CUPRESSIFORMIS FROM G. H. CUNNINGHAM, NEW ZEALAND (Fig. 1715).- We dislike to refer a New Zealand plant to a European species that we know only from a very old figure (Micheli.) but it appears to agree with the figure and also with the account given by recent writers in Europe (Nitschke and Traverso). The plant is quite close to *Xylaria Schweinitzii* but differs in the evident, pubescent stipe. Spores 8×24 . Surface and stroma are same.

LENZITES STRIATA FROM PROF. T. PETCH, CEYLON (Fig. 1716).-

This is a form with distinct zones on the surface, the first we have noted. In every other respect it is exactly the same as the usual plant, so abundant in the American tropics but more rare in the East.

THE GENUS PORONIA.

This genus, as we would define it, differs from other large Pyrenomyces in having the black, carbonous perithecia imbedded in a white, fleshy stroma. The shape is usually cup-form, rarely hemispherical, and the only other genus that approximates it is *Carnostromata* which resembles a *Xylaria* in form. All other of the large Pyrenomyces have a black, carbonous crust. The name ("because the disc is punctate porous") is a misnomer because the disc is no more punctate porous than any other Pyrenomyces. There is one species, *Poronia punctata*, which is fairly common on dung in Europe and widely distributed, but rather rare in the United States. Most species are dung loving, the few that are not are exceptions.

PORONIA PUNCTATA (Fig. 1717).— Growing on dung; the head cup-form and even with the surface, the stem imbedded in the matrix and it can not be mistaken from our figures. The spores are large, about 12 X 24, and like many of the dung loving Pyrenomyces each spore has a thin, mucilaginous coat. It is fairly common in Europe, rare in America, has been reported from India and probably occurs in many temperate region countries. Our Fig. 1717 shows the plant as it appears on the surface of the dung and Fig. 1718 the same separate from the matrix.

PORONIA OEDIPUS (Fig. 1719).— Like the preceding species this grows usually on cakes of manure or manured ground but the heads are raised on a stalk either simple or branched and usually swollen near the base. It is very common in the West Indies, occurs in southern Europe and southern United States and is recorded from many tropical countries. It seems to replace *Poronia punctata* in warm countries. The spores are similar to those of *Poronia punctata* and our figure tells the remainder of my story. It was first collected at Lyon, France, and sent to Montagne who named it *oedipus* (or rather *oedipoda*) as a stalked form of the preceding species. Then he got it from Cuba and illustrated it in his work on Cuba, raising it to specific rank. It has since been found widely in tropical countries. Montagne was only acquainted with the simple form (Fig. 1719) with a swollen stem, hence the name. But a branched form (Fig. 1720) occurs also in the tropics, which has never received a special name, but is as much entitled to one as many species are. The stem of this branched form is not swollen as far as the specimens I have seen and I have the impression it takes this branched form when growing in manured earth and rarely in cakes of manure. Our Fig. 1719 with simple stem is from Rev. Langlois, Louisiana. Fig. 1720, right, from J. A. Stevenson, Porto Rico, and Fig. 1720, left, from F. S. Earle, Cuba, the two latter in the New York Botanical Garden.

All the following species of *Poronia* are known from but few collections each.

PORONIA PILEIFORMIS (Fig. 1721).— Plant with a sclerotoid base and long stem was figured from the Philippines by Berkeley in 1842. Our figure is from the type at Kew. Currey gives the spores as 7-8 mic. long and our figure tells the rest. Cooke includes it as an Australian species but I do not know on what basis. I have a suspicion that it is the same plant as the next.

PORONIA MACRORHIZA (Fig. 1722).— In 1907 I received a most curious plant from A. D. Machado, Perak. It proceeded from a sclerotium, had a long, black, branching stem and a white, soft, floccose head. I sent it to Patouillard and he advised me that he thought it was an immature *Poronia*. Last summer in the New York Botanical Garden I found a collection of a most curious *Poronia* which was mature and remarkable in the soft, white, cottony texture of the stroma in which the perithecia were imbedded. It came from Peru and was collected on "cow dung" by O. F. Cook. While it has no sclerotium (probably broken off) I am satisfied it is the same as that I received from Perak. The spores are 6 X 26. The remarkably soft, cottony tissue of the head and the figure we give will enable it to be identified when found again.

Poronia pileiformis from the photograph appears to be the same, but I did not note that the type had the soft, cottony stroma and Currey's spore record does not apply. I do not know *Poronia macrorhiza* excepting from description which does not mention the soft stroma, but coming from the same locality, having the same sclerotium and spores, there is but little doubt, and Spegazzini probably did not know the usual texture of *Poronias*.

PORONIA HEMISPHERICA (Fig. 1723).— This is the only species we have not seen, and we present the figure that was made of it (natural size). It is very small, has a hemispherical head, a sclerotoid base and grows on cow manure in Brazil. It seems to be based on a single immature specimen and possibly it is an incipient specimen of *Poronia macrorhiza*. It is the same size and shape of *Xylaria discoidea* and at one time we discussed the possibility of its being that plant, but no doubt we were mistaken. "New species" should not be based on such scanty, immature material.

PORONIA EHRENBORGII (Fig. 1724).— This is a large species with a long stem that is completely buried in the sand, only the head appearing on the surface. It was collected in Arabia, the spores said to be 16-21 X 30-40, and our figure tells the remainder.

PORONIA DOUMETII (Fig. 1725).— This is the same in appearance and habits as the preceding and came from Tunis. The heads are hemispherical and the spores 9 X 15 are the character on which it was separated from *Poronia Ehrenbergii*. Both have the spores enveloped in a thin, mucilaginous covering, indicating the relation to manure loving species.

PORONIA AGARICIFORMIS (Fig. 1726).— Heads hemispherical, white, punctate with the black ostioles. Stipes an inch or two long black, smooth. Spores 7 X 14 mic.

A hemispherical *Poronia* was so unexpected that Cooke referred it to *Xylaria*, evidently on its shape. But one collection is known

from Australia, sent to Kew thirty years ago and two specimens are at New York. Rehm so determined (as *Xylaria*) for Rick, *Xylaria discoidea* of Brazil that has no suggestion of it whatever, but Rehm was only guessing and made a bad guess. From the resemblance of the photographs I have supposed *Poronia Doumetii* to be the same, but while they look alike, same size and shape, the habits are entirely different. Indeed there is no other *Poronia* known that "grows on a stump" as this is said to grow. A close examination of the co-type at New York discloses a thin, carbonous crust under the thick, white, external coat, hence perhaps it is technically a *Xylaria*. Still I think it is better classed as *Poronia*.

PORONIA USTORUM (Fig. 1727).— Exceptional in its habitat, the burnt stem of grasses, there can be no trouble in recognizing the species which is a true *Poronia* with carbonous perithecia imbedded in a white stroma. The spores are 6 X 12 and the photograph shows the remainder. It has been recorded in New Caledonia, in South America, but no specimens have reached me. Co-types are found at New York. Type is at Paris, from which our photograph is made.

Synonyms or unknown to me

Poronia cupularis, Europe, Fries. Said by Nitschke not to be a *Pyrenomycete* but he does not state what it is.

Poronia scutellata, Europe, based on Micheli, T. 54, Fig. 3, is supposed to represent *Poronia punctata*, but if so it is very poor and Micheli stated it grew on the ground.

Poronia pocula is the name under which the unique little *Polyporus Pocula* was first proposed.

Poronia fornicata. Judging only from Moeller's figure and publication, and a specimen I so referred from Rev. Torrend, Brazil, this is the same plant we consider now as *Kretzschmaria Kunziana*. It is a question whether *Kretzschmaria* or *Poronia*. The contiguous perithecia are aberrant in either genus and it has a thick crust not found on *Poronias*, and not carbonous as in *Kretzschmaria*. I am inclined to think it is better classed as *Poronia* in which case it would become *Poronia Kurziana* (Currey) McGinty.

Poronia leporina. The material I have seen is scanty and I am not sure about it, but if Ellis' or Masee's enlarged drawings are correct it is a *Poronia*. I do not believe either is correct. It is a very minute species on rabbit dung. I opine it is not a *Poronia* at all and that both drawings were made to fit the idea. It seemed to me to have a black, carbonous crust instead of a fleshy disc as shown, and I believe it to be *Xylaria Tulasnei* of Europe, which was illustrated by Tulasne as *Xylaria pedunculata* var. *pusilla* and which also grew on rabbit dung. I have seen Tulasne's plant in Europe, and as near as I could judge Ellis' plant is the same. "*Poronia*" *leporina* is known from one collection, Demetrio, Missouri, thirty years ago. Perhaps if our American collectors would more closely observe rabbit dung they would find it more often.

The following species have not been noted by me: *Poronia*

caelata, based on immature specimens from Tahiti, characterized by very soft, yellowish stroma, the disc marked with impressions like *Calvatia caelata*; *Poronia clevisiformis*, named from Africa and from description seems to be a *Xylaria*; *Poronia candida* and *Poronia intermedia*, growing on branches and named by Schweinitz, neither is a *Poronia*. Specimens are found in Schweinitz's herbarium but I have not examined them; *Poronia macrospora*, a species growing in the sand, sent to Peck from Connecticut and exceptional in its very large spores, 20-30 X 40-60; *Poronia polyporoides*, described by Hennings from Africa, spores 6 X 12, seems from description to be close if not the same as *Poronia fornicata*.

FOMES LONGOPORUS FROM JOHN GOSSWEILER, PORTUGUESE WEST AFRICA (Fig. 1728).— *Fomes applanatus*, a fairly dependable species in Europe, has so many tropical variations that it is hardly practical to apply different names to them. And yet this is so different from the usual form that one not familiar with it would hardly associate them. While the pores are small they are large compared to the usual *Fomes applanatus* and our enlargements, Figs. 1729 and 1730 in contrast show it graphically. The pores are long (1 cm.) in contrast to the context (2 mm.) but similar long pored forms are not rare in the tropics, but with minute pores. The crust is brown and faintly zonate. The context color and spores are the same as *Fomes applanatus* and context color and spores are the essentials of a *Fomes*.

FOMES GOSSWEILERI FROM JOHN GOSSWEILER, PORTUGUESE WEST AFRICA (Fig. 1731).— Pileus sessile, dimidiate, four to five inches in diameter. Color unicolorous, pale brown approximately but darker brown than buffy brown of Ridgway. Surface dull not zoned and no distinct crust. Context thin (2-5 mm.) concolorous with faint layers, marked with darker zones. Pores minute, irregular, 1-4 cm. long, faintly zoned. Cystidia none. Spores scantily found, globose, 4 mic., smooth, pale colored.

While the species belongs to the brown series (Section 71) it is a different shade of brown from any I ever saw before. The layers of context would indicate that the plant adds annual context layers, also a feature unknown to me in any other *Fomes*. Specimen No. 142 collected at Maiambe, Portuguese Congo. In a later shipment from Mr. Gossweiler I find a second collection, thus confirming the species.

POLYPORUS MOLLICULUS FROM PROF. T. PETCH, CEYLON (Fig. 1732).— Dimidiate, 2-3 inches in diameter. Surface pure white when fresh, spotting brown where touched or bruised in drying. Context pure white, very soft and spongy. Pores white, minute. Cystidia none. Spores allantoid, 1 X 5.

Professor Petch writes that the flesh is soft and watery and often dries in an unrecognizable shape. It should be entered in Section 87. The plant suggests our rare *Polyporus occidentalis* but has entirely different spores.

POLYPORUS PSEUDOGILVUS FROM DR. JAMES R. WEIR, CUBA (Fig. 1733).— *Polyporus gilvus* from the tropics has received many names and we have looked through them and have not found one that is

applicable to this form. It is intermediate between *Polyporus gilvus* and *Polyporus licnoides*, having the same "structure" (color, setae, pores, spores) as both. It is more hard and rigid than *Polyporus gilvus*, more thick and rigid than *Polyporus licnoides*. We believe we have among our unnamed collections, made in Cuba, an ample collection of the same form. It should be entered in Section 96 as a form of *Polyporus gilvus*.

HYDNUM LUTEOLUM (Fig. 1734).— We believe this to be one of the rarest plants of Europe. It appears to have been described first in Fries' last work (*Hym. Europaei*, 1874) and was apparently based on Villars' old reference under the misname *Hydnum auriscalpium*. Fries endorses it "v.v." but it is not included in either of his Swedish lists and is not in his herbarium. Quélet includes it in his book though he never recorded it in his yearly reports. There seems to be but one French record, Villars' old record from France. Both Fries' and Quélet's records were probably based on that. The only specimens I have ever seen are in the museum at Paris, misreferred to *Hydnum geogenium* and from which our photograph was made. It is a thin, yellow plant and I believe the only one known of this shape, spathulate, tapering to the base. No illustration of it has heretofore been given. The spores, if I see them correctly are globose, hyaline, smooth, about 4 mic.

HYDNUM ADUSTUM, DIMIDIATE. In 1907 we received from R. B. Mackintosh, Massachusetts, a sessile, thick, brittle *Hydnum* about $2\frac{1}{2}$ X 5 inches and $\frac{1}{4}$ cm. thick. We misreferred it at the time for we were not expecting a dimidiate specimen of *Hydnum adustum*. But on comparison we can see it is the same plant in its flesh, spines, and spores. The surface is more pubescent than the usual plant and it is much thicker. We have a very similar collection from Dr. Whetstone, Minnesota. We present (Fig. 1735) the usual stipitate form of *Hydnum adustum* which is quite common in the United States. We have about fifty collections of the usual, thin, stipitate form. Rarely *Hydnum adustum* has its spines coalescent, resembling superficially a polypore. We have one such collection from E. B. Sterling, New Jersey, and present (Fig. 1736) the hymenial appearance which is abnormal. Outside of our country *Hydnum adustum* is only known from Japan.

HYDNUM GLABRESCENS FROM DR. JAMES R. WEIR, CUBA (Fig. 1737).— We present a photograph of the type and it is doubtful if it is other than a thick form of the tropical *Hydnum Rawakense*. It is quite rare. The only collection we have is the one collected by Morgan many years ago and correctly referred, which Banker renamed *Hydnum Morganii*. Berkeley also got it from Ceylon. *Hydnum guaraniticum*, as named by Spegazzini and *Hydnum luteo-virens* by Cesati, Borneo, which was listed Grevillea, Vol. 20, page 2 but does not seem to have been published, are both better classed as *Hydnum Rawakense*. We have the thin, tropical form from Burt Leeper, Salem, Ohio, growing on a wild cherry and it is noteworthy that a tropical plant should be found so far north.

POLYSTICTUS EXPANSUS FROM JOHN GOSSWEILER, AFRICA (Fig. 1738). We use a name for this proposed by Fries for a plant from Guinea of

which no type exists but it answers the description to the letter. It is the Eastern analogue of *Polystictus pinsitus* but it is pure white and unzoned. Collections of the plant at Kew from Madagascar are referred to *pinsitus*. It is quite close to *Polystictus cryptomeniae* from Japan (Myc. Notes 53, 758, fig. 1136) but the pileus hairs are coarser.

DENDROCLADIUM FRUTICOLA FROM JOHN GOSSWEILER, AFRICA (Fig. 1739).— Stems 2–3 cm. tall, with a few lax branches. Color brown. Spores colored, subglobose, 8 mic. (and others appear more elliptical, 6 X 12). Grows on fruit of some kind.

As stated page 870 we feel the genus *Dendrocladium* is a convenient genus embracing the "Pterulas" with colored spores. Two species of *Pterula* grow on fruits. We can not explain the two forms of spores we find. Perhaps one is accidental.

POLYPORUS (SECTION AMAURODERMUS) FROM JOHN GOSSWEILER, AFRICA: The section *Amaurodermus* (Cfr. *Stip. Polyporoids*, page 110) is for me the most interesting section of *Polyporus*. It is tropical only and the species are so different and most of them are so rare. Mr. Gossweiler finds them more abundantly than any other correspondent I have. There are more collections in this one shipment than I found in any museum in Europe.

POLYPORUS (AMAUR.) SALEBROSUS FROM JOHN GOSSWEILER, AFRICA (Cfr. Letter 42, p. 14; Myc. Notes 49, 693, fig. 1036; Myc. Notes 56, 809, fig. 1257).— This species appears to be the most frequent one in tropical Africa. We have it now in five different shipments, a dozen collections. It is characterized by the minute, satiny surface which sometimes takes metallic zones. The spores are globose, smooth, 10–12 mic., and very faintly colored. The pore tissue is somewhat the same color as that of *Polyporus vinosus*.

POLYPORUS (AMAUR.) FASCICULATUS FROM JOHN GOSSWEILER, AFRICA.— This is a rare species and the third specimen known. (Cfr. *Stip. Polyporoids*, p. 117). Originally named from Congo Belge in 1895, we received a second specimen from Edouard Luja in 1912. It has a similar surface to *Polyporus salebrosus* but the context and pore tissue (cinnamon) and spores (14 X 16 mic., colored, strongly rough) are entirely different. This specimen has a very long stipe, sixteen inches tall, and must have been a conspicuous object when growing.

POLYPORUS (AMAUR.) FUSCATUS FROM JOHN GOSSWEILER, AFRICA (Fig. 1740).— Pileus with a thin, smooth, fuscous crust, separating easily from the context and very fragile. Context white, very thin, the crust almost resting on the pores. Stipe mesopodial with brown, dull surface. Pores pale, almost white, medium in size, about 3 mm. deep. Spores in abundance, elliptical, smooth, 8 X 14 mic. and very pale color, almost hyaline.

We have already noticed a specimen of this section with almost hyaline spores, *Polyporus conjunctus* (Myc. Notes 56, 812, fig. 1266) but that has only the spores similar to this. There is no species that approximates it in any way. In this section, *Amaurodermus*, Nature seems to take delight in never making two alike. The

color of this is about what Ridgway calls fuscous and it does not approximate any other species. Unfortunately the specimen slipped out of its envelope so I can not cite its number.

POLYPORUS (AMAURO) AURISCALPIUM. This is the second time this South American species has reached me from Africa (Cfr. Letter 69, Note 773). It is exactly the same to the eye as *Polyporus trulliformis* (Letter 42) and only differs in spores. *Auriscalpium* has pale colored, smooth spores, globose, 3-10. *Trulliformis* has oval, rough, colored spores, 12 X 16. Our figure 1741 which is the type of *trulliformis* could be taken for either.

POLYPORUS (AMAURO) LOMCIPES FROM JOHN GOSSWEILER, AFRICA (Fig. 1742).— Seventy-five years ago Lévillé found in the museum at Paris a collection made in French Guiana, South America, which he named as above. This specimen from Mr. Gossweiler (tropical Africa) is the second collection ever made that agrees exactly with the type. The species has a peculiarity which Lévillé did not know. The spores (Fig. 1743) have narrow, raised, wing-like bands that run parallel. This was not known as to any other species until recently when I got a plant from the Philippines with this same peculiar spore but a much larger plant and different in other respects. It was named *Polyporus costatus* (Let. 56, Note 25C). Assuming that *Polyporus costatus* is different, is it not strange that Mr. Gossweiler is the first to collect this plant in Africa seventy-five years after it was named from South America?

POLYPORUS BIOGILVUS FROM JOHN GOSSWEILER, AFRICA (Fig. 1744). Pileus effuso-reflexed, yellowish brown with dull surface. Context concolorous, soft, easily indented with the finger nail. Pores concolorous with slightly darker mouths. Spores (abundant) hyaline, smooth, elliptical, 4 X 6. Setae none.

To the eye this is *Polyporus gilvus* but differs in context, absence of setae and spores. It goes in Section 91 instead of the *gilvus* crowd in 96.

POLYPORUS LUTEO-OLIVACEUS FROM PROF. T. PETCH, CEYLON (Fig. 1745).— Triquetrous form. Usually a thin plant, 2-4 mm. thick and several inches in diameter, the reference of this thick specimen would appear dubious, but for me with the same surface, context, color, texture, pores and spores (4 X 12) it is the same species. This thick form we would enter in Section 94. The context color is nearer Isabella than "olive-yellow" of Ridgway. Mr. Petch also sends a collection (6037) that for me is a thick form of *Polystictus aratus*, which for me is a dark form of *Polystictus luteo-olivaceus*. The context color approximates brownish olive of Ridgway.

FOMES DURISSIMUS FROM JOHN GOSSWEILER, AFRICA (Fig. 1746).— Pileus hard, heavy, applanate, usually thin with hard, narrowly sulcate, black crust. Context Argus brown to my eye with indistinct pore layers. Setae none. Spores globose, 4 mic., deeply colored.

A common plant in both Eastern and American tropics, easily known by its very heavy weight and texture. While I have known the plant for years I have had my doubts as to a valid name for it. In my *Fomes* pamphlet I referred a Madagascar collection to *Fomes*

pseudosenex and I have so referred others since. But that is not satisfactory for while both are heavy species with the same context, pores and spores and absence of setae, *Fomes durissimus* does not have distinct pore layers and the strongly distinct pore layers of *Fomes pseudosenex* are its most prominent feature. Berkeley had the plant several times and mostly misreferred it to *Fomes rhabarbarinus* and one Cuban collection (Wright 264) to *Fomes calcitratus*, both of which differ under the microscope, both having setae. Merrill got it abundantly and mostly misreferred it to *Fomes extensus*, a plant with hyaline spores, but his description applies to *Fomes fastuosus*, a similar plant with brighter context color, velvety surface when young and larger spores and is not a heavy species. We dislike to propose a new name for such an old species but we do not know of a single name that has been correctly applied to it. But there is another plant, *Fomes Caryophylli* that is so close to *Fomes durissimus* that it is going to be embarrassing to show the difference. As I compare the specimens I have they appear to me to be different species, but to convey that to another is not so easy. But in *Fomes Caryophylli* the old pores become paler than the fresh ones and when compared with *Fomes durissimus* the texture is coarser to the eye.

POLYPORUS VANDYKEI FROM JOHN GOSSWEILER, AFRICA (Fig. 1747).- Pileus thin, rigid, 6-8 cm. broad, 1/2 cm. thick, from a reduced base. Surface dull, Vandyke brown, not zoned. Context thin, 1-2 mm. Vandyke brown. Pores minute, 3-4 mm. long with brown tissue and white mouths. Spores not surely found.

A peculiar species in its color and we think belongs to *Ganoderma*, Section 103, although we do not find its spores and one not familiar with *Ganoderma* would hardly see its relations. We need a name for it and the name will fix it for us even if it does not belong in this section.

CORRECTIONS

In looking over the sheets after they were printed a few errors were noted, remarkably few considering the fact that in a publication of this kind the proof can not be read. Such errors as occur are from misreading my poor writing.

Poria ochraceus, page 916, 3rd line in the 2nd paragraph should be *Poria obducens*. One name, however, is about as good as another for a *Poria*, for I do not believe that any one knows much about any of them. The *Poria* work to date is very much of a bluff.

Under *Hydnum pulcher*, page 918, the word "smooth" should be inserted before "colored spores". Of course, we know that many *Hydniums* have colored spores, but smooth, colored spores (of the *Coniophora* type) are rare.

The reference to Dr. Torrey in connection with *Xylaria pedunculata* on page 919 is an error. It was Dr. Engelmann who found this rare species near St. Louis, not Dr. Torrey. Another case of a faulty memory on my part and where I did not take the trouble to look up the record.

"glabroud", page 920, 3rd paragraph, should of course be *glabrous*.

"*Hypocrealla*", page 924, 2nd paragraph, should be *Hypocrella*.

"*Kretzschmaria Kunziana*", page 939, 6th paragraph, should be *Kurziana*, as the name is correctly spelled in the last line of the same paragraph.

MYCOLOGICAL NOTES

BY C. G. LLOYD

No. 63

CINCINNATI, OHIO.

MAY, 1920

THE FINEST PLATES PUBLISHED IN UNITED STATES

A popular article on the common mushrooms of the United States by Mr. Louis C. C. Krieger, appears in the May issue of the National Geographic Magazine. It is published with sixteen colored plates and thirty-six excellent photographs. Such perfection of illustration has never been reached by any one else in this country, and in Europe only by Boudier.

We hope the National Geographic Magazine will arrange to issue these articles separately for there will certainly be a great demand for them among mycologists. We trust also that arrangements may be made to continue the publication of these beautiful plates as illustrations of future articles.

We have kept in touch with Mr. Krieger's work for a number of years and have always hoped it might find a publisher and see the light of day. We understand it is through the generosity of Dr. Howard A. Kelly, the eminent surgeon of Baltimore, that Mr. Krieger has been able to devote his time to this work, to which we will add that the mycological world at least will surely appreciate Dr. Kelly's aid in the matter.

For many years Mr. Krieger was employed by Dr. Farlow, large numbers of his beautiful plates being found in Dr. Farlow's private collection. May we not express the wish that Dr. Kelly can by some means also arrange to have these published? It is an open secret that Dr. Farlow always planned to give the world the benefit of these plates, but like many other things begun but not completed, it was put off too long and Professor Farlow died without accomplishing this object.

Another gratifying feature in connection with the work is that Mr. Krieger has employed the established names for fungi, entirely ignoring the flood of cheap name juggles with which American mycology has been weighted, we came near saying cursed.

In looking through the plates and cuts there is not a single plate that is not simply the perfection of excellence - not the slightest error either in figure or coloration has crept into any of them. As to the photographs reproduced, the same may be said of all, with one unworthy and unfortunate exception. The cut of *Sparassis Herbstii* is a crude affair and in addition *Sparassis Herbstii* is not the correct name, for it is not a *Sparassis* but a *Stereum* and is called *Stereum spathulatum* by Schweinitz. I have always regretted the truth regarding this error as it was a well-intended compliment to my old friend Dr. Herbst, on the part of Professor Peck.

The introductory announcement in the heading of the article

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was almost overlooked. "For those who desire more detailed descriptions of mushrooms, the article is being amplified with much technical data and can be obtained separately, bound in cloth, at \$3.00 per copy, postpaid." We regret to be advised, however, by the publisher of the National Geographic Magazine that owing to the scarcity of good plate paper the amplified issue has been postponed and may not be issued. But every one interested in fungus should procure a copy of the May, 1920, issue of the National Geographic Magazine, for there may never be another opportunity to get such fine plates of agarics.

P. A. SACCARDO

We have received notice of the death of Professor Saccardo, which took place on the twelfth of February, 1920, in his seventy-fourth year. Professor Saccardo was so well known by reason of his *Sylloge* that it is not necessary for us to speak of what he has done for mycology. Before he took hold of it, it was all an unsystematic conglomeration of so-called new species which he very carefully compiled and arranged with some system. We have never held that his work was of any practical value in the determination of species, but it is a most convenient index, and any one working on the subject has occasion to consult it constantly. The work is not up to date for the new species producers are constantly at work. The last time we heard from Saccardo he had two volumes accumulated that he was unable to get printed on account of the high cost of printing. It is probable now they will never be published. While we think it probable that Saccardo's work has been a financial success, we doubt if another will be found with the energy and application necessary to continue it.

HISTORICAL NOTES. THE GENUS *MICHENERA*.— We give on page 390 consideration of the confusion that exists in the naming of *Michenera* and *Artocreas*. In Clinton's herbarium pasted on a sheet of "*Michenera Artocreas*", we found a clipping, without date, source or signature, but surely by Curtis, as follows:

"*Michenera Artocreas*, B. & C. This interesting fungoid plant referred to at a previous meeting of the Microscopical Society, and noticed under the name of *Artocreas Michenerii* had first assigned to it the former name by M. A. Curtis of South Carolina, in honor of its discoverer, Dr. Ezra Michener of Chester County, Pa., and this was accepted by the English mycologist, Berkeley, and published with the appended initials "B. & C." for authority. Supposed afterwards to have certain generic relations to *Artocreas* it was referred to that genus, one other species being known and found only in Ceylon. By subsequent decision, however, the name first appropriated was restored; and it is gratifying now to be able to say that the 28th annual report of the New York State Museum of Natural History, on botany, prepared by the botanist, Chas. H. Peck, gives it under its proper name, *Michenera Artocreas*, B. & C: so that the just claim for the genus in favor of our contemporary, Dr. Michener, is now regarded as fully established, a fitting and meritorious testimonial of respect due to one who has been our leading cryptogamist in bryology and mycology, and who, although he has well nigh passed through

the buffetings of eighty-five winters is yet active in his favorite pursuit in this as well as in other departments of natural science."

A letter also preserved in the Clinton herbarium from the venerable Dr. Michener is worthy of publication.

Tonghkenamon 24th of First Month, 1879.

Halliday Jackson - Dear Friend: Thy letter was duly received and appreciated. Poor Michenera like Darlingtonia has had a hard life of it. M. A. Curtis named it Michenera at once if it could be made a good species, and added B. & C. as its authors. But in the meantime Berkeley had appropriated the same name to a plant from the White Mountains, Michenera decipiens, B. & C. This has been abandoned as nothing more than an amorphous lichen. Curtis then wrote "Michenera will be better attached to No. 1022" my plant. Of the genus Artocreas I have not any knowledge, and I presume this has been recently introduced. I suppose that Berkeley has made the change since the death of Curtis. I would like to know exactly on what authority. Be that as it may it is not at all likely that I shall get the genus. I must be content with the species, of which Curtis has given me a dozen or more.

My Herbarium is always accessible and open for inspection. But the rough and tumble of eighty-five winters has obliterated much of the little knowledge I may once have possessed of its contents, a condition which would have been less annoying if the interest and inclination had gone with the knowledge.

Very truly,

E. Michener.

REPORT ON SPECIMENS

The acknowledgment of specimens, formerly issued under the title of "Letters" will in future be a part of Mycological Notes. The mimeograph process is now working well as evidenced by the last fifteen pages of No. 62. At the start the process was all right but the producer was mostly wrong.

My best thanks are extended to those who favor me by forwarding to me their collections of the fungi of their regions, and particularly those who live in the tropics. Every day it becomes easier to determine the specimens, for the common species have mostly taken definite form and I recognize the larger part of them at sight. Still each lot received brings considerable work, and though I am behind at present, I hope correspondents will not hesitate to send in their specimens on that account. They will all be worked over in time and those that are rare or of special interest will be published. All the large fungi are desired excepting the Agarics. We are particularly interested now in the little Laschias and in Xylarias and in tremellaceous plants. For some reason collectors do not usually send in Tremellas. They dry so poorly that the impression seems to be that it is not worth while drying them. But there is no class of specimens that makes better plants to work with than those of a tremellaceous nature. A few minutes soaking brings them back to the same condition as when collected. They may shrink to almost nothing in drying, but they are good specimens nevertheless. We hope that our friends in the United States and Europe will

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watch out for Tremellas, especially the small species, for I am sure we have many that we know nothing about. So many specimens have been received from foreign countries that we have fallen much behind with the work. At the time this letter goes to press we are working on a large shipment of about 400 numbers from E. D. Merrill of the Philippines. We have on hands packages from G. H. Cunningham, New Zealand, Dr. Jas. R. Weir, from the tropics, A. V. Bottomley, South Africa, Rev. C. Torrend, Brazil, Rev. J. Rick, Brazil, L. Rodway, Tasmania, Prof. Marcial Espinosa, Chile, Prof. S. R. Bose, India, T. Hunter, West Africa, E. Cheel, Australia, Otto A. Reinking, Philippines and several small packages from others. Also we have worked over and reported on a fine shipment from Prof. Alfred H. W. Povah and another from Prof. L. H. Pennington, but the copy is not ready to include in this report.

In the following list we have put in capitals those plants that on account of rarity or novelty are of especial interest and on which articles have been or will be written and published. But do not get the impression that we only want rarities or unusual things. On the contrary we are more interested in the "old" species, their abundance, distribution and variation, and collections of the most common species, especially from the tropics are always welcome.

In my printed Letters I do not give authority for names, believing that the binomial should represent a plant name, but in acknowledging the specimens to my correspondents I give the "authority" in the event they desire to use it. All specimens are acknowledged by personal letter as soon as I get time to study and report on them. 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,
309 W. Court St.,
Cincinnati, Ohio.

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

Cincinnati, May, 1920.

ADAMS, J. F. PENNSYLVANIA: *Bulgaria inquinans*.

ALLEN, LIZZIE C., MASSACHUSETTS: *Hypomyces viridis* - *Hypomyces chrysospermum* - *GEOGLOSSUM IRREGULARE* - *Hypomyces hyalinus* - *Polyporus trabeus* - *Tremellodendron pallidum* - *Cordyceps capitata* - *Polyporus Schweinitzii* - *Lycoperdon piriforme?* - *Thelephora terrestris* - *Urnula Craterium* - *Irpex lacteus* - *Irpex obliquus* - *Tremella foliacea* - *Stereum albobadium*.

NOTE 818 - *GEOGLOSSUM IRREGULARE* FROM MISS LIZZIE C. ALLEN, MASSACHUSETTS: At times this plant is much more gelatinous than I had supposed. One collection received from Miss Allen I thought at first was a *Calocera*, very much of the appearance of a tremellaceous plant. Under the microscope I think there is no question about it. The paraphyses, reported as none, are hyaline, filiform with knobs on the end. They are seen without trouble if the plant is soaked.

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It is not well classed as *Geoglossum*, nor to my mind as *Mitrula* where it has recently been placed.

ARCHER, W. A., NEW MEXICO: *Lycoperdon cruciatum* - *PTYCHOGASTER LUCIDUS* - *Ptychogaster corruscans*?

NOTE 817 - *PTYCHOGASTER LUCIDUS* FROM W. A. ARCHER, NEW MEXICO: Nature seems to have produced the genus *Ptychogaster* for the purpose of confusing the systematist. In this case she builds enough of the fungus on normal lines so that one may recognize its source, although greatly distorted and all out of shape. But the pores she changes so completely into a mass of conidial spores that the normal pores are not suggested. Another *Ptychogaster* sent by Mr. Archer is so changed that its normal source is not sure though from its context color and spores I think it is derived from *Polyporus corruscans*. While *Ptychogasters* rarely occur from some mysterious cause in well watered regions like Sweden, they are more common in semi-arid regions and seem to be a provision of Nature to insure production under conditions where the normal fungi do not have sufficient moisture to develop.

ARCHER, W. A., FRANCE: *Stereum hirsutum*.

BAKER, C. H., FLORIDA: *Lycogala epidendrum* - *Daldinia concentrica* - *Polyporus cuticularis* - *Polystictus sanguineus* - *Tremella mesenterica* - *Polyporus pusillus* - *Xerotus nigrifusus* - *Polyporus arcularius* - *HYPOXYLON MALLEOLUS* - *Polystictus circinatus* - *Xylaria hypoxylon* - *Favolus caespitosus* - *Trametes hydnoides* - *Polyporus carpinus*.

BALLOU, DR. W. H., NEW YORK: *Polyporus griseus*.

BALLOU, DR. W. H., COLLECTED BY DR. BARNUM BROWN IN CUBA: *Cyathus Colensoi*.

BARBIER, PROFESSOR M., FRANCE: *Calocera cornea* - *Pistillaria micans* - *Poronia punctata* - *Typhula Grevillea* (?) - *Gyrocephalus rufa* - *Pterula multifida* - *Calocera viscosa* - *Sebacinea calcea* - *Sebacina incrustans* - *Exidia recisa* - *Auricularia mesenterica* - *Xylaria polymorpha* - *Auricularia auricula-Judae* - *Hypocrea citrina* - *Dacryomyces chrysocomus* - *EXIDIA GLANDULOSA* - *CALOCERA CORTICALIS* - *Clavaria flaccida* - *Clavaria coralloides* - *Clavaria truncata* - *Clavaria botrytis* - *Clavaria palmata* - *Clavaria fastigata* - *Clavaria inaequalis* - *Clavaria juncea* - *Clavaria muscoidea* - *Clavaria cristata* - *EXIDIA THURETIANA*.

NOTE 818 - *EXIDIA THURETIANA* D'APRÈS le PROFESSEUR BARBIER, FRANCE: Je suppose que ce nom est correct; la figure est conforme au dessin original envoyé il y a quelques années par Bornet au Museum de Paris; mais, elle ne me semble pas correspondre à la description première ni à celle de Quélet. Le "voile byssoïde" ne se montre aucunement et l'expression "en forme de coupe" ne désigne guère la forme du fungus. D'après les descriptions les plus récentes publiées en France, la plante devrait être "hérissée de mèches papilliformes." Rien de semblable ici. Je cueillis naguère en

France un fungus tout à fait différent de celui-ci et on m'assura que j'avais bien là l'*Exidia Thuretiana*. Dès l'abord j'en doutai et maintenant je me trouve sans aucun nom pour la plante que je cueillis.

J'aime à croire que mes amis et connaissances d'Europe viendront à mon aide pour résoudre ce problème. Qu'ils aient l'obligeance de me recueillir toutes les espèces de Thelephoracées, Hydnoacées, Clavariacées et Trémellacées qu'ils pourront rencontrer. Après les avoir suffisamment desséchées, qu'ils aient la bonté de me les envoyer par la poste. Je désire très vivement obtenir ces spécimens Européens. On les rencontre moins souvent que les échantillons exotiques dans les musées d'Europe. On ne peut par conséquent en faire une bonne étude à moins d'aller à leur quête dans leurs habitats inconnus et souvent inabornables.

NOTE 819 - *EXIDIA GLANDULOSA* FROM PROFESSOR M. BARBIER, FRANCE: *Exidia glandulosa* in France is not the same plant as *Exidia glandulosa* in Sweden or the United States. We will go into the details some other time.

BEARDSLEE, H. C., OHIO: *Tremella mesenterica* - *Stereum spadiceum* - *Stereum sericeum* - *Exidia glandulosa* - *EXIDIA BEARDSLEEI* (published as *Exidia Uva passa* (bis) - *Naematella nucleata* - *Xylaria polymorpha* - *Polyporus floriformis* - *Seisimosarca alba* - *Peniophora filamentosa*.

NOTE 820 - *POLYPORUS FLORIFORMIS* FROM H. C. BEARDSLEE, OHIO: (Cfr. *Apus Polyporus*, 317.) This is better classed as a stipitate species in Section 13. It is rare with us and not enough have been received so that its habits are really known. It was named also *Polyporus sub-stipitatus* by Murrill, from the Northwest.

BEARDSLEE, H. C., FLORIDA. Professor Beardslee spent the winter at New Smyrna, Florida, and collected such fungi as came to his notice. The result is an interesting list as follows: *Fomes conchatus* - *Trametes serpens* - *Polystictus rigens* - *Merulius Corium* - *Hydnum australe* - *Polystictus tenuis* - *Hydnum fuligineo-violaceum* - *Poria Tulipifera* - *Polystictus biformis* - *Stereum bicolor* - *Stereum subpileatum* - *Stereum complicatum* - *Stereum lobatum* - *Polyporus gilvus* - *TREMELLA LUTESCENS* - *Polystictus tabacinus* - *TRAMETES CUBENSIS* - *Hypomyces viridis* - *Lentinus vellereus* - *Exidia glandulosa* - *Lenzites striata* - *Poria Tulipifera* - *GUEPINIA SPATHULATA*.

NOTE 821 - *TRAMETES CUBENSIS* FROM PROF. H. C. BEARDSLEE, FLORIDA: While I get this frequently from Brazil and the West Indies I think this is the first time from Florida. When freshly dried it is white with pale ochraceous tint. This grew on oak.

BECHTEL, A. R., NEW YORK: *Crucibulum vulgare* - *SCLERODERMA CEPA* VAR. *MACULATUM* - *Bovista Pila* - *Scleroderma vulgare* - *Daedalea confragosa* - *Lycoperdon gemmatum* - *Geaster limbatus* - *Cyathus vernicosus* - *Cyathus striatus*.

NOTE 822 - *SCLERODERMA CEPA* VAR. *MACULATUM* FROM A. R. BECHTEL, NEW YORK: This is a rare form and I believe this is the

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first time it has ever reached me. Compare Peck's 53rd Report, page 848. However, it is for me a form of *Scleroderma cepa* rather than of *Scleroderma verrucosus* as considered by Peck.

BERNARD, Dr. CH., JAVA: *Polystictus sanguineus* - *Poria byssogena* - *Rosellinia aquila* - *Trametes versiformis* - *Trametes heteropora* - *Schizophyllum commune* - *Trametes hispidula* - LENZITES ALBO-LUTEA - *Polystictus hirsutus* - POLYSTICTUS NEPALENSIS - POLYSTICTUS DILATULUS - *Polystictus versicolor* - *Polystictus elongatus* - HYDNUM SPATHULATUM - POLYPORUS ELATINUS - *Polyporus gibbosus* - *Lenzites platyphylla* - *Stereum ostreum* - *Fomes Konigsbergii* - ISARIA CRINITA - *Polystictus sanguineus* - *Polyporus lignosus* - *Fomes leucophaeus* - *Cladoderris infundibuliformis* - MIDOTIS HEINRICHERII - STEREUM PRINCEPS - FAVOLUS JUNGHUHNII - *Xylaria castorea* - *Polystictus affinis* - TRAMETES CREMULATA - *Polyporus sulphureus*.

NOTE 823 - POLYSTICTUS NEPALENSIS FROM DR. CH. BERNARD, JAVA: We utilize this name which has never been recognized in the seventy years since it was proposed and never will be either from the scanty or the "type" which is old and effete and should not have been named. Pileus thin, pale, glabrous or minutely pubescent near the base. Growing imbricate. Context thin, white. Pores small, soft. Cystidia none. Spores not found. The plant suggests (faintly) *Polystictus zonatus* but the much paler color and glabrous pileus is hardly more than a suggestion.

NOTE 824 - TRAMETES CREMULATA FROM DR. CH. BERNARD, JAVA: I have not received this before. It is of the same general nature as *Trametes lactinea* which is common in the East but this has large pores. The surface is dull but hardly "tomentose" as described nor is the photograph of the type "tomentose".

BESSEY, PROFESSOR E. A., MICHIGAN: *Daldinia concentrica* - *Daldinia vernicosa* - *Xylaria filiformis* - *Xylaria corniformis* - LYCOPERDON PIRIFORME.

NOTE 825 - LYCOPERDON PIRIFORME: Professor Bessey calls my attention to the fact that the spores are distinctly rough and that they pass in my writings as smooth. As a usual thing the spores of this species are smooth, under ordinary magnification, and the demonstration that there are cases where they are distinctly rough does not invalidate the rule. Smoothness and roughness of spores are questions of degree in *Lycoperdon*s and I doubt if there is any *Lycoperdon* spore that would not appear rough under high enough magnification. But it is not practicable to make species on this variation in degree of roughness. *Lycoperdon piriforme* is a species that may be recognized at sight when learned. There is no one character that is absolutely fixed but the ensemble is unmistakable, just as is the case with every other good species. A similar case is *Lycoperdon pseudopusillum*, proposed on specimens of *Lycoperdon pusillum* with slightly rough spores. I have always contended it was of no value whatever as a "species", admitting that the difference in spore roughness that Dr. Hollos pointed out is true.

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BETHEL, ELLSWORTH, CALIFORNIA: *Mycenastrum Corium* - *Geaster fornicatus* - *Gyrophragmium Delilei* - *Geaster floriformis*.

BEWLEY, ANNA K., PENNSYLVANIA: *Xylaria polymorpha* - *Hypoxylon coccineum* - *Daedalea confragosa*.

BIJL, P. VAN DER, SOUTH AFRICA: *Stereum perlatum* - *Clavaria abietina* - *Trametes devexa* - *Polystictus phocinus* - *Poria ferruginosa* - *Hexagona similis* - *Fomes Robinsoniae* - *Stereum ostreum* - *Polyporus vinosus* - *Fomes durissimus* - CAMPANELLA BUETTNERI - *Stereum concolor* - *Radulum mirabile* - *Stereum bicolor* - *Merulius Corium* - *Polystictus ochraceus* - *Fomes pectinatus* - *Polyporus arcularius* - *Polystictus cinnabarinus* - TRAMETES ZIMMERMANNI - *Trametes violacea* - *Fomes badius* - *Fomes Niaouli* - *Fomes rimosus* - *Hexagona phaeophora* - *Polyporus gilvus* - POLYPORUS NIGROLUCIDUS - *Polyporus megaloporus* - *Favolus dermoporus* - POLYPORUS ARENOSOBASUS - *Irpex lacteus* - *Polystictus zonatus* - *Fomes Yucateensis* - *Polystictus versiporus* - *Polyporus intactilis* - *Polyporus dichrous* - *Favolus brasiliensis* - *Lentinus fasciatus* - *Favolus spathulata* - *Favolus tessellatus* - *Fomes geotropus* - *Lentinus betulinus* - *Auricularia auricula-Judae* - *Trametes protea* - *Corticium laetum* - *Lentinus velutinus* - *Calocera cornea* - *Lycogala epidendrum* - *Guepinia spathulata* - *Polystictus versicolor* - *Polystictus leoninus* - *Tremella fuciformis* - *Scleroderma Ceba* - *Hexagona umbrinella* - *Hexagona tricolor* - *Favolus Friesii* - *Hexagona similis* - HEXAGONA PHAEOPORA - *Stereum pusillum* - *Lentinus lepideus* - *Pleurotus applicatus* - LENZITES BETULINA - *Radulum Javanicum* - DACRYOMYCES AUSTRALIS - HYDNUM (GYRODONTIUM) PULCHER - DACRYOMYCES DIGRESSUS - *Lentinus stippeus* - *Dacryomitra dubia* - *Polyporus megaloporus* - *Auricularia ornata* - *Auricularia polytricha* - *Cyathus plicatulus* - *Calvatia lilacina* - *Catastoma anomalum* - *Xylaria apicula* - *Xylaria multiplex* - *Geaster coronatus* - *Scleroderma tenerum*.

NOTE 826 - TRAMETES ZIMMERMANNII FROM P. VAN DER BIJL, SOUTH AFRICA: According to a specimen I saw so named at Berlin, from Madagascar, but I do not know if published. It is one of the few *Trametes* with decidedly yellow context color. It is very close to *Trametes devexa* (viz. trametoid *Polystictus occidentalis*) but does not have a pubescent surface.

NOTE 827 - HEXAGONA PHAEOPORA FROM P. VAN DER BIJL, SOUTH AFRICA: This was named from China but this is the second collection I have received from South Africa.

NOTE 828 - LENZITES BETULINA FROM P. VAN DER BIJL, SOUTH AFRICA: Form with red zone, surely entitled to a name as a color form. It does not occur with us.

BONANSEA, DR. SYLVIO J., MEXICO: *Fomes leucophaeus* - *Polyporus colossus* - *Polyporus dichrous* - *Stereum complicatum* - *Stereum fasciatum* - *Clavaria formosa* - *Helvella lacunosa* - *Trichoscypha Hindsii*.

BOSE, PROFESSOR S. R., INDIA: *Lenzites murinus* - POLYSTICTUS SUBOCCIDENTALIS - *Favolus Bengala* - *Trametes Meyenii* - *Polystictus occidentalis* - POLYPORUS GUHAE - POLYPORUS RHIZOPHORAE - TRAMETES KARIE - *Trametes crenulata* - *Polyporus rigidus*.

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BOTTOMLEY, A. V., AFRICA: BROOMEIA ELLIPSOSPORA.

BOURDOT, REV. H., FRANCE: *Caldesiella viridis* - *Sirobasidium Cerasi*.

BOUTLOU, REV. A., WEST VIRGINIA: *Craterellus cantharellus* - *Stereum sericeum* - *Stereum complicatum* - *Craterellus cornucopioidea* - *Polyporus tephroleucus* - *Stereum* (Hym.) *rubiginosum* - *Tremellodendron pallidum* - *Rhinotrichum rubiginosum* - *Calocera cornea* - *Polyporus radiatus* - *Tricoderma viride* - *Mitremyces cinnabarinus* - *Odontia ferruginosa?* - *Tremellodendron merismatoides* - *Seismosarca albida* - *Fuligo septica?* - *Merulius incarnatus* - *Hypoxylon marginatum* - *Xylaria polymorpha* - *Poria pulchella* - *Polyporus Berkeleyi* - *Peziza scutellina* - *Chlorosplenium versiforme* - *Glonium stellarum* - *Naucoria arvalis* - *Polyporus arcularius* - *Marasmius rotula* - *Panus angustatus* - *Polyporus caesius* - *Daedalea unicolor* - *Urnula craterium* - *Bulgaria rufa* - *Daldinia concentrica* - *Stereum fasciatum* - *Trametes malicola* - *Polyporus circinatus* - *Stereum Burtianum* - *Tremellodendron pallida* - *Calvatia lilacina* - *Thelephora vialis* - *Clavaria fumosa* - *Thelephora spiculosa* - SPARASSIS CRISPUS - *Polyporus Schweinitzii* - *Stereum spadiceum* - *Lenzites saepiaria* - *Lenzites trabea* - *Phlebia radiata* - *Cantharellus cinnabarinus* - *Tremella mesenterica* - *Daedalea confragosa* - *Polyporus Curtisii* - *Clintoniella rosea* - *Xylaria Longiana* - *Merulius tremellosus* - *Poria rhodella* - *Irpex lacteus* - *Polystictus balsameus* - *Ombrophila sarcoides* - *Helotium citrinum* - *Ustulina vulgaris* - *Phlebia radiata* - *Geaster triplex*.-

NOTE 829 - POLYSTICTUS BALSAMEUS FROM REV. A. BOUTLOU, WEST VIRGINIA: This is a rare plant and these are the first specimens I ever received. I am not sure it is the same as Peck named but I believe it is according to the description and according to my memory of the specimen at Albany. At New York there is a collection so labeled which is not the same as this, but to my view is the same as *Polystictus alabamensis*, also a rare form, collected by Earle.

BRACE, L. J. K., BAHAMAS: *Xylaria polymorpha* - *Xylaria Schweinitzii* - *Polystictus pinsitus* - *Polystictus sanguineus* - *Hypoxylon polyspermum* - *Polyporus fruticum* - *Lentinus villosus* - *Sebacina spongiosa* - *Merulius Corium* - *Trametes lactea* - *Polystictus occidentalis* - *Daldinia concentrica* - SCHIZOPHYLLUM UMBRINUM - *Odontia chrysocomum* - *Spumaria alba* - *Lentinus fasciatus* - *Polyporus gracilis* - *Stereum Leveilleianum* - *Polystictus sanguineus* - *Cantharellus cibarius* - POLYPORUS ENDOZONUS - *Lentinus fasciatus* - IRPEX PALLIDUS - *Polyporus Curtisii* - *Trametes hydnoides* - *Hypoxylon haematostromum*.

NOTE 830 - SCHIZOPHYLLUM UMBRINUM FROM L. J. K. BRACE, BAHAMAS: While we can only hold this as a dark brown variation of the common *Schizophyllum commune*, it is very rare. Mr. Brace sends a nice collection.

NOTE 831 - POLYPORUS ENDOZONUS FROM L. J. K. BRACE, BAHAMAS (Fig. 1554): We published this on page 892 as *Polyporus euzonatus*, believing it to be unnamed. We have never located a specimen of *Polyporus endozonus* which was named by Fries from the West

Indies (S. Jan). We supposed it belonged to the gilvus crowd and Merrill guessed it to be a synonym, but recently in looking up a possible name for one of the sections we considered Fries' description of *Polyporus endozonus* and we are confident it covers the plant we named *Polyporus euzonatus*. It is much easier to interpret a description when one is familiar with the plant and it is better to give an old name a definite meaning than to maintain a new one. *Polyporus endozonus* does not belong to the Gilvus section (96) but to the section without setae (95). Cfr. Myc. Notes, p. 892 and Fig. 1554.

NOTE 832 - IRPEX PALLIDUS FROM L. J. K. BRACE, BAHAMAS: Resupinate. Color cinnamon-buff. Teeth short, irregular. Subiculum thin. Metuloids hyaline, thick-walled, rather few, obtuse, 6-8 mic. thick, projecting about 20 mic. Spores not found. As to a photograph it could not be told from one of the common *IrpeX cinnamomeus*, but the plants have little relation. This has hyaline metuloids and *IrpeX cinnamomeus* has true colored setae. This is quite close to *IrpeX Iyoensis* of Japan.

BRAUN, E. L., OHIO: *Urnula craterium*.- *Ozonium auricomum*.

NOTE 833 - POLYPORUS TUCKAHOE: On a recent visit to our museum, Professor A. H. Reginald Buller gave me the sclerotium of the above named plant, recently named from Manitoba by Dr. Güssow, Plant Pathologist at Ottawa. On comparison with the sclerotium of *Polyporus tuberaster* of Italy it seems to be the same and I opine when well known will be found to be this species. The specific name was very badly chosen for it has nothing to do with Tuckahoe. The occurrence of *Polyporus Tuberaster* in Manitoba would for me be a far more interesting event than the publication of a "new species" of "*Grifola*" (sic) which most mycologists would naturally suppose to be some kind of bug. *Polyporus Tuberaster* has never been recorded with us and that it should grow in extreme northern stations (as far as known) with us, and in Europe only in Italy is rather strange. If you add one collection sent me from Australia and one unconfirmed record from Japan you have the whole known history of this rare plant. But to illustrate the difficulties in presenting accounts of fungi, Dr. Güssow gave a good account and a good photograph of this plant and its sclerotium. I considered it closely and concluded that the only species it could possibly be was *Polyporus Myllittae* of Australia. But as soon as I saw the sclerotium I knew it had no suggestion of *Polyporus Myllittae*. And if a good photograph can not be correctly interpreted, what result can one expect from the fake drawings that were habitually put out by Kalchbrenner, Cooke and Masee, or the crude cuts of Hennings, Rehm and Britzelmayr? Another incident is its specific name. If it turns out to be a good "new species", which I do not believe it will, the name *Polyporus Tuckahoe* will be a standing evidence of the fact that the author did not know anything at all about Tuckahoe, for if he had he would not have so named it.

BURNHAM, STEWART H., NEW YORK: A fine lot of specimens with a number of *Clavarias* in which I am especially interested. *Clavaria sticta* - *Polyporus mollis* - *Clavaria ligula* - CLAVARIA TRUNCATA -

THE HOUSE
OF REPRESENTATIVES
IN SENATE AND HOUSE
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REPORT
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FOR THE FISCAL YEAR
1966

COMMITTEE ON THE MILITARY AND NAVAL AFFAIRS
U.S. HOUSE OF REPRESENTATIVES
REPORT
ON THE
BILLS
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FOR THE FISCAL YEAR
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Clavaria cristata - *Clavaria crassipes* - *Hydnum aurantiacum* - *Hydnum cyathiforme* - *Mutinus elegans* - *Clavaria flaccida*.

BURT, E. A., MISSOURI: *Aleurodiscus botryosus* (co-type) - *Aleurodiscus cremeus* (co-type).

CALDAS, DIOGENES, BRAZIL: *POLYPORUS RHIZOMORPHUS*.

NOTE 834 - *POLYPORUS RHIZOMORPHUS* FROM DIOGENES CALDAS, BRAZIL: Compare *Stipitate Polyporoids*, p. 181, fig. 479. The specimen is the rhizomorph only, not in fruit, but I recognize it as I am familiar with the original collection which had fruit. It is rare and this is the first time I have received it. It is the only species of *Polyporus* known that is produced from aerial rhizomorphs.

CAVE, G. H., INDIA: *Polystictus xanthopus* - *Trametes lactinea* - *MITRULA ROSEA* - *POLYPORUS ADUSTUS* - *Polystictus vibecinus* - *Clavaria fusiformis* - *THELEPHORA GELATINOSA* - *Stereum* (*Hymenochaete*) *Cocoa* - *Polystictus chioraceus* - *Polyporus rubidus* - *LENTINUS praerigidus*.

NOTE 835 - *POLYPORUS ADUSTUS* FROM G. H. CAVE, INDIA: *Polyporus adustus*, so common with us, in tropical countries takes a variety of forms but whether practical to designate them by separate names is not assured. We listed (*Apus Pol.* p. 328) sixteen names which we considered as synonyms. We have looked over the descriptions and can not decide on any special name to apply to this collection which differs from our plant in being thinner and having fuliginous zones on the pileus. *Polyporus secernibilis* is very close but has a brown, pubescent pileus and can not be this plant.

NOTE 836 - *LENTINUS PRAERIGIDUS* FROM G. H. CAVE, INDIA: This was named by Berkeley from India, as above, and also by Currey as *Lentinus Kurzianus*, and Currey gave a good figure of it in the *Transactions of the Linnaean Society*. It was also called by Berkeley, *Lentinus estriatus* and *Lentinus Thwaitesii*, and it is the plant Leveillé sent to Kew as *Lentinus polychrous*. It appears to me now as I go over the specimens in our collection that there are two similar species in the East which I have not heretofore distinguished, both characterized by the dark gills when dry, which are almost black but have a slight purplish tinge.

LENTINUS PRAERIGIDUS has whitish, furfuraceous surface, becoming squamulose when old, fuliginous, squamulose stem and gills rather broad, about 2mm. This appears to be the main Indian Ceylonese species. I have specimens from S. Hutchings, Perak, and this collection from G. H. Cave.

LENTINUS POLYCHROUS is somewhat thinner, has brownish, furfuraceous surface becoming squamulose, a less squamulose stem and rather narrow gills, about a mm. broad. The name proposed by Leveillé is as uncertain as is most of his work. I found no type at Leiden as cited, "Lent. 24.25" but an old collection "Lent. 26" at Leiden is this plant. Also the plant as labeled at Paris but not the plant he sent to Kew which is the preceding. It seems very common in the Philippines. Part of the Philippine specimens that Bresadola referred to *Lentinus polychrous* belongs here, but he mostly determined Philippine collections as being *Lentinus Kurzianus*.

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CHARDON, CARLOS E., NEW YORK: *Hypoxyton coccineum* - *Hypoxyton cohaerens* - *Hypoxyton annulatum* - *Xylaria axifera* - *Xylaria apiculata*.

CHEEL, EDWIN, NEW SOUTH WALES: *Cordyceps Robertsii* - BOTRYTIS.

CHIPP, T. F., SINGAPORE: Mr. Chipp is a splendid collector and his specimens are adding much to our knowledge of tropical species. Very few collections have been made heretofore in this region and the result is a number of most novel additions. It is gratifying to work with such fine and interesting collections. *Lenzites platyphylla* - *Xylaria allantoidea* - *Polyporus rubidus* - *Geaster mirabilis* - *Stereum involutum* - *Auricula reflexa* - *Polystictus flavus* - *Fomes lamaeoensis* - *Trametes lactinea* - *Lentinus Sajor Caju* - *Polystictus versatilis* - *Fomes (Gan.) appianatus* - *Fomes gibbosus* - *Hexagona flavida* - *Auricularia mesenterica* - *Polyporus grammocephalus* - *Polystictus flavus* - *Xylaria furcata* - *Polyporus (Gan.) lucidus* - *Polyporus durus* - *Polystictus tabacinus* - *Irpex flavus* - *Polyporus Rhizophorae* - *Stereum (Hym.) tenuissimum* - *Lenzites repanda* - *Schizophyllum commune* - *Polystictus cervinogilvus* - *Xylaria apiculata* - *Polyporus vinosus* - *Polystictus occidentalis* - *Fomes appianatus* - *Fomes australia* - *Polyporus lignosus* - *Polystictus cichoraceus* - *Cyclomyces fusca* - *Polyporus maliensis* - POLYPORUS (GAN.) OCHROLACCATUS - *Fomes fastuosus* - *Fomes senex* - POLYPORUS BRUNNEO-MACULATUS - *Fomes Caryophylli* - *Fomes (or Polyporus) multiplicatus* - *Fomes pachyphloeus* - POLYPORUS RETRO-ATER - *Fomes rimosus* - POLYPORUS ATER - POLYSTICTUS CRISTATUS - POLYPORUS ABRUPTUS - *Polyporus mastoporus* - *Polystictus gallo-pavonius* - POLYPORUS ACERVATUS - *Hexagona tricolor* - KRETZSCHMARIA BOTRYTES - *Fomes pomaceus* - *Auricularia Brasiliensis* - *Hydnum maliensis?* - *Hypocrea lenta* - POLYPORUS BIOGILVUS - *Stereum latum* - *Stereum involutum* - *Cyathus sphaerosporus* - HYDNUM FLAVIDUM - LASCHIA SIMILIS - *Stereum aterrimum* - HYDNUM DURIUSCULUM - POLYSTICTUS BICOLOR - STEREUM INCISUM - STEREUM CUNEATOFORME - *Lentinus subnudus* - *Polyporus gilvus* - *Polyporus licnoides* - *Polyporus Hookeri* - *Hexagona polygramma?* - *Stereum nitidulum* - POLYPORUS CYSTIDIDOIDES - *Hexagona durissima* - STEREUM BOLLEANUM - *Hexagona albida* - *Polystictus crenatus* - *Radulum mirabile* - *Trametes serpens* - *Favolus tessellatus* - *Merulius similis* - *Stereum spectabile* - *Geaster javanicus* - *Fomes Caryophylli* - *Polystictus versatilis* - HYDNUM MALIENSIS - POLYSTICTUS ACULEIFER - HYDNUM FERREUM - *Polyporus grammocephalus* - *Daedalea flavida* - *Polystictus xanthopus* - *Ustulina vulgaris* - *Lenzites repanda* - *Trametes Meyenii* - TRAMETES TRANSMUTANS - MASSEERINA CARTILAGINEA - *Trametes Persoonii* - *Polyporus (Ganodermus) Curtisii* - *Polyporus (Amaurodermus) rugosus* - SCHIZOPHYLLUM COMMUNE - *Odontia sclerodontium?* - LASCHIA CHIPPII - XYLARIA KEDAHAE - *Favolus spathulatus* - POLYSTICTUS CAPERATUS - *Cratereillus cornucopoides* - *Polyporus carneo-fulvus* - *Polyporus lignosus* - POLYPORUS THEOBROMAE - *Lycoperdon Wrightii* - *Daldinia concentrica* - *Polyporus ostreiformis* - *Xylaria nigripes* - *Xylaria Berkeleyi* - *Hexagona cucullata* - *Stereum (Hym.) Cocoa* - POLYSTICTUS BADIUS - POLYSTICTUS ALBOBADIUS - HEXAGONA UMBROSUS - POLYSTICTUS PALLIDUS - *Trametes badius?* - *Polystictus aratus* - HEXAGONA ANGULATA - *Fomes subtornatus* - *Asterostroma investiens* - *Xylaria allantoidea* - DAEDALEA RIDLEYI - HYDNUM SCLERODONTIUM - POLYPORUS (AMAURODERMUS) RUGOSUS - ECHINODIA THEOBROMAE.

NOTE 837 - *HYDNUM FLAVIDUM* FROM T. F. CHIPP, SINGAPORE: This is a fleshy, dimidiate species, growing imbricately in clusters, the same size and manner of growth as our *Hydnum pulcherrimum*. However, the color when fresh was "bright yellow or brown, yellow toward the edge." Spines were "yellow". In drying it turns black and without the collection notes nothing could be told about it. The spores are hyaline, smooth, some globose, 5 mic., but more about 3 X 4. We do not give a photograph of it for it would not tell much, but if one will associate it as being a yellow *Hydnum pulcherrimum*, turning black in drying that will be the best description. It is a larger and more fleshy species than *Hydnum duriusculum* and with longer spines.

NOTE 838 - *POLYPORUS OCHROLACCATUS* FROM T. F. CHIPP, SINGAPORE: A very distinct species (Cfr. *Stipitate Polyporoids* p. 105) and a rare one. I only found in the museums of Europe the original collection of Cumings, Philippines, made in 1835. Recent collectors in the Philippines have sent it in a few times and I have one from E. Cheel, Australia. Cooke got it from the Solomon Islands (specimen at New York) and Hennings had a long, stiped form of it from New Guinea. Now it comes from Mr. Chipp, Singapore. In the entire world five countries and nine collections are known and but one collection from any country excepting the Philippines, six of these collections being in our museum.

NOTE 839 - *POLYPORUS BRUNNEO-MACULATUS* FROM T. F. CHIPP, SINGAPORE: Cfr. *Stipitate Polyporoids*, p. 133. This plant was mis-referred by Cooke, specimen from Malay, to *Polyporus brunneo-pictus* of Brazil, and is the basis of the erroneous record of *Polyporus brunneo-pictus* from Malay in Saccardo. It is quite close to *Polyporus maliensis* and should be moved from Sect. 15 to Sect. 17 in my pamphlet.

NOTE 840 - *POLYPORUS ABRUPTUS* FROM T. F. CHIPP, SINGAPORE: We became familiar with this in Samoa. We considered it in our *Fomes* pamphlet, page 222 as *Fomes abruptus*. It should be moved to Sect. 82 of *Polyporus*. It is a case like *Polyporus lignosus* which passes as a *Fomes*. They are potential *Fomes* only but generally they are *Polyporus*. *Polyporus abruptus* can be learned but it is difficult to convey the idea to another. Murrill got it from the Philippines, Elmer 6951, discovered it was a new species and called it *Trametes caespitosa*. I recognized the type at New York as soon as I saw it, but the specimens that were distributed to Kew I could make nothing of and I do not believe they have any connection with it. (Cfr. *Apus Polyporus*, page 311).

NOTE 841 - *HEXAGONA UMBROSUS* FROM T. F. CHIPP, SINGAPORE: Thin, glabrous, dark umber with dark context and pores but evidently glaucous when fertile. Exactly the same as *Hexagona polygramma* (*Hexagone Synopsis*, p. 25, fig. 308) excepting color, and the photographs could not be told apart, hence we give no figure of this. The variations of color, pores, surface, in the *Hexagona tenuis* section are most puzzling as explained at length in our pamphlet, and it is a question what to consider as species. This is the second collection of this dark umber plant received from Mr. Chipp, and it has never reached me from any other source.

NOTE 842 - POLYPORUS (AMAURODERMUS) RUGOSUS FROM T. F. CHIPP, SINGAPORE: This is very much thinner than any other collection I have and I now have twelve. The pores dry black but Mr. Chipp notes were "white when fresh, bleeding when injured." Thwaites records the same as to Ceylon plants. The reference of such a thin plant to Polyporus rugosus is not satisfactory. Perhaps it is best to call it a new species, Polyporus Ramesii, as Murrill did this same thin form.

CLELAND, DR. J. BURTON, NEW SOUTH WALES: Polystictus varicolor - Polyporus gilvus - DIPLODERMA PARVISPORA - Ustulina vulgaris - Calvatia craniiformis - Polyporus atrophipidus - Catastoma pedicellatum - LYSURUS AUSTRALIENSIS - Merulius aureus - SECOTIUM COARCTATUM - Dendrocladium furcellatum - Ombrophila terrestris - POLYSTICTUS SUBCONGENER - Polystictus flavus - Thelephora myriomera Polyporus trabeus - Polyporus annosus - Scleroderma verrucosum - Polystictus versatilis - Trametes lilacino-gilvus - Stereum caperatum - Polyporus dichrous - Polystictus flavus - Polyporus arcularius Stereum purpureum - Stereum tasmanicum - TRAMETES PROTEA - TRAMETES CERVINA - Merulius pallens - Irpex vellereus - Hypomyces chrysospermus - Hexagona rigida - Irpex concors - Polyporus fumosus - Polystictus elongatus - POLYSTICTUS SUBCAPERATUS - HEXAGONA SIMILIS - Polyporus (Gan.) zonatus - Trametes Muelleri - Polyporus rubidus - Lentinus fasciatus - Polystictus oblectans - Lenzites abietina - Trametes Feei - Polystictus cervino-gilvus - Fomes durissimus - LENZITES BECKLERI - Polystictus luteo-olivaceus - Geaster saccatus - PODAXON ANOMALUM - Polyporus spurcus - Fomes rimosus - STEREUM PSEUDANNOSUM - Fomes Calkinsii - Fomes torulosus - Fomes hornodermus.

NOTE 843 - LYSURUS AUSTRALIENSIS FROM DR. J. B. CLELAND, NEW SOUTH WALES: There is no doubt in my mind that our Lysurus borealis is the same plant. These specimens are more slender than the type at Kew, but the species varies in this regard. Some plants are slender, others more stocky. A question that has been puzzling me for years is whether Lysurus Gardneri of Ceylon is the same or not. It has finally been demonstrated that it is not by Professor Petch who shows that the arms have a different structure when the gleba is removed. We never saw a specimen with the gleba removed, but we are very glad to get the old problem settled.

NOTE 844 - SECOTIUM COARCTATUM FROM DR. J. B. CLELAND, NEW SOUTH WALES: This is a very rare species and I believe this is the first specimen since Berkeley named it years ago. Dr. Cleland's specimen agrees exactly with the type at Kew and with the figure that Berkeley gave of it.

NOTE 845 - TRAMETES CERVINA FROM DR. J. B. CLELAND, AUSTRALIA: This is the eighth collection we have received from foreign countries and all are very similar. We have it now from Australia, Ceylon, Japan, Brazil and Mexico. While we have no doubt it is the same species we have in the United States and as the European plant in the essentials (color and spores) there is a constant difference. The European is usually resupinate, rarely it develops a narrow, reflexed pileus. The pores usually 4-5 mm. deep are daedaloid. The foreign plant is usually pileate, much thinner than

the European. Pores are shallow, one or two mm. deep and more round. We have compromised the matter by holding our foreign specimens as *Trametes cervina* and our European and American specimens as *Daedalea cervina*. The Brussels conspirators do not approve of either name, but personally we never subscribed to any rules having for their object the robbing of poor old Persoon, in the cases where Persoon was right and Fries was wrong.

NOTE 846 - *HEXAGONA RIGIDA* and *HEXAGONA SIMILIS* FROM DR. J. BURTON CLELAND, AUSTRALIA: We are getting these two species abundantly from Australia and they are quite distinct in the color of the context which is brown in the latter and pale isabelline in the former. Both are marked with fibrillose, scrupeose surface. In our Note 660 we got this statement just reversed. *Hexagona similis* is a more rigid species than *Hexagona rigida* and has darker context. The matter is given correctly in our *Hexagona* pamphlet. We do not get *Hexagona rigida* excepting from Australia, but we have *Hexagona similis* from Madagascar. I am afraid I have misdetermined several collections for my Australian correspondents. *Hexagona similis* varies as to thickness. Usually it is about the same as *rigida* but I just have a collection from Dr. Cleland as thin as *Hexagona tenuis*.

CLUTE, WILLARD N., ARIZONA: *Tylostoma Purpusii* - *Mycenastrum Corium* - *Lycoperdon rimulatum* - *Lycoperdon cepaeforme* - *Catastoma subterraneum*.

COKER, W. C., NORTH CAROLINA: *Naematelia nucleata* - *Dacryomyces deliquescens* - *DITIOLA RADICATA* - *Tremella foliacea* - *EXIDIA BEARDSLEEI* - *Arrhytidia flava* - *Calocera cornea* - *Dacryomyces aurantia* - *Tremella mesenterica* - *Tremella lutescens*.

COOL, CATH., HOLLAND: *Polyporus (Amaur.) rugosus*. Collected in Sumatra.

COX, ELIZABETH C., PENNSYLVANIA: *Xylaria polymorpha* - *Daedalea quercina* - *Schizophyllum commune* - *Lycoperdon piriforme* - *Corticium epiphyllum* (teste authors) = *Asterostroma epiphylla* for me. - *Lycogala Epidendrum* - *Stereum spadiceum* - *Polystictus versicolor* - *Polyporus Spraguei*.

CRADWICK, WM., JAMAICA: *Auricularia auricula-Judae*.

CUNNINGHAM, G. H., NEW ZEALAND: *Polystictus tabacinus* - *Polyporus dichrous* - *Polystictus hirsutus* - *Ceratiomyxa mucida* - *Stereum concolor* - *Stereum membranaceum* - *CORDYCEPS AEMONAE* - *Stereum ostreum* - *STEREUM SCHOMBERGKII* - *Nummularia Eulliardii* - *Rosellinia aquila* - *Nummularia australis* - *Hydnum Muelleri* - *Poria undata* - *Helotium citrinum* - *Fomes rufo-flavus* - *Poria contigua* - *POLYPORUS AUREOFULVUS* - *Irpex concors* - *Hydnum ochraceum* - *Stereum surinamense* - *Polyporus adustus* - *AURICULA TOTARAE* - *XYLARIA APICULATA* - *XYLARIA CUPRESSIFORMIS* - *Xylaria castorea* - *Xylaria haemorrhoidalis* - *XYLARIA RAMULATA* - *Kretzschmaria caenopus* - *KRETZSCHMARIA MAURITANICA* - *Hypocrea sulphurea* - *Polyporus dictyopus* - *Trametes lilacino-gilva* - *Clintoniella rosella* - *Stereum vellereum*.

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NOTE 847 STEREOUM SCHOMBURGKII FROM G. H. CUNNINGHAM, NEW ZEALAND: Investigations concerning this have raised the question if it is really different from *Stereum membranaceum*. The microscopic features of both, "colored metuloids" are the same and the main difference is the color of the hymenium, umber in the former, violaceous in the latter. I collected *Stereum membranaceum* in abundance in Cuba and a prominent feature was the violaceous color of the hymenium, but in going over the specimens now after some years there is very little violaceous color left. *Stereum membranaceum* has been generally known as *Stereum papyrinum*, and we call it the former, following Bresadola. But whether he bases it on a specimen or on Fries' description I do not know. At any rate the specimen so labeled in Montagne's herbarium (who named the latter and later) is surely the same.

NOTE 848 - XYLARIA APICULATA FROM G. H. CUNNINGHAM, NEW ZEALAND: The New Zealand plant is not the same as the Brazilian in all respects. It is the same as to size, shape and spores, but it is a blacker plant and the surface is not at all cracked. Spores are 8 X 24.

DAVIS, SIMON, MASSACHUSETTS: *Lycoperdon pusillum* - *Polyporus brumalis*.

DEMETRIO, C. H., MISSOURI: *GEASTER CAESPITOSUS* - *Spumaria alba* - *Hypoxylon coccineum* - *Lenzites trabea* - *Lycogala Epidendrum* - *Polyporus rutilans* - *Guepinia spathularia*.

NOTE 849 - *GEASTER CAESPITOSUS* FROM C. H. DEMETRIO, MISSOURI: As a variety of *Geaster velutinus* (Cfr. *Geastrae*, p. 38, fig. 72). It merits a separate name from *velutinus* for it is only about half the size and of much darker color. It is rare, this being, I believe, the second collection.

DUTHIE, MISS A. V., SOUTH AFRICA: *Polyporus gilvus* - *Scleroderma cepa* - *ARACHNION ALBUM* - *Lycoperdon oblongiosporum* - *Kalchbrennera corallocephalus* - *Hypoxylon multifforme* - *Hypocrea citrina* - *Phallus gracilis* - *Geaster saccatus* - *Cyathus microsporus* - *Tylostoma cyclophorum* - *EXIDIA DUTHIEI* - *PHALLUS RUGULOSUS* - *LACHNOCLADIUM CRISTATUM* - *Rhizopogon rubescens* - *CATASTOMA PEDICELLATUM* - *PHELLORINA INQUINANS* - *CATASTOMA DUTHIEI* - *MUTINUS SIMPLEX* - *Polyporus adustus* - *Polystictus versicolor* - *Polystictus zonatus* - *Polystictus ochraceus* - *Thelephora terrestris* - *Lenzites trabea* - *Scleroderma flavida* - *Polystictus occidentalis* - *THELEPHORA PENICILLATA* - *Stereum cyphelloides* - *Lanopila Wahlbergii* - *PROTUBERA AFRICANA* - *HORMOMYCES AURANTIACUS* - *CYTIDIA SIMULANS* - *Polyporus (Gan.) Curtisii* - *TREMELLA MICROSPORA* - *ARACHNION SCLERODERMA*.

NOTE 850 - *PHALLUS RUGULOSUS* FROM MISS A. V. DUTHIE, SOUTH AFRICA: This was named from alcoholic material and the recorded colors are not sure. Miss Duthie sends a colored sketch and her plant has a pink volva and a yellow stem. It is a question if it is really distinct from *Phallus rubicundus* which has a red stem. Colors are variable factors in phalloids. This plant, however, as shown by specimens in alcohol, has slight reticulations on the pileus. The pileus of *Phallus rubicundus* is supposed to be even and is in specimens we have.

NOTE 851 - ARACHNION ALBUM FROM MISS A. V. DUTHIE, SOUTH AFRICA: South Africa is the most favored locality for the genus *Arachnion*. I have received probably a dozen collections from Miss Duthie and this is the second where she notes - "growing in abundance!" We never find it in the United States (where it was originally named) in abundance, and it is unusual for a collector to find it. The plant was named and figured by Schweinitz about a hundred years ago. Then Berkeley got it from South Africa and called it *Scoliciocarpus tener*. Then Montagne, from South America, and called it *Scoliciocarpus Bovista*. Both afterwards acknowledged that *Scoliciocarpus* is the same as *Arachnion* but neither changed the specific name. Then Berkeley got it from Australia and called it *Arachnion Drummondii*. The only difference in the above is that the specimens came from different countries and in old times each specimen from a new locality was a "new species." But perhaps we should be more charitable to these old namers for they knew not what they did. Their material was so scanty they could not tell much about it. There are more specimens of *Arachnion* in this one lot from Miss Duthie than in every museum in Europe today.

NOTE 852 - CATASTOMA PEDICELLATUM FROM MISS A. V. DUTHIE, SOUTH AFRICA: This is a species of our Southern States and we recorded it, Note 463, from Australia. It now comes in from South Africa. It is very difficult to explain the wide distribution of "puff balls".

NOTE 853 - PHELLORINA INQUINANS FROM MISS A. V. DUTHIE, SOUTH AFRICA: In my opinion the genus *Phellorina* really consists of only two species, *Phellorina inquinans* and *Phellorina strobilina*. The former was named by Berkeley from South Africa. Afterwards Montagne got it from North Africa and called it *Xylopodium Delastrei*. Admitting that there is no difference in the genera and practically none in the species, the name was changed to *Phellorina Delastrei* which we have in our previous writings adopted. While we take no stock in the "sacred principles of priority" when used as an excuse for name juggling, in a case like this where it involves no "new combination" it is only a matter of common right that the original name should be used.

NOTE 854 - HORMOMYCES AURANTIACUS FROM MISS A. V. DUTHIE, SOUTH AFRICA: I think there is but one species of *Hormomyces*, at least that I have ever seen. Compare *Myc. Notes*, p. 712. Kalchbrenner's South African "new species" is undoubtedly the same, as I stated in the article cited.

EVANS, I. B. POLE, SOUTH AFRICA: *BROOMEIA ELLIPSOSPORA*. A fine specimen which will be illustrated in *Mycological Notes*.

FAIRMAN, DR. C. E., NEW YORK: *Merulius tremellosus* - *Solenia fasciculata* - *Tremellodon gelatinosum* - *Stereum sericeum* - *Morchella esculenta* - *Sclerotina fructigena* - *Lentinus lepideus* - *Peziza repanda* - *Peziza muralis*.

FORBES, C. N., HAWAII: *Xylaria Schweinitzii* - *ALEURODISCUS APICULATUS* - *Lycoperdon nigrum* - *Polyporus dictyopus* - *Fomes senex*.

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GEORGIA, F. R., NEW YORK: *Merulius Corium*.

GILBERT, EDOUARD, FRANCE: All as named by M. Gilbert.
Peniophora byssoidea - *Corticium centrifugum* - *Nemospora crocea* -
Merulius tremellosus - *Radulum junquillinum* - *Fomes annosus* - *Corti-*
cium Bombycinum - *Poria mucida* - *Poria eupora* - *Stereum cristulatum* -
Gyrocephalus rufus - *Corticium Botryosum* - *Tremella lutescens* -
Tremella mesenterica - *Peniophora leucoxanthum* - *Polyporus albellus* -
Peniophora sphaerospora - *Peniophora cinerea* - *Corticium Richii* -
Peniophora setigera - *Stereum cristulatum* - *Corticium praetervisum*.

GILKEY, MISS HELEN M., OREGON: *Rhizopogon occidentalis*.

GOSSWEILER, JOHN, WEST AFRICA: Mr. Gossweiler sends finely selected specimens in good quantities. *Trametes Meyenii* - *Fomes Carophylli* - *Polyporus durus* - *Polystictus caperatus?* - *Lentinus tuber regius* - *Fomes applanatus* - *Fomes hornodermus* - *Fomes Robinsoniae* - *Fomes cinereus* - *Polyporus dorsalis* - *Cladoderris elegans* - *Fomes lamaeoensis* - *Polyporus Moellerianus* - *Polyporus lucidus?* - *Fomes fastuosus* - FOMES GOSSWEILERI - *Polystictus caperatus* - *Polyporus Oerstedii* - FOMES LONGOPORUS - *Polyporus maliensis* - *Fomes rimosus* - *Polystictus incomptus* - *Polystictus concinnus* - *Polyporus vinosus* - *Polystictus occidentalis* - POLYPORUS FRUTICUM - POLYPORUS VANDYKEI - *Polyporus lignosus* - *Polyporus licnoides* - *Auricularia nigra* - POLYPORUS ANGOLENSIS - DENDROCLADIUM FRUTICOLA - *Fomes Kermes* - POLYPORUS BIOGILVUS - *Polystictus sanguineus* - *Polystictus concinnus* - *Polystictus xanthopus* - *Stereum (Hymen.) tenuissimus* - *Stereum involutum* - POLYSTICTUS EXPANSUS - POLYSTICTUS HYPOTHEJUS - *Polyporus (Gan.) mastoporus* - *Polyporus (Gan.) longoporus* - *Polyporus fasciatus* - *Polyporus (Gan.) Mangiferae* - *Polyporus (Gan.) zonatus* - XYLARIA LONGIPES - *Fomes Caryophylli* - FOMES DURISSIMUS - POLYSTICTUS LUTEO-AFFINIS - *Cantharellus buccinalis* - *Panus eugrammus* - *Kretzschmaria Heliscus* - *Kretzschmaria cetrarioides* - *Daldinia Bakeri* - *Auricularia delicata* - *Lenzites repanda* - *Ustulina vulgaris* - *Geaster mirabilis* - *Tricoscypha Hindsii* - *Polyporus sterinus* - *Polyporus sterinoides* - *Xylaria scruposa* - *Xylaria allantoides* - *Xylaria nigrescens* - *Fomes fusco-pallens* - *Cyathus Montagnei* - LYCOPERDON TEPHRUM - *Hypocrea mesenterica* - POLYSTICTUS BYRSINUS - XYLARIA RIDLEYI - *Xylaria multiplex* - PHYLLOTREMELLA AFRICANA - CORDYCEPS AUSTRALIS - POLYPORUS (GAN.) ALBO-CINCTUS - ISARIA CORNEA.

NOTE 855 - POLYPORUS FRUTICUM FROM JOHN GOSSWEILER, AFRICA: (Cfr. Apus *Polyporus* page 366, fig. 700.) Mr. Gossweiler notes - "on the finger thick stems of undershrubs on the banks of the river. Always on living shrubs in shady, humid situations." This was named by Berkeley from Cuba but it occurs in the Philippines, Malay, Australia and other Eastern countries. It is well named, for growing on stems of living shrubs it may well be likened to a fruit. However, it is not always found in such localities for it reaches its best development when found on logs, etc.

NOTE 856 - LYCOPERDON TEPHRUM FROM JOHN GOSSWEILER, AFRICA: Growing on wood, globose, scanty, sterile base. Context fuliginous. Spores globose, 4 mic. smooth with a large gutta. Capillitium scanty hyaline. This is quite close to *Lycoperdon fuligineum* but differs in the smooth spores.

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GRANT, J. M., WASHINGTON: Mostly Discomycetes which were named by Dr. Seaver. *Aleuria aurantia* - *Lachnea hemisphaerica* - *Creonectria ochroleuca* - *Pseudoplectaria nigrella* - *Geopyxis cupularis* - *Trametes carnea* - *Ustulina vulgaris* - *Hymenochaete spreta* - *Fomes applanatus* - *Lycoperdon piriforme* - *Polystictus abietinus* - *Polyporus croceus* - *Poria Weirii* - *MERULIUS CARBONARIUS* - *Coniophora arida* - *MUCRONELLA ALBA* - *TREMELLA SARCOIDES* - *Tremellodon gelatinosum*.

NOTE 857 - *MERULIUS CARBONARIUS* FROM J. M. GRANT, WASHINGTON: Resupinate, 4-5 inches or more over a burnt log. Sub-hymenial tissue. Hay's brown when soaked, of a soft, spongy texture, drying hard, horny and pale with a slightly reddish tint. On a flat surface probably normally 3-4 mm. thick, but in this specimen where it has filled up an angle in the host it is in one portion over an inch thick. Hymenium drying with permanent, shallow pores which when old are somewhat irpicoid. Color orange (Kaiser brown) when moistened. Cystidia infrequent, projecting 16-20 mic., thick walled, hyaline. Spores hyaline but not seen by me.

A species distinct from any known to me and I can not mention one that suggests it. The coloring matter resides in elongated cells of the hymenial tissue which is sharply distinct from the sub-hymenial.

GRIFFITHS, DAVID, CALIFORNIA: *Lysurus Mokusin*.

GRIFFITHS, DAVID, DISTRICT OF COLUMBIA: *Polyporus sulphureus*.

GUILLEMIN, HENRI, FRANCE: *Stereum multizonatum*.

HEMMI, TAKEWO, JAPAN: *Stereum fasciatum* - *Lenzites acuta* - *POLYSTICTUS GLEADOWII* - *Fomes pomaceus* - *POLYSTICTUS CONCHIFER* - *TRAMETES UNGULATA* - *Stereum (Hymenochaete) attenuatum* - *Hydnum Copelandii* - *Hypoxylon multiforme* - *Trogia crispa* - *Hydnum ochraceum* - *Lenzites betulina* - *Polystictus abietinus* - *IRPEX UNICOLOR*.

NOTE 858 - *POLYSTICTUS CONCHIFER* FROM TAKEWO HEMMI, JAPAN: This is such a frequent species on elm in the States that I have often wondered why it did not reach me from some other country. At last it has come in from Japan. *Polystictus conchifer* is a peculiar species as illustrated and explained on page 41, Myc. Notes. Polyporoid Issue No.2. Late in the season it usually produces abortive, secondary pilei on the upper surface near the base. These are little concave growths similar to a shell, hence the name. I think it is a case of habitude, the only one known to me. During the winter the fertile pileus falls away leaving this sterile growth which persists until the next season. This has led to the impression first proposed by Morgan that the new plants are derived from these cups. I am satisfied from many years observation it is a mistake. They never produce new growths but finally disappear. Murrill, in his ambition to discover new genera bases one on this feature and defines it "hymenophore preceded by a cup-shaped sterile body." I think he has his cart before his horse. The "sterile body" proceeds from the hymenophore. At any rate the finding of this most peculiar species in Japan is of much interest.

NOTE 859 - TRAMETES UNGULATA FROM TAKEWO HEMMI, JAPAN: As named Myc. Notes, page 759. As there stated it is a large pored, trametoid form of *Lenzites saepiaria* but does not occur with us in the States where *Lenzites saepiaria* is very common. We have, however, a small pored form called *Trametes protracta*.

HIBBARD, MISS ANN, MASSACHUSETTS: *Cordyceps militaris* - *Exidia glandulosa* - *Polystictus velutinus* - ARRHYTIDIA FLAVA - *Lycoperdon coloratum* - *Lycoperdon dryinum* - *Stereum* (*Hymenochaete*) *tabacina* - *Guepinia spathulata* - CALOCERA PALMATA - *Polyporus picipes* - *Stereum purpureum* - *Hypomyces viridis* - STEREOUM TUBERCULATUM (pileate) - *Ptychogaster albus* - *Helvella infula* - *Helvella lacunosa* - *Polyporus rutilans* - *Phlebia radiata* - IRPEX PARADOXUS - *Ombrophila sarcoides* - *Auricularia reflexa* - *Hydnum ochraceum* - *Dacryomyces aurantius*. In addition a fine lot of *Clavarias* which I have not worked up.

HRDLICKA, A., DISTRICT OF COLUMBIA: *Hydnum erinaceum* - *Clitocybe abortivus*.

HUNTER, T., WEST AFRICA: A very fine collection with many interesting specimens. All have not been worked over yet. - *Fomes lignosus* - *Trametes Persoonii* - *Stereum Ostrea* - LENTINUS BLEPHARODES XYLARIA NIGRESCENS - *Xylaria anisopleura* - *Xylaria hemorrhoidalis* - *Xylaria allantoides* - XYLARIA GRAMMICA - POLYPORUS MOLLITEXTUS - *Lenzites repanda* - *Hexagona hirta* - *Ustulina vulgaris* - *Polyporus* (Gan.) *Curtisii* - LENZITES REPANDA - *Stereum durum* - PTYCHOGASTER AFRICANUS - POLYPORUS (GAN.) JAPONICUS - *Fomes caliginosus* - *Hexagona speciosa* - *Xylaria laevis* - *Xylaria pistillaris* - *Fomes australis* - *Polyporus Moellerianus* - *Polyporus velutinosus* - *Stereum involutum* - *Stereum affine* - THAMNOMYCES CAMERUNENSIS - *Pyrenopolyporus Hunteri* - *Xylaria scruposa* - *Geaster velutinus*.

NOTE 860 - POLYPORUS (GAN.) JAPONICUS FROM T. HUNTER, WEST AFRICA: This is for me in reality only a form of the temperate region species, *Polyporus lucidus*, with intensely black crust. It is a form I have from Japan and was originally no doubt the plant named by Fries.

JOHNSTON, I. M., COLORADO (Collected on Pike's Peak.) : *Polystictus perennis* - *Trametes hispida* - *Fomes igniarius* - *Polyporus arcularius* - *Trametes carnea* - *Trametes protracta* - *Fomes pinicola* - *Fomes pini* - *Geaster rufescens* - *Lycoperdon atropurpureum* - *Lycoperdon piriforme* - *Lycoperdon umbrinum* - *Lenzites saepiaria* - LENZITES ABIETINA.

KELLY, DR. HOWARD A., FLORIDA: *Trametes hydnoides*.

LANGE, J. E., DENMARK: *Polystictus perennis* (*pusillus*).

LATHAM, ROY, LONG ISLAND: POLYSTICTUS DEPENDENS - *Polyporus hispidus* - *Polyporus circinatus* - *Leotia marcida* - *Scleroderma Ceba* - *Hydnum velutinum* - *Hydnum scobiculatum* - *Lycoperdon umbrinum* - *Daedalea ochracea* - *Dacryomyces deliquescens* - *Hydnum amicum* - *Phallus duplicatus* - *Craterellus cornucopioides* - *Scleroderma vulgare* - *Polyporus silvus* - *Sarcoscypha occidentalis* - *Tremellodendron pallidum* - Poly-

saccum pisocarpium - Crucibulum vulgare - Fomes annosus - Polystictus cinnamomeus - Pleurotus sapidus - Thelephora multipartita - Calvatia lilacina - Stereum sericeum - Polyporus poculus - Exidia recisa - Panus stipticus.

NOTE 861 - POLYSTICTUS DEPENDENS FROM ROY LATHAM, ORIENT, LONG ISLAND: A rare species (Cfr. Stip. Polyporoids, p. 165) only known from a few stations in the South. This is the only collection in any way northern. Otherwise it is only known from one collection from Japan.

NOTE 862 - CRATERELLUS CORNUCOPIOIDES, LOBED FORM, FROM ROY LATHAM, NEW YORK: The common Craterellus cornucopioides is usually so regular and cup shaped that we were somewhat surprised to receive a collection lobed and almost divided at the base, from Mr. Latham. We supposed that it had been torn accidentally but Mr. Latham stated that it grew naturally in this way and he found a large colony in this form.

LEEPER, BURTT, OHIO: Polystictus conchifer - POLYPORUS CYATHOIDES - INSTITALE ALBA - Hydnum pulcherrimum - Polyporus delectans - Daedalea quercina - Polystictus biformis - Fomes pomaceus.

NOTE 863 - POLYPORUS GRAVEOLENS FROM BURTT LEEPER, OHIO: The following notes regarding the development of this plant settles forever the uncertainty there has been regarding it. We have brought up this subject several times for it has been doubtful whether it is a Polyporus or a Fomes. Mr. Leeper's observations place it definitely with Polyporus, and we trust we have heard the last of "Fomes graveolens."

"The plants make their appearance about September 1st in the form of a smooth, gray nodule of an irregular shape, without indication of pilei. By the middle of October they are fully matured and are usually so infested with insects that they have the appearance of weathering two or three winters. They grow from the top, side or bottom of limbs, and have no odor, young or old. Their quick decay and effete appearance is probably responsible for the classification as a Fomes. In three seasons there have been no indications of a revival of growth in any of these plants, about thirty in all." - Leeper.

DOCTERS VAN LEEUWEN, DR. W., JAVA: Trametes Meyenii - Polyporus vinosus - Schizophyllum commune - Lentinus fasciatus - Lentinus velutinus - Stereum perlatum - POLYPORUS VENULOSUS - Hexagona tenuis - Fomes applanatus - Polyporus Blanchetianus - Polystictus xanthopus - Polystictus sanguineus - Polystictus crenatus - Polystictus Blumei - GUEPINIA FISSA - Stereum Ostrea - Stereum concolor - Trametes Persoonii - Trametes aspera - Trametes fuscella - Polyporus zonalis - Polyporus grammocephalus - Polyporus perversus - Hydnum ochraceum - Polyporus caliginosus - Auricularia auricula-Judae.

LUDWIG, C. A., ALABAMA: Boletus chrysenteron? - Polyporus Curtisii.

MCDUGAL, W. B., ILLINOIS: Tylostoma rufum - Daldinia

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concentrica - Clitopilus abortivus - Calvatia rubroflava - Seismosarca alba - Guepinia spathulata - Tremella mesenterica.

MCFARLAND, FRANK T., KENTUCKY: Calvatia lilacina - Polyporus rufescens - Polyporus adustus - Stereum fasciatum - Hypoxylon coccineum - Peniophora incarnata - Auricularia auricula-Judae - Stereum ramealis - Trametes sepium - Poria ferruginosa - Peniophora cinerea - Aleurodiscus Oakesii - Polyporus fuscus - Nummularia Bulliardii - Stereum albo-badium - Mitremyces Ravenelii - Xylaria Longiana - Trametes sepium.

MERRILL, E. D., PHILIPPINES: Through the kindness of Mr. Merrill the herbarium sheets of the historical specimens of the Philippines have been submitted to us with permission to retain part when it could be divided without injury to the specimens. There were many specimens of interest which will be published in Mycological Notes with illustrations. These are in capitals.

Since this list was prepared Mr. Merrill has sent us the complete set of herbarium sheets of Philippine polyporoids. We are now engaged in their study and will publish a separate pamphlet on them very shortly.

Xylaria reniformis - Xylaria Schweinitzii - Hymenochaete epichlora - Hymenochaete agathicola - Xylaria grammica - Xylaria rhopaloides - Xylaria scruposa - Sarcoxylon compuncta - Xylaria nigripes - Xylaria herculea - Cyathus Montagnei - Polyporus megaloporus - Polyporus Menziesii - Polyporus lingua - Xylaria Castorea - Xylaria Hypoxylon - Xylaria anisopleura - Xylaria allantoides - Xylaria multiplex - Geoglossum Walteri - Xylaria fibula - Trametes grisea - XYLARIA BICEPS - XYLARIA RIDLEYI - DALDINIA LUZONENSIS - Septobasidium Bakari - SEPTOBASIDIUM LAXUM - Xerotus vinoso-fuscus - XEROTUS PHILIPPENSIS - XYLARIA BOTULIFORMIS - XYLARIA BIFORMIS - Xylaria lignosa? - Xylaria aristata - XYLARIA LUTEOSTROMA - Xylaria bataanensis - Xylaria gracillima - POLYSTICTUS STRIATULUS - CALVATIA BRESADOLEANA - Xylaria dealbata (very ?) - SEPTOBASIDIUM ALATUM - Polystictus brunneolus - Pterula pallascens - HYMENOCHAETE VELUTINA - Daedalea reflexa - Nummularia Merrilli - Craterellus philippensis - Septobasidium Merrillii - Hydnum rawakense - Hydnum Copelandii - Cantharellus Merrillii - Septobasidium bogoriense - POLYPORUS COCHLEARIFORMIS - FOMES VALIDUS - POLYPORUS LEPTOPUS - Kretzschmaria Pechuelii - Pterula pusio - POLYPORUS GRAFFIANUS - HETEROCHAETE PALLIDA - KRETZSCHMARIA HELISCUS - HEXAGONA RESINOSA - DALDINIA GOLLANI.

NOTE 865 - HYMENOCHAETE VELUTINA FROM E. D. MERRILL, PHILIPPINES: Co-type as Duportella. For me it is a Hymenochaete, but differs from others for the "setae" are not strongly differentiated from the hyphae. This for me is only a question of degree and a question of terminology, whether to call them "setae" or "paraphyses". It is cutting the cloth pretty fine to make a new genus of them. As to species, I do not know the resupinate Thelephoraceae.

NOTE 866 - POLYPORUS COCHLEARIFORMIS FROM E. D. MERRILL, PHILIPPINES: Correctly determined by Bresadola, though of somewhat different shape (and one collection is lobed) than the type at Kew. These two Philippine collections are all known in addition to the

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original from Malay. Spores abundant, globose, hyaline, 5 mic. Cfr. Stip. Polyporoids, Sect. 19, page 129.

NOTE 867 - POLYPORUS GRAFFIANUS FROM E. D. MERRILL, PHILIPPINES: Co-type. This, for me is a good species, but has no resemblance to the plant I so referred in Philippine Polypores Mss. (pp. 26 and 110.) The context color, pores and absence of setae ally this closely to Polyporus anebus but (one specimen at least) has a stipe and it would fall in Section 11 of Stipitate Polyporoids. I should call the color light brown (about Sayal brown, Ridgway) but of course color terms are largely individual ideas. It is a concolorous plant, the pores slightly darker than the context. I find no spores and the plant has no setae. For me the plant does not suggest Polyporus cremeo-tomentosus.

NOTE 868 - HETEROCHAETE PALLIDA FROM E. D. MERRILL, PHILIPPINES: The genus Heterochaete in the sense of this species is simply a resupinate Exidia, same gelatinous texture, same papillae, spores and basidia. Spores I do not find, but teste Bresadola, oblong, 6 X 10-12. This species has a true relationship to tremellaceous plants. This is the third "Heterochaete" that has come to me and each has a different type of texture. This is all gelatinous, Another was all cartilaginous and another pileus gelatinous, granules cartilaginous. It appears that Heterochaete is quite a heterogenous genus.

NOTE 869 - "XYLARIA COPELANDII", CO-TYPE FROM E. D. MERRILL PHILIPPINES. What absolute punk it is for a man with any pretensions as a mycologist to do such work as this. It has not so much suggestion of a Xylaria as it has of a hemp seed. The plant is a Rosellinia and no doubt has many names in the museums. I never worked them over. I saw the same collection labeled "Xylaria Copelandii, Henn." at Kew, but I thought it was an error of enclosure for I did not realize that even Hennings could make such a bull.

NOTE 870 - FOMES VALIDUS FROM E. D. MERRILL, PHILIPPINES: Co-type. Probably a good species, but rests entirely on the context color. There is nothing "yellow-brown" to it to my eye, but "red-brown" and I would class it in Section 66 with "orange rufous" species. It is the same as Fomes tricolor excepting that the latter is brighter red. If it develops that Fomes validus is Fomes tricolor after several years of growth, I would not be surprised.

MORSE, A. P., MASSACHUSETTS: Daedalea confragosa - Poria calcea.

MOXLEY, GEO. L. CALIFORNIA: TYLOSTOMA MONTANUM - Polystictus hirsutus - Trametes hispida - Armillaria mellea - Catastoma circumscissum.

MUENSCHER, W. C., WASHINGTON: Polystictus cinnabarinus - Fomes fomentarius - Hypoxylon marginatum - Fomes pinicola - Nidula microcarpa - Diatrype bullata - Trametes abietis - Poria ferruginosa - Trametes carnea.

MUENSCHER, W. C., NEW YORK: *Gyrocephalus rufus* - *Coryne sarcoides* - *Dacryomyces aurantia* - *Thelephora terrestris* - *Tremellodon gelatinosum* - POLYPORUS DELECTANS.

NOTE 871 - POLYPORUS DELECTANS FROM W. C. MUENSCHER, NEW YORK: We are accustomed to think of this only as a species of the middle west, Ohio, Indiana, etc. This came from the vicinity of Ithaca and is the first specimen recorded from New York.

MUNZ, PHILIP A., CALIFORNIA: *TYLOSTOMA MOHAVEI*.

NELSON, N. L. T., TEXAS: *Calvatia craniiformis* - *Polyporus* (Gan.) *sessilis* - *Polyporus gilvus* - *Fomes robustus* - *Merulius Corium* - *Tremella mesenterica* - *Polyporus arcularius* - *Hypoxylon rubiginosum* - *Trametes trabea*.

NOBLE, MRS. M. A., FLORIDA: *Helvella sulcata* - *Seismosarca alba* - *Auricularia auricula-Judae*.

NOWELL, WILLIAM, BARBADOS: *Polyporus fruticum*.

OLESON, O. M., IOWA: *Calvatia craniiformis* - *Rhizopogon diplophloem* (Det. Burt) - *Seismosarca alba* - *Polyporus occidentalis* - *Thelephora terrestris* - *Polyporus frondosus* - *Fomes leucophaeus* - *Polyporus obtusus* - *Polyporus brumalis* - *Hydnum erinaceum* - *Fuligo septica* - *Pterula penicellata* - *Irpeex crassitatus* - *Tremella frondosa* - *Trametes hispida* - *Tremellodendron pallidum* - *Tremellodendron candidum* - *Xylaria longiana* - *Lycogala Epidendrum* - *Clavaria pyxidata* - *Thelephora multipartita*.

ODELL, W. S., CANADA: *Polyporus betulinus* - *Lenzites betulina* - *Daedalea confragosa*.

OVERHOLTS, L. O., PENNSYLVANIA: A valuable addition to our museum and listed mostly as named by Mr. Overholts. Several of them (resupinate *Thelephoraceae*) we should have been unable to name. *Geoglossum hirsutum* - *Stereum abnormalis* - HYMENOCHAETE AGGLUTINUM - *Corticium investiens* - *Tremellodon gelatinosum* - *Peniophora gigantea* - *Corticium subgiganteum* - *Polyporus malicolus* - *Coniophora arida* - *Corticium laetum* - *Peniophora cinerea* - *Polyporus pocula* - *Peniophora affinis* - *Hymenochaete corrugata* - *Stereum versiforme* - MITREMYCES LUTESCENS - *Merulius aureus* - *Grandinia granulata* - *Coniophora puteana* - *Guepinia spathulata* - *Craterellus pistillarlis* - *Lycoperdon floccosum* - *Exidia glandulosa* - *Stereum sulcatum* - STEREUM RAMEALE - *Dictydiaethalium plumbeum* - TREMELLA SPARASSOIDES - *Clavaria cinerea* - *Clavaria formosa* - *Hydnum velutinum* - *Hydnum nigrum* - *Hydnum amicum* - *Hydnum aurantiacum* - *Sphaerobolus stellatus* - *Poria semitincta* - *Dacryomyces hyalinus* - *Radulum pallidum* - *Grandinia viridis* - *Tremellodendron candidum* - *Fomes Bakeri* - *Radulum casearium* - GUEPINIA MONTICOLA (from Colorado).

NOTE 872 - GUEPINIA MONTICOLA FROM L. O. OVERHOLTS FROM COLORADO: It is a question whether this is better classed as a *Guepinia* or a *Dacryomyces*, a question I shall not consider here. It is intermediate between these genera. Mr. Overholts found it in the "type locality", Colorado, on coniferous logs.

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DEPARTMENT OF CHEMISTRY
1950

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NOTE 873 - MITREMYCES LUTESCENS FROM L. O. OVERHOLTS PENNSYLVANIA: "Fairly common, growing scattered along a cut in a road in the mountains, Charter Oak, Pennsylvania." - Overholts.

NOTE 874 - STERREUM RAMEALE FROM L. O. OVERHOLTS, PENNSYLVANIA: We get our first clear idea of this from this collection. For me it is a color "species" of Stereum sericeum, and not a form of hirsutum as classed by Fries. Excepting its tendency to yellow hymenium it is about the same as Stereum sericeum.

NOTE 875 - HYMENOCHAETE AGGLUTINUM FROM L. O. OVERHOLTS, PENNSYLVANIA: These are beautiful specimens accompanied by an interesting note by Mr. Overholts, as follows: "There is an idea abroad that this species grows only when two branches or trunks rub together, the fungus cementing the two very tightly. Graves in his article in Mycologia (1914) did mention the fact that it occurs otherwise, but without reading the article carefully one would obtain that idea. Burt only mentions that it is found where two branches rub together. As a matter of fact it is very commonly found laying flat on a branch or trunk with no other branch near it. I have seen half a dozen such orbicular masses on a single Alnus trunk. I also find the species on Viburnum dentatum in the mountains near here."

PALMER, RALPH G., NEW YORK: Polyporus dichrous - TRAMETES VARIIFORMIS.

PARISH, S. B., CALIFORNIA: Polystictus versicolor. - Polyporus corruscans - Fomes applanatus.

PAUL, J. T., AUSTRALIA: Schizophyllum commune - Stereum elegans - Hydnum scobiculatum - Clavaria fusiformis - Polystictus versicolor - Polystictus hirsutus. - Stereum hirsutum - Polysaccum pisocarpium - Polystictus oblectans - Stereum illudens.

PECKOLT, GUSTAVO, BRAZIL: THAMNOMYCES CHAMISSONIS - Stereum Ostrea - ISARIA PECKOLTII.

NOTE 876 - THAMNOMYCES CHAMISSONIS FROM GUSTAVO PECKOLT, BRAZIL: A fine, ample collection of a characteristic species which was one of the early foreign fungi, named from Brazil by Ehrenberg. There is confusion as to the species of Thamnomycetes, and we have three, distinct species now, which we will consider soon. All are similar in general appearance and we are sure have been confused under the above name. Mr. Peckolt's sending is the true species.

PETCH, PROFESSOR T., CEYLON: Polyporus aratus - Polyporus rigidus - Polyporus anebus - Polystictus aratus - POLYPORUS LUTEO-OLIVACEUS - Fomes senex - Polyporus lucidus - Polyporus resinaceus - SARCOXYLON AURANTIACUM - LENZITES STRIATA - PORIA EPIMILTINA - POLYPORUS MOLLICULUS - Fomes Yucateensis - Trametes roseola - Polystictus polyzonus - Polyporus rubidus - Polyporus Menziesii - Polyporus Thwaitesii - Trametes Meyenii - Xylaria pyramidata?

NOTE 877 - PORIA EPIMILTINA FROM PROF. T. PETCH, CEYLON: We do not make many notes on the foreign Porias for we have never

critically studied the named specimens and have to change the name every time we write a note. This was named from Ceylon by Berkeley (teste Petch) and may be the first name. It is widespread and frequent in our American tropics and known as *Poria rufotincta* in our local traditions. It also occurs in Japan and the Philippines and appears as *Poria borbonica* in Philippine lists. The species is readily recognized by the peculiar orange stain it imparts to the wood.

NOTE 878 *XYLARIA MULTIPLEX* FROM PROFESSOR T. PETCH, CEYLON: (Cfr. *Xylaria* Notes, p. 26, fig. 1343.) It was sent as *Xylaria Culleniae*, which was Berkeley's name for the Ceylonese collection. The species seems to be peculiar in habits, growing on fruits, as stated by Berkeley. The type of *Culleniae* consists of two specimens. One, which is surely *multiplex*, was used by Cooke for his figure. The other has a few, short, fasciculate clubs and is quite doubtful.

NOTE 879 - *XYLARIA APICULATA* FROM PROF. T. PETCH, CEYLON: This is the same plant I received from Madagascar (Cfr. *Xylaria* Notes page 20) and in my opinion the same as the common plant we have in the American tropics. The Eastern plant has a club not so strongly rimose and spores are smaller (about 6 X 12). Berkeley's record from Ceylon is *Xylaria hypoxylon* var. *mucronata*, but surely it has nothing to do with the European species.

NOTE 880 - *XYLARIA VAGANS* FROM PROF. T. PETCH, CEYLON: This is a very distinct species which was named and finely illustrated by Professor Petch in the *Annals, Peradeniya*, Vol. 6. It is the only species of *Xylaria* that produces the black rhizomorphs in the tropics known as "horse hair blight." The most of them are products of *Marasmi*. *Xylaria vagans* is a strongly distinct species but not known from the American tropics, its nearest relative is *Xylaria axifera*.

NOTE 881 - *XYLARIA HAEMORRHOIDALIS* FROM PROF. T. PETCH, CEYLON: This was so named from Ceylon by Berkeley. It differs (if really a difference exists) from *Xylaria anisopleura* (page 24) only in its sessile, globose form. The surface, stroma, perithecia and spores (10 X 28) are exactly the same, and these are really the essentials of a *Xylaria*. *Xylaria tuberiformis* of Australia (Myc. Notes page 678) appears to me to differ in its more strongly protruding perithecia and smaller spores. Otherwise it is the same.

RAPP, S., FLORIDA: *Irpe*x *cinnamomeus* - *Trametes hydnoides* - *Polystictus pinsitus* - *Stereum lobatum* - *Omphalia campanella*. - *Mycena haematopes* - *Tubercularia vulgaris* - *Lenzites striata* - *Polystictus versicolor* - *Stereum complicatum* - *Clavaria inaequalis* - LENTINOID *FAVOLUS BRASILIENSIS* - *Auricularia auricula-Judae* - *Trametes hydnoides* - *Hypocrea bicolor* - *Polystictus Friesii* - *Polyporus dichrous* - *Lentinus villosus* - *Geaster hygrometricus* - *Schizophyllum commune* - *Hypoxylon investiens* - *Clavaria fusiformis* - *Stereum lobatum* - *Polyporus gilvus* - *Lenzites striata* - *Stereum caperatum*.

REA, CARLETON, ENGLAND: *Exidia glandulosa* and a number of resupinate *Thelephoraceae* which have been sent to Miss Wakefield for determination.

REINKING, OTTO A., PHILIPPINE ISLANDS: Mr. Reinking is a most liberal collector. More than 500 numbers have been received from him in the last few months. Naturally they were largely duplicates and we have indicated after each species the number of collections as an index of the relative frequency of the species. We have a large number of specimens from Mr. Reinking as yet not determined. *Fomes lamaeoensis* (8) - *Fomes applanatus* (37) - *Fomes australis* - *Fomes gibbosus* (2) - *Fomes fasciatus* - *Schizophyllum commune* (28) - *Hexagona apiaria* - *Fomes melanopus* - *Trametes Persoonii* (62) - *Lenzites repanda* (27) - *Lenzites acuta* - *Trametes acuta* (4) - *Polystictus occidentalis* (22) - *Polyporus zonalis* (18) - *Polyporus concrescens* - *Polyporus lignosus* (3) - *Polyporus semilaccatus* (6) - *Trametes Meyenii* (17) - *Polystictus sanguineus* (27) - *Daedalea flavida* (4) - *Hexagona flavida* (2) - *Polystictus abietinus* (4) - *Guepinia spathularia* - *Polystictus xanthopus* (6) - *Polystictus affinis* (2) - *Irpex flavus* (2) - *Polystictus flavus* (18) - *Polystictus tabacinus* (7) - *Polyporus grammocephalus* (2) - *Cyclomyces fusca* - *Hexagona tenuis* (5) - *Hexagona cucullata* - *Auricularia mesenterica* - *Daldinia concentrica* - *Cyphella fusco-disca* - *Arcyria punicea* - POLYSTICTUS MICROLOMA - *Polystictus meleagris* - *Polystictus murinus* (2) - *Schizophyllum commune* - *Auricularia delicata* - *Auricularia cornea* - *Auricularia polytricha* - *Polyporus conchoides* - *Phlebia reflexa* - *Polystictus zelanicus* (?) - *Stereum cinereum* - *Polyporus rigidus* - POLYPORUS RUGULOSUS - *Polyporus dorsalis* - *Xerotus nigritus* - *Polystictus luteus* - *Polyporus perversus* - *Geaster mirabilis* - *Polyporus conchoides* - *Hydnum ochraceum* - STEREUM NIGROPUS - HEXAGONA ALBIDA - POLYSTICTUS SUBCROCATUS - MARASMIUS EQUICRINIS - *Cladoderris infundibuliformis* - *Favolus albus* - POLYSTICTUS CERVINO-GILVUS - *Favolus platyporus* - *Cyathus Montagnei* - *Stereum spectabile* - *Poria setulosa* - *Pterula capillaris* - *Pterula Aciculae* - *Grammothele mappa* - POLYSTICTUS SETULOSUS - CYATHUS PLICATULUS - POLYSTICTUS SUBREFLEXUS - LENZITES TENUIS - *Stereum involutum* - *Stereum ostrea* - *Lentinus Sajor-Caju* - *Lentinus connatus* - *Trichoscypha Hindsii* - AURICULARIA ORNATA - *Auricularia auricula-Judae* - *Auricularia Moelleri* - *Xylaria laevis* - *Xylaria herculea?* - *Polystictus cryptomeniae* - *Fomes Kermes* - *Panus cladophora* - *Polyporus perversus* - *Lenzites deplanata* - *Auricularia Brasiliensis* - *Polyporus licnoides* - *Xylaria allantoidea* - *Xylaria nigrescens* - *Xylaria botuliformis* - *Xylaria multiplex* - *Xylaria rhopaloides* - *Xylaria apiculata* - *Favolus tenuissimus* - XYLARIA NIGRIPES - *Xylaria Hypoxylon* - *Ustulina vulgaris* - *Xylaria faveola* - XYLARIA TIMORENSIS - *Xylaria pistillaris* - *Xylaria Schweinitzii* - *Xylaria castorea* - *Hypocrea mesenterica* - *Lenzites striata* - *Tremella fuciiformis* - POLYSTICTUS AFFINIS - *Trametes devexa* - *Polyporus Rhizophorae* - *Polyporus (Amaur.) rugosus* - *Polyporus durus* - *Guepinia fissa* - *Fuligo septica* - *Lentinus strigosus* - *Sarcoxylon splendens* - ISARIA COCOA - POLYPORUS RHINOCEROTIS - *Geaster velutinus* - *Polystictus leoninus* - *Polyporus trigonus* - *Polyporus gilvus* - *Lenzites Japonica* - *Lenzites alba* - *Polyporus substygius* - *Trametes badia* - *Hypoxylon rubiginosum* - POLYPORUS SUBSTYGIUS - *Polyporus adustus?* - *Polyporus Williamsianus* - TRAMETES BURCHELLII.

NOTE 882 - POLYPORUS RHINOCEROTIS FROM OTTO A REINKING, PHILIPPINES: A single specimen of this was collected on Mount Maguiling, Laguna, by O. Bagni. It is a very rare plant and this

is the third collection known. Originally from Malay, and Petch has found it in Ceylon. Several hundred Philippine polypores have come to me but this has never before been collected in the Philippines. Polypore species with sclerotia are rare. The best known one is *Polyporus sacer* from Africa which is practically the same plant as *Polyporus rhinocerotis* but has larger pores. However, they are so close that they are best considered perhaps as small and large pored forms of the same species. We gave on page 122, Stipitate Polyporoids an account of both forms and a figure (420) which could not be told from Mr. Reinking's plant.

Since the above was written we have received two other collections made in the Philippines, Ramos 35916 and Martelino 35843.

NOTE 883 - *AURICULARIA POLYTRICHA* FROM OTTO A. REINKING, PHILIPPINES: Purchased in the Chinese market at Canton, China, by Mr. Reinking. It is well known that the Chinese consume large quantities of the "Jew's ear" and related species, and that it is an important export from New Zealand and Pacific Islands to China. Although very common in the States and Europe, the "Jew's ear" is not eaten with us and does not appeal to the European palate.

NOTE 884 - *POLYSTICTUS VERSATILIS* FROM OTTO A. REINKING, PHILIPPINES: This is a frequent plant in the Philippines on the railway ties. Twenty-three separate collections were received from Mr. Reinking in the last package and twenty-one of them grew on railway ties. The plant is fairly uniform in the Philippines, a better *Polystictus* than *Trametes* and in the Philippines always has large pores.

NOTE 885 - *POLYPORUS SUBSTYGIUS* FROM OTTO A. REINKING, PHILIPPINES: This should be moved from Section 100 to Section 96 with *Polyporus gilvus*. The minute pores are long and the plant is rigid and its true relations are in *Polystictus*, Section 120, with *Polystictus tabacinus*. It is a plant with the texture of a *Polystictus* and the thickness of a *Polyporus*. *Polystictus spadiceus* is an intermediate plant between *Polystictus tabacinus* and *substygius*. These are the first typical specimens of *Polystictus substygius* I have seen from the Philippines where *tabacinus* is common.

NOTE 886 *CYATHUS PLICATULUS* FROM OTTO A. REINKING, PHILIPPINES: We have heretofore used *Cyathus Poeppigii* as the name for this species but in the future we shall adopt the name originally applied to it by Poeppig. We do not do this on any ground of priority, but because *Cyathus Poeppigii* is a heathenish kind of name that ought to be suppressed.

NOTE 887 - *POLYSTICTUS SETULOSUS* FROM OTTO A. REINKING, PHILIPPINES: Named by Hennings as a *Poria*, it is really a *Polystictus*. The narrow pileus is developed in this collection. It has a smooth surface, reddish like that of *Trametes Persoonii*. Usually the plant is entirely resupinate, then of course it is a *Poria*.

NOTE 888 - *POLYPORUS RUGULOSUS* FROM OTTO A. REINKING, PHILIPPINE ISLANDS: We adopt this name for a collection which is quite close to *Polyporus zonalis* and *Polyporus rigidus* but of much paler

color. All three are, however, practically the same species, the same general type of plants and context and spores (globose, 4-5 mic.). *Zonalis* and *rigidus* have reddish brown surface, the former zoned. *Rugulosus* which is much rarer is very similar but has paler surface.

NOTE 889 - *POLYSTICTUS CERVINO-GILVUS* FROM OTTO A. REINKING, PHILIPPINES: The pores of this specimen are yellow. Some collections are decidedly reddish. The species run into *Polystictus flavus* through these yellow specimens. There is no basidial hymenium on dried specimens. The hymenium is densely covered with projecting hyphae, some of which are thickened, knobbed or incrustated. Then they become cystidia..

NOTE 890 - *HEXAGONA ALBIDA* FROM OTTO A. REINKING, PHILIPPINES: This is the only white *Hexagona* and was named from the Philippines. The synonymy was first brought together in our *Hexagona* pamphlet. It has large, multicellular bodies on the hymenium called (with an elastic stretching of the term) setae. An incongruous genus *Elmerina* has been based on these hairs, but we are strongly opposed to such genera.

NOTE 891 - *XYLARIA TIMORENSIS* FROM OTTO A. REINKING, PHILIPPINES: This was named but recently from the Island of Timor (Cfr. p. 896, fig. 1570). It is most peculiar with a thick, black, pannose base and short, regular club with brown cuticle. It grows on dead branches. The "types" were immature but this collection has ripe spores (6 X 12). The ripe plants are not so bright color as immature ones but it does not change much.

NOTE 892 - *MARASMIUS EQUICRINIS* FROM OTTO A. REINKING, PHILIPPINES: In the exhaustive account of the "horse-hair blights" by Professor Petch (*Annals, Peradeniya, Vol.6, p. 41*) *Marasmius equicrinis* is given as the most frequent species in the East producing this common, tropical rhizomorph known as horse hair blight. He also recognized two other species, *Marasmius obscuratus* and *Marasmius coronatus*. Which if the three is responsible for these threads it would be futile for me to guess. In addition to the three species that Petch recognized, fifteen so-called species of *Marasmius* have been promulgated by the "new species" promoters, said to produce horse-hair blights. As Petch, who has given the subject much study, virtually acknowledged that he could not tell anything about them from descriptions, I most assuredly would not attempt to do any further guessing on the subject, except to make one guess that is pretty safe, viz: the whole eighteen are about the same thing.

NOTE 893 - *POLYSTICTUS AFFINIS* FROM OTTO A. REINKING, PHILIPPINES: As to shape and stipe attachment. *Polystictus xanthopus* as to color of the stipe. It is a case where Nature is playing a trick on the systematist.

NOTE 894 - *XYLARIA NIGRIPES* FROM OTTO A. REINKING, PHILIPPINES: There is no question but this is as above, growing on a log, with same shaped club and small spores (4 X 6). And yet the species

usually grows in the ground, and generally in connection with ant hills. The stem also is branched, bearing five clubs and usually it is simple with one club only.

RHOADS, ARTHUR S., CALIFORNIA: *Stereum albo-badium* - *Hypoxyton Thuarsianum* - *POLYPORUS LEEI* - *POLYSTICTUS HIRSUTUS* - *Phlebia radiata* - *Stereum purpureum* - *Stereum (Hymenochaete) tabacinum* - *HYDNUM OCHRACEUM* - *Irpelex cinnamomeus* - *Stereum vellereum* - *FOMES LONICERA* - *Fomes Laricis* - *Lycoperdon cruciatum* - *Stereum hirsutum* - *Trametes variiformis* - *Trametes serialis*.

NOTE 895 - *POLYSTICTUS HIRSUTUS* FROM A. S. RHOADS, CALIFORNIA: The pores are in layers (like a *Fomes*) due to the mild winter on account of which the plant is not killed each winter. It does not make it a separate species, however, any more than the idle rich who seek the mild climate of California in winter are a separate species of homo.

NOTE 896 - *HYDNUM OCHRACEUM* VAR. FROM A. S. RHOADS, CALIFORNIA: A grey form worthy of a name. The pileus greyish, pubescent, context white and spines ochraceous, give it a different appearance from the usual plant but it impresses me as a color variation.

NOTE 897 - *FOMES LONICERA* FROM A. S. RHOADS: Growing on *Lonicera* in Maryland, and is the first specimen I have seen from this country although I knew it from Europe. For me it is the same species however as our *Fomes ribis* on *Ribes* species. Same color and "structure" but a different shape (Cfr. Synopsis *Fomes*, p. 252.)

NOTE 898 - *POLYPORUS LEEI* FROM A. S. RHOADS, CALIFORNIA: It appears to me to be a resupinate form of *Polyporus hispidus*. Same color, hyphae, spores and same abundant coloring matter in potash solution. That *Polyporus hispidus* should take an effused form is rather unexpected, however, and until it is proven the name *Polyporus Leei* should be used. It is only known from California.

RICK, REV. JOHAN, BRAZIL: A large number of specimens from Rev. Rick are still undetermined. The agarics of this list are as named by Rev. Rick. - *Polyporus cubensis* - *Polyporus dryadeus* - *Polyporus Blanchetianus* - *Xylaria multiplex* - *Trametes Meyenii* - *Polyporus conchoides* - *Claudopus ater* - *Lepiota cyanea* - *Polystictus tenuis* - *Xylaria scopiformis* - *Trametes Feei* - *Leptonia nefrens* - *Pleurotus nidulans* - *Trametes Cubense* - *Polystictus byrsinus* - *Polystictus arenicolor* - *Polystictus pinsitus* - *Polyporus lignosus* - *Xylaria lancea* - *Lenzites tenuis* - *ISARIA MYRMICIDAE* - *Polyporus guaraniticus* - *Polystictus campyloporus* - *CORDYCEPS KLENEI* - *CORDYCEPS FLAVELLA* - *CORDYCEPS RICKII* - *GLAZIELLA SPLENDENS* - *CORDYCEPS BOMBI* - *Ustulina vulgaris* - *Kretzschmaria licnoides* - *Xylaria grammica* - *XYLARIA GRAMMICA (ALBIDA)* - *Polyporus valenzuelianus* - *Fomes Ohiensis* - *Rickella transiens* - *Trametes Parsoonii* - *XYLARIA CARPOPHILA* - *XYLARIA ALLANTOIDEA* - *Hypocrea sulphurea* - *Xylaria obovata* - *AURICULARIA BRASILIENSIS* - *Eccilia atra* - *Stereum elegans* - *Daedalea steroides* - *Stereum bicolor* - *Polyporus (Gan.) testaceus* - *Lycogala epidendrum* - *Geaster Hieronymus* - *Xylaria corniformis* -

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Polyporus vinosus - Geaster minimus - Xylaria Brasiliensis - Boletus subtomentosus - Hydnum pulcherrimum - Stereum lobatum - Xylaria faveolis - Xylaria filiformis - Collybia atramentaria - Xylaria apiculata - Xylaria scruposa - Xylaria arbuscula - Xylaria Cubensis - Polyporus dichrous - Philipsia olivacea - Xylaria herculea - Xylaria violacea-pannosa - Polystictus biformis - STEREOUM CRENATUM - Fomes australis - PATOUIILLARDINEA CINEREA - XYLARIA COMOSA - Oudemansiella platensis - Polyporus mastoporus - Isaria flabelliformis - Xylaria lancea - Tremella fuciformis - Polyporus olivaceus - Polystictus porphyrites - Sarcoxylon compunctum - Polystictus Drummondii - Heterochaete livida - Lentinus vellereus - Polyporus (Gan.) reniformis - Fomes applanatus - Polyporus supinus - Fomes pseudosenex - Fomes senex.

NOTE 899 - LENZITES ERUBESCENS . Rev. Rick advises me this species is most abundant in the region in which he is located and that it is as common as Lenzites saepiaria is in Europe. It was named by Berkeley 65 years ago. Also Léveillé found it was "new". And just think - both Hennings and Spegazzini discovered it only recently comparatively! Spegazzini made the mistake of giving a figure of it or no one would ever have known what his "discovery" was.

NOTE 900 - STEREOUM CRENATUM FROM REV. J. RICK, BRAZIL: This reference is not sure for it is a paler, thinner plant than is called for in our note (Stip. Stereum, p. 24), but it is well represented by the figure 541. It is larger, paler, thinner than Stereum nitidulum but with the same habits.

NOTE 901 - PATOUIILLARDINEA CINEREA FROM REV. J. RICK, BRAZIL: Named by Rev. Rick, as we could not have determined it. This genus (published?) is a resupinate Auricularia with cylindrical, septate basidia so it is stated. We are unable to find the basidia.

RODWAY, L., TASMANIA: A large number of specimens with many novelties, from Mr. Rodway, are as yet undetermined. - Polystictus hirsutulus - Fistulina hepatica? - Polystictus nigricans - Stereum hirsutum - Geaster saccatus - Polystictus versicolor - Stereum illudens - Lycoperdon gemmatum - Scleroderma flavida - Auricularia reflexa - Lycoperdon gemmatum - Polyporus ochroleucus - Daldinia concentrica - CYPHELLA PTERIDOPHYTA - Polyporus dichrous - Fomes applanatus - Tremella mesenterica - Fomes senex - Polyporus osseus - Polyporus croceus - CANTHARELLUS MULTIPLEX - Polyporus Wilsonianus - Stereum nitidulum - Polyporus atro-strigosus - POLYSTICTUS AEQUUS - Irpex concors.

NOTE 902 - CYPHELLA PTERIDOPHYTA FROM L. RODWAY, TASMANIA: As named by Mr. Rodway and surely correctly, in the sense as described. Very small white, cup-shaped bodies, about 3/4 mm. in diameter, growing on upper surface of living fern fronds. Spores however are not "elliptical, 4 X 12" but are cylindrical 2-2½ X 8-12. I find no basidia but I do not know how the spores are borne, but believe the fungus is a Hyphomycete and the abundant spores have that appearance.

NOTE 903 - CORDYCEPS ROBERTSII FROM L. RODWAY, TASMANIA: Mr. Rodway sends a photograph which is Cordyceps Robertsii as he

determined it. This species, originally from New Zealand, is only represented in English museums by New Zealand material, but I have recently received it from Australia and now Mr. Rodway finds it in Tasmania. It is undoubtedly distributed throughout the Australasian continent..

ROSE, J. N., WASHINGTON, D. C.: *Lenzites saepiaria*.

ROSE, J. N., ATLANTIC CITY, N. J.: *Lycoperdon cruciatum* - *Tylostoma campestris*.

ROSEN, H. R., ARKANSAS: *Polyporus picipes* - *Urnula Craterium* - *Guepinia spathulata* - XYLARIA DIGITATA.

NOTE 904 - XYLARIA DIGITATA FROM H. R. ROSEN, ARKANSAS: All on apple tree roots. There has been considerable confusion as to this species in the United States but I believe this is the above species. It has been confused in this country with *Xylaria Cornu-damae* (Cfr. Note 430) and most of the records of *digitata* are based on the latter plant. With us it is a characteristic species on apple trees so it appears.

SEMMENS, E. J., AUSTRALIA: *Lycoperdon pratense* - *Calvatia candida* - *Geaster saccatus* - *Polyporus atrohispidus* - *Stereum hirsutum* - *Trametes lilacino-gilvus* - *Polyporus gilvus* - *Bovistella bovistoides* - *Bovistella australiensis* - POLYPORUS EUCALYPTORUM - *Geaster plicatulus* - *Tremella mesenterica* - *Hexagona Gunnii* - *Daldinia concentrica* - *Catastoma anomalum* - *Polyporus ochroleucus* - *Scleroderma flavidum* - *Polyporus arcularius* - *Polystictus versicolor* - *Stereum illudens* - *Auricularia reflexa* - FOMES RIMOSUS - MERULIUS DUBIUS - POLYPORUS MULTISETOSUS - *Paulocotylis griseus*.

NOTE 905 - POLYPORUS MULTISETOSUS FROM E. J. SEMMENS, AUSTRALIA: This can best be described by stating it is *Polyporus gilvus* with abundant, dense setae on the hymenium as shown in Fig. 687 Apus *Polyporus*, p. 350 for *Polyporus setosus*. *Polyporus setosus* is thin, subresupinate and only known from our western states on *Larix*. The Australian species is dimidiate, thick and excepting in its excessive setae is the same as *Polyporus gilvus*. Notwithstanding it only differs in this one feature I do not believe it is a form of *Polyporus gilvus* and do not anticipate there will ever be any trouble in recognizing it.

POLYPORUS EUCALYPTORUM FROM E. J. SEMMENS, AUSTRALIA: It is difficult to believe that this is not the same as our common *Polyporus betulinus*, having the same size, crust, color, appearance and the pores are detersive in the same way. But *Polyporus eucalyptorum* has large, subglobose spores, 8-12 mic. and *Polyporus betulinus* has allantoid spores. But to the eye this specimens could not be told from *Polyporus betulinus*.

NOTE 907 - FOMES RIMOSUS FROM E. J. SEMMENS, AUSTRALIA: Typically growing on *Eucalyptus*. This, which with us always grows on the locust tree usually occurs in other countries on Leguminosaceous trees. It is the most common *Fomes* with globose, colored spores.

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SHEAR, C. L.: *Lycoperdon pusillus* (Collected by Dr. Paravicini, California.

STILLINGER, C. R., CALIFORNIA: *Tremella mesenterica* - *Exidia Zelleri* - *Tylostoma campestris* - *Lycoperdon pratense* - *Lycoperdon nigrescens* - *Fomes annularis* - *Fomes applanatus* - *Hypoxylon Thouarsianum*.

STILLINGER, C. R., IDAHO: *Polyporus volvatus*.

STOCKER, DR. S. M., MINNESOTA: *Thelephora cuticularis* - *Polyporus elegans* - *Fomes Ohiensis* - *Polystictus hirsutus* - *Polystictus versicolor* - *Polyporus frondosus* - *Tremella vesiculosa* - *Merulius tremellosus* - *Polystictus ochraceus* - *Daedalea confragosa* - *Tremellodendron pallidum* - *Favolus europaeus* - *Thelephora Caryophylla* - *Polyporus melanopus* - *Polystictus hirsutululus* - *Polystictus hirsutus* - *Favolus Europaeus* - *Secotium acuminatum*.

THOMAS, RAY C., OHIO: *Polyporus occidentalis*.

VANDERYST, REV. HYACINTHE, CONGO BELGE: *XYLARIA BRACHIATA*.

WALKER, MRS. IRA B., NEW HAMPSHIRE (Formerly Miss Kate A. Jones. My sincere congratulations on the happy event.): *Polyporus lucidus* - *Daedalea confragosa* - *Polystictus cinnabarinus* - *Lenzites saepiaria* - *Trogia crispa* - *Lenzites betulina* - *Fomes leucophaeus* - *Irpex lacteus* - *Panus stipticus* - *Schizophyllum commune* - *Polyporus brumalis* - *Stereum fasciatum* - *Polyporus pubescens* - *Polyporus pergamenus* - *Daedalea unicolor* - *Polystictus hirsutus* - *Polystictus versicolor*.

WARNER, H. E., FLORIDA: *Polyporus Curtisii*.

WEIR, DR. JAMES R., CUBA: *POLYPORUS (GAN.) OPACUS* - *POLYPORUS PSEUDOGILVUS* - *HYDNUM GLABRESCENS* - *Trametes serpens* - *Polystictus pinsitus* - *Fomes fasciatus* - *POLYSTICTUS PAVONIUS* - *Polystictus arenicolor* - *Fomes pseudosenex* - *Polystictus tenuis* - *Polyporus pusillus* - *USTULINA VULGARIS* - *Lycoperdon rubellum* - *Fomes endotherius* - *Hydnum ochraceum* - *Xylaria dealbata?* - *Panus eugrammus* - *XYLARIA TABACINA* - *Polyporus Calkinsii* - *Xylaria anisopleura* - *Hydnum Rawakense* - *Fomes hornodermus* - *XYLARIA MYOSURUS* - *Polystictus rigens* - *Polyporus immaculatus*.

WEIR, DR. JAMES R., EAST AFRICA: *Fomes hornodermus* - *Poria Jamaicensis*.

WEIR, JAMES R., WASHINGTON: *Polystictus planus* - *Trametes serpens* (from Kentucky.)

WEIR, DR. JAMES R., GUAM: *Trametes Persoonii* - *Polyporus meleagris* - *POLYPORUS VERECUNDUS* - *Auricularia polytricha* - *Polyporus immaculatus*.

NOTE 908 - *USTULINA VULGARIS* FROM DR. JAS. R. WEIR, CUBA: While I knew at once as soon as I saw it that it must be *Ustulina*

vulgaris, a comparison shows that *Ustulina vulgaris* is not always the same exactly. This has large perithecia, 3 mm. long, and I have American specimens with perithecia only about half as large and other collections just as large. This has a greyish surface with punctate black ostioles but it may not be ripe. American specimens are black with papillate ostioles. I could photograph the two in contrast and claim this is a new species, but it would not be true.

NOTE 909 XYLARIA TABACINA FROM DR. JAS. R. WEIR, CUBA: At the time I wrote my account of the species (*Xyl. Notes* p.3) I had not seen this from the American tropics. I have since noted Wright's Cuban collection, correctly named by Berkeley in the Herbarium of Clinton. Also in the New York Botanical Garden, Guadeloupe, Duss (determined by Patouillard as *involuta*) and the following which were not named: Costa Rica 612, Maxon; Honduras, 563, Wilson; Jamaica 1040, Murrill and 2616, Underwood. It is strange to me that the Brazilian collectors have not found *Xylaria tabacina*.

NOTE 910 - POLYPORUS VERECUNDUS FROM DR. JAS. R. WEIR, GUAM: A thin plant about a cm. thick, white or probably white when fresh with soft, brittle, white context and minute pores. We referred it in our Apus pamphlet with doubt to *Polyporus immaculatus* which is thick, "unguliform." We still think it is virtually the same thing but it is not convenient to use the same name for plants so different in appearance.

WEIR, D. W., MASSACHUSETTS: *Polyporus borealis* - *Fomes leucophaeus* - *Hydnum nigrum* - *Polystictus versicolor* - *Panus stipticus* - *Poria tulipifera* - *Polyporus dichrous* - *Fomes connatus* - *Polyporus fumosus* - *Lycoperdon gemmatum* - *Polystictus perennis* - *Daedalea confragosa* - *Stereum spadiceum* - *Polyporus adustus* - *Polyporus albellus* - *Polyporus tephroleucus* - *Trametes suaveolens* - *Polyporus* (or *Polystictus*) *circinatus* - *Ptychogaster albus* - *Daedalea unicolor* - *Polystictus conchifer* - *Poria sinuosa* - *Stereum* (*Hym.*) *nubiginosum* - *Hydnum ochraceum* - *Stereum complicatum* - *Fomes annosus?* *Phlebia radiata* - *Helotium citrinum* - GUEPINIA PEZIZA - *Guepinia spathulata* - *Irpex lacteus* - *Lycogala epidendrum* - *Fomes pinicola* - *Lenzites betulina* - *Lentinus strigosus* - *Tremellodon gelatinosum* - *Irpex lacteus* - *Polystictus hirsutus* - *Polystictus hirsutululus* - *Chlorosplenium aeruginosum* - *Irpex cinnamomeus* - *Polystictus abietinus* - *Stereum sanguineolentum* - *Stereum tabacinum* - *Polystictus pergamenus* - *Daedalea quercina* - *Polyporus radiatus* - *Stereum purpureum* - *Polyporus albidus* - *Physarum sinuosum* - *Dacryomyces corticioides* - *Hormomyces aurantiacus* - *Enteridium splendens* - *Lycogala epidendrum* - *Thelephora terrestris* - *Poria viticolor* - *Fomes fomentarius* - *Dacryomyces aurantia* - *Hypoxylon coccineum* - *Tremella lutescens* - *Pleurotus applicatus* - *Polyporus lucidus* - *Trametes protracta* - *Trametes sepium* - *Stereum hirsutum* - *Polystictus cinnabarinus* - *Lenzites saepiaria* - *Trogia crispa* - *Poria subacida* - *Peniophora incarnata?* - *Polyporus adustus* - *Hydnum septentrionale* - *Lycoperdon piriforme* - SCHIZOPHYLLUM COMMUNE - *Polystictus versicolor* - *Stereum fasciatum* - *Polyporus caesius* - *Hydnum ochraceum* - *Tubercularia vulgaris* - *Polyporus poculus* - *Polyporus heteroporus* - *Stereum cinerescens* - *Bulgaria inquinans* - *Coniophora arida* - *Merulius tremellosus*.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

In the second section, the author details the various methods used to collect and analyze the data. This includes both manual and automated techniques. The goal is to ensure that the information gathered is both reliable and comprehensive.

The third section provides a detailed breakdown of the results. It shows how the data points correlate with the initial hypotheses. The findings indicate that there are significant trends in the data that were not initially apparent.

Finally, the document concludes with a series of recommendations based on the analysis. These suggestions are aimed at improving the efficiency of the data collection process and ensuring that future studies can build upon the current findings.

NOTE 911 - SCHIZOPHYLLUM COMMUNE FROM D. W. WEIS, MASSACHUSETTS: With pink gills. The pink gills are very unusual. I do not remember ever noting them before. Probably not abnormal but an unusual color form. I thought at first due to a young Hypomyces but a section shows no evidence of a parasite.

WEST, ERDMAN, NEW JERSEY: *Irpex lacteus*.

WHETSTONE, DR. M. S., MINNESOTA: *Isaria farinosa* - *Tremellodendron pallidum* - *Tremella clavarioides* - *Polyporus dichrous* - *Polystictus pergamenus* - *Polystictus biformis* - *Lenzites betulina* - *Paxillus atratomentosus* - TREMELLA SPARASSOIDEA - *Trametes hispida* - *Daedalea confragosa* - *Daedalea unicolor* - *Hydnum coralloides* - *Favolus europaeus* - *Crucibulum vulgare* - *Cyathus striatus* - *Seismosarca alba* - POLYPORUS VARIUS - *Polystictus perennis* - *Hydnum pulcherrimum* - *Urnula Craterium* - *Polystictus versicolor* - POLYSTICTUS OCHRACEUS - *Pilacre faginea* - *Polystictus conchifer* - *Stereum spadiceum* - *Tremella frondosa* - *Stereum fasciatum* - *Merulius tremellosus* - *Tremellodendron pallidum* - *Polystictus hirsutus* - *Hydnum ochraceum* - *Stereum diaphanum* - *Polystictus circinatus* - *Polyporus gilvus* - *Thelephora cuticularis* - *Polystictus biformis* - *Polystictus Greyii* - *Clavaria cinerea* - *Clavaria pyxidata* - *Thelephora palmata* - *Stereum zonatum* - *Hydnum velutinum* - *Tremellodendron Cladonia* - *Fomes leucophaeus* - *Hydnum friabile* - *Fomes applanatus* - *Polyporus adustus* - *Polystictus hirsutululus* - *Polystictus hirsutus*.

NOTE 912 - POLYSTICTUS OCHRACEUS FROM DR. M. S. WHETSTONE, MINNESOTA: This is a rare species both in Europe and the United States. It was named by Persoon and referred to *Polystictus zonatus* by Fries, from which it differs entirely. The surface hairs are very soft and silky and the (unzoned) color is about chamois of Ridgway.

NOTE 913 - POLYPORUS VARIUS FROM DR. M. S. WHETSTONE, MINNESOTA: This is quite close to our common *Polyporus picipes* but is paler color and has longer pores. It is frequent in Sweden, rare with us. The pores of this specimen are 3-4 mm. long and are the feature that attracted my notice at once. They are short, not over 2 mm. in *picipes*. The spores, abundant in this specimen, are 3 X 10 cylindrical, straight.

WHETZEL, H. H., NEW YORK: *Polyporus Peckianus*.

WILSON, REV. JAS., AUSTRALIA: *Auricularia reflexa* - *Schizophyllum commune* - *Stereum illudens* - *Polyporus ochroleucus* - *Polyporus atrohispidus* - CLATHRUS GRACILIS - POLYPORUS TUMULOSUS - *Polyporus gilvus* - *Polyporus rosettus* - *Trametes lilacino-gilva* - *Polystictus ochraceus* - *Polystictus sanguineus* - *Polystictus zonatus* - *Stereum elegans* - *Polystictus versicolor* - *Polystictus hirsutus* - *Strobilomyces pallescens* - HYDNUM GRAVEOLENS - POLYPORUS DICTYOPUS - *Hydnum scobiculatum* - *Polyporus Hartmannii* - FISTULINA HEPATICA.

NOTE 914 FISTULINA HEPATICA FROM REV. JAMES WILSON, AUSTRALIA: This, known as the beefsteak fungus, is frequent both in the United States and Europe and has quite a reputation as an edible

species. It appears to be rare in other countries and this is the first foreign specimen we have ever received.

NOTE 915 - POLYPORUS TUMULOSUS FROM REV. JAMES WILSON, AUSTRALIA. This is the second collection known, the other being the type at Kew. With the exception of having a central stipe, the pure white, soft context, thin cuticle and color are the same as *Polyporus betulinus*. The spores which I did not find in the Kew specimen are allantoid, $1\frac{1}{2} \times 6$.

NOTE 916 - HYDNUM GRAVEOLENS FROM REV. JAMES WILSON, AUSTRALIA: This is no doubt the plant on which the record in the Handbook was based and fits the description exactly. Whether it is the same as the European or not is a question. I think not, but the European plant is not definitely fixed for me.

NOTE 917 - POLYPORUS DICTYOPUS FROM REV. JAMES WILSON, AUSTRALIA: This differs from the usual collection in being thicker, blacker, more rugulose, and merits a name. But we do not wish to propose one on a single collection. If it develops that it is a constant form in Australia we would give it a separate name.

NOTE 918 - CLATHRUS GRACILIS FROM REV. JAMES WILSON, AUSTRALIA: Dr. Cleland is disposed to think this the same as *Clathrus cibarius*, and it is only a question of relative size. But it is curious that I only get *Clathrus gracilis* from Australia and *Clathrus cibarius* from New Zealand.

WILSON, M., EDINBURGH, SCOTLAND: TYLOSTOMA CAESPITOSA, from Serbia.

NOTE 919 TYLOSTOMA CAESPITOSA FROM M. WILSON, COLLECTED IN SERBIA: This species is known among the large, obese species (Group 6) by its large, hyaline capillitium and nearly smooth spores. It was named by Trabut and was only known heretofore from a few collections from northern Africa.

YASUDA, PROFESSOR A., JAPAN: *Trametes Bulliardii* - *Trametes Dickinsii* - *Exidia recisa* - *Polyporus fragilis* - *Fomes fastuosus* - *Trametes sepium* - HYMENOGAETHE MOUGEOTII - *Hypocrea japonica* - *Polyporus caesius* - *Stereum frustulosum* - *Exidia glandulosa* - *Hypoxylon unitum* - *Hydnum ochraceum* - *Auricularia mesenterica* - *Polyporus rutilans* - *Lenzites betulina* - TRAMETES TRICOLOR - *Merulius Corium* - *Trametes vittata* - CONIOPHORA MATSUZAWAE - *Polyporus virellus* ? - *Lycoperdon plicatum* - *Polyporus mikraulos* - *Trametes lactinea* - *Trametes truncatispora* - *Trametes Trogii* - *Cantharellus cibarius* - *Stereum frustulosum* - *Mutinus bambusinus* - *Stereum rubiginosum* - *Lycoperdon serotinum* - *Hydnum coralloides* - *Polyporus gilvus* - *Polytictus azureus* - *Calvatia versiporus*.

NOTE 920 CONIOPHORA MATSUZAWAE FROM PROF. A. YASUDA, JAPAN: As named by Yasuda. It has typical *Coniophora* spores. As to basidia I can not say. But it is a "new genus" for no such *Coniophora* is now included in the genus. It is resupinate but hard and woody and differs from *Coniophora* as *Stereum* differs from *Corticium*.

NOTE 921 - HYMENOCHAETE MOUGEOTII FROM PROFESSOR A. YASUDA, JAPAN: In Europe, as far as I have seen, this is noteworthy for its color, dark blood red of Fries, about brick red of Ridgway, and young specimens from Japan. But old specimens from Japan have very little red, darker in fact than Hessian brown of Ridgway. It is also strange that this plant of Europe and Japan is not known from America.

ZELLER, S. M., MISSOURI: *Stereum hirsutum* - *Hydnum erinaecum* - *Lenzites saepiaria* - *Lycoperdon Wrightii* - *Polyporus albellus* - *Favolus europaeus* - *Tremella mesenterica* - *Trametes protracta* - *Xylaria rhopaloides* - *Diatrype stigma* - *Arachnion album* - *Lycoperdon rimulatum* - *Lycoperdon pusillum* - *Trametes malicola* - *Catastoma circumscissum* - *Calvatia rubro-flava* - *Hydnum coralloides* - *Cyathus stercoreus* - *Polystictus versicolor* - *Polystictus pargamenus* - *Lycoperdon cruciatum* - *Stereum fasciatum* - *Xylaria Longiana* - *Irpex pachylon* - *Hydnum ochraceum* - *Calocera cornea* - *Crucibulum vulgare* - *Daldinia vernicosa* - *Lenzites trabea* - *Geoglossum hirsutum* - *Lenzites betulina* - *Polyporus adustus* - *Lenzites confragosa* - *Hypoxylon atropunctatum*.

ZELLER, S. M., OREGON: *Polystictus zonatus* - *Poria carbonaria* - *Hydnofomes tinctorium* - *Hormomyces aurantiacus* - *Discinia ancilis* - *Tremella lutescens* - *Polystictus perennis* - *Boletus ZELLERI* - BOVISTA MONTANA - POLYPORUS DRYADEUS - *Lycoperdon pratense* - *Lycoperdon piriforme* - *Hypoxylon cohaerens* - *Hypholoma lacrymabundans* - *Crucibulum vulgare* - *Clavaria pistillaris* - *Hydnum ochraceum* - *Sphaerobolus stellatus* - *Daedalea unicolor* - *Spathularia flavida* - *Gomphidius oregonense* - *Crucibulum vulgare* - *Polyporus castaneus* - *Polyporus trabeus* - *Polyporus rufescens* - *Lycoperdon fuscum* - *Lycoperdon gemmatum* - *Lycoperdon elegans* - *Gyrocephalum rufum* - *Polyporus pubescens* - EXIDIA ZELLERI.

NOTE 922 POLYPORUS DRYADEUS FROM S. M. ZELLER, OREGON: I find in this specimen (rarely) short, thick, curved setae that I do not recall seeing in *Polyporus dryadeus* before. However, from the context color and globose, hyaline spores I do not question the species.

NOTE 923 - BOVISTA MONTANA FROM S. M. ZELLER, OREGON: I have always contended that this is a synonym for *Bovista pila* and in the original sense I am very much of that opinion now. But the plant at first hardly suggested *Bovista pila* and coming from the same region I think it better to apply Morgan's name to it. The peridium is paler color and thicker and until I examined it I thought it was *Mycenastrum Corium*. The spores and capillitium are very close to those of *Bovista pila* but the latter has thicker main stems.

ZENKER, DR. G., AFRICA: Dr. Zenker is a most liberal and satisfactory collector. His collections are ample in quantity and when a species is represented in the museum by his collection there can never be any further question about it. *Polyporus zonalis* - *Polyporus aratoides* - *Lentinus blepharodes* - *Polystictus concinnus* - *Polystictus xanthopus* - *Polyporus (Amaurodermus) salebrosus* - *Polyporus Mangiferae* - XYLARIA HYPOXYLON - POLYPORUS (AMAUR.) NIGER - *Lentinus tuber-regius* - DALDINIA ANGOLENSIS - *Ozonium auricomum* - THAMNOMYCES CAMERUNENSE - PTYCHOGASTER NIGER.

NOTE 924 - DALDINIA ANGOLENSIS FROM DR. G. ZENKER, WEST AFRICA: Compared with the specimen we previously received from Mr. Hunter (Cfr. Myc. Notes p. 688) this collection shows some difference. This soft, spongy context is not so prominent, the surface not so shiny, the stipe forms a more distinct columella. Still we have no doubt it is the same species. It seems frequent in Africa and when we come to work over the named "Hypoxylons" in the museums we shall doubtless find it under other names.

MISCELLANEOUS NOTES

NOTE 925 - POLYPORUS CROCEUS: This is a rare plant around Cincinnati but I found (April, 1920) a fine, wintered specimen on a stump. It was a disreputable looking affair on the surface but when I broke it open the colors were still bright. The context was a rich apricot orange. The pores about carob brown. I believe this is the first specimen I ever found around Cincinnati.

NOTE 926 - TRAMETES ARGYROPOTAMICA: On another examination we fail to find the large, truncate spores we saw floating around when we received the plant. Those we see now are globose, about 4-5 mic. and probably the proper spores.

NOTE 927 - ENDOGONE SPHAGNOPHILA: An article from the late Professor Atkinson has just named a little orange yellow Endogone found attached to Sphagnum stems. They are about the size of peas. I shall be glad if those who live in regions where Sphagnums grow will notice the Sphagnum for any fungi attached to it. No doubt it can be found if looked for and I shall be very glad indeed to get specimens.

NOTE 928 - PTERULA PUNGENS: "J'ai vu page 866 un Pterula pungens"; le dessin que vous donnez est très différent du véritable "Merisma" pungens, Lev. Cette plante n'est pas un Pterula, ni un Lachnocladium. Je ne sais même pas ce que c'est! et je l'ai bien étudiée. C'est une grande plante (10 cm.) rigide, très glabre, naissant d'un subiculum membraneux. Je n'ai pas vu de spores, pas de basides, mais je crois sans toutes réserves que le champignon est peut-être une hétérobasidiée. Je suis peut-être le seul à posséder le type de cette espèce." - Patouillard.

NOTE 929 - LYSURUS MOKUSIN: I am informed by Mr. L. C. C. Krieger that this species has recently been found in the vicinity of Washington. I do not have the exact data but I presume in the government hothouses. Mr. Krieger, while located at Chico, California, was the first to collect this plant in this country, it having appeared in the Government Gardens at least two seasons. It is a Chinese species, evidently introduced in our hothouses. An account was given in Synopsis of the Known Phalloids, p. 36 and in Myc. Notes, p. 402.

NOTE 930 - DACRYOMYCES: This genus is remarkable for the number of "new species" that are discovered and distributed by the authors, but which no one ever finds or at least ever recognizes a second time. In the classical language of the Name Jugglers, "Known

only from the type locality." The specimens all look very much alike and whether they have any difference or not I can not say, but doubt very much. I have noted at Kew the following which I think have very little value:

Dacryomyces syringae, Ravenel, S. Carolina, Cooke det.

" *adpressus*, Grog. Roumeg. 2216.

" *multiseptatus*, Winter, Roumeg. 5107.

" *corticoides*, Ellis, 2nd ser. 1587.

This seems to be a confluent species and I think good. But is it different from *Arrhytidia flava*?

" *confluens*, Karsten in Rabenh. 3522.

" *viticola*, Schweinitz (specimen at Kew).

" *Lythri*, Desmaz. 1545 (Not a *Dacryomyces*).

" *Phragmitis*, West, Roumeg. 5511.

" *conigenus*, Niessl in Rabenh. 2628.

" *Poae*, Libert 136 (Not a *Dacryomyces*).

" *pallens*, Fuc., Fucel 2092.

NOTE 931 - *PORIA TERRESTRIS*: Rev. Bourdot advises me that the plant published (*Myc. Notes* p. 543, fig. 744) as *Poria mollicula* is the rare *Poria terrestris*. This was figured in Persoon's rare work and was always a mystery to me. It is a soft, white species which reddens when bruised and grows on debris of calcareous stone rather than on the earth as Persoon states. It has been confused in European accounts with *Poria sanguineolenta*, a similar species that occurs in abundance at times on pine wood.

NOTE 932 - *XYLARIA OBOVATA*: Either Berkeley or I have made a mistake in regard to *Xylaria obovata* and from the evidence I have it appears to me it was Berkeley, but it may have been myself. Berkeley described it from Saint Vincent. The type is probably in the British Museum. What I photographed as the type at Kew (Fig. 1090, p. 728) may not be the true type. I took it on page 728 as I thought in the sense of the Kew specimens which seem to me to agree with the description. But I recently saw specimens of Wright's collection, Cuba, named *Xylaria obovata* by Berkeley and they are not the plant I have so taken. Wright's plant is *Xylaria Ridleyi* (Fig. 1223) as considered on page 12 of *Xylaria Notes*. Until I revisit London I can not decide which is right but I judge that Berkeley was in error in naming the Cuban specimen. If he was right then, he was wrong in describing it as having a "black, brittle bark" for the "bark" of the Cuban collection is as white as this sheet of paper. *Xylaria obovata* and *Xylaria Ridleyi* in the sense of what I have published as these are so different they should not be confused. Since the question has come up it is apparent that *Penzigia obovata* in the sense of Spegazzini is in the sense of Wright's collection and in this sense it is not a bad *Penzigia* either. *Xylaria Duchassaingii* (sic) as named by Rehm from Guadeloupe is also surely *Xylaria obovata* in the sense of the Cuban naming, but we still believe not the original Guadeloupe naming. *Xylaria obovata* in the sense as I published it on p. 728 is in the same sense as published by Theissen. It also developed on a recent examination I made of Ellis' collection that it is also in the sense as he took

NOTE 933 - "TRAMETES ODORATA, FRIES", MacOwan's distribution No. 1220 and Kalchbrenner's determination is the common *Fomes applanatus* with about as much suggestion of *Trametes odorata* as it has to a piece of cheese.

"*Trametes MacOwanii*, Kalch., n. sp." MacOwan No. 1066, is apparently a discolored specimen of the common *Lenzites repanda*. It has a short, lateral, thick stem and is discolored now but I do not question its identity. When it came to naming fungi Kalchbrenner was surely the limit. He had about as much idea of fungus classification as he had of bacteria, but his "new species" are scraped up and compiled just the same as any others. South Africa and Australia got the benefit of the most of his "work" which makes it very bad for Australia and South Africa.

NOTE 934 - *FOMES OLIVACEUS* OF LETTER 65, NOTE 565, is the same as *Fomes cinereus*, Letter 65, 534. I believe Murrill has a name for it also.

NOTE 935 - *TRAMETES STOWARDII*: Cfr. Myc. Notes 48, 683, fig. 1022. We are convinced now this is only a synonym for *Trametes lilacino-gilvus* with more strongly developed fibrillose surface.

NOTE 936 - *XYLARIA PUMILA*: In reading over Fries' original account of the plant (*Linnaea*, 1830) from Brazil, we believe it is the same as we figured (*M. N.* 54, 770, fig. 1157) as *Xylaria stromatica*. Fries mentions the "black, innate spots" on the bark from which the clubs arise and this is the only species that has a hypothallus as far as I know. Very often when one is familiar with a species he will recognize a description that otherwise would have no meaning for him. In other words, one can work backward to better advantage than he can forward, which is quite right as long as one does not use it as an excuse for name juggling.

NOTE 937: Dr. Howard A. Kelly, 1418 Eutaw Place, Baltimore, Md. has secured a complete set of my sporadically issued pamphlets with the exception of Vol. 2, no. 19. Any one having a copy of this number to spare will do Dr. Kelly quite a favor by addressing him on the subject.

NOTE 938 *FAVOLUS EUROPAEUS*: Footprints of history. I copied an old note of Peck from an herbarium sheet which is very interesting as showing the trouble the old workers had.

"This in Ravenel is *Polyporus Boucheanus*. Dr. Curtis calls it *Favolus europaeus*. Worthington G. Smith says of it - "It looks like a *Hexagona* and is probably undescribed." I find no description that accords with it."

NOTE 939: We formerly thought it was something terrible when we found an author naming two different plants the same name. As we have just noted we are guilty of it ourselves in a late issue of *Mycological Notes*, we may have to modify our views. *Exidia Uva passa* page 898, fig. 1577, is a duplicate (Cfr. p. 774, fig. 1168). The United States plant we would therefore change to *Exidia Beardsleei*.

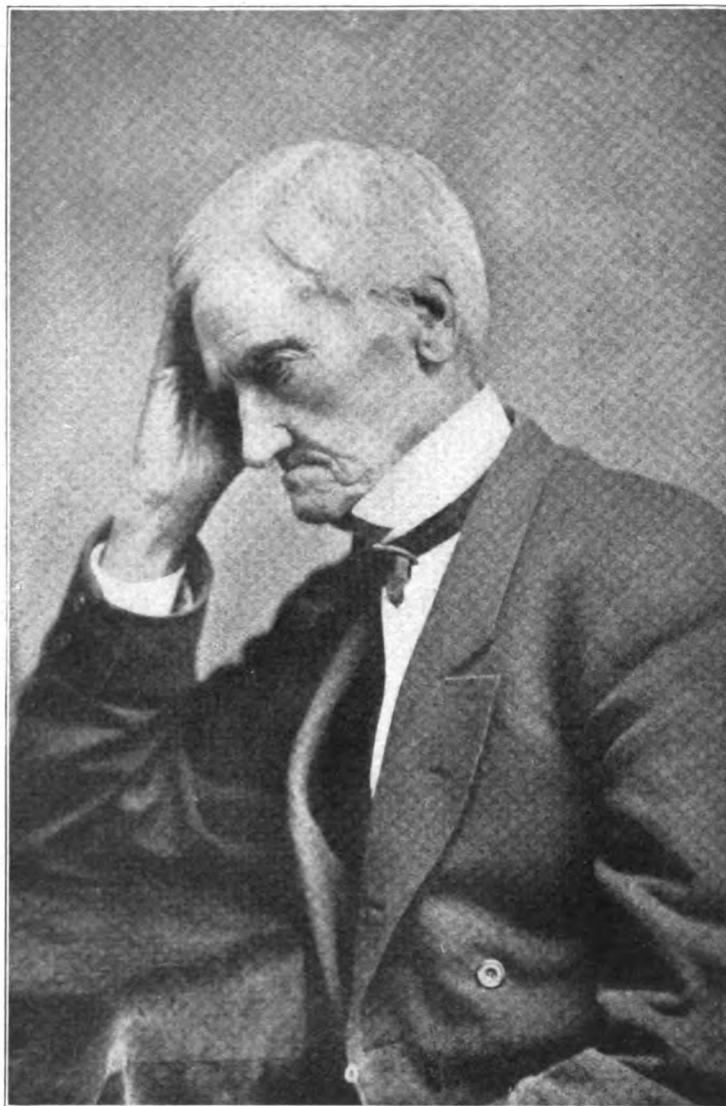
MYCOLOGICAL NOTES.

By C. G. LLOYD.

Plates for No. 64.

CINCINNATI, O.

SEPTEMBER, 1920.



GEORGE W. CLINTON



PAUL HARIOT.



REV. L. J. GRÉLET.



WORTHINGTON G. SMITH.



Fig. 1748. Protuberance Maracuja.



Fig. 1749. Section enlarged.

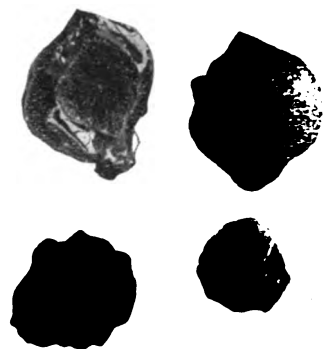


Fig. 1750. Protuberance africana.

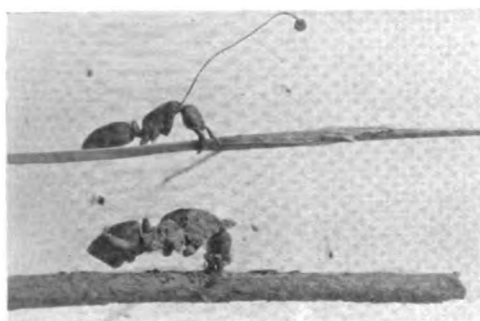


Fig. 1752. Cordyceps australis.

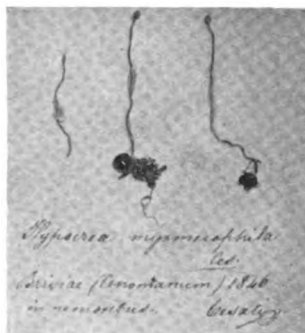


Fig. 1753. Cordyceps myrmecophila.

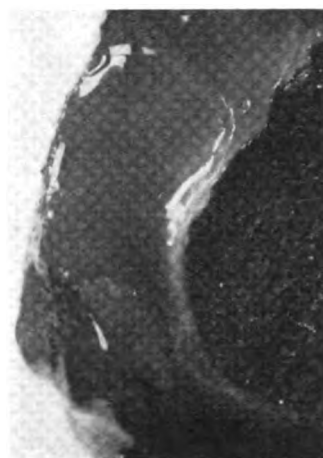


Fig. 1751. Section enlarged.

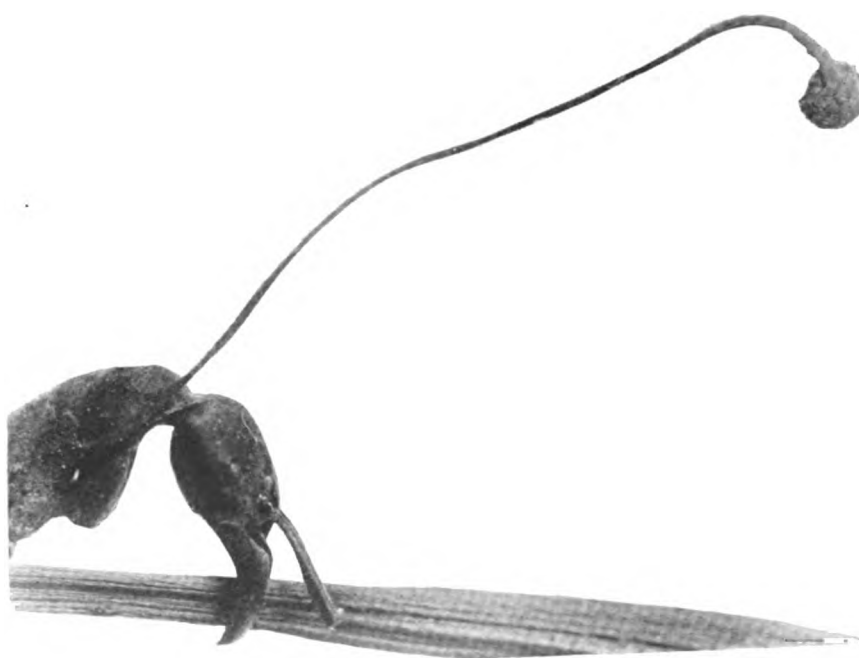


Fig. 1754. Cordyceps australis (enlarged).



Fig. 1755. *Clavaria unicolor*.

Clavaria truncata.

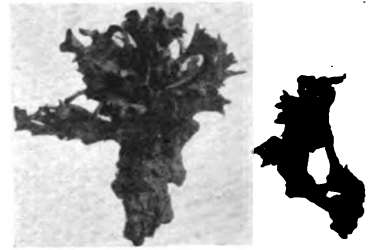


Fig. 1756. *Stereum incisum*.



Fig. 1757. *Stereum cuneiforme*.



Fig. 1758. Probably same.



Fig. 1759. *Telephora penicillata*.



Fig. 1760. *Telephora penicillata* (enlarged).



Fig. 1761. *Tricoscypha insititia*.



Fig. 1762.
Dacryopsis palmata.



Fig. 1763.
Caespitose *Guelpinia spathularia*.



Fig. 1764. *Ditiola radicata*.



Fig. 1765. *Ditiola radicata* (X 6)

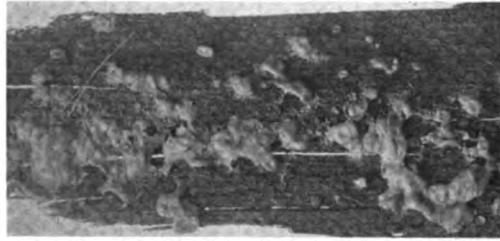


Fig. 1766. *Ditiola radicata* (confluent)

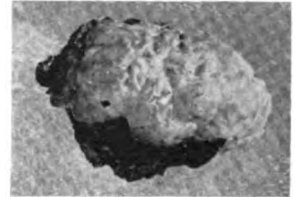


Fig. 1767. *Tremella lutescens*.



Fig. 1768. *Tremella lutescens*.

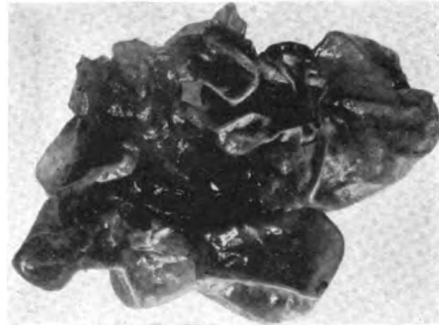


Fig. 1769. *Tremella microspora*.



Fig. 1770.
Guelpinia spathularia,
young.

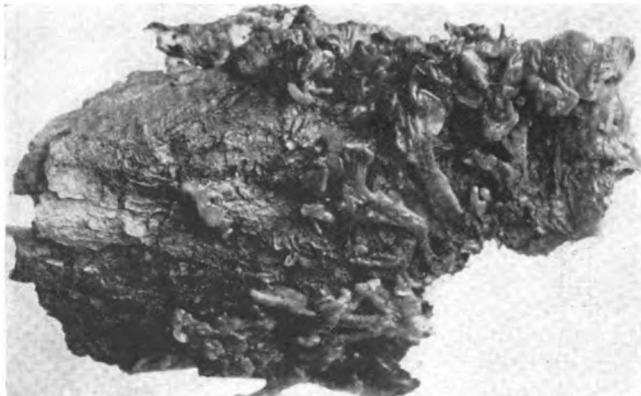


Fig. 1771. *Guelpinia spathularia*.



Fig. 1772. *Cytidia simulans*.



Fig. 1773. *Exidia Beardsleei*.

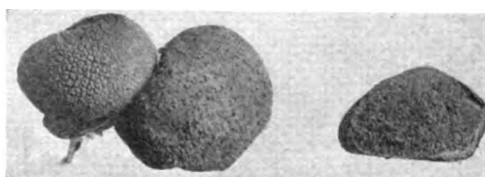


Fig. 1774. *Arachnion Scleroderma*.

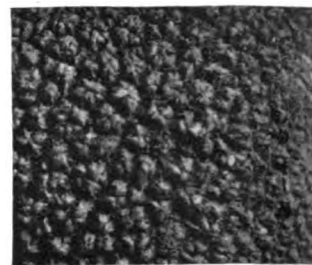


Fig. 1775. Cortex of same X 6.



Fig. 1776. *Podaxon anomalum*.

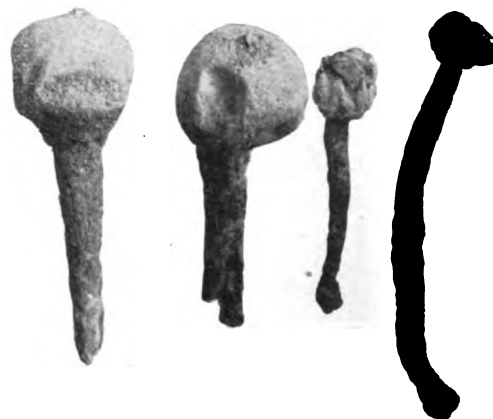


Fig. 1777. *Tylostoma Mohavei*. *Tylostoma McAlpinianum*.



Fig. 1778. *Tylostoma montanum*.



Fig. 1779. *Xylaria luteostromata*.



Fig. 1780. *Xylaria muscula* X 6.



Fig. 1781. *Xylaria muscula*.



Fig. 1782. *Xylaria citrina*, type.



Fig. 1783. *Xylaria citrina*, as figured.



Fig. 1784. *Xylaria Ridleyi*.

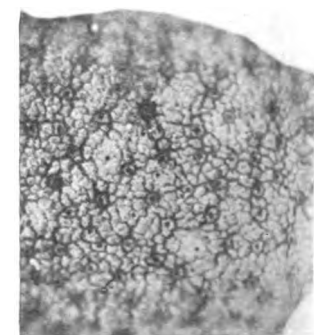


Fig. 1785. *Xylaria Ridleyi* cortex X 6.



Fig. 1786. *Xylaria comosa* and cortex X6.



Fig. 1787.



Fig. 1788.

Xylaria tentaculata.

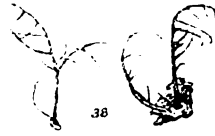


Fig. 1789.
Xylaria confusa (conidial).



Fig. 1790.
Xylaria penicilla (conidial).

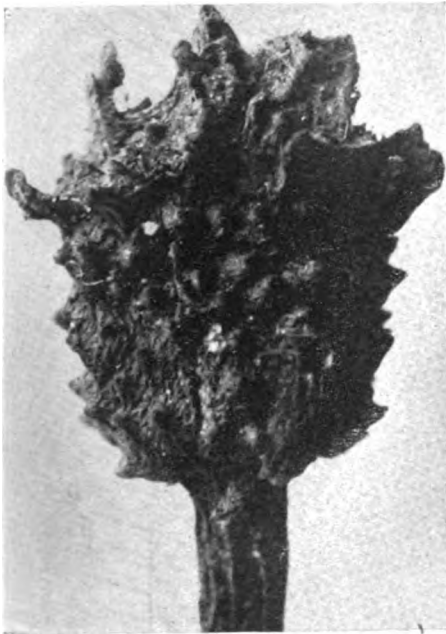


Fig. 1791. *Xylaria tentaculata* (enlarged).

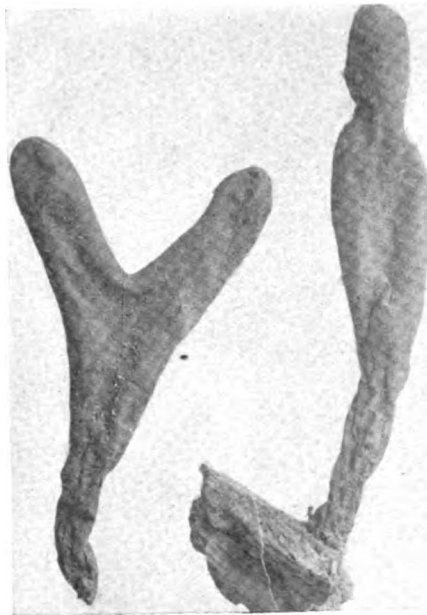


Fig. 1792. *Xylaria longipes*.

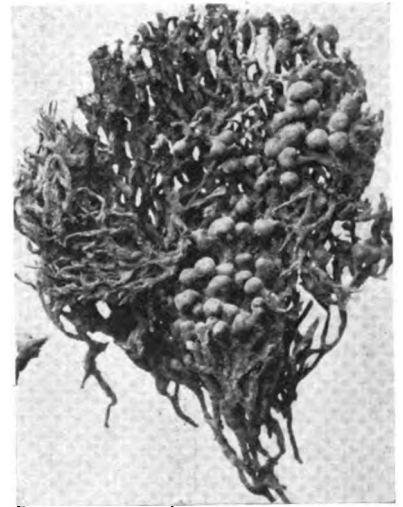


Fig. 1793. *Kretzschmaria Botrites*.



Fig. 1794. *Polyporus Rhizomorphae*.
(*dimidiata*)

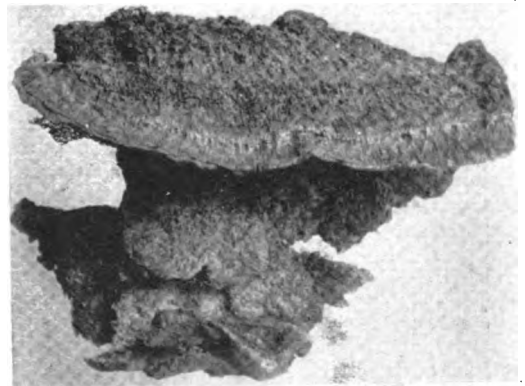


Fig. 1795. *Polystictus subcaperatus*.

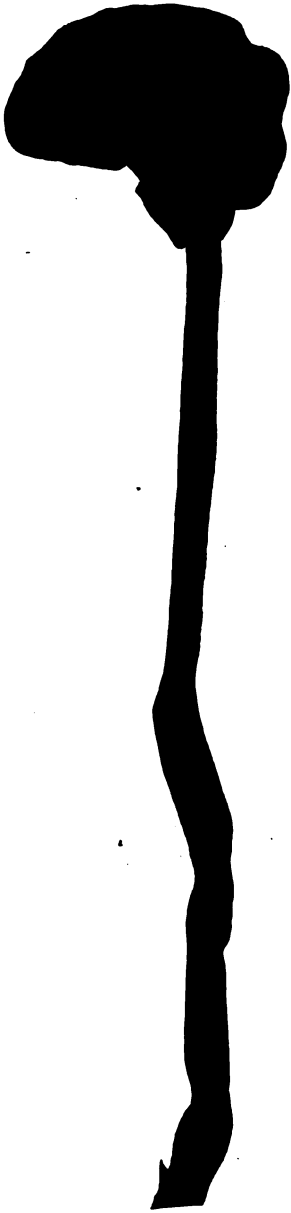


Fig. 1796. *Polyporus albocinctus*.

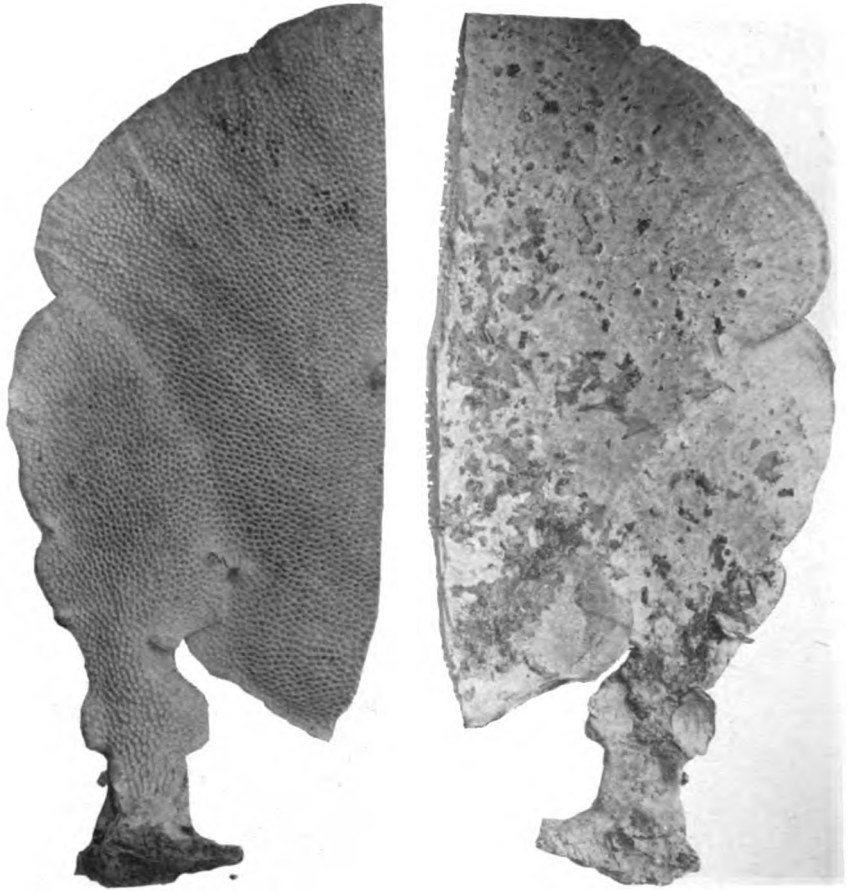


Fig. 1797. *Trametes transmutans*.

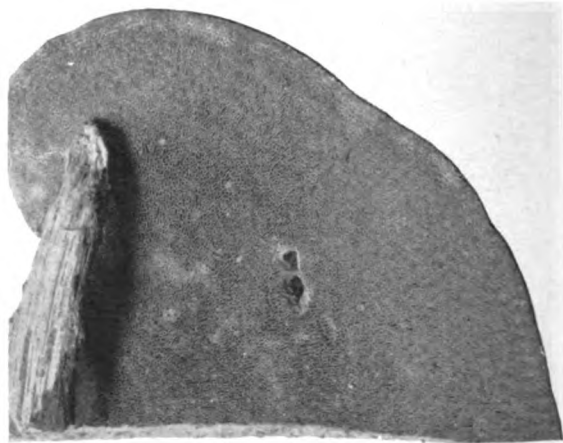


Fig. 1799. *Trametes lactea*.

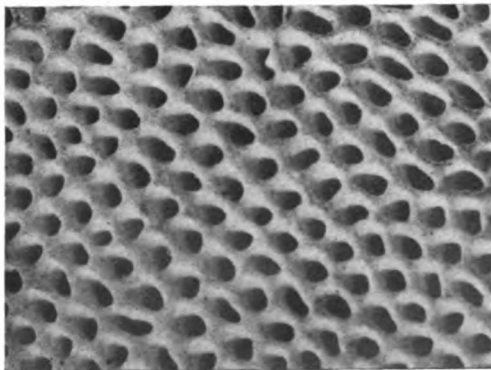


Fig. 1798. Pores X6. *Trametes transmutans*.

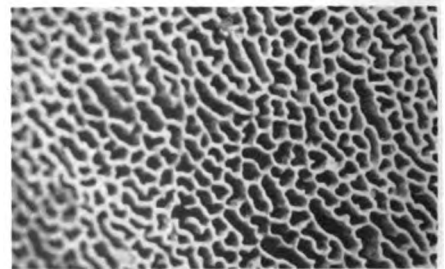


Fig. 1800. *Trametes lactea*. Pores X6.

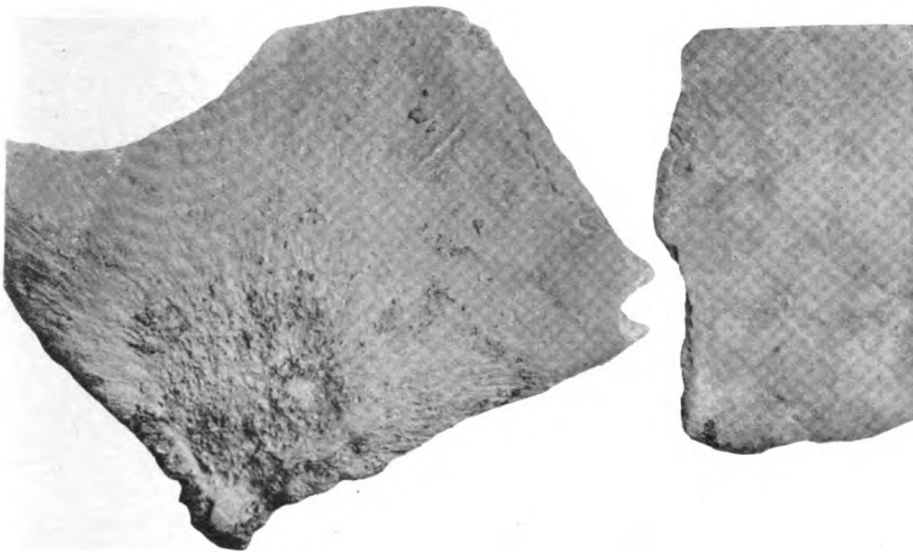


Fig. 1801. *Polyporus angolensis*.

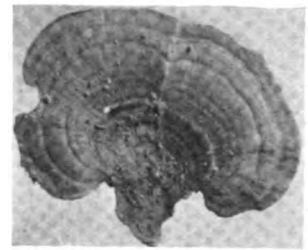


Fig. 1802. *Polystictus rarus*.

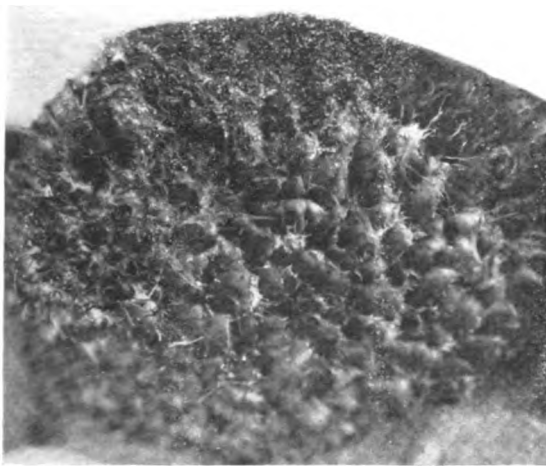
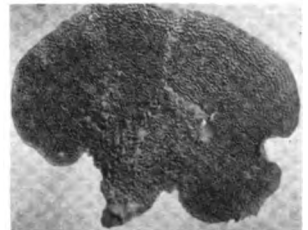


Fig. 1803. *Polyporus Theobromae* X6.

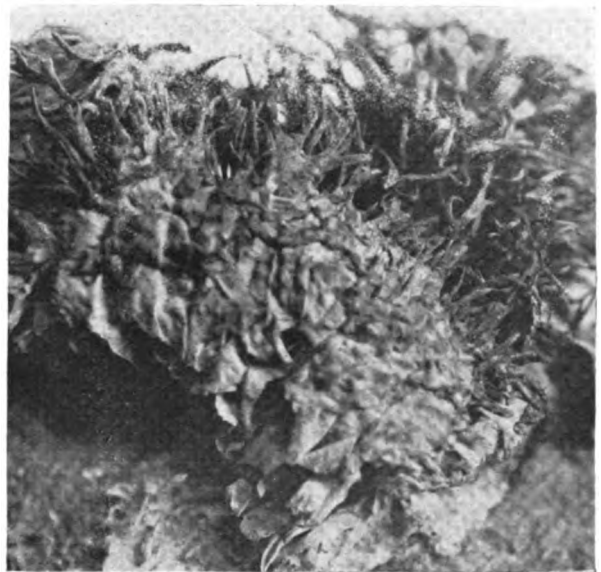


Fig. 1804. *Polystictus aculeifer* X6.



Fig. 1805. *Polystictus aculeifer*.



Fig. 1806. *Polystictus hypothejus*.

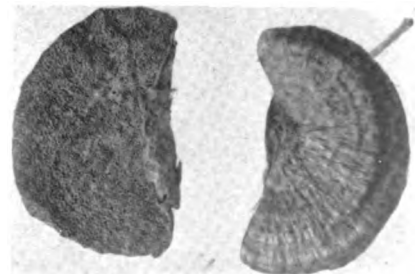


Fig. 1807. *Trametes tricolor*.



Fig. 1808. *Polystictus aculeans*.



Fig. 1809. *Polyporus anebus* (serpentine).



Fig. 1810. *Polyporus opacus*.



Fig. 1811. *Polyporus leucocreas*.



Fig. 1812. *Laschia similis*.

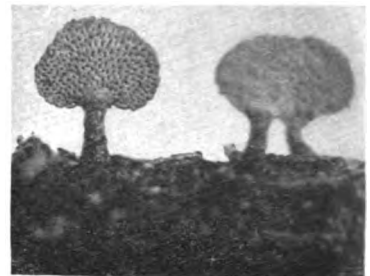


Fig. 1813. *Laschia similis* X6.



Fig. 1814. *Lenzites Beckleri*.



Fig. 1815. *Polystictus suboccidentalis*.



Fig. 1816. *Polystictus byrsinus*.

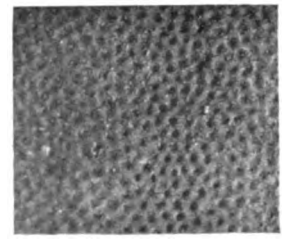


Fig. 1817. Pores of same enlarged 6X.



Fig. 1818. *Favulus Brasiliensis*.



Fig. 1819. Lenzitoid *Favulus Brasiliensis*.



Fig. 1820. *Sarcoxylon aurantiacum*.

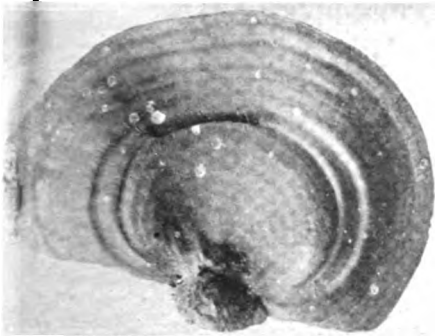


Fig. 1821. *Polystictus luteo-affinis*.



Fig. 1822. *Polystictus bicolor*.



Fig. 1823. *Campanella Buettneri*.



Fig. 1824. *Campanella Buettneri* enlarged.

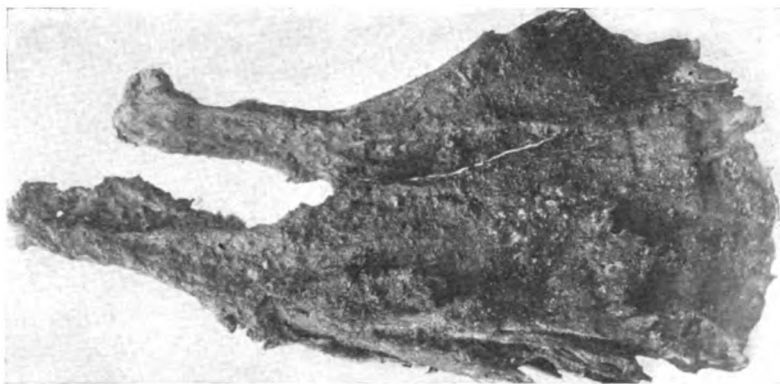


Fig. 1825. *Masseerina cartilagineus*.



Fig. 1826. *Polyporus cystidioides*.



Fig. 1827.
Hyphae enlarged.



Fig. 1828. *Hydnum duriusculum*.



Fig. 1829. *Hydnum maliense*.



Fig. 1830. *Hydnum ferreum*.

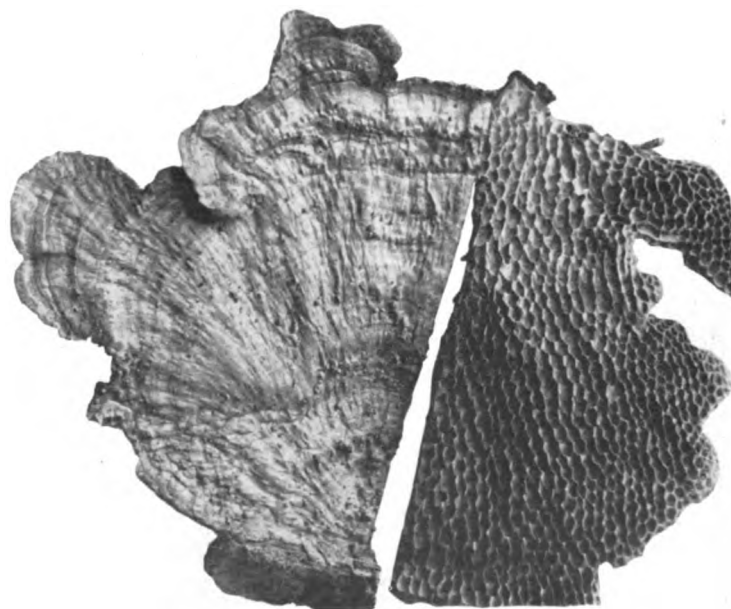


Fig. 1831. *Hexagona angulata*.



Fig. 1832. *Polyporus ater*.

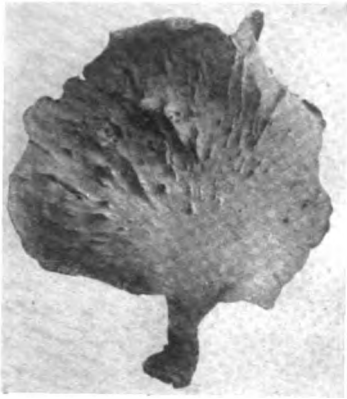


Fig. 1833. *Polyporus elegans* (spinulose).



Fig. 1835. *Polyporus elegans* (usual).

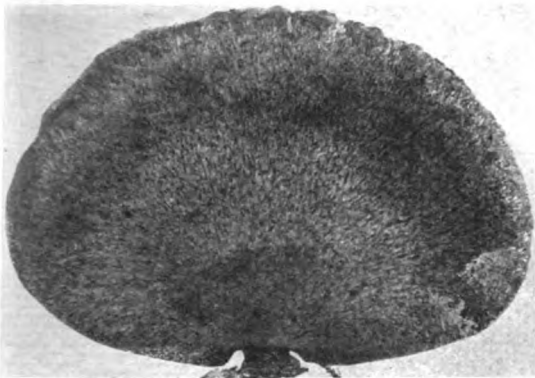


Fig. 1834. *Polyporus elegans* (velutinate).

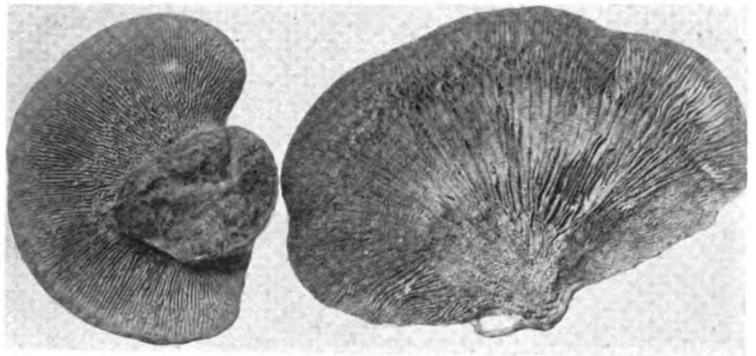


Fig. 1836. *Lenzites repanda*.



Fig. 1837. *Ptychogaster niger*.

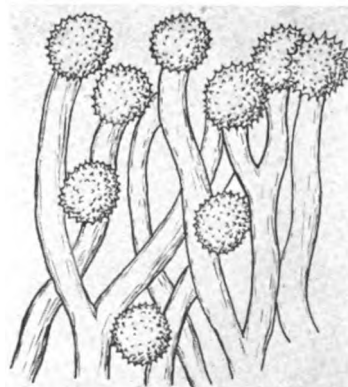


Fig. 1838. Conidial spores *Ptychogaster niger*.

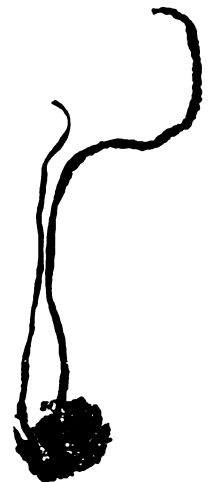


Fig. 1839. *Xylaria subterranea*.

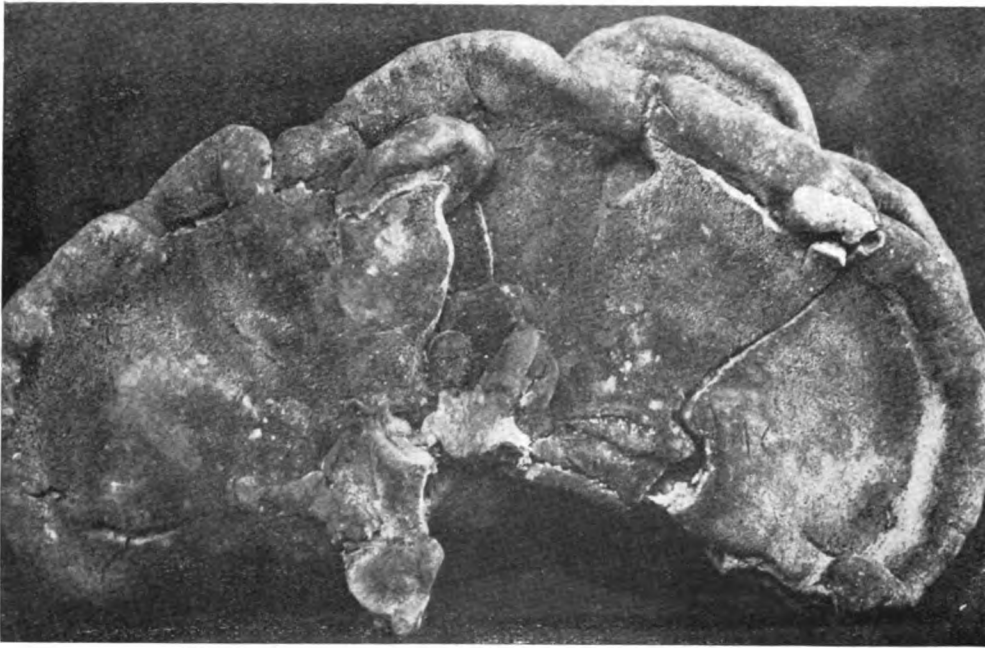


Fig. 1840. *Ptychogaster versisporus*.



Fig. 1841. *Polyporus dorsalis* (branched stem).

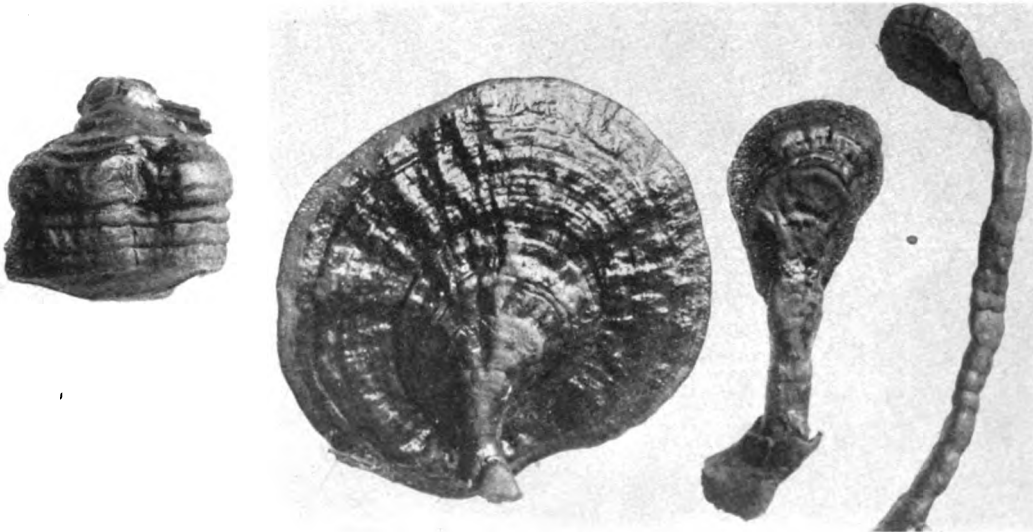


Fig. 1842. *Polyporus dorsalis* (varying form).



Fig. 1843. *Isaria cornea*.



Fig. 1844. *Polystictus cuneato-brunneus*

Fig. 1845. *Polystictus pallidus*.

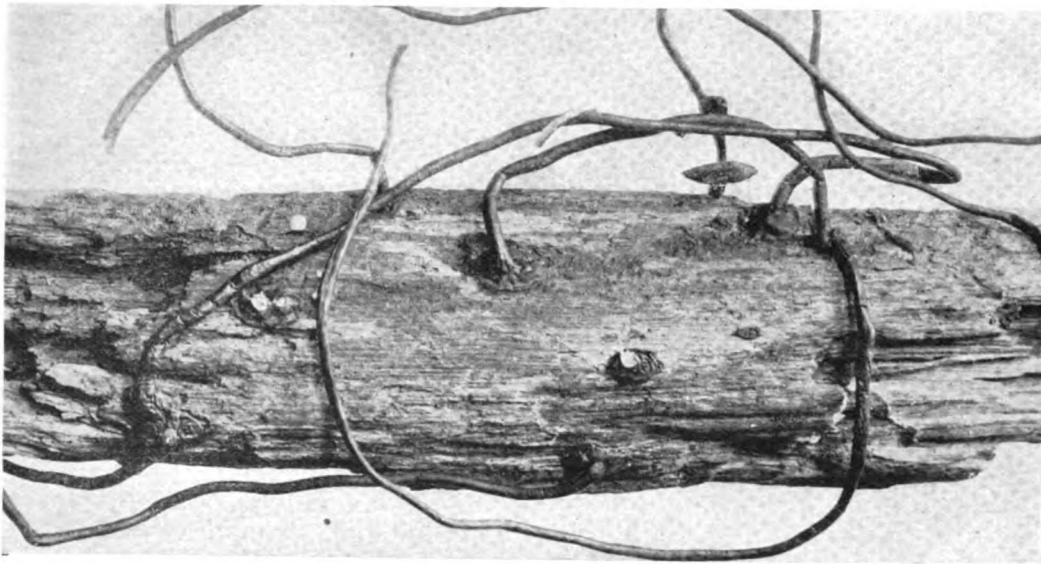


Fig. 1846. Rhizomorph from Philippines.

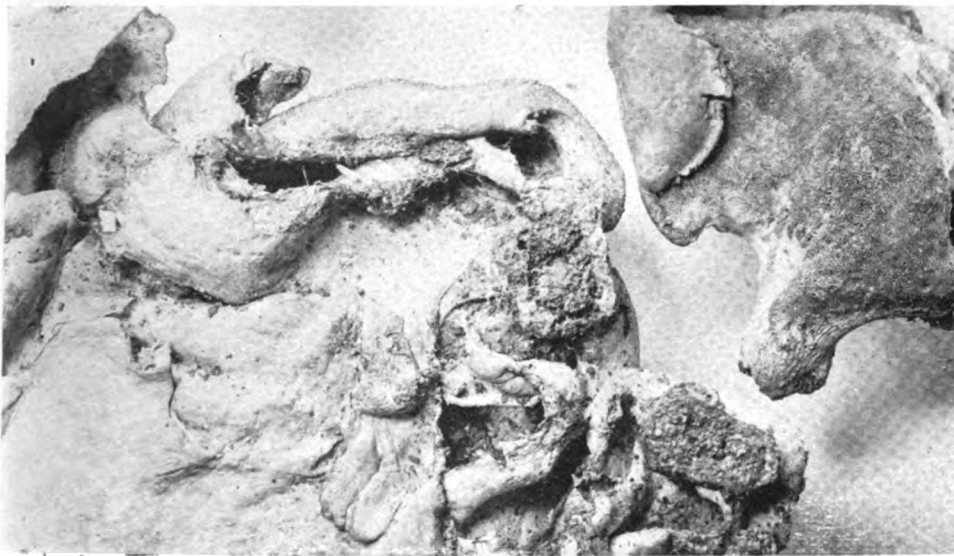


Fig. 1847. *Polyporus acervatus*.



Fig. 1848. *Polystictus aculeifer*.

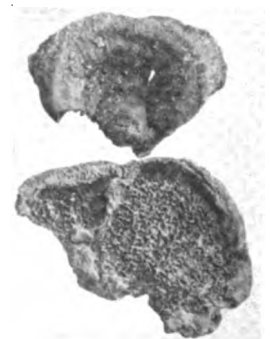


Fig. 1849. *Polystictus anomalus*.

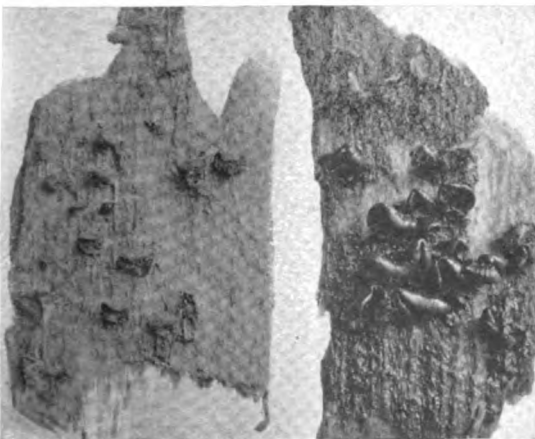


Fig. 1850. *Phyllotremella africana*.

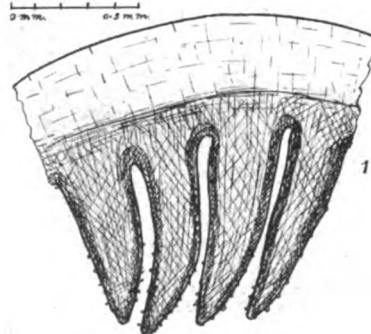


Fig. 1851. Gills enlarged.



Fig. 1852. Pileus enlarged.

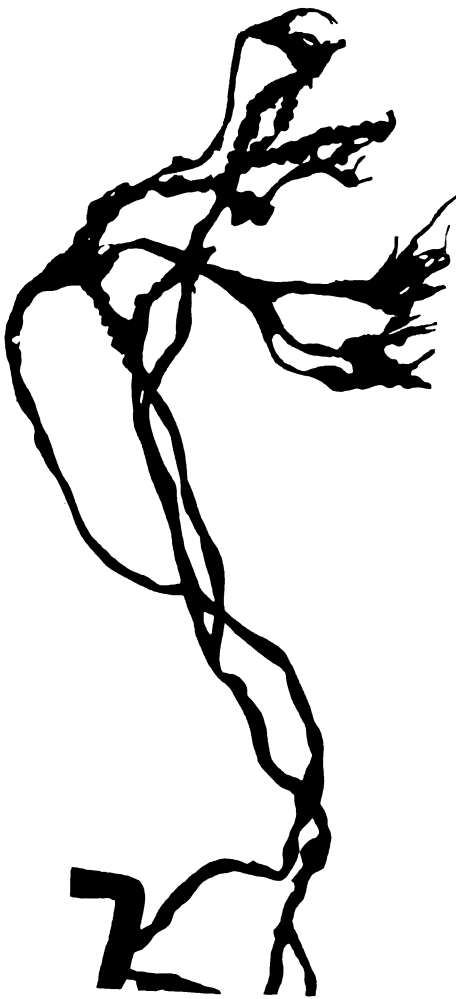


Fig. 1853. *Xylaria nodulosa*.

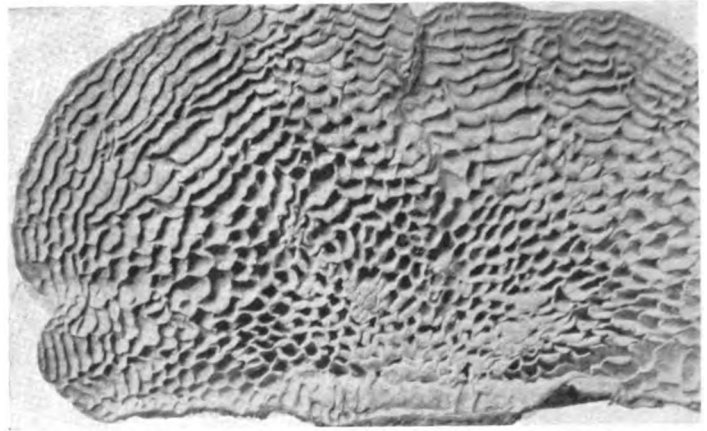


Fig. 1854. *Cyclomyces albida*.

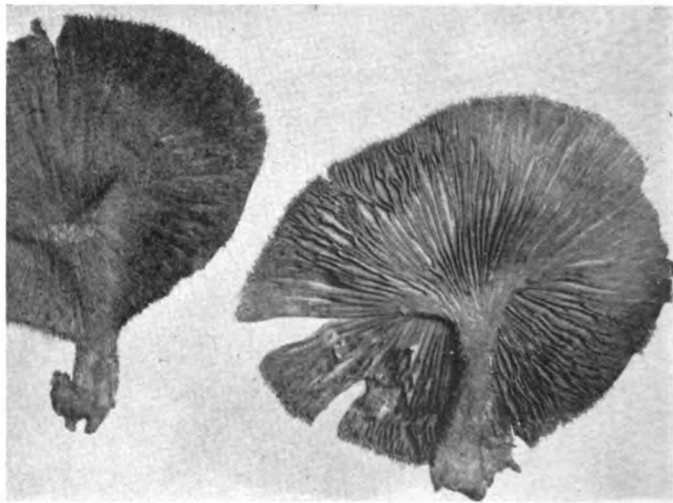


Fig. 1855. *Lentinus ochraceus*.



Fig. 1856. *Clavaria taxophila* (enlarged).



Fig. 1857. *Stereum annosum* (type).



Fig. 1858. *Stereum annosum*



Fig. 1859. *Stereum annosum*.

MYCOLOGICAL NOTES

BY C. G. LLOYD

NO. 64

CINCINNATI, OHIO.

SEPTEMBER, 1920

GEORGE W. CLINTON

Our portrait of this issue is of George W. Clinton, familiarly known as Judge Clinton, who was for many years the President and moving factor of the Buffalo Society of Natural Sciences. He is best known as a botanist, and in connection with David F. Day published a catalogue of the plants in the vicinity of Buffalo, the list of fungi being contributed by Judge Clinton.

Judge Clinton never published much on mycology but his herbarium now preserved in the building of the Buffalo Society of Natural Sciences is evidence that he was a life-long and enthusiastic collector in this branch of science. The treasurers of this collection are not generally known and I was much gratified and surprised in looking over it last summer. Not only is found there an extensive collection of local fungi but many specimens from other collectors not often found in the herbaria I have visited. I noted many plants from Bennett, New Jersey, Blake and Frost, Vermont, Michener, Pennsylvania, Peck of New York, and it is evident from the notations that Professor Peck had been over the collection which gives it an additional value. The most unexpected and gratifying discovery I made in the herbarium was a set of Wright's Cuban fungi which were named by Berkeley. I know of no other in America excepting in Farlow's collection but of course there may be others. The set has lost some of its historic value for the original collection numbers of Wright are not preserved. The specimens are numbered according to Berkeley's determination. Many of them are in reality "co-type" specimens. The set is in much better condition than I noted in England for no one has even disturbed it and the specimens have never been pawed over. This collection of Judge Clinton's at Buffalo is well worth a visit from any mycologist interested in American species. We are enabled to present Judge Clinton's portrait through the kindness of Mr. Henry R. Howland.

MONSIEUR PAUL HARIOT

Grâce à notre ami commun, Monsieur le Professeur N. Patouillard, nous avons le plaisir de reproduire ici une bonne photographie de Paul Hariot, le regretté Directeur du Musée de Botanique Cryptogamique de Paris. La pauvre photographie publiée il y a quelque temps par la Société Mycologique de France était un vrai désappointement. Nous en exprimons récemment notre regret dans une de nos notes. La photographie que nous présentons aujourd'hui à nos lecteurs est une excellente reproduction de la physionomie de Paul Hariot, un des meilleurs Directeurs de Musée que nous ayons jamais connu. Son affabilité, son abord cordial, sa complaisance inlassable n'étaient surpassées que par la connaissance approfondie qu'il avait des sujets confiés à sa direction. Si nous ne nous trompons, il ne sera pas facile de le remplacer au Musée par un Maître de sa compétence.

REV. L. J. GRELET

Our photograph is of an active French mycologist, a member of the Mycological Society of France and a special student of the Discomycetes. For many years he was in close relations with Monsieur Boudier, who named some species in his honor. We have not had the pleasure of a personal acquaintance with Rev. Grélet, but are indebted to him for a very large shipment of specimens, mostly of Discomycetes. Should we ever take up the study of the group the specimens will be most helpful.

WORTHINGTON G. SMITH

Fifteen or twenty years ago Mr. Smith sent me the photograph that we reproduce. We failed to publish it during his life. While we in America know but little of Mr. Smith he was closely connected with the mycological department of the British Museum and well known in England through the books he wrote or rather compiled on mycology. It is about as difficult for a man living in London to acquire an actual knowledge of fungi as for an Arab living in the desert of Sahara to write a book on the culture of ginseng. Mr. Smith was a very good artist and it is to be regretted that his mycological illustrations were not extended beyond forty-eight plates. He was about sixty years old when I first came into correspondence with him and the photo was sent me. I never knew him personally but I have no doubt he was a very fine old man. Any one who loves dogs is worth cultivating.

THE GENUS PROTUBERA

account

Alfred Moeller gave an excellent with figures of this genus from Brazil in *Brasilische Pilzblumen* (1895). The systematic position of the genus is in doubt. It is between Hymenogasters and Phalloids, agreeing with the former in having a peridium (which corresponds to a volva) and encloses the gleba, and with Phalloids in the gelatinous nature, color and structure of gleba, basidia and spores. To my mind it should be set apart in a special Order, and the addition of a second species from South Africa is of much interest. We now have knowledge of five species of this Order. Two *Protubera* with permanent gleba cells with gelatinous walls and three species of *Phallogaster* (Cfr. *Myc. Notes*, p. 739) which differ in the complete deliquescence of the tissue.

PROTUBERA MARACUJA FROM REV. RICK, BRAZIL (Fig. 1748).-

From the excellent account as published it is not necessary to give additional description. The interior is filled with a greenish olive gleba which dries hard and soaks up gelatinous. This is divided into several large compartments by plates that radiate from the base and merge into the peridium. Our enlargement (Fig. 1749) will show these plates although in a dried specimen they are dark colored and difficult to show in a photograph. The gleba mass to the eye is somewhat porous, the lens resolving it into chambers with gelatinous, hyaline walls. The gleba of *Protubera* is of the same general nature as that of a Phalloid, but in *Protubera* the gleba walls are permanent and in a true Phalloid the walls deliquesce in ripening leaving a

mucilaginous mass of spores only.

Protuberia Maracuja is known from Brazil only. Rev. Rick writes me it is not rare.

PROTUBERA AFRICANA FROM MISS A. V. DUTHIE, SOUTH AFRICA (Fig. 1750).- Peridium thick, gelatinous, about 3 mm. consisting of three layers. The outer smooth, thin, cartilaginous, pale brown, the inner thin, white, cartilaginous and a thick, soft, gelatinous, pale intermediate layer. In every feature the peridium is of the same nature as the volva of a phalloid. (Fig. 1751 enlarged). Gleba mass filling the interior greenish olive, firm, compact, minutely porous to the eye. Its structure under the lens consists of hollow chambers with gelatinous, hyaline walls, analogous in every respect to that of *Rhizopogon* excepting that the walls are gelatinous. Spores like a Phalloid, $2\frac{1}{2} \times 5$ pale, greenish, smooth.

A second *Protuberia* from South Africa, the genus heretofore only known from Brazil, is most interesting. The African species differs in not having the tramal plates which is so important that a new genus could be based on it. Miss Duthie found this (No. 233) in damp, clayey soil. As it has a delicate rooting system I presume it grew on the surface.

CORDYCEPS AUSTRALIS FROM JOHN GOSSWEILER, AFRICA (Fig. 1752).- There is a large, black ant in tropical Africa that illustrates the old saying "holding on like grim death." When it becomes infected it locks its mandibles firmly on a twig and remains attached after death when the *Cordyceps* develops. A half dozen specimens were sent me by Mr. Gossweiler and every one had attached itself firmly to a twig. One specimen sent by Mr. Gossweiler was in the *Botrytis* stage, forming a light brown powdery growth that developed from the sutures of the body. It consists of slender hyphae, no spores having developed on this specimen. Our lower figure represents this stage, natural size.

The *Cordyceps* develops from the prothorax segment, usually one on each insect but there were two in one case. The stem is black, filiform, an inch to an inch and a half long. Head is globose, $1\frac{1}{2}$ mm. in diameter, light brown, with even surface. I do not like to cut the few heads I have to examine the spores. As to a name, while we refer it to a species illustrated by Moeller, we suspect it is the same species as *Cordyceps myrmecophila*, but it is much larger and of different shape. *Cordyceps sphecocephala* (Myc. Notes p. 544, Fig. 746) which is a well known species on wasps, is very close, but on comparison quite different in shape of head, color and thickness of stem. *Cordyceps myrmecophila*, collected by Cesati in old Italy (Brixiae) seems very close to this species and grows on ants. An original collection (Fig. 1753) is in Tulasne's herbarium and seems to have been first proposed as *Hypocrea* (on the label). It is much smaller than this African plant and with ovate head, but the ants were smaller. It is in most museums for the collection of Cesati was distributed (Rabenhorst 719.) - A similar collection was distributed (Rabenhorst 3649) from Uhl, Brazil, on bees. Tulasne considered *Cordyceps myrmecophila* the same as *Cordyceps sphecocephala*, which to me appears doubtful. We refer this African plant to the South American species on the strength of Moeller's account and figure. The head is more globose which as far as we note is the only difference.

CLAVARIA TRUNCATA FROM STEWART H. BURNHAM, NEW YORK (Fig. 1755).— While this plant has been known for about two hundred years, having been illustrated by Micheli, it has had such a variety of names it is hard to trace it. The old fellows thought it was a *Clavaria* and it is so close to *Clavaria pistillaris* that, as Burt well states it, it is a vexed question whether it is or is not *Clavaria pistillaris*. It is the same plant excepting it has a truncate apex. Technically it is not a *Clavaria* for the truncate apex does not bear a hymenium, hence it is a "pileus" and is called *Craterellus*. It is a case where natural affinities have been subordinated to artificial classification. For me it is a *Clavaria*, and while I do not usually take much stock in Quelet, I think he used the best name, *Clavaria truncata*. The very old fellows did not distinguish it from *Clavaria pistillaris* and Persoon called it *Clavaria herculeana* as a variety. In his early days Fries did not hold it distinct but later he classed it as *Craterellus pistillaris* and claimed it as distinct from *Clavaria pistillaris* not only in shape but habitat, stating that it grew in pine woods around Upsala where *Clavaria pistillaris* does not occur. However, a specimen of *Clavaria pistillaris* in his herbarium, from around Upsala, does not bear this out. In this country while *Clavaria pistillaris* is common enough, *Clavaria truncata* is rare, and these are the first we have received. Burt has only two records of it.

CRATERELLUS UNICOLOR FROM SUSAN TUCKER, WASHINGTON (state).— When I compared the type of *Craterellus unicolor* at Kew with the preceding plant, a specimen from Fries at Kew, I thought they were the same plant. When I compare now the specimen received from the Pacific coast with the preceding plant, it appears quite distinct. It seems to take its best development in the West and one would hardly refer it to *Clavaria*. But I suspect if the truth were known it grades from the western form through our eastern form and through *Clavaria truncata* into *Clavaria pistillaris*. A second collection received from Miss Tucker (Fig. 1755 on the left) seems to connect it pretty closely in the same locality. *Clavaria unicolor* is not well named as far as this western plant is concerned for the pileus top is reddish brown and the dried hymenium is rather fuliginous. But I note it becomes brown when moistened. Ravenel so distributed it and Peck called it *Craterellus corrugis*. My statement, Note 56, that he called it *Cantharellus clavatus* is an error due to my treacherous memory. It is rather a local plant in the United States and has heretofore been mostly known from around Boston. Burt does not give any western station.

STEREUM INCISUM FROM T. F. CHIPP, SINGAPORE (Fig. 1756).— Pilei thin, brown, incised, glabrous, tapering to the base. Margin incised. Surface smooth, striate. Hymenium dark amber brown, smooth. Cystidia none. Spores if correctly seen, globose, hyaline, 8 mic. The pilei grew fasciculate from the top of the rooting stem. In texture, thickness and color they are similar to our *Stereum sericeum*. We would enter it in Section 6 although it does not suggest any other species in our Stipitate Stereums. This little plant grew in the ground, the pilei fasciculate from the top of the root stalk.

STEREUM CUNEOFORME FROM T. F. CHIPP, SINGAPORE (Fig. 1757).— Spathulate, incised, concolorous, grey, glabrous, about a cm. high

and growing singly in the ground. Our photograph is the best description. The spores, if correctly seen, are hyaline, globose, 3 mic.

This little species should be entered in Section 9 of the Stipitate Stereums. It is very similar to *Stereum unguiforme*, figured Letter 48, Fig. 569, but a comparison shows they are not the same. Besides, if I mistake not the latter grows on wood. Based on Burkill's collection No. 288. Another collection (Fig. 1758) Burkill 254, we have labeled the same though it is quite doubtful. It is a larger, thicker plant and grows more caespitose.

THELEPHORA PENICILLATA FROM MISS A. V. DUTHIE, SOUTH AFRICA (Fig. 1759).— Fungus brown, forming a thick, rigid layer over dirt and rubbish. Spores angular, globose, about 8 mic., colored, tubercular. The fungus sends up in ridges dense growths of incised, white sterile flaps (Fig. 1760 enlarged.) While these penicillate growths are analogous to pilei, they are pure white, sterile and the hymenium is borne only on the resupinate stratum. We have, at first view a very similar species in the United States, *Thelephora spiculosa*, but this is a true pileate species bearing the hymenium on the under side of the pileate flaps, quite a different idea from the South African plant.

TRICOSCYPHA INSITITIA (Fig. 1761).— We presented on page 847 a photograph of a dried specimen and have since found a photograph we made in Samoa of the fresh plant. We believe it is the first published. *Tricoscypha insititia* resembles closely our common *Sarcoscypha floccosa* but differs in spores (12 X 42) and hairs. It only occurs in the East.

DACRYOPSIS PALMATA (Fig. 1762).— We present a figure (dried and soaked) of a specimen of this rare species which was distributed by Ellis (No. 1897) as *Tremella aurantia*. *Tremella aurantia* (as distributed by Schweinitz) is now known to be a *Dacryomyces*, as Ellis should have known had he investigated the structure of tremellaceous plants. This collection, while having the same color and structure, has a distinct stalk and a separate head, hence must be included in *Dacryopsis*, if that is held as different from *Dacryomyces*.

Dacryopsis palmata is a rare species. The types in Schweinitz' herbarium and this distribution of Ellis are the only collections known to me, and the types are not as characteristic as Ellis' distribution, but in connection with Schweinitz' description which answers this plant to a letter, there is no question with me as to its identity now. I collected once at Albany, N. Y. a caespitose, branched plant (Fig. 1763) which I thought when fresh was Schweinitz' *Tremella palmata*, but I recognized it at once when dried as a caespitose condition of the common *Guepinia spathularia*. As Schweinitz compares *Tremella palmata* to *Guepinia spathularia* I have had an impression it was in reality the same caespitose condition of the latter I had found at Albany, but I am sure now I was mistaken. *Dacryopsis palmata* may be thought to be a stalked form of *Dacryopsis aurantia*, same color, texture and "structure" but I do not believe it. I think it is a distinct species but a very rare one.

DITIOLA RADICATA FROM W. C. COKER, NORTH CAROLINA (Fig. 1764) This is the first time I have received this plant from the United

States although it is probably not rare, but tremellaceous plants have not come into me as abundantly as I would wish. It grows on pine wood and is very close to *Dacryopsis nuda*, illustrated on page 841, but *Ditiola* has a heterogeneous head and stipe and *Dacryopsis* has homogeneous. *Ditiola radicata* grows in great abundance on decorticate pine in Sweden. It has a short stem, rooting in the host of a tough, sub-fleshy texture. It expands above and bears the yellow, gelatinous hymenium which differs in color and texture. The color when mature and wet is pale ochre yellow but it is deep orange yellow when young. Basidia forked, typically of the *Dacryomyces* order. Spores pale yellow in mass, about 4 X 12, cylindrical, curved. There are two forms or conditions of *Ditiola radicata*. One with distinct stalk which usually grows separate (Fig. 1764) the other with very short stalk and heads often confluent (Fig. 1766). The latter at first view resembles a *Dacryomyces*. Both forms are very common in Sweden.

While *Ditiola radicata* is the most abundant tremellaceous plant represented in Fries' herbarium, it does not occur in his last work, *Hym. Europaei*. The reason is that Fries in his early days thought it was a *Discomycete* and that impression was never eradicated from his mind. Although it is supposed to have been first illustrated from Lusatia, it is evidently rare in southern Europe. Schroeter includes it apparently on the old A. & S. record. Quélet's record is apparently based on "*Femsjonia luteoalba*", a quite different plant. Bourdot's record is also surely "*Femsjonia luteoalba*" and not *Ditiola radicata* in the sense of Fries at least, whatever A. & S.'s figure may represent. While this figure is doubtful on account of its shape and large size, I believe that Fries correctly interpreted it and the French botanists have it wrong. Berkeley's record of *Ditiola radicata* "on fir" is the only one we have noticed in England and is probably the source of Smith's remarkable habitat, "amongst pine needles." Our figures are natural size and enlarged, the latter showing the different texture of the stem and hymenium on which the genus *Ditiola* is based.

Since the above was written we notice where Father Bourdot corrects his determination from *Ditiola radicata* to *Ditiola luteoalba*. The plant is not cogenetic with *Ditiola* in my opinion (being homogeneous) and while we have no doubt it is "*Femsjonia luteoalba*" it is embarrassing to use Fries' genus *Femsjonia* for Fries records the basidia as "globose. I have no doubt he was mistaken and that it is the same plant as *Guepinia femsjoniana* of Brefeld's paper and that its correct classification is *Guepinia luteoalba*. It is *Ditiola conformis* of Karsten, *Ditiola Ulicis* of English books. The genus *Femsjonia* might be maintained on the character of a superior hymenium as all other *Guepinias* have inferior hymenii. (Compare *Guepinia Peziza*, page 921.)

TREMELLA LUTESCENS FROM PROF. H. C. BEARDSLEE, FLORIDA (Fig. 1767).— Usually in the spring of the year a pale yellow *Tremella* comes on beech, oak and apple. This specimen, however, was on cedar. The color is paler than straw yellow of Ridgway. At first it is cerebrine (Fig. 1767) but when well developed more foliaceous, as shown in Fig. 1768 from Prof. Beardslee. Basidia usually abundant but immature in Beardslee's specimen, globose, 14 mic. and filled with yellow granular matter. Spores ovoid, apiculate, 6 X 8 mic.

Later in the season one finds a deep orange *Tremella* (*mesenterica*.) about the same form, spores and basidia but of much deeper color. I have seen it claimed that *Tremella lutescens* and *Tremella mesenterica* are seasonal forms of the same species. I can not say to the contrary but I do not believe it. We present a photograph of Professor Beardslee's specimens, one showing the cerebrine condition and the other an unusually well developed foliaceous state. Both are the same color.

TREMELLA MICROSPORA FROM MISS A. V. DUTHIE, SOUTH AFRICA (Fig. 1769).— Thin, soft, appanate-foliaceous, amphigenous, avellaneous in color. Basidia 16-20, hyaline, globose, imbedded, cruciate parted. Spores subglobose, $3\frac{1}{2}$ - 4 mic., hyaline.

From the general appearance we thought we were dealing with an *Auricularia* until we examined it. It is, excepting color, the shape of the "Jew's ear". The unusually small, abundant spores we thought must be conidial until we noted the basidia were ripe and surely they are basidial. Miss Duthie notes color when fresh as "cream, reddish in parts." The soaked plant very nearly matches avellaneous of Ridgway.

GUEPINIA SPATHULARIA FROM PROF. H. C. BEARDSLEE, FLORIDA (Fig. 1771).— We present (Fig. 1770) an enlargement of a young specimen showing the hymenium on one (the lower) side and that the plant is a typical *Guepinia*. Usually the plant grows more erect and the lower or upper sides are not so patent. The usual view that *Guepinia* may have its hymenium on the upper side is a mistake as pointed out in detail in our article on *Guepinia Peziza* (p. 921). Prof. Beardslee's Florida collection is such a well developed specimen of *Guepinia spathularia* that it is unusual in appearance and we present a photograph (Fig. 1771).

CYTIDIA SIMULANS FROM MISS A. V. DUTHIE, SOUTH AFRICA (Fig. 1772).— Discoid, concave, $1\frac{1}{2}$ - 2 cm. in diameter. Texture gelatinous. Surface uneven. Color pale brown. Upper surface white (when dry) with matted, hyaline hairs (under the lens.) Hymenium on under (?) side only. Basidia cylindrical, club shaped, thickened above, ends obtuse, about 6 mic. broad, probably imbedded but projecting, 12-16 mic. Sterigmata short. Spores long, straight or slightly curved, hyaline, $5 \times 10-22$, often with two small guttae. Conidial spores, rod-shaped, hyaline, straight, 1×8 . This is about the color, size and appearance of *Auricularia cornea* and there is a strong contrast between the upper and lower surfaces. These terms used in the description are assuming that it grew on the under side of a branch, which I have no way of knowing. In old days this would have been an *Exidia*, but classification of tremellaceous plants is now based on the basidia and these do not differ from the ordinary homobasidia, clavate, of the usual fleshy fungus. It is, however, an unusual type of basidia to be found in a truly tremellaceous plant.

EXIDIA BEARDSLEEI FROM W. C. COKER, NORTH CAROLINA (Fig. 1773) Sessile, cushion shape, gyrose, lobed. Color of a raisin. Flesh same color. Papillae none. Basidia globose, 8-10 mic. very pale

color. Spores hyaline, 5 X 10, slightly curved, unilateral, apiculate.

Were we to determine this from books we should call it *Exidia saccharina*, but we know this in Europe and it is not that species. The color might be compared to brown sugar but better to a raisin. We do not find it in Ridgway, but pecan brown is not far away. While it has no papillae we put it in *Exidia* on the spores. As previously stated the line between *Tremella* and *Exidia* is hard to draw. In general appearance this is rather a *Tremella*. The color is somewhat like that of *Naematelia nucleata* when old. It dried away leaving hardly a trace and it grew on frondose bark.

We published this in *Myc. Notes* No. 51, p. 898 as *Exidia Uva Passa* (in duplicate) having used the name (54, 774) for a plant from Japan. We are not sure that our American plant is different from the Japanese but it appears to us to have a more reddish color and smaller spores but it is practically the same.

ARACHNION SCLERODERMA FROM MISS A. V. DUTHIE, SOUTH AFRICA (Fig. 1774).— This is the second collection of this very distinct species forwarded by Miss Duthie. For a hundred years *Arachnion* was known from three or four so called species but practically only one, *Arachnion album*. But Miss Duthie has found two very distinct species that no one else has ever collected. *Arachnion Scleroderma* we now believe is not very well named. It has more the general appearance of a *Lycoperdon* than a *Scleroderma*. The cortex when old takes a scaly appearance suggesting the squamules of a *Scleroderma*, but when in good condition, as these specimens are, it is exactly the cortex of a *Lycoperdon*. We present (Fig. 1774) another illustration of this interesting species and also Fig. 1775 an enlargement of the cortex spines. Until Miss Duthie found this species the cortex of all *Arachnions* known was smooth.

PODAXON ANOMALUM FROM DR. J. B. CLELAND, AUSTRALIA (Fig. 1776).— This is really a new genus but we do not like to propose one on a single old half specimen in bad condition. Dr. Cleland found but a single old specimen and sent us half. It is intermediate between *Podaxon* and *Secotium*. It is a *Secotium* in general appearance but *Secotium* does not have powdery gleba. The dehiscence can not be told surely from the specimen but the peridium is soft and fragile and seems to flake off in the manner that *Cauloglossum* is said to dehisce. This is entirely at variance with any *Podaxon*. The columella, thick at the base, rapidly tapers and does not reach the apex of the peridium. This is another feature of which I know no similar case. The gleba is light brown, floccose, powdery. The microscope resolves it into pale yellow, globose or elliptical, smooth spores, 10-12 X 12-14 mic. which are mixed with abundant, hyaline hyphae fragments, apparently, the remains of the basidia. It does not have true capillitium. We place it provisionally in *Podaxon* on account of the gleba nature, and *Podaxon* is one of the few puff ball genera in which basidial remains are found in the gleba. This is a very exceptional and curious species and I hope our Australian friends will watch for further collections.

TYLOSTOMA MOHAVEI FROM PHILIP A. MUNZ, CALIFORNIA (Fig. 1777). Peridium uncolored (white) with a definite, circular protruding

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auth. Cortex of the nature of a sand case where it forms a persistent collar, separates, leaving the peridium smooth. Stem thick, pale slightly scaly, tapering to the base. Capillitium hyaline with swollen septa. Spores 5-6 mic., almost smooth. The work we do with fungi constantly presents paradoxical situations. We had just finished considering a *Tylostoma* from Geo. L. Moxley, California, and explaining why we would reduce the species of *Tylostoma*, and the next package we open from Philip A. Munz, California, causes to explain why we have to increase them. *Tylostoma Mohavei* was collected by Mr. Munz in the sands of the Mohave Desert. It is described in almost the same words as *Tylostoma McAlpinianum* from Australia excepting size, and size does not count for much in puff balls. And yet to my mind they are entirely different species, different in habits and appearance, as we believe our figure will show. The one on the left being *Tylostoma Mohavei*, that on the right, *Tylostoma McAlpinianum*.

TYLOSTOMA MONTANUM FROM GEO. L. MOXLEY, CALIFORNIA (Fig. 1778).— As named by Patouillard from Tunis, if one wants a separate name for it, but for me it is only an obese form of *Tylostoma squamosum* as named by Persoon from Europe a hundred years ago. It was collected in the San Gabriel mountains by Mr. J. A. Perkins and this was the first time this obese form was found in the States. When I wrote my pamphlet on *Tylostoma* (1906) I had narrow views of species and recognized five in Groups 2 and 3 with scaly stems. If I were revising them now I should probably make one out of the lot and that one the old species of Persoon of Europe, where it is as rare as it is with us. At the time I wrote the pamphlet an Italian had just come out with a paper claiming that species of *Tylostoma* could be differentiated by spore and capillitium characters. I did not place much stress on it then and I do not place any on it now. For instance, I thought our rare American species, *Tylostoma verrucosum*, could be distinguished from the rare European *Tylostoma squamosum* by the persistent cortex and not swollen septa. But as to cortex I suspect it is only a condition of age and as to septa, in examining Mr. Perkin's specimen (where the septa are rare) I found two. One was exactly even and the other was strongly swollen. In "puff balls" as all other fungi the more specimens we receive the fewer the "species" we have.

Since the above was written we have an additional specimen collected by O. M. Oleson, at Los Angeles, California.

XYLARIA LUTEOSTROMATA (Fig. 1779).— When we published this (Myc. Notes page 896, fig. 1572) we based it on a globose collection from the Philippines (Elmer 7217) which we illustrated. There was another collection sent us of entirely different shape, slender, club form (Merrill 10549) which we stated was probably the same species. At New York we found these same collections embracing both shapes and we are now convinced that *Xylaria luteostromata* takes both globose and club shapes. It develops that shape has not much to do with *Xylaria* species.

Xylaria luteostromata is characterized by its yellow stroma, otherwise unknown to me in a *Xylaria* and its small spores, 4-5 X 8 X 9. It is close to *Xylaria castorea* and belongs to the same group (Polymorpha) with solid stroma and non-meriform surface.

XYLARIA MUSCULA FROM REV. C. TORREND, BRAZIL (Fig. 1781 natural size and 1780 enlarged.) - Simple, 2-3 cm. long and about a mm. thick, with a short, black stem and tapering to an acute, sharp sterile apex. A section shows yellowish, pithy stroma, a black context covered with a white crust. Perithecia immature in these specimens but formed and the black ostioles protruding through the crust.

This came to me first from Rev. Torrend, Brazil (765) then I found it in New York, collected in southern Florida by Small (No. 6129). Both collections are immature but I feel it should have a name in our museum. It is a unique little species and not similar to any other known to me.

XYLARIA CITRINA. - This was named by Masee from the West Indies. We did not find the type at Kew but we did find it among the specimens sold by Masee to the New York Botanical Garden. We present, Fig. 1782, a photograph of the type and Fig. 1783 the wonderful picture Masee published of it in the Journal of Botany. It belongs to that large and growing section known as the "Myths of Mycology". A comparison of the figures needs no further comment.

XYLARIA RIDLEYI FROM JOHN GOSSWEILER, AFRICA (Fig. 1784). - We apply the same name to these collections (3) that we did to a previous collection from Mr. Gossweiler (Cfr. *Xylaria* Notes, p. 12, fig. 1223). We are convinced they are the same species although they present differences that we can not explain. Both have the same shape, same distinct stem, same marked white crust with black ostioles, same large perithecia, same spores, but in the former collection the stroma was all carbonous, not becoming hollow, separating from the perithecia so readily that they remain attached to the crust as shown in the figure. It is a fact that it is a *Penzigia* as we understand it. "These collections have a white, pithy stroma, disposed to become fuliginous when old but in some specimens entirely disappearing, leaving only the walls that are usually split. At the time we received the first collection from Mr. Gossweiler, we had only recognized it as one collection named from Malay by Masee. Since we have received seven collections from the Philippines where it is common, and was referred to *Xylaria grammica* (sic) by Sydow. Then we saw several collections from the West Indies in Wright's Cuban plants, named *Xylaria obovata* by Berkeley and from Guadelupe named *Xylaria obtusissima* by Patouillard. It does not agree with either according to our photographs of types, nor the descriptions, but surely such a frequent species had a name before Masee got it. The thick, white cuticle is a marked character and is retained even in old specimens. It is sometimes cracked in a peculiar way as shown in our enlargement, Fig. 1785. We feel the plant must have had names by the old names but we do not know what they are.

XYLARIA COMOSA FROM REV. JOHAN RICK, BRAZIL (Fig. 1786). - A nice collection that we figure though we have considered and illustrated the plant before. (Cfr. pp. 726 and 895, figs. 1086 and 1565). These specimens are strongly marmorate which was the basis on which Spegazzini named *Xylaria tigrina*, which is surely the same as *Xylaria comosa*. Also we are inclined to think Theissen was right in referring here *Xylaria collabens*, which from a close reading of the original of Montagne appears to be an old, hollow, globose state, as the

author suspected. We did not locate the original at Paris and it is difficult to refer Montagne's globose, smooth specimens as figured to *Xylaria comosa*. However, I now think that is correct although I have puzzled over the question many times without reaching this conclusion. I never saw *Xylaria comosa* when it was either hollow or smooth. We present in Fig. 1786 a photograph of these fine specimens and the surface enlarged.

XYLARIA TENTACULATA (Figs. 1788 and 1791 enlarged sixfold and Fig. 1787 conidial state, natural size).— From Miss Mary Fitzgerald, North Carolina, I received several years ago a single *Xylaria* head which I suppose belongs to *Xylaria tentaculata* as described by Berkeley from North Carolina and Cuba. I also received from her several conidial collections (Fig. 1787) but did not connect the two. At Kew I found only the conidial form but it is evident to me that Berkeley, from his description, had also the mature form. One would hardly connect the two and I did not until I noted that one of Atkinson's students had developed the fertile plant from culture. *Xylaria tentaculata* is usually only collected in the conidial form. I have several collections from Miss Fitzgerald, and I did not find the ascus state at Kew or in any other European museum. It is known only from our southern states and from Cuba and is rare. It occurs however strange to say, at Ithaca, N. Y. In Grevillea, Berkeley cited it as "Rav. Ms." and in Cuban list as "Berk. & Broome", which is an example of the value of his advertising scheme. Ravenel referred it, as evidenced by a specimen he sent Ellis, to *Xylaria comosa*, which species, however, has never been collected in the United States.

XYLARIA CONFUSA (Fig. 1789).— This was named and figured from Brazil by Starbäck. It was collected in Cuba by Wright and referred by Berkeley to *Xylaria tentaculata*, an evident error, as it is branched in a different manner. It is only known from the conidial state.

XYLARIA PENICILLA (Fig. 1790).— A species evidently related to the preceding two and only known from a specimen (Johnston 930, Porto Rico) at New York, has a close resemblance to a camel's hair brush. Our figure, 1790, natural size, will enable it to be recognized if found again.

XYLARIA LONGIPES FROM MR. JOHN GOSSWEILER, AFRICA (Fig. 1792).— This is not exactly the same as the European plant, but close. The stipe is thicker, the surface is smoother and the spores 6×10 are smaller than the European longipes, 8×16 . We should prefer not to name it as different on one collection. It belongs to the polymorphous group with solid stroma.

KRETZSCHMARIA BOTRITES FROM T. F. CHIPP, SINGAPORE (Fig. 1793).— We gave in our Large Pyrenomycetes pamphlet, page 18, figures of all the Kretzschmarias but nothing like this. Growing caespitose with long (2-3 inches) black, much branched, matted stipes. Heads globose, medium, separate and distinct. Perithecia large, few 2-3 in a head, imbedded in a carbonous stromata. Ostioles minute. Spores large, 10×4 with rather obtuse ends. In a general way

this may be likened to a bunch of grapes. It differs from the usual *Kretzschmaria* in its large size, few perithecia, globose (not flattened) loose heads. The species it most closely approaches is *Kretzschmaria cetrarioides*.

POLYPORUS RHIZOMORPHAE FROM S. R. BOSE, INDIA (Fig. 1794).- A comparison of our figure (1794) with the figure of this plant in its normal form (*Stip. Polyporoids*, p. 128, fig. 425 as *Polyporus scopulosus*) would indicate that our reference is improbable. But a comparison of the specimens seems to me they are exactly the same species. This is the first dimidiate specimen I ever saw although the plant in its usual stipitate form is not rare in the Philippines. In our pamphlet the plant is called *Polyporus scopulosus*, as named by Berkeley from one old specimen, the surface of which had become rough from weather exposure and it is the only specimen I ever saw that was "scopulose". We decline to continue to apply a misname to a plant, acquired through its author's ignorance of its natural state, and particularly in this case where the plant was well named and well illustrated by Reichardt.

POLYSTICTUS SUBCAPERATUS FROM DR. J. B. CLELAND, AUSTRALIA (Fig. 1795).- Effuso-reflexed with pileus an inch or more broad. Color dark brown, the margin in these paler. Surface appressed, fibrillose. Context thin, brown. Pores medium, round, 5-6 mm. deep, concolorous. Cystidia none. Spores 6 X 12, cylindrical, straight, hyaline, smooth.

I rather suspect this is only a form of *Polystictus caperatus* but I have compared it with many collections of *caperatus* and it differs from all in the larger, long pores. *Caperatus* has minute pores usually 1-2 mm. deep and white mouths. It goes in Section 119.

POLYPORUS (GAN.) ALBOCINCTUS FROM JOHN GOSSWEILER, AFRICA (Fig. 1796).- While we have not seen the original of this name, coming from the same region and answering the description fairly well, we feel justified in taking the name. Only one specimen was collected by Mr. Gossweiler and that as shown in our figure is considerably smaller than described (5-8 cm.). We do not think it is happily named for the white margin in the species is only where the white pores slightly exceed the pileus. Similar in size and shape to the old *Polyporus amboinensis* figure, which belongs to the *lucidus* section with laccate surface, for me this would better be classed in a stipitate section corresponding to *Fomes applanatus*. It has similar color, spores 8 X 10, truncate, smooth, context color, pore mouths (white). The only similar stipitate species we know are *fasciatus* and *gibbosus* (Letter 55, Fig. 627) and these are both evidently *Fomes*. The specimen has a long, dull, olive stipe (8 inches) and is only partly shown in our figure. This is the first specimen of the species we have seen.

TRAMETES TRANSMUTANS FROM T. F. CHIPPI, SINGAPORE (Fig. 1797).- A single half specimen of this was sent and it is evidently rare and sporadic. We look upon it as a large, thick-pored form of *Trametes lactea*, and *Trametes lactea* we consider a trametoid form of *Lenzites repanda*. In its color, texture, surface, form, size, thickness and every feature excepting the hymenium, *Trametes transmutans* is the same as *Lenzites repanda*. This specimen has some reddish spots on the pileus and *Lenzites repanda* sometimes takes these same spots. The pores are all round, shallow, about 1 mm. in diameter, with thick walls and

of regular arrangement in lines (Fig. 1798 enlarged). In fact, if one closely observes them the lamellate arrangement is evident. While we can not state that *Trametes transmutans* is a derivative of *Lenzites repanda*, we believe it to be. The naming of these sporadic, hymenial forms is not of much importance excepting as a museum convenience.

TRAMETES LACTEA (Fig. 1799 and Fig. 1800, pores enlarged).— In connection with *Trametes transmutans* from Malay we present a photograph of *Trametes lactea*, which is common in American tropics and which for me is a trametoid form of *Lenzites repanda*. These three plants agree in every character excepting hymenium, and while the hymenii are so different that they hardly suggest the same species "species" are only individual opinions.

There is a related species, "*Daedalea flavida*", common in the East that seems never to produce two individual specimens of exactly the same hymenial form, and while 23 different "species" have been discovered in six different genera, I can see in the whole lot but one species.

POLYPORUS ANGOLENSIS FROM JOHN GOSSWEILER (Fig. 1801).— Pileus 3-4 inches by 6-8 mm. thick, white, suborbicular, to a reduced base. Surface smooth, dull with no crust. Context white, 3-4 mm. thick, very light weight and fragile. Pores medium, somewhat irregular with tissue white or very slightly darker. Cystidia none but irregular crystals on the hymenium. Spores about $2\frac{1}{2} \times 3\frac{1}{2}$. The light weight of this species reminds one in texture and appearance of that of *Polyporus sulphureus* but it has no coloration. We would enter it in Section 87 though its affinities, excepting in manner of growth, are close to *Polyporus sulphureus*. As it is attached by a reduced base it might be sought in Section 12. A name indicating light weight would be best for it but they all seem to be in use.

POLYSTICTUS RARUS (Fig. 1802).— I found in the Clinton herbarium a *Polystictus* unnamed which came from Ravenel which I had not seen before, and certainly is entitled to be named as rare. I did not see the plant in Ravenel's own herbarium.

Entire plant unicolorous, approximates buckthorn brown of Ridgway. Pileus orbicular, thin, to a reduced base. Surface glabrous with raised zones. Pores medium, concolorous, shallow.

The relatively large pores suggest *Polystictus pinsitus*, the color, *Polystictus rigens*. We would enter it in Section 22b but it does not fall naturally into any section that we proposed.

POLYPORUS THEOBROMAE FROM T. F. CHIPP, SINGAPORE (Fig. 1803). We do not know to be sure but we believe this to be the mature *Polyporus* development of *Echinodia Theobromae*, considered on page 934, Fig. 1704. If so, the stilboid hairs have been transformed into ordinary, tawny, velutinate hairs. But the pores are the same large, flaccid pores of *Polystictus aculeifer*, the same in every respect to the eye and under the microscope. This is not a coincidence. We can not claim they are the same plant but there is some connection between this plant, *Echinodia Theobromae* and *Polystictus aculeifer* that we do not understand. We hope Mr. Chipp will make observations on the subject and clear up the mystery. We present (Fig. 1803) an enlargement of *Polyporus Theobromae* and (Fig. 1804) an enlargement of

1. The first part of the document
describes the general situation
of the country and the
state of the economy.
It also mentions the
main problems that
the government is facing.

2. The second part of the document
describes the measures that
the government has taken
to solve these problems.
It also mentions the
results of these measures.

Polystictus aculeifer.

POLYSTICTUS ACULEIFER FROM T. F. CHIPP, SINGAPORE (Fig. 1805).
I can not say surely for no pores are developed but I believe on comparison it is a young specimen. If so, it is the first time it has been collected outside the American tropics. At first it appears to be a *Hydnum* but I am confident if its development is watched it will be found to develop pores. An account and poor figure was given in *Myc. Notes*, No. 61, p. 877, Fig. 1498. We present in our Fig. 1804 an enlargement of *Polystictus aculeifer* showing its large, flaccid pores and peculiar conidial bearing hairs. This enlargement was made from a specimen from Rev. Rick, Brazil. *Polystictus aculeifer* is not surely known excepting in the American tropics but we believe we have young specimens from Malay and from the Philippines.

POLYSTICTUS HYPOTHEJUS FROM JOHN GOSSWEILER, AFRICA (Fig. 1806)
This, named from Australia, is quite close, practically the same as *Polystictus expansus*, and both are too close to *P. pinsitus* of the American tropics. *Polystictus hypothejus* differs from *P. expansus* (Cfr. *Myc. Notes* p. 941, fig. 1738) a thicker plant, the pores reddish as shown in Kalchbrenner's figure. We have refused to use the name before, but we need a name for this collection.

TRAMETES TRICOLOR FROM PROFESSOR A. YASUDA, JAPAN (Fig. 1807).-
For me the trametoid form of *Lenzites tricolor* but the first collection I have seen. Same texture, thickness and color. In this connection, it is curious that *Lenzites tricolor* of Europe occurs in Japan, but not as far as known in the United States. The name does not impress us as having much application for the dried plant at least is quite uniform in color, deep reddish brown.

POLYSTICTUS ACULEANS FROM T. F. CHIPP, SINGAPORE (Fig. 1808).-
One may hunt the museums of Europe over and find but one collection of this most peculiar species which came from Brazil (Spruce) and was named by Berkeley in 1856. It can not be mistaken from our figure which was made from the type at Kew. Saccardo referred here a plant as a variety, from Malay, which I have not seen but from the description in my opinion can not even be a variety of this.

Polystictus aculeans has a peculiar surface, zonate and covered with appressed, coarse fibrils, not well designated originally as "aculei". The context is deep brown. Pores minute with concolorous tissue but white mouths. Spores I do not find. It is quite close to *Polystictus caperatus*. Is it not strange, illustrating the sporadic occurrence of fungus species, this plant which was found in Brazil sixty-five years ago was re-collected for the first time by Mr. Chipp in Malay only last year.

POLYPORUS ANEBUS FROM T. F. CHIPP, SINGAPORE.- This species, frequent in the Eastern tropics, varies as to thickness and color of context from yellow to brown, according to age of specimens it appears to me. The collection notes are "upper surface chestnut-brown. Pores smoky grey." A very thin, proliferous form (Fig. 1809) was among the first foreign fungi named by Persoon and figured (1826) in Gaudichaud's *Voyage*. The type is still preserved at Paris. Persoon called it *Polyporus serpens*, which as Fries did not compile neither did Saccardo

even in his Icones volume. Since it is contrary to the laws promulgated by our learned "law-makers" to recognize Persoon, we presume it is too late to dig up the name. Nor would it be advisable if it were legal for the "serpentine" arrangement of one specimen does not make a species. We do not see, however, how Mr. Murrill who worships only the "sacred rights of priority" should not have used it, excepting perhaps he did not know the species when he saw the specimen at Paris. We present, Fig. 1809, a photograph of Mr. Chipp's specimen which is in close accord with Persoon's figure.

POLYPORUS (GAN.) OPACUS FROM JAS. R. WEIR, CUBA (Fig. 1810).- This is the fifth collection known and the first we have received of this peculiar and rare species. Montagne named it from Brazil in 1849 but neither Spruce nor Uhl nor Rick nor Torrend nor any of the recent collectors have refound it in Brazil where it must be wonderfully rare. However, four collections have been made in the West Indies. One at Paris and this one from Dr. Weir from Cuba and one from Porto Rico and one from Jamaica at New York. It is a true Ganodermus section notwithstanding its mat surface and peculiar spores which are more strongly asperate than any other of the section or any other Polyporus for that matter known to me. We gave an account of the plant on page 106 of our Stipitate Polyporoids. The specimens at Paris have been sliced and did not make good photographs. Dr. Weir's specimen is mashed and the two beautiful collections at New York we neglected to photograph. Hence we present a figure of the Cuban collection at Paris which is not satisfactory.

Notwithstanding this most strongly marked species can not be confused with any other, Mr. Murrill failed to note it on his fugitive trips to Paris and discovered it was a "new species", *Polyporus flavoporus*. He put it in the section *Amaurodermus*, and it is not the only case where he has failed to grasp the recognized difference between the sections *Amaurodermus* and *Ganodermus*. Dr. Weir's specimens "grew on a tree trunk" at Guantanamo, Cuba. I was under the impression that the species grew in the ground.

POLYPORUS (GAN.) LEUCOCREAS FROM T. HUNTER, TROPICAL AFRICA (Fig. 1811).- With very much the aspect of *Polyporus lucidus* this impresses me now as quite different, although when I saw the type I thought it was *Polyporus lucidus* with pale context. It is a small species with the laccate surface of *lucidus*, a slender, mesopodial stipe and white context and very pale spores. The spores, 6 X 8, were described as lightly punctulate but they appear to me decidedly rough, though Atkinson claimed that the rough spores of *Ganodermus* section were an optical delusion. We believe from our photograph and the character of the white context there will be no trouble in recognizing this species in future. It was named as *Ganodermus leucocreas*, hence for those who use *Ganodermus* as a sectional name it becomes a duplicate in *Polyporus*, there being a *Polyporus leucocreas* proposed by Cooke. As it is a synonym, however, there will be no further use for it excepting as a bar to again use the name according to that exceedingly useful rule (for name jugglers) "once a synonym, always a synonym".

LASCHIA SIMILIS FROM T. F. CHIPP, SINGAPORE (Fig. 1812, natural size and Fig. 1813 enlarged sixfold).- When I first soaked

this out I thought it was a diminutive specimen of a diminutive species, *Polyporus pusillus*, as named by Persoon or *Polyporus rhizidium* as always known to Berkeley. When I sectioned it I found it was a true *Laschia* with homogeneous, gelatinous context. The common little *Polyporus pusillus* was considered in detail in our *Polyporoid* Issue No.2, page 22, fig. 260E. It is very similar to this plant but a section shows the context (fleshy) of large hyphae, 5-8 mic. in diameter, not the slender (1-1½) hyphae of a gelatinous tissue. Minute, growing on bark. Stipe lateral, reddish, 1-1½ mm. long. Surface smooth, reddish. Context white, gelatinous with slender, homogeneous hyphae. Pores minute, round. A section shows the hymenium darker than the tissue. Spores subglobose, hyaline, smooth, 3½-4 mic.

This has neither color glands nor cristated cells found in most species of *Laschia* and is the second that has reached me so characterized (Cfr. *Laschia Chippii*, page 908, fig. 1606).

LENZITES BECKLERI FROM DR. J. B. CLELAND, AUSTRALIA (Fig. 1814).- In the last book he published Fries defines *Lentinus* as having "gills membranaceous, lacerate-dentate" and *Lenzites* with "gills coriaceous with acute edges", but here we have a *Lenzites* with dentate gills and Dr. Cleland sends another specimen of the same collection with even gills. Our definitions and ideas of genera must all be elastic and subject to correction as we get more light on them. Fries' last definition of *Lentinus*, however, does not cover the greater part of the tropical species classed as *Lentinus*, including quite a number that were named by himself.

We are getting different collections of *Lenzites Beckleri* from Australia now until the species is beginning to clear up. The essentials are a rough, uneven surface, glabrous but not smooth, white context, yellowish, distant gills. The gills are usually even as shown in our figure, page 806, but the specimen we now figure has dentate gills.

The early American namers applied a dozen different names to *Daedalea confragosa* but everyone is in accord now that they are all one species. The early namers (mostly Berkeley and Léveillé) named *Daedalea flavida* of the East twenty-three different names in six different genera, all the same species in my opinion. *Lenzites Beckleri* is not rare in Australia. We can see now that what we referred to *Lenzites unguiaeformis* (Myc. Notes No.58, p.811, fig. 1265) is the same thing. Also we suspect that what we recently called *Lenzites albolutea*, from Java (p. 879 fig. 1502) is not specifically different, notwithstanding its vast hymenial difference.

POLYSTICTUS SUBOCCIDENTALIS FROM S. R. BOSE, INDIA (Fig. 1815) with no suggestion of *Polystictus occidentalis*. Masee published a *Polystictus* from India as *Polystictus albidus* which as to description is the plant (excepting a few discrepancies.) I have a note - "no type found", also another note - "equals *Trametes cingulata*" so I may have found it. As *Polystictus albidus* was a duplicate Saccardo changed it to *Polystictus suboccidentalis* which was an unwise thing to do on the face of it. No plant with white context is any "sub" of *occidentalis*. While the matter is very doubtful, we so label the specimens for the name is as good as many in use and as bad as could be suggested. It goes in Section 105.

POLYSTICTUS BYRSINUS FROM JOHN GOSSWEILER, AFRICA (Fig. 1816). We prepared a cut of the plant, thinking at first we would be under the necessity of naming it. We have never noted it before excepting in the American tropics, but on comparison we find the African plant exactly the same. The features of the species are the light, puffed context and the very minute, punctate pores. Our figure 1816 will give a good idea of the plant and Fig. 1817 of the pores enlarged sixfold.

LENTINOID FAVOLUS BRASILIENSIS FROM S. RAPP, FLORIDA (Fig. 1819).— Our first impression when we saw this collection was that it was a *Lentinus*, but we have no smooth, white *Lentinus*. When I came to consider it closely it is certainly only a lentinoid form of our southern white *Favolus Brasiliensis*. If you will compare with the normal form our figure given in Pol. Issue, p. 20, the identity will be evident. Beginners might have trouble to realize the identity of such hymenial variations but familiarity with species brings one to recognize these unusual forms. We present, Fig. 1818 the normal form and in contrast Fig. 1819 the lentinoid form from Mr. Rapp. *Favolus* is intermediate between the Polypores and the agarics, but it is rare that specimens take these decided agaric forms.

SARCOXYLON AURANTIACUM FROM PROF. T. PETCH, CEYLON (Fig. 1820).— While we know this only by what was published, we do not doubt it but think it was not happily named. The color of the dried specimen is reddish brown (auburn, Ridgway) and to our eye it is not orange at all. However, it was described as *aurantiacus*, red, orange or ochraceous and from the description had as many shades of color as a chameleon. When soaked up it is about the color of *Polyporus lucidus*. Prof. Petch advises me this is the plant on which Berkeley's record of *Sarcoxylon compunctum* was based. It is surely a very different plant from our idea of *Sarcoxylon compunctum* (Cfr. Lge. *Pyrenomycetes* p. 28, fig. 1458.) The "genera" *Sarcoxylon*, *Glaziella*, *Penzigia*, are in a bad mess and until the originals are hunted up and learned the least said about them the better for they are apt to be wrong. The context is fleshy orange yellow when soaked but it dries hard. The surface of the dried plant is convolute, lobed, but when soaked is more even as shown in our photograph. None of these specimens are "hollow" as originally figured, although the flesh splits in drying. This is the third species of *Sarcoxylon* to reach us and we are not at all sure that we have their history straight.

POLYSTICTUS LUTEO-AFFINIS FROM JOHN GOSSWEILER, AFRICA (Fig. 1821).— Intermediate plants of the section *Microporus* are hard to name and this is just between *luteus* and *affinis*. It has the thick, pale pileus and short stem of *luteus* but the stem is black as in *affinis*. In addition to the yellow stem *luteus* is usually a thicker plant than *affinis*.

POLYSTICTUS BICOLOR FROM T. F. CHIPP, SINGAPORE (Fig. 1822).— Small, about a cm., growing broadly, attached to the host and developing a little, conchate pileus. Texture soft. Context white. Surface smooth, brown, contrasting with the white context. Pores small, decurrent, pale yellowish. Cystidia none. Spores minute, globose, 2 mic. but may be only conidial spores.

This is a little conchate plant growing on bark. In coloration it reminds one of *Stereum bicolor*. It goes in Section 105.

CAMPANELLA BUETTNERI FROM O. VAN DER BIJL, SOUTH AFRICA (Fig. 1823).- When we wrote our article on *Campanella* (Myc. Notes p. 815) we referred this as a synonym for *Campanella cucullata*. We had only seen the specimens in alcohol at Berlin and had not examined the spores. The specimen from Mr. Van der Bijl has different spores (4 X 8) from *Campanella cucullata* and we assume it is Hennings' species from Africa. There is also a difference in the appearance of the plant as shown by a comparison of our figures. The enlargement (Fig. 1824) will give the best idea of the species.

MASSEERINA CARTILAGINEUS FROM T. F. CHIPP, SINGAPORE (Fig. 1825).- This plant was named *Cladoderris cartilagineus* by Masee but it has no suggestion of or relation or resemblance to a *Cladoderris*. It seems to me to have a very peculiar structure but I do not feel sure about it and will wait further specimens before saying much about it. In the meantime we have labeled the specimen as above.

POLYPORUS CYSTIDIDOIDES FROM T. F. CHIPP, SINGAPORE (Fig. 1826).- Pileus thin, sessile, three or four inches in diameter with a zonate reddish brown crust. Context apparently none, the pores reaching the crust. Pores minute, round, yellow, 3 mm. deep. Color of pore tissue dried is chamois, of the mouths old gold. Imbedded in the pore tissue are large, thick, ligneous, subhyaline hyphae, 8-10 mic. thick, which curve and project in the hymenium 40-60 mic. They are pale colored, thick-walled and sharp and remind me of similar bodies in the tissue of *Fomes pachyphloeus* (*Fomes* Syn. Fig. 800) excepting that these are pale almost hyaline and those of the *Fomes* are deeply colored.

The fresh plant was noted as "bright yellow-red" and grew on bark. In general appearance except color the plant reminds me of *Polyporus lignosus* but I know no other *Polyporus* with such structure. (Collector, Sappan, 5357.)

HYDNUM DURIUSCULUM FROM T. F. CHIPP, SINGAPORE (Fig. 1828).- The unnamed fungi should be described by the collectors from fresh specimens for many change in drying so that the usual description has no suggestion of the fresh plant. This plant when fresh is "cream color" but the dried specimen has darkened until it is dark brown, almost black and has probably hardened for it is now stiff, rigid and hard. It now resembles a piece of *Polyporus giganteus* which changes in the same way in drying. The pilei are reduced to the base and grow imbricately "in clusters of horizontal brackets." The spines are small and at first view would hardly be taken for a *Hydnum*. The spores I do not find with certainty. The best description of the plant is that it is the same as *Polyporus giganteus* but a *Hydnum*.

HYDNUM MALIENSIS FROM T. F. CHIPP, SINGAPORE (Fig. 1829).- Pileus thin, fleshy, depressed with a mesopodial stem. Color when dried dark with a slightly greenish cast. Spines lighter color. Surface glabrous, zoned. Spores globose, 5-6 mic., hyaline, smooth. It grew on ground (No. 5096) and the color when fresh was

"grey with darker zones". The color of the dried plant with a faint greenish cast was associated by us with only two species, *Hydnum Blackfordae* and *Hydnum geoginum*. It can be neither of these.

HYDNUM FERREUS FROM T. F. CHIPP, SINGAPORE (Fig. 1830).— This was sent to me in slices and it is of different texture from the fleshy *Hydnums* of temperate regions. I thought it would soak up gelatinous but it did not. The color of the dried plant and spines is that of iron rust, but the collection notes are "yellowish, salmon above, dirty cream below." It evidently changed in drying. Pileus mesopodial as shown in our figure, which however, is of a slice pressed flat. Spores are globose, 4 mic., hyaline and appear minutely rough. Basidia I do not make out. I am satisfied it is not a European species nor does it agree with any of the few foreign species I have noted in the museums. It grew on ground in the Garden jungle and was collected (188) by Ethel M. Burkill. I hope to receive additional specimens, not sliced, and notes on its texture when fresh. Also microscopical notes on the fresh basidia would be of interest for it may not have clavate basidia.

HEXAGONA ANGULATA FROM T. F. CHIPP, SINGAPORE (Fig. 1831).— Pileus thin, rigid, smooth, unicolorous, buffy brown of Ridgway. Context thin, same color. Pores rigid, shallow, angular, concolorous, arranged in lines and with walls prolonged in points, rough to touch. Setae none. While this belongs to the section *Tenuis*, it presents a type of pore not known to me in any other species.

POLYPORUS ATER FROM T. F. CHIPP, SINGAPORE (Fig. 1832).— Stipitate with a lateral, black stipe. Surface rugulose, dull, black. Context pale grey with fuliginous tint. Pores minute, black (when dry) but collector's note is - "Pores, surface white." No basidia, cystidia or spores found.

We would enter this in Section 10 (*Lignosus*). It is the first really black *Polyporus* I ever noted excepting *Polyporus Preussii* which Hennings named from Africa (Cfr. *Stip. Polyporoids*, page 124). Although *Polyporus Preussii* has a mesopodial stipe the general description is similar to this, and we would be disposed to so refer it but we have a little piece of the original and a comparison shows they are not the same.

POLYPORUS ELEGANS FROM PROF. L. H. PENNINGTON, NEW YORK (Fig. 1833).— The old time mycologists who took themselves seriously and thought Nature cast species in molds, are as extinct as the dodo. For one of these old fellows this would be a "new species," surely. The surface of this collection has thorn-like protuberances but why I do not know. I have over a hundred collections that do not have them and where the surface is as smooth as a pane of glass. In this connection - Is *Polyporus elegans* deterrent-velutinate when young and growing? I do not know that it is always so but I do know that the only time I ever found it young and growing it was velutinate (Fig. 1834) and when dried it was as glabrous as a billiard ball. We present also (Fig. 1835) the usual dried specimen as it comes to me generally. *Polyporus varius*, common in Europe, very rare with us is the same plant as *Polyporus elegans*, excepting size. Size is usually

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of not much "specific value" for intermediate plants usually occur so it is not practical. But in this case I think both are "good" species. Very many collections of both are in our museum and not one intermediate. This will no doubt be a shock to the "closet naturalist" who can not see a difference perfectly obvious to eyes, so long as the difference is not so minute as to only be seen with the microscope.

LENZITES REPANDA FROM E. D. MERRILL, PHILIPPINES (Fig. 1836).- We present a photograph of two specimens of the same collection (Wenzel 140). One is thick with daedaloid gills, the other thin with crenate, lenzitoid gills. The first is the usual type of this common plant, the second a variation of the same collection. Is it any wonder that *Lenzites repanda* masquerades in Philippine lists under several different names?

PTYCHOGASTER NIGER FROM DR. G. ZENKER, WEST AFRICA (Fig. 1837). - What curious things grow in Africa in the fungus line! *Ptychogaster* are supposed to be abnormal developments of *Polyporas* but I am sure I never saw a *Polypore* from which this could possibly be derived. My first impression was that it was a *Polystictus* with very minute pores and very curious in being black and soft. When sectioned I found the pores were obliterated if it ever had pores, which is only a theory as to *Ptychogaster*, but the tissue supposed to be metamorphosed pores is well defined from the context. This (pore?) tissue consists of pale colored, thick hyphae, 8-10 mic. thick, bearing throughout large, globose, pale colored spores, strongly echinulate and 8-10 mic. in diameter (Fig. 1838 magnified). The hyphae of the context tissue is more slender, loosely matted and does not bear spores. From all our previous ideas of *Ptychogaster* this differs in many ways. While indications of pores are seen on a fracture they do not show on a section. The pore hyphae bearing the spores does not disorganize as usual and the spores are firmly attached. Often in *Ptychogaster* the tissue is very scanty and the spores form a powdery mass. And in addition it is the only truly black polypore I can recall. The specimen is attached to the branch by a broad base and seems to clasp the stem, as shown in the figure, though it is soft and flexible and no doubt part of this clasping effect is due to wrapping it for shipment. The branch on which it grew is apparently a living branch, very hard wood, not at all affected by any rot. Is the fungus epiphytal? A view contrary to all ideas of fungal nature.

XYLARIA SUBTERRANEA FROM PROF. L. H. PENNINGTON, NEW YORK (Fig. 1839).- Clubs cylindrical, slender, acute, usually growing a few together from a somewhat pannose base, simple or with a few long branches. Perithecia strongly moriform. Spores 7 X 14-16.

This is a rare species, or at least is rarely collected, and was first sent to Schweinitz by Dr. Torrey. Originally it came from timbers in a well, hence the name, and it seems to grow on wood that is kept wet. But it is not well named if it did grow in a well and one might as well so name a fish that was caught in a well. The Torrey specimens, as illustrated by Schweinitz, are immature. They are still preserved at Philadelphia. In addition Rau found it on wet logs of a pump and sent it to Ellis (Exsicc. 771.) Shear (Exsicc. 331, Fig. 1839) on a log in edge of a brook and Prof. Dearness sent it to Ellis. The collection from Prof. Pennington is therefore the fifth only I have

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seen and the first I have received. Specimens in the museums of Europe labeled "*Xylaria gracilis*, Braendle mss." are no doubt the same thing. Our illustration is from specimens distributed by Shear which are more slender than those from Prof. Pennington. The latter have a resemblance to *Xylaria Cornu damae* but not so black, thick and spores are much smaller.

PTYCHOGASTER VERSISPORUS (Fig. 1840).— The curious fungus that we received from Prof. Umenura, Japan, and published with a photograph in Letter 56, Fig. 150 has been observed by Professor Yasuda as it grows and found to be not a *Calvatia* as I provisionally classed it when received but a *Ptychogaster* form of a *Polyporus*. While Prof. Yasuda has not succeeded in arriving at the normal *Polyporus* state, until this has been worked out the plant had best be known as *Ptychogaster versisporus*. We present in Fig. 1840 a photograph that has been made of the underside of the specimen, showing the evident traces of abortive pores, thus fixing its place and classification. Most curious things turn up in the shape of *Ptychogasters* but this is the first one that could be confused with a *Gasteromycete*. We have not seen Prof. Yasuda's specimen but we have little doubt that he has correctly interpreted it.

POLYPORUS DORSALIS with a compound stem FROM E. D. MERRILL, Philippines (Fig. 1841).— The tropical form of *Polyporus lucidus* and related species have a tendency at times to produce branching stems as shown in Fig. 1841. This is unquestionably an endeavor to produce a second pileus, but do they ever succeed? We have seen a number of specimens with branching stems but we never saw one that had succeeded in producing two pilei, and it is relatively rare that a plant makes the attempt.

POLYPORUS DORSALIS FROM E. D. MERRILL, PHILIPPINES (Fig. 1842).— As illustrating the difficulty of considering polypores on shape and stipe characters we present a figure of four specimens of the same collection (Ramos 36418) made in the Philippines and unquestionably the same species. The specimen of the left is exactly the same plant as referred to *Polyporus lingua* by Montagne and so considered in our pamphlet. The three on the right are called by us *Polyporus dorsalis* from the stipe insertion. All of them are in reality only species forms of *Polyporus lucidus*. There are a host of so called "new species" in the tropics, all better referred to the European species.

ISARIA CORNEA FROM JOHN GOSSWEILER, WEST AFRICA (Fig. 1843).— Quite a number of *Isarias* have reached me but none suggestive of this. It consists of simple, brownish clubs of a horny consistency and reminds one somewhat of *Calocera cornea*. The spores are globose, hyaline, 4 mic. and are borne directly on the hyphae of the clubs. As often stated, named *Isarias* are only a convenience in the museum.

POLYSTICTUS CUNEATO-BRUNNEUS FROM E. D. MERRILL, PHILIPPINES (Fig. 1844).— Pileus reduced to a sessile base, cuneate, Mikado brown, smooth, glabrous. Context pale isabelline. Pores minute, shallow, with mouths similar in color but some paler than the pileus.

Based on Yates 36187 from Isabella, Basilan Island, Philippines. To the eye similar to *Polyporus maliensis* but context different color. It is also close to *Polyporus bruneolus* but thinner and different context color. We would enter it in Section 15.

POLYSTICTUS PALLIDUS FROM T. F. CHIPP, SINGAPORE (Fig. 1845). Pileus orbicular or flabelliform with a short, lateral stipe which is black at base only. Surface glabrous with raised zones, pale ochraceous buff, in some specimens with portions colored deeper reddish brown. Pores minute, creamy white.

This belongs to section *Microporus* (23) and our photograph could be taken for *Polystictus luteus* with which it corresponds excepting in color. There is an indication only of the deep chestnut brown color which is so familiar in *Polystictus affinis*, *Polystictus xanthopus* and similar species and which Fries called *fulvus-badius*.

RHIZOMORPH FROM E. D. MERRILL, PHILIPPINES (Fig. 1846).- Aerial rhizomorphs are not rare in the tropics but they are usually slender thread like and often produce little *Marasmii*. Professor Petch recounts a species of *Xylaria* that produces "horse hair" rhizomorphs of Ceylon. What is the source or rather the product of this conspicuous, large, black rhizomorph of the Philippines we do not know. A similar rhizomorph in northern South America produces *Polyporus Rhizomorphus* (Cfr. *Stip. Polyporoids*, p. 182, Fig. 479). We trust the Philippine collectors will watch out for a fruiting fungus on these rhizomorphs. Of course we can not say it will be *Polyporus rhizomorphus* but we anticipate it will for the rhizomorph is exactly the same. It is curious the way the rhizomorph adheres to the wood with a discoid, carbonous base (Ramos 36455).

POLYPORUS ACERVATUS FROM T. F. CHIPP, SINGAPORE (Fig. 1847).- Pilei thin, brittle, pale creamy white, 3-4 inches in diameter, 4-5 mm. thick, laterally stipitate with short thick stipe. Surface glabrous, smooth, faintly lined. Context thin, 1-2 mm., brittle, white. Pores small, rounddecurent on the stem. Cystidia none. Spores small, globose, 3 mic., hyaline.

It grows on dead wood, densely caespitose and concurrent. In a general way it represents the caespitose form of *Favolus brasiliensis*. The surface is very faintly lined but its natural position is in Section 18 next to *Polyporus grammocephalus*. It was not suggested to us until we had this in type that this may be the same as *Polyporus angolensis* (Fig. 1801) but the pores are larger and our spore records are not the same. The plants are very close.

POLYSTICTUS ACULEIFER FROM E. D. MERRILL, PHILIPPINES (Fig. 1848).- The only specimen that has come in from the Philippines is doubtfully referred to the above species. It is young and the pores are just beginning to develop, mere reticulations. However, with the large pores and peculiar hairs there is little doubt of its reference. We are fairly well acquainted with this plant in the American tropics, fine collections being at New York. Recently we received what we think is the same from Malay and now from the Philippines. If we mistake not the young condition was called *Ceratomyces bogoriensis* from Java by Holtermann and *Echinodia theobromae* from Malay by Patouillard.

POLYSTICTUS ANOMALOSUS FROM T. F. CHIPP, SINGAPORE (Fig. 1849).- In the tropics there occur generic types that do not grow in Europe and do not fit into the Friesian genera. They could be called new genera, but that would only confuse the subject. This plant suggests *Polystictus pinsitus*, but only in the large shallow pores. In color, texture and general nature it is widely divergent. The color is dark brown, about warm sepia. Texture fleshy, brittle. Pores are shallow, large and pore walls black when dry. Spores I do not find.

As we know no other plant at all similar we shall have to class it in a new section, 119 bis. But in reality it is not a *Polystictus*. It was sent as *Favolus* but does not accord with other *Favoli* as well as it does with *Polystictus*.

PHYLLOTREMELLA AFRICANUS FROM JOHN GOSSWEILER, AFRICA (Fig. 1850).- A true tremellaceous plant with gills is something new and rather startling. When I first noted the specimen dried I thought it was a little gelatinous *Pleurotus* like *P. striatulus*, but when soaked it had the consistency, color and appearance of an incipient "Jew's ear." A section shows a hyaline, translucent, gelatinous upper layer and a darker, lamellate hymenium. The gills are obtuse and radiate from the base. As I could not make out the basidia I sent it to Professor Buller who states: "The basidia were not clearly seen but I gained the impression they are more or less club shape and project like those of the Agaricaceae. The fruit body is undoubtedly gelatinous, the hyphae of the flesh and tissue being well separated by a thick, gelatinous medium made up of confluent outer cell walls." We present (Fig. 1851) a section through the flesh and gills which was kindly made for us by Professor Buller.

We have tremellaceous *Merulius*, tremellaceous *Hydnium*, tremellaceous *Clavarias*, but I think this is the first truly tremellaceous agaric that is known. Specimens on very rotten wood (No. 211). Our figures represent the plant natural size, dried and soaked, a single specimen (Fig. 1852) enlarged sixfold and a sectional drawing made by Professor Buller.

XYLARIA NODULOSA FROM REV. J. RICK, BRAZIL (Fig. 1853).- Stem growing in the ground (?), long, 4-6 inches, much branched. Perithecia large, free, singly on the branches, or confluent not covering the rhachis. Spores large, 7 X 36-40, rather acute at both ends.

This is very much larger but grew in the same general manner and has the same perithecia as *Xylaria luxurians* (*Xylaria* Notes p. 29 fig. 1348) and at first we were so disposed to refer it. But the very much larger spores seem to us to forbid the reference.

CYCLOMYCES ALBIDA FROM E. D. MERRILL, PHILIPPINES (Fig. 1854).- *Hexagona albida* (Cfr. Syn. *Hexagona* p. 29 fig. 314) takes three hymenial forms, hexagonal, lenzoid and very rarely cyclomycoïd. The first two we have collected in Samoa from the same mycelium (Cfr. l.c. fig. 313 and 314). The cyclomycoïd form is very rare and this specimen (Ramos 36488) is the first we have seen from the Philippines. The only other specimen we ever saw is at Kew, collected in Borneo and named *Hexagona Cesati* (alleged as by Berkeley.)

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data. The text also mentions that regular audits are necessary to identify any discrepancies or errors in the accounting process.

Furthermore, it is crucial to keep the accounting system up-to-date with the latest regulations and standards. This involves staying informed about changes in tax laws and accounting practices. The document suggests that companies should invest in professional training for their accounting staff to ensure they are equipped with the necessary skills and knowledge.

In addition, the document highlights the significance of maintaining a clear and organized chart of accounts. This helps in categorizing transactions correctly and facilitates the preparation of financial statements. It also notes that the use of modern accounting software can greatly enhance the efficiency and accuracy of the accounting process.

Overall, the document provides a comprehensive overview of the key principles and practices of sound accounting. It stresses the need for diligence, accuracy, and transparency in all financial reporting. By following these guidelines, companies can ensure that their financial records are reliable and provide a true picture of their financial health.

The second part of the document focuses on the practical aspects of accounting, such as the recording of transactions and the preparation of financial statements. It provides detailed instructions on how to properly record debits and credits, and how to calculate the ending balances for each account. It also explains the steps involved in preparing the balance sheet, income statement, and statement of cash flows.

Finally, the document discusses the importance of internal controls and the role of the accounting department in ensuring the integrity of the company's financial information. It outlines various internal control procedures, such as segregation of duties and regular reconciliations, and explains how these measures can help prevent fraud and errors. The document concludes by emphasizing the role of the accounting department as a key component of the company's overall management and decision-making process.

LENTINUS OCHRACEUS FROM E. D. MERRILL, PHILIPPINES (Fig. 1855).— Pileus thin, when dried ochraceous tawny (of Ridgway.) Margin hirsute with fine hairs which on the surface are disposed to become squamulose. Gills narrow, close, ochraceous tawny, somewhat decurrent, edges darker, entire with fringe of minute hairs. Cystidia few, scattered, 16 mic. at base, projecting 36 mic. Spores 3 X 6. Based on Ramos 36424. It is related to *Lentinus villosus* (Sect. 7) but has shorter marginal hairs and a distinctive color.

CLAVARIA TAXOPHILA (Fig. 1856 enlarged).— Classification nowadays is artificial. Plants are arranged to conform to key characters of genera instead of their natural relationships. This little *Clavaria* has been called *Craterellus* because it has the apex truncate, but notwithstanding it is for me a much better *Clavaria* than it is a *Craterellus*. It is a very diminutive little species as may be noted from our figure which is enlarged sixfold and it is apparently as rare as it is small. It is only preserved in the Herbarium of Cornell University, having been found in the vicinity of Ithaca and exploited by a student in 1904. It grew in connection with fallen leaves and twigs of *Taxus* in Fall Creek Gorge and it devolves on some of the students of Prof. Fitzpatrick's class to find it again and send us some specimens. I should like very much to have enough material to examine for I have an idea that the "truncated apex" which appears to me to be exaggerated in the published figure is fertile and that the plant is a *Clavaria* literally. There can be no trouble in recognizing it from our published figure for it is fleshy, cinnamon-buff and looks just like any other little, simple *Clavaria*. The spores are given as globose, smooth, 3-4 mic.

STEREUMS WITH SPINY CYSTIDIA

We have in the United States but one species (published) with spiny cystidia, viz: *Stereum frustulosum*, and it is most abundant. We gave a photograph and account of it on page 696. The following is a very similar species of the East.

STEREUM ANNOSUM (Fig. 1857).— Context hard, Mikado brown (Ridgway) faintly stratose to the eye, but numerous narrow strata easily seen in a section. Hymenium pale, densely covered with hyaline, cylindrical, spiny cystidia, projecting 20 mic.

This was named originally from Ceylon which I believe was all Berkeley knew. It came to me from Africa (Fig. 1040) which I considered continuous *Stereum frustulosum* (Cfr. Myc. Notes p. 696) but Miss Wakefield put me right on it. This African collection seems now to me the same exactly as the type. Then I received a pileate specimen from the Philippines so determined (McGregor 10548) which did not at first appear possible, but on comparison with the microscope I believe now is correct. This pileate specimen has a hard, black, sulcate, smooth crust. The context color and microscopic features are the same as the type but it is a thicker plant. Our figure of the type (1857) shows one pileate specimen though it was described and passes as a resupinate species.

Our figure, 1858, we believe now is also *Stereum annosum* although when we received it we thought different and proposed to call it *Stereum pseudannosum*. Another comparison however, has convinced us it is the same species. It came from Dr. Cleland, Australia.

Faint, illegible text, possibly bleed-through from the reverse side of the page.

REPORT ON SPECIMENS

My best thanks are extended to those who favor me by forwarding to me their collections of the fungi of their regions, and particularly those who live in the tropics. Every day it becomes easier to determine the specimens for the common species have mostly taken definite form and I recognize the larger part of them at sight. Still each lot received brings considerable work, and though I am behind at present, I hope correspondents will not hesitate to send in their specimens on that account. They will all be worked over in time and those that are rare or of special interest will be published. All the large fungi are desired excepting the Agarics.

It has been several years since I have had time to do any collecting. The present season is so favorable that notwithstanding I am so far behind with my report to correspondents I expect to devote August, September and October to local collections. There are many fungi in our woods that I do not know, and I am anxious to learn those that occur locally at least. I will therefore have to ask the indulgence of those who send specimens until after the collecting season.

In the following list I have put in capitals those plants that on account of rarity or novelty are of especial interest and on which articles have been or will be written and published. But do not get the impression that I only want rarities or unusual things. On the contrary, I am more interested in the "old species", their abundance, distribution and variation, and collections of the most common species, especially from the tropics are always welcome.

In my printed Letters 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 the event they desire to use it. All specimens are acknowledged by personal letter as soon as I get time to study and report on them. 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
309 W. Court Street,
Cincinnati, Ohio.

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

Cincinnati, September, 1920.

AIKEN, PROF. WALTER A., MICHIGAN: *Thelephora radians* - *Lentinus lepideus*.

ARCHER, W. A., NEW MEXICO: *Secotium macrosporum*, very rare - *Stereum rufum* - *Podaxon Farlowii* - *Geaster triplex* - *Geaster hygrometricus* - *Cyathus stercoreus* - *Botrytis Limacidiae* (pro tem).

BAKER, C. H., FLORIDA: *Cordyceps ophioglossoides* - *Polyporus fruticum*.

CONFIDENTIAL REPORT

The following information was obtained from a confidential source who has provided reliable information in the past. It is being provided to you for your information only and should not be disseminated to other personnel. The source has advised that the information is accurate and reliable.

The information pertains to the activities of certain individuals who are active in the area of [redacted]. It is noted that these individuals are active in the area of [redacted] and are active in the area of [redacted]. The information is being provided to you for your information only and should not be disseminated to other personnel.

The information is being provided to you for your information only and should not be disseminated to other personnel. It is noted that the information is being provided to you for your information only and should not be disseminated to other personnel.

PEARDSLEE, PROF. C. H., FLORIDA: *Lentinus velutinus* - *Lentinus villosus* - *Irpeex pachylon*.

BEWLEY, MISS A. K., PENNSYLVANIA: *Polystictus cinnabarinus* - *Tremellodendron pallidum* - *Geaster saccatus* - *Schizophyllum commune* - *Xylaria polymorpha*.

BOSE, PROF. S. R., INDIA: *TRAMETES FLOCCOSUS* - *Polyporus anebus* - *Trametes badius* - *Trametes Karii* - *Polystictus protea* - *Polyporus fumoso-olivaceus* - *Polystictus Berkeleyi* - *Polyporus nilgherrensis* - *POLYPORUS FRIABILIS* - *LENZITES ALUTACEA* - *Polyporus guhae* - *Favclus bengala* - *Daedalea flavida* (hexagonal) - *Trametes devexa* - *Trametes Meyenii* - *Daedalea flavida* - *Fomes leucophaeus* - *Polystictus suboccidentalis*.

NOTE 940 - *LENZITES ALUTACEA* FROM S. R. BOSE, CALCUTTA: As named by Cooke from Japan. It has yellow gills and pale yellowish context and is close, too close to *Lenzites flavida*. However, the surface is soft to the touch and minutely velvety. It is hard and glabrous in *Lenzites flavida*. I reported the same number before as *Lenzites murina* but if the same collection the yellow color had disappeared from the previous sending.

NOTE 941 - *TRAMETES FLOCCOSUS* FROM S. R. BOSE, CALCUTTA: Cfr. *Fomes* pamphlet, page 220 but the plant is a *Trametes* not a *Fomes*. Noteworthy from its soft "punky" context. The pores are darker color than the context, not concolorous as I noted. This plant, originally from Ceylon is now known from India, Africa and Australia.

BOTTOMLEY, MISS A. M., SOUTH AFRICA: *Geaster saccatus* - *Geaster Bryantii* - *Stereum Kalchbrenneri* - *Stereum vellereum* - *Stereum tenebrosum* - *Stereum pusillum* - *Lentinus stuppeus* - *Lentinus velutinus* - *STEREUM AFFINE* - *TRAMETES CAPENSIS* - *Xylaria apiculata* - *Xylaria pistillaris* - *Xylaria nigripes* - *Xylaria digitata* - *PODOCREA TRANSVAALII* - *XYLARIA HELOIDEA* - *POLYPORUS CONCHOIDES* - *Polystictus occidentalis* - *Polyporus durus* - *Trametes cingulata* - *Clavaria flaccida* - *Lycoperdon polymorphum* - *TYLOSTOMA TRANSVAALII* - *Cyathus stercoreus* - *Cyathus microsporus* - *Cyathus vernicosus* - *Cyathus Hookeri* - *Lycoperdon djurense* - *Fomes McGregori* - *Trametes ochraceus* - *Boletus bovinus* - *Polyporus anebus* - *Polyporus heteroporus* - *Polyporus Patouillardii* - *Polystictus occidentalis* - *Polystictus hirsutulus* - *Hexagona tenuis* - *Daldinia concentrica* - *Polystictus proteus* - *Scleroderma Cepa* - *Polystictus Macounii* - *Polystictus sanguineus* - *Polystictus occidentalis* - *Polyporus lucidus* - *Lenzites betulina* - *Scleroderma verrucosum* - *Polyporus sulphureus* - *Polystictus leoninus* - *Polystictus sanguineus* - *Geaster striatulus* - *Hexagona tenuis* - *Myriostoma coliformis* - *Geaster fornicatus* - *Geaster floriformis* - *Catastoma magnum* - *Geaster floriformis* - *Catastoma magnum* - *Xylaria multiplex* - *Geaster minimus* - *Calvatia Fontanesii* (var. of *caepata*) - *Stereum hirsutum* - *Trametes devexa* - *Phellorina inquinans* - *Geaster pectinatus* - *Thelephora terrestris*.

BOURDOT, REV. H., FRANCE: *Polyporus* (cfr. *Marianii*) - Various collections of *Poria* referred to *Poria terrestris* which I

I am unable to get straight. - *Poria radula* - *Poria versispora* - *Poria hibernensis*.

BRENCKLE, DR. J. F., NORTH DAKOTA: *Helvella lacunos* - *Acetabula vulgaris*.

BULLER, A. H. REGINALD, CANADA: *Coprinus sterquilinus*.

BURNHAM, S. H., NEW YORK: *Verp. Bohemic*.

CHIPP, T. F., SINGAPORE: We are pleased to report a continuation of the fine tropical collections from Mr. Chipp. As this goes to press we have several packages from him that we have not worked over. *Fomes lignosus* - *POLYPORUS ANEBUS* - *POLYPORUS SEPIA* - *POLYSTICTUS ANOMALOSUS* - *Polyporus Emerici* - *POLYSTICTUS ACULEANS* - *Favolus tessellatus* - *Ustulina vulgaris* - *Fomes australis* - *Polyporus (Gan.) dorsalis* - *Fomes leucophaeus* - *Favolus Molluceensis* - *Polyporus (Gan.) Mangiferae* - *Trametes Muelleri* - *Polyporus grammocephalus* - *Lentinus strigosus* - *Xylaria furcata* - *Polyporus gilvus* - *Polystictus occidentalis* - *Trametes Persoonii*.

COOL, MISS CATH., HOLLAND: *Crucibulum vulgare* - *Polyporus lucidus* (from Java).

DEMETRIO, C. H., MISSOURI: *Ceratiomyxa mucida* - *Guepinia elegans* - *Dacryomyces deliquescens*.

ESPINOSA, PROF. MARCIAL R., CHILE: *POLYPORUS CASEARIUS* - *Polyporus caryophyllaceus* - *Polyporus giganteus* - *Polystictus fulvicolor* - *Sarcoscypha rheana* - *Bovistella aspera* - *Peziza vesiculosa* - *Clavaria fennica* - *Cyttaria Hariotii* - *Clavaria flava* - *Lachnea arenosa* - *Thelephora terrestris* - *Cyttaria Darwinii* - *TRAMETES VERSICOLOR* - *Ciliaria theleboloides* - *Polystictus versicolor* - *Polyporus adustus* - *Fistulina hepatica*.

NOTE 942 - *POLYPORUS CASEARIUS* FROM PROF. MARCIAL R. ESPINOSA CHILE: For me it is a form of *Polyporus sulphureus* and I think the European plant as determined is often only discolored *Polyporus sulphureus*. This has the same brittle flesh, the same spores, the same yellowish surface but was never a bright colored plant. The pure white context never could have been any shade of yellow. It is entitled to a name as different from *Polyporus sulphureus*.

FAIRMAN, DR. CHAS. E., NEW YORK: *Stereum diaphanum*.

GRELET, REV. L. J., FRANCE: A fine collection of European Discomycetes which will be of great help should we ever take up the study of this group. Rev. Grelet uses the complicated Boudier names which we have reduced to those more familiar in this country. *Helvella* *monochella*, *albipes*, *atra*, *ephippium*, *albella*, *sulcata* and var. *cinerea* and var. *crispata*, *crispa*, and var. *Grevillei* - *Geoglossum hirsutum*, *nudipes*, *glabrum* - *Barlaea haemastigma*, and var. *ocellata*, *dictydiola*, *miniata*, *crec'hqueraultii* - *Ciliaria coprinaria*, *vinacea*, *paludosa*, *Woolhopeia*, *theleboloides*, *miniata*, *chateri*, *scutellata*, *asperior*, *trechispora*, *hirta*, *Barlae* - *Humeria granulosa*, *granulata* - *Otidea alutacea*, *grandis*, *onotica* - *Chlorosplenium aeruginosum* - *Geopyxis*

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cupularis, catinus and var. velata - Bulgaria inquinans - Sepultaria tenuis, Sumneri - Leotia lubrica - Macropodia macropus - Verpa Krombholtzii and var. morchelloides - Peziza castanea, badia, aurantia, umbrina, Labessiana, ochracea, subumbrina - Lachnea hemisphaerica - Acetabula vulgaris, Dupainii - Galactinia succosa - Sarcoscypha coccinea - Detonia trachycarpa.

The minute species are listed as received: Ascobolus furfuraceus, atrofuscus, denudatus - Ascophanus carneus - Arachnopeziza aurata - Calycella sulfurina, ochracea - Corynella virella - Cyathicula coronata - Dasyscypha nivea, papyracea, virginea, bicolor, cerina, pudibunda - Hyaloscypha hyalina - Helotium fructigenum, fallax, rhizophylum, scutula, vitigenum, herbicolum, herbarum - Lecanidion atratum - Micropodia pteridina - Mollisia ligni, olivella, canella - Orbilbia coccinella, xanthostigma - Ombrophila imberbis - Propolis faginea - Pyrenopeziza lignicola, lycopinicola, ulmaria - Phialea echinophila, petiolorum - Tapesia fusca - Velutaria aeruginosa.

HEDGCOCK, GEORGE G., WASHINGTON, D. C.: POLYPORUS GLOMERATUS.

NOTE 943 - POLYPORUS GLOMERATUS FROM GEORGE G. HEDGCOCK, WASHINGTON, D. C.: We live to learn. What we have heretofore thought was a valid *Poria*, viz. *Poria xanthopus* as named by Underwood, turns out to be the resupinate condition of *Polyporus glomeratus*. It is a remarkable species on account of the great abundance of yellow spores that it sheds. We found it years ago and sent it to Ellis who referred it to *Poria Andersonii* that he had named. We have held for some time that *Poria Andersonii* and *Poria xanthospora* were synonyms. A short time ago I saw the type of *Poria Andersonii* and recognized it at once as resupinate *Polyporus glomeratus* but thought then I had been mistaken in its being a synonym of *Poria xanthospora*. I note a new character that I had not heretofore observed in this "Poria". This collection has abundant setae and imbedded setae (the genus *Oxyuris*.) This I knew in connection with *Polyporus glomeratus* but not with the "Poria." In going over my specimens I find the setae a varying factor. Sometimes abundant, sometimes rare, sometimes I do not find them at all. Compare our previous articles, *Apus Polyporus* p. 356; Letter 54, Note 204; 58, 292; 65, 512; 66, 592.

HEMMI, TAKEWO, JAPAN: It is gratifying to receive from Japan collections named correctly as these mostly are, as it is evidence that collectors are getting definite names for species of fungi. *Stereum purpureum* - *Polystictus illicicola* - *Polystictus conchifer* - *Lenzites tricolor* - *Polystictus Persoonii* - *Lenzites Japonica* - *Polyporus varius* - *Hydnum septentrionale* - *Fomes conchatuus* - *Polystictus hirsutus* - *Polyporus adustus* - *Polystictus zonatus* - *Polystictus hirsutus* - *Fomes (Gan.) leucophaeus* - *Panus stipticus* - *Polyporus adustus* - *Daedalea Kusanoia* - *Polystictus gypseus* - *Polyporus adustus* - POLYSTICTUS VELLEREUS - *Polystictus abietinus* - *Polyporus dichrous* - *Polyporus fumosus* - *Stereum spadiceum*.

NOTE 944 - POLYSTICTUS ZONATUS FROM TAKEWO HEMMI, JAPAN: It is a paradox but *Polystictus zonatus* is usually not zoned and

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Polystictus versicolor is zoned. Otherwise they are practically the same. This collection, however, is of a darker color than typical *zonatus*.

HILL, H. H., NEWZEALAND: *Polystictus oblectans*.

INGHAM, WM., ENGLAND: *Lycogala Epidendrum* - *Hypholoma fasciculare*?

JOHNSTON, I. M., COLORADO: *Trametes hispida* - *Trametes protracta* - *Fomes igniarius* - *Tubercularia vulgaris* - *Poria callosa* - *Trametes piceina* - *Catastoma circumscissum* - *Calvatia caelata* - *Trametes heteromorpha* - *Polystictus abietinus* - *Polystictus subchartaceus* - *Auricularia auricula-Judae* - *Dacryomyces aurantia* - *Polyporus arcularius* - *Lycoperdon gemmatum* - HYDNOFOMES TINCTORIUS - *Trametes serialis* - *Fomes roseus* (rare).

JOHNSTON, I. M., WESTERN MOHAVE DESERT: *Gyrophragmium Delilei* - *Chlamydomus Meyenianus* - POLYPORUS LEUCOSPONGIA - FOMES ARCTOSTAPHYLI.

NOTE 945 - FOMES ARCTOSTAPHYLI FROM I. M. JOHNSTON, MOHAVE DESERT: In structure it is the same in the essentials, context color, hyaline, subglobose spores as *Fomes igniarius* and we take it for a diminutive form. Its peculiar habitat, growing on shrubs, and its small size entitle it to a name, however. Mr. Long found it on *Arctostaphylos* in Arizona and Mr. Johnston on *Adenostoma fasciculata*, "a common chaparral shrub" of southern California. It is quite close, perhaps the same as *Fomes pusilla* of Japan, but considerably larger.

NOTE 946 - HYDNOFOMES TINCTORIUS FROM I. M. JOHNSTON, COLORADO: "Growing on living *Abies*, always on main trunk, on lower axis formed by a dead branch." Quite common in the northwest Oregon up to Alaska but this is the first record I have noted from Colorado. It has had a most amusing experience getting named. The original collection made in Alaska was sent to Ellis by Mr. Coville of the Department of Agriculture, and Mr. Coville told me it was ground and used as a paint by the Indians. The teeth were broken off, and Ellis evidently sent it to Cooke who referred it to *Fomes lateritius*, a species he had named from the American tropics, and to which the plant has as much resemblance as a porcupine has to a honey comb. The specimen is in the British Museum (Cfr. Letter No. 52.) Then Ellis was not satisfied with this and published it as *Fomes tinctorius*, a "new species." Neither Ellis nor Cooke paid enough attention to it to note the plant did not have pores, though if either had called an alligator a serpent without noting it had legs it would not have been a worse bull. Next, I received the plant abundantly from C. V. Piper, Washington, and sent it to Ellis. He saw the spines on these and changed his name from *Fomes* (sic) *tinctorius* to *Echinodontium tinctorium*. *Echinodontium* means "spiny teeth", not a very good name for teeth that have no spines. It is true there are cystidia but they are not spines. Then Hennings got it from Japan, and that collection now at Berlin, is the only one known from Japan to this day. Hennings was as innocent of any knowledge of its history as a newborn babe and he proposed to call it *Hydnofomes*, a quite appropriate name, con-

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sidering the lack of knowledge on which it was based.

We adopt Hennings' generic name on the ground of suitability though contrary to Mr. Kuntze who maintains that any old bull or blunder or "de betises" is valid so long as it is an original bull. We admire originality but not in the bull line.

NOTE 947 - POLYPORUS LEUCOSPONGIA FROM I. M. JOHNSTON, MOHAVE DESERT: We gave quite an extended account of this peculiar species in our Apus Polyporus pamphlet, page 322, fig. 665. It has a very soft context and grows on spruce and pine logs in the high altitudes of our western mountains. There is a discrepancy about the spores. Those of this collection are surely allantoid, $1\frac{1}{2} \times 8$. We gave them as globose, 6×8 , in one article and $3 \times 6-8$ in another. The collection we have from Dr. Whetstone which does not have globose spores, we are now sure was referred to this species in error.

KNAEBEL, ERNEST, COLORADO: *Trametes piceina* - *Fomes pinicola* - *Lenzites saepiaria* - *Hydnum imbricatum* - POLYPORUS CONFLUENS - *Polyporus circinatus* - LYCOPERDON GLOBOSO-PIRIFORME - *Polystictus abietinus* - *Fomes igniarius* - *Cudonia circinans* - *Polystictus parmagenus* - *Daldinia concentrica* - *Fomes roseus* - TRAMETES CUPREO-ROSEA.

KNAEBEL, ERNEST, NEW YORK: *Fomes leucophaeus* - *Fomes fomentarius* - *Polyporus picipes* - *Stereum sericeum* - *Polystictus hirsutus* - *Daldinia concentrica* - *Lenzites saepiaria* - *Polyporus albellus* - *Polystictus velutinus*?

NOTE 948 - POLYPORUS CONFLUENS FROM ERNEST KNAEBEL, COLORADO: I was puzzled over this at first as the specimen has a smooth shiny cuticle and general appearance of a dried *Boletus*. I never noted before that *Polyporus confluens* has a distinct cuticle, but when I examine the other material I do find a cuticle but dull and thin, never as evident and notable as in this specimen.

LEE, H. A., PHILIPPINE ISLANDS: *Auricularia polytricha* - *Irpex flavus* - *Polyporus zonalis* - *Daedalea flavida* - *Hexagona tenuis* - *Polystictus xanthopus* - *Lenzites striata* - *Polystictus sanguineus* - *Auricularia mesenterica* - *Fomes* (Gan.) *applanatus* - *Trametes serpens* - *Polyporus caliginosus* - *Polystictus flavidus* - *Fomes senex* - POLYPORUS TROPICUS - *Fomes melanodermus* - *Lentinus Sajor Caju* - *Trichosphaeria acanthostroma* - *Irpex cervino-gilvus* - *Polystictus velutinus* - *Polystictus polyzonus* - FOMES MAGNOSPORUS.

NOTE 949 - FOMES MAGNOSPORUS FROM H. A. LEE, PHILIPPINES: Large, thick, unguulate, hard, woody, 8-12 inches in diameter. Surface rugulose, rough, dark with indistinct crust. Context color buckthorn brown. Pores small, in irregular and indistinct layers with intergrowing context layers. Setae few, scattered, slender. Spores globose, 11-12 mic., colored, smooth. This belongs in Sect. 72 and stands out from others in the section in its large spores. The pore mouths of this specimen are overgrown with an aftergrowth, probably not a constant feature.

NOTE 950 - POLYPORUS (GAN.) TROPICUS FROM H. A. LEE, PHILIPPINES: To the eye this is the same as Polyporus Oerstedii, a more common tropical plant. The difference is in the spores. The latter has smooth or only slightly rough spores the same as Polyporus lucidus. Polyporus tropicus has spores 7-8 X 10-12 and strongly rough. It is the same as Polyporus oroleucus, recently named from Java.

DOCTERS VAN LEEUWEN, W., "VERLATEN EILAND NEAR KRAKATUA."
 Trametes Persoonii - Hexagona tenuis - Hexagona bivalvis - Stereum
 Bresadoleanum - Ascheronia basicystis - POLYSTICTUS BLUMEI - Auricu-
 laria mesenterica - Polyporus grammocephalus - Guepinia spathulata -
 Polystictus xanthopus - Geaster fimbriatus - Polystictus luteo-
 olivaceus - Trametes fuscella - Fomes oroleucus - Polyporus con-
 crescens - FAVOLUS LEEUWENII - POLYPORUS FUSCELLUS.

MCDUGAL, W. B., ILLINOIS: Trametes hispida - Stereum
 (Hymen.) rubiginosum - Tremella foliacea.

MERRILL, E. D., PHILIPPINE ISLANDS: We are pleased to record an additional large shipment from Mr. Merrill. We have in hand a systematic, descriptive account of the Philippine polypores but the work has been interrupted by our collection season. I expect to finish this Philippine work next, as soon as I find the time. - Racodium xylostroma - Polyporus zonalis - Polystictus xanthopus - Polyporus (Gan.) Williamianus - Polyporus vinosus - POLYPORUS VIRGATUS - Hexagona tenuis - Polystictus tabacinus - Polyporus semilaccatus - POLYPORUS SUPERNIGER - Polyporus sterinus - Polystictus sanguineus - Lenzites subferruginea - Polyporus rigidus - Polyporus Rhizophora - Polyporus rubidus - Polyporus (Amaur.) rugosus - Lenzites repanda - Xylaria Ridleyi - Trametes Persoonii - Polyporus perversus - POLYPORUS OBOVATUS - Polystictus occidentalis - Stereum ostrea - Fomes melanopus - Polystictus Menzesii - Polyporus maliensis - Polystictus microloma - Trametes Meyenii - Fomes melanopus - Polyporus megaloporus - Polystictus leoninus - Polyporus lignosus - Fomes lamaeoensis - Polystictus incisus - Polyporus grammocephalus - Polystictus meleagris - Polyporus gibbosus - POLYPORUS FLABELLARIIS - Polyporus (Gan.) fasciatus - Polystictus flavus - Polystictus floccosus - Guepinia fissa - Polyporus fruticum - Polystictus Fischeri - Polystictus florideus - Daedalea flavida - Polystictus elongatus - Polyporus durus - Polyporus dorsalis - Polyporus cinnamomeo-squamosus - POLYPORUS COCHLEARIFORMIS - POLYSTICTUS CUNEATO-BRUNNEUS - Polystictus cuneatiformis - Polystictus cervinogilvus - Stereum concolor - Schizophyllum commune - Polyporus Blanchetianus - POLYPORUS BRUNNEOLUS - Polyporus anebus - Favolus albus - Trametes acuta - Favolus glandulosus - Favolus molluceensis - Favolus platyporus - Daedalea reflexa - Polystictus murinus - Polystictus gallo-pavonis - Trametes Philippensis - Trametes heteropora - Trametes aspera - Trametes fuscella - Daedalea maculosa - POLYPORUS SACER VAR. RHINOCEROTIS - Hexagona Apiaria - Trametes palacea - Trametes Muellerei - Polyporus caliginosus - Polyporus Patouillardii var. nigroporus - Polyporus nigroporus - POLYPORUS ORONIGER - CYCLOMYCES ALBIDA - Campanella cucullata - LENTINUS OCHRACEUS - RHIZOMORPH - RADULUM ANOMALUM - PHLEBOPHORA PHILIPPENSIS - Xerotus Philippensis - Xylaria biformis - Xylaria fibula - Xylaria anisopleura - Xylaria Ridleyi - Xylaria allantoides? - Geoglossum

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Walteri - Xylaria Schweinitzii - Daldinia concentrica - Xylaria multiplex - Daldinia Eschscholzii - Xylaria reniformis - Xylaria dealbata - Xylaria bipindensis? - Xylaria rhopaloides - Xylaria euglossa? Polystictus affinis - Polystictus microloma-affinis - Polystictus affinis-sepia - Polystictus xanthopus-sepia - Polystictus xanthopus-affinis - Polystictus sepia - Polystictus crenatus - Polystictus luteus-affinis - Polystictus affinis-luteus - Polystictus xanthopus-luteus - POLYSTICTUS ACULEIFER - POLYSTICTUS VERSATILIS - PORONIA PILEIFORMIS - POLYPORUS DORSALIS - POLYPORUS DORSALIS with a compound stem - Lenzites platyphylla - TYLOSTOMA EXASPERATUM - PANUS CLADOPHORA - Hexagona flavida - HEXAGONA RESINOSA - HEXAGONA APPLANATA - HEXAGONA FERRUGINOSA.

NOTE 951 - HEXAGONA APPLANATA FROM E. D. MERRILL, PHILIPPINES: The adoption of the name resinosa in its logical sense (Note 953) leaves the original specimen cited (or rather mis-cited, I think) without a legal designation. Fortunately Bresadola has suggested the name Hexagona applanata as a variety of Hexagona sulcata but for me it is not a form of Hexagona sulcata. It is not resinous at all, has pale isabelline context and pore tissue and is characterized by abundant, subhyaline cystidia. It is rare in the Philippines only the following two collections being known. Merrill 4026, Ramos 1214.

NOTE 952 - HEXAGONA FERRUGINOSA FROM E. D. MERRILL, PHILIPPINES: Pileus applanate, 2-3 inches in diameter, an inch thick. Surface dark but not resinous. Context dark ferruginous brown. Hymenium with dense, projecting, colored hyphae, not specialized. To the eye this might suggest Hexagona resinosa, same shape, size and general color. It is exceedingly light weight, noticeable as soon as one picks it up. There is no other Hexagona that is truly allied to it for the context is ferruginous, similar in color to most "Hymenochaete" and like plants of this context color it turns dark under potash solution. The colored hyphae of the hymenium, however, are not true setae. We would enter it in Section 161, the "Ungulaformis" of pidgin Latin.

Based on Martelino and Edano No.35868, collected on Mt. Salibongbong, Capiz, province Panay.

NOTE 953 - HEXAGONA RESINOSA FROM E. D. MERRILL, PHILIPPINES: When Murrill named Hexagona resinosa from the Philippines he cited only Ramos 1344 which is not truly resinous. At New York, however, there is a specimen, Copeland 151, which is strongly resinous and named Hexagona resinosa on the label by Murrill, and it turns out that it is a common species in the Philippines. While it is not cited by Murrill it is probably the specimen he had in mind when he applied the name and it is a most suitable name for the plant. While it is contrary to the laws of Kuntzeism I shall adopt it in this sense, for it is contrary to the laws of common sense to apply a name to a plant that has no application to it, and to leave a plant to which the name is suitable without a name, just because the author cited the wrong specimen. Bresadola refers it to Hexagona durissima, which I do not concede for this is not resinous. This species is strongly resinous, black when old and the resinous matter is readily soluble in alkaline solution. It has no cystidia. Specimens Yates 35997, 36120, McGregor 32686.

The first part of the report deals with the general situation in the country. It is noted that the economy is showing signs of recovery, but that the unemployment problem remains acute. The government has taken various measures to stimulate the economy, but more is needed. The report also discusses the state of the treasury and the need for fiscal reforms.

The second part of the report deals with the state of the treasury. It is noted that the government has a large deficit, and that the debt has increased significantly. The report discusses the various sources of revenue and the need for more efficient tax collection. It also discusses the need for more capital investment in infrastructure and industry.

The third part of the report deals with the state of the economy. It is noted that the economy is showing signs of recovery, but that the unemployment problem remains acute. The report discusses the various sectors of the economy and the need for more investment in infrastructure and industry. It also discusses the need for more efficient tax collection.

The fourth part of the report deals with the state of the treasury. It is noted that the government has a large deficit, and that the debt has increased significantly. The report discusses the various sources of revenue and the need for more efficient tax collection. It also discusses the need for more capital investment in infrastructure and industry.

The fifth part of the report deals with the state of the economy. It is noted that the economy is showing signs of recovery, but that the unemployment problem remains acute. The report discusses the various sectors of the economy and the need for more investment in infrastructure and industry. It also discusses the need for more efficient tax collection.

NOTE 954 - POLYPORUS BRUNEOLUS FROM E. D. MERRILL, PHILIPPINES: We take this name in the sense of our Note 572, Letter 65, but it is in this sense only a color form of *Polyporus rubidus*. It is only partially historically correct, for the original in the British Museum is the same as *Polystictus murinus* according to description and our notes. But we have always had an impression, gained at Kew, that *Polyporus bruneolus* was close to *Polyporus rubidus* as considered in our *Stipitate Polyporoids* which was written at Kew. And while it has been several years since we have seen them and they are very old collections we are confident that this is the Berkeley sense of *Polyporus bruneolus* at Kew. *Polyporus rubidus*, as it frequently occurs, not only in the Philippines but Java, Ceylon, Malay, Japan, is a unicolorous plant of a beautiful old rose color (jasper pink, Ridgway) if varying in color the surface is lighter. *Polyporus bruneolus* in the sense we take it is *Polyporus rubidus* exactly the same context color, but with the surface Mikado brown to my eye. It is only a color form and probably does not merit a separate name.

NOTE 955 - POLYPORUS COCHLEARIFORMIS FROM E. D. MERRILL, PHILIPPINES: This species (Cfr. *Stip. Polyporoids*, p. 139) was hitherto only known from one collection from Malay. Two collections have been made in the Philippines. Ramos 7589 and Ramos 32123.

NOTE 956 - POLYPORUS OBOVATUS FROM E. D. MERRILL, PHILIPPINES: A question we puzzled over in the old collections in the museums of Europe was - Is *obovatus* of the East and *mutabilis* of American tropics the same or not? We know both now from recent collections and on comparison we think they are practically the same. Merrill had a glimpse of the truth but he lost it when he messed it up by referring it to *Polyporus dealbatus* which has no suggestion or resemblance to either.

NOTE 957 - POLYPORUS VIRGATUS FROM E. D. MERRILL, PHILIPPINES: This was named from Cuba and at the time our pamphlet was published we had not recognized it otherwise. But it develops that it occurs in the Eastern tropics and this is the second we have from the Philippines. The other (10063) was misreferred to *Polyporus versiformis*. *Polyporus virgatus* has a black stem (which is not always evident), and should be moved from Section 45 to Section 49. *Polyporus subvirgatus* and *Polyporus rubro-castaneus* of our pamphlet we believe now are both the same plant. We have specimens from Cuba, Brazil, Malay, India, Philippines, Java and Australia.

NOTE 958 - PORONIA PILEIFORMIS FROM E. D. MERRILL, PHILIPPINES: This is the first collection that has been made of this species since it was originally collected in the Philippines by Cumings, eighty years ago. We considered and figured it *Myc. Notes* p. 938, fig. 1721. To the eye it is the same as *Poronia macrorhiza*, but the spores 4 X 8 are much smaller. We are glad of the specimen from the "type locality" and to be able to confirm Currey's record of the spores. We wrote to Miss Wakefield for a confirmation of the original spore measurement at Kew, but she was not able to find spores in the type. As *Poronia pileiformis* and *Poronia macrorhiza* are the same excepting the spores, we are glad to have the difference established.

Poronia pileiformis with its small spores is only known from these two Philippine collections.

NOTE 959 - TYLOSTOMA EXASPERATUM FROM E. D. MERRILL, PHILIPPINES. This is a very marked and a very rare species. (Cfr. *Tylostoma pamphlet*, page 26, Pl. 85.) *Tylostoma pusillum* named by Berkeley from the Philippines is evidently based on a depauperate specimen of the same thing.

MILLE, REV. L., ECUADOR: *Cyathus vernicosus* - *Lycoperdon piriforme* - *Trametes cervinus* - TRAMETES RUGOSO-PICTA - HYDNANGIUM PALLIDUM.

MUENSCHER, W. C., NEW YORK: *Clavaria pyxidata* - SEISMOSARCA ALBA - *Clavaria vermicularis*.

MUENSCHER, W. C., WASHINGTON (state): *Isaria farinosa*.

O'CONNOR, C. A., ZANZIBAR: *Lycogala epidendrum* - *Trametes hystrix* - *Polystictus sanguineus* - *Polystictus Persoonii* - *Polyporus Oerstedii* - *Polystictus meleagris* - *Hexagona speciosa*.

OLESON, O. M., CALIFORNIA: *Tylostoma montanum* - *Polystictus Macounii*.

OLESON, O. M., IOWA: *Fomes rimosus* - *Lycoperdon piriforme*.

OWENS, C. E., OREGON: *Discina repanda?* - *Radulum Owensii* - *Verpa Krombholzii* - *Morchella semilibera* - *Morchella conica*.

PENNINGTON, L. H., NEW YORK: This fine collection from Prof. Pennington embraces the most of our prominent species. Practically all are listed as determined when received. *Polyporus admirabilis* - *Poria subacida* - *Xylaria cornu-damae* - *Polyporus cuticularis* - *Daldinia concentrica* - *Ustulina vulgaris* - *Polyporus biformis* - *Polyporus fissilis* - *Melanogaster ambiguus* - XYLARIA SUBTERRANEA - *Polyporus corruscans* - *Polyporus borealis* - TRAMETES PROTRACTA - POLYPORUS ELEGANS - *Trametes sepium* - *Daldinia vernicosa* - *Polyporus glomeratus* - *Polystictus pubescens* - *Polyporus picipes* - *Polystictus hirsutus* - *Polyporus spumeus* - *Polyporus varius* - *Bovista pila* - *Lycoperdon cruciatum* - *Geaster saccatus* - *Scleroderma tenerum* - *Calvatia lilacina* - *Trametes variiformis* - *Polyporus fumosus* - *Polystictus biformis* - *Geaster minimus* - *Polyporus circinatus* - *Polyporus poculus* - *Lycoperdon muscorum* - *Polyporus elegans* - *Lycoperdon Wrightii* - *Lycoperdon umbrinum* - *Poria salmonicolor* (doubtful for me) - *Polyporus pubescens* - *Polystictus velutinus* - *Polyporus caesius* - *Polyporus rutilans* - *Polyporus epileucus* - *Polyporus pallidus* - *Polyporus alutaceus* - *Polyporus aurantiacus* - *Poria attenuata* - *Hypoxylon coccineum* - *Lycoperdon atropurpureum* - *Polyporus albellus* - *Lycoperdon subincarnatum* - *Scleroderma Cepa* - *Polyporus sessilis* - *Polyporus circinans* - *Daldinia vernicosa* - *Gomphideus nigrescens* - *Propolis rhodoleuca* - *Xylaria corniformis* - *Gyrophragmium inquinans* - *Fomes scutellatus* - *Xylaria polymorpha* - *Geaster Schmideli* - *Geaster triplex* - *Scleroderma Geaster* - *Trametes robinophila* - *Polystictus versicolor* - *Hypoxylon atropunctatum* - *Stereum rufum* - *Lycoperdon*

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gemmatum - Polyporus ursinus - Hypoxylon marginatum - Hypoxylon pruinaum - Hypoxylon multiforme - Hypoxylon cohaerens - Hypoxylon fusco-purpureum - Hypoxylon fuscum - Polyporus semisupinus - Nummularia Bulliardii - Trametes serpens - Poria ferruginosa - Poria subacida - POLYPORUS SUBPILEATUS - Tremella lutescens - Calocera cornea - Exidia glandulosa - Naematelia nucleata - Dacryomyces deliquescens - Tremella foliacea.

NOTE 960 POLYPORUS SUBPILEATUS FROM L. H. PENNINGTON, NEW YORK: We held in our pamphlet that this was a synonym for semisupinus. Prof. Pennington sends two specimens, one (85) referred to subpileatus, the other (101) to semisupinus. The latter is the plant as we have considered it. It is mostly resupinate with a narrow reflexed margin, drying discolored, "bluish green, then dark when bruised." The former has thicker pileus and remains white. If really different or not we can not say. We have looked over our collections, about thirty, and we would not try to sort them out into two species. What Prof. Pennington calls subpileatus is surely the same as grows in Europe and there passes usually as Polyporus chioneus. I believe no one really knows what chioneus is.

NOTE 961 - TRAMETES PROTRACTA FROM PROF. L. H. PENNINGTON, NEW YORK: The actual relationship of species is not always indicated in a casual acquaintance with them. I have always held and I still hold that Trametes odorata does not occur in the United States; that our Trametes protracta is a trametoid form of Lenzites saepiaria and I still believe that. But if this collection had come to me from Europe I should have referred it to Trametes odorata. As I now view it, Trametes odorata, Trametes protracta and Lenzites saepiaria are in their essentials the same, the same context color, the same pore mouth color when fresh and the same spores. But they differ as follows:

FOMES ODORATUS.- Very fragrant when fresh. Large plant, usually three or four inches. Pores usually elongated, rather large. This is a true Fomes although it has usually passed as Trametes odorata.

TRAMETES PROTRACTA.- Not fragrant. Small plant, one or two inches. Pores small, round, trametoid. Rather rare.

LENZITES SAEPIARIA.- Not fragrant. Small plant, one or two inches. Hymenium lenzitoid. Very common on pine wood.

The following are constant characters of these three species. Context color russet brown. Pore mouths yellow when fresh and growing but color usually disappearing on dried specimens. I was quite familiar with Fomes odorata for years but never suspected that its pore mouths were yellow until I collected it in Sweden. Spores cylindrical, 4 X 10-12, straight or laterally apiculate at the base.

POVAH, ALFRED H. W., NEW YORK.- This fine collection from Prof. Povah embraces about all of our prominent species and are mostly listed under the names as originally determined. Scleroderma vulgaris - Polyporus brumalis - Polyporus elegans - Trametes variiformis - Discina perlata - Otidella fulgens - Hydnum aurantiacum - Polystictus bififormis - Geaster triplex - Polyporus glomeratus - Fistulina hepatica - Polyporus balsameus - Polyporus melanopus - Elaphomyces granulatus - TRAMETES QUERCINA - Polyporus lucidus - Polyporus

borealis - Polyporus galactinus - Polystictus biformis? - Polyporus subpendulus? - Polyporus tephroleucus - Geaster saccatus - Polyporus sessilis - Polyporus ludovicianus - Hydnum ochraceum - Poria punctata - Polystictus velutinus - Secotium acuminatum - Geaster hygrometricus - Polyporus volvatus - Trametes carnea - Tremellodendron pallidum - Hypoxylon atropunctatum - Cyathus striatus - Daldinia vernicosa - Stereum purpureum - Cordyceps ophioglossoides - Polyporus rutilans - Hydnum ochraceum - Sphaerobolus stellatus - Exidia glandulosa - Daedalea unicolor - Nummularia tinctor - Trametes corvina - Nidula microcarpa - Cordyceps clavulata - Aleurodiscus Oakesii - Polyporus albellus - Geaster coronatus - Cyathus vernicosus - Sclerotinia tuberosa - Xylaria digitata? - Polyporus cuticularis - Xylaria corniformis - Hydnum ochraceum - Polystictus perennis - Lenzites (or Trametes) trabea - Trametes protracta - Tremella foliacea - Trametes cervina - FOMES APPLANATUS? - Poria rufa - Secotium acuminatum - Bovista Pila - Xylaria Hypoxylon - Polyporus fragilis.-

NOTE 962 - FOMES APPLANATUS? FROM ALFRED H. W. POVAH, NEW YORK: Perhaps better referred to Fomes laccatus of Europe which grows on beech only and has yellow pore mouths. Compare Fomes pamphlet p. 267. This plant has only a faint indication of a laccate crust but it is the first time I have received anything like it from this country.

RAPP, S., FLORIDA: Xylaria Hypoxylon - Auricularia polytricha - Stereum caperatum - Polystictus biformis? - Poria subiculosa

REA, CARLETON, ENGLAND: We are indebted to Miss Wakefield for her kindness in determining the following resupinate specimens. Hymenochaete corrugata - Merulius pallens, Berk. (non Schw.) "This is what Berkeley always called M. pallens - with rather deep pores. We have another with shallow pores and the same spores which I usually call M. serpens, but they may be the same. I am not very clear about Merulius." - Lenzites abietina (small, abnormal) - Phlebia radiata - Acaia stenodon - Corticium roseo-cremeum - Odontia stipata - Exidia glandulosa.

RICK, REV. J., BRAZIL: We have a large number of packages from Rev. Rick that have not yet been studied. - Polystictus maximus - Polystictus hypoxanthus - Xylaria Schweinitzii - Polyporus stereinus? Polystictus armenicolor - XYLARIA RAMOSA - Fomes grenadensis - ENTONAEMA LIGNESCENS - Fomes fastuosus - Polyporus leprodes - Hypoxylon polyspermum - Fomes pectinatus - Polyporus Patouillardii - Xylaria rhopaloides - Polyporus (Amaur.) subrenatus.

RITCHIE, A. H., JAMAICA: Auricularia Moellerii.

STOCKER, DR. S. M., MINNESOTA: Morchella esculenta - Morchella conica - Xylaria digitata.

TORREND, REV. C., BRAZIL: Xylaria apiculata - Xylaria arbuscula - Xylaria Schweinitzii - Xylaria Berkeleyana - Xylaria globosa - Fomes fastuosus - Polystictus phocinus - Polyporus (Gan.) capensis - Polyporus (Gan.) dorsalis - Hypoxylon serpens - Polystictus campyloporus - Tylostoma Berteroanum - Polyporus ludovicianus -

Polystictus stereoides - PODAXON FARLOWII - LASIOPHERA FENZLII - FAVOLUS MAXONII - Fomes senex - Tremella fibulifera - POLYSTICTUS OCCIDENTALIS - Trametes Feei - Trametes Persoonii - Geaster rufescens - Polyporus gilvus - Xylaria Ridleyi - Fomes marmoratus - Fomes lignosus - Polyporus modestus - POLYSTICTUS PALLIDO-MOLLIS - BOVIS-TOIDES TORRENDII.

NOTE 963 - LASIOPHERA FENZLII FROM REV. C. TORREND, BRAZIL: We would change the spelling of the name slightly as above so as not to interfere with the pyrenomycetous homonym. We have used the name for this most exceptional species several times in our writings but were we to publish systematically we would make a section of Calvatia of it. We gave Myc. Notes, p. 191, an extended account of the plant and Note 684, Letter 67, a list of its known stations, Sumatra, Ceylon, India, Japan and West Africa. Rev. Torrend's plant is the first collected in the American tropics excepting possibly the original Novara collection and I believe no one knows where that came from.

NOTE 964 - POLYSTICTUS OCCIDENTALIS FROM REV. C. TORREND, BRAZIL: A very large occidentalis specimen more than a foot in diameter but no thicker than usual.

NOTE 965 - PODAXON FARLOWII FROM REV. C. TORREND, BRAZIL: "In one of the driest places of Brazil where it rains only once or twice a year." Podaxon Farlowii is the only species we have in the States and it occurs only in the arid regions of the West.

WEIR, DR. JAMES R., CUBA: Polystictus lenis - Trametes hispidula.

WEIR, DR. JAMES R., AFRICA: POLYPORUS (AMAUROGYPHE) FUSCATUS - Polyporus giganteus - Polyporus virgatus - Specimens collected by Maitland.

WEIR, DR. JAMES R., IDAHO: EXIDIA CANDIDA - EXIDIA GLANDULOSA - Calvatia lilacina.

NOTE 966 - POLYPORUS (AMAUROGYPHE) FUSCATUS FROM DR. JAMES R. WEIR, UGANDA, AFRICA: Cfr. Myc. Notes p. 942, fig. 1740. This is the second specimen we have received and we have no doubt in referring it although there are some discrepancies. Spores are very pale color, the largest we have about 8 X 10 mic., and a great many much smaller. The context also is pale but not white.

WHETSTONE, DR. M. S., MINNESOTA: MERULIUS ERECTUS - Polystictus abietinus - Hymenochaete rugispora (Det. Burt) - Diatype bullata.

NOTE 967 - XYLARIA RADICATA.- The specimen in Clinton's herbarium, Wright, Cuba, is supposed to be a co-type, but there is some mistake for it has smaller spores, 4 X 8 and Berkeley records them as 15-20 mic. long. The original publication was confused in the start. Berkeley says he got the name from Schweinitz (manuscript) no doubt from Surinam. But he published and described a plant from

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Wright (578). Will some wise lawmaker specify which is the type? The Wright or Schweinitz collection? I doubt if the tangle will ever be straightened out.

NOTE 968 - HISTORICAL. POLYPORUS LUCIDUS.- Years ago in America it was a tradition that Polyporus lucidus was Fomes lucidus and that the European plant had stratified pores. I can remember when the rumor went about that our plant which we called Fomes lucidus could not be correct because the pores were not stratified. I think it was Underwood who started this. At any rate when Murrill heard about it in his primary days he discovered that our plant was a "new species" because it did not have stratified pores. I do not know whether Murrill believed in Santa Claus then or not but the Fomes lucidus myth was of the same order. After Murrill began to realize what a bull he had made in proposing Polyporus tsugae as a new species on its non-stratified pores, then he tried to side-step it by claiming that it differed from Polyporus lucidus in its white context, and its habitat on hemlock. There are those who still take that seriously, Overholts, for instance. While it is a half truth, Polyporus lucidus on hemlock does have paler context than on frondose wood, there is about as much specific difference as between a sorrel horse and a grey mare. And in addition Polyporus lucidus with us is not confined to hemlock wood nor is the context color always white. Usually it is brown next to the pores and paler above and we have American collections (several) where the context color is just as brown as it is in Europe. In a recent number of Mycologia, Murrill summarized and corrected a large number of his earlier delusions but he still sticks to the Polyporus tsugae story.

FOMES IGNIARIUS, FOMES FOMENTARIUS AND FOMES APPLANATUS

The history of these three species is an index of the kind of work that has been done in mycology. No commoner species grow, and yet up to a few years ago practically every writer had his own idea as to the identity of each, and no two of them were alike. This confusion was due to the established fetishism of "Science" in writing the names of authors after the plant names. Thus they write "Linnaeus" after Fomes igniarius and Fomes fomentarius, although it is doubtful if any one knows what Linnaeus so designated and Linnaeus probably did not know himself. Not much can be told from his vague description. In one of his works he speaks of igniarius having "aculei" and "stipes", characters which are hardly to be found on Fomes igniarius nowadays or that which they call igniarius, not failing to append "Linnaeus" to it.

Persoon first referred to Fomes igniarius, Fomes pinicola as he afterwards states. Fomes fomentarius, the typical form, Persoon had correct, though he misreferred to it as varieties, Fomes applanatus, Polyporus dryadeus and Fomes pinicola. The interpretation of both Fomes igniarius and Fomes fomentarius was afterwards based by both Persoon and Fries on Sowerby's illustration, Pl.132, Fomes igniarius, and Pl.133, Fomes fomentarius, though in the text it is evident that Sowerby under Fomes igniarius referred to Fomes applanatus in part. Fomes fomentarius of Sowerby is correct as known today, both his figure and account and he states he had the specimen direct from Linnaeus through a former pupil, Dr. Afzelius.

Schweinitz referred to *Fomes fomentarius* the common *Fomes applanatus* or rather the American form of it which is also called *Fomes leucophaeus*. Berkeley, in his first British work, takes *Fomes fomentarius* in the sense of *Fomes applanatus*, and the only specimen in his herbarium of his naming as *Fomes fomentarius* is a slice of *applanatus*. I think Berkeley at a later date got a correct idea of *Fomes fomentarius*. It is needless to say Masee never got any idea beyond Berkeley's little herbarium slice, and in all his books he has based his idea of *Fomes fomentarius* on this misnamed specimen. Cooke never seemed to have any idea of *Fomes fomentarius* whatever and of twenty-five specimens named by him that I have noted not one is right.

It is not very far from Paris to Upsala, but a man could travel over this distance and find three entirely different plants known locally as *Fomes igniarius*. In France it was a local tradition that *Fomes robustus* was *Fomes igniarius*. In England, following Berkeley, they call *Fomes pomaceus*, *Fomes igniarius*. In Sweden they had it right.

Our American authors, Ellis and Peck, seem to have had *Fomes fomentarius* right, and Murrill knew the species correctly, though he made a bad mess of its spores, copying apparently from Masee's inaccurate account, and a bad mess in his genus discovery, putting *Fomes fomentarius* and *Fomes applanatus* in the same "genus", using the word genus in the distorted sense that Murrill uses it. The German and French botanists have had *Fomes fomentarius* right and all of the many German *exsiccatae* I have noted are correct.

There is no more reason for confusing these three species than there would be to confuse an oak tree, a beech tree and a pine tree, and yet the history of mycology shows there has not been a single prominent author who had the three species correct, but they are perfectly competent to write books on mycology, and from such books students are supposed to be able to learn the names of fungi.

OUR YELLOW TREMELLAS

"*NAEMATILIA QUERCINA*" FROM W. C. COKER, NORTH CAROLINA.— This was recently published as *Naematelia quercina*. It had been submitted to me as "*Tremella mesenterica*?" and from the dried specimen I thought this was correct. On soaking it now I think it would be better referred to *Tremella aurantia*, but it is only a question of color. The color of the soaked plant is pale yellow with only a suggestion of orange, in fact, between *lutescens* and *mesenterica*, and in my opinion it is too close to *Tremella aurantia* to be named as a new species in a genus where it does not belong. That *Tremella lutescens* and *mesenterica* are the same as Mr. Coker thinks I do not believe, nor would any one else who has collected both as they grow in Europe. In a letter to me some years ago Bresadola advanced the view that *lutescens* might be the earlier stage of *Tremella mesenterica* but that is only a theory and has not been proved. There is no confusing the two plants if one is familiar with them as they grow. Mycologists in France who have collected and recorded *Tremella lutescens* and *Tremella mesenterica* many times often on the same day, and consider them entirely different, will be interested I am sure in learning that an American who never saw but one in his life has published the learned opinion that they are the same species probably. Persoon's original figure of *Tremella lutescens* is not good but it

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STATEMENT OF THE BOARD

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has no more suggestion of *Tremella mesenterica* than it has of a lump of chrome potash. If Mr. Coker had been familiar with the situation he could have saved himself a lot of vague discussion of a subject he evidently knew very little about.

As to its being *Naematelia*, Mr. Coker had an entire misconception of the genus as it has been understood. The two species that now pass as *Naematelia* in our books are really different genera, different ideas entirely. Both have a gelatinous, hymenial stratum surrounding a center of an entirely different texture. They have heterogeneous structure. In *Naematelia encephala* (the original species) the interior is fleshy (not gelatinous) and in *Naematelia nucleata* the "nuclei" are calcareous (not gelatinous.) Coker's plant has the tissue homogeneous, all gelatinous. In fact it is a typical Tremella in every character. Perhaps the interior is a little paler, but of the same texture, made up of the typical, slender hyphae of all gelatinous tissue. Mr. Coker would be more successful in finding "new species" if he first learns the "old genera." While the specimen I have from Mr. Coker is not so foliaceous I think it is *Tremella aurantia*, the same general form and the same color as I remember it the only time I ever collected it. We so published it (Old Species, page 11, fig. 225) and we still believe it the plant Schweinitz described and it agrees (basidia) with the frustule mounted in his herbarium, which has globose basidia and is not a *Dacryomyces* as the specific name has also been applied in our late writings to another plant, following Farlow. Schweinitz confused a *Tremella* and a *Dacryomyces*. The type specimen in his herbarium mounted, is a *Tremella* as we have assured ourself on two examinations. It is practically all gone but there is enough left to find the basidia. The specimens at Upsala and at Kew and in the Curtis herbarium from Schweinitz are *Dacryomyces*. Also an envelope in Schweinitz's herbarium, teste Coker. We therefore see no objection now to applying the name *Tremella aurantia* to the plant Schweinitz described and preserved, and the name *Dacryomyces aurantia* to the plant he distributed as *Tremella aurantia*, the latter being a *Dacryomyces* and not a *Tremella*. As Mr. Coker was informed of the substance of the above views in a private letter I see no occasion for his statement - "Mr. Lloyd seems to have changed his opinion as to the species as he has seen my plants and agrees with my determination although he has illustrated something entirely different as this species." Mr. Coker sent *Dacryomyces aurantia* to me as *Dacryomyces chrysospermus* and I corrected his determination and wrote him in detail its history in the museums of Europe and he adopted the correction I gave him and then was indiscreet enough to go into print with the above misleading statement. Mr. Coker's endeavor in this and other instances to give a wrong impression of the history of the subject which he knew at the time was not correct, may be "science" but it is not good policy.

Whether the little frustule (type) in Schweinitz' herbarium of *Tremella aurantia* is *Tremella aurantia* or *Tremella mesenterica* or *Tremella lutescens* can not be told, but it is ¹⁵one or the other and not *Dacryomyces aurantia*.

Berkeley and Cooke habitually confused *Tremella mesenterica* and *Dacryomyces aurantia*, and specimens of both are found mis-labeled at Kew. They never recognized either species as a *Dacryomyces* excepting once when Berkeley discovered *Dacryomyces aurantia* to be a

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"new species" although he had referred the same thing several times to *Tremella mesenterica*. As to *Tremella aurantia*, Berkeley made one of his most amusing bulls. He named it as *Sparassis* (sic) *tremelloides*. Masee discovered the blunder, that it had no relation to *Sparassis* (sic) and perpetrated the sophisticated name "*Tremella tremelloides* (Berk.) Masee." A specimen from Ravenel in the herbarium of Tulasne is labeled *Sparassis brevipes*. Berkeley and Ravenel take it for a *Sparassis* and Coker as a *Naematelia*. It would be hard to say which is the bigger bull.

The following letters are self explanatory.

Manchester, Ky., June 4, 1920.

My dear friend:

I am running a serial in the Louisville Courier-Journal entitled "Who's who in State Biography." Under that heading is published short biographical sketches of prominent Kentuckians on their respective birthdays.

I would be glad to have you in that list and shall appreciate it very much if you will prepare a short sketch of your life and send it to me at once. You will find enclosed a stamped addressed envelope.

Very truly your friend,
Wm. J. Moore.

Cincinnati, Ohio, June 10th, 1920.

Mr. Wm. J. Moore,
Manchester, Ky.

Dear sir:

Replying to your request of June 4th, while personally I am not much impressed with the "Who's who" idea, believing that individuals are very much of a uniform grade and that the average individual is of about as much importance to the world as an ant is in the ant hill, I enclose herewith the sketch as you have requested. You are at liberty to condense it or to omit it as you may desire. I am also sending you some publications giving you a general idea of my activities.

Yours very truly,
C. G. Lloyd.

CURTIS G. LLOYD

Mr. Curtis G. Lloyd was born in Florence, Kentucky, July 17, 1859, and is therefore at the present time sixty one years old. His father was a country school teacher at Florence, and when a child nine years old the family moved to Crittenden, Ky., where such schooling as Mr. Lloyd had was acquired in the country schools. As a young man he went to Cincinnati to make his way and his first job was as an apprentice and general bottle washer in a retail drug store at Ninth and Elm Streets where he received the sum of five dollars per week.

About thirty-five years ago, with his two older brothers he formed the firm of Lloyd Brothers, a firm that has grown and become quite prosperous, and in 1918 Mr. Lloyd retired with a competency.

His tastes have always run to botany and scientific subjects and in his earlier days he acquired a herbarium and practical knowledge of most of our flowering plants of the eastern states. About twenty-five years ago, having exhausted the subject of flowering plants as far as opportunity presented, he took up the study of mycology, which in common language is the study of fungus growths. This was largely a new field, for mycology had never been worked from a practical standpoint. The specimens of the world had been sent to different centers in Europe, namely Kew, Paris, Berlin and Upsala, and the plants had been named by local workers, none of them knowing what the others had done, and no one being able to interpret the work that was done, with the result that fungi, which are plants of wide distribution, had different names in each locality.

About fifteen years ago Mr. Lloyd made arrangement with his brothers whereby he was to have his time and he placed a man in charge of his department in the firm. He went to Europe and spent ten or fifteen years hunting up the historical specimens preserved in the museums of Europe and in acquiring a knowledge of their history and nomenclature. Mr. Lloyd is practically the only one who has ever engaged in the details of this work and he has therefore become a fungus informant. Hundreds of specimens are sent to him every year from every country in the world and they are preserved in the Lloyd Museum which has become not only the largest museum of the subject in the world but contains probably ten times as many of the larger fungi as all other museums combined.

Early in life Mr. Lloyd began the accumulation of botanical books and it finally became an obsession with him, as he spent much of his time in the book centers of Europe, purchasing books wherever he found them. The library has grown to be the largest perhaps in the world on this special subject, containing about fifty thousand volumes. It is known as The Lloyd Library, has been endowed by Mr. Lloyd and placed in the hands of Trust Companies so that it will be continued for all time to come.

Mr. Lloyd is the owner of a fine farm, embracing about four hundred acres, near Crittenden, Ky. Being a lover of flowers he devotes a large part of his time to the establishing of flowers in mass along the pike frontage of the farm. This farm will also be placed in the hands of a Trust Company to be maintained perpetually and a sufficient fund provided to take care of its expenses.

Being an old bachelor and having very modest personal expenses, Mr. Lloyd has funds to devote to the maintenance of the library and flower garden for the pleasure and profit of the public.

In this connection we have a pride that we trust is pardonable in reproducing a free translation of an article that appeared recently in "Broteria" and which being in French and published in a Spanish journal might probably not otherwise be brought to the attention of our readers. We believe we are justified in reproducing this article and in having a pleasure in this appreciation of our work by Father Torrend.

THE POLYPORACEAE OF BRAZIL

By. C. Torrend, S. J.

The Genus *Ganoderma*.

Until only a few years ago it was with a veritable sentiment of terror that a mycologist contemplated writing a work of the ensemble of polypores of such a vast region as South America. In searching the volumes of Saccardo with its colossal compilation of more than 3000 species belonging to this family, to which were necessarily added new lists annually, one can not avoid being discouraged, believing that the work of ensemble is impossible in the midst of this inextricable confusion. Happily there is an intrepid man who has permitted himself to become impassioned by the noble idea of putting in order this obscure realm of nomenclature where they were taking refuge too often in the ignorance and vanity of authors. Mr. C. G. Lloyd has demonstrated that having the time and the means and a little common sense one can succeed in solving the problems of this most complicated family. With admirable patience he has searched the museums of Europe where are conserved the original specimens of the species in question and has expended sums of energy and money which it is difficult to calculate in order to study each species, photograph it and identify it with others described under different names. Finally he has published his important "Letters and "Mycological Notes" in which one does not know which to most admire, the incredible abundance of judicious observations, the clear typography of the impression and the photographs, without speaking of the humor which would do honor to Mark Twain, with which he attacks the vanity of certain authors. The elimination of encumbering matter consummated by Mr. Lloyd simplifies in a surprising fashion the study of the polypores of the American tropics and of any other region of the Old and New World. Some of us would prefer perhaps that Mr. Lloyd was less revolutionary in his divisions and that he would more faithfully conserve the old groups of Fries or of Hennings. If one thinks, however, that after all systematic mycology is strongly arbitrary and that it is often impossible to circumscribe the boundary of certain species without encroaching more or less on others even of the same family, one will be obliged to confess that Mr. Lloyd has good reason for introducing his new divisions, so practical for the study of polypores. For example, he divides from the start the species that are sessile from those that are stipitate. We follow as closely as possible this authorized master. However, we believe we should depart in the present case of *Ganoderma* by preserving its place in nomenclature to this genus so autonomous of which some species are sessile and others are stipitate. In the work that follows we shall study in the light of the writings of this author and present in order the groups of other stipitate polypores and then will consider the sessile forms, not forgetting the other more natural groups such as *Favolus*, *Hexagona*, etc. As to the resupinate species, until Mr. Lloyd or some enthusiastic imitator of his initiative has thrown some light on the subject we shall ourselves keep silence.

The work that we present is the fruit of the later years of war, during which it was impossible to consult our master, l'Abbé J. Bresadola, the one mycologist whom Mr. Lloyd regards as having the most profound knowledge of the Basidiomycetes and consequently the polypores. He does not the less merit our recognition for his services rendered before the war as well as for the learned, critical

observations of his numerous writings, which have served so grandly to guide Mr. Lloyd in the midst of the labyrinth of mycological nomenclature.

While we are on the subject we submit a letter received from Mr. W. R. Lowater, Toledo, Ohio, and publish it without changing a word. We do not know that we endorse all that Mr. Lowater has said particularly regarding ourself, but we believe there is a great deal more truth in his comments than mycologists in general recognize. As Mr. Lowater is a comparative stranger to us and we have no personal acquaintance with him nor have we been in correspondence with him, there was certainly no personal bias in his remarks. The taxonomic and historical side of mycology has gotten into a hopeless tangle, due as I have always contended to the curse of adding personal names to plant names and the resulting poor quality of work done mainly with this subject, and he who cleaned the Augean stables had a simple task compared to one who desires to get any definite sense out of mycology under present conditions.

Toledo, Ohio, 7-24-20.

C. G. Lloyd,
Dear sir:

I recently received from you a package of pamphlets for which I herewith render thanks.

I can not too highly commend you for the method you have adopted in presenting your subject. After having read your Synopsis of the Known Phalloids with the accompanying illustrations I feel there is at least one group of fungi that I will be able to resolve into genera and species without the fear of being all wrong. In fact, reading your pamphlets, after having read the general run of taxonomic literature was like dropping from the abstrusities of Kant and Hegel to the straightforwardness and lucidity of Darwin.

Incidentally no person who has the welfare of science at heart could do otherwise than approve of your merited condemnation of egotists and nature fakers, and to these I wish to add another more pernicious than the others, in so far as his influence is more general and can not be escaped, viz: the pedant. I doubt whether there is another branch of the natural sciences that is so cursed with the dead hand of the past, with straight-laced orthodoxy, as is mycology, a condition of affairs well enough adapted to the exploitation of individual pedantry, but detrimental to the advancement of mycological learning. I refer to the systematic, taxonomic portions of its literature. The accepted analyses of orders, families and genera and the descriptions of species are too often allegories rather than descriptions, or at best descriptions that are useless without an explanation of what the description means. These descriptions are all run through a planer and planed to the same thickness, then all are sawed off to the same length, and there you are - now locate your specimen. While a drawing, a reproduction of a photograph or a word here and there in plain, prosaic language would enable the investigator to locate his specimen more readily, such word or assistance is not forthcoming, not from him, the pedant, he would be compromising his dignity, lowering the ethical standard of

his cult by such a condescension to the hoi polloi.

Brand me if you will as an upstart who "had better get dry behind the ears before he presumes to criticize his elders" but unless your pamphlets belie your true character you will agree that I voice the sentiments of hundreds, yes, thousands who have taken up this fascinating study, some of whom will perhaps render a good account of themselves, beginners whose "aching heads and exhausted patience" is proof of weeks, months and even years of absolutely wasted time and effort, energy that was wasted for lack of descriptions that describe not confuse.

Lucidity, simplicity and directness in mycological literature, is in need of champions to break down the old hide-bound traditions. In your treatment of the Gastromycetes you have "did your bit" and gained the esteem of those who need help, even if you did not gain the approval of the mycological Pharisees. Let us hope that your treatment of the Polyporii will be another blow at the "Beckmesser method."

I regret that you were unable to supply me with your works on the Geastreae and Lycoperdaceae, but will live in the hope that fortune may some day favor me and place them in my hands.

Again I thank you for your kindness. If I can repay you in any manner, command me.

Yours respectfully,
W. R. Lowater.

COLLECTION NOTES

Although we are very much behind with our correspondence and reports on specimens received, we have neglected the work since the first of August. We must ask the indulgence of our friends until after the close of the season. Rarely do we have such a fine fungus season around Cincinnati as this year. The woods are full of fungi and we can take a basket and collect more in a day than we can work over in a week. There are so many groups that we know so little about and are anxious to learn. For instance, Hypocreas, Hypoxylons, Porias, resupinate Thelephoraceae and many others. Many of them we are unable to get names for but we can collect them, and photograph them and they may work out in time. To learn fungi right one must study them as they grow, and I am satisfied that if one were familiar enough with them he could recognize at sight almost every fungus, including the resupinate Thelephoraceae and even the Myxomycetes. They must first be studied and learned with the microscope, but there is a great deal of unnecessary work done by those who study only the dried specimens.

There ought to be a practical collection book with which a student could go to the woods and observe and name the fungi he finds. But there is none, and probably there never will be as long as the energies of those who work on the subject are chiefly directed to hunting for "new species."

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F. Buchholz



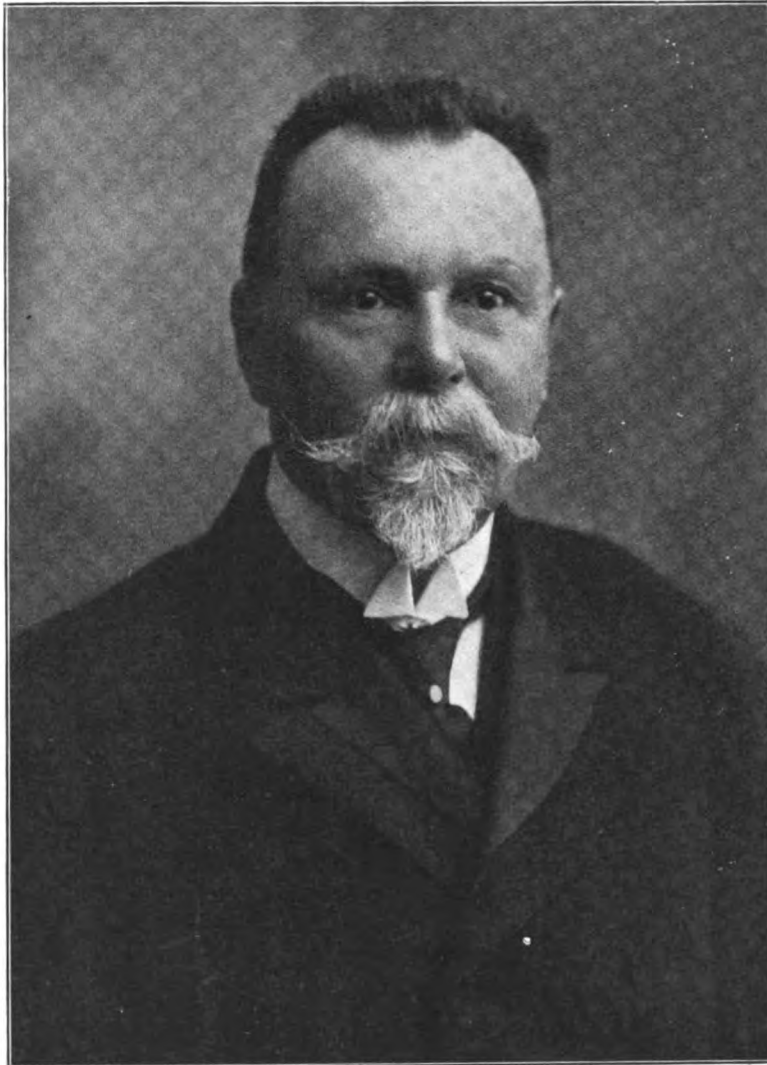
MYCOLOGICAL NOTES.

By C. G. LLOYD.

Plates for No. 65.

CINCINNATI, O.

NOVEMBER, 1920.



Prof. O. Müllin
Turin. 20. VIII. 906



O. P. F. THEISZEN, S. J.



Fig. 1859. *Xylaria æmulans*.



Fig. 1861. *Xylaria Berkeleyi* (type).



Fig. 1862. *Xylaria Berkeleyi*.



Fig. 1860. *Xylaria æmulans* X6.



Fig. 1863. *Xylaria Berkeleyi* X6.



Fig. 1865. *Xylaria moriformis*.



Fig. 1866. *Xylaria* "inaequalis".

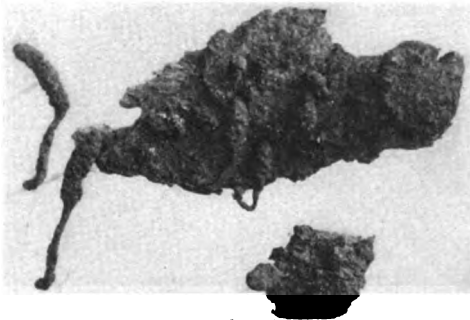


Fig. 1864. *Xylaria biformis*.



Fig. 1867. *Hydngangium pallidum*.

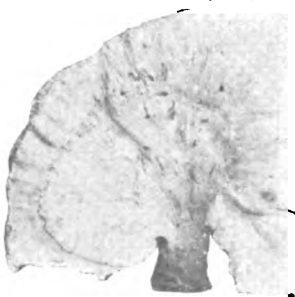


Fig. 1868. *Polystictus Blumei*.

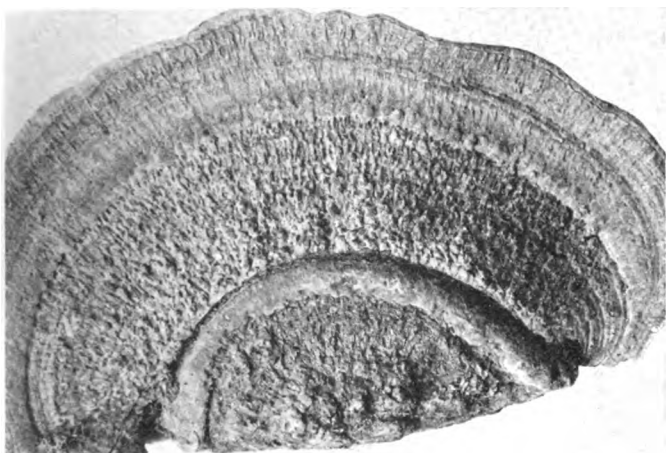


Fig. 1869. *Polystictus caperatus* (type).



Fig. 1870. *Polystictus caperatus* (unusual).



Fig. 1871. *Polystictus caperatus* (pubescent).



Fig. 1872. *Polystictus caperatus* (usual).



Fig. 1873. *Polystictus aculeans*.



Fig. 1874. *Polystictus Fischeri*.



Fig. 1876. *Podocrea transvaalii*.



Fig. 1875. *Polystictus phocinus*.

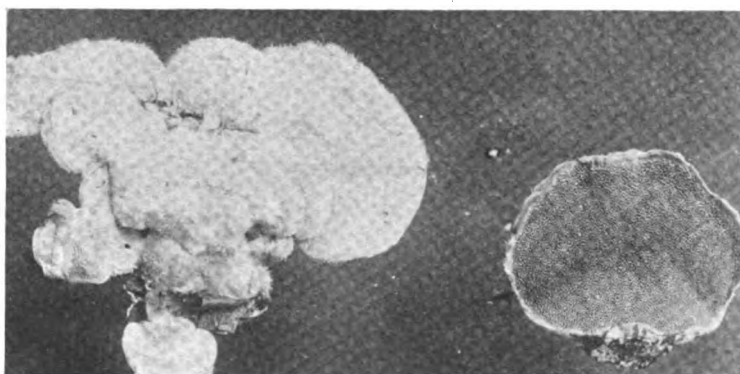


Fig. 1877. *Polystictus velleus*.



Fig. 1878. *Kretzschmaria spinifera*.



Fig. 1879. *Kretzschmaria spinifera* enlarged.



Fig. 1880. *Kretzschmaria Kurziana*.



Fig. 1881. *Kretzschmaria truncata*.

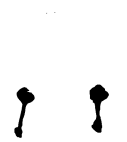


Fig. 1883. *Kretzschmaria (?) pusilla*.



Fig. 1884. *Kretzschmaria pusilla* section enlarged.

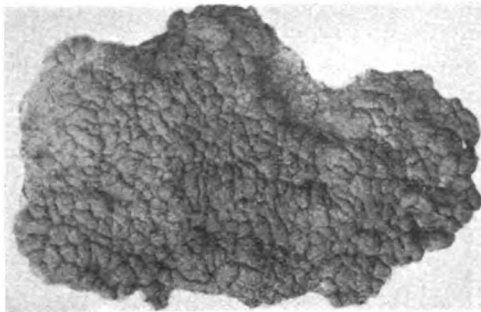


Fig. 1882. *Kretzschmaria lichenoides*.

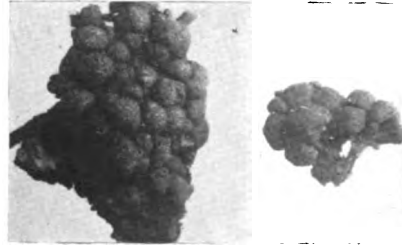


Fig. 1885. *Kretzschmaria Mauritanica*.



Fig. 1886. *Dubiomyces viridis* (natural).



Fig. 1887. *Dubiomyces viridis* (young X6).



Fig. 1888. *Dubiomyces viridis* (surface X6).



Fig. 1889. *Dubiomyces viridis* (section X6).



Fig. 1890. *Polyporus flabellaris*.



Fig. 1891. *Entonæma mesenterica* (soaked).

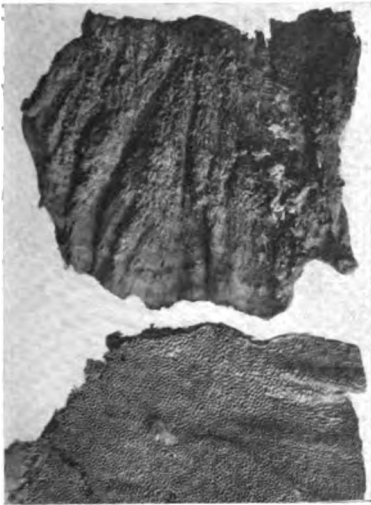


Fig. 1892. *Polystictus cristatus*.

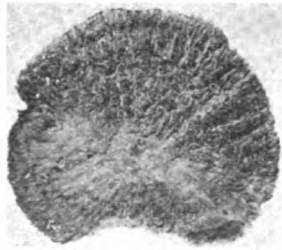


Fig. 1893. *Polystictus zelanicus*.

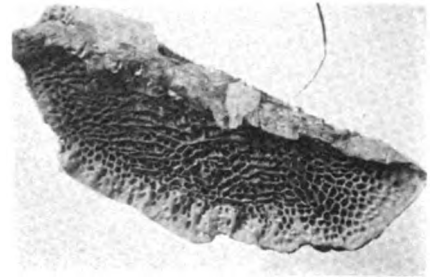
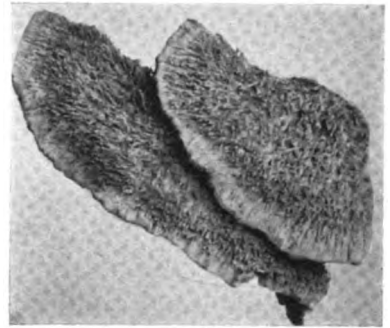


Fig. 1894. *Trametes Wildemani*.



Fig. 1895. *Polystictus floccosus*.

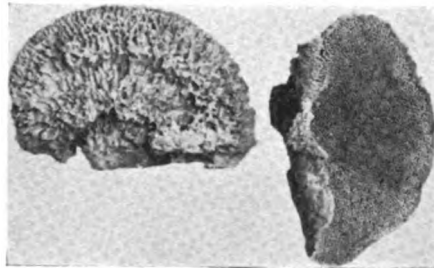


Fig. 1896. *Polystictus floccosus*.



Fig. 1897. *Polystictus Ellisianus*.



Fig. 1898. *Polystictus Dybowski* (bis).



Fig. 1899. *Trametes cupreo-rosea* (above).
Trametes carnea (below).



Fig. 1900.
Polyporus rhinocerotis (natural).



Fig. 1901. *Polyporus sacer* (natural).



Fig. 1902. *Polyporus superniger*.



Fig. 1903. *Polystictus albobadius*.



Fig. 1904. *Polyporus lucidus*.

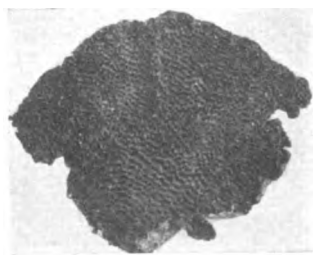


Fig. 1905.
Polystictus cichoriaceus (cyclomyoid).

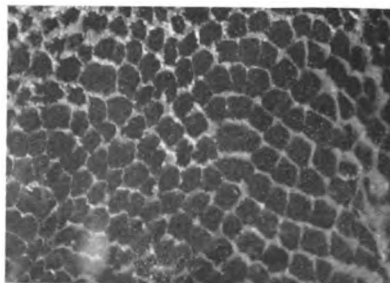


Fig. 1906. *Polystictus cichoriaceus* (cyclomyoid)
pores enlarged.



Fig. 1907. *Trametes rugoso-picta*.

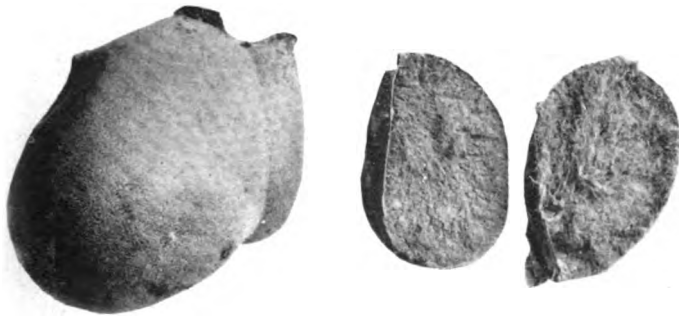


Fig. 1908. *Lycogala flavo-fuscum*.

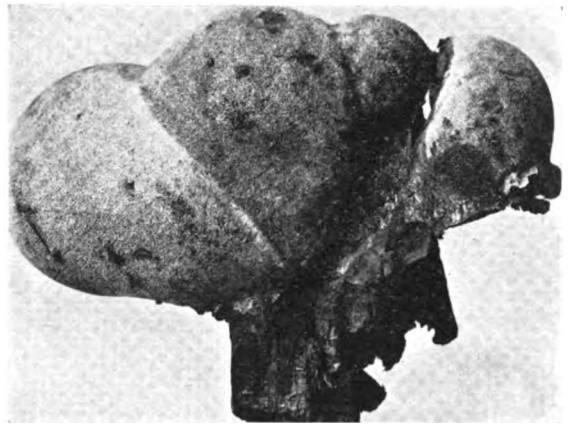


Fig. 1909. *Lycogala flavo-fuscum*.



Fig. 1910. *Lycogala flavo-fuscum* (pendulose).

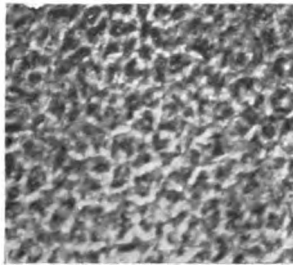


Fig. 1911. *Lycogala flavo-fuscum* cortex enlarged.

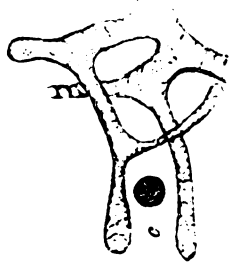


Fig. 1912. *Lycogala flavo-fuscum* capillitium (Lister).

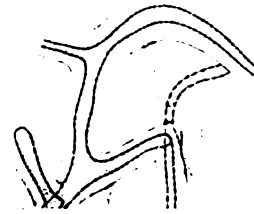


Fig. 1913. *Lycogala flavo-fuscum* capillitium (Rostafinski).



Fig. 1915. *Reticularia Lycoperdon* capillitium.



Fig. 1917. *Polyporus lucidus* (young).

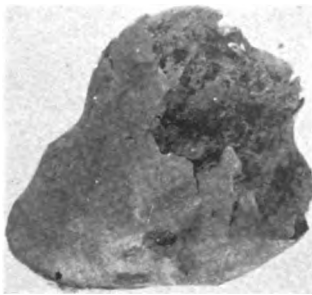


Fig. 1914. *Reticularia Lycoperdon*.

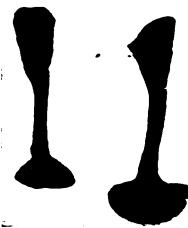


Fig. 1916. *Polystictus xanthopus* (young).

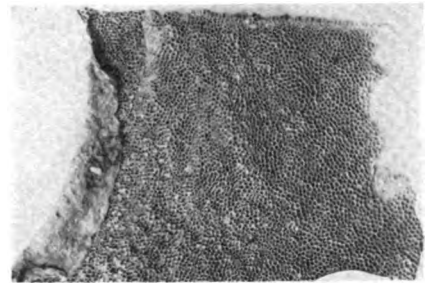


Fig. 1918. *Polystictus setulosus*.



Fig. 1919. *Polyporus fuscellus*.

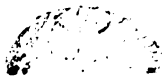


Fig. 1920. *Polyporus dichrous* (velutinate).

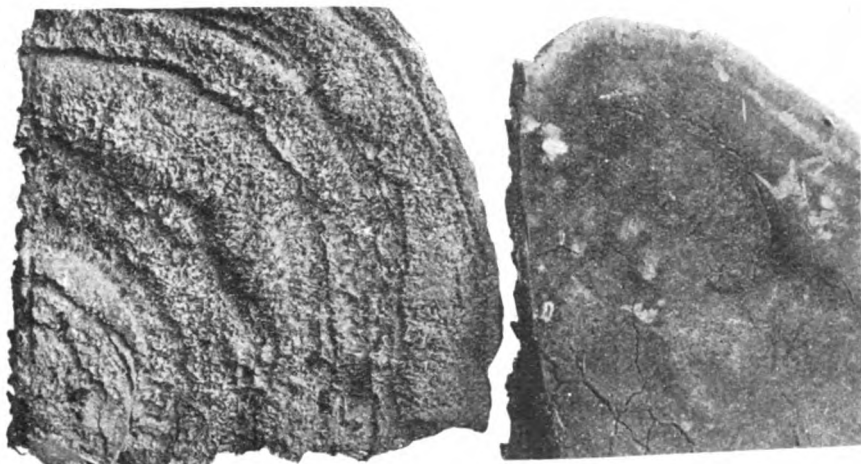


Fig. 1921. *Polyporus oroniger*.



Fig. 1922. *Stereum speciosum*.

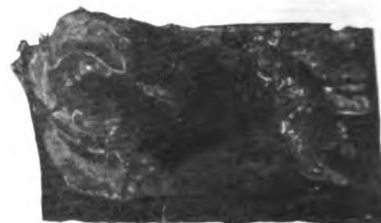


Fig. 1923. *Exidia candida*.



Fig. 1924. *Polyporus sepioides*.



Fig. 1925. *Polyporus sepioides* (pores).

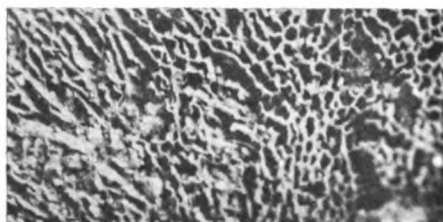


Fig. 1926. *Polyporus sepioides* pores enlarged.



Fig. 1927. *Trametes versicolor*.

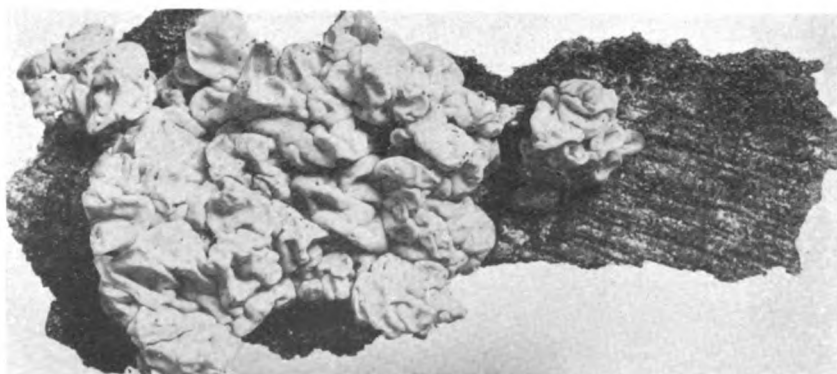


Fig. 1928. *Seisimosarca alba*.

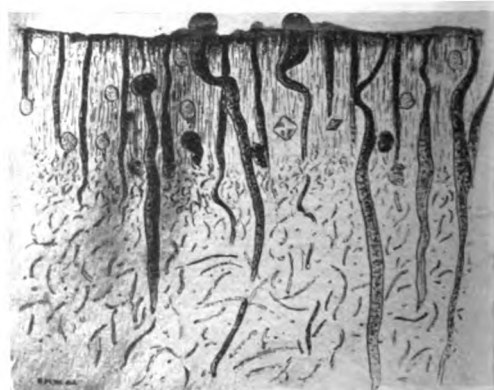


Fig. 1929. *Seisimosarca alba* section.



Fig. 1930. *Exidia glandulosa*.

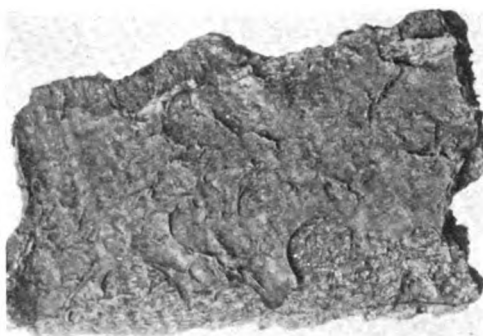


Fig. 1931. *Exidia glandulosa* (dried).



Fig. 1932. *Exidia glandulosa* (from Weir).

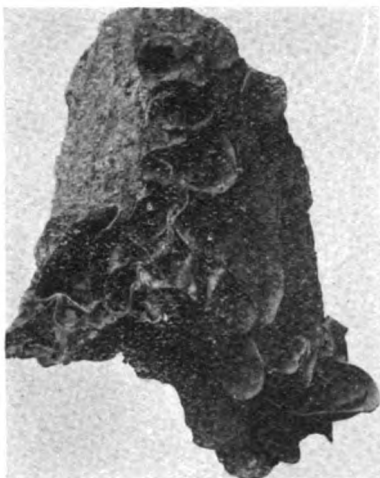


Fig. 1933. *Exidia arborea*.



Fig. 1934. *Exidia arborea* (dried).



Fig. 1935. *Clavaria laciniata*.



Fig. 1936. *Clavaria laciniata*.



Fig. 1937. *Xylaria helcidea*.



Fig. 1939. *Melanogaster mollis*.



Fig. 1938. *Xylaria heloidea* (enlarged).



Fig. 1940. *Tylostoma Transvaalii*.



Fig. 1941. *Broomeia ellipsospora*.



Fig. 1942. *Melanogaster variegatus*.



Fig. 1943. *Dacryomitra lutea*.



Fig. 1944. *Dacryomitra lutea* enlarged.



Fig. 1945. *Merulius erectus*.



Fig. 1946. *Merulius erectus* enlarged.



Fig. 1947. *Tremellodendron Hibbardii*.

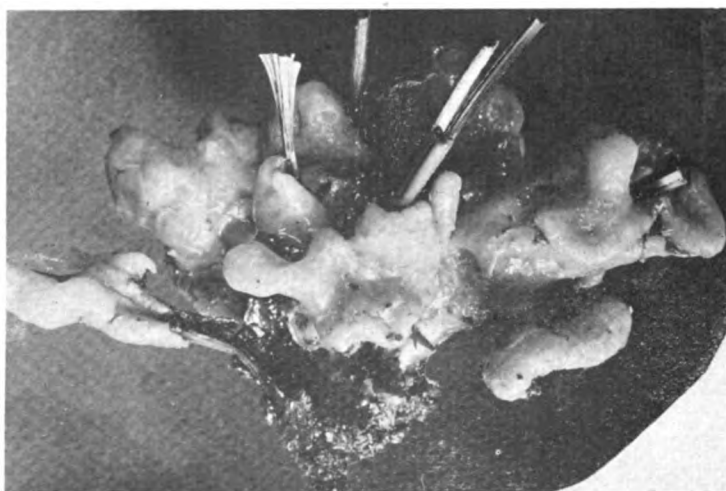


Fig. 1948. *Tremella vesicaria*.



Fig. 1949. *Lachnocladium geniculatum*.

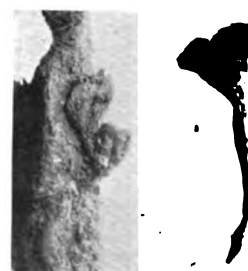


Fig. 1950. *Trichoscypha magnispora*.



Fig. 1951. *Exidia Beardsleei*.



Fig. 1952. *Dacryomyces candida*.

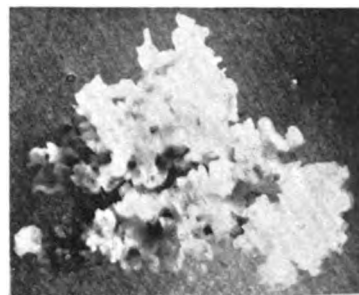


Fig. 1953. *Tremella fuciformis*.



Fig. 1954. *Tremella carneo-alba*.



Fig. 1955. *Calocera guepinioides*.



Fig. 1956. *Hypoxylon rostratum*.



Fig. 1958. *Femsjonia luteo-alba*.



Fig. 1959. *Femsjonia luteo-alba* (enlarged).



Fig. 1957. *Hypoxylon rostratum* (enlarged).



Fig. 1961. *Podocrea anomala* (enlarged).



Fig. 1960. *Podocrea anomala*.



Fig. 1952. *Xylaria diversa*.



Fig. 1963. *Stereum affine*.

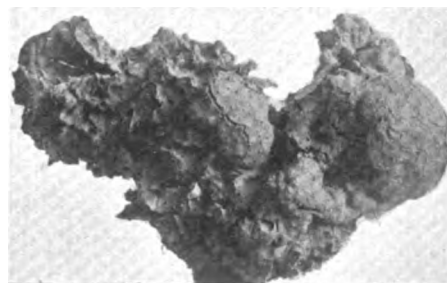


Fig. 1964. *Hypoxylon magnosporum*.

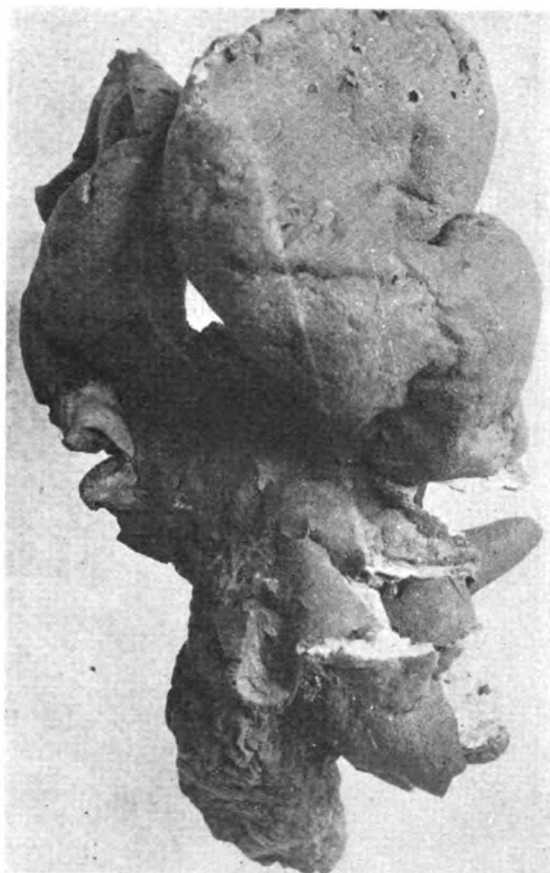


Fig. 1965. *Xylaria composita*.

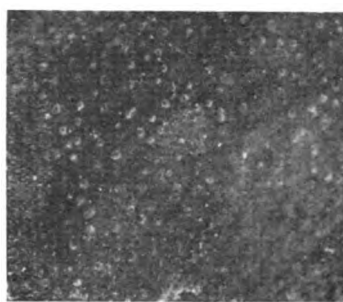


Fig. 1966. *Xylaria composita* surface enlarged.

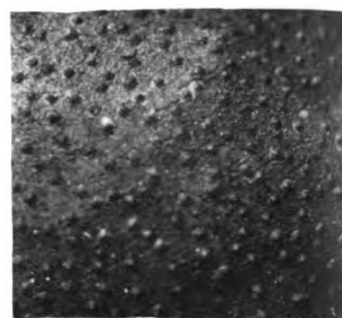


Fig. 1970. *Xylaria papulis* surface enlarged.



Fig. 1969. *Xylaria papulis* section.



Fig. 1967. *Xylaria papulis*.



Fig. 1968. *Xylaria papulis*.



Fig. 1972. *Xylaria timorensis* (enlarged).

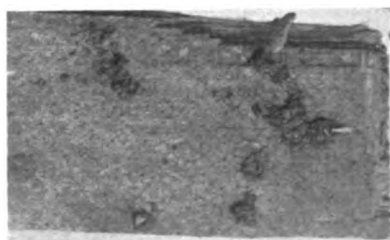


Fig. 1971. *Xylaria timorensis*.



Fig. 1973. *Stereum auriscalpium* (enlarged).



Fig. 1974. *Pterula incisa* natural size and enlarged.



Fig. 1975. *Phyllomyces multiplex*.



Fig. 1976. *Diploderma cretaceum*.

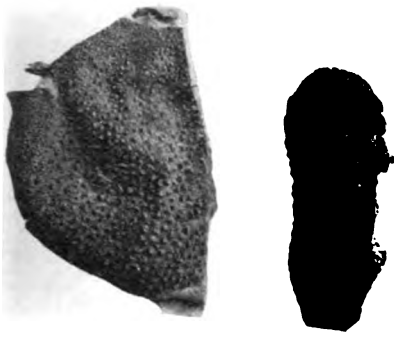


Fig. 1977. *Lycoperdon globoso-piriforme*.

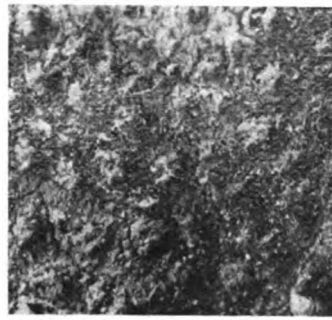


Fig. 1978. *Lycoperdon globoso-piriforme* cortex enlarged.

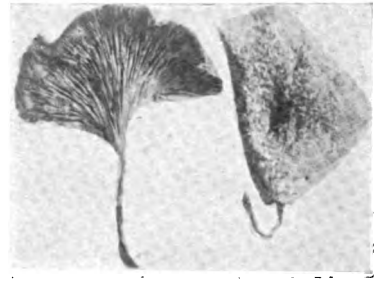


Fig. 1979. *Lentinus crinitus*.



Fig. 1980. *Scleroderma maculatum*.

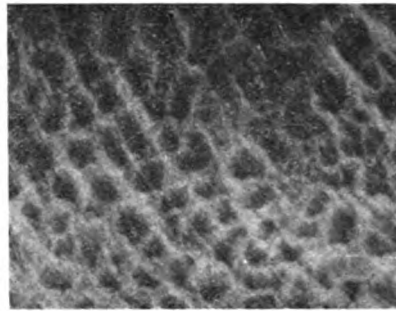


Fig. 1981. *Scleroderma maculatum* scales (X6).



Fig. 1982. Scales of *S. verrucosum* (X6).

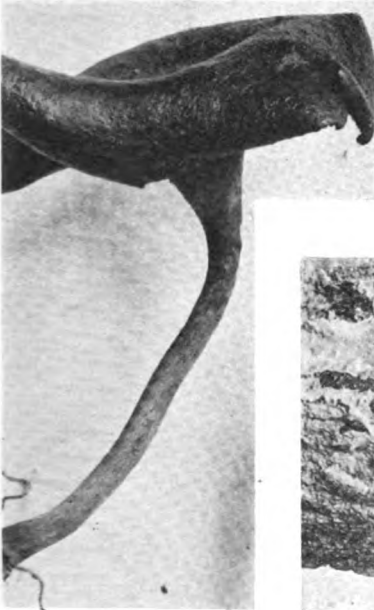


Fig. 1983. *Polyporus Craterellus*.



Fig. 1984. *Radulum Owensii*.



Fig. 1985. *Geoscypha crenulata*.



Fig. 1986. *Merulius ochraceus*.

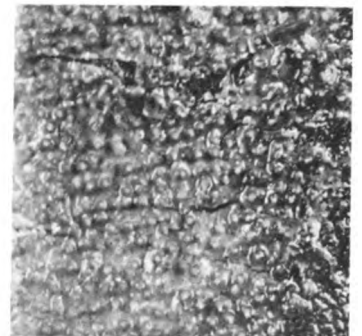


Fig. 1987. *Merulius ochraceus* (enlarged).



Fig. 1988. *Trametes subminima*.



Fig. 1989. *Irpex castaneus*.



Fig. 1990. *Cordyceps dipterigena* (enlarged).



Fig. 1991. *Cordyceps dipterigena* natural size.

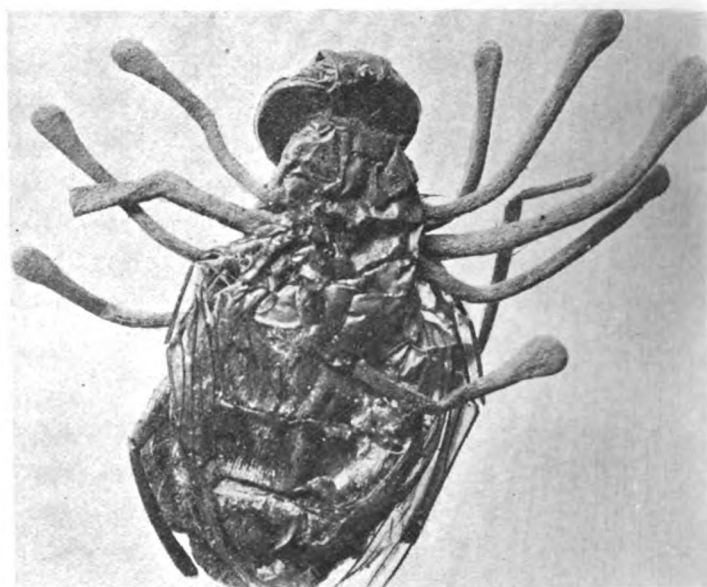


Fig. 1992. *Cordyceps Thwaitesii* (enlarged).



Fig. 1993. *Cordyceps Forquignoni*.



Fig. 1994. *Cordyceps Hillii* (natural).



Fig. 1995. *Polyporus Burkillii*.

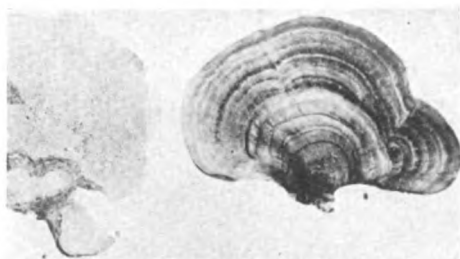


Fig. 1996. *Polystictus pavonius*.

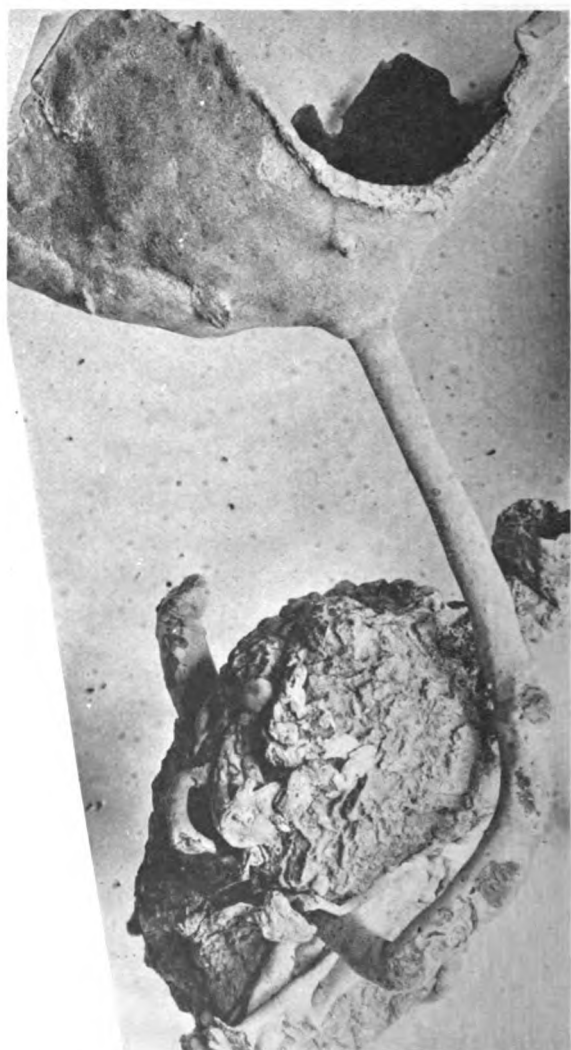


Fig. 1997. *Polyporus rhinocerotis* (or better small pored sacre).

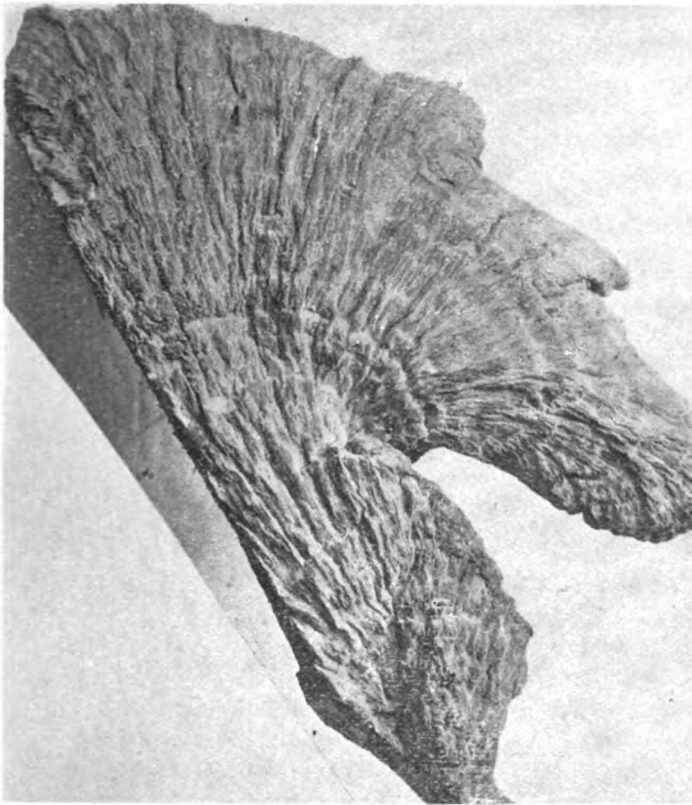


Fig. 1998. *Polyporus armadillus*.



Fig. 1999. *Fomes latistipitatus* (reduced).



Fig. 2000. *Polyporus* (Gan.) *asperulatus*.

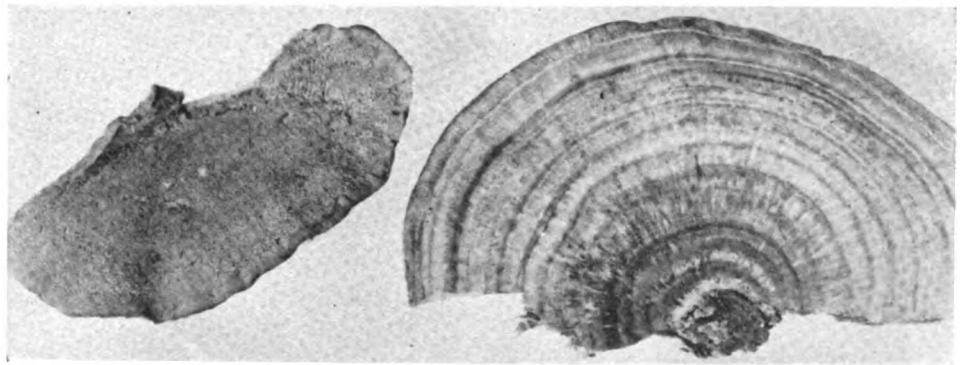


Fig. 2001. *Polystictus radiata-rugosus*.

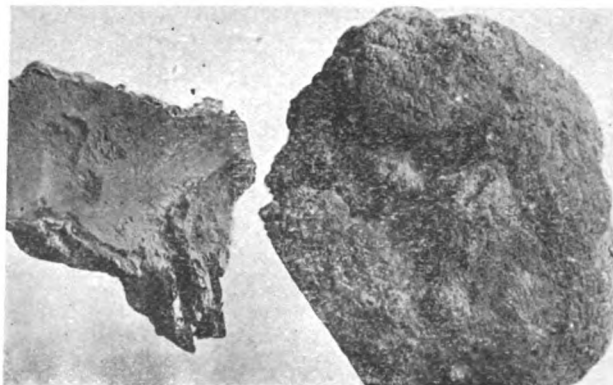


Fig. 2002. *Ptychogaster aureus*.

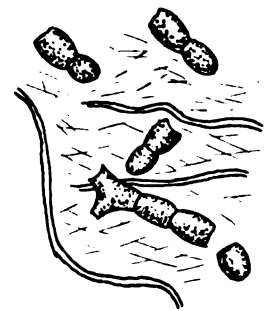


Fig. 2003. "Structure" *Ptychogaster aureus*.

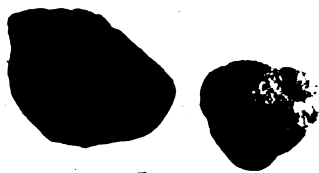


Fig. 2004. *Melanogaster variegatus*.



Fig. 2005. *Melanogaster ambiguus*.

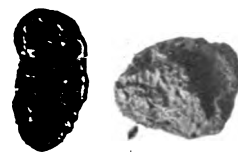


Fig. 2006. *Melanogaster rubescens*.



Fig. 2007. Spores of *Melanogaster* species.



Fig. 2008. *Phyllocarbon Yasudai*.



Fig. 2009. *Aleurodiscus Tsugae*.



Fig. 2010. *Aleurodiscus stereoides*.

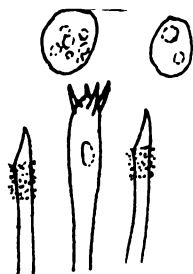


Fig. 2011. *Aleurodiscus stereoides* "structure".



Fig. 2012. *Aleurodiscus scopulatus*.

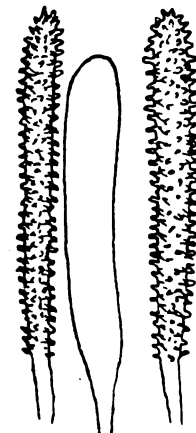


Fig. 2013. *Aleurodiscus scopulatus* "structure".



Fig. 2014. *Lentinus atro-lucidus*.



Fig. 2015. *Exidia glandulosa*.



Fig. 2016. *Scorias spongiosa*.



Fig. 2017. *Antennaria scoriacea*.



Fig. 2018. Hyphae threads *Antennaria scoriacea*.

MYCOLOGICAL NOTES

BY C. G. LLOYD

NO. 65

Cincinnati, Ohio

May 1921.

PROFESSOR ORESTE MATTIROLO

It is a pleasure to add to our gallery of mycological portraits that of Professor Oreste Mattiolo who is very prominent in the mycological world in Italy.

Professor Mattiolo was born December 7th, 1856, and is therefore at present sixty-four years of age.

He secured his Doctor's degree in Medicine and in Science from the University of Turin and later studied at the University of Strassburg for two years (1879-80, 1880-81) in the Laboratory of M. de Bary. For the past twenty years Dr. Mattiolo has been Director of the Botanical Garden and Professor of Botany of the University of Turin, having previously served in the same capacity in the University of Bologna and the Istituto di Studi Superiori of Florence. He is now President of the Royal Academy of Agriculture.

Professor Mattiolo's activities have covered a wide field from phaenogamic and agricultural botany to all branches of mycology, his specialty being the difficult section known as hypogaeal fungi. He is perhaps the best informed man in Europe on this subject today. He has published a great deal on the hypogaeal fungi of Italy and has promised a paper on our North American hypogaeal fungi which has been delayed, he writes me, by the interruptions of the war. One who lives in Italy has special opportunities for studying hypogaeal fungi, for Italy is really the birthplace of the study. The first mycologist who ever investigated this difficult branch was Vittadini whose work is still an authority on the subject and he is the father of the study of hypogaeal fungi. Then it was taken up by Tulasne who issued, at Paris, a beautiful monograph. These two men and Professor Mattiolo have given us practically all that is known of the subject. We presume there is not in Europe another collection of hypogaeal fungi as extensive as that in the private herbarium of Prof. Mattiolo, and on our next trip to Europe it is our intention to make a special visit to Italy in order to see this collection. We have corresponded with Prof. Mattiolo for a number of years and have always relied on him for what little knowledge of hypogaeal fungi we have. I am sure Prof. Mattiolo would be glad to give critical advice to any one collecting hypogaeal fungi and it would certainly aid in getting a correct idea of the subject if some of our students who are publishing on the subject would send their material to Prof. Mattiolo and really learn something about it. He is still actively interested in the subject and I trust he will find time to publish a systematic résumé of hypogaeal fungi.

O. P. FERNANDO THEISZEN, S. J.

We are glad to present a photograph of Rev. Theiszen whose tragic death occurred a little more than a year ago, September 5th, 1919. Rev. Theiszen was a member of the Society of Jesus and was

graduated from the seminary at Feldkirch, which as we understand, is the headquarters of this society. It is not necessary to tell the readers of Mycological Notes of the prominent part that has been taken in the development of mycology by Fathers, Rick, Torrend, Theiszen, Mille and other graduates of this seminary. Father Theiszen has written some very important papers based on the collections of Rev. Rick in Brazil. To my mind the best of these was on the genus *Xylaria*, the most important paper that has yet appeared on this family.

At the time of his death Father Theiszen was located at his Alma Mater. Feldkirch is a little village in the Tyrolean mountains and is surrounded by very rugged country. On the 2nd of September, 1919, he made a botanical excursion to the mountains and valleys of Valle de Montafon. He did not return to the college and was missing for four days when his body was found badly mutilated at the base of a precipice. He gave his life as a martyr to Science and at the early age of 42 years.

We have a very pleasant memory of a day spent with Father Theiszen at Feldkirch some years ago, and in his death we feel a personal loss.

XYLARIA SECTION 12

In this section we would include the small, cylindrical species with solid stroma that are obtuse (or sometimes acute) but not apiculate as Section 11. It is a very puzzling section for the data regarding it is very meager. Most of the specimens we have seen are in the New York Botanical Gardens.

XYLARIA AEMULANS (Fig. 1859 and 1860 surface enlarged).— 2-3 cm. high with a distinct, smooth stem. Clubs 2-3 mm. thick. Surface slightly moriform with partially protruding perithecia. Spores small, ovoid, 5 X 7.

This is distinguished from others of the section by its small pores. The clubs are mostly acute but not apiculate. Rick, Brazil, 152. "Cuba, on ground", Bros. Lewis 4506 at New York. (Fig. 1859) Cuba B & W. 4947 at New York. Cuba, B. W. & L. 14135 at New York. The habitat given "on the ground" appears from the specimens to be an error. This appears to be *Xylaria radicata* in the sense of Wright, Cuba, in the Clinton Herbarium (and Cooke) which has spores 4 X 8, not surely as Berkeley described as "15-20" mic. long.

XYLARIA BERKELEYI (Fig. 1861 and 1862).— Clubs 2-3 cm. tall with distinct stipe. Surface slightly moriform with partially protruding perithecia. Spores 6-7 X 18-20.

This is said to be *X. furcata* of Schweinitz's manuscript, from Surinam, but why called "furcata" I can not say. Montagne first published it as *Xylaria corniformis* but when Berkeley told him this was an error he changed it to *Xylaria Berkeleyi*. The type at Kew (Fig. 1861) is obtuse, but most specimens I so refer are acute. *Xylaria Cordovicensis*, Mexico, Cooke, is for me now the same. The only "type" I have ever noted is at New York, from Masee. Spores 5 X 16 are some smaller. *Xylaria trachelina*, a poor type of which is at Paris, is probably the same. Our statement somewhere that no type is known is an error.

Theiszens figure, (Pl. 10. Fig. 5) from its rimose surface represents for me *Xylaria apiculata* instead of *Berkeleyi*. Specimens, J. A. Stevenson, Porto Rico, 1518. Wolcott 2804, Porto Rico, at New York. Our figure 1863 is of the surface enlarged six fold.

XYLARIA BIFORMIS FROM E. D. MERRILL, PHILIPPINES (Fig. 1864).— Clubs cylindrical, about a cm. long, obtuse. Surface strongly tubercular with the protruding perithecia. Stipe varying from none to 1 cm. long. Spores 8-12 X 20-24.

This is close to *Xylaria Berkeleyi* of the American tropics but of different stature and with larger spores. The variation in the length of the stipe as shown in different specimens of the same collection is such that one if sent separately, would hardly consider them the same species.

XYLARIA MORIFORMIS IN THE UNITED STATES (Fig. 1865).— Compare *Xylaria* Notes p. 30. fig. 1353. We dislike to refer a single collection from the United States to a single collection only known from Africa, but it has the same general characters, shape, size, strongly moriform perithecial and general size of spores, 6 X 20-24. We only know one collection of this from the States, which was made at Ithaca, N.Y. (on log) by Atkinson and sent to Rehm who referred it to "*Xylaria inaequalis*, B. & C." Rehm did a lot of bad guessing at *Xylarias*. There is some discrepancy between my photographs of what I took as the type at Kew, and the co-type at Paris of *Xylaria inaequalis*. The latter (Fig. 1866) is, from the description, correct and for me is *Xylaria scopiformis*. (Cfr. *Myc. Notes* p. 675). In any event neither photograph has the least suggestion of Atkinson's plant.

HYDNANGIUM PALLIDUM FROM REV. L. MILLE, ECUADOR (Fig. 1867): About 2 cm. in diameter. Peridium thin, seeming to flake off in spots. Rooting base strongly marked. Section pale isabelline. Loculi more or less elongated. Basidia persistent, each with two sterigmata. Spores globose, 16 mic. rarely 18, many swollen, pale colored, strongly and finely echinulate.

While I have not done much work on the Hymenogasters I can not reconcile this to any species of Europe or named as far as I can make out. The spores are the same as those of *Hydnangium carneum*, but the color of the gleba is entirely different. Compared to *Hydnangium Söderstromi* which was named from South America, it also differs entirely in color. Rev. Mille collected it "*Crescit in radicibus Eucalypti globuli*".

POLYSTICTUS BLUMEI FROM DR. W. DOCTERS VAN LEEUWEN, VERLATEN EILAND NEAR KRAKATAU (Fig. 1868).— Three collections received from Dr. Docters van Leeuwen we would so refer although they differ some among themselves. The character of the species is the glabrous surface, pale or white color and elongated, thin, shallow pores, better shown in our Fig. 1868 than we can describe. One of the collections is white, the others have murinus zones. It appears to be variable and we are not sure now that the plant we so figured from Japan is the same. As to classification we would enter it in Section 105 from its glabrous surface, although it inclines also to Sect. 108 with large, shallow pores.

POLYSTICTUS CAPERATUS FROM T. F. CHIPP, SINGAPORE (Fig. 1870).

A form bearing on the surface curious hydroid processes better shown in our Photographs (Fig. 1870) than we can describe it. This is not the first collection with such a feature. Dr. G. Zenker sent it from Cameroun, Africa in 1912, exactly the same thing. Nor is it a character of either collection for in both occur specimens with even surface and specimens with these processes. It is exceptional for on 41 collections that we now have it occurs only on two, nor did we find it on any of the numerous specimens we saw in the museums of Europe.

Polystictus caperatus was named by Berkeley from Mauritius. Type is in the British Museum. It is readily known by the dark, umber context, soft, velutinate, usually zonate surface, small pores with white mouths. It varies much as to surface aspect, due perhaps to age. Many collections (as Fig. 1872) have a uniform, velutinate, strigose surface. And the type form (Fig. 1869) has conspicuous, dark, metallic zones. These zones are prevalent on Brazilian collections and occur less frequently in the Eastern tropics. An unusually pubescent form is represented, Fig. 1871.

Most collections are thin but rigid and would be classed as *Polystictus*. One collection we have, however, is thicker, about $1\frac{1}{2}$ cm., hard and rigid and better classed as a *Trametes*. The type collection was of this nature. Although a rather frequent species *Polystictus caperatus* has been mostly known correctly and has escaped the usual synonyms of common, tropical species. *Polystictus myrrhinus* as named by Kickx from Mexico is indorsed as a synonym on the label in Montagne's herbarium.

FORMS - *POLYSTICTUS PHOCINUS* (Fig. 1875) is a thin, unzoned, velutinate form from Ceylon and we type form does not occur there. We have it, however, from Java, Philippines, South Africa and Brazil. *Polystictus comatus* as described by Fries from tropical America is doubtless the same thing though no type exists to confirm it. *Polystictus beharensis* as received by me from Miss Wakefield, Africa, is a subresupinate collection of *Polystictus phocinus*.

POLYSTICTUS ACULEANS (Fig. 1873).- A form with a strongly fibrillose uniform surface. We recently received it from John Gossweiler, Angola, Africa, but it is rare.

POLYSTICTUS FISCHERI (Fig. 1874) in the original sense of Hennings is not much different from the usual *Polystictus caperatus*. We apply the name, however, as a convenience to a subglabrous form which frequently reaches us.

PODOCREA TRANSVAALII FROM A. M. BOTTOMLEY, SOUTH AFRICA (Fig. 1876).- Clubs fasciculate from the top of a thick, rooting stem, obtuse, irregular, with a light brown cortex. Stroma fleshy white. Perithecia globose with hyaline walls, arranged almost contiguous beneath the cortex.

It appears that the rooting stem is buried, the fruit bodies developed on the surface of the ground. Unfortunately the specimens are immature, only the perithecia are developed, no asci or spores. It is a *Hypocreaceae* and if named in old times would no doubt have been as a *Hypocrea*, or *Podocrea* as clavate *Hypocrea* are now called. It has entirely different aspect and habits from any species described.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This not only helps in tracking expenses but also ensures compliance with tax regulations.

In the second section, the author provides a detailed breakdown of the monthly budget. It includes categories for housing, utilities, food, and entertainment. The goal is to identify areas where spending can be reduced without affecting the quality of life.

The third section focuses on investment strategies. It suggests diversifying the portfolio to include both stocks and bonds. The author also mentions the importance of regular contributions to retirement funds, highlighting the power of compound interest over time.

Finally, the document concludes with a summary of key takeaways. It reiterates the need for discipline and consistency in financial planning. The author encourages readers to review their financial status regularly and make adjustments as needed.

POLYSTICTUS VELLEREUS FROM PROF. TAKEWO HEMMI, JAPAN (Fig. 1877) - This is exactly the same plant as named by Berkeley from Japan. Of course it is only a pale (pure white in these specimens) form of *Polystictus hirsutus*, but it is attached by a small base and is worthy of a separate name as it only appears to occur in Japan.

ADDITIONAL NOTES ON KRETZSCHMARIA

Since our article on this genus was published (Large Pyren. 2nd Paper) we have received several collections from correspondents and have worked over all the historical material of the Philippines, through the kindness of Mr. Merrill. We have also worked over Ellis' herbarium and extensive collections from the American topics in the New York Botanical Garden and have seen a set of Wright's Cuban collection, determined by Berkeley.

KRETZSCHMARIA PROXIMA. Co-type (Balansa, Tonkin) has spores 10 X 30. I believe it was correctly referred (l.c.) to *Kretzschmaria cetrarioides*.

KRETZSCHMARIA TURBINATA. These are small, sessile, but to a reduced base, specimens with a flattened disc that Ellis called *Poronia turbinata*. It probably has other names as *Hypoxyton*. Surely it is not a *Poronia*, neither is it a good *Hypoxyton*, *Kretzschmaria* or *Xylaria*. It agrees with *Kretzschmaria* in shape of the fruit body but differs in being subsessile and scattered in its habits. In "structure", white stroma, spores (7 X 16) and small perithecia imbedded in a carbonous crust, it is a *Xylaria*. In size and subsessile habits it is a *Hypoxyton* of tradition. In shape it is a *Kretzschmaria*. In nothing is it a *Poronia*.

Kretzschmaria Puiggarii. Co-type at New York. This, for me, is the same as *Kretzschmaria lichenoides*. Spores are 8 X 36.

Kretzschmaria clavus and *caenopus*, Berkeley's determination, Wright, Cuba (as *Hypoxyton*) are both correct as I understand them.

KRETZSCHMARIA SPINIFERA (Fig. 1878 & 1879 enlarged). The types are in Ellis' herbarium. It is peculiar in having spiny protuberance in the fruit bodies which are not protruding ostioles. The spores are unusually large, 16 X 48. Baker 2112, from Philippines, belongs here I think, although spores are smaller. Two collections, one from Mexico, the other from the Philippines are all that are known.

KRETZSCHMARIA KURZIANA (Fig. 1880). - This is quite different from other *Kretzschmarias* in having paler crust and numerous contiguous perithecia. *Kretzschmaria truncata* (Fig. 1881) appears to be the same, but is different in habits. Our figures represent both. Montagne's figure (enlarged) of *Kretzschmaria heliscus* has the same appearance, but the plants are very different. Spores of *truncata* are 8 X 16. I have an idea that *Kretzschmaria kurziana* is a better *Poronia* although it is intermediate and I will consider it more in detail under *Poronia*. It is certainly not the same, as I at one time thought, as *Kretzschmaria truncata*, as it grew in hard ground and *truncata* grew on wood. Fungi of such different habits are rarely the same.

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KRETZSCHMARIA LICHENOIDES IN THE UNITED STATES (Fig. 1882).— In the New York Botanical Garden is a fine collection of *Kretzschmaria lichenoides* from Dr. R. P. Burke, Montgomery, Ala. I am confident it is the only collection of *Kretzschmaria* ever made in the United States. Spores are 9 X 32.

KRETZSCHMARIA ? PUSILLA (Fig. 1883).— The regular globose form and distinct stipe would, we think, remove this from *Kretzschmaria* but it is a question where to put it. If named in the museums of Europe it was no doubt as *Hypoxylon* and until the foreign species of *Hypoxylon* are worked out and located it is not well to form conclusions. The section (Fig. 1884 enlarged) shows a little white stroma and the spores are 8 X 28-32. It is only known to me from the type, Nicaragua.

Kretzschmaria rugosa named by Earle from Saint Kitts is *Xylaria haemorrhoidalis*, or *Xylaria tuberiformis* if that is different. There are little white rings around some ostioles but I do not attach much importance to that feature now in classification. It has, however, no suggestion of a *Kretzschmaria* and the author should have known more of the genera at least before indulging in this kind of work,

Kretzschmaria Pechuelii. A specimen from Angola at New York, supposed to be the co-type is a distinct species, but does not agree with "description" as it is sessile and has no stipe at all. Spores are 12 X 28. Specimen (Yates 103) so determined from the Philippines is entirely different and is in my opinion large (12-16 X 24-28) spored form of *Kretzschmaria cetrarioides*.

KRETZSCHMARIA MAURITANICA from G. H. Cunningham, New Zealand (Fig. 1885).— This is the same as *Kretzschmaria caenopus* and probably best held as a small spored form. Spores in this collection 8 X 16. In addition it will be noted that the heads of this collection are more hemispherical (not flattened) than they are usually in other species. In all the essential characters it agrees with *Kretzschmaria caenopus* but smaller spores.

A CURIOUS GASTEROMYCETE (?)

DUBIOMYCES VIRIDIS (Fig. 1886).— While I was working at Kew on the Gasteromycetes in the spring of 1911 I received from G. Clyde Fisher some specimens that had been collected on living grass (*Chusquea*) in the Blue Mountains, Jamaica by Dr. D. S. Johnson. As I did not believe they were a Gasteromycete, certainly not any recognized genus, I sent them to Miss Annie Lorrain Smith at the British Museum, thinking perhaps they were in her department. She returned them to me and insisted they belonged in my department. They have been lying around without a name ever since. In examining them recently I found a very young specimen (Fig. 1887 enlarged) with an entire peridium, hence I think they are technically Gasteromycetes when young, although I do not believe they have any true relations to other Gasteromycetes. The gleba, which is greenish, dry, forms a thin layer over the sterile base, as well shown in our enlarged section (Fig. 1889). It consists mostly of globose, smooth, pale greenish spores, 6-8 mic. in diameter. Many can be seen attached to slender, hyaline hyphae that proceed apparently from the sterile base.

Our photograph will tell the remainder of the story. (Fig. 1886) is natural size; Fig. 1888 the exterior; Fig. 1889 a section; Fig. 1887 a very young specimen. All are enlarged sixfold excepting the first. From the way the spores are borne I do not doubt that it belongs to that great unknown (to me) world called Hyphomycetes, though I do not think it has been named. If any one knows it I should be glad if they would advise me and it certainly can be recognized from our figures.

POLYPORUS FLABELLARIIS FROM E. D. MERRILL, PHILIPPINES (Fig. 1890).- Pileus flabelliform, about four inches in diameter, 4-5 mm. thick, rigid, with short, thick, lateral stipe, 1 X 3/4 inches. Surface glabrous, dark grey, zoned. Context pale isabelline. Pores minute, reddish brown tissue and concolorous mouths. Spores globose, hyaline, 7 mic.

A single specimen that we would enter in Section 16 although it is more rigid than any other in this section. The surface is that of *Polystictus murinus*. The context and pore colors and spores are those of *Polyporus zonalis* to which its relations are close although surface color and shape are so different.

ENTONAEMA MESENTERICA FROM REV. J. RICK, BRAZIL (Fig. 1891).- We determined this as *Entonaema liquescens* when received but have since received from Professor Thaxter, collected in Trinidad, what corresponds to Moeller's figure of *Entonaema liquescens*. We believe Moeller must have transposed the names for his two species for "mesenterica" does not apply to this plant at all and does apply to the plant Moeller illustrated as *liquescens*.

When soaked *Entonaema mesenterica* is globose, hollow, about an inch in diameter and the flesh 1/2 cm. thick, is gelatinous. The perithecia are contiguous under the yellow cuticle. Spores 4 X 8 pale colored, one (or rarely two) guttulate. We have received before from the Philippines, Alabama and Africa, what appears to be the same plant when dried, but on soaking it the interior appears to be solid, fleshy and not hollow, gelatinous. We considered it on page 910 as *Glaziella splendens*. While we can not so assert our impression now is that *Glaziella splendens* is entirely different from *Entonaema mesenterica*, although dried they appear to be the same. We presume the subject will clear up in time.

POLYSTICTUS SECTION 113

POLYSTICTUS CRISTATUS FROM T. F. CHIPP, SINGAPORE.- This is the first time we have received the true species as named by Cooke. The type came from Australia and has small pores and very peculiar strigose surface of branched hairs. If we were writing a systematic account of *Polystictus* we would make a section (No. 113) embracing the species with strigose, branched hairs, and it would include five species as follows:

POLYSTICTUS CRISTATUS (Fig. 1892).- A thin species with small pores. Rare and but two collections known, the type from Australia and this collection from Malay. The name *Polystictus cristatus* has been confused at Paris and in Philippine determinations with the next species, which has large pores.

There is a collection of *Polystictus zelanicus* at Paris determined as *Polystictus cristatus* "Cooke in litt.". If Cooke did not know his own species we can hardly expect our Parisian friends to know it.

POLYSTICTUS ZELANICUS (Fig. 1893).- This is somewhat similar to the preceding but is a thinner plant with much larger pores and is much more common and widespread. The type in the British Museum came from Ceylon where it is evidently rare. I have specimens from Ceylon, India, Africa, China and several collections from the Philippines. These had been determined and recorded as *Polystictus acutus*, *pargamenus* and *Munsae*, all synonyms, and as *cristatus*, *gibberulosus*, *floccosus* and *funalis*, all misdeterminations. The plant is very characteristic and should not from our figure ever be confused again.

TRAMETES WILDEMANI (Fig. 1894).- Some years ago we received from Rev. Hyac. Vanderyst, Congo Belge, a specimen that we misreferred to *Polystictus cristatus* on comparison at Paris with the misnamed specimens of "Cooke in litt". In our opinion now it is the same plant as *Polystictus zelanicus* but a thick, *Trametes* form. We found afterwards at Brussels a co-type specimen of *Hexagona Wildemani* as this plant has been named by Bressdola. For me it is a *Trametes* closely related to this section of *Polystictus*, although we would class it in Sect. 132 of *Trametes*. The plant is only known from this one collection from Rev. Vanderyst (sent to me) and only found by me in the museum at Brussels.

POLYSTICTUS FLOCCOSUS (Fig. 1895 & 1896).- This is somewhat similar to *Polystictus zelanicus* with which it has been confused but it has smaller pores than *zelanicus* and finer, softer hairs than *cristatus*. It was named from Java, and beautifully illustrated by Junghuhn and his types are at Leiden. It is rare and I know of but one certain, recent collection (Williams 74, Philippines).

POLYSTICTUS DYBOWSKI: (bis.) (Fig. 1898).- The three preceding species are closely related but this departs in its very thin context, large, long, glaucous pores and more hirsute surface hairs. It is only known from Africa and we have a fine collection from Hyac. Vanderyst and co-types given us by P. Hariot. It was published as *Hexagona Dybowskii* and so illustrated in our *Hexagona* pamphlet but for me now it is a much better *Polystictus* in this section. However, it is a duplicate name in *Polystictus* and will have to be changed some day.

POLYSTICTUS ELLISIANUS (Fig. 1897).- Published as *Trametes*. We put it in *Polystictus* as a convenience and because of its close relationship to *Polystictus Dybowskii*. It is not a good *Polystictus* neither a *Trametes*, as published. It might be called *Irpex*. The surface is covered with the same fibrils as *Polystictus Dybowskii* but the pores are large, irpicoid and to the eye the plants have no resemblance, as a comparison of our figure with Fig. 1898, will show. The teeth are strongly glaucous but I find no spores or basidia. The projecting hyaline hyphae are not specialized.

It is surely inappropriate that Ellis' name should be applied to an African plant. It seems that some correspondent of Ellis', probably a missionary of Africa named Cole sent him a few specimens. As Ellis knew nothing of tropical species he sent them to Hennings in Berlin who showed his gratitude by naming one *Trametes Ellisiana*. Nice collections are in the Ellis herbarium which are really co-types, but the type at Berlin we did not locate as we failed to photograph them at New York we can only present in our figure a little frustule that we brought home with us. *Polystictus Ellisianus* has been given as a synonym for *Polystictus Dybowskii* but not for me.

TRAMETES CUPREO-ROSEA FROM ERNEST KNAEBEL, COLORADO (Fig. 1899 above).— If this has been received from Australia it would have been referred to the above without hesitation, so I see no reason for not so referring it when received from our western region, although I admit it is practically the same as our common *Trametes carnea* but it is the only collection I have seen with us. The appressed, fibrillose, upper surface is the main difference between it and our common species which has usually a smoother upper surface. Our figures in contrast will show this. As a matter of fact, however, *Trametes cupreo-rosea*, common in Australia, with strongly fibrillose surface: *Trametes carnea*, (Fig. 1899 below) our common pink species with a smooth surface; *Trametes Feei*, common in American tropics, about the same as our plant but usually larger and brighter color; *Trametes Palliseri*, a rare, western plant with a silvery surface are in reality one and the same species. They differ in the smoothness and roughness of the surface and size of pores and in these features they run all together. None of them occur in Europe. In addition, *Fomes roseus*, rare in Europe, as with us, is a true *Fomes* but belongs in this same series in fact.

POLYPORUS SACER VAR. *RHINOCEROTIS*, FROM E. D. MERRILL PHILIPPINE (Fig. 1900).— There are three collections of this plant now known from the Philippines; all collected in 1919. We gave a figure and account of *Polyporus sacer* on page 122 of stipitate *Polyporoids*. It is originally an African plant, exceptional in having a sclerotium and was known and named by Fries. *Polyporus rhinocerotis* was named by Cooke from Malay. He only made three mistakes. He described the stem as laccate and it has not the slightest indication of that character. He stated it grows on trunks. It grows in the ground, and a *Polyporus* with a sclerotium growing on a trunk would be about as natural as a potato growing on a peach tree. He classes it as *Fomes* and *Polyporus sacer* he classes as *Polystictus*. Both are virtually the same plant and a *Fomes* has about as much suggestion of *Polystictus* as a sheet of paper has of a lump of coal. In my view it is neither *Fomes* nor *Polystictus* but *Polyporus*. When I wrote the paper I thought *Polyporus rhinocerotis* different in having more minute pores than *sacer*, but both are minute. We have learned more since, having received it from Ceylon and the Philippines, and have noted somewhere where Bresadola has recorded a small pored variety. His small pored variety is no doubt *Polyporus rhinocerotis* which is better as a small pored variety. But it is curious that in Africa, and we have several collections from Africa, the pores while minute are larger than they are as it grows in any other country. We present Fig. 1901 pores of

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Polyporus sacer natural size and Fig. 1900 pores of *Polyporus rhinocerotis*, natural size.

POLYPORUS SUPERNIGER FROM E. D. MERRILL PHILIPPINES (Fig. 1902).— Dimidiate, effused with reflexed pileus an inch broad. Surface with a thin, black, glabrous crust, uneven with raised zones. Context rigid, firm, brown. Pores minute with brown tissue darker than the context. Mouths dark in dried specimens but probably concolorous when fresh. Setae none. Spores small, hyaline, $2\frac{1}{2} \times 3$ smooth.

This was collected Basillan Island, 36016, by H. S. Yates. It belongs in Section 95. The black crust and brown context suggests the section *Apus Ganodermus* but the spores forbid.

POLYSTICTUS BADIUS FROM T. F. CHIPP, SINGAPORE.— In the Philippines, the "type locality" *Trametes badius* as named by Berkeley varies much in thickness. We get around that by calling the thin collection *Polystictus badius* and the thick ones *Trametes badia*. This collection from Malay is thin and differs from the Philippine form in smaller pores. It could be called "var. microporus".

POLYSTICTUS ALBOBADIUS AS VARIETY OF POLYSTICTUS BADIUS, from T. F. Chipp, Singapore (Fig. 1903).— In the main, size, color, thickness, surface, this is exactly the same as *Polystictus badius* in its thin, Philippine form, but this has very minute pores not half as broad as the type and in addition the pore mouths are white and the pore mouths of the usual plant are never white. We have now sixteen collections of *Polystictus badius*, and not a specimen among them but has brown (concolorous) pore mouths.

THE LACCATE CRUST OF POLYPORUS LUCIDUS (Fig. 1904).— We have never observed *Polyporus lucidus* as it develops but from specimens we receive it appears that the laccate crust is an exudation, perhaps not found on the very young specimens. We present a figure of two of the same collection, one of them well lacquered, the other with hardly a trace. In this connection *Polyporus Curtisii* is the same plant as *Polyporus lucidus* excepting that the thin, laccate deposit gives it a different color and appearance. Usually it is more or less yellow but we have one collection that is full grown but with no deposit at all and as white as snow when we received it. We would deduce that the hot climate retarded the laccate exudation, were it not for the fact that forms of *Polyporus lucidus* and related species of the tropics are often more strongly laccate than our temperate region plant.

CYCLOMYCROID POLYSTICTUS CICHORIACEUS FROM T. F. CHIPP, SINGAPORE, (Fig. 1905).— The cyclomyroid arrangement of the pores as shown in our enlargement, (Fig. 1906) is evidence that the collection is intermediate between *Polystictus cichoriaceus* and *Cyclomyces fuscus*. All the pores do not show such a disposition. In nature there is no such thing as a species.

TRAMETES RUGOSO-PICTA FROM REV. L. MILLE, ECUADOR (Fig. 1907): Pileus thin, rigid, from a reduced base. Surface rugulose, appressed fibrillose, marked with large, fuliginous spots behind, the margin pale. Context pale. Pores minute, slightly alutaceous. Cystidia none. Spores not found. The plant suggests *Trametes cingulata* and we would class it in the same section (127) although it does not have the smooth, glabrous surface of all others of this section. We do not know another species that suggests it.

NOTES ON THE MYXOMYCETES

I presume every mycologist at some stage gets a *Myxomycetes* craze. Thus far I have escaped it but the larger species reach me so frequently that I have had to study them a little. One does not work with fungi long until he learns what *Myxomycetes* are, and we presume every one who reads this article will know. In their earlier stages all have an amorphous mass known as a plasmodium. It is without cells or definite form and creeps or rather flows over logs or other objects until it gets ready to take its fruiting form. Any one who hunts the old logs will notice these plasmodia, soft, mucilaginous, moving, bodies and will be attracted to them. The power to move is not the usual property of a plant, hence there have been learned discussions as to whether *Myxomycetes* are plants or animals. The fungus men have always claimed them for in the mature state they have every analogy to fungi, but few have written on them without a long apology or rather explanation as to why a fungus man should consider as a plant an organism that has the power in its earlier stage of moving about. Most of them are quite small but generally occur in such numbers that they are noticeable on the old logs, dried leaves and other habitats where they are found. They are beautiful microscopic objects. I well remember my first visit to Prof. Morgan, how he opened my eyes to a new world when he showed me a *Stemonitis* under the microscope. I gained the impression that Morgan was the first man to find them, but I presume that was wrong, as I have since learned they have been hunting them, illustrating them, and naming them for more than two hundred years; principally naming them, I think, for roughly speaking there are about two hundred species and a thousand names. About fifty years ago Rostafinskięgo, (called Rost. for short) wrote an elaborate account, the first chapter entitled "Rzut oka na dotychczasowe prace nad sluzowcami." It does not explain much to me, but Cooke, with the aid of his Polish hired girl it is said, gave an English translation (in part) and Lister and Macbride judging from the fluent extracts they quote read it as if it were English. "Rost." looked up all the old names and arranged them chronologically (we can read that much of him) but we are inclined to agree with Masee in effect that the only part of his arrangement that has much probability of truth is the sequence of dates. In one or two instances where we have looked up Rost's synonymy it is absolutely impossible, as "*Mucor serpula* Scop. 1772." It is typical of established methods in "science" which would be more correctly known as pedantry, or some similar term.

We do not object to calling the plant *Hemitrichia Serpula* for that is the customary and I presume the proper classification. But I do not approve of calling it "*Hemitrichia Serpula* (Scop.) Rost." for Scopoli's figure seems to be a racine and has no more suggestion

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of plant than a rat-tail file has to a piece of Venetian lace, and Scopoli had nothing whatever to do with this plant, judging from his picture. And I also object to calling it "Hemitrichia Serpula, Rost." for this plant was well known and well named "Sperpula" in the proper genus as these plants were then classified years before Rostafinskięgo was born. To represent that he named it is a fraud on the face of it.

Any system of securing uniformity in nomenclature by going back to Linnaeus as "legalized" by the "lawmakers" at Brussels is absolutely chimerical, particularly if based on Rost.'s alleged, chronological order. It is my belief there were very few men at Brussels that knew a Myxomycete from a piece of moldy cheese, and as a legislative body they were just about as competent to make rules regarding Myxomycetes as I should be to define the rules of harmony in music, and I know not one note from another. Notwithstanding the diversity as to names, and the names employed by writers on Myxomycetes are about as uniform as a crazy quilt, the subject is in much better and more satisfactory condition than are most sections of Mycology. This is due to the work done by Lister in London as to the family in general, and to Macbride in this country. Most of their time, however, has been devoted to investigating the mistakes of the wonderful discoveries of "new species" and disposing them in the rubbish pile called synonymy. There are many cases recorded where men have discovered "new species" of Myxomycetes who did not know a Myxomycete from a Hyphomycete or from a last year's bird nest, for that matter. And if you will analyse Lister's synonymy you will be surprised how many there are of this nature. Professor Macbride's book is one of the few practical books we have in mycology. It is out of print but we are expecting a new edition to be issued soon. If Professor Macbride would disregard the Brussels fiasco and adopt names for his plants on the basis of their proper classification, as he sees it, and general use and familiarity of the name, we feel sure it would meet with favor. Particularly if he would ignore the cheap juggling that has been done with the names by looking up dates of Rost.'s alleged synonyms and shuffling the names around as Morgan did.

These running remarks are not for the purpose of soliciting specimens of Myxomycetes for we know but very few of the large ones and have hundreds of the little fellows unnamed now in our museum of which we know practically nothing at all.

LYCOGALA FLAVOFUSCUM AND RETICULARIA LYCOPERDON.

My apologies are due and are extended to the following correspondents for misdeterminations of *Lycogala flavofuscum* as being *Reticularia Lycoperdon*: Anthony Killgore, New Jersey; Frank H Ames, New York; Dr. M. S. Whetstone, Minnesota; Ernest Krnest Knaebel, Washington, D.C.; Burt Leeper, Ohio; Dr. W. H. Ballou, New York; David Griffin, Vermont; Rev. J. Rick, Brazil. I have no desire to escape responsibility for these mistakes, but I have never studied Myxomycetes in the museums and drew my conclusions from books, and could not understand how *Lycogala flavofuscum* could be so named if it has no yellow at all about it and is silvery grey, nor why books in which I looked at up described it as ochraceous brown or purplish brown.

The first part of the report deals with the general situation of the country and the progress of the work during the year. It is followed by a detailed account of the various expeditions and the results obtained. The second part of the report is devoted to the study of the flora and fauna of the country, and the third part to the study of the geology and the mineral resources of the country.

The first expedition was led by Mr. J. H. ... and was directed towards the ... mountains. The results of this expedition were ... The second expedition was led by Mr. ... and was directed towards the ... mountains. The results of this expedition were ...

The study of the flora of the country has shown that there is a great variety of plants, many of which are new to science. The study of the fauna of the country has shown that there is a great variety of animals, many of which are new to science.

The geology of the country is very complex, and the study of the mineral resources of the country is of great importance. The results of the study of the geology and the mineral resources of the country are ...

I have a specimen of *Reticularia Lycoperdon* from Rev. Grelet, France, and when I compare it with the American collections I have so determined, particularly under the microscope, it is an entirely different plant and there is no trouble in deciding which is which from either Lister or Macbride if one disregards their color terms.

Both species have the same general size and appearance and I doubt if a photograph could be decisive. As others may have the same trouble I have had, we will contrast the differences.

*Lycogala flavofuscum**Reticularia Lycoperdon*

Color not "flavofuscum" but silvery grey.	.	Color brown with a silvery sheen.
Gleba grey.	.	Gleba brown.
Capillitium irregularly branched and tubular.	.	Capillitium flattened, lacerate.
Spores 5-6 mic. Uniformly rough	..	Spores 7-8 mic., surface partly rough, partly smooth.

Ehrenberg, 1815, named this *Diphterium flavofuscum* and gave two figures of it. One of them (B) is fairly characteristic as to color, the other (A) is more probably *Reticularia Lycoperdon* from its color and it is from the latter evidently that he got the specific name. To my mind it is a misnomer as now applied for there is nothing "yellow" about it, either "dark" or "light" at least to any of the several collections of *Lycogala flavofuscum* that we have. Lister's color terms "ochraceous brown or purplish brown" do not apply at all to our American plant which is always silvery grey. Bulliard (1783) had given an evident though inaccurate figure of it (192) under the name *Lycoperdon ardosiacum* but the figure had been referred in the European traditions to *Bovista plumbea* (sic) which it has no possibility of being. *Bovista plumbea* never grows on a stump but Rostafinski's did not scrape up the reference. For that reason Morgan who juggled the names of Rostafinski's chronology overlooked it. Prof. McGinty who does not depend on Rostafinski's synonyms has changed it to "*Lycogala ardosiacum* (Bull.) McGinty" which any one who professes to be governed by the "Brussels rules" must either adopt or wink at the rules for 1783 is "prior" to 1815. Ehrenberg gave a fairly good illustration of the capillitium which Rost. found was the same as that of the common little *Lycogala Epidendrum* and put it in the same genus. Rostafinski's figure of the capillitium we reproduce (Fig. 1913) but we really think Ehrenberg's and Lister's (Fig. 1912) figures are more accurate. I do not know what Rost. says but his figure of the capillitium of *Lycogala* looks like it is flat, and of *Reticularia* tubular, but just the reverse is the case it appears to me. The capillitium of *Reticularia* is evidently the remains of sporangium walls as stated by all, but the capillitium of *Lycogala* is not so easily understood. If one reads Lister closely the sporangia do not have walls. They are a kind of phantom sporangia and the capillitium is formed by walls of air spaces between them. This is difficult for a layman to grasp, but I suppose that *Lycogala* forms its capillitium as some good housewives are said to make doughnuts. First they make the hole and then they form the doughnut around it.

LYCOGALA FLAVOFUSCUM FROM GEORGE G. HEDGCOCK, collected in Virginia (Fig. 1908).— Among the large Myxomycetes that I receive *Lycogala flavofuscum* is the finest and these specimens from Mr. Hedgcock are unusually fine. These Myxomycetes are frequently sent to me as puff balls but as explained in the previous article they have an early plasmodial state which no puff ball has. There are two species that look much alike and are liable to be confused (at least I have had a confused idea of one of them) viz. *Lycogala flavofuscum* and *Reticularia Lycoperdon*. The points of difference have already been given, but by the eye the former may be told (contrary to our books) by its silvery cortex, beautifully areolate as shown in our enlarged figure 1911. The interior is a mass of greyish (or "pale buff") spores and capillitium, in general appearance to the eye, not much different from the usual puff ball. Under the microscope, however, the capillitium has different appearance to anything found in a puff ball. It consists of subhyaline branched tubes, of unequal diameter and has the appearance of, as it is said to be, the walls of an intricate system of air spaces. We present Fig. 1912 reproduction from Lister as more correctly representing it than the flat ribbons shown by Rostafinski (Fig. 1913) *Lycogala flavofuscum* is not rare with us, judging from the numbers I have received. It takes mostly globose or piriform shapes but is evidently influenced by its position of growth. If it develops on the under side of a log, the mobile plasmodium hangs down from gravity forming an elongated aethalium, even attached by a stalk reminding one of the chrysalis of some butterfly. We present, Fig. 1910 such a specimen that was found and photographed in Michigan.

RETICULARIA LYCOPERDON FROM DR. M. S. WHETSTONE, MINNESOTA (Fig. 1914).— In general appearance this is much like the preceding but the color is reddish brown, covered with a silvery sheen that appears to disappear from old specimens. At least the one we have from Dr. Whetstone is about the bronze color of the bronze of a turkey gobbler. The capillitium is flat, so it appears to me, with lacerated edges. It is said to be chambered, and is so shown in Rostalfinski's figure (Fig. 1915) that we reproduce but we do not see it that way.

Reticularia Lycoperdon was named and very well illustrated in Bulliard's old work (T. 446 f. 4) excepting he shows the peridium too pale. The gleba color, however, is very good. His other figure T. 476 is with the exception of the gleba color more like *Lycogala flavofuscum*. Macbride tells us it is widely distributed, Maine to California. It is probably rare for we have but one American collection from Dr. M. S. Whetstone and one European from Rev. L. Grelet, France. We present (Fig. 1914) a photograph of Mrs. Whetstone's specimen.

THESES

Theses are the pests of the librarian. Usually they are issued as separate pamphlets, each requiring a separate entry in the catalogue, and their number is legion, as each student on graduation from a University of Europe is required to write and publish a thesis. It is but rarely that one of these has enough merit to be worth cataloguing, much less preserving in a library, for the average student has not much practical knowledge and for the most part theses are a waste of time and printer's ink.

A pamphlet that recently reached us - "A critical study of the slime molds of Ontario" by Mary E Currie, is we judge of the nature of a thesis by a student. But it is such an exception to the usual production that it merits special mention. The paper is, as it states, a critical work on slime molds, embracing close, accurate, original and practical observations. We know but little about slime molds and have no ambitions in that line, but if we had we would carefully study this paper for it impresses us as presenting the most interesting part of their study, their characters, distribution, frequency or rarity, points of difference, in fact the information one wants about the plants. We do not indorse the practice of writing personal names after plant names, but of course those connected with Universities have to follow this fetish of "Science". And particularly we do not indorse the fraudulent practice, so dear to our English friends, of substituting for the name of the real author of the species the name of the individual who shuffles it around into another genus, as "lycogala flavo-fuscum, Rost." This practice, based on rascality in the start, had produced some wonderfully cheap name juggling, as "Mucilago spongiosa, Morg." and has robbed the old fellows like Persoon, Bulliard and Schraeder, who really made the species known, of all their glory. However, these old fellows have been dead so long I suppose they do not mind it now. Besides they ought to be used to it by this time for the history of botanical names is a series of continuous jockeying, one after the other, of writers getting up all kinds of schemes to substitute their own names for that of some other fellow, or to put the other fellow in parenthesis and add their own names.

The one particular, noteworthy and exceptional feature of Miss Currie's article is that she can give so much information on her subject and in not one single instance advance any argument why "Currie" should be added to the name of any plant. It would be much better if there were more writers on mycology like Miss Currie.

POLYSTICTUS XANTHOPUS, YOUNG SPECIMENS FROM E. D. MERRILL PHILIPPINES (Fig. 1916).- We get a great many specimens of *Polystictus xanthopus* but this collection (McGregor 5232) from the Philippines is the first we have seen that seems to indicate how it develops. The pileus is formed at a very early stage and both the pileus and the stem grow concurrent. This is the way perhaps that most stipitate polyporoidss develop, but not *Polyporus lucidus* and similar species (forms). In *Polyporus lucidus* the stem first develops (Fig. 1917) and after it has become almost full size, the pileus is developed from the top of the stem. It is not unusual for us to receive these stems with no indication even of a pileus starting to grow.

POLYSTICTUS OR PORIA SETULOSUS FROM E. D. MERRILL, PHILIPPINES (Fig. 1918).— This was named by Hennings as *Poria setulosa* and while this specimen was resupinate, I have a very strong impression I have seen it with a pileus. It is readily separable from the host and is of the same texture and I think is allied to the more common *Polystictus cervino-gilvus*. The color is about tawny olive (Ridgway). Pores rather rigid with thin walls. The hymenium bears large, pleurocellular glands on which the genus *Elmerina* was based. It has also imbedded crystals. I feel that a genus is just as logical based on one as the other. The plant was named from Africa but is principally known from the Philippines.

POLYPORUS FUSCELLUS FROM DR. W. DOCTERS VAN LDDUWEN, VERLATEN EILAND NEAR KRAKATAU (Fig. 1919).— We would enter it in Section 12. Based on collection 4130. The surface of this to the eye is the same as *Trametes fuscillus*, the pores are of a *Polyporus*. Petaloid from a reduced base. Surface glabrous, reddish brown with darker zones. Context pale isabelline. Pores minute, darker than context, soft 1/2 cm. deep. Cystidia none. Spores 4 X 6.

POLYPORUS CONCHOIDES (VELUTINATE) FROM A. M. BOYYOMLEY, SOUTH AFRICA (Fig. 1920).— We have seventeen collections of *Polyporus conchoides* from Brazil, Cuba, Madagascar, Tropical Africa, Ceylon, Philippines, Niagaragua and one from Durban, South Africa, every one with a hard, smooth but dull surface. Then this collection comes in with a soft, velutinate surface in every other feature exactly the same. It is truly hard to define the characters of species. Our figure represents this soft upper surface.

POLYPORUS ORONIGER FROM E. D. MERRILL, PHILIPPINES (Fig. 1921).— Pileus sessile, applanate, about 3 X 4 inches and half inch thick. Color (excepting the pore mouths) Sudan brown. Surface strongly spongy, sulcate with raised zones. Context soft, spongy. Pores minute, hard with brown tissue and dark (almost black) mouths. Setae none. Spores small, globose, 3 mic. deep colored.

This was included with a collection of *Polyporus nigroporus* but evidently quite different. It belongs in Section 101 and is quite close to *Polyporus capucinus*, differing in the strongly zoned pileus and dark pore mouths. It is also close to *Fomes fastuosus* but different texture, surface and smaller spores.

STEREUM SPECIOSUM FROM CARLOS E. CHARDON, PORTO RICO (Fig. 1922) (Or *Hymenochaete* if one wishes.) Pileus erect, dendroid, merismatoid, with flattened, pileate branches. Color Brussels brown. Setae dense, numerous, 8-10 by projecting 200-220 mic. Spores globose, 4-5 mic., hyaline, smooth.

We refer this to an old name of Fries (as *Thelephora*) which is known only from the description, no specimen preserved. It agrees fairly well with the description. It is not as determined by Montagne which is *Stereum Damaecorne* (*Stipitate Stereums*, page 41) nor in the sense of Peck which is *Stereum unicum* (l. c. p.35). It belongs to Section 11 of our *Stereum* pamphlet which embraces several forms, all referred by us to one species. Burt recognized three species forms.

But this differs entirely to our mind, being entirely merismatoid, while all previous collections of this section have "many pilei borne on a common, central stem." As to color and shape it is like *Stereum unicum* but the latter does not belong to the section *Hymenochaete*. The large, dense setae exceeding 200 mic. are also larger than recorded in this section..

EXIDIA CANDIDA FROM DR. JAMES R. WEIR, IDAHO (Fig. 1923).- Cfr. *Myc. Notes* p. 620, fig. 881. Although on comparing our previous figure with the one we give now they appear different, we think surely the same species. This collection is not "applanate" but would rather appear as lobed. The pure white color when fresh, curved, hyaline spores, 8 X 14, oblong, hyaline basidia, 16 X 20, absence of papillae, are exactly the same in both. This grew on alder. To the eye the same as *Seismosarca albida* but microscopically entirely different. When old the plant becomes sordid.

POLYPORUS SEPIA FROM T. F. CHIPP, SINGAPORE (Fig. 1924).- Entire plant (dried) sepia brown, 3-4 inches in diameter, 7 mm. thick, dimidiate. Surface dull, glabrous, concolorous with raised zones. Context concolorous, very fragile, crumbly. Pores large, daedaloid, (Fig. 1926 enlarged) concolorous. Setae none. Spores not found, no doubt hyaline. The above notes are from the dried specimen which has no doubt changed color as collection notes are "upper surface white with grey zones". It grew on dead cocconut tree. The plant suggests *Polyporus anebus* excepting its brittle, crumbling flesh.

TRAMETES VERSICOLOR FROM PROF. MARCIAL R. ESPINOSA, CHILE (Fig. 1927).- We so name a collection that impresses us as being only a thick and very unusual form of *Polystictus versicolor*. It is not necessary to describe it. The spores are the same, allantoid, about 1 1/2 X 5. Context pure white.

SEISMOSARCA ALBA FROM W. C. MUENSCHER, NEW YORK (FIG. 1928).- Plants pure white and cerebrine (Fig. 1928) when young, foliaceous and sordid buff when old. Basidia globose, cruciate, imbedded, hyaline, 10-12 mic. in diameter. Spores sub-reniform, 6 X 12, hyaline. Gloecystidia (Fig. 1929) (or colored ducts perhaps) cylindrical, obtuse, irregular in shape, imbedded near the surface, the ends slightly protruding.

The genus *Seismosarca* is the only one of the tremellaceous plants known that had gloecystidia. The genus was named, misdescribed and misfigured by Cooke from Australia, as explained in detail *Myc. Notes* p 629; but that our American plant is co-generic with the Australian is evident on comparison of the specimens. No commoner tremellaceous plant occurs around Cincinnati and it is of frequent record in our literature always under the name "*Tremella albida*" as Berkeley and others always mis-determined it. It is entirely different from the European plant as explained in detail Letter 44, Note 48 (as *Exidiopsis alba*). Our previous spore record, piriform, 5 X 10 is an error probably, based on immature spores. It is curious that the genus *Seismosarca* is only known from America and Australia and does not occur in Europe or other countries as far as known. We are indebted to Miss Wakefield for the drawing of the hymenial structure that we present (Fig. 1929).

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EXIDIA GLANDULOSA FROM DR. JAMES R. WEIR, IDEHO (Fig. 1932).— The common *Exidia glandulosa* takes two different forms or species I think, but they are not separated in our books. The widely distributed plant, the one we have in America and the plant I found in Sweden, is not the same consistency at least, as the plant around Paris that Bulliard figured. But the name is taken from Bulliard, hence if we hold them as different we would have to invent a name for the common form. We might continue to call the common plant as generally called, *Exidia glandulosa*, and the local form around Paris, *Exidia arborea* as named by Hoffman, but if one did that Otto Kuntze would turn over in his grave and the Kuntzeites would have a spasm. Or we might take the view of the Brussels conspirators and call the common plant *Exidia glandulosa* on the ground that Fries did not know any better and what Fries did not know no one has any business learning. Neither view is satisfactory to me, so I shall continue to call them both *Exidia glandulosa* merely designating the one I found around Paris as the Parisian form, and labeling it *Exidia arborea* in the collection and on our figures.

Exidia glandulosa begins as erumpent tubercles attached to the host by a point but it soon becomes confluent and cerebriform and resembles a *Tremella*. Our figure 1930 well represents it in the usual form. The color is dark brown, almost black one might say, and the surface is covered with little projecting papillae. These papillae are multicellular, about 50 X 100 mic. and are on the surface as shown in Tulasne's figure, not imbedded in the tissue as sometimes inaccurately figured. The basidia are ovoid, 15 X 20 when young, brown becoming paler when old. Spores 4 X 16, hyaline, cylindrical, curved.

The usual form (Fig. 1930) is very common everywhere and favors beech willow and alder. In very wet weather it absorbs moisture and becomes so soft that it "runs". It dries to a thin, black film and the dried specimen (Fig. 1931) hardly suggests the soaked plant. Mr. Weir finds on willow in the West a form with much larger lobes and fewer papillae (Fig. 1932). We show in the figure the under surface also, showing the small point by which it is attached.

EXIDIA GLANDULOSA (PARISIAN) (Fig. 1933).— I collected around Paris and have seen it from no where else a form of *Exidia glandulosa* which was the original of Bulliard and of Tulasne as shown in their figures and preserved in Tulasne's herbarium. This is much more firm and discoid (Fig. 1933) than the usual plant and retains its shape when dried (Fig. 1934). In fact it is for me closer to *Exidia truncata* than it is to *Exidia glandulosa*, but it is the original of *Exidia glandulosa*, and of course as Fries did not know it, it can not be changed now. That is the "law". I have however, labeled it in my herbarium, and the figures, *Exidia arborea*.

CLAVARIA LACINIATA FROM H. C. BEARDSLEE, CANADA (Fig. 1935) as illustrated by Schaeffer. Perhaps a form of *Clavaria rugosa*, but much more branched than the type figure of Bulliard. Or it might be held as a form of *Clavaria cristata* with the branches all above. Spores globose, 8-10 mic., smooth. We present a figure 1935 from photograph from Professor Beardslee. We have this same plant from Overholts, and Fig. 1936 is made from his photograph. We referred it when received to Krombholzii.

Clavaria laciniata can be held as intermediate between *Clavaria rugosa* and *Clavaria cristata*. All three agree in globose, smooth spores, 8-10 mic., and the habitat is acerous woods.

XYLARIA HELOIDEA, A. M. BOTTOMLEY, SOUTH AFRICA (Fig. 1937 and Fig. 1938 enlarged sixfold).- This is the first time we have received this little species which was well illustrated from Java by Penzig. Its characters are the small size, the globose head consisting of a few protruding perithecia, spores 6 X 18. I think this is the first record outside of the original.

MELANOASTER MOLLIS FROM SIMON DAVIS, WYOMING.-(Fig. 1939).- Globose, an inch or more in diameter, when wet very soft and flabby collapsing and becoming almost hallow in drying. Peridium reddish brown, smooth, with no attached fibrils. Gleba cells mostly deliquescent, only fragments which are white remain in soaked gleba. When soaked the interior is filled with a soft, gelatinous mass, consisting mostly of spores and fragments of the cell walls. After soaking an hour or so it becomes liquescent. Color of the wet gleba is black to the eye but brown under the microscope. Spores elliptical, mostly 4 X 8, some 5 X 8, obtuse at both ends, smooth, pale brown color. There is a possibility that this is *Melanogaster tuberiformis* of Europe which has a soft black gleba from accounts. Certainly the spores have no resemblance at all to the original figure of Corda but these were shown by Tulasne to be only a burlesque. Nor do these plants have any external fibrils. The spores, 5 X 8 (largest) are smaller than those of the European plant, both of Tulasne's and Hesse's record, (6 1/2 X 9-12, Tulasne: 6 X 10, Hesse.) and are not of the shape stated and shown by Tulasne. Harkness records *Melanogaster tuberiformis* in California but he only reproduced Corda's original description - "spores deorsum attenuatis" which he should have known was a bad mistake at the start and like all of Harkness' work and records no reliance can be placed on any of it. The original *Melanogaster* species has permanent gleba cells. Whether it is advisable to include plants with deliquescent gleba walls as appears to have been done with *Melanogaster tuberiformis* is a question.

Mr. Davis kindly furnishes the following collection notes: "These specimens were found in black, vegetable humus in a thick bunch of greasewood, they were buried in the ground, only the tops were exposed. At first sight they seemed to be knots at the base of the greasewood. They are not easily seen for they are the color of the surrounding earth and lie close to the greasewood. On drying they gave a disagreeable, rancid odor and tried hard to deliquesce, but I watched them carefully, kept turning them over and saved all. There was no difference in color. The little and big ones were exactly alike in color. The gleba of the dried plant was black to the eye but a very deep brown when viewed in a strong light. It took 48 hours to get them to begin to dry on top of a range and another 48 hours before I deemed it safe to wrap them up"

TYLOSTOMA TRANSVAALII FROM A. M. BOTTOMLEY, SOUTH AFRICA (Fig. 1940).- Peridium pale, 1 1/2-2 cm. in diameter. Cortex dark, warty breaking away and leaving the peridium smooth.

Mouth shield shaped, raised Stem rather obese with valvular enlargement at base. Capillitium hyaline, 5-8 mic. thick, with few slightly swollen nodes. Spores 6-7 mic. strongly aculeate.

This belongs close to *Tylostoma Leveilleanum* in Group 10, characterized by the mammate mouth and the large, strongly rough spores. In the mammate mouth it agrees with *Tylostoma poculatum*.

BROOMEIA ELLIPSOSPORA (Fig. 1941).- We acknowledge from Rev. H. A. Junod a fine collection of the above species known only from South Africa. We have given figures of it previously. While the specimen does not show it, there was undoubtedly a universal veil when young over the entire group of little "puff balls". This common exoperidium is the distinguishing character of the genus *Broomeia* as explained in *Myc. Notes* p. 917.

Our figure represents the upper and lower surface. The subiculum is rather thin and the little puff balls impress their form. *Broomeia congregata*, the only other species which also grows in South Africa, has a thick stroma on which the little puff balls are seated.

MELANOGASTER VARIEGATUS (Fig. 1942).- We presented on Plate 178 a figure of what we called *Melanogaster mollis*. We had sent it to Professor Mattiolo and since have received his reply that it is an overripe collection of *Melanogaster variegatus*. We had several collections of *Melanogaster variegatus* in our collection and they all had permanent gleba cells and were as hard as rocks and did not change much when soaked. Mr. Davis' collection was soft as mush when fresh and soaked and the gleba cells disintegrated. They seemed quite different to us but we are willing to defer to Professor Mattiolo's much more extended acquaintance with this class of plants and we thank him for correcting us.

DACRYOMITRA LUTEA FROM L. RODWAY, TASMANIA (Fig. 1943).- We are thankful for the opportunity to study this. It is the second collection made and both were made by Mr. Rodway, in Tasmania. The original (No. 598) very scanty, is at Kew and pressed flat on a piece of paper. We did not take the liberty of trying to examine such scanty types. It was said to have globose basidia and was put in the genus *Gyrocephalus* by Masee. We doubted that at Kew for the plant has the aspect of *Dacryopsis* or *Dacryomitra* and no suggestion of the only species of *Gyrocephalus* known. In fact it is a miniature of *Dacryomitra glossoides*. The genus *Dacryomitra* is simply a stalked *Dacryomyces* with an inflated, gyrose head entirely distinct from the stalk. But when we come to examine it we are still in doubt. There is a narrow, peripheral zone, evidently basidial. It stains deep colored with iodine and consists of what I take to be mostly immature, cylindrical basidia. The ripe basidia I found were hyaline with two sterigmata. I could not make out the entire basidia but I think cylindrical. The spores are hyaline, 5 X 12, cylindrical, curved, separated into four cells (3 septate) and typically the spores of *Dacryomyces* and this class of plants. Beneath the thin, peripheral, basidial zone is a broad zone in which are densely imbedded globose bodies about 6-8 mic. in diameter and no doubt in my mind conidial spores such as are shown in the familiar figure

(Brefeld) of *Tremella lutescens*, but which by the way I have never noted. These were taken for basidia when the plant was put in *Gyrocephalus*. I think this an error for the globose basidia of *Tremella*, etc., are always much larger, there is no indication of sterigmata and it is most improbable that they could be basidia and send their sterigmata such a distance to the surface. We give a figure of *Dacryomitra luteus* soaked, (Fig. 1943) and an enlarged plant (Fig. 1944). It is only known from Mr. Rodway's collection and we are very glad to get it, for nothing could be told from the scanty type excepting that the classification of Masee was in all probability wrong.

MERULIUS ERECTUS FROM DR. M. S. WHETSTONE, MINNESOTA
(Fig. 1945).- Plants fleshy, clavariiform, growing erect and imbricate from the ground. Color dark brown with deeply colored hyphae. Hymenium amphigenous, of shallow elongated pores (Fig. 1946 enlarged) Cystidia none. Spores abundant, elliptical, 4-5 X 6, colored, smooth.

What strange things do come in. We puzzled a long time as to what genus this should be included in for there is none in which it naturally falls and we do not like to propose new genera. Of course it is not a *Merulius* except it could be so placed on account of its shallow pores, but there is no other species of *Merulius* that in any way suggests it. In general form and habits it reminds one of certain *Thelephora*, the old section *Merisma* of Persoon. As to spores it is a *Coniophora*. There is a possibility it is not a normal plant but without other evidence one would not be justified in so stating.

TREMELLODENDRON HIBBARDII FROM MISS ANN HIBBARD, MASSACHUSETTS
(Fig. 1947).- Plant clavariaeform, divided into numerous, erect branches which are fimbriate at the apices. Color white at base but the main stem and branches (when fertile) are dark purplish, almost black for me, about blackish violet grey of Ridgway. Tips of branches sterile, buff. Basidia "heterobasidia" shape of those of a *Tremella*. Spores 6-8 X 12, unilateral, apiculate, hyaline, smooth, with granular contents. I suspected this was a *Tremellodendron* as soon as I saw it from its evident resemblance to our common species. But a *Tremellodendron* with dark, purplish hymenium is something novel and evidently very rare or it would have been collected before. It grew in the ground and excepting color and more slender habits reminds one of the common *Tremellodendron pallidum*. I take pleasure in dedicating it to Miss Hibbard who has the happy faculty of collecting some very unusual plants.

TREMELLA VESICARIA FROM MISS ELIZABETH C. COX, PENNSYLVANIA
(Fig. 1948).- As an illustration of how conditions affect plants we present a figure of this species that grew ambient around the base of herbaceous stems. It is quite different in general appearance from the figure we gave (page 871, fig. 1488) where the plant grew erect without the aid of support. Notwithstanding the contrary views of such eminent authorities as Mr. Coker, who I think was principally guessing, I do not believe it is the same plant as *Tremella clavarioides* that develops pointed branches and I am quite sure it has no relation to a *Corticium* as Berkeley or Ravenel or Cooke or whoever

The first part of the document discusses the general principles of the proposed system. It is intended to provide a clear and concise summary of the main points. The following sections will deal with the details of the system and the methods of its implementation.

The second part of the document describes the various components of the system and their functions. It is important to understand how these components interact with each other and how they contribute to the overall performance of the system.

The third part of the document discusses the results of the experiments conducted to evaluate the system. It includes a detailed analysis of the data collected and a comparison of the results with the theoretical predictions.

The fourth part of the document discusses the conclusions drawn from the experiments and the implications of the results. It also includes some suggestions for further research and development.

The fifth part of the document discusses the practical aspects of the system, such as its cost, its reliability, and its ease of use. It is important to consider these factors when deciding whether to implement the system in a particular application.

The sixth part of the document discusses the future prospects of the system and the potential for its development. It includes some thoughts on how the system might be improved and how it might be used in other applications.

The seventh part of the document discusses the acknowledgments and the references. It is important to acknowledge the help and support of those who have assisted in the work and to provide a list of the sources of information used in the document.

The eighth part of the document discusses the appendixes. These contain additional information that is not included in the main text but that is useful for a more complete understanding of the system.

The ninth part of the document discusses the index. This is a list of the topics covered in the document and the pages where they can be found. It is a useful tool for finding specific information in the document.

The tenth part of the document discusses the bibliography. This is a list of the books and articles that have been consulted in the preparation of the document. It provides a useful reference for further study.

it was who was responsible for "*Corticium tremellinum* var. *reticulatum*" seems to have thought. They write "B. & R." in the advertisements but I have an idea it was a libel on Berkeley to accredit this work to him. It appears in Ravenel's second *exsiccatae* and Cooke I think was responsible for most of the naming of that. At any rate it was a most comical bull on the face of it and any one who takes it as "authority" for the name of the plant has about as broad a view of the situation as a knife blade.

LACHNOCLADIUM GENICULATUM FROM OTTO A. REINKING, PHILIPPINES (Fig. 1949).— No one I believe knows much about the tropical *Lachnocladiums*. I have photographs of all the species I found named in the museums and this seems to fit as above. It is a white plant with a pubescent appearance but under the microscope the hairs are very short and fine. It has hyaline, elliptical, rough spores about 4 X 6. The reference of course is doubtful as it was named (as *Clavaria*) from South America about sixty years ago and is only known from the "type locality". We present a figure of the type in case of any error.

TRICHOSCPHA MAGNISPORA FROM OTTO A. REINKING, PHILIPPINES (Fig. 1950).— Color brown. Cup infundibuliform, scurfy, about a cm. in diameter. Surface scurfy under the lens of large, globose, brown cells. Spores extra ordinarily large, fusiform, 10 X 50, acute at both ends, hyaline, with faint granular contents.

This grew on dead wood. In size, shape, color, same as the familiar *Sclerotinia tuberosa*. It is exceptional in its unusual large spores, more than double the length of any species I find noted. Not having worked with the named specimens of *Pezizae* I would not venture on this were it not so much out of the ordinary. The old cups are naked but I note a fringe of multicellular hairs on the mouths of young specimen, hence include it in *Trichoscypha*. One would look for the old specimens in *Geopyxis*.

EXIDIA BEARDSLEEI FROM GEO. W. MARTIN, NEW JERSEY (Fig. 1951) .— This is evidently the same plant as I named and a much better specimen. We would modify the description some. The plant is the color of a raisin to the eye, same as Coker's Plate 23, Fig. 15 also noted by Coker as "color of a raisin". The term is likely to be loosely applied for Peck described *Exidia pinicolor* as "raisin colored" and Coker says it is the same as *Exidia gelatinosa* in appearance. If any raisin had the color of *Exidia gelatinosa* it would not be salable. The soaked plants appear sessile but really have a short sterile base. Basidia are globose, hyaline. Spores 5 X 10 elongated, slightly curved, apiculate with granular contents. Mr. Martin found this on oak and Coker reports three collections on locust and oak. The plant therefore does not appear to be rare and no doubt has other names. Peck has named two species that he described as "raisin color". *Tremella colorata* which he claims to have concolorous spores and *Tremella pinicola* and both may be this same plant. I never examined Peck's or Schweinitz's tremellaceous discoveries as not much can be told without soaking them and I did not take that liberty. Neither Peck nor Schweinitz knew the elements of tremellaceous, basidial characters, however, and were as liable to get their "new species" in one genus as another.

The colored spores of *Tremella colorata* are probably a bull. At least the other genera, based on "colored spores", *Seisimosarca* and *Phaeotremella* have both turned out to be bulls and the probabilities are the same thing will apply to Peck's species. Excepting the yellowish spores of some species of *Dacryomyces* no tremellaceous plant is known with colored spores. Coker has examined and reports on Peck's species but he apparently is not familiar enough with the subject to recognize a bull if he found one in a china shop. From Peck's description *Tremella pinicola* seems to be exactly the same plant as *Tremella Beardsleei* excepting it grows on pine but from Coker's description of Peck's species it has no suggestion of it. And there you are.

Dacryomyces candidus from Nelson A. Nunez Valdez (Fig. 1952).- Cushion shape, white or with a yellowish tinge when soaked, confluent. Spores 8 X 16, hyaline, slightly curved, two septate. Basidia hyaline, furcate.

I have no doubt this was what was named from Chile by Montagne. It agrees with his brief description and while white *Dacryomyces* are rare I did not find the original in Montagne's herbarium. We have but one white *Dacryomyces hyalinus* (Myc. Notes page 828 fig. 1386) which differs in habits and appearance. There is a record of another white "*Dacryomyces*" in Europe, Madame Libert (I presume a Madame) was a Belgian who published an exsiccatae of four centuries in the thirties. Her "relics" were worked over by several, hunting for new species, fifty years later. One which the Madame had named *Dacryomyces albus* was included in Saccardo 8, 803. The same drifted into Cooke and was published as *Tremella culmorum* in *Grevillea*, vol. 8. The specimen is still in Cooke's herbarium and is *Sebacina incrustans*, a most common plant of Europe with no more suggestion of a *Tremella* or a *Dacryomyces* either, than of a piece of tripe.

TREMELLA FUCIFORMIS FROM OTTO A. REINKING, PHILIPPINES.- (Fig. 1953).- To my mind the most beautiful *Tremella*. It is tropical only (or subtropical) pure white and has crisped, foliaceous lobes. Although we have already illustrated it we can not refrain from giving another figure of Mr. Reinking's specimen. The spores are globose, about 5-6 mic. The basidia globose about 12 mic. hyaline and four parted. They are close to the surface. The core of this collection is decidedly yellow. This is not normal but the plant has been attacked by the plasmodium of some *Myxomycete*.

TREMELLA CARNEO-ALBA (Fig. 1954).- Plants small, cushion shaped, convolute, color almost white with a faint cast of yellow. Basidia globose, pale yellow, 14 mic. Spores hyaline, globose, 8 mic.

This is a rare *Tremella* in size and appearance, more like a *Dacryomyces*. I first received it from Mr. Coker, North Carolina and advised him in my opinion it was unnamed. Afterwards I made one scanty collection on decorticate wood near Cincinnati.

CALOCERA GUEPINOIDES FROM E. J. SEMMENS, AUSTRALIA (Fig. 1955).- While there are several collections at Kew, all from Australasia, this is the first time I have received it.

I am glad to have specimens for the question arose just the other day in working with the rare *Dacryomitra lutea* of Tasmania as to whether it is the same or not. They are very close but *Calocera guepinoides* has a very short stem and *Dacryomitra lutea* has a stem as long as the head. As a matter of relationship *Calocera guepinoides* is closer to *Dacryomitra lutea* than to any *Calocera*, but classification must in many cases be artificial. Dried it does not seem to have a stem, but soaked a short stem is seen, hence it would become *Dacryomitra guepinoides* for some future McGinty. Berkeley gave the plant a good name for it suggests small specimens of *Guepinia spathulata* so closely that I think one not well familiar with both plants would consider them the same. But a section shows an amphigenous hymenium, hence not a *Guepinia*. The dried plant is dark, but soaked (and when growing) is yellow, Berkeley "described" it as reddish brown, which makes it quite evident that he did not soak his tremellaceous plants. It is needless to add the basidia are furcate and spores (hyaline) cylindrical 5 X 10 slightly curved for all this group of plants have about the same spores and basidia. It is one group where the anatomical expert has not much advantage, and he who exploits at length these features of tremellaceous plants is only exhibiting pedanticism.

HYPOXYLON ROSTRATUM FROM L. RODWAY, TASMANIA. (Fig. 1956).-
Sessile, cushion-shape, 1 1/2 cm. broad, 6-8 mm. thick, black, no pellicle or remains of a conidial layer on the ripe plant. Surface rostrate with large, protruding beaks, (Fig. 1957 enlarged) concave at the apices. There are, of course, the "ostioles", but I know none so large in any other species although there is a suggestion in *Hypoxylon maleolum*. Stroma black, all carbonaceous. Perithecia unusually large, globose, 2-3 mm. located peripherally and corresponding in number to the beaks. Spores 6-7 X 8, subglobose, black. No evidence of the asci remain in the ripe plant

Mr. Rodway sends this to me as - "This was determined by Masee as *Hypoxylum annulatum* but I was never satisfied." Mr. Rodway had good grounds for dissatisfaction. *Hypoxylum annulatum* was named from the United States but neither it nor any other of our species (or in Europe) has any suggestion of *Hypoxylon rostratum*. The publication of this illustrates my views on such cases. I have a general knowledge of the *Hypoxylons* of Europe and the United States and am sure it is none of these I have photographed and collated most of the figures that have been given of the foreign *Hypoxylons* and I never saw it, and if any one should publish such an exceptional plant and not give a figure of it he would be very remiss in his obligations, to put it mildly. I have looked over the "descriptions" of foreign species and find none that would apply to it, though that of course is not conclusive as not one species out of ten could be determined correctly from the publication. I would not call it a "new species" for I do not know. It may be an old one. But I feel that Mr. Rodway has sent it to me for a name and as I do not know it if it has been named, I am justified in giving it a name for our museum and for Mr. Rodway, provided I illustrate it in such a characteristic manner that it will be recognized if it is ever found, named and filed away in some museum.

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FEMSJONIA LUTEO-ALBA FROM A. D. COTTON, ENGLAND (Fig. 1958 and 1959 enlarged).— This is a rare plant in Europe and has not as far as I know been collected in the States. It grows on frondose wood (oak, beech, cherry, alder, etc.) and is but scantily represented in the museums. It is a question how to consider the genus *Femsjonia*. It is surely the plant Fries so named though it was many years before that conclusion was reached as Fries evidently misrecorded it as having globose basidia. Excepting as to basidia it answers Fries' description and no plant known in Europe does that has "globose basidia". Fries never had correct ideas of tremellaceous basidia. As to genus it appears to be monotypic. The texture is homogeneous, thus differing from *Ditiola* and the superior hymenium removes it from *Guepinia* which has similar disciform hymenium. The texture is not frankly tremellaceous, more firm and "waxy" but the component hyphae are similar. The color of the soaked plant is pale yellow. Shape turbinate, the hymenium on a concave (upper) disc. Outer (sterile) surface minutely white, pubescent, of hyaline projecting hyphae under the lens. Basidia furcate, typical. Spores (test Bourdot) 8-10 X 18-31 oblong, subcylindrical, 1-2 guttulate. Our record was 8-10 by 20 rather piriform. I do not believe its history is all told yet but the following is as far as we have traced it. Fries found it at Femsjö and named it *Femsjonia luteoalba* as stated. His description (except basidia) applies exactly. Brefeld well illustrated it and called it *Guepinia Femsjonia*. It had been sent him by Dr. Olesen who found it but once on oak. Olsen was satisfied it was Fries' species but Brefeld put it in a different genus and changed its name. It is *Exidia pezizaeformis* of Lévillé (co-type at Kew) as Fries suspected and *Femsjonia pezizaeformis*, McGinty and future jugglers. It is *Ditiola radicata* (in error) of Quélet and Bourdot since corrected by Bourdot to *Ditiola luteo-alba*. It is *Ditiola conformis* of Karsten, and his *exsiccatae*, (No. 629) are about the only ones I saw in the museums of Europe. It is *Ditiola Ulicis* of English mycology, co-type in British Museum. It is *Femsjonia luteoalba*, Sydow Exsic. No. 253, the only correctly named specimen I ever noted. We are under the belief but we are not positive that the hymenium is superior. If it is inferior then the plant must be put in *Guepinia*.

PODOCREA ANOMALA FROM OTTO A. REINKING, PHILIPPINES (Fig. 1960).— The more specimens we receive of tropical Pyrenomycetes the more confused are our ideas of the limitation of genera. This unique specimen appears to the eye as a Xylariaceae, but when it is examined it is a Hypocreaceae, at least as to perithecia and spores. And it is anomalous as to either. It has the carbonous crust of the former and the fruit of the latter and it does not belong in any established genus of either. In old times I think it would have been called a *Hypocrea* which Saccardo divided up as far as he could into different subgenera mostly belonging to different subfamilies of his artificial classification. While I have heard this classification lauded very highly and it no doubt is convenient, the genera in Sylloge, based primarily on spore color, septation and form appear to me as being largely artificial and a backward step from the more natural grouping of Fries. It is the same as if our phaenogamic friends should abandon Natural Orders and go back to the Linnean system of counting the stamens and pistils.

The sections of *Hypocrea* of Saccardo have mostly been raised to generic rank by Seaver and called "new genera" but that does not solve the problem for some of his genera on Saccardo's scheme of classification should be split up as *Hypocreopsis* which embraces spores that are "Hyalosporae" and others that are "Hyalodidynae". This plant from Mr. Reinking is a "composite" genus. It is a *Kretzschmaria* on its carbonous crust and general appearance. It is a *Hypocrea* of Saccardo's *Sylloge* Vol. 8. It is a *Podocrea* as since separated on its erect habits. It is a *Hypocreopsis* on its spore characters in part as considered by Seaver, not as originally defined. We put it in *Podocrea* as a matter of convenience. We might make a new genus of course but we feel that when tropical *Hypocreaceae* are finally grouped the simple plan of considering as *Podocrea* the erect species will probably prevail. At any rate it is a curious plant.

Podocrea anomala (Fig. 1960 and head enlarged).— Black, the stem and crust carbonous. Heads borne on the branches of an intricate, erect stromatic stem (Fig. 1961 enlarged) Heads with an enlarged disc, fertile only on the disc. In general appearance reminding somewhat of a clove. Crust carbonous, black. Perithecia, globose, fleshy white, imbedded in a layer below the crust of the disc only. Paraphyses filiform, hyaline, slightly exceeding the asci. Spores elliptical, smooth, hyaline, 12 X 24 mic. each with two guttae. Collected by E. Collado (No. 9728) on dead wood, Luzon, Philippines.

XYLARIA DIVISA, FROM OTTO A. REINKING, PHILIPPINES (Fig. 1962) From a thick buried stem no doubt attached to buried wood, divided above into several short stems bearing obtuse cylindrical clubs. Color black, no cuticle. Surface faintly moriform. Spores 5 X 10.

I would enter this in Section 15 and I know no other species it suggests excepting the photograph of the "co-type" of "*Xylaria eupiliaca*" from Cesati, at Kew, which is an immature specimen and should not be named. Cesati published it as *Xylaria Guepinia* and it has no suggestion of the European plant as I understand it. It was compiled as a variety in Saccardo.

STEREUM AFFINE FROM A. M. BOTTOMLEY, AFRICA (Fig. 1963).— The specimens are young and pale color. While we have already illustrated the species (*Synopsis Stip. Stereums*, fig. 561) we give another figure to show the strong development of the mycelial pad at the base. The feature was noted in our previous account but is more strongly developed than we have previously seen.

HYPOXYLON MAGNOSPORUM FROM E. B. STERLING, NEW JERSEY (Fig. 1964).— Globose, caespitose, black, about 1 cm. in diameter, seated on a thin, black substratum that covers the surface of the wood. Surface uneven, slightly moriform. Stroma carbonous not zoned. Perithecia large, globose, forming a peripheral layer. Spores very large, 10 X 36, deep colored, somewhat fusiform.

Our first impression was that it was *Daldinia concentrica* but not when we cut it. We do not know that it is a "new species" for we have never worked over the foreign named old ones, but we have not found a "description" that applies. We feel quite sure however that it was not known to Ellis or Schweinitz for we have worked over their herbaria. Also that it belongs to the quite convenient (if not logical) section "*Macroxylon*" and is not one of the eleven species listed by Cooke.

The first part of the document discusses the general principles of the law of contract. It states that a contract is a legally binding agreement between two or more parties. The law of contract is concerned with the formation, performance, and breach of contracts.

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The ninth part of the document discusses the rescission of a contract. It states that a contract can be rescinded, which means that the contract is treated as if it never existed.

The tenth part of the document discusses the rectification of a contract. It states that a contract can be rectified, which means that the contract is corrected to reflect the true intentions of the parties.

The eleventh part of the document discusses the frustration of a contract. It states that a contract can be frustrated, which means that the contract is terminated because of an unforeseen event.

The twelfth part of the document discusses the discharge of a contract by agreement. It states that a contract can be discharged by agreement between the parties to the contract.

It should be readily recalled from our other Hypoxylons by its large size (relatively) and large spores.

XYLARIA COMPOSITA FROM DR. GEORGE ZENKER, WEST AFRICA (Fig. 1965).— Plant with a thick, black, solid, wrinkled stem an inch or more long, about 2 cm. thick, bearing on the summit four or five large, obese, obtuse globose or flattened clubs. Surface (Fig. 1966 enlarged) with a thin, brownish crust which disappears from old plants, even, with minute, white ring around the ostioles. Stroma white or slightly fuliginous, solid when young but disposed to become hollow when old. Spores 6 X 12-14.

We apply a new name to this though we suspect it is *Xylaria Poitei*, *Xylaria regalis*, etc. as itemized in Letter 64. If so, however, the latter were not perfect specimens, but they may have been pieces of one. No *Xylaria* is named or described that grows in the manner of the fine specimen that Dr. Zenker sends, but Dr. Zenker's specimens are always perfect. It is possible of course that species may be simple or compound. We suspect also that it is the same as *Xylaria obesa* (*Xylaria* Notes page 26, fig. 1344) which was named from Africa but young specimens of a very different appearance from these when ripe.

While we place this in the "obese" section (10) its relations are closest to *Xylaria allantoidea* (*Xyl.* Notes page 8). Broken frustule of the club of one could hardly be told from the other. I doubt if there is any section of mycology that has been any worse exploited than tropical *Xylarias*. But there is a reason if not an excuse for it, for *Xylarias* vary so much as to form and change so much from young to old conditions and have been so scantily and fragmentarily collected that the work of the old namers, Montagne, Berkeley principally, could not be anything but tentative. In addition the most superficial and inaccurate work was done by the more recent exploiters such as Cooke, Hennings and Rehm. But with good collectors like Dr. Zenker we have faith to believe the subject will straighten out in time. In the photograph we give of Dr. Zenker's specimen only two of the heads remain. Two or three of these were broken off in transit.

XYLARIA PAPULIS FROM VICTOR DEMANGE, CHINA (Fig. 1967 and 1970 surface enlarged).— We wrote this article some years ago but have held it from publication until we got additional specimens from Mr. Reinking from the Philippines. Among the photographs we made in the museums are two "authentic" pictures of *Xylaria guyanensis*. They do not for us represent the same species. One which corresponds to the description we have published (page 649). The other which we have received for the second time from Mr. Reinking we would call *Xylaria papulis* from the strong protruding mouths of the ostioles as shown in our enlargement, Fig. 1970. *Xylaria papulis* as shown in our figure is a club shaped species tapering to a short stem. It differs from most species of *Xylaria* in two characters. The stroma is white but becomes dark near the crust and the perithecia are imbedded in a dark stroma instead of the usual white. The surface has a thin, very dark brown crust which to an extent disappears from old specimens. It is studded with little black points or protuberances (Fig. 1970 enlarged) which are no doubt the mouths of the ostioles.

The text on this page is extremely faint and illegible. It appears to be a multi-paragraph document, possibly a letter or a report, but the content cannot be discerned. The text is scattered across the page in several distinct blocks, with some lines appearing as small, dark specks or very light gray marks. The overall appearance is that of a scan of a document where the contrast is too low to read the words.

Usually perithecia of a *Xylaria* are close together and the protruding mouths give a "moriform" appearance. In this species the perithecia being more distant from each other gives the surface an entirely different appearance from usual. The spores are about 6×14 . Our figures represent, Fig. 1968 specimen from Mr. Reinking; Fig. 1967) type (one) of *Xylaria guyanensis*; Fig. 1969 section showing the outer, carbonous layer of the stroma; Fig. 1970 the surface enlarged, showing the scattered protuberances on which is based the name. These same protuberances are shown on Cooke's figure of *Xylaria guyanensis* which is a fairly good representation of the co-type at Kew. But the co-type is not the same as the type, in my opinion, and Cooke habitually showed the same effect on most of his drawings of *Xylarias* whether it existed or not, hence the fact has not much significance in this instance.

XYLARIA TIMORENSIS FROM OTTO A. REINKING, PHILIPPINES
(Fig. 1971 and 1972 enlarged).— Very small, not exceeding a cm. tall and 3 mm. thick, obtuse, covered with a brown crust. Subsessile from a black, discoid base. Perithecia in a carbonous layer the ostioles protruding through the brown, cuticular crust. Stroma solid, isabelline. Spores 5×10 , elliptical, rather pale colored, usually one (or rarely two) guttulate near the ends. We gave a previous figure and notice of this plant, page 896. Twenty years ago we received this unique little *Xylaria*, growing on bamboo, from Wm. Gollan, British India. We sent it to one in Europe who was working on *Xylarias* and it was referred to *Xylaria aspera* from Malay. Some years later when we saw the type of *Xylaria aspera* we saw it had no possible suggestion. There is no section of the 31 provisional sections into which we have sorted our *Xylarias* where we can assign this specimen. Section 29 (*Xyl. Notes*, page 2) has a similar crust but they are large plants and have pithy stroma that become hollow. Section 1 is "brown but not truly carbonous". We have therefore assigned a new number or rather replaced an old number (19) for this, and we know no other that goes with it. We present a photograph (Fig. 1972) of this little species enlarged sixfold, also a photograph (Fig. 1971) of the host, showing the discs on the bamboo where the plants have fallen off for there was only one club remaining on the piece of bamboo that we received. Since this article was written we have several fine collections from Mr. Reinking, Philippines.

STEREUM AURISCALPIUM FROM OTTO A. REINKING PHILIPPINES
(Fig. 1973 enlarged X6).— Very small about a cm. tall, shape of an auriscalp. Surface glabrous, dark brown. Stipe slender, bearing the unilateral little pileus. Some of the specimens have lacerations of the pileus and stem as shown in our figure, others are regular and not lacerate. Cystidia few, hyaline, smooth with thin walls, projecting about 20 mic. Spores globose, 6 mic. hyaline, smooth. This is the tiniest little *Stereum* we ever saw, growing in the ground. It was collected by J. Reyes (No. 9656) and Mr. Reyes must have good eyes to have noticed it. There are other small species of *Stereum* of record (Cfr. *Stipitate Stereums*, Sect. 9) but they are all white and grow on wood. We would enter this in Sect. 4, although it has not much suggestion of any other species in the section. The "cystidia" remove the plant to the genus *Lloydella* for those who recognize the genus.

PTERULA INCISA FROM OTTO A. REINKING, PHILIPPINES (Fig. 1974 enlarged).— Our enlarged figure describes it better than we can. It is a white plant, about a cm. high and grew on wood. We gave, Myc. Notes No. 80, figures of all *Pterulas* we found in the museums but surely not this. The acute, incised branches suggest a brush. We are not sure this is a *Pterula* and I do not believe any one else can tell from a dried plant where the basidia (or spores even) are not found. It may be a "*Tremellodendron*", in fact it has a suggestion of this genus but differs in habits from our United States species which are the only ones really known. It is a sad fact that in these modern days when genera are based on basidia (not found on dried specimens usually) it is not possible to refer specimens with confidence even to genera.

PHYLLOMYCES MULTIPLEX FROM OTTO A. REINKING, PHILIPPINES (Fig. 1975).— In the first lot of fungi collected in the Philippines (1835), by Hugh Cuming, was an unusual thing which Berkeley labeled "*Xylaria multiplex*" but I did not note whether as a new species or a reference (miss) to the plant named by Fries. I did not examine it but questioned its being a *Xylaria* at all and certainly not *Xylaria multiplex*. These specimens from Mr. Reinking are the first I have since seen and I believe they are the same thing. We present a photograph of the "type" herewith. We soaked out Mr. Reinking's plant and find it as we suspected not a *Xylaria* and possibly not a fungus. When dry it is black and brittle but when soaked and sectioned not carbonous. It belongs to the *Diacomycetes* although I get no clue to any genus in this group at all suggesting it. The plant is foliaceous and best shown in our figure. The hymenium is a palisade layer of asci and filiform paraphyses both very dark. Spores are narrow elliptical, hyaline, about 3 X 6, eight in each ascus. As we do not know a genus named for it we invent one. There is a possibility that the lichen men have claimed this but it appears to me to have the fruit of a fungus. There is another specimen at Kew from the Philippines (Cumings 2218) that Berkeley named *Xylaria fulvo-lanata*. Probably I think this is a narrow lobed form of same thing but an examination should be made of it.

DIPLODERMA CRETACEUM FROM L. RODWAY, TASMANIA (Fig. 1976).— Globose, about 1 cm. in diameter, pure white. Exoperidium about 1/4 mm. thick smooth, chalky in appearance, closely adhering to the endoperidium. Endoperidium about 1/4 mm. thick, the context dark but the inner face pearly white. Gleba pale greenish, powdery, consisting of a few spores mixed with much cellular debris and imperfect thread fragments, representing the capillitium. Spores elliptical, subhyaline, smooth, obtuse with a minute pedicel at the other end. This was sent to me by Mr. Rodway as *Diploderma glaucum* as determined for him by Masee. For the absolute carelessness and inattention, that was prevalent during Cooke and Masee's regime, read this story. "*Diploderma*, Link. Diss. 2, 44" was based on an unopened *Geaster hygrometricus*, specimen still at Berlin. It has no "hard, central nucleus." "*Diploderma glaucum*, Cooke and Masee" was described (Grev. 18, 99) from a specimen, Wintle, Scamander River, Australia, still preserved at Kew. "It differs from *Mesophellia* in the distinct, double peridium. The hard, central nucleus is connected with the inner wall of the inner peridium by the radiating threads of the

capillitium" and the "type" specimen has these characters as shown in Cooke's figure 117 in Handbook. But the type specimen of *Diploderma glaucum* is *Mesophellia arenaria* as named and well illustrated by Berkeley a few years before and has no relation whatever to Link's genus *Diploderma* which was based on unopened *Geaster hygrometricus* and has no "hard, central core". About twenty years ago Mr. Rodway sent to Masee a collection of the plant he sends me now (No. 534) still preserved at Kew. Masee labeled and reported it as "*Diploderma glaucum*, Cooke and Masee." It is a true species of *Diploderma* as now defined, has no hard, central core and not the slightest resemblance to "*Diploderma glaucum*, Cooke & Masee", type at Kew. There has been a lot of bad work done in mycology, but I doubt if there ever was another as careless a piece of work as that done by Masee with the specimens that were sent to him by Mr. Rodway.

LYCOPERDON GLOBOSE-PIRIFORME (Fig. 1977) FROM ERNEST KNAEBEL, COLORADO: Globose, about an inch in diameter. Sterile base none. Cortex (Fig. 1978 enlarged) short, consolidated, scabrous warts. Gleba pale, olivaceous. Capillitium 4-6 mic. in diameter. Columella prominent. Spores globose 4 mic. pale color, smooth. Probably a form of *Lycoperdon piriforme*, but warts not the same, and it is the first large *Lycoperdon* I ever noted without a sterile base.

LENTINUS CRINITUS FROM OTTO A. REINKING, PHILIPPINES (Fig. 1979).- White, infundibuliform, with dense, light brown scales. Gills narrow, white close, with edges entire. Stipe slender, mesopodial, white. Cystidia none. Spores hyaline, 3 X 6.

Lentinus species with scales are rather rare. Most are velutinate or hairy. This is the first scaly collection we have seen from the Philippines excepting *Lentinus Elmeri* which does not suggest it. In adopting a name we select a very old one (Linnaeus, 1763) but we would not write Linnaeus after it. Linnaeus raked up a couple of old tropical pictures which have no resemblance to each other and called them *Agaricus crinitus*. Fries put the species in *Lentinus*. It being the only tropical *Lentinus* named in his day, Swartz so referred a collection from Jamaica which is deposited in the British museum. Berkeley (1842) reviewed Swartz's specimens and illustrated his *Lentinus crinitus* with a very good figure that for me is this plant. We therefore use the name and leave it to others whether to write Linnaeus, Fries, Swartz or Berkeley after it.

SCLERODERMA MACULATUM FROM M. PIERRE MARTENS, BELGIUM (Fig. 1980 and 1981 cortex enlarged).- This is a rare plant in America. (Cfr. Notes 822, page 950). I know of but two collections and this is the first collection I have seen from Europe. It was named by Peck and well illustrated but as a variety of *Scleroderma verrucosum*. The character is a thin, smooth, brown cortex which breaks up into little areas as shown in the enlargement (Fig. 1981). *Scleroderma verrucosum* has true scales or rather a scaly peridium which is an essentially different idea from this plant. (Fig. 1982 scales enlarged) Our books tell us that *Scleroderma* has a simple peridium (no exoperidium), not double as most puff balls have, but this has a thin, smooth cortex, thus vitiating all the old ideas on the subject of *Scleroderma* peridium structure.

POLYPORUS CRATERELLUS FROM NELSON A. NUNEZ VALDEZ, ECUADOR (Fig. 1983).— This has heretofore been known from a single collection made in Cuba and named at Kew. We are glad of an abundant collection from Mr. Nunez to enable us to soak it up and examine it. It is noteworthy from its deep, infundibuliform shape, perfectly smooth, and color of both stem and pileus, leather color I should call it, but near Buckthorn brown of Ridgway. The pores are so minute they are not visible to my eye and I sectioned it to be sure. Context white. Cystidia none. Spores globose, 4-5 (rather than 4-X 5 as I recorded at Kew) hyaline smooth.

It is evidently a very rare plant of our American warm countries and it does not occur in the abundant collections from American tropics in the New York Botanical Garden.

RADULUM OWENSII FROM S. M. ZELLER, OREGON (Fig. 1984).— As published Genus Radulum, page 10, or Irpex Owensii (l.c. page 12). This specimen is a better Radulum than an Irpex. In sectioning it we note some features that we overlooked. The plant is yellow but potash changes it to purplish and applied to the fungus to black. The hymenial and sub-basidial tissue is hyaline and strongly different from the dark colored sub-hymenial tissue. We believe now the plant does have cystidia but they are hyaline, smooth and of similar appearance (though projecting and narrower) to the basidia for which we probably mistook them.

GEOSCYPHA CREMULATA FROM OTTO A. REINKING, PHILIPPINES (Fig. 1985).— Unless (or until) someone works over the named, foreign Discomycetes in the museums and critically studies them, the determinations are very much on the order of guesses. We judge this is the above species named from Ceylon by Berkeley from the description and Cooke's figure. We also think from the same source it is Geoscypha Cordovensis as named from Mexico, also probably Humaria Raimundoi as named from the Philippines by Rehm. As to genus it is Galactinia of Boudier, Geoscypha of Cooke, Peziza of Saccardo and Humaria of Rehm. The genera of the Pezizae of various authors are about as much in accord as the views of politicians on the League of Nations. As it seems to be a frequent species in the Philippines (at least) we add a few notes. It is a bright red "scarlet" (Ridgway) with white flesh and exterior. The outer surface white to the eye, has under the lens short, hyaline hairs but it is not hairy to the eye like a Lachnea. The hymenium is made of asci and paraphyses of about equal length, the latter very numerous. They are pale color, red under the lens but in mass they form the bright color of the hymenium. The paraphyses are filiform not branched and septate and pale red but have not granular contents as some similar species have. Spores are elliptical, hyaline, smooth 10 X 20 and have two nuclei, not so marked however as often. We expect this will prove to be a common species of the tropics and it probably has many names. Four collections were received from Mr. Reinking, all growing on branches.

MERULIUS OCHRACEUS FROM NELSON A. NUNEZ VALDEZ, ECUADOR (Fig. 1986).— Mostly resupinate, with narrow, reflexed border. Surface pileate portion and context white. Hymenium ochraceous (exactly color of common Hydnum ochraceum) tubercular, swollen in folds

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(when soaked) (Fig. 1987 enlarged) not poroid. Cystidia none. Spores elliptical, 3 X 6, hyaline, smooth. This is not included in Burt's North American species, nor in either Hennings' or Bresadola's described South American species (both of which have globose spores) or species named by Spegazzini which is not a *Merulius*.

TRAMETES SUBMINIMA FROM L. RODWAY, TASMANIA (Fig. 1988).-

Pileus small, about one cm. pure white, spotting brown, where bruised no doubt. Pores at first small, round, becoming large, elongated. Cystidia none. Spores not found.

To the eye very small like *Trametes minima* (Myc. Notes page 850) a common little form of *Trametes sepium* on oak with us. It has brown spots where bruised and touched with alkali it turns brown at once, a character that *Trametes minima* does not have otherwise we would so refer it. There is a white *Trametes* in Japan (Cfr. Myc. Notes page 710) that turns red when touched with alkali but that is mostly resupinate and differs otherwise.

IRPEX CASTANEUS FROM PROF. A. YASUDA, JAPAN (Fig. 1989).-

Prof. Yasuda sent this to me with the suggestion that it is the same as *Merulius castaneus*, named and figured in Myc. Notes p. 555. At first view it did not seem possible to me, nor will it so impress another if our photographs are compared. But on studying them and comparing them we believe this is correct although they appear so different. I also note two features that are characteristic and common to them both and which I overlooked on the previous examination. First there is a color reaction changing to violet under potash solution. Second they have large, hyaline cystidia of the metuloid type. Taking everything into account I conclude there is no doubt about it now, and the whole story shows what absolute contempt nature has for man's ideas of classification. If fungus species were cast in molds as the old new-species hunters thought they were, it would save a lot of trouble. It would be quite absurd to call the "type" specimen an "IrpeX" but that is what the species appears to be when developed.

CORDYCEPS DIPTERIGENA (Fig. 1990).- We present a figure of the type enlarged sixfold. It came from Ceylon and now consists of two clubs from the head (all that remains of the host.). The Cordyceps heads are globose and the stem relatively short. There is at Kew (Fig. 1991 natural size) unnamed, but evidently the same species, a specimen collected by E. Berkeley at Rangoon. *Cordyceps dipterigena* appears to be rather frequent and widespread. Moeller found it in Brazil, gave a good figure of it and named it *Cordyceps muscicola*. It has never been collected in Europe nor recorded in the United States. But I have seen abundant and fine collections in the herbarium of Professor Thaxter at Harvard and Prof. Thaxter told me he had collected it several times in our country.

CORDYCEPS THWAITSI (Fig. 1992).- While we are on the fly Cordyceps subject, we present (Fig. 1992 enlarged sixfold) of a specimen in Berkeley's herbarium which came from Thwaites, Ceylon. Berkeley did not name it but it is now pasted on the sheet with *Cordyceps dipterigena*.

A comparison of the figure, however, shows it can not be that species. The clubs are of a different shape and stature and the heads taper and merge into the stem. In *Cordyceps dipterigena* they are perfectly globose and distinct from the stem.

CORDYCEPS FORQUIGNONI FROM MISS CATH. COOL, HOLLAND (Fig. 1993')

.- We reproduced a drawing sent by Miss Cool of a *Cordyceps* found on a fly in Holland in 1919. It is a single specimen and *Cordyceps* on flies are rare in Europe. The only previous record of which we know is the above named by Quelet in the 16th Supplement. Though larger than Quelet's figure, with the same general shape and host that Quelet records one would not be justified in holding that it was different. It does not agree in all features with Quelet's drawing but he was not accurate in his work and drew *Cordyceps* figures with collars such as no one but Quelet ever saw. Also it is a severe tax on any one's credulity to believe that any one ever had such (secondary) spores as Quelet depicts. But making proper allowance for Quelet's inaccuracy there is little doubt it is the same fungus and this is the second time ever collected in Europe. Miss Cool's figure impresses me as being a correct presentation of a *Cordyceps* but we do not know whether the figure is natural size or enlarged.

CORDYCEPS HILLII FROM H. H. HILL, NEW ZEALAND (Fig. 1994).-

Stalk proceeding from near the head of larva, about an inch long, bearing at the apex two or three short, oval, black clubs. Our figure is the best description. We know no other species where the clubs are borne in this way excepting *Cordyceps Dovei*, Myc. Notes, p. 691, fig. 1034 and that is very different. In addition the black clubs and hard texture are unusual for a *Cordyceps*. A section shows perithecia filled with hyaline hyphae, or at least it looks to me like ligneous hyphae and not at all like asci which I have no doubt they are, probably immature, as I see no sign of the spores. All of which is very mysterious to me.

POLYPORUS BURKILLII FROM T. F. CHIPP, SINGAPORE (Fig. 1995).-

Plant mesopodial, of a uniform drab color (when dry). Stipe an inch long 1/2 cm. in diameter, solid, Pileus surface glabrous and even. Pores very minute and shallow, decurrent on the stem. Cystidia none. Spores not formed.

I can not recall any *Polyporus* that suggests this. The color drab, or rather cinnamon drab of Ridgway is unusual. The texture fleshy but tough is not brittle as usual with such plants. We would enter it in 45b though it does not suggest any other in this section. The host is not stated and it appears to me to have grown in the ground. Based on E. M. Burkill's 347 in the Botanical Garden at Singapore.

POLYSTICTUS PAVONIUS FROM L. RODWAY, TASMANIA (Fig. 1996).-

In the sense as published from Cuba, Myc. Notes page 920, Fig. 1647. These, the second collections we have seen, are darker, thinner specimens than the Cuban plant. The main feature, to us, is the reduced attachment, glabrous, zonate surface and the general reminder of *Polystictus versicolor*, excepting these features, are the same.

Polystictus pavonius in the original sense is one of those phantom names that have been floating around without definite meaning for a hundred years and it is well we think to give it a definite meaning.

POLYPORUS RHINOCEROTIS, FROM T. F. CHIPP, COLLECTED BY C. BODEN KLOSS IN SUMAREA (Fig. 1997).- (Cfr. Myc. Notes page 1037 fig. 1900). *Polyporus sacre* came originally to Fries in the old days from Africa. It was a celebrated plant on account of having a sclerotium (tuber) and was used by the negroes in some superstitious rite. Cooke got a small pored form from Malay and named it *Polyporus rhinocerotis* without the slightest idea of any connection with *Polyporus sacre*, misdescribed it in three important features so no one could recognize it and put it in a different genus (sic) from *Polyporus sacre*. I dug it out at Kew and found it different only in its smaller pores. It is a pity it was held as other than a small pored form of *Polyporus sacre*. Only one collection was known (Malay) when I was in Europe but since it has reached me from Malay, Ceylon, Sumatra (now) and several from the Philippines and every one of them have the same minute pores materially smaller than the original plant as it grows in Africa. Although we have already figured the plant, we give another (Fig. 1997) of this fine specimen from Mr. Chipp.

POLYPORUS ARMADILLUS FROM E. D. MERRILL, PHILIPPINES (Fig. 1998).- Woody. Stipitate. Color isabelline, the pore tissue slightly darker. Pileus surface rugulose, zonate, concolorous. Context isabelline, woody about 1 cm. thick. Stipe lateral, 1 1/2 cm. thick, with interior a continuation of pileus context and surface smooth, "fuscous" of Ridgway. Pores very minute not visible to the eye, with dark, isabelline tissue and fuscous mouths. Cystidia none. Spores globose. 4 mic., hyaline, smooth.

A remarkable species not similar to any other *Polyporus* I ever saw. In the fungus world I hardly know any other with which to compare it but the rugulose surface suggests an armadillo. The stipe about two inches long is broken off. We enter it in Section 11 (*Lignosus*) though it is decidedly woody and in former days would be a *Fomes*. Still it is surely not perennial in the sense of having stratose pores. But one collection is known, No. 36060, collected by H. S. Yates, Isabella, Basilan Island.

Fomes latistipitatus from John E. A. Lewis, Japan (Fig. 1999 reduced from 15 cm. tall to 10 cm.).- Pileus with a lateral rooting stem, probably attached to buried wood. Surface hard, dark, smooth, rugulose. Stem about 3 X 12 cm. hard, woody, with soft, spongy outer flesh. Context hard, Argus brown, woody. Pores minute, hard, concolorous. Setae with inflated base. Spores scanty (if correctly seen) globose, 5 mic. deeply colored. While this has but one pore stratum we hold it a true *Fomes* from its woody nature, though true *Fomes* rarely have stems. Sometimes *Fomes applanatus* (or rather the hard crust form) develops a stem (then called *Fomes gibbosus*) but it is rare with us, more common in the tropics. If this Japanese specimen had hyaline spores it would be analogous to *Fomes pomaceus*, but the scanty spores we note are colored and we know no similar species in Section 72 (sessile) from which it could be derived. Our figure 1999 is reduced to about two thirds the diameter. Since the

cut has been made, from the position photographed it appears that the stipe is not lateral, but as a fact it is. Things are not always what they seem, even photographs.

POLYPORUS (GANODERMUS) ASPERULATUS FROM OTTO A. REINKING, PHILIPPINES (Fig. 2000).— Pileus reniform, glabrous, pale brown, faintly zoned with dull now laccate surface. Context pale isabelline. Stipe lateral, 3-6 mm. thick, 5-10 cm. long with dull surface, proceeding probably from an underground rhizome. Pores small, round 1-1 1/2 cm. long. Spores obovate 16 X 28 in the type, 14 X 20 in collection from Mr. Reinking, strongly reticulate with hyaline, truncate base.

We are always glad to get specimens of this rare and unique section and particularly of this which is the second collection made in the Philippines. Otherwise it has only been reported, one collection from Borneo. The first collection (now at New York) was made by Copeland in 1907. It was described by Murrill as having spores "studded with immense warts" an error of observation as the spores are reticulate, the edges of the reticulations appearing under the lens as spines.

This collection, T. Ferrer, 9787, was made on "dead wood, Mt. Maquiling, Luzon, Oct. 1, 1920". It is more slender than the original collection and has smaller spores. It appears to me as though it had a rhizome, hence probably grew in the ground but of course I do not dispute the collection notes. Since the above was written I have another specimen from Mr. Reinking (Sison 9729) also endorsed "on dead wood" but I think that must be a mistake.

POLYSTICTUS RADIATA-RUGOSUS FROM L. RODWAY, TASMANIA (Fig. 2001).— Pileus thin, rigid, glabrous or appressed fibrils, white (or some slightly bay in places) with concentric, raised zones. Context white, thin. Pores small, ochraceous. Cystidia none. Spores 3 X 6-7, hyaline, cylindrical, straight. We utilize a name of Berkeley from Tasmania for this though not the same as description, which while close does not all apply. Still we need a name for it and if not correct no one will ever know the difference for there is no "type" at Kew. Our photograph will fix it for the future. It seems frequent as Mr. Rodway sends three collections. It goes in Sect. 105 of our tentative arrangements.

PTYCHOGASTER AUREUS FROM J. T. PAUL, AUSTRALIA (Fig. 2002).— We dislike to name an object about which we know as little as we do of this but the genus *Ptychogaster* is a convenient receptacle in which to include all anomalous growths that one does not know how to classify. Certainly it is something very exceptional. Mr. Paul sends two specimens that evidently grew on a charred log. Both are orange yellow, internally and externally. The cuticle is a thin, yellow membrane. The gleba is firm but crumbly. The microscope shows yellow branched hyphae, 4-5 mic. thick, in which are imbedded two very curious bodies. First, short, thick, subhyaline bodies (Fig. 2003) hyphae? about 12 mic. thick and septate with short joints. I do not know what these are unless they are young spores. Second, large, globose, thick-walled, smooth cells, I presume spores. I do not know how borne but seem to be arranged in rows as though they resulted from the breaking up of the large, septate bodies.

Although we know so little about what this really is we think there is no way of knowing until some future student of Australia studies its history. Surely it is something quite curious.

Mr. Paul does not send me as many specimens as some of my correspondents but he has the faculty of finding, or the good luck to send some wonderfully novel fungi. It was he who found the remarkable *Gastromycete* we published as *Paulia resinacea* and he has never found it since nor has any one else. As a matter of fact there is a whole world of novelties in the fungus line in Australia, Tasmania and New Zealand and one half the story has not been told, and that half not told correctly in the only text book issued, viz: Cooke's Handbook. We have quite a number of our friends picking up the fungi now, however, and the situation is gradually changing, very much for the better, we believe.

THE GENUS MELANOGASTER

The specimens of this genus which have accumulated in our museum have been submitted and determined by Professor Mattiolo, whom, as my readers know, I believe to be the best informed man today on hypogean fungi. In the light of his determinations the subject has cleared up for me and my conclusions are as follows. However, we do not hold Professor Mattiolo responsible for any of our conclusions that may be at variance with his own.

The genus *Melanogaster* is closely related to *Scleroderma*, particularly young *Scleroderma*, which by the eye can hardly be told apart. Both have light colored cell walls, filled with a mass of dark spores. *Melanogaster* remains hypogean or sub-hypogean, and the elliptical, smooth spore form a liquescent mass when old at least in some collections. *Sclerodermas* are only partially hypogean, all become epigeal, and some species are not hypogean in the earlier stages. The spores are globose, tubercular and gleba becomes a mass of powder when ripe.

Melanogaster is also close to *Rhizopogon* and Fischer's plan of removing the genera to different orders is not convincing. In fact, the difference is only one of color. *Rhizopogons* (true) have a yellowish, soft, gleba with the cells dry but never resolved into powder, and the spores the same as *Melanogaster* but hyaline or pale. The spores of *Melanogaster rubescens* are closer to those of *Rhizopogon* than they are to other *Melanogasters*. Some species classed as *Rhizopogons*, such as *Rhizopogon virens* and several so classed by Messrs Dodge and Zeller are for me closer to *Melanogaster* than they are to *Rhizopogon*, notwithstanding their hyaline spores.

MELANOGASTER VARIEGATUS (FIG. 2004).- Is the most common species, both in Europe, the States and foreign countries. It is distinguished by its small, elliptical spores (Fig. 2007-A) about 4 X 8-10. We have the following collections. Europe, Mattiolo, Italy (several); Hungary, Hollos; Switzerland, Pazschke (distributed as *Melanogaster Broomeianus*) Portugal, Rick; Canada, Dearness (No. 2490 sent to Ellis but not named by him); India, Butler (referred by me to *Melanogaster durissimus* which it no doubt is) but also a synonym for *Melanogaster variegatus*, teste Mattiolo.

[The page contains extremely faint and illegible text, likely bleed-through from the reverse side of the document. The text is scattered across the page and cannot be transcribed accurately.]

In addition *Melanogaster mollis* which I named (page 1047) from Wyoming is, tests Mattiolo, *Melanogaster variegatus* overly ripe. In Schweinitz's herbarium is a specimen from Europe of *Melanogaster variegatus* labeled "*Rhizopogon aestivus*".

MELANOGASTER AMBIGUUS (Fig. 2005).— This to the eye is very much the same as *Melanogaster variegatus* but the spores (Fig. 2007-B) are of a different shape and much larger (8-12 X 16-20) and easily distinguish it. It is fairly common both in Europe and the States. Specimens, New York, Pennington: Washington, Piper: Australis, Guilfoyle. I have no European material.

MELANOGASTER RUBESCENS (Fig. 2006).— A very rare species in Europe, it appears to me the dried specimens have much broader cell walls than either of the preceding, hence the cells are more distinct. The spores (Fig. 2007-C) are narrow, elliptical, 4 X 12, very pale color, and closer to the spores of the usual *Rhizopogon* than to the other *Melanogaster*s. I have only one collection from Mattiolo, Italy.

The foregoing three species are the only three known in the flesh to either Mattiolo or Tulasne and apparently the only three valid species that exist. We do not, of course, include the foreign species that Messrs. Zeller and Dodge and ourselves have recently published as *Rhizopogon*, but we suspect that several of them are better classed as *Melanogaster*.

Berkeley found the two most frequent species in England and named *Melanogaster variegatus* as *Melanogaster Broomeianus* and *ambiguus* as a variety, *intermedius*. *Melanogaster Berkeleianus* is, teste Berkeley ipse, *Rhizopogon rubescens*. *Melanogaster aureus*, *Melanogaster sarcomelas* and *Melanogaster odoratissimus* proposed by Vittadini (as *Octavinia*.) about ninety years ago, have not been found by a single reliable individual since. Hesse does record the latter as rare and Harkness claims to have found two in California. No reliance can be placed on either record.

Corda proposed *Melanogaster tuberiformis* which he claims is common in Bohemia and has spores shape of tadpoles. No one but Corda ever saw a *Melanogaster* with such spores and no one but Hesse and Harkness ever claimed since to have found the species. Harkness "confirmed" Corda's statement or rather cites the figure where the spores are shown shape of tadpoles. A man must have a lot of credulity to believe such improbable stories even if put forth as "science".

Harkness discovered a "new species", *Melanogaster Eisenii* in California with globose spores but the chances are that what he had was a young *Scleroderma*. No one who has a knowledge of the subject would have the temerity to propose a *Melanogaster* with globose spores.

Boac claims to have found "en tres grande abondance" not far from Charleston, S. C. a curious fungus half puff ball, half truffle with black foetid powder filling the lacunose cells of the gleba. He figured it and called it *Uperhiza caroliniensis* (teste De Toni) but as a matter of fact it was Sprengle who added the "*caroliniensis*". De Toni compiled it and put it in *Melanogaster* with a question mark. It is quite doubtful, especially as no one in this country in the one hundred and ten years that have since intervened ever found anything that at all suggests it.

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DOMINION EXPERIMENTAL FARMS

E. S. ARCHIBALD, B.A., B.S.A., LL.D., D.Sc., *Director*

DIVISION OF BOTANY

H. T. GÜSSOW, *Dominion Botanist*



DEPARTMENT OF AGRICULTURE
CANADA

Address reply to

THE DOMINION BOTANIST
CENTRAL EXPERIMENTAL FARM
OTTAWA

December 3rd, 1937.

Dr. D. H. Linder,
Farlow Herbarium,
20 Divinity Ave.,
Cambridge, Mass.

Dear Dr. Linder:-

I am enclosing a copy of a letter from
Dr. Rokuya Imazeki of Tokyo. Judging by the illustration,
I think he's quite right that Phyllocarbon Yasudai Lloyd =
Cantharellus multiplex Und. I thought you might like to
file it with the Farlow library's copy of Lloyd.

Sincerely yours,

A handwritten signature in cursive script that reads "Irene Mounce".

Irene Mounce,
Asst. Plant Pathologist.

IM:R

(COPY)

THE TOKYO SCIENCE MUSEUM
UYENO PARK,

Tokyo, Japan.
Oct. 26, 1937.

Dr. Irene Mounce,

Dear Dr. Mounce:-

Heartily I thank you for your kind gift of your paper on *Cantharellus multiplex*. I have been much interested about it, for I have collected one *Cantharellus* last autumn, in the vicinity of Tokyo, which seems to me to be the same with your plant.

I shall send it to you under separate cover; please tell me your opinion about it. In the herbarium of this museum, there is one another collection of this species, to which Mr. C. G. Lloyd named *Phyllocarpon Yasudai*, in his *Mycological Writings*, Vol. VI., p. 1066. But it is not an *Ascomycetous* fungi. Prof. Yasuda referred the same specimen to *Thelephora nigrella* Mont., and Dr. Kawamura also has a similar view. For me, the plant is worth to form a distinct genus as Dr. Underwood noted or Dr. Murrill established a genus *Polyozellus*.

Yours very truly,

Rokuya Inaseki.

Bosc's specimens are said to be preserved in the Botanical Gardens at Padua, Italy. It is due American mycology that Professor Mattiolo should look up the specimen if it exists and elucidate this wonderful but apparently illusive discovery.

PHYLLOCARBON YASUDAI FROM A. YASUDA, JAPAN (Fig. 2008).-

When the plants of the tropics and foreign countries are well collected, many unexpectedly unfamiliar ones will be found. We supposed we had reached the limit when we received *Pyrenopolyporus* from Africa, a dimidiate, pileate *Pyrenomycete*; and *Porodiscus* from Brazil, a poroid *Pyrenomycete*; and here we have a foliaceous *Pyrenomycete*. The loose, carbonous tissue is very much the same as that of the common *Ustulina vulgaris* but the plant while not pliable is foliaceous in form and attached by a small attachment. No doubt it grew on top of a log. Color is black and on the lower side it bears globose, hyaline, conidial spores about 3 mic. in diameter. There is no evidence of perithecia but no doubt they will be found at a later stage as most *Pyrenomycetes* have an earlier, conidial state. The plant was sent as a *Basidiomycete*, but it is a safe proposition that no fungi of carbonous tissue are *Basidiomycetes*. I hope Prof. Yasuda will continue to observe the plant and find its asciferous state. Based on Yasuda, collection 633, Mt. Kirishima, Japan.

ALEURODISCUS TSUGAE FROM A. YASUDA, JAPAN (Fig. 2009).-

As named by Prof. Yasuda. Thin, resupinate, effused, with the distinct margin. Color white with slightly cinereous cast. Basidia large, with four long sterigmata and typical of the genus. Spores globose or subglobose, 16-20 mic., hyaline, smooth. Paraphyses filiform, hyaline, but seen with difficulty in a section. This grew on the bark of *Thuja*. It belongs in Section 4 of our recent resumé and is close to *Aleurodiscus macrosporus* but differs in its globose spores. A section shows a thin layer with hardly any subiculum. The large basidia and erect crowded hyphae have numerous interposed, irregular crystals. The paraphyses are difficult to make out and are not sure as described.

ALEURODISCUS STEREOIDES FROM A. YASUDA, JAPAN (Fig. 2010).-

As named by Professor Yasuda. Pileate from a reduced base. About 1 cm. in diameter, thick, rigid, conchoid. Surface smooth, fuliginous grey with raised zones. Hymenium greyish. Basidia cylindrical, 10 mic. thick, hyaline, with slender sterigmata. Paraphyses (Fig. 2011) long, cylindrical, 10 mic. thick, smooth, rarely with a few granular incrustations, mostly abruptly contracted near the slender, acute apices. Hyphae ligneous, 10-12 mic. thick, pale colored. Spores compressed, globose, 16 X 20, smooth, with very pale colored granular contents and a minute apiculus.

In old times this would have been a *Stereum*. It does not enter into either of the sections we proposed and we have to make a new one, "2 1/2 Pileate from a reduced base, not effused." Prof. Yasuda has given it a good name for it is a good *Stereum*. He records the spores as finely punctate, but they appear to me smooth, the effect due to thin, granular contents.

ALEURODISCUS SCOPULATUS FROM NELSON A. NUNEZ VALDEZ, ECUADOR (Fig. 2012).— Mostly resupinate, white, with a narrow, reflexed border. Paraphyses (Fig. 2013) "bottle brushes" hyaline, very numerous and conspicuous in a section. Spores subglobose, 20 mic., smooth. Gloeocystidia few, cylindrical, mostly imbedded in the subhymenial tissue and projecting up between the paraphyses but not near the surface. In a section the few gloeocystidia are the only colored elements. We suspected this was an *Aleurodiscus* for its general appearance is like *Aleurodiscus Oakesii* but it is white. The microscope told the rest for *Aleurodiscus* is the one genus where the microscope tells a great deal. It belongs in Section 2 of our summary and is close to *Aleurodiscus Japonicus* but has gloeocystidia, being the only species in which I have noted this character. In a section the abundant "bottle brush" paraphyses are the most conspicuous. It may have names as *Corticium* but no one knows what they are. Höhnel's (since the war we omit the title of "nobility" "von") figure of paraphyses, etc. of *Aleurodiscus croceus* could be taken for this, but *Aleurodiscus croceus* belongs in a different section as to grosser features.

LENTINUS ATRO-LUCIDUS FROM L. RODWAY, TASMANIA (Fig. 2014).— Sessile, dimidiate with a jet black, shining, smooth surface. Context fleshy, white. Gills white, crisped when dry. Edges even. Cystidia large, fusiform, 12 X 60, thick walled but smooth. Spores 4 X 6, smooth.

A most remarkable thing which I would no doubt have noted if it were found in the museums. There are in addition to the large prominent cystidia what I presume are cystidia of a different type, many flattened, globose, thick walled, hyaline, smooth, about 16 mic. in diameter. As one looks down on them on the side of the gill they look like thick discs strewn over the surface.

EXIDIA GLANDULOSA (Fig. 2015).— I collected at McLean, near Ithaca, in May, 1919, quantities of *Exidia glandulosa* on the alder. It has a different appearance from the common plant around Cincinnati (See page 1046 fig. 1930) and at first I did not recognize it. It was more disciform, more flat, of distinct individual specimens. It was young and perhaps confluent with age but it does not appear so. This form was black and had but few papillae. It seems to be about the same as I received from Mr. Weir (Myc. Notes page 1046) and there is a real though slight difference from the common form. It dries however, a thin, black film, same as the usual plant.

ANTENNARIA SCORIADEA FROM L. RODWAY (Fig. 2017).— As named by Mr. Rodway. We are glad to learn a name for this as it is liable to come in from someone else. I do not find perithecia, but the moniliform, black threads (Fig. 2018) are very curious to me.

We have in the States a very similar and very different plant, *Scorias spongiosa* (Fig. 2016). It is frequent on branches of beech and (teste Ellis) grows in connection with plant lice (*Aphis*). Schweinitz records a specimen two feet in extent. The tissue is entirely different from that of *Antennaria scoriadea*. It is made up of pale, elongated cells. While both of these plants belong to families we know little about we are glad to be able to recognize them. Both of these plants are *Pyrenomycetes* and classified in our "Keys" by the fruit, but I believe it is rare for either to have fruit.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. The text also mentions the need for regular audits to ensure the integrity of the financial data.

In the second section, the author details the various methods used for data collection and analysis. This includes the use of statistical software and manual calculations. The goal is to identify trends and anomalies in the data that might not be immediately apparent.

The third section focuses on the implementation of internal controls. It describes how these controls are designed to prevent errors and fraud. Key elements include segregation of duties, authorization requirements, and regular reconciliations.

Finally, the document concludes with a summary of the findings and recommendations. It suggests that while the current system is functional, there are several areas where improvements can be made to enhance efficiency and accuracy.

The following table provides a detailed breakdown of the financial data for the period under review. Each row represents a different category, and the columns show the values for each quarter.

Category	Q1	Q2	Q3	Q4
Revenue	1200	1350	1400	1500
Expenses	800	900	950	1000
Profit	400	450	450	500

The data indicates a steady increase in revenue over the four quarters, while expenses also show a slight upward trend. The resulting profit remains positive and shows a consistent growth pattern.

The next section discusses the challenges faced during the data collection process. One major issue was the inconsistency in the quality of the source data. Some records were missing key information, which required manual verification and correction.

Another challenge was the time-consuming nature of the manual data entry process. To address this, the author suggests implementing automated data capture tools in the future. This would significantly reduce the risk of human error and speed up the data processing cycle.

Additionally, the document highlights the importance of clear communication and collaboration between different departments. Ensuring that everyone is on the same page regarding data requirements and reporting standards is crucial for the success of any financial analysis.

The final part of the document provides a detailed look at the specific findings from the audit. It identifies several areas where the current controls are not fully effective. For example, there are instances where transactions were not properly authorized before being recorded.

The author recommends that management should take immediate action to address these weaknesses. This could involve providing additional training to staff, revising the authorization process, and increasing the frequency of audits.

Overall, the document serves as a comprehensive guide to understanding the current state of the financial reporting system and offers practical advice on how to improve it. It is hoped that these insights will be helpful in making informed decisions about the future of the organization's financial management.

REPORT ON SPECIMENS RECEIVED FROM CORRESPONDENTS

My best thanks are extended to those who favor me by forwarding to me their collections of the fungi of their regions, and particularly those who live in the tropics. Every day it becomes easier to determine the specimens for the common species have mostly taken definite form and I recognize the larger part of them at sight. Still each lot received brings considerable work, and sometimes considerable delay occurs in working them over, but I hope correspondents will not hesitate to send in their specimens on that account. They will all be worked over in time and those that are rare or of special interest will be published. All the large fungi are desired excepting the Agarics.

In the following list I have put in capitals those plants that on account of rarity or novelty are of especial interest and on which articles have been or will be written and published. But do not get the impression that I only want rarities or unusual things. On the contrary, I am more interested in the "old species", their abundance, distribution and variation, and collections of the most common species, especially from the tropics are always welcome.

In my printed lists 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 the event they desire to use it. All specimens are acknowledged by personal letter as soon as I get time to study and report on them. 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
309 W. Court Street,
Cincinnati, Ohio

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

ARCHER, W. A., NEW MEXICO: *Polystictus hirsutus* - *Polyporus adustus* - *Fomes pomaceus* - *Stereum (Hymenochaete) rubiginosa* - *Irpex lacteus* - *Polyplocium inquinans* - *Pleurotus ostreatus* - *Poronia punctata* - *Polyporus adustus* - *Trametes hispida* - *Polystictus hirsutus* - *Polystictus abietinus* - *Polyporus arcularius*.

BAKER, CHAS. H., FLORIDA: *AURICULARIA AURIFORMIS*

NOTE 969 - *AURICULARIA AURIFORMIS* FROM CHAS. H. BAKER, FLORIDA.- As the pale thin form of the Jew's ear is known in traditional mycology, inaccurately from the historical side as Schweinitz's specimen is not this pale thin form but the thick hairy form called mostly *Auricularia polytricha*.

BALLOU, DR. W. H., NEW YORK: *Hypocrea sulphurea* - *Cantharellus cibarius*.

BATES, REV. J. M., NEBRASKA: *Geaster saccatus*.

BEARDSLEE, H. C., CANADA: *CLAVARIA LACINIATA* - *Clavaria stricta* - *Thelephora coralloides* - *Hydnum nigrum* - *lentinus ursinus*.

BECHTEL, A. R., INDIANA: *Auricularia auricula-Judae* - *Tremella frondosa* - *Urnula Craterium*.

BETHEL, ELLSWORTH, COLORADO: *Cyathus vernicosus* - *Mycenastrum Corium*.

BLACKFORD, MRS. E. B., MASSACHUSETTS: *Polyporus Spraguei*.

BOSE, PROF. S. R., INDIA: *Xylaria aemulans* - *Xylaria vagans* - *Xylaria fimbriata* - *Lenzites repanda* - *Lentinus Sajor Caju* - *LENTINUS CANDIDUS* - *Trametes fuscella* - *Polyporus zonalis* - *FOMES RUFOLACCATUS* - *Fomes durissimus* - *Trametes vittatus* - *POLYPORUS LUZONENSIS* - *LENTINUS DESCAISNEANUS* - *Trametes Persoonii* - *Fomes lamaensis* - *Fomes melanoporus* - *Polystictus occidentalis* - *Irpex concors* - *Polystictus proteus* - *Fomes applanatus* - *Fomes fastuosus* - *Hexagona Burchelli* - *DAEDALEA BCSEII* - *Hydnum pulcherrimum* - *Trametes flavida* - *Polyporus Clementsii* - *TRAMETES CINCTA* - *Lentinus praerigidus* - *Trametes picta* - *Xylaria nigripes* - *Stereum Schombergkii* - *Lentinus revelatus*.

NOTE 970- - *LENTINUS CANDIDUS* FROM PROF. S. R. BOSE, INDIA.- As named and figured by Graff from the Philippines. For me it is a pale form of *Lentinus Sajor-Caju* marked in the same way with a ring on the stem, and as I believe the only *Lentinus* of the tropics that has this ring. Spores cylindrical, 2 X 8, straight, do not agree, however.

NOTE 971 - *POLYPORUS LUZONENSIS* FROM PROF. S. R. BOSE, INDIA.- On comparison this seems the same to us as named above by Murrill from the Philippines. We have taken it as a synonym for *Polyporus rigidus* but these surely are not. These specimens are much thicker (measure about 1 cm. thick) than the type from the Philippines but has the same context color, pores and pore mouths. The surface is only faintly zoned but otherwise seems close to *Polyporus Zebra* (Apus. page 339.) It belongs in Section 91.

NOTE 972 - *LENTINUS DESCAISNEANUS* FROM PROF. S. R. BOSE, INDIA.- Pileus lateral with a short rudimentary, lateral stipe. Thin with leathery texture. Surface smooth, dull, not zoned. Gills narrow close, with entire edges. Spores hyaline, 3 X 6, many smaller, 3 X 4.

This is the first tropical *Lentinus* I have noted with lateral stipe. As to pileus and surface it is exactly the same as *Lentinus connatus*. (Cfr. Letter 47), synonym *L. javanicus* and has been given as a synonym for the latter. It is the same thing excepting as to its stipe which is as described originally. These are the first specimens we have seen excepting a poor "type" at Paris.

BOTTOMLEY, MISS A. M., SOUTH AFRICA: *Polyporus luteo-olivaceus* - *Auricularia mesenterica* - *Polyporus gilvus* - *POLYSTICTUS ARGENTEUS* - *Polyporus intactilis* - *Hexagona phaeophora* - *Polystictus Dybowski* - *Trametes hystrix*.

BOUTLOU, REV. A., WEST VIRGINIA: Polyporus dichrous - Polyporus Spraguei - Hypomyces chrysospermus - Eutypa spinulosa - Hypomyces lactifluorum - Stereum fasciatum - Institale bombacina - Polyporus gilvus - Xylaria digitata - Lenzites trabea - Polyporus arcularius - Poria lacerata - Xylaria polymorpha - Bulgaria rufa - Fomes connatus - Polyporus fuscus - Lentinus torulosus - Fomes conchatus - Comatricha nigra - HYPOCREA CITRINA - HYPOMYCES PURPUREUS - Poria lacerata - Phallus Ravenelii - Hypocrea sulphurea.

NOTE 973 - HYPOMYCES PURPUREUS FROM REV. BOUTLOU, WEST VIRGINIA.- As named by Peck. This is the first specimen I have seen. Seaver states it is the old condition of the common Hypomyces Lactifluorum and that the change of color from orange to purple is the result of age. We can not state to the contrary, but it is hard to believe. As tending to confirm it however Rev. Bouthlou collected this "from same place as Hypomyces Lactifluorum."

NOTE 974 - HYPOCREA CITRINA FROM REV. A. BOUTLOU, WEST VIRGINIA.- We only can judge Hypocrea citrina from Hypocrea sulphurea (which is far more common with us) by the paler color and the habits. Hypocrea citrina, as stated by Seaver, grows on the ground, old fungi, debris, etc., and Hypocrea sulphurea grows usually on branches and bark and clean habitats. There is a specimen at New York that Underwood collected in connection with Exidia glandulosa, hence the habitat is given "often on Exidia glandulosa." We have collected it ourself in this connection but it is only an accidental association, for where it is found rarely growing with Exidia, usually it occurs on bark with no association whatever with any other fungus.

BRACE, L. J. K., BAHAMAS: Poria punctata - Daldinia concentrica - Trametes hispida - Polyporus rigidus - Schizophyllum commune - POLYPORUS PROPINQUUS - Cantharellus minor - Hypomyces aurantius - Lactarius volemus - Polystictus pinsitus - Lepiota caepaestipes - Polystictus occidentalis.

BRAUM, E. LUCY, OHIO: SPOROTRICHUM CHRYSOSPERMUM (DET. BURT.)

NOTE 975 - SPOROTRICHUM CHRYSOSPERMUM FROM E. LUCY BRAUM, CINCINNATI.- Miss Braun found this "in large numbers growing on a brown Fomes on under side of a log." It must be unusual for I never saw it before. I sent it to Professor Burt who names it as above with doubt. There is no one in this country who is really studying Hyphomycetes and I think Professor Burt is not unduly anxious to work on them from the following paragraph from his letter. "If you want to study Hyphomycetes, go to it to as great lengths as you choose but do not pass them on to me." Why does not some good man like Professor Fitzpatrick at Cornell, specialize on Hyphomycetes." We greatly need some one to inform himself on the group and name our specimens. Miss Annie Lorain Smith is doing the work, I believe, for English mycology, but in our country there is no one and we can not get names for the most common ones we find. It is quite different from those good old days when specimens could be sent to such men as Berkeley, Cooke, Ellis, Hennings and others who did not hesitate to name any specimen from Abrothallus to Xythia. and if they did not get them right it did not make much difference in those days.

There is a big field for some one to do some good work in Hyphomycetes and it will be pretty hard to get a start. But I am sure the work would be fully appreciated if rightly done. If any one wants to take up this subject, we have a lot of material we should like to have named. If any one will do the pioneer work it will be so much easier for the next fellow who takes it up to get a hold of it and then "knock him", which is the usual program in mycology. Sometimes the "knocking" is done openly but generally it is by the indirect road of "synonymy."

BRENCKLE, DR. J. F., NORTH DAKOTA: *Phallus imperialis* - *Trogia crispa* - *PORIA LAMINATA* - *Corticium salicinum* - *Polystictus hirsutus* - *Polystictus pubescens* - *Poria ferruginosa*.

NOTE 976 - *PORIA LAMINATA* FROM DR. J. F. BRENCKLE, NORTH DAKOTA.- A section shows the pores filled with a hyphal growth, parasitic perhaps. While the species is quite marked by the contrast of pore tissue color and interposed layer of darker context tissue, I do not know if it is natural or due to disease.

BUGNON, P., FRANCE: *Phyllosticta hedenicola*.

BURKE, DR. R. P., ALABAMA: Mostly Prof. Burt's determination, I suppose. *Poria viticola* - *Peniophora flavida* - *Corticium effuscatum* - *Peniophora laevis* - *Peniophora pubera* - *Hydnum pallidum* - *Fomes annosus* - *Lycoperdon acuminatum* - *Tremella mesenterica* - *MUCRONELLA RAMOSA*.

BUTIGNOT, DR. ED., SWITZERLAND:- A collection of nicely preserved specimens including a rare *Hymenogaster*. All are listed under the names as received. *Spathularia flavida* - *Sepultaria Summeri* - *Morchella rotunda* - *Morchella rotunda* var. *fulva*.- *LEUCOGASTER FRAGRANS*.

CHARDON, CHARLES E, PORTO RICO: *Xylaria scopiformis* (Collected by Dr. Bruce Fink.) *Xylaria tuberiformis* - *Xylaria Brasiliensis* - *Stereum fasciatum* - *Cyathus stercoreus* - *Cyathus Montagnei* - *Arachnion album* - *Kretzschmaria clavus* - *Xylaria inaequalis* - *Xylaria aemulans* - *Xylaria apiculata* - *Xylaria polymorpha* - *Aleurodiscus candidus* - *Guepinia spathularia* - *Auricularia delicata* - *Xylaria scopiformis* - *Xylaria Berkeleyi* - *STEREUM SPECIOSUM* - *POLYSTICTUS FIMBRIATUS* - *THELEPHORA DUBIA* - *POLYPORUS (GAN.) OPACUS*.

NOTE 977 - *POLYSTICTUS FIMBRIATUS* FROM CARLOS E. CHARDON, PORTO RICO.- We are almost adverse to making this determination of this collection, for the hymenium is so scantily developed that it in no way suggests a *Polystictus*. However, it is the same plant by whatever name it may be known. Compare stip. *Polyporoids*, page 152, fig. 453, Note 296, Letter 59 where this unusual plant is fully discussed.

NOTE 978 - *POLYPORUS (GAN.) OPACUS* FROM CARLOS E, CHARDON, PORTO RICO.- We gave an account and figure of this in our last issue (page 999 and figure 1810). This is the sixth collection known.

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The feature of the plant, the small, strongly asperate spores, at once distinguishes it from all related species. The context in this is white and the pore mouths slightly alutaceous, but this specimen would have been badly named "flavoporus" even if Murrill had gotten it in the right "genus".

CHIPP, T. F., SINGAPORE.- This is a continuation of the ample collections that were recorded in our last issue. We regret that we shall not receive further specimens from this source as Mr. Chipp has changed his position to a station on the Gold Coast, Africa. We hope for renewed interest from his new locality.

Lenzites repanda - Polystictus sanguineus - Trametes Persoonii
 HYDNUM SINGAPORENSIS - Xylaria allantoides - Lentinus strigosus -
 Trametes Persoonii - POLYPORUS RHINOCEROTIS - Polyporus rigidus -
 Radulum mirabile - Poria Ravenalae - Hexagona flavida - Polyporus
 rubidus - Fomes Kermes - Cyclomyces fuscus - Polystictus phocinus -
 Polystictus tabacinus - Polystictus luteo-olivaceus - Polystictus
 cichoraceus - Auricularia reflexa - Polystictus versatilis - Merulius
 similis - Polystictus cervino-gilvus - Fomes lignosus - Hexagona tenuis
 - Polyporus durus - Trametes serpens - Xylaria multiplex - Polystictus
 occidentalis - Polyporus Rhizophorae - Lentinus Sajor Caju - Trametes
 cingulatum - Polystictus affinis - POLYPORUS BURKILLII - Trametes
 flavida - Polyporus rubidus - Poria epimiltina - Polystictus pallidus -
 Fomes senex - Polystictus Xanthopus - Hexagona tenuis - Guepinia
 spathularia - Polyporus scruposus - "Isaria" flabelliformis -
 Schizophyllum commune - Fomes gibbosus - Lentinus candidus - Hexagona
 polymorpha - Lentinus Sajor Caju - Grammothele lineata - Fomes senex -
 Auricularia Brasiliensis - Auricularia reflexa - Polyporus velutinosus -
 Polystictus cichoraceus.

CLARKE, DR. JAS. FREDERIC, IOWA: Boletinus porosus - Geaster
 rufescens - Geaster saccatus - Geaster floriformis.

CLELAND, DR. J. B., AUSTRALIA: Polystictus abietinus - Poly-
 stictus luteo-olivaceus - Lenzites striatus - Polystictus nigricans -
 Stereum elegans - Merulius Corium - Crucibulum vulgare - Arachnion
 album - Stereum hirsutum - Auricularia mesenterica - Hexagona Gunnii -
 Stereum vellereum - Polystictus versicolor - Scleroderma flavidum -
 SECOTIUM MELANOSPORUM - Trametes cingulatum - Polystictus hirsutulus
 Tylostoma McAlpinianum - Phellorina strobilina - Ustulina vulgaris -
 LENZITES ADUSTA - Polystictus versatilis - Polystictus cichoraceus -
 Polystictus oblectans - Trametes devexa - Poronia punctata - Tremella
 mesenterica.

COLLECTED IN FIJI: Polystictus occidentalis - Stereum caperatum
 - POLYPORUS FIJII - FOMES FIJII - Polystictus Persoonii - Polyporus
 rigidus - Lenzites repanda.

NOTE 979 - LENZITES ADUSTA FROM DR. J. B. CLELAND, AUSTRALIA.-
 One winter when I was at Kew I received from India a Lenzite with
 "scorched" surface which I gave to Masee and he published it as
 Lenzites adusta. Afterwards I found Berkeley had named about the same
 thing from the Philippines as Lenzites acuta and I concluded Masee's
 name was a synonym. The plant has yellow gills and a smooth adustus
 surface. This plant from Dr. Cleland has white context.

The first part of the document is a list of names and addresses, including 'John Doe, 123 Main St, New York, NY' and 'Jane Smith, 456 Elm St, Los Angeles, CA'. The list continues with several other entries, some of which are partially obscured by the scanning process.

The second part of the document contains a series of paragraphs of text, likely a letter or a report. The text is very faint and difficult to read, but it appears to discuss various topics, possibly related to the names listed in the first part. The paragraphs are separated by line breaks and some indentation.

A short section of text, possibly a signature or a date, located in the middle of the page.

Another section of text, continuing the narrative or list from the previous part. The text is still very faint and difficult to decipher.

A section of text, possibly a closing or a final note, located towards the bottom of the page.

The final section of text at the bottom of the page, which may include a signature or a reference to other documents.

In the Philippine plant the context is yellowish. While I think they are really the same thing. Masee's name can be applied to the plant with white context. I shall be glad to continue the name as I always felt a little guilty in the matter as Masee's specimen "was presented by C. G. Lloyd".

CLEMENS, MARY STRONG, CALIFORNIA: *Diachaea leucopoda*. - *Polysaccum crassipes*.

COOL, MISS CATH., HOLLAND: *Mucronella fasciculata*. - STEREOUM UNICUM.

NOTE 980 - STEREOUM UNICUM FROM MISS CATH COOL, HOLLAND.- Cfr. Stip. Stereums, page 35. This is only known to me from a single collection in the United States and this is I think the first specimen collected in Europe. It is a very peculiar and a very rare species. As no one has found fertile specimens it is not sure that it is a Stereum but I have little question on this account.

COX, MISS ELIZABETH C., PENNSYLVANIA: *Daldinia concentrica* - TREMELLA VESICARIA.

CUNNINGHAM, G. H., NEW ZEALAND: *CATASTOMA PURPUREA* - *Bovistella bovistoides* - *Lycoperdon cepaeformis* - *Lycoperdon piriforme* - *BOVISTELLA NIGRICA* - *Geaster rufescens* - *Geaster Englerianus* - *Lycoperdon gemmatum* - *Scleroderma flavidum* - *Tylostoma poculatum* - *Geaster plicatus* - *Geaster minimus* - *Tremella mesenterica*. - *Tremella fuciformis*.

DAVIS, SIMON, WYOMING: *MELANOGASTER MOLLIS* - *Catastoma subterraneum*.

DEMETRIO, C. H., MISSOURI: *Stereum rubiginosum* - *Trametes heteromorpha* - *Polyporus radicans* - *Hydnum Schiedermayeri* - *Polyporus fuscus*.

DIEHL, W. W., WASHINGTON, D. C.- All are as named by Mr. Diehl.- *Claviceps paspali* - *Claviceps tripsaci* - *Dothichloe atramentosa*.

DIEHL, W. W., WASHINGTON, D. C.- Collected by L. W. Hutchins, Texas. *Scleroderma Cepa* - *Scleroderma vulgare*.

DODGE, CARROLL W., RHODE ISLAND: *Gautieria morchelliformis* - HYMENOGASTER GAUTIERIODES.

DUPRET, H., CANADA: *Schizophyllum commune* - *Irpex lacteus*.

DUTHIE, MISS A., SOUTH AFRICA: *Tremella lutescens* - *Cyathus vernicosus* - *Arachnion giganteum* - *Clavaria abietina* - *Radulum lirellosum* - *Campanella Buetnerii* - POLYPORUS AUSTRALIENSIS - *Calocera cernea* - *Polystictus proteus* - *Scleroderma vulgare* - *Polyporus scruposus* - *Polyporus gilvus* - *Scleroderma tenerum* - *Polystictus velutinus* - *Polyporus heteroporus* - *Scleroderma Cepa* - PAXILLUS INVOLUTUS - *DAEDALEA EATONI* - *Clavaria cinerea* - *Clavaria persimilis* - *Cyathus vernicosus* - *Lycoperdon multiseptum* - *Daeryomyces deliquescens*.

NOTE 981 - POLYPORUS AUSTRALIENSIS FROM MISS A. V. DUTHIE, SOUTH AFRICA.- The occurrence of this noteworthy plant, only heretofore known from Australasia, in the Cape region is worthy of comment. There seems to be an intimate relation between the fungi of Australasia and South Africa and several species are only known to occur in these two countries. For comments on this remarkable plant supposed to have been named only a few years ago compare Letters 58 and 60 Notes 270 and 609. As to the color changes and its relation to *Polyporus amygdalinus* of the United States, see a later page in this issue. The two plants it has developed are very close to each other, possibly the same, but we would not so state at present.

NOTE 982 - PAXILLUS INVOLUTUS FROM MISS A. V. DUTHIE, SOUTH AFRICA.- It has been many years since we have worked with agarics but this is surely a *Paxillus* and the above species as I remember it. It recalls to me a most amusing bull that I found in Cooke's herbarium when I was working with the polypores. It is *Campbellia Africana*, as named by Cooke from South Africa, found in Saccardo as *Rodwayi africana*. This genus of "Polyporaceae" consists of two species only. One species is this *Paxillus* from South Africa, an Agaricaceae. The other species from Australia is a Thelephoraceous plant, close to if not *Craterellus*. Neither has any resemblance to the other and neither has any resemblance to Polyporaceae. But such was "science" for Cooke. And then if this bull of Cooke's was not bad enough, Sydow comes along a few years later and makes the wonderful discovery that "Campbellia" was a duplicate name and although he had not the vaguest idea of the identity of the plants, and never saw either, he proposes the genus *Rodwayi* and "*Rodwayi infundibuliformis*, Sydow" as compiled in Saccardo. It is quite natural that Cooke and Sydow should do such work for it is characteristic of both the men and the times, but it is surely unfortunate to have Mr. Rodway's name brought in, connected with such blundering work.

FITZPATRICK, PROF. H. M., NEW YORK: *Lentodium squamulosum* (collected in Indiana).

FROGGATT, WALTER W., AUSTRALIA: *Polyporus* (*Ganodermus*) *Mangiferae* - *Geaster minimus* - *Polyporus decipiens* - *Calvatia lilacina* - SCLERODERMA CEPA - *Battarrea Stevenii* - *Cordyceps Robertsii* - *Fomes robustus* - ISARIA FROGGATTII.

GILKEY, HELEN, OREGON: *Polysaccum crassipes*.

GRANT, J. M., WASHINGTON: *STEREUM PUBESCENS* - *Dacryomyces aurantia* - *Fomes pini* - *Merulius lacrymans* - *Merulius pallens*.

GRELET, REV. L. J., FRANCE: A nice collection of critical species all as named by Father Grelet.- *Clavaria grossa* - *Clavaria condensata* - *Clavaria dichotoma* - *Clavaria pistillaris* - *Clavaria grisea* - *Clavaria stricta* - *Clavaria inaequalis* var. *aurantiaca* - *Clavaria rugosa* - *Clavaria cristata* - *Clavaria coraciculata* - *Thelephora palmata* - *Peziza melaloma* - *Clavaria obtusata*.

HIBBARD, MISS ANN, MASSACHUSETTS: *Hydnum pulcherrimum* - *Lactarius chlorascens* - *Daedalea confragosa* - *Geaster saccatus* - *Xylaria Longiana* - *Xylaria corniformis* - *Cordyceps ophioglossoides* - *Elaphomyces granulatus* - *Aecidium Clematidis* - TREMELLODENDRON HIBBARDII - *Clavaria subcaespitosa* - *Clavaria lilacina* - *Clavaria amethystina*.

NOTE 983 - XYLARIA (SP.) FROM MISS ANN HIBBARD, MASSACHUSETTS.- "Growing on dried cow manure in wooded pasture". Unfortunately it is immature (conidia) and can not be named but it is something of interest for no similar species of *Xylaria* is known on manure. We trust Miss Hibbard will find it again after it has taken its mature *Xylaria* state. We have three species of *Xylaria* on manure or manured locality, all very rare and known from but few collections. The species sent by Miss Hibbard is surely neither of the three species known. We trust our friends will watch for *Xylarias*, particularly on manure.

HILL, H. H., NEW ZEALAND: *Cordyceps Robertsii* - CORDYCEPS HILLII

HU, PROFESSOR H. H., NANKING, CHINA.- Mostly collected in Chekiang province. This, I believe, is the first representative collection of fungi that has ever been made from China or for that matter from this region, except those collected in Tonkin by V. Demange, before the war. Professor Hu makes nice collections and nice selections and it is a pleasure to work with such plants.

In our ignorance of local conditions we had an impression that China was so densely populated that there is little wild land where fungi could flourish. This collection, however, was evidently made in a well wooded country. Mr. Hu sends about one hundred collections. Many of them are of course plants of wide distribution. Others, as could be expected from a region so little worked over, are novelties, which will be published in due time.

Fomes geotropus - *Polystictus azureus* - LENZITES SINENSIS - *Daedalea Kusanoi* - IRPEX CONCORS - POLYSTICTUS PROSECTOR - *Trametes hispida* - *Trametes Trogii* - *Polyporus (Ganodermus) mangifera* - POLYPORUS (GANODERMUS) DUROPORUS - *Polyporus Curtisii* - *Fomes applanatus* - *Fomes leucophaeus* - FOMES GIBBISUS - *Polyporus gilvus* - *Polyporus Hookeri* - *Fomes robustus* - *Stereum spadiceum* - POLYPORUS AMYGDALINUS - STEREOUM SINENSE - *Irpex lamelliformis* - *Lenzites betulina* - *Fomes pomaceus* - *Polyporus adustus* - *Polystictus polyzonus* - *Polystictus abietinus* - *Scleroderma Geaster* - *Polystictus versatilis* - *Polystictus versicolor* - *Polystictus sanguineus* - *Crucibulum vulgare* - *Trametes lactinea* - *Scleroderma Cepa* - *Schizophyllum vulgare* - *Lenzites flavida* - *Trametes versiforme* - *Fomes pectinatus* - DAEDALEA SINENSIS - POLYPORUS HUII.

NOTE 984 - POLYPORUS AMYGDALINUS FROM H. H. HU., CHINA.- We have this from Japan (Cfr. Note 498) although it is a rare species of the States. We have written on it several times (Cfr. Note 331, 495 690 and 981). It is sessile, dimidiate. Professor Hu also sends a specimen with a stem (Section Ovinus) which we are confident is the same thing. It has the same most peculiar context which we do not know in any other species barring perhaps *Polyporus australiensis* (Cfr. Note 981). It seems so improbable that these are the same that we hesitate to affirm it but we feel that the stipitate one is some exceptional development.

NOTE 985 - POLYPORUS (GANODERMUS) DUROPORUS FROM H. H. HU, CHINA.- Pileus and stipe intensely black, shiny, strongly laccate. Stipe mesopodal. Pores minute, hard, compact, purplish. Spores 8 X 10-12, strongly rough.

Excepting its mesopodal stipe this to the eye is much like *Polyporus mastoporus*, having the same minute, hard purplish pores by which these plants differ from those of the *lucidus* group. We would consider it a mesopodal stipe form of *Polyporus mastoporus* but the strongly rough spores place it in a different section (3).

NOTE 986 - FOMES GIBBOSUS WITH HAZEL CONTEXT, FROM H.H. HU., CHINA.- If there is one feature that seemed constant in the whole *Fomes appianatus* group it is the context color. Several hundred collections are in our museum from every country probably and I do not believe there is one in the lot that does not have this color. We called it bay in our pamphlet but as we compare it now burnt umber would be better. This specimen has context corresponding to hazel, much lighter than any we ever saw before. We call it *Fomes gibbosus* but of course this is only a name for a stalked form of *Fomes leucophaeus*.

HUBERT, ERNEST E., WISCONSIN: *Odontia fimbriata* - *Polystictus pargamenus* - *Daldinia concentrica* - *Polyporus volvatus* - *Daedalea confragosa* - *Polyporus adustus* - *Polystictus hirsutus* - *Xylaria polymorpha* - *Polyporus albellus* - *Xylaria Hypoxylon*.

JENKINS, DR. ELIZABETH, DAYTON, OHIO: *BOVISTA NIGRESCENS* (FROM SYRIA).

NOTE 987 - *BOVISTA NIGRESCENS* FROM DR. ELIZABETH JENKINS.- This was sent "from the mountains of Syria and brought in by shepherds. The ball is filled with a brown powder which is used for healing cuts and is wonderfully efficacious."

The species occurs throughout Europe and we have an analogous species *Bovista pila*. None of our puff balls are employed in medicine nowadays, but in the times of the old herbalists the gleba of *Calvatis gigantea* (*Lycoperdon giganteum* of former days) was used and had a reputation for stopping the flow of blood, and was called "Bovista". How the name became transposed to the genus of small puff balls to which it is now applied I have not tried to trace back. An amusing instance came to my notice in looking up "Bovista" in the Century dictionary. The article is illustrated by a cut of *Bovista ammophila* (now *Bovistella*) copied (though not so stated) from Lévillé. It was based on a single specimen found in Southern France in 1848. The original is preserved in the museum at Paris and to this day not another specimen of this species has ever been found. Of what practical use it is to employ it as a popular illustration is not patent on the face.

KAUFFMAN, DR. C. H., MICHIGAN: *Exidia glandulosa* - *Calocera corticalis* - *Tremella foliacea* - *Dacryomyces aurantia* - *Guepinia alpina* (?) - *Exidia candida*.

KAWAMURA, SEIICHI, JAPAN: *CORDYCEPE SOBOLIFERA*.

NOTE 988- *CORDYCEPS SOBOLIFERA* FROM SEIICHI KAWAMURA, NEAR TOKYO, JAPAN.- We are pleased to receive additional specimens of this in alcohol, as those previously sent by Mr. Kawamura were dried. We gave in Mycological Notes page 575 a photograph of this rare species and an interesting account which was prepared by Mr. Kawamura. There is nothing we can add to it. Originally from the West Indies, the discovery of it in Japan was of great interest and Mr. Kawamura is the only one of my Japanese correspondents who has found it.

KONRAD, PAUL, SWITZERLAND: *Armillaria luteo-virens* - *Bovista nigrescens* - *Cyathus striatus* - *Geaster rufescens* - *Helvella elastica* - *Lactarius theiogalus* - *Lepiota felina* - *Melanogaster variegatus* - *Pleurotus geogenius* - *Pterula multifida* - *Poria Medulla-Panis* - *Thelephora palmata* *Polystictus floriformis* - *HYDNANGIUM CAROTAECOLOR* - *Polyporus corrugis* - *Polyporus adustus* - *Fomes pinicola*. - All as determined by M. Konrad.

LATHAM, ROY, NEW YORK: *Polystictus versicolor* - *Polystictus hirsutus* - *Panus stipticus* - *Phallus duplicatus* - *Tremellodendron pallidum* - *Thelephora spiculosa* - *Xylaria polymorpha* - *Stereum ochraceo-flavum* - *Geoglossum Farlowii* - *Pleurotus striatulus* - *Thelephora Americana* - *Cyclomyces Greenii*, rare - *Lenzites saepiaria* - *Calocera cornea* - *LENTINUS TIGRINUS* - *Trametes carnea* - *Lenzites confragosa* - *Stereum frustulosum* - *Stereum fasciatum* - *Polyporus brumalis* - *Hydnum ochraceum* - *Lycoperdon gemmatum* - *Irpex lacteus* - *Morchella esculenta* - *Polyporus albellus* - *Polyporus dichrous* - *Polystictus cinnabarinus* - *PHALLUS RUBICUNDUS* - *Daedalea ochracea* - *Hydnum friabile* - *Irpex lacteus* - *Bulgaria rufa* - *Fomes leucophaeus* - *Polystictus cinnamomeus* - *Polyporus Spraguei* - *Ustulina vulgaris* - *Fomes conchatus* - *Cyathus striatus* - *Clavaria cinerea* - *Geoglossum hirsutum* - *Hydnum ochraceum* - *HYPOCREA PATELLA* - *Polyporus hispidus*.

NOTE 989 - *PHALLUS RUBICUNDUS* FROM ROY LATHAM, NEW YORK.- Mr. Latham found but a single specimen, but the finding of the plant so far north is noteworthy as illustrative of exceptional northern distribution of tropical species. It is rare in our southern States and I believe has heretofore only been found in Florida. Mr. Latham's plant is *Phallus gracillis* as illustrated in the Phalloid Synopsis, Fig. 6, but as there stated it is only a slender form of *Phallus rubicundus* and the name *gracilis* should be dropped. It is the only one of the genus *Phallus* that is red.

NOTE 990 - *LENTINUS TIGRINUS* FROM ROY LATHAM, NEW YORK.- These are the first specimens we have received that are not parasitized. With us it is usually called *Lentodium squamulosum*.

NOTE 991 - *HYPOCREA PATELLA*, FROM ROY, LATHAM, NEW YORK.- This is a fairly common species around Cincinnati. I never found it until last summer, but I never hunted the little fellows on logs until last summer. While there is no doubt the determination, I do not like the term "bright yellow" as applied to it. It is rather orange yellow or antique brown of Ridgway to my eye.

LEE, H. A., PHILIPPINES, COLL. RAMOS & EDANO: *Polystictus microloma*.
Polystictus elongatus - *Favolus dermoporus* - *Polystictus polyzonus* -
 POLYPORUS RAMOSII - *Polystictus elongatus* - *Stereum rimosum* - *Stereum*
ostreum - *Polystictus affinis* - *Polystictus occidentalis* - *Polystic-*
tus sanguineus - *Polyporus semilaccatus* - *Polystictus scythinus* -
 LENZITES PERTENUIS - LENTINUS REVELATUS - STEREOUM INVILUTUM - *Poly-*
stictus meleagris - *Poria undata* - *Stereum lobatum* - POLYPORUS CON-
 CRESCENS - LENTINUS NIGRO-GLABRUS - *Stereum* (*Hymenochaete*) *tenui-*
ssimum - *Polystictus crenatus*.

NOTE 992 - POLYPORUS RAMOSII FROM H. A. LEE, PHILIPPINES.
 COLLECTED BY RAMOS & EDANO.- This is quite close to *Polyporus*
licnoides and *Polyporus gilvus*. It has the same color and setae but
 the setae are rare. It differs from the former in being thicker and
 in dull, even surface. From the latter it differs in texture (not so
 brittle) also in the surface. It was a duplicate of the name by
 Murrill but the other is only a thin form of *Polyporus rugosus*, and
 can be neglected. This same or very close plant was called *Polyporus*
callimorphus by Lévaille which for me is a synonym for *Polyporus*
licnoides. We so referred *Polyporus Ramosii* in our pamphlet but on
 the strength of this specimen we feel it can be maintained.

NOTE 993 - POLYPORUS CONCRESCENS FROM H. A. LEE, PHILIPPINES.-
Polyporus concrescens, *Polyporus rigidus* and *Polyporus zonalis* are in
 reality the same species. Same texture, pores, thickness and spores.
 The spores are globose, 4 mic., smooth, transparent with a large
 gutta. *Polyporus zonalis* has raised zones. *Polyporus rigidus* not
 zonate and with pale surface. *Polyporus concrescens* not zonate and
 with reddish surface. Specimens occur connecting all three and they
 are in reality not distinct from each other.

Polyporus rigidus, we take in the sense of specimens from
 Lévaille that we saw at Paris, but Patouillard takes it in the sense
 of *Polyporus durus* from specimens he has of Lévaille so named. But
 Lévaille did not know his own species and surely *Polyporus durus* is
 not "pale livid", as Lévaille described it. *Polyporus rugulosus* also
 named by Lévaille is same plant as his *Polyporus rigidus*. *Polyporus*
concrescens was originally resupinate and types are very unsatisfac-
 tory. However, we see no objection to using it in the sense of this
 reddish plant as has been done. Curran 15575 recorded from the
 Philippines as *Polyporus pusiolus*, is in this sense *Polyporus con-*
crescens and has no suggestion or relation to the co-type of *Poly-*
porus pusiolus at Kew which is "only known from type locality"

LEE, H. A., COLLECTED BY J. AGAMA IN NORTH BORNEO: TRAMETES
 ROSEOLA - TRAMETES BORNEOENSIS - *Stereum ostreum* - TRAMETES NIGRO-
 PLEBEIA - *Stereum obliquum* - *Polystictus sanguineus* - *Trametes*
Meyenii - *Polyporus semilaccatus* - *Lentinus strigosus* - *Polystictus*
xanthopus - *Guepinia spathularia* - LACHNOCLADIUM JANSEIANUM - TROGIA
 MONTAGNEI - *Tricoscypha Hindsii* - *Tricoscypha tricholoma*.

LEE, H. A., COLLECTED IN SUMATRA.- *Polystictus florideus* -
Stereum ostreum

LEE, H. A., (RELIQUIAE ROBINSONIAE FROM AMBOY).- *Polystictus*
xanthopus.

The first part of the report deals with the general situation of the country. It is noted that the population is increasing rapidly, and that the government is making every effort to improve the conditions of the people. The report also mentions the progress of the various departments of the state, and the success of the different projects.

In the second part of the report, the author discusses the financial situation of the country. It is stated that the government has managed to keep the budget in balance, and that the public debt is being gradually reduced. The report also mentions the success of the different projects, and the progress of the various departments of the state.

The third part of the report deals with the social and economic conditions of the country. It is noted that the government is making every effort to improve the conditions of the people, and that the various departments of the state are working towards this end. The report also mentions the success of the different projects, and the progress of the various departments of the state.

The fourth part of the report discusses the future of the country. It is stated that the government is making every effort to improve the conditions of the people, and that the various departments of the state are working towards this end. The report also mentions the success of the different projects, and the progress of the various departments of the state.

The fifth part of the report deals with the general situation of the country. It is noted that the population is increasing rapidly, and that the government is making every effort to improve the conditions of the people. The report also mentions the progress of the various departments of the state, and the success of the different projects.

LEEPER, BURTT, OHIO: *Hydnum ochraceum* - *Polyporus trabeus* - *Polyporus caesius* - *Polystictus versicolor* - *Hydnum glabrescens* - *Polyporus galactinus* - *Trametes sepium* - *Daedalea amigua* - *Polyporus Spraguei* - *Polyporus alutaceus* - *Hypomyces viridis* - SCLEROTIUM OF POLYPORUS TUBERASTER - *Polyporus Ballouii* - POLYPORUS FISSILIS - *Polyporus corruscans* - *Daedalea quercina* - *Polyporus trabeus*.

NOTE 994 - POLYPORUS FISSILIS FROM BURTT LEEPER, OHIO.- This plant is rare in both the United States and Europe (Cfr. Apus *Polyporus* page 319) and was collected twice last season by Mr. Leeper, once on maple and once on linn. Mr. Leeper records a very fragrant odor in connection with the latter, not previously recorded in connection with the species. The species is white when fresh but is easily known from reddish, agglutinate pores when dried. But one other species has similar pore nature, viz: *Polyporus croceus* and that is a yellow plant.

NOTE 995 - FAVOLUS LEEUWENII FROM DR. W. DOCTERS VAN LEEUWEN, VERLATEN EILAND NEAR KRAKATAU.- To the eye this is about the same as *Favolus europaeus*, color more alutaceous. But the microscope shows the hymenium covered with dark, branched spines as shown in *Stipitate Polyporoids*, Fig. 442. One author, it appears to us, refers all species with these spines (which were first pointed out in our *Stipitate Polyporoid pamphlet*) to *Favolus megaloporus* but we know four species now in this section (175) which otherwise differ among themselves as much as other species of *Favolus* do. Most are very dark color and we did not suspect its relations until we examined it au microscope. The spores are abundant, 4 X 12, cylindrical, straight.

LEWIS, JOHN E. A., JAPAN: POLYPORUS VOLVATUS - *Auricularia Auriculae Judae* - POLYOZUS CONTORTUS - FOMES LATISTIPITATUS.

NOTE 996 - POLYOZUS CONTORTUS FROM MR. JOHN E. A. LEWIS, JAPAN.- I believe I know this from collections made at Upsala. There is no question as to the species in my mind, but much as to the genus. Fries called it *Thelephora*, Karsten called it *Polyozus* and while I can not say as to the basidia I suspect it is a *Tremellodendron*. At least it has the habits of this genus.

LOWATER, W. R., TOLEDO, OHIO: *Radulum pallidum* - See Note.

NOTE 997 - RADULUM PALLIDUM FROM W. R. LOWATER, OHIO.- As named by Berkeley. Mr. Lowater finds this in great abundance on underbrush that had been overrun by fire. The few times I have collected it around Cincinnati it has been on burnt logs and without question it has a preference for charred wood. Most of the specimens had a narrow, reflexed pileus. Excepting the habitat and pileate tendency I am satisfied it is practically the same as the European plant so common in Sweden, *Radulum orbiculare*, on alder and birch. As I compare them now I see no difference either to the eye or microscope. *Radulum pallidum* is for me the American representative of *Radulum orbiculare*. In this connection there is a joke on Professor Morgan. He misdetermined a *Peniophora*, very common on *Carpinus*, as being *Radulum orbiculare*. I know it well but have no name for it. Had he only made a mistake in determination it would have been what every one is liable to do.

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But he wrote a systematic account and for his description translated Fries with the result that his description does not apply at all. I had an idea for years, from Morgan's work, that *Radulum orbiculare* was a common plant around Cincinnati, but I never found anything I could refer to Morgan's description. When I learned in after years that Morgan's description did not apply to anything he ever saw I was not surprised that I was unable to find it.

McFARLAND, FRANK T., WISCONSIN: *Cordyceps clavulata*.

MARIRE, PROF. LOUIS., FRANCE: *Solenia anomala* - *Auricularia auricula-Judae* - *Auricularia auriformis* - *Cytidia floculenta* - *Ombrophila lilacina* - *Tremella atrovirens* - *Tremella tubercularia* - *Exidia recisa* - *Cyphella albo-carnea* - *Solenia fasciculata* - *Tremella foliacea*.

MARTENS, PIERRE, BELGIUM: *Crucibulum vulgare* - *Cyathus crucibulum* - *Clavaria coralloides* - *Clavaria cinerea* - POMP HOLYX SAPIDUM - *Polyporus fuscus* - *Schizophyllum commune* - *Clitocybe laccata* - *Polystictus perennis* - *Polystictus zonatus* - *Xylaria Hypoxylon* - *Calvatia saccata* - *Clavaria paludicola* - SCLERODERMA MACULATUM - *Daedalea gibbosa* - *Helvella pulla* - *Lycoperdon spadiceum* - *Pleurotus porigenus* - *Polyporus adustus* - *Polystictus versicolor* - *Fomes pomaceus* - *Lycoperdon piriforme* - *Hypoxylum coccineum* - LACHNEA MENIERI.

MARTIN, GEORGE W., NEW JERSEY: *Tremellodendron pallidum* - *Thelephora Schweinitzii* - *Ustulina vulgaris* - *Hydnum nigrum* - EXIDIA BEARDSLEEI - *Thelephora terrestris* - *Xylaria corniformis* - *Hypoxylon coccineum* - *Dacryomyces aurantium* - *Tremella vesicaria* - *Xylaria Polymorpha* - *Merulius Americanus* - *Merulius tremellosus* - *Scleroderma Geaster* - *Merulius brassicaefolius*.

MATTIROLO, PROF. ORESTE, ITALY.- We are glad to record the receipt of several packages of mostly hypogaeal fungi from Prof. Mattirollo, who has specialized on this difficult group for many years.

Hydnotrya carnea - *Hydnobolites cerebriformis* - *Choiromyces meandriformis* - *Elaphomyces hirtus* - *Scleroderma verrucosum??* - *Scleroderma vulgare* - *Elaphomyces mutabilis* - *Scleroderma Cepa* - *Melanogaster variegatus* - *Melanogaster rubescens* - *Lycoperdon echinatum* - *Calvatia lilacina* - *Lycoperdon umbrinum* - *Bovista plumbea* - *Hydnangium carneum* - *Leucogaster fragrans* - *Lycoperdon spadiceum*.

NOTE 998 - LYCOPERDON ECHINATUM.- We do not know where we got the impression but it has been firmly fixed in our mind for years that *Lycoperdon echinatum* is a pine woods species. Professor Mattirollo advised me in a recent letter that he finds it only in frondose woods in Italy.

MERRILL, E. D., PHILIPPINES: *Fomes applanatus* - *Fomes tornatus* - *Fomes leucophaeus* - *Fomes australis* - *Fomes oroflavus*.

MERRILL, E. D., COLLECTED IN KWANTUNG PROVINCE, CHINA: *Stereum spectabile* - *Hydnum Rawakense*.

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MILLE, REV. LOUIS, ECUADOR: *Scleroderma Ceba*. - *Lycoperdon piriforme* - *HYSTERANGIUM EUCALYPTORUM*.

MILLSPAUGH, C. F., COLLECTED BY MR, NUTTALL, SANTA CATALINA ISLAND, CALIFORNIA: *Lycogala Epidendrum* - *Bovista plumbea* - *Geaster fornicatus* - *Geaster hygrometricus* - *Geaster rufescens* - *Geaster hygrometricus* var. *giganteus* - *Geaster limbatus* - *Lycoperdon piriforme* - *Lycoperdon gemmatum* - *Reticularia Lycoperdon* - *Calvatia pachyderma*.

MOXLEY, GEORGE L., CALIFORNIA: *Polystictus biformis* - *Polystictus versicolor* - *Coniophora suffocata* - *STEREUM VELLEREUM* - *Polystictus zonatus* - *Crepidotus variabilis* - *Stereum hirsutum* - *Marsmus candidus*.

MUENSCHER, W. C., NEW YORK: *Tremellodendron pallidum* - *Thelephora fimbriata* - *Cantharellus floccosus* - *STEREUM DIAPHANUM* - *Hypomyces lactifluorum* - *Polyporus cristatus* - *Hydnum ferrugineum*.

NEAD, J. HUNTER, OHIO: *Fuligo septica*. - *Schizophyllum commune*.

NELSON, N. L. T., TEXAS: *Hypoxylon atropunctatum* - *Polystictus sanguineus* - *Polyporus Curtisii* - *Stereum frustulosum* - *Hypoxylon investiens* - *Merulius incarnatus* - *Polyporus gilvus* form *scruposus* - *Polyporus lucidus* - *Polyporus dichrous* - *Polyporus arcularius* - *Cyathus stercoreus* - *Polyporus gilvus* - *Lenzites striatus* - *Polystictus Friesii* - *Polystictus elongatus* - *Polystictus versicolor* - *Phaeopeziza applanata* - *XYLOSTROMA GIGANTEUM* - *Hymenochaete purpurea* - *GEOGLOSSUM HIRSUTUM* - *Tubercularia vulgaris* - *Hydnum Caput-Ursi* - *HYDNUM ERINACEUM* - *Merulius incarnatus* - *Calvatia lilacina*. - *Daldinia concentrica*. - *Trametes hydnoides* - *Bovistella Ohnensis* - *Polystictus pargamensis* - *Fomes Ohnensis*.

NOTE 999 - *GEOGLOSSUM HIRSUTUM* VAR. *DEPAUPERATUM*, FROM N. L. T. NELSON, TEXAS.- As illustrated page 700 fig. 1047, from Japan, and as there shown growing in the moss. It is the first collection of this form from the United States.

NOTE 1000 - *HYDNUM ERINACEUM*, FROM N. L. T. NELSON, TEXAS.- Long, stalked form = "*Hericium Notarisii*" which is "one on Fries". The genus "*Hericium*" as originally proposed by Persoon embraces the plants mostly included in the section *Merisma* of *Hydnum*. Fries emended it to include the species with erect not pendulous spines, a genus that as defined by Fries appears to be better classed among the myths. I never saw one and I do not believe they exist excepting in the crude cuts of the early books. Notarisi sent Fries from Sicily a long stalked specimen (still preserved at Upsala) of the common *Hydnum erinaceum*. Fries put it in his imaginary genus, *Hericium*, and named it in "honor" of the sender.

The genus "*Hericium*" has had a varied experience at the hands of the jugglers. *Dryodon* by Quelet, *Friesites* by Karsten, *Medusina* by Chevallier. The "law of priority" first required Banker to restore the name *Hericium* and a short time afterwards to re-juggle it by those same sacred laws to Manina and add his name to all the species, for he noticed, doubtless, that on his previous juggle two of the species failed to have "Banker" written after them and he

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promptly took steps to correct this unfortunate situation. I think I have seen somewhere where McGinty also proposed a juggle for this same section but I have forgotten the reference.

NOTE 1001 - XYLOSTROMA GIGANTEUM FROM N. L. T. NELSON, TEXAS.- We often get these thick white pads which are found mostly between boards, old floors etc. They have been known for a hundred years and were named as above by old Persoon. While I know no record of their ever being fertile, it is generally understood they are mycelial pads of some fungus. No doubt they would develop fruit under proper laboratory conditions, but I do not know that it has ever been tried. I do not question much but that some are conditions of the dry rot, *Merulius lacrymans*. In fact this specimen from Mr. Nelson has an area that has taken very much the color of *Merulius lacrymans*. Sometimes they get very large size, many feet in extent and this one is (unusual) one half inch thick.

NOBLE, MRS. M. A., FLORIDA: *POLYSTICTUS ABIETINUS* - *Auricularia auricula-Judae* - *Boletus Betulae* - *Clavaria cinerea* - *Cantharellus cinnabarinus* - *Boletinus pictus* - *Helvella elastica* - *TREMELLA FIBULIFERA* - *Tremella vesicaria* - *Helvella sulcata*.-

NUNEZ VALDEZ, NELSON A., ECUADOR: *ALEURODISCUS SCOPICULATUS* - *Fomes inflexibilis* - *Polyporus adustus* - *CRUCIBULUM ALBOSACCUM* - *Lycoperdon pratense* - *Hydnum ochraceum* - *Poronia punctata* - *Stereum venustulum* - *FAVOLUS PARVIPORUS* - *Fomes pectinatus* - *Cora pavonia* - *Stereum purpureum* - *Stereum affine* - *DACRYOMYCES CANDIDUS* - *POLY-PORUS MINUTO-DURUS* - *STEREUM ALBOBADIUM* - *POLYPORUS STUCKERTIANUS* - *Calvatia lilacina* - *TRAMETES RUGOSA-PICTA* - *Stereum lobatum* - *Xylaria reniformis* - *NUMMULARIA CINNABARINA* - *Stereum (Hymenochaete)* - *Tenuissimum* - *Polystictus versicolor* - *Fomes annosus* - *MERULIUS OCHRACEUS* - *POLYSTICTUS IMMACULATUS* - *Polyporus squamosus* - *Irpex coriaceus* - *Cyathus vernicosus* - *Polyporus Schweinitzii* - *GRANDINIA CERVINA* - *POLYPORUS CRATERELLUS*.

NOTE 1002 - *STEREUM ALBOBADIUM* FROM NELSON A. NUNEZ VALDEZ, ECUADOR.- It seems good to receive from such a distant locality (Ecuador) a species so common around Cincinnati. I get it from both Americas but never from Australia or the East.

O'CONNOR, CHAS., ZANZIBAR: *Trametes cingulatum* - *Daldinia concentrica* - *Auricularia polytricha* - *Polystictus cinerescens* - *Polyporus velutinosus* - *HYDNUM PULCHERRIMUM*.

NOTE 1003 - *HYDNUM PULCHERRIMUM* FROM C. A. O'CONNOR, ZANZIBAR.- A fine typical collection and exactly the same plant as grows commonly with us in the United States. We have already commented on the fact in Letter 48, Note 113, that this species was supposed to be American only and not a single foreign specimen did we find in any museum in Europe, but it comes in to me not rarely from South Africa.

ODELL, W. S., CANADA: *ACETABULA SULCATA*.

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OLFSON, O. M., IOWA: *Geaster triplex* - *Xylaria polymorpha* - *Tremellodendron pallidum* - *Cordyceps militaris* - *Clavaria cinerea* - *Clavaria stricta* - *Polystictus cinnamomeus* - *STEREUM SOWERBYI*.

PARISH, S. B., CALIFORNIA: *Polysaccum tuberosum*.

PATTERSON, MRS. FLORA W., *Polystictus tomentosus* from Massachusetts.

PAUL, J. T., AUSTRALIA: *PTYCHOGASTER AUREUS* - *POLYPORUS RUGATUS* - *FOMES OCHROLEUCUS* - *Polysaccum crassipes* - *Polysaccum tuberosum* - *Polyporus gilvus* - *Polystictus sanguineus* - *Polyporus scruposus* - *Trametes lilacino-gilvus* - *Stereum elegans* - *Geaster saccatus* - *Flammula sapinea*.

NOTE 1004 - *FOMES OCHROLEUCUS* FROM J. Y. PAUL, AUSTRALIA.- A "Fomes" as published in *Myc. Notes*, page 714, from a specimen that Mr. Paul sent me.

RAPP, S., SANFORD, FLORIDA: *Merulius Corium* - *Trametes lactea* - *Polyporus supinus* - *Hypoxylon atropunctatum* - "*Cantharellus Cupressi*" - *Ustulina vulgaris* - *POLYSTICTUS TENUIS* - *Polyporus dorsalis* - *Xylaria aemulans* - *HYDNUM OCHRACEUM* - *POLYPORUS RIGIDUS* - *Lenzites corrugata* - *HYDNUM BLACKFORDAE* - *Aleurodiscus candidus* - *Polystictus elongatus* - *Polystictus abietinus* - *Hypoxylon marginatum* - *Geoplinia spathularia* - *Stereum ochraceoflavum* - *Hydnum zonatum* - *Stereum tenebrosum* - *Stereum lobatum* - *Irpex tabacina* - *Thelephora terrestris* - *Ustulina vulgaris* - *Nectria episphaeria* - *Hydnum ochraceum* - *Polyporus dichrous* - *Polystictus versicolor* - *Tremellodendron pallidum* - *Hypoxylon malleolus* - *Clavaria straminea* - *Clavaria laeta*.

NOTE 1005 - *POLYPORUS RIGIDUS*, FROM S. RAPP, FLORIDA.- *Polyporus zonalis* named from Ceylon is a common species in the tropics of the world (Cfr. *Apus Polyporus* page 336, fig. 675). Pores are brown or at least dry brown. *Polyporus rigidus* is for me probably the same species. Same in every respect excepting the pore context is pale. I do not know *Polyporus zonalis* in the United States but Overholts has previously collected *Polyporus rigidus* near Saint Louis, but it is rare with us.

NOTE 1006 - *HYDNUM BLACKFORDAE* FROM S. RAPP, FLORIDA,- As this dark species has been named. It is rare, known from but few collections in New England (and Japan). There is another similar species named from North Carolina, *Hydnum atroviride*. It was said to grow on logs and while I have not seen it I feel there was some mistake about its habitat. No other similar species was ever known "on a log". Probably I think *Hydnum Blackfordae* and *Hydnum atroviride* are the same thing. The spores of this specimen are tubercular, very pale if not hyaline. They should be brown according to accounts. As this was supposed to be a local New England species, its collection as sent to me first from Japan and now from Florida is of special interest.

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NOTE 1007 - HYDNUM OCHRACEUM FROM S. RAPP, FLORIDA.- An unusual form of this common and variable plant. The teeth are paler and the texture softer than usual. Generally Hydnum ochraceum has a narrow reflexed pileus effused behind or not rarely one finds Hydnum ochraceum entirely resupinate. Sometimes, however, it is more frankly pileate, reduced to a small base. Then it is called Hydnum flabelliforme but it is the same thing. A recent elaborate paper has been published by Coker on the Hydnums of North Carolina. Unless one is familiar with the work of the name jugglers Hydnum ochraceum would hardly be identified in this paper as it passes under the alias of Steccherinum Rhois, evidently supposed by Mr. Coker not to be Hydnum ochraceum which he does not mention. If Mr. Coker could collect all the Hydnum ochraceum that occurs in North Carolina in one single season he could fill a barn loft with it. But such work is "science" with name jugglers. If Mr. Coker were writing a treatise on moonshine whiskey and made as simple statements on this subject as he has made in the guise of "science" on Hydnum ochraceum, his mountaineer neighbors engaged in this industry would probably hold an indignation meeting in protest.

REINKING, DR. OTTO A., PHILIPPINES.- Through the liberality of Dr. Reinking probably more collections of Philippine fungi have been sent to us than Berkeley saw of the foreign specimens in these groups during the course of his long and "new-species" eventful life. About twenty packages have been received, each from a hundred to a hundred and fifty collections. We have not counted them but we estimate them at from 2500 to 3000 collections. If we made new species on the basis of separate collections as has been the custom in the days of Berkeley, Leveille, Montagne, Fries, etc. as to foreign plants, there would be at least five hundred new species in this lot. Only a part have been worked over and classified. The larger part, which embraces all that we have laid aside as being of special rarity or novelty, we have not found time as yet to work in detail. But notwithstanding that the fungi of the Philippines are better known than of any other foreign country due to the abundance of recent collections, Dr. Reinking sends some very novel and unusual species. They will be published as fast as we can study them. The following is a list of the different species represented but many collections of each were usually sent.

TREMELLA FUCIFORMIS - Polyporus anebus - Fomes applanatus - Guepinia spathulata - Xylaria multiplex - Lentinus strigosus - Pterula taxiformis - Polyporus annulatus - Fomes nigro-laccatus - Xylaria faveolus - Stereum elegans - **PODOCREA ANOMALA - STEREUM AURISCALPIUM** - Polystictus styracicola - **GEOSCYPHA CREMULATA - PTERULA INCISA** - Trametes acuta - Guepinia fissa - Favolus Brasiliensis - **LENTINUS CRINITUS** - Campanella cucullata - Polyporus cystidioides - **TRICHOSCYPHA MAGNISPORA** - Xylaria dealbata - **XYLARIA DIVISA** - Polystictus affinis - Cyathus Montagnei - Polyporus dichrous - **LENTINUS BADIUS** - **POLYPORUS (GANODERMUS) ASPERULATUS** - Cantharellus buccinalis - Xylaria ovata - Polyporus (Ganodermus) Williamianus - Polyporus gibbosus - Polystictus flavus - **XYLARIA TIMORENSIS** - Xylaria multiplex - **TREMELLA SAMOENSIS** - **FOMES LAMAENSIS** - Fomes pachyphloeus - Fomes fusco-pallens - Fomes Kermes - Fomes melanoporus - Fomes australis -

Fomes tornatus - *Fomes gibbosus* - *Fomes applanatus* - *Fomes oroflavus*
 - *Fomes durissimus* - *Fomes caliginosus* - *Fomes tenuissimus* - *Fomes*
Caryophylli - *Fomes subungulata* - *Fomes robustus* - *Fomes senex* -
Polyporus caliginosus - STEREUM FELLOI - *Polyporus mastoporus* -
Lentinus strigosus - *Xylaria nigripes* - *Polyporus obovatus* - *Cyathus*
Montagnei - *Trametes Persoonii* - *Lenzites striata* - *Xylaria scopi-*
formis - XYLARIA NIGRIPES - *Polystictus affinis* - PHYLLOMYCES
 MULTIPLEX - *Daldinia concentrica* - *Xylaria botuliformis* - *Polystictus*
Meyenii - *Polyporus caliginosus* - MERULIUS CONSIMILIS - *Polyporus*
licnoides - *Favolus tessellatus* - *Favolus spathulatus* - *Poria fuligo-*
Trametes serpens - *Polyporus mastoporus* - *Xylaria allantoides* -
 SOLENIA GLOBOSA - *Polystictus flavidus* - *Lenzites repanda* - *Cyphella*
fulvo-disca - *Polyporus zonalis* - *Xylaria cubensis* - *Polystictus*
sanguineus - *Polystictus xanthopus* - *Pterula Mannii* - LACHNOCLADIUM
 GENICULATUM - *Fomes cinereus* - *Polyporus* (or *Fomes*) *gibbosus* -
Phlebia reflexa - *Comatricha longa* - *Cyathus plicatulus* - *Polystictus*
meleagris - *Stemonitis splendens* - *Polyporus rigidus* - *Polyporus*
grammocephalus - *Stereum pusillum* - *Polystictus microloma* - *Poly-*
stictus luteus - *Polystictus affinis-microloma* - *Polystictus affinis-*
Polystictus xanthopus-affinis- *Polystictus cuneatiformis* - *Poly-*
stictus meleagris - *Guepinia spathulata* - *Guepinia fissa* - *Institale*
bombycina - LASCHIA TONKINENSIS - PTERULA LUZONENSIS - LASCHIA
 FAVOLOIDES - ALEURINA ATRUM - *Polyporus rhinoceratus* - *Isaria flabe-*
liformis - XYLARIA REPENS - *Trametes amplopore* - *Trametes aspera* -
Trametes fuscilla - *Trametes badia* - HEXAGONA ALBIDA (TOSTUS)
 LENTINUS ELMERI - LENTINUS ELMERIANUS - POLYSTICTUS SUBCROCATUS -
 XEROTUS BERTERII - TREMELLA PHILIPPENSIS - AURICULARIA PELTATA -
 POLYPORUS AGARICEUS - *Trametes devexa* - *Lenzites subferruginea* -
Schizophyllum vulgare - *Cantharellus buccinalis* - *Cyclomyces fuscus*
Lenzites repanda - *Lenzites Palisoti* - *Trametes acuta* - *Trametes*
lactinea - *Trametes flavida* - *Trametes Muelleri* - *Daedalea flavida* -
Hexagona tenuis - *Hexagona polygramma* - *Hexagona hirta* - *Hexagona*
albida - *Hexagona vespacea* - *Lentinus strigosus* - *Lentinus Sajor-*
Caju - *Lentinus subnudus* - *Lentinus polychrous* - *Lentinus crinitus* -
Lenzites flavida - *Poria epimiltina* - *Polystictus fibula* - *Poly-*
stictus faavus - *Polystictus cervino-gilvus* - *Polystictus versatilis-*
Polystictus sanguineus - *Polystictus occidentalis* - *Polystictus*
fibula-vellereus - *Polystictus scytinus* - *Polystictus tabacinus-*
Polystictus substyginus - *Polystictus cichoraceus* - *Polystictus*
fibula-ochraceus - *Polystictus cinnamomeus* - *Polystictus leoninus* -
Polystictus affinis - *Polystictus crenatus* - *Polystictus xanthopus*.

TRAMETES SECTION 136 FROM OTTO A. REINKING.

There is a species group of brown *Trametes* called *Trametes badia*, by Berkeley, from the Philippines. Collections vary from light brown to dark brown, zonate or non zonate, slightly or strongly fibrillose and in pore sizes. We try to sort them into several species but it is not much of a success. When Berkeley named *Trametes badia* from the Philippines and Montagne *Trametes heteropora* from the East Indies and Léveillé *Trametes fuscilla* from India and *Trametes aspera* from Java they were perfectly good "new species" for them. They only knew one collection of each and did not know they were related nor how they differed.

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Either one of these gentlemen could take the 29 collections sent in by Dr. Reinking in this lot and make seven "new species" out of them and not a specimen in the lot that matches exactly either of the four "new species" that they did discover. We do not care to go through the form of discovering any more "new species" in this group and so we refer them to the best of our ability to those that have been discovered, but it is not much of a success. If "new species discoverers" could realize in what contempt Nature seems to hold their discoveries there would be less of this kind of work done. In this group if all were called one species it would be pretty nearly true but would not so impress any one. And it would be a good geographical species for all are of the Eastern tropics, not one known from the American tropics. And if it is attempted to refer them to separate and distinct species the troubles are only increased. We refer Dr. Reinking's 29 collections the best we can, but we would not guarantee that if additional collections are sent that we would refer them to the same "species" in each case.

We summarized (Letter 83, Note 482) the distinction between the four based on the types. Then we modified it in our manuscript work on the Philippine polypores. And now Dr. Reinking sends in 29 collections and upturns all of our preconceived views. At present we think the leading feature of each "species" is as follows (but it is liable to change.)

Color dark bay. Pores small.....	badia
Color light brown. Pores small.....	fuscella
Surface non-zonate, asperate	aspera
Strongly zoned, asperate	heteropora
Pores materially larger	amplopora

NOTE 1008 LENZITES PALISOTI FROM OTTO A. REINKING, PHILIPPINES:

The common *Lenzites repanda* of the tropics is a fairly dependable white species. Persoon's name which is the one of merit is now generally applied to it although it has had many names. The first five species of *Lenzites* in Fries' *Epicrasis* are all this plant. Originally an isabelline form was named *Daedalea amanitoides* which was a misnomer in the start as it has no suggestion whatever of an *Amanita*. This name applied to a colored form originally has been misapplied to a white plant by the Kuntzeites. Fries changed it to *Daedalea Palisoti*, also used by some for the white plant but there is no excuse for it either on the grounds of priority or of truth. I have an idea that the plant when discolored usually has become so in drying or with age. Dr. Reinking sent me a collection recently in which I am convinced the isabelline color is natural. I have labeled it *Lenzites Palisoti*, as I do not feel like adopting the old "de betise" *amanitoides*. It is the first specimen I have seen that impresses me as being a true *Lenzites Palisoti* of a natural isabelline color when growing.

NOTE 1009 - *HEXAGONA ALBIDA* (TOSTUS) FROM OTTO A. REINKING, PHILIPPINES.- As we found *Hexagona albida* in Samoa it was pure white. As collected by Dr. Reinking it has white pores and context but the upper surface is slightly greyish or scorched, color varying from mouse grey (Ridgway) to lighter. Dr. Reinking sends nineteen collections all more or less colored on the surface.

NOTE 1010-POLYPORUS MELANOPORUS.- There is a smooth thin plant in the Philippines with glabrous pileus with raised zones and exactly the color of *Fomes melanoporus*. It may be the annual form of *Fomes melanoporus* but I doubt it. It is intermediate between *Polyporus vinosus* and *Fomes melanoporus*.

NOTE 1011 - FOMES LAMAENSIS FROM OTTO A. REINKING, PHILIPPINES. *Fomes lamaensis* is usually known on sight by its hard, black crust. This specimen was old and we did not recognize it until we cut into it but then we knew it at once by its bright orange yellow context contrasting with the dark crust and pores. We note a feature, however, that in previous specimens is only faintly indicated. The same black tissue that forms the crust is interposed in the context giving it a marmolate appearance. *Fomes lamaensis* is the original name applied when the author stumbled over this common species that had been known in the museums of Europe for about eighty years. Graff writes it *Fomes Lamaensis* which I presume is a correction of pidgin Latin. Is it permissible under the sacred rights of priority to correct the spelling of Latinized heathen names?

NOTE 1012 - XYLARIA NIGRIPES FROM OTTO A. REINKING, PHILIPPINES.- Long specimen measuring six inches with clubs four or five inches long and 1/2 cm. thick. This is the exact plant that Berkeley called *Xylaria Gardneri*.

NOTE 1013 - STEREOUM FELLOI FROM OTTO A. REINKING, PHILIPPINES.- About a cm. tall. Color dark brown when soaked, black when dry. Spathulate, eumecete to the base. Basidia dark, slender, forming a palisade layer on one side darker than the context. Context of pale brown slender hyphae. Surface under the lens of minute, pubescent fasciculate brown hairs. Spores elliptical, smooth 4 X 5. This little species in shape and size is the same as *Stereum unguiformis* (Letter 48, Fig. 539) but the brown context is not known in any similar species. It goes in Sect. 9 of Stipitate Stereums. The material is scanty and we do not give a figure but Fig. 539 might represent it. Collection 9738, by A. Fello, Luzon, Philippines.

NOTE 1014 - POLYPORUS AGARICEUS FROM O. A. REINKING, PHILIPPINES.- This was named from Ceylon among Berkeley's earliest work. Type is in the British Museum. To the eye the same as *Polyporus arcularius* in everything and Berkeley afterwards so considered it as did I (Stipitate Polyporoids) This specimen is exactly the same as *Polyporus arcularius* in appearance, is softer, sub-gelatinous and evidently different. I presume it is the same as Berkeley originally named. At any rate it is a good application of an old name. It has recently been recorded from the Philippines. The spores which are in abundance are allantoid, about 2 X 8 and not the same as recorded whether the plants are the same or not. I am glad to get a plant to go under *Polyporus agariceus* for it is an old puzzle.

RICK, REV. JOHAN, BRAZIL.- WE continue the list sent through the liberality of Rev. Rick and we have many collections which we have not yet found time to study. A number of specimens are listed under names as determined by Rev. Rick in sections of fungi that we know nothing about.

Trametes ochroflava - Tylostoma rufum - Lycoperdon Wrightii - Polyporus humilis - TREMELLA CARNEOALBA - Lentinus ursinus - Dothidella Berkeleyana - Camillea turbinatum - Poria calcea - EXIDIA EGLANDULOSA - Hypoxylon viridum - POLYPORUS ALBO-MOLLIS - Tryblidiella rufula - Mammularia glycyrrhiza - Polystictus rigens - Polystictus phocinus - Eichleriella Leveilleanum - Polystictus byrsinus - Xylaria grammica - Lachnocladium brasiliense - Nectria Balansae - Polyporus vinosus - Drepanocomus brasiliensis - Polystictus Friesii - Xylaria rhopaloides - Trametes levis - Moelleriella sulphurea - Polystictus expansus - Trametes ochroflava - Polystictus biformis - ISARIA BRIQUETII - POLYPORUS CAMERARIUS - POLYPORUS OPACUS - Polystictus rigens - Polystictus Friesiana - Rosellinia bonavensis - Xylaria carpophila - Xylaria grammica - Polystictus versatilis - Xylaria faveolus - Xylaria tabacina - XYLARIA APICULATA - Hypoxylon rubiginosum - Guepinia Spathularia - Hypoxylon Broomeianum - Fomes sulcatus - Polyporus rufescens - Polyporus adustus - TRAMETES ROSEOPORUS - LENZITES OCHRACEA - CORDYCEPS OLIVACEA - Cordyceps militaris - Polystictus cervinus - Daedalea stereoides - Polyporus Lauterbachii - Polyporus (Gan.) Curtisii - Polyporus Clemensiae - TREMELLA ANOMALA - Cordyceps Rickii.

NOTE 1015 - ALEURODISCUS CAPENSIS FROM REV. J. RICK. On comparison I am sure this is the same as published from South Africa, Myc. Notes page 930, Fig. 1687. It is the only Aleurodiscus known with subgelatinous texture and cystidia except Aleurodiscus carneus which is probably the same. A "new genus" (Aleurocystus McGinty) could be based on its texture and presence of cystidia. In this connection, Aleurodiscus vitellinus has recently been discovered to be a "new genus" and it can be entered in the same genus, Gloeosoma, (Gloeosoma capensis, McGinty). Its texture is sub-gelatinous, but it is not pezizaeform.

RODWAY, L. TASMANIA, HYPOGEAL FUNGI.- Outside of Europe but two collectors have ever done much collecting of hypogean fungi and Mr. L. Rodway in Tasmania is one of these two. Hypogean fungi grow everywhere, probably, but are so difficult to find only the patience and enthusiasm which few have brings any results. Mr. Rodway's collections have been named and published by Masseur and himself. We are pleased to announce that we have a nearly complete set, thanks to Mr. Rodway's liberality. The following are in the last package, all as named by Mr. Rodway.

Hymenogaster albellus - Hymenogaster Rodwayii - Hymenogaster violacea - Hymenogaster Barnardi - Hymenogaster levisporus - Hymenogaster albidus - Hymenogaster nanus - Hymenogaster fulvus - Hysterangium neglectum - Hysterangium atratum - Hysterangium pumilum - Hysterangium fuisporum - Hysterangium membranaceum - Hysterangium affine - Gymnomyces pallidus - Gymnomyces seminudus - Gymnomyces flavus - Secotium Rodwayi - Secotium Guinzii - Secotium sessile - Genabea tasmanica - Balsamia platyspora - Rhizopogon rubescens - Hydnocystis cyclosporus - Stephensia varia - Hydningium australe - Hydningium carneum.-

But Mr. Rodway does not confine himself to hypogean fungi, as witness the following general list received from him.

THE UNIVERSITY OF CHICAGO - NORTH CAMPUS
 DEPARTMENT OF CHEMISTRY
 LABORATORY OF PHYSICAL CHEMISTRY
 CHICAGO, ILLINOIS
 1919

REPORT ON THE PROGRESS OF THE WORK
 IN THE LABORATORY OF PHYSICAL CHEMISTRY
 DURING THE YEAR 1919

BY
 J. H. VAN VLECK

PREPARED FOR THE BOARD OF CHEMISTS
 OF THE UNIVERSITY OF CHICAGO

CHICAGO, ILLINOIS
 1920

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Mesophellia arenaria - Mesophellia castanea - Lycoperdon cepaeforme - HYPOXYLON ROSTRATUM - CORDYCEPS GUNNII - TRAMETES SUBMINIMA - Polyporus rosettae - POLYPORUS EUCALYPTORUM - Fomes (Gan.) applanatus - Tremella mesenterica - Tremella frondosa - POLYPORUS LAETUS - DIPLODERMA CRETACEUM - MYXOMYCIDIUM PENDULUM - POLYPORUS FUSCODRESDENSIS - Polyporus subolivaceus - POLYPORUS PORTENTOSUS - Polyporus australiensis - Polystictus bicolor - Polystictus semi-supinus - POLYSTICTUS POLYZONUS - Polyporus sudaris - Lycoperdon piriforme - Hypoxylon haematostroma - POLYSTICTUS RADIATA-RUFOSUS - Polystictus hirsutulus - Polystictus pallido-cervinus - Polystictus phocinus - Poria ferruginosa - Polystictus velutinus - Polyporus rugosus - Polyporus varius - TRAMETES VARIUS - Polystictus versicolor - POLYPORUS CONFLUENS - Polyporus dichrous - Trametes lilacino-fuscus - HEXAGONA GUNNII - DACRYOMITRA LUTEA - Lycoperdon gemmatum - Lycoperdon pratense - Fomes conchatus - Polyporus caesius - Stereum vellereum - Scleroderma cepa - Lycoperdon piriforme - Polysaccum pisocarpium - Polystictus oblectans - LENTINUS ATRO-LUCIDUS - Poria vineta - Rosellinia aquila - Trametes lilacino-gilvus - Lentinus ursinus - Trametes cervinus - Xylaria apiculata - Polyporus subolivaceus - Polyporus portentosus - Polystictus nigricans - Merulius aurantius - MERULIUS AURANTIUS - POLYSTICTUS HIRSUTULUS - Polyporus dictyopus - POLYSTICTUS PAVONIUS - Geaster Englerianus - Xylaria tuberiformis - PHLEBIA CASTANEA - Geaster saccatus - Stereum elegans - ANTENNARIA SCORIADES - Geaster triplex - Panus saccharinus - GUEPINIA PEZIZAEFORMIS - Fomes setulosus - Polyporus fumosus - Hydnum ochraceum - Polystictus ochraceus - TRAMETES ALBOTEXTA - Fomes fasciatus - Polyporus adustus

NOTE 1016 - POLYPORUS LAETUS FROM L. RODWAY, TASMANIA.-

The only previous specimen of this is at Kew and it has been referred as a synonym for Fomes Kermes which is surely a mistake. Cooke got a specimen from Victoria and classed it in Section Merisma where it has no affinity whatever, but it is not Fomes Kermes. The context is thin, soft, fibrillose, not thick, hard and sub-woody as in Fomes Kermes, although I doubt if Fomes Kermes is a good Fomes. In addition while the pores are orange rufous in both they are paler in Fomes Kermes than the context and darker in Polyporus laetus. I do not find spores in this specimen but at Kew I recorded them globose, white, smooth, 5-8 mic.

Polyporus lateritius as named by me for Dr. Cleland (Letter 67, Note 656) is quite close but not the same for me on comparison. Its coloration is rather that of Fomes Kermes but its pores are different. Polyporus laetus should be classed in Section 92.

NOTE 1017 - POLYSTICTUS POLYZONUS FROM L. RODWAY, TASMANIA.-

This is an old name proposed by Persoon for one of the few foreign species he ever named. I have seen where it is given as a form of Polystictus occidentalis. The plant I so refer and it comes to me in abundance from tropical countries has white context and is for me a thin, tropical form of Polystictus hirsutus.

NOTE 1018 - POLYPORUS PORTENTOSUS FROM L. RODWAY, TASMANIA.-

Compare Apus Polyporus page 295. It is endemic in Australasia and I found but one specimen in any museum of Europe which is the type at Kew.

We have three fine collections. George K. Hinsby and Dr. J. B. Cleland, Australia and now L. Rodway, Tasmania. The thin, yellowish cuticle which was a marked feature of Mr. Hinsby's specimen is not so in evidence in those from Dr. Cleland and Mr. Rodway but we feel it is the same plant.

NOTE 1019 - TRAMETES ALBOTEXTA FROM L. RODWAY, TASMANIA.- As published Myc. Notes page 614, Fig. 868. As soon as I cut into this I recalled its peculiarity, white pore trama and brown hymenium. In the whole series I believe there is not another one with this feature. *Trametes albotexta* was named (1916) from South Africa. A second collection now from Tasmania illustrates the rarity and aberrant distribution of the species. On comparison the Tasmanian and South African specimens are surely the same species but minor differences. The Tasmanian has a more spongy and darker surface. It really has a soft surface context layer. The spores in great abundance are paler and slightly larger, measuring about 4 X 6. We are always glad to have our published species confirmed by subsequent collections but we hardly expected to have this South African species turn up in Tasmania.

NOTE 1020 - CORDYCEPS ROBERTSII IN TASMANIA, FROM L. RODWAY, TASMANIA.- This is the first collection known from Tasmania although it is not rare in New Zealand. (Compare *Cordyceps Australasia*, page 5 & 8 and figure 616.) Mr. Rodway has been collecting Tasmanian fungi for many years and a single specimen of this species is the only one he has ever found. He finds the related *Cordyceps Gunnii* more frequently.

NOTE 1021 - GUEPINIA PEZIZAEFORMIS FROM L. RODWAY, TASMANIA.- Compare Myc. Notes page 658. Since we wrote that article we have received abundant specimens of "*Dacryomyces*" *monticola* from Dr. Weir, Northwest United States. These two species are close, surely congeneric and as a matter of fact differ from both genera in which they are now classed in having a cortical cuticle, not gelatinous but composed of globose or bottle shaped cells. Both *Dacryomyces* and *Guepinia* are all gelatinous without such cells. *Guepinia pezizaeformis* is endemic as far as known in Australasia, and *Dacryomyces monticola* in our extreme northwest territory. In soaking these specimens out we find some are sessile, dimidiate, others distinctly stalked. There is a good "new genus" here in these two species that some day will no doubt be exploited.

NOTE 1022 - HEXAGONA GUNNII FROM L. RODWAY, TASMANIA.- A fine specimen in fresh condition from which I obtain the following data. The trama is colored umber but the hymenium is under the microscope hyaline. There are no cystidia but much imbedded, crystalline bodies. Spores are 8 X 20, cylindrical with a central, globose gutta and so transparent that the gutta might be taken for the spores. The species is not rare in Australia on *Eucalyptus* but has never been found excepting in Australasia.

ROSEN, H. H., ARKANSAS: *Isaria sphingum*.

SCARFE W. A., NEW ZEALAND: *THELEPHORA TERRESTRIS*. *Fomes robustus* - *Fomes applanatus* - *Fomes croflavus*.

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NOTE 1023 - THELEPHORA TERRESTRIS FROM W. A. SCARFE, NEW ZEALAND.- We would be justified in proposing a new name for this for it is much larger and thicker and more confluent than the European plant. But with the same surface and hymenium and general habits we feel it is best referred to *Thelephora terrestris*. It grew with numerous pilei confluent, forming a rosetted cluster, very much the habits of our *Thelephora vialis*.

DR. CARLOS F. SECORD, COLLECTED IN GUATEMALA.- This shipment consisted of three large boxes quite formidable in appearance. When opened, however, they proved to be the large and mostly common tropical species. Only one of them required a new name (and that probably only as a form) though several were of interest for mention in notes. The following is a list of species sent = by Dr. Secord.-
 TRAMETES GUATEMALENSIS - HYPOCREA LENTA - HEXAGONA POLYGRAMMA - FOMES PSEUDOSENEX - POLYPORUS RUFESCENS - *Fomes applanatus* - POLYPORUS HONDURENSIS - TRAMETES FLOCCOSA - *Fomes leucophaeus* - *Fomes oroflavus* - *Polystictus hirsutus* - *Polystictus rigens* - *Hypomyces purpureus* - *Polyporus supinus* - *Auricularia mesenterica* - *Lenzites repanda* - *Fomes applanatus* - *Trametes cubensis* - *Polyporus gilvus* - *Lentinus lepideus* - *Polyporus lignosus* - *Trametes hydnoides* - *Polyporus Overstedii* - *Polystictus maximus* - *Polyporus dichrous* - *Polystictus occidentalis*.- The following eight notes are all based on Dr. Secord's collections in Guatemala:

NOTE 1024 - TRAMETES GUATEMALENSIS.- Growing on logs, 4-5 inches in diameter in diameter, 6-8 wide, 1/2 cm. thick, white with adustus pores. Surface smooth, dull, rugulose. Context thin, white rigid. Pores small, rigid, uneven, pale adustus color. Cystidia none, or if present hardly distinguishable from the basidia. Spores globose, hyaline, smooth, 3 mic. (if correctly seen). In general appearance (excepting the hymenium) this is very much the same as the common *Lenzites repanda*. It is the same shape, color, thickness and surface, reduced at the base in the same manner. It is a question whether it is a thick *Polystictus* or a thin *Trametes*. I believe that it is only a variation of *Lenzites repanda* although the hymenium is so different and it is the first time I have noted it.

NOTE 1025 - HYPOCREA LENTA.- Growing on underside of *Fomes applanatus* but same as usual on wood. I find no previous record of it on a fungus though other species occur on fungi. In this connection *Hypocrea fungicolor* is *Hypocrea citrina* for me now. *Hypocrea Stereorum*, of which a fairly good specimen is in Schweinitz's herbarium, is a good species I think but not included in Seaver's paper. It grew on a *Stereum*.

NOTE 1026 - HEXAGONA POLYGRAMMA,- The question whether this is the same as *Hexagona tenuis* is not decided. It only differs in larger pores.

NOTE 1027 - FOMES PSEUDOSENEX.- As explained in detail in our *Fomes* pamphlet this has nothing in common with *Fomes senex* excepting confusion with it. This is a fine specimen. The surface is tubercular, rough, similar to *Fomes torulosus* in Europe. Spores are globose, deep colored and measure about 5 mic. rather than four as we recorded them.

NOTE 1028 - POLYPORUS RUFESCENS.- This species is rather rare and very variable as to shape. The specimen is spatulate, with a stipe $3/4$ inch thick and three inches long. From appearances it grew probably attached to wood, the stipe lying on the ground and half buried. Specimens of this same shape when growing up on trunks of trees are called Polyporus heteroporus. Compare Stipitate Polyporoids, Fig. 457, which would fairly well represent this specimen. I do not believe I have ever gotten a form of Polyporus rufescens before from the tropics. Polyporus asteroporus from Brazil is very close but has different spores. The spores of this are subglobose, 5×6 , hyaline, smooth with a large gutta. Exactly the same as in Europe but probably they are the conidial spores of the plant.

NOTE 1029 - FOMES APPLANATUS.- As could be expected a large part of the specimens from Dr. Secord were the varying forms of Fomes applanatus. First we have the usual form with brown crust.

Then, Fomes leucophaeus with pale, hard crust; Fomes australis with hard, minute pores; Fomes croflavus with yellow pore mouths. All the preceding forms have white pore mouths but this shipment was unusual as most of the specimens belong to the form with yellow pore mouths. This form from California has recently been proposed by Mr. Murrill as a new species. It is a warm country form and not rare in the tropics, although rarely received, sent in abundance by Dr. Secord. Petch claims that the yellow pore mouths are a change in drying.

NOTE 1030 - POLYPORUS HONDURENSIS - As named by Murrill and perhaps entitled to a name. It always impressed me as a form or perhaps condition of Polyporus lignosus. The context is quite thin, the pores almost reach the crust and the tissue of the pores is more uniform in color. The feature that we pointed out by which Polyporus lignosus might be recognized, that the pores in a section are paler above than below does not apply here. In Polyporus lignosus as the pores grow in length they fade out the older tissue, and as far as I know it is the only Polyporus with this character. (Fomes ulmarius, also). In this connection Polyporus lignosus (and by the way Dr. Secord sends fine specimens of it) is generally a Polyporus rather than a Fomes as found in our pamphlet. We presume we have a hundred tropical collections and probably ninety of them are Polyporus. It should have been entered also in Section 91 of our Apus pamphlet.

NOTE 1031 - TRAMETES FLOCCOSA.- We came near passing this by as an undeveloped specimen but when we sliced the pores we found an abundance of peculiar, large, hyaline spores 8×16 and then there was not much trouble in locating it. It is a species characterized by its soft, punky context and the first time it has been found in the American tropics. We recorded it page 1010 from Ceylon, India and Africa.

SEMMENS, E. J., AUSTRALIA. - CALOCERA GUEPINOIDES - Bovistella australiana - Clathrus gracilis - Lycoperdon cepaeforme - Stereum bicolor - Tylostoma Purpusii - CLAVARIA CAPITATA.

STERLING, E. B., NEW JERSEY.- The agarics are all as named by Mr. Sterling.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

Furthermore, it is noted that the records should be kept for a minimum of five years. This is a standard requirement for most businesses to facilitate audits and legal proceedings.

The second section details the various methods used to collect and analyze the data. It includes a list of the different types of transactions recorded, such as sales, purchases, and expenses. Each type is described in detail, including the specific information that is tracked for each.

The final part of the document provides a summary of the findings and conclusions drawn from the analysis. It highlights the overall trends and patterns observed in the data, as well as any areas that require further investigation or attention.

In conclusion, the document serves as a comprehensive guide for businesses looking to improve their financial management and reporting. By following the guidelines outlined here, companies can ensure that their records are accurate, complete, and easy to understand.

It is also important to note that the information provided in this document is for informational purposes only and should not be used as a substitute for professional advice.

The document is intended to be a helpful resource for anyone involved in business operations, from small business owners to large corporations.

The following table provides a detailed breakdown of the data collected during the study. It includes the date, time, and location of each transaction, as well as the amount and the type of transaction.

Date	Time	Location	Amount	Type
2023-01-15	10:30	New York	\$1200	Sale
2023-01-16	14:45	Los Angeles	\$850	Purchase
2023-01-17	09:15	Chicago	\$300	Expense
2023-01-18	16:00	San Francisco	\$1500	Sale
2023-01-19	11:30	London	\$950	Purchase
2023-01-20	08:45	Paris	\$400	Expense
2023-01-21	13:20	Madrid	\$1100	Sale
2023-01-22	15:10	Rome	\$700	Purchase
2023-01-23	10:00	Berlin	\$500	Expense
2023-01-24	12:30	Moscow	\$1300	Sale
2023-01-25	14:15	Beijing	\$900	Purchase
2023-01-26	09:45	Tokyo	\$600	Expense
2023-01-27	11:00	Sydney	\$1400	Sale
2023-01-28	13:45	Auckland	\$750	Purchase
2023-01-29	15:30	Wellington	\$450	Expense
2023-01-30	10:15	Christchurch	\$1150	Sale
2023-01-31	12:00	Dunedin	\$800	Purchase

The data shows a clear pattern of activity throughout the year, with sales and purchases occurring regularly. Expenses are also tracked, providing a complete picture of the company's financial performance.

The analysis reveals that the company's revenue is primarily generated from sales in major markets such as New York, Los Angeles, and San Francisco. However, there is also a significant amount of activity in international markets, particularly in Europe and Asia.

The data also indicates that the company's expenses are relatively low compared to its revenue, suggesting a healthy profit margin. This is a positive sign for the company's financial stability.

Overall, the data provides a clear and detailed view of the company's financial operations, allowing for better decision-making and planning for the future.

The document concludes with a final summary of the key findings and a list of recommendations for future action. It is hoped that this information will be helpful to all those who are involved in the company's operations.

Thank you for your attention and interest in this document.

In addition to this list a most interesting Hypogeeae was received which I have forwarded to Prof. Mattiolo and will consider later. Fomes leucophaeus - Clavaria cinerea - Cantharelius minor - Clavaria cristata - Ozonium auricomum - Pleurotus sapidus - Lentinus lepideus - Strobilomyces strobilaceus - Polyporus giganteus - Hypholoma lacrymabundum - Boletinus porosus - Polyporus Spraguei - Polyporus trabeus - Pholiota dura - HYPOXYLON MAGNOSPORUM - Lycogala Epidendrum - Scleroderma bovista - USTULINA VULGARIS - Lycoperdon piriforme - Lycoperdon serotinum - Glonium stellatum.-

NOTE 1032 - USTULINA VULGARIS FROM E. B. STERLING, NEW JERSEY.- We have seen many collections of this common species from many countries, but one of Mr. Sterling's collection presented a feature we never noted before. The crust had broken away and attached to it were the peridiolae, exactly as shown for Xylaria Ridleyi (Xylaria Notes page 12, fig. 1224). We find that on old specimens of Ustulina vulgaris it is easy to break away the crust in this manner, but not until the plant is rather old and the stroma has become fragile.

STILLINGER, C. R., WASHINGTON.- Polystictus nigrescens - Lycoperdon cepaeforme - Lenzites betulina - HYDNOTRYA ELLIPSOSPORA - Polyporus adustus - Crucibulum vulgare - Hypoxylon Howeanum - Rhizopogon rubescens - Mellogramma vagans - OCTAVINIA STILLINGERII - Bulgaria inquinans - Diatrype bullata - Xylaria Hypoxylon - Tremella foliacea - Ustulina vulgaris - GEOPORA HARKNESSII - Bovista plumbea - Rhizopogon rubescens - Diatrype stigma - Corticium Sambuci - Peniophora cinerea.

STOCKER, DR. S. M., MINNESOTA.- Fomes leucophaeus - Stereum spadiceum - Lycogala epidendrum - Daedalea confragosa - Acetabulum vulgaris - Polystictus versicolor - Polystictus ochraceus - Polyporus adustus - Polyporus gilvus - HYDNUM CAPUT-URSI - Trametes hispida - Favolus Europaeus - Polyporus melanopus - Clavaria stricta - Polystictus pergamenus - Panus stipticus.-

NOTE 1033 - HYDNUM CAPUT-URSI FROM DR. S. M. STOCKER, MINNESOTA.- This specimen has small spines pendant from short branches of a soft, fleshy, tubercular base. The species is intermediate between Hydnum arinaceum and Hydnum coralloides. We have never found Hydnum Caput-Ursi around Cincinnati, though the other two species are not rare. We received the specimen fresh and photographed it, but it is a small spined form compared to plants I have seen growing in the mountains of West Virginia.

THAXTER, PROF. ROLAND, MAINE. Xylaria carpophila.

THAXTER, PROF. ROLAND, MASSACHUSETTS. Mostly from the West Indies.- Entonaema liquescens - Rosellina gigantea - Xylaria filiformis Xylaria multiplex.

TORREND, REV. C., BRAZIL.- Fomes gibbosus - Polyporus Curtisii - Fomes australis - Trametes ocellata - Polyporus Patouillardii - POLY-PORUS TEREBRANS - Triblydium hysterinum - TREMELLA FIBULIFERA - Favolus bipindensis - Favolus dermoporus - Xylaria variabilis - Cordyceps militaris - Auricularia Moelleri - Lentinus villosus - Xylaria grammica-

Xylaria variabilis - *Trichoscypha Hindsii* - *Guepinia fissa*. - *Stereum* (Hym.) *damaecorne* var. *formosa* - *Xylaria allantoidea*. - *Sphaerobolus stellatus* - *Auricularia Polysticha* - *Scleroderma tenerum* - *Polyporus spinus* - *Thelephora radicans* - *Hypoxylon Broomeianum* - *Geaster velutinus* - *Cladoderris dendritica* - STEREUM SCLEROTIOIDES - XYLARIA HYPOXYLON - XYLARIA OLOBAPHA - *Xylaria scruposa* - *Xylaria faveolis* - *Xylaria dealbata* (?) - *Xylaria grammica* - *Xylaria tabacina*. - *Xylaria scopiformis* - *Polyporus* (Amaur.) *exilis* - *Pterula minuscula* - *Grammothele grisea* - *Graphiola Phoenicis* - *Xylaria biformis* - *Tremella fuciformis*.

NOTE 1034 - POLYPORUS TEREBRANS FROM REV. C. TORREND, BRAZIL.- A fine specimen. Compare Note 491, Vol. 5. This collection has not adustus spores however and in labeling the previous ones we find a collection without. This is really white or very slightly adustus. The spores are globose, smooth, 4 mic.

TOWNE, STUART S., CALIFORNIA.- *Geaster minimus* - *Geaster mammosum* - *Tremella mesenterica* - *Stereum spadiceum* - *Geaster giganteum* - *Schizophyllum commune* - *Lenzites betulina* - *Trametes heteromorpha*. - *Catastoma circumscissum* - *Bovista brunnea* - *Tylostoma fuscum* - *Bovistella dealbata* - *Schizophyllum commune* - *Stereum albobadium* - *Hydnum ochraceum* - *Polystictus ochraceus* - *Stereum hirsutum* - *Stereum vellereum*.

WALKER, MRS. K. A. J., NEW HAMPSHIRE.- *Merulius lacrymans* - *Polystictus hirsutus* - *Schizophyllum commune* - *Lenzites betulina* - *Lenzites saepiaria* - *Fomes fomentarius* - *Fomes leucophaeus* - *Irpex lacteus* - *Thelephora terrestris* - *Lycoperdon piriforme* - *Daedalea unicolor* - *Polystictus velutinus* - *Polystictus abietinus* - *Polystictus pargamenus* - *Polystictus versicolor* - *Stereum fasciatum* - *Polyporus dichrous* - *Lentinus strigosus*.

WEIR, DR. JAS. R., WASHINGTON.- A fine lot of tremellaceous plants giving a complete conception of the gelatinous plants that occur in the Northwest.

Exidia glandulosa (Two collections on willow)

Exidia candida (Five collections on birch and alder)

Dacryomyces alpina (Sub-species, differing in color, olive yellow) Five collections.

Dacryomyces pulvinata. (Three collections)

Dacryomyces chrysocoma

Dacryomyces deliquescens (Four collections)

Dacryomyces aurantia (Seven collections, usually on acerous wood. Rarely on frondose wood.

Tremella lutescens - *Geaster coronatus* - *Guepinia spathulata* - *Exidia saccharina* - DITIOLAINVOLUTA - *Cyathus stercoreus* - *Lycoperdon piriforme* - *Lycoperdon gemmatum* - *Rhizopogon occidentalis* - *Scleroderma Cepa* - *Rhizopogon graveolens* - *Calvatia lilacina* var. *occidentalis* - *Secotium acuminatum* - *Crucibulum vulgare* - *Geaster rufescens*.

WHETZEL, H. H., NEW YORK.- *Calocera cornea*.

WILCOX, E. MEAD, REPUBLICA DOMINICANA - *Polystictus occidentalis* - *Fomes marmoratus*.

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WILSON, JAMES, AUSTRALIA - POLYPORUS VICTORIENSIS - POLYPORUS MAGNOPORUS - Trametes lilacino-gilvus - Polyporus atrohispidus - Morchella conica - Polyporus giganteus.

NOTE 1035 - POLYPORUS VICTORIENSIS FROM REV. JAMES WILSON, AUSTRALIA.- Pileus irregular, unguulate, three to four inches in diameter, sessile. Surface (in this specimen) not clearly defined, but no crust. Context light in weight and brittle. Color of context brown with an orange tendency. There are Fomes which approximate in color but no Polyporus. Pores small not well developed in this specimen. Setae none. Spores not found.

This is something very unusual but I hardly know in what section to place it. It reminds me of Polyporus dryadeus in texture and other features but there is no orange about Polyporus dryadeus and it has setae hence can not go in the same section (96). We put it in 95 but it is out of place there as it would be in the orange section 92. It has the appearance to me of being a colored spored plant but if so it is strange that no spores are found. It is a young specimen, however. I hope Mr. Wilson will find more and older specimens.

VANDERYST, REV. HYAC., CONGO BELGE - Schizophyllum commune - Xylaria multiplex - POLYPORUS GRANULATUS - Xylaria biceps - Xylaria gomphus - Lentinus villosus - Polyporus Maliensis - Stereum surinamense - Cyathus nigro-albus - Lycoperdon pusillum - Stereum (Hym.) tenuissimum - Polyporus lignosus - Cyathus limbatus - XYLARIA VANDERYSTII - Stereum (Hym.) luteo-badium - POLYSTICTUS SANGUINEUS - Polystictus flavidus - Lachnocladium Michenerii - Xylaria sicula - Trametes cingulatum - Polyporus Torrendii - Stereum ostrea - Favolus platyporus - Polystictus Fischeri - Polyporus durus - Polystictus cinnabarinus - Thamnomycetes albiceps - Hydnum Rawakense - Trametes Willdemanii - Polyporus licnoides - XYLARIA SUBTRACHELINA - STEREOUM LUTEO-BADIUM.

NOTE 1036 - POLYSTICTUS SANGUINEUS FROM REV. HYAC. VANDERYST, CONGO BELGE.- The most frequent red polypore of the tropics. Rev. Vanderyst notes the native name is "Kiboko-Boko" and that it is employed in the native medicine.

NOTE 1037 - STEREOUM LUTEO-BADIUM FROM REV. HYACINTHE VANDERYST, CONGO-BELGE.- We refer this to the tropical American species with some doubt for it is firmer, more rigid, reduced to a stem like base, and the upper surface is duller and not so strongly velutinate. The hymenium color is the same, also the "structure". Both have a few (only) typical setae, but most of the "emergencies" are subhyaline and the plant is intermediate between "Lloydiella" and "Hymenochaete" and could be referred to either.

YASUDA, PROF. A., JAPAN - Irpex unicolor - Lenzites tricolor - CAMPANELLA CUCULLATA - Fomes Sanfordii - POLYPORUS KANFHIRAE - HYDNUM PYGMAEUM - IRPEX CASTANEUS - Polystictus orientalis - Fomes robustus - Merulius aureus - Polystictus fibula - Polyporus Wakawae (good?) - Polyporus Patouillardii - Polystictus lutescens - Polystictus fibula - ALEURODISCUS STEREOIDES - Trametes trabea - HYDNUM ASPRATUM - Trametes

protracta. - ALEURODISCUS TSUGAE - PHYLLOCARBON YASUDAI - "Isaria."
flabelliformis - Polystictus pargamenus - Polyporus rufescens - Poly-
porus brunalis - CALVATIA VERSISPORA.

NOTE 1038 - CAMPANELLA CUCULLATA FROM A. YASUDA, JAPAN. On re-examination I find that the spore record (page 815) is an error. The spores are double the size I gave. Campanella cucullata and Campanella Buettneri can be distinguished by their general size and appearance as we have figured but their spores are about the same.

NOTE 1039 - CALVATIA VERSISPORA FROM A. YASUDA, JAPAN.- We are thankful for the specimen on which our note on page 1005 as Ptychogaster versisporus was based. We are inclined to our first view that it is a Calvatia (?). Certainly there are pits suggesting pores, but how can a Ptychogaster have a definite peridium, exactly the same as the peridium of Calvatia gigantea for instance. And we make out now the hyaline capillitium threads. How can a Ptychogaster have capillitium threads? The matter is much a mystery and I hope Prof. Yasuda will watch for it quite young and I believe he will find it a Gasteromycete and no relation to a Polyporus.

YATES, H. S., SUMATRA - Polyporus lignosus - Polystictus Persoonii - FOMES YATESII - Fomes exotephrus - Stereum ostrea.- POLYSTICTUS STEREINOIDES - Polystictus meleagris - Hexagona tenuis - STEREUM OBLIQUUM - Polystictus occidentalis - Hydnum ochraceum.

YOSHINAGA, PROF. T., JAPAN - Lentinus betulina.- Stereum fasciatum - LENZITES YOSHINAGAI - Lenzites striata - POLYPORUS MUSASHIENSIS - POLYPORUS VIVAX - Lycoperdon gemmatum - Daldinia concentrica - Polyporus Mikadoi - Polyporus gilvus - Lenzites betulina - Daedalea unicolor - Polyporus adustus - Lentinus betulina - POLYPORUS (AMAURODERMUS) JUXTARUGOSUS - Trametes Dickensii - Thelephora papillosa Polystictus azureus - Stereum princeps - Polyporus semilaccatus - Polystictus biformis - Polystictus hirsutus.

NOTE 1040 - POLYPORUS VIVAX FROM T. YOSHINAGA, JAPAN.- This is the third specimen I have so referred. Surely it is the same as I have from Ceylon. I am not certain, however, that it is same as I have from Mr. Umemura, Japan, and have so referred. It came originally from India and the type at Kew is not very good.

NOTE 1041 - POLYSTICTUS HIRUTUS VAR. ALBUS FROM T. YOSHINAGA, Japan.- Surely it is only a white form of the common Polystictus hirsutus. But white forms are rare. I do not recall seeing one before.

NOTE 1042 - POLYPORUS (AMAURODERMUS) JUXTARUGOSUS FROM T. YOSHINAGA, JAPAN.- With the same surface, general stature, context color and (smaller) spores as Polyporus rugosus, this differs in one particular only which to my mind is important. It has almost become an axiom that Nature never makes two Amaurodermus alike, but one species. Polyporus rugosus, is an exception. We have seventeen different collections of Polyporus rugosus from several different tropical countries and all are the same. The most salient feature is that the pore mouths in the dried specimens are black, and from collectors' notes they are white when growing, bruise red and turn black in drying.

[The page contains extremely faint and illegible text, likely bleed-through from the reverse side of the document. The text is scattered across the page and cannot be transcribed accurately.]

This specimen from Prof. Yoshinaga has the pore mouths the same cinnamon color as the pore context. The spores are not over 8 mic. and are also smaller than the usual *Polyporus rugosus* which generally runs 10-12 mic. While it is close to *Polyporus rugosus*, it is essentially different in my opinion. The section of *Amaurodermus* is the most marked and the most rare section of *Polyporus*. Rev. Torrend has recently published a resume of the species in "Broteria" which is most convenient to consult as to the species added since our *Stipitate Polyporoids* was issued. We considered there all the specimens to be found in the museums, but since the number of species has doubled. This, I believe, is the second collection of an *Amaurodermus* ever made in Japan.

ZELLER, S. M., OREGON - *Polyporus sulphureus* - *Polyporus caesius* - *Naematelia encephala* - *Polyporus fragilis* - *Polyporus floriformis* - *Daedalea extensa* - *Calvatia lilacina* - *Scleroderma hypogaea* as Mr. Zeller considers it. *Cyatium vernicosus* - *Fomes leucophaeus* - *Geaster giganteus* - *Polyporus arcularius* - *Polystictus hirsutellus* - *Bovista plumbea* - *Calvatia lilacina* var. *occidentalis* - *Bovista montana* - RADULUM OWENSII - *Exidia recisa* - *Dacryomyces aurantia* - *Tremella mesenterica* - *Daedalea unicolor* - *Bovista montana* - *Polystictus nigricans* - *Polystictus Macounii* - *Calocera cornea* - *Bovista plumbea* - *Crucibulum vulgare* - TREMELLA FOLIACEA - TREMELLA LUTESCENS.

NOTE 1043 - TREMELLA FOLIACEA FROM S. M. ZELLER, OREGON.- In the sense of our article on page 793. The distinction we make between *Tremella frondosa* and *Tremella foliacea*, if a distinction exists is only one of color, that the latter is darker than the former. We tried to explain this in detail on page 791. There is no difference excepting imaginary in the microscopic features that I can see. The spores and basidia vary in size. On the glass I have the spores are hyaline, globose, most of them 6 mic. some over 12 mic. Basidia globose, pale colored, mostly about 16 mic. The gelatinous hyphae are brown and it has a feature that I have not seen noted and which does not occur in the yellow Tremellas. There is a thin, dark brown cuticular membrane which breaks up when mashed under the cover glass into irregular, dark fragments. A similar thing is found in the brown Exidias, but quite different from the papillae found on some species of Exidia. We do not know if *Tremella foliacea* and *Tremella frondosa* are different ages of the same species (as Brefeld seems to hold) or different species. We doubt if the names we use are historically accurate, particularly *frondosa*, for in the original sense we think it only a large form of *Tremella foliacea*. *Tremella ferruginea* as named on the old English Botany figure could not be questioned but we do not like to adopt unfamiliar names. The following citations will give a clear idea of our view of each species.

Tremella foliacea. Sense of Persoon, Berkeley and Fries, seems to include both colors. Bulliard, Plate 406, fig. A, B and D (? as to C). Bulliard, Plate 499 fig. T, U (? as to V and not X, Y). Atkinson page 205 fig. 208 and Coker page 141 Plate 39 both as *frondosa*. Also for me *Tremella aspera* of Coker. *Tremella undulata*, Moeller, used as a juggle. Bresadola t. 202 on acerous wood. (Not at all in the sense of Brefeld.)

Tremella frondosa (in the sense in which I use it) is Bulliard Plate 499, fig. X, Y. Probably *Tremella nigrescens*, Fr. Hym. Europe.

Tremella ferruginea, English Botany t. 1452 an excellent figures and the name that should be applied to it. Probably Bulliard 272 (on which the name *Tremella fimbriata* of the books is based) but no specimen of this aspect known although the color is suggestive.

ZENKER, DR. GEORGE., AFRICA.- As noted in previous shipments, Dr. Zenker is a most liberal collector and when we get a species from him it is then abundantly represented in the museums.
Lycogala Epidendrum - *Geaster mirabilis* - AURICULARIA DELICATA -
Trametes Meyenii - *Xylaria anisopleura* - *Stereum Bolleanum* - XYLARIA COMPOSITA.

NOTE 1044 - AURICULARIA DELICATA FROM DR. GEO. ZENKER, AFRICA.- Dr. Zenker notes "essbar". It is close to the Jew's ear, which is eaten largely by the Chinese. All species of *Auricularia* are similar and are collected and shipped in quantities from New Zealand, Pacific Islands to China and are important commercial products.

RESUPINATES

The situation is this. Several hundred foreign collections have been named as *Poria*, *Corticium*, etc., and not one can be determined from anything published. The only way to ever learn them would be to study them in the museums where these "types" are preserved and no one has ever done this as to foreign species, and probably no one ever will as it would require several years to do it right. About all the past work that has been done on the subject is pure bluff and much that is being done at present. Men pose as having sufficient knowledge of the subject to decide what are "new species" when as a matter of fact they do not know the identity of one out of fifty that are named in the museums. Such work impresses me and always has impressed me as being of little value. A man will make enough mistakes if he has really studied his subject. If he has not studied it intelligently then his new species and old species too are purely guess work and of no value whatever. Take the publication of any real student, such as Lister on the *Myxomycetes*, Burt on the *Thelephoraceae*, men who have done honest and thorough work on special subjects, and note the details of the blundering and superficial work that was done before them, mostly by men who proposed "new species" without knowing the old ones that grow in their own back yards. We get many specimens of *Poria*, resupinate *Thelephoraceae*, foreign *Hypoxylons*, *Hypocreas*, *Pezizas*, etc. that we do not know and can not name and we so advise our correspondents. We are glad to get them even if we can not name them. They will all be preserved and if we never find time to intelligently study these sections, perhaps some day someone else may. But I take no stock whatever in any one who claims now to be able to decide on a "new species" of *Poria*, foreign resupinate *Thelephoraceae*, resupinate *Hydnaceae*, foreign *Pezizas*, the great world of *Hyphomycetes* and the equally great world of foreign, small *Pyrenomycetes*, etc. Any one who claims to be able to know them to the extent that he knows five percent of the old species or what are "new species" is making a fraudulent claim on the face of it.

Hyphomycete.- Any good collector, especially in the tropics, will find many *Hyphomycetes* or *Fungi Imperfecti* as those have called them who do not know much about them.

Miss Annie Lorain Smith is supposed to have worked them out as to England but excepting her I do not know any one who has really made any study of the subject. If I am mistaken and there is any one who knows them I hope he will not be too modest to write me for I have numbers of specimens I should be glad to get named. It is embarrassing to me to receive so many specimens in families about which I do not know anything at all and which I have no way of learning.

PROBLEMS IN MYCOLOGY

The genus *Mesophellia*. (Cfr. Myc. Notes page 639 Fig. 910 and 640 Fig. 912). The genus *Mesophellia* as noted by us more than once is one of the most curious genera known. It is endemic in Australasia. The original species from Tasmania had greenish gleba and a core to the peridium by numerous ligaments. C. C. Brittlebank, Australia, sent me a collection with a free core and pale pinkish gleba that we named *Mesophellia castanea*. Mr Rodway sends two collections, 1050 and 1055 with these characters just reversed. The former has greenish gleba and practically free core, the latter pink gleba and core with ligaments. What are we to do about it? Are we to make four species instead of two or are we to conclude that the characters on which our two species are drawn are of no value and reduce them to one. Either horn of the dilemma is not satisfactory or convincing.

NOTE 1045, - A NEW USE FOR THE ADVERTISING CUSTOM IN MYCOLOGY.- A correspondent who does not indorse my views on the binomial alone to represent a plant name proposes an advantage in quoting authors' names which has been suggested before but I believe not printed. When certain authors names are "written" after plant names it indicates on the face that the name "written" is "wrotten". "We had a McGinty named Carl Mueller in the moss world, but though he did some harm, we soon learned when we saw the mystic initials "C. M." after the moss to require some more reliable verification." If there were a law requiring a man to write his name after the species so as to show on the face that his work has no value unless confirmed, it might be useful, and the average mycologist would not get so much pleasure as at present out of this childish conceit. As Hollis Webster well put it- "children like to see their names on their underclothes" and there is about the same logic in writing an author's name after one of the "mihi" species. The "mihi" authors used to be familiar in days gone by but they have been ridiculed out of it and are now extinct. The "n.s." authors are now their legitimate and current successors.

NOTE 1046 - POLYPORUS METALLICUS.- The common *Polyporus lucidus* has, as every one knows, a shiny, dark reddish, laccate surface. Sometimes there reach me specimens with a dull mat surface with a metallic cast. While of course it is only a form or perhaps condition of *Polyporus lucidus*, we have labeled our specimen as above. *Polyporus lucidus* is an annual but I have found it in the spring when it has wintered over and perhaps the surface difference of some specimens is due to this cause.

NOTE 1047 - APPRECIATION?- When we note the beautiful plates of bugs, plants, etc. now being issued by the State Museum of New

York, we feel chagrined as we think of the way dear, old Professor Peck was used. All during his life it was a constant struggle for him to get his plates published in an acceptable manner and it is no secret that his plates of agarics are not what they should have been. Had Professor Peck been a better politician and a poorer mycologist, perhaps the results would have been different. One time when I visited him a number of years ago, I found him crowded out in a little hallway with his specimens stored about in boxes, and he told me many of them never survived the experience. It will always be a reproach to the great state of New York that the "powers that be" were so niggardly with Professor Peck and did not appreciate the merits of the man. Surely "a prophet is not without honor save in his own country."

NOTE 1048 - POLYPORUS AMYGDALINUS AND POLYPORUS AUSTRALIENSIS.-
COLOR CHANGES. On our last visit to New York we noticed a specimen from Dr. Burke, Alabama, with white context and pore tissue when broken. It impressed us for we remembered a specimen that Dr. Burke had sent us with salmon context and white pore tissue and we had commented on it (Letter 60, Note 331). When we compare our specimen now from Dr. Burke we find both context and pore tissue pink. It has surely changed since we received it. We received the same plant from J. Umemura, Japan, and wrote (Letter 63, Note 495 and Letter 67, Note 690) concerning the color. Mr. Umemura advised me his plant when young is "beautifully orange". When I received it the color of the pores and context was pale pink and as I view it now it is white with faintly pink cast. We have noted several times a remarkable plant received from Australia. *Polyporus australiensis*. (Cfr. Letter 58, Note 270, Letter 66, Note 609). This has the same general (and unusual) nature as *Polyporus amygdalinus*. The soft spongy flesh is orange and fades out to white on the cut surface. The pores are dark and on my specimens have not become light. The plant is large, obese, several inches thick. While these two species are not the same they are intimately related, much more closely than had occurred to me before. *Polyporus persicinus*, principally remembered from the bulls that Berkeley and Murrill made in connection with it, is probably the same as *amygdalinus*.

NOTE 1049 - ANTHROCOPHLOUS RHIZOPOGONOIDES.- We are in receipt of a long article from Professor Mattiolo concerning the above plant, and we would gladly publish it if it did not take up so much space. In substance it is a mild protest against the change of name of this plant which C. W. Dodge found so labeled in our museum and published with a different specific name as a *Rhizopogon*. While this was a breach of ethics on the part of Mr. Dodge, I am perhaps to blame for it. I well remember a conversation I had with Mr. Dodge with reference to *Rhizopogons* that I had named in manuscript in my collection. I told him to pay no attention to them as I did not know enough of the subject to give my mss. names any claim to recognition, and I did not care anything about it anyway. However, I was not speaking for Professor Mattiolo, but I had no intimation that Mr. Dodge expected to publish on the foreign species which he had so little opportunity of knowing.

Mr. C. W. Dodge and Mr. S. M. Zeller who were associated in the article in question, are young men, graduates under Professor Burt,

and they would not intentionally commit a breach of ethics. They will learn much yet about the genera and species of their specialty, and I rather feel that some of their published conclusions are premature. For instance, they announce a new species of *MacOwanites* from our West. While I have not seen the specimen on which this was based, I believe they have about the same chance of finding a species of *MacOwanites* in the United States that they have of finding a kangaroo.

Professor Mattiolo is a man who has spent years on the study of hypogean fungi. He has, without doubt, the largest collection of specimens of these plants and the largest experience with them, and with me his opinions on this subject have more weight than those of any one else. At the same time the limitations of genera are matters of individual opinion, and Mr. Dodge, if he was right in considering the Mauritian species at all, was right in my view, in including it in *Rhizopogon*. I have always maintained it is better to stretch the limits of old genera than to erect new ones on slight differences. The peridium of *Anthrocophlous* is black and of a different hyphal structure from that of all *Rhizopogons* as Prof. Mattiolo demonstrates in his article, but the gleba and spores are exactly the same as those of *Rhizopogon*, and this class of plants has in the past been classified mostly on their spore and gleba characters.

NOTE 1060 - *XYLARIA GUEPINI*. - A plate of this rare plant is issued in the last fascicle of the "Flora Batava". While we have seen but one collection, which was distributed in the old Italian *exsiccatae*, we judge from Fries' description that this plant is correctly determined as illustrated in *Flora Batava*. It is a very exceptional *Xylaria*, not black as are most *Xylarias* but brown and is evidently very closely related to *Xylaria rhizophila* of Australia, considered page 936 *Mycological Notes*. Fries received this plant from Guepin, France and gave a description of it in *Elenchus*, Vol. 2. Cesati found a plant in Italy that he referred to Fries' description and gave a figure. It is a very doubtful question as to whether the plant Cesati found and the plant Fries named are the same plant. I never could reconcile Cesati's figure to Fries' description and it is surely not the plant that has just been illustrated in *Flora Batava*. Notwithstanding, they write the name *Xylaria Guepini* (Fries) Cesati. It is stated in *Flora Batava* that *Xylaria Guepini* occurs in North Italy, France, Brazil, Ceylon and Borneo. As a matter of fact it is a very rare species, collected very few times and the only certain localities are France and Holland. The records in northern Italy, Ceylon and Borneo are all mis-determinations.

