LETTER No. 47.

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

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

C. G. LLOYD,
224 Court Street,
Cincinnati, Ohio.

C. G. LLOYD,
37 Holmes Road,
Twickenham, England.

Cincinnati, Ohio, November, 1913.

ALLEN, MISS LIZZIE C., Massachusetts:

Hydnum compactum, (see Note 84).—Polystictus versicolor.—Polyporus lucidus.—Hydnum velutinum.—Stereum bicolor.—Thelephora radiata.—Xylaria polymorpha.

Lenzites corrugata. Two plants exactly the same, although the hymenium is so different. A very polymorphic species as to hymenium shape.—Lepiota Allenae. Cotype.—Cyathus stercoreus.—Stereum spadiceum.—Polyporus circinatus.—Polystictus cinnabarinus.—Poria Tulipifera, probably incipient.—Polyporus adustus.—Polystictus conchifer.—Polyporus brumalis.—Hydnum septentrionale.

AMES, F. H., New York:

Irpex cinamomeus.—Polystictus pergamenus, abnormal.—Polyporus gilvus, abnormal.—Polyporus Spraguei.—Stereum sericeum.—Lenzites betulina, thick form.—Stereum spadiceum.—Tremella mesenterica.—Polyporus adustus var. fragrans.—Hydnum nigrum.

BALLOU, W. H., New York:

Hypocrea lateritius.—Polyporus Schweinitzii.—Polyporus circinatus.—Polyporus giganteus.

BLACKFORD, MRS. E. B., Massachusetts:

Hydnum vellereum.—Daedalea unicolor.—Stereum hirsutum?—Hydnum adustum.—Hydnum ferrugineum, (see Note 85).—Hydnum scobiculatum (see Note 85).—Stereum sericeum.—Daedalea confragosa.

BRACE, L. J. K., Bahamas:
Trametes hydnoides, effete.

BRANDEGEE, T. S., California:
Tylostoma campestris. (Sand hills near San Francisco.)

BROWN, GEORGE, New Zealand:
Geaster limbatus.—Stephensia bombycina (or close). Determined by Miss Wakefield.—Pleurotus (species).

BROWN, GEORGE, Pitcairn Island:
Schizophyllum commune, stalked form.—Clavaria persimilis.—Clavaria Bizzozeriana (prox.).
The Clavarias determined by A. D. Cotton.

CAMPBELL, MISS E., New South Wales:
Polystictus sanguineus.—Polystictus versicolor.—Polystictus hirsutus.—Stereum hirsutum.—Polysaccum pisocarpium.—Fomes leucophaeus, undeveloped.
Lentinus fasciatus. This species is known only from Australia. It is a beautiful plant.—Polystictus lilacino-gilvus.—Trametes lactinea.
Polystictus-Trametes. That I can not place. The specimens from Miss Campbell were nicely selected and preserved.

CARL, EMMA J., Ohio:
Polystictus cinnabarinus.

CHEESEMAN, W. N., England:
Trametes cervinus.—Daedalea unicolor, form cinerea.

CRADWICK, WM., Jamaica:
Marasmius (sp.)

DAS BASHAMBAR, India:
Fomes australis (?). Young. This has same context color, and yellow pore mouths as australis and I think a very young specimen.
Polyporus lucidus? This is the common plant I get from the tropics, which I call Polyporus lucidus as there is no other name for it. It is quite close to the European species, but I think not the same.
Polyporus, species not recognized by me.
Hirneola auricularis. This is the same as Hirneola auricula-Judae, but smooth. This specimen is not perfectly smooth, but very minutely velutinate, hence intermediate.
Polyporus inamaenus, only an indurated Polyporus gilvus.

DAVIS, SIMON, Massachusetts:
Polyporus albellus.—Peziza macropus, (cfr. Boudier's Icones, t. 239). Peziza (Discina) leucoxantha, (cfr. Boudier's Icones, t. 253). Peziza (Lachnea) Sp.?—Bovista pila.

DUNCAN, S., New Zealand:

Daedalea glabrescens.—Polystictus iodinus.—Geaster saccatus.—Daldinia concentrica.—Polystictus cinnabarinus.—Calvatia lilacina. Sterile base.

Fomes fraxineus? This is undeveloped, but has the same context as fraxineus of Europe.—Fomes australis.

DUPONT, E., Reunion:

Daldinia concentrica. A large specimen over two inches in diameter.

DUTHIE, A. V., South Africa:

Polyporus Oerstedii. This is the same as Polyporus lucidus in every respect except the absence of a stipe.—Stereum hirsutum.—Thelephora terrestris.

Polystictus (Sp.) that I do not know as to species although I have received nearly the *same plant* from *Northwest Canada* (!!).—Stereum lobatum.

Arachnion album. One of the rarest and most curious of puff balls. (Cfr. Myc. Notes, page 253.)—Scleroderma flavidum.—Merulius lachrymans.—Trametes hispida.—Scleroderma verrucosum.

Tylostoma cyclophorum. A species originally received from Miss Stoneman, South Africa. (Cfr. Monograph, page 25, plate 85).

Fomes (Ganodermus) applanatus, form with a hard, sulcate crust and substipitate. The sorting of these exotic forms of Fomes applanatus is a most puzzling problem.—Polyporus sulphureus.—Lenzites repanda.

Podaxon carcinomalis. This was one of the first species of Podaxon to reach Europe, having been sent in by one of Linnaeus' students from South Africa. It grows often on ant hills, and in olden days had a reputation among the natives as a cure for ulcers.

FAWCETT, H. S., California:

Fomes robustus, on Eucalyptus. This species, on Oak in Europe, is rare in the United States and is found only in our western States as far as I know.—Daldinia concentrica.—Fomes applanatus.

GARMAN, H., Kentucky:

Peziza or other Discomycetes. Supposed to have caused sickness in a child, but probably an error.

GARNER, W. G., New Zealand:

Aseroe Hookeri.—Pseudocolus Archeri. (See Note 86.)

GILLET, REV. J., S. J., Africa:

Epichloe Schumanniana. Determined by A. D. Cotton.

HADLEY, ALICE M., Vermont:

Polyporus squammosus.

HANMER, C. C., Connecticut:

Calvatia rubroflava.—Geaster rufescens.

HARIOT, P., from Henri Perrier de la Bathie, Madagascar:

Ganodermus mangiferae. This species was not, but should have been, included in my Stipitate Polyporoids. It is quite close to mastoporus and may be the same thing. The only difference I can note is that the pore mouths are pale, while they are always dark in mastoporus, even when young.

Fomes australis with *yellow* pore mouths.—Polyporus pruinatus.—Polystictus gallo-pavonius.—Polystictus caperatus.—Daedalea quercina.

Trametes roseolus. A beautiful species compared with the type at Paris. It is said to be same as Polyporus Afzelius, of which no type exists. —Fomes Haskarlii.— Fomes pectinatus.—Polyporus (Glaeoporus) candidus, a white form of conchoides.—Polystictus gallo-pavonius, (pale form).— Hexagona tenuis.—Fomes lignosus (annual).

Polyporus megaloporus. When young it is a Polyporus, when old tends towards Favolus. Setae are very peculiar (cfr. Stipitate Polyporoids, fig. 441).—Polyporus durus.—Fomes applanatus.—Polyporus modestus. Compared, and same as the "cotype" of "atypus" at Paris= bruneolus of Montagne not Berkeley.—Polystictus versatilis.

Polyporus anaebus. Compared with cotypes in Montagne's herbarium. It is smoother but for me the same species as pruinatus.—Fomes pullus. Compared with type in Montagne's herbarium. A unique little species. Setae none. Spores not found, no doubt white.

HOLDEN, WM., North Carolina:

Polyporus salignus?—Ustulina vulgaris, conidial form.—Polyporus arcularius.—Polyporus amorphus.—Polystictus sanguineus.—Polystictus pergamenus.—Polyporus gilvus.—Lentinus strigosus.—Polystictus hirsutus.— Lenzites betulina.—Polyporus adustus.—Stereum fasciatum.—Tremellodendron pallida.—Fomes annosus.—Fomes reniformis.—Polyporus giganteus.

Scleroderma Geaster. A liberal collection, unopened.—Fistulina hepatica.—Polyporus Schweinitzii.—Favolus europaeus.—Polystictus versicolor.—Bulgaria inquinans.—Clavaria botrytes.—Polyporus sulphureus.

LEEUWEN, DR. VAN, Java:

Dichonema sericeum. Named by Monsieur Hariot. It is in Saccardo as a Rhipidonema, but is a lichen.—Polystictus xanthopus.—Nummularia (sp.).—Polyporus fumosus? Seems a little different from the European plant.

Fomes (Ganodermus). Quite close to Fomes leucophaeus, but I am satisfied that it is different. It is heavier, harder, more minute pores, and has a tendency to form a stipe. Spores are smaller, 6 x 8. I have an ample collection of same species from Dr. J. C. Koningsberger, Java.

LIND, J., Denmark:

Daedalea confragosa (form Bulliardi).—Polystictus versicolor.

MACOUN, JOHN, Canada:

Hymenochaete spreta.—Stereum (Hymenochaete) tabacinum.—Polyporus adustus.—Polystictus hirsutus.—Lenzites saepiaria.—Polystictus versicolor tending to zonatus.—Polystictus zonatus if different from versicolor.—

Dacryomyces aurantia.—Crucibulum vulgare.—Xylaria Hypoxylon, (cfr. Letter 45, Note 66).—Corticum, (cfr. amorphum).

Also a number of specimens of Poria, Hypoxylon, Corticum, etc., genera of which I do not know the species.

MELBOURNE BOTANIC GARDENS, Australia:

Polystictus sanguineus.

Polyporus (Amaurodermus) rudis. (Compare Stipitate Polyporoids, page 111, fig. 403.) A rather frequent species in Australia and too close to Polyporus rugosus of the East.—Geaster saccatus. This is the form with a firmer exoperidium, named Geaster coriaceus by Colenso, from New Zealand.

MEMMINGER, ED. R., North Carolina:

Myriostoma coliforme.—Geaster pectinatus.—Irpex pachydon.—Polyporus arcularius.

Cordyceps capitata. These specimens are not "capitate" as are all specimens I have seen in Europe of this species. They are same form as Cordyceps ophioglossoides of Europe. The distinction between these two species is a marked spore difference as shown by Tulasne. There is also a difference in the method by which they are attached to the host.—Geaster floriformis.

MERRILL, E. D., Philippines:

I have been favored with an ample collection of Philippine specimens through the courtesy of Mr. E. D. Merrill, Botanist of the Bureau of Science, Manila, Philippines. These specimens were mostly named by Rev. Bresadola, and as I consider Rev. Bresadola the only mycologist in Europe who has made a critical and historical study of foreign fungi, the specimens are mostly labeled in my museum under the names as received. In some instances I do not adopt the names, but these are mostly cases of difference of opinion due to variation. In some cases the difference comes from questions of "priority," for the haphazard way in which the same species have been given names by the old botanists leads to much doubt about "who saw it first?" and in some instances the man "who saw it first" did not know enough about it to name it decently. This is particularly true in the line of the bungling work of Lèveillè. A few cases of discrepancy rest on the "authenticity" of "types." Thus there is doubt about most of Lèveillè's types at Leiden for they were not labeled, and at Paris, where he did label the specimens, the "cotypes" are not always the same species as the "types" at Leiden. I list the plants as I have labeled them in my museum, and have indicated in parenthesis the names under which they were received. The numbers indicate the number of collections. In addition there are about twenty collections (not listed) which I have not yet found time to work with.

Phlebia strigoso-zonata, (2), (reflexa).—Calvatia lilacina, (1).—Daldinia concentrica, (1).—Polystictus flavus, (1) (Irpex).—Auricularia mesenterica, (2).—Hirneola auricula-Judae, (1).—Hirneola polytricha, (2), (ampla).—Polystictus affinis var. melanopilus, (2), (for me a pale form.)—Polystictus flabelliformis, (2), (flabelliformis, luteus).—Polystictus affinis, (9), (luteus, pterygodes, nepholodes).—Polystictus xanthopus, (4).—Poly-

stictus carneo-niger, (3), (microloma, celebicus).—Polystictus luteus, (2), (crenatus, but entirely different).—Stereum involutum, (1). Very doubtful to me.

Stereum lobatum, (5), (bicolor evidently error of enclosure, f. concolor, ostrea).—Stereum tenuissimum, (1), (attenuata).—Polystictus cichoriaceus, (1), (Hexagona tabacinum).—Hexagona resinosus, (1).—Polystictus Persoonii, (6), (corrugatus).—Daedalea confragosa, (1).—Trametes gibbosa, (2).—Corticium caeruleum, (1).—Septobasidium bogoriense, (1).—Polystictus cervino-gilvus, (3), (dermatodes).—Hexagona tenuis, (8), (bivalvis, pulchella).—Hexagona Deschampsii, (1).—Hexagona apiaria, (3), (Wrightii).

Lenzites ochroleuca (cfr. Hexagona pamphlet, page 31), (13), (Daedalea tenuis, Daed. subconfragosa, Daed. pruinosa, Daed. lenzites, Daed. flavida).—Trametes ochroleucus, (2). Trametes form of previous. (Hexagona glabra, Daedalea Hobsoni).—Lenzites repanda, (8), (Palisoti, indica).

Polyporus (Ganodermus) ochrolaccatus, (2). This is a marked and rare species (cfr. Stip. Polyp., page 105. All specimens I have noted in the various museums of Europe are the original collection from the Philippines by Cummings, made many years ago.

Cantharellus bucccinalis, (1), (partitus).—Lentinus praerigidus, (1), (Kunzianus).—Lentinus sajor caju, (3).—Xerotus nigrita, (1), (Anthracophyllum).—Lentinus connatus, (2), (exilis).—Polyporus semilaccatus, (4).—Lentinus strigosus, (1), (Panus rudis).

Fomes australis. The tropical forms of Fomes applanatus have in the past been usually referred to Fomes australis. Numerous specific names have been proposed, but whether it is practicable to definitely separate them is a doubtful problem. Some day we hope to make a trial of the many specimens that have acccumulated in our museum. In the meanwhile we label them all as above. (9). (subtornatum, australe, applanatus.)

Polyporus sulphureus. (2). (One as Polyporus miniatus, cfr. Stip. Polyp., p. 154.)—Polyporus grammocephalus, (2).—Fomes melanoporus, (4).—Fomes pinicola, (4), (ungulatus).—Fomes Kermes, (1), (Fomes albomarginatus, cfr. Letter 36).—Polyporus zonalis, (2).—Lenzites subferruginea, (4).—Lenzites nivea, (2), (platyphylla).—Lenzites betulina, form? (1).—Polyporus durus, (2).—Polystictus tabacinus, (3), (microcyclus).

Polystictus benquetensis, (1), very poor specimen. It is quite close to circinatus.—Polystictus occidentalis, (2).—Polystictus obstinatus, (3), (Meyeni).—Polyporus rubidus, (3).

Polyporus Didrichsenii, (2). Received as atypus Lèveillè, no type of which exists (cfr. Letter No. 36), and the specimen so labeled by Lèveillè at Paris is not this plant. There is a cotype of Polyporus Didrichensii at Kew from Fries.—Polystictus abietinus, (1).—Polystictus elongatus, (1).—Polystictus sanguineus, (5).—Geaster hygrometricus? (1).—Schizophyllum commune, (4).

Craterellus diamesa, (1). ("Type locality" as "Thelephora" (sic). It is probably same as Craterellus cantharellus.)

MORRIS, GEORGE E., Maine:

Hydnum geogenium, (see Note 87).

OLESON, O. M., Iowa:

Polyporus arcularius.—Polyporus sulphureus.—Favolus europaeus.—Tremella frondosa.—Exidiopsis alba, (See Note 48, Letter 44).—Polyporus picipes.—Trametes sepium.—Hydnum pulcherrimum.—Hirneola auricula-Judae.—Fomes (Ganoderma) reniformis.—Fomes pomaceus.—Fomes fraxinophilus.

Fomes (Ganodermus) reniformis, I think. If not it is Fomes applanatus. It is hard to tell Fomes applanatus from Fomes reniformis unless the specimen is stratose showing it to be a perennial, or has a dead last year's growth with it showing that it is an annual.—Tremella foliacea.—Polyporus gilvus.

From California:

Fomes pomaceus, on sycamores. Usually on plum trees.—Poria ambigua.—Fomes applanatus.—Tremella lutescens.—Polyporus gilvus.—Fomes gilvus. (See Note 88).—Stereum hirsutum?

PAZSCHKE, DR. O., Dresden:

An historical lot, including specimens from Rabenhorst's exsiccata and several from South Africa of Kalchbrenner's naming.

From Africa:

"Polystictus vibecinus" as determined by Kalchbrenner, and which agrees with specimen so determined by Kalchbrenner at Kew. No type exists of Polystictus vibecinus and its identity is unknown. I know no other name for the plant, however.—Schizophyllum commune as labeled.

From China:

Polystictus occidentalis.—Fomes ribis. Seems to me close if not the same as the European species.

From Europe:

Poria lenis. Cotype, but I do not know critically the species of Poria.—Fistulina hepatica.—Polyporus mollis, (as P. Weinmanni Fr., a synonym for me).—Radulum laetum. (Not R. molare as labeled, a misdetermination).—Lenzites betulina.—Irpex obliquus.

From Portugal:

Polystictus occidentalis. (Typical specimen).—Polystictus biformis. Same as American plant.—Hydnum adustum. Same as American plant.

I think Polystictus biformis is known in Europe, but this is the first time Hydnum adustum is known to me from there.—Polystictus versicolor.

From United States:

Polyporus pocula. Raben. 3328 as cupulaeformis. A synonym.—Polystictus pergamenus. Rab. 3331 as named.—Hydnum adustum. Rab. 3124 as named.—Polyporus resinosus, as named.—Daedalea ambigua. Rab. 3334 as D. glaberrima.—Hydnum erinaceum. Rab. 3641.—Polyporus giganteus (not frondosus as labeled, a misdetermination).—Polyporus dichrous (=purpurascens).—Daedalea confragosa, (=Lenzites Crategi).

PLITT, CHAS. L., Maryland:

Favolus europaeus.—Urnula craterium.

RICK, REV. J., Brazil:

Polyporus Feei.—Lenzites erubescens (See Note 89).—Polystictus membranaceus.—Daedalea stercoides.

Hydnum spongiosum. Cotype. An excellent species belonging to a section of the genus not represented in Europe or United States.—Ganodermus Oerstedii = pachyotis Speg. teste Rick, resinosus Pat. in Europe, and sessile Murr. in the United States.—Ganodermus renidens, (see Note 90).—Polyporus fruticum.—Polyporus Blanchetianus.—Polystictus licnoides, very thin form.—Hydnum rawakense.—Lachnocladium compressum as named by Rev. Rick.—Lachnocladium (sp.).—Merulius tremellosus.

SCHULTZE-WEGE, MADAME, Germany:

Fomes leucophaeus.—Daedalea gibbosa.—Panus torulosus.—Lenzites saepiaria.—Stereum hirsutum.—Polystictus versicolor.—Merulius tremellosus.—Polystictus perennis.

Sistotrema confluens. Sent as Polyporus rutrosus which is a doubtful species only known from Rostkovius' old figure. (Cfr. Stipitate Polyporoids, p. 130.) Sistotrema confluens has in a general way some resemblance to this old figure, but is much smaller, and has irpicoid pores. Only recently one of our American "experts" who apparently does not know a Polyporus from a Hydnum, discovered that Sistotrema confluens belonged to the genus Hydnum (sic.).—Helvella crispa.

SMITH, THEO. L., Massachusetts:

Polyporus sulphureus.—Mitrula paludosa.

STORER, MISS E. D., Georgia:

Merulius Corium. Specimen in its prime color and a fine species in this stage. These are the first specimens I ever saw of this species so brightly colored.—Stereum fasciatum.—Polystictus hirsutus.—Stereum albo-badium.—Polystictus versicolor.—Lentinus strigosus.—Polyporus Curtisii.

STOWARD, DR. F., Australia:

Polysaccum pisocarpium.

TEPPER, J. G. O., South Australia:

Fomes. Probably unnamed, small, ungulate, with deep, narrow, sulcate rings. Spores globose, 5 mic., colored. Setae none. Close to rimosus.

Calvatia rubroflava.—Polystictus cinnabarinus.—Polyporus ochroleucus.

WALKER, S. B., Colorado:

Lycoperdon pyriforme, growing on moss.—Lycoperdon (Sp.).

WHETSTONE, DR. M. S., Minnesota:

Clavaria cinerea.—Stereum spadiceum.

WILDER, MRS. H. E., California:

Polyporus Schweinitzii, dimidiate, imbricate.—Lycoperdon gemmatum. —Lycoperdon fuscum.

YASUDA, PROF. A., Japan:

Polystictus iodinus.—Rhizopogon rubescens.—Fomes connatus, young.—Thelephora spiculosa.—Rhizina undulata.—Cantharellus floccosus. An American species.—Lenzites striata.—Lenzites subferruginea.—Irpex. Unnamed I believe.—Stereum Burtianium. (See Note 91.)

Trametes comfragosa, unnamed form. Compare Note 55 in Letter No. 44. We do not have this form in America.—Daldinia concentrica, form tending towards vernicosa.—Trogia crispa.

ZENKER, DR. G., Africa:

Polystictus incomptus. Quite frequent in Africa.

Stereum affinis. (See Note 92.)

THE LENTINI OF OUR MUSEUM.

(By C. G. Lloyd, written at Kew, April, 1913.)

Recently, while at Kew we studied the species of Lentinus which we have received from foreign collectors in comparison with the abundant collections and historical material preserved at Kew. We have since worked over the specimens, at Leiden, Berlin, and Paris, which include about all the historical specimens except a few in Fries' herbarium at Upsala.

We shall not trouble to define what distinction should be made between Lentinus and Panus, for we do not know. The original definition of Lentinus included the dry, persistent Agarics with equal gills, or if unequal, serrate. In Fries' Epicrisis, he restricted this definition to species with "dentate or lacerate" gills, but this definition only applies to a few of the species that he lists in the genus. We accept Lentinus in the meaning that it has acquired by use, viz., Agarics of a dry, persistent nature, reviving when moist, and having the gills mostly subequal, or if unequal, serrate. The line is not sharply drawn between Lentinus and Panus, though in theory Panus should have unequal gills with entire edges. We find we have received the following species of Lentinus from correspondents.

LENTINUS VILLOSUS (Type at Kew). This species, originally from Mauritius, is widespread in the tropics and very common in American tropics. When young it has long, cirrose hairs on the margin, but when old these hairs are to an extent detersive, and rarely specimens become bald with age. Usually, however, these long hairs are a marked feature of the plant. The stem is scaly when young with a tendency to become smooth and dark. (For Fries it is then Lentinus nigripes.) The color is brown. The plant reached Berkeley abundantly from the American tropics and he referred it usually to villosus. He named it also Swartzii, crassipes, siparius, Wrightii, subcervinus, rigidulus, and Schomburgkii, and also determined it as being crinitus and tener. Léveillé named it fumigatus according to his type at Paris. There are at Kew a few specimens from India and a few from Africa.

Specimens from Florida—Mrs. M. A. Noble, C. G. Lloyd; Louisiana—A. B. Langlois; Southern California—T. S. Brandegee; West Indies—Wm. Cradwick, Thos. Langton, H. Miller; Central America—S. Schumo; Brazil—G. Peckolt, M. L. Demazio; Africa—Rev. J. Gillet, J. M. Wood.

LENTINUS STUPPEUS. From the nature of the hairs this is the same as villosus but the color is dark, almost black. It is apparently an African species only. I have heretofore referred it to cirrosus, which is probably same species. I have specimens from Madagascar—Henri Perrier de la Bathie (three collections).

LENTINUS NICOTIANA is for me only a form of Lentinus stuppeus with the hairs fasciculate, into scale-like bundles.

LENTINUS VELUTINUS. Color brown. Stem densely and persistently hirsute, velutinate. Pileus with similar covering but on the margin the hairs are longer and rigid. A most common species in tropical America, more rare in Africa and the East. I have species from Theodore Stuckert, Argentine; Leon Castillon, Argentine; Dr. Anna Brockes, Brazil; Donor unknown, India; Henri Perrier de la Bathie, Madagascar; S. Hutchings, Bengal.

LENTINUS EGREGIUS of Australia is quite close to velutinus but is a larger plant with narrow, close gills. It is only known from the type.

LENTINUS DICHROUS. There is no material at Kew, but my collection from Samoa has been so determined. It has the same velutinate stipe as velutinus, but hairs on the pileus are more reduced and scabrous. It is also a smaller and more slender species. Lentinus dichrous was based on an old Zollinger collection which I have not located, but I know no other name for the Samoa collection.

LENTINUS BLEPHARODES. This species of the American tropics has been confused both with velutinus and with similis of the East. It is intermediate, different from velutinus in having a usually *striate* pileus, also yellowish, *more distant* gills. It is frequent in the American tropics, and was originally from Cuba. I have a specimen from the East determined as Lentinus braccatus which is probably the same thing. Specimen from Gustavo Peckolt, Brazil, and Botanical Garden, Saharanpur, India.

LENTINUS SIMILIS. This species is very similar to blepharodes as to the pileus. It occurs only in the East, not in the American tropics, but the Ceylon specimens were mostly misreferred by Berkeley to Lentinus blepharodes. It differs from blepharodes in the covering of the stipe *not* being velutinate but has a spongy, matted covering, as first pointed out by Petch. Berkeley also misreferred one Ceylon collection to Lentinus badius, a glabrous species of the Philippines. I have a collection (old and effete) from M. A. D. Machardo, Perak. I have also one specimen that I collected in Samoa, where it must have been very rare as I only found one specimen.

LENTINUS FULVUS. Color dark brown. Stipe strongly hirsute, velutinate. Pileus hispid, hirsute. This species, known at Kew only from Australia, could be regarded as an exaggerated velutinus, same general

type of plant but much stronger, more hispid pileus. I have no specimen of this.

LENTINUS FASCIATUS. As to hairs same exactly as Lentinus fulvus, but the color is *light* tawny, and it seems so different in this respect, that on the color alone it may be maintained as different. Only known from Australia, and called also by Berkeley Lentinus holopogonius. I have a fine collection from an unknown correspondent in Australia.

LENTINUS STRIGOSUS. This is a frequent, American species and the only one we have in this hirsute section, excepting Lentinus velutinus and Lentinus villosus, both of the extreme South. Lentinus strigosus occurs as far North as Canada. In American mycology, although an evident mistake, this species passed for years as being Lentinus Lecomtei and it is only recently that it has been called anything else. Years ago having decided it could not possibly be Lentinus Lecomtei, I sent it to Bresadola, who referred it to Panus rudis and this name has been lately much used by myself and others in America. It is "Panus rudis" of Western Europe, but why a Panus I can not explain. Surely it is the same genus as the preceding species. It is the only Lentinus (of this hirsute section) that grows in Europe and it occurs frequently only in the Western Europe, particularly Hungary and Austria. That it is Lentinus strigosus of Schweinitz there is no possible doubt. It is a plant of wide distribution. I have it from Samoa, also Madagascar from Perrier de la Bathie, and have referred here (with doubt) a collection from Albert Green, Australia, and one from A. Yasuda, Japan.

LENTINUS PRAERIGIDUS. This is a noteworthy species of the East, quite frequent and very distinct from any species of the American tropics. It has an even, minutely tomentose pileus, sometimes breaking into scales when old, and very *dark*, rather broad, and distant gills. Berkeley called it praerigidus, estriatus, and Thwaitesii. Currey called it Kurzianus and determined it also as furfurosus of Fries (which I presume no one knows). Léveillé sent a specimen to Kew labeled polychrous, but his specimen at Paris is not the same species. I have a specimen from S. Hutchings, Bengal. The very dark color of the gills, which is the most salient character, is assumed in drying. When moistened they are a much lighter brown. Spores (secured in abundance from Mr. Hutchings's specimen when received) are hyaline, cylindrical, straight, 3½ x 10 mic.

LENTINUS SAJOR CAJU. Pileus with a veil that often remains as a ring at the base of the gills, hence it belongs to the "genus" Lentodium, not in the sense of the man who made the genus Lentodium (Morgan) for he had no such idea and would have resented being so misrepresented, but in the perverted sense of the writer who used Morgan's generic name as a convenient juggle. Lentinus Sajor Caju is a most abundant species in Africa and in the East, but does not occur in the American tropics. It is the only foreign species known to me that has a ring. It is yellow, always glabrous, with broad, rather distant, yellow gills.

Rumphius gave a crude but evident figure of it with an indication even of the scar left by the ring. Fries correctly interpreted Rumphius'

crude figure and his specimen is evidence at Kew. Klotzsch called the plant Lentinus exilis and this name was generally used by both Berkeley and Cooke, and many collections so labeled are at Kew. Currey called it Lentinus irregularis. Léveillé with his habitual inclination to call everything a "new species" that he did not know, and he did not know many, named it Lentinus dactyliophorus, which name has been mostly used at Paris. Murrill elucidated the subject by referring exilis to an American species (though it does not grow in America), Agaricus hirtus, described as having a stipe "1-2 lines" (sic) long (one or two inches would more nearly fit it), and surface "setoso-hirtus." The surface of Lentinus exilis is always as smooth as a billard ball. Either Murrill made a very bad guess or Fries gave a very bad description. I have a dozen or more collections of this common species from the following correspondents:

S. Hutchings, Bengal; A. D. Machardo, Perak; Museum Paris, New Caledonia; Rev. J. Gillet, Congo; Dr. G. Zenker, Kamerun; H. Perrier de la Bathie, Madagascar; Dr. K. Braun, German East Africa; Miss A. V. Duthie, Transvaal; J. Medley Wood, Natal; P. Koenig, Mauritius.

LENTINUS VELLEREUS. Color yellowish (when dry) with dark, rather broad gills. Surface *velvety* or *tomentose*. Specimens from A. A. Evelyn, Barbados, sent with the next species, which is alleged to be same but the statement is to me most dubious.

LENTINUS SCLEROPUS. Color yellowish, *glabrous*, with rather broad gills. This is the same as the preceding excepting as to surface. Statement has been published that it is the same species. I much doubt it. It appears quite common in the American tropics judging from the number of times it has been discovered to be a "new species" (about a dozen). Persoon named this plant from Gaudichaud's collection in Brazil, and the type is in good condition at Paris. Murrill takes the name Lentinus hirtus as the valid name for the species, although years subsequent to Persoon's name. Can it be possible that Murrill has joined issues with the band of conspirators at Brussels and excludes poor old Persoon from the benefits of "those sacred rights of priority?" Lentinus infundibuliformis the type (almost destroyed) from Central America seems to be same as scleropus, but the determination from the East are obviously a different species. I have one specimen of scleropus from A. A. Evelyn, Barbados.

LENTINUS REVELATUS. This is much the same as scleropus of the American tropics, but differs in very narrow, close gills. I have collections made in Samoa. The types of revelatus have much longer stalks and several are more infundibuliform than my collection, but I prefer to so refer them rather than propose a new species.

LENTINUS SCLEROTICOLA. The species of Lentinus that are developed from a tuber have not been studied in detail by me. The most common one, in Africa at least, is Lentinus Tuber regium supposed to have been originally illustrated by Rumphius, but if so, very crudely. I collected one in Samoa, that is surely Lentinus scleroticola as named by Murray, but as to the relative value of the five or six specific names of Lentinus from tubers, I have made no studies.

LENTINUS SUBNUDUS. Pileus usually infundibuliform, smooth, white, discoloring when old. Gills close. This seems quite a frequent species in the East. I have it from C. B. Ussher, Straits Settlements; J. P. Mousset, Java, and have collected it in Samoa. It has probably other names as Panus and the following as Lentinus are in my opinion all the same: cretaceus, inconspicuus, lobatus, coadunatus, and caespitosus of Currey changed to Curreyanus. There are other synonyms at Berlin and Paris.

LENTINUS TIGRINUS. A collection from S. N. Ratnagar, India, seems to be this species of Europe.

LENTINUS TORULOSUS. In Fries as Panus, but I can not see how it is to be distinguished generically from previously listed plants. I have a collection from Dr. J. Dutra, Brazil, which is more slender but otherwise seems to me the same as this species as I know it in Europe.

LENTINUS CONNATUS. This is quite a distinct species in the East and is found in several museums having been distributed in Zollinger's exsiccatae from the Philippines, though Berkeley afterward referred several collections to Lentinus infundibuliformis, a quite different plant that he had named (several times) from the American tropics. Léveillé called it Lentinus javanicus and Cesati, Lentinus Beccarianus. I have a specimen from the Philippines sent to me while at Kew for comparison.

LENTINUS (species), I have a collection from Joges Ray, India, that I did not find named.

LENTINUS (species unnamed I believe). This was sent to me at Kew for comparison. It came from the Philippines, and in the recent list of Bresadola appears as Lentinus polychrous, Léveillé. No type of Lentinus polychrous is found (at Leiden) and the specimens that Léveillé sent to Paris and to Kew are different species, so that I think the name can not be used with certainty. Judging from Léveillé's description the plant at Kew (which is the same as Lentinus praerigidus) is the cotype.

ADVERTISEMENTS.

The following personal names can be added to the foregoing plant names by those who believe in this form of advertisement.

Lentinus blepharodes Berkeley, connatus Berkeley, dichrous Léveillé, egregius Berkeley, fasciatus Berkeley, fulvus Berkeley, Nicotiana Berkeley, praerigidus Berkeley, revelatus Berkeley, Sajor Caju Fries, scleroticola Murray, scleropus Persoon, similis Berkeley, strigosus Schweinitz, stuppeus Klotzsch, subnudus Berkeley, tigrinus Bulliard, torulosus Persoon, villosus Klotzsch, vellereus Berkeley, velutinus Fries.

NOTE 84.—**Hydnum compactum**, from Miss Lizzie C. Allen, Newtonville, Mass. This specimen, received fresh, I was very glad to get, as it is a species I have never collected and it has been confused with Hydnum aurantiacum and Hydnum caeruleum. It it quite different from Hydnum aurantiacum as I know it well in the woods of Sweden. It is well named, for its short, obese, compact form. The top is even (colliculose in aurantiacum) and very minutely tomentose. The color is ochraceous, with a suggestion of orange. When cut the flesh *turns blue*, a feature entirely different from what takes place when Hydnum aurantiacum is cut. Hydnum compactum has heretofore been confused by me (cfr. Note 69) and by others with Hydnum caeruleum.

NOTE 85.—**Hydnum ferrugineum** and **Hydnum scobiculatum**, from Mrs. E. B. Blackford. The receipt of fresh specimens of these two species from Mrs. E. B. Blackford, Boston, and a study of the European figures that are cited clears up to my mind a subject concerning which I have never before had a clear idea. Fries was quite unfortunate in the naming of the latter plant at least, for it is curious that Hydnum scobiculatum is zonate, and only slightly scobiculate, and Hydnum ferrugineum is strongly scobiculate. This is borne out by the figures that Fries published and also those that he cites and also accords with my observations on Hydnum ferrugineum in the woods of Sweden. When young or in moist weather Hydnum ferrugineum exudes drops of colored water, a characteristic feature of the young plant, but when old or partially dried, there is no evidence of any exudation. Mrs. Blackford's specimens when received by me showed no sign of this. This has led Banker I believe to mistake old specimens of Hydnum ferrugineum for Hydnum scobiculatum.

Hydnum scobiculatum is much thinner and *zonate* and the "scobiculations" are more in the nature of abortive pileoli than the true "scobiculations" of Hydnum ferrugineum. It was called by Banker, Hydnum concrescens and has generally in American mycology been referred to Hydnum zonatum. It is a common species with us and I doubt if we have the true Hydnum zonatum of Europe. If we have it is rare. They are very close, but zonatum as I know it in Europe and as originally illustrated is a smaller, thinner, more infundibuliform species.

Hydnum ferrugineum and Hydnum scobiculatum have exactly the same color, dark fawn (No. 307-4, R. C.), and are the same internally. Both are mild to the taste and no pronouncedly fragrant odor is noticeable from either. Possibly they run into each other, but Mrs. Blackford's species seem very distinct.

NOTE 86.—**Pseudocolus Archeri.** About fifty years ago Berkeley published a figure in Flora of Tasmania (t. 184) as Lysurus pentactinus, and in his text he called it Lysurus Archeri. The figure was probably prepared first, but in the binding the text is bound first, hence by the sacred laws of priority the name Lysurus Archeri is "valid." If some binder should go to work and bind up the plates before the text, what an awful muddle it would make in the working of those unalterable laws! But as Berkeley called the same plant two different names in the same publication, even the wisdom of an Otto Kuntze must find it hard to make laws to settle such careless work.

The specimen has disappeared and it is evident that the reconstructed figure is more or less inaccurate, for surely no phalloid has the volva split into petal-like lobes as shown. Hence the identity of Lysurus Archeri (or Lysurus pentactinus, as Otto Kuntze may will) is as much a puzzle now as it was the day Berkeley published it. I reproduced Berkeley's figure in the Synopsis of the Known Phalloids as Anthurus Archeri (Fig. 48), as it was evident in any event the plant was not a Lysurus. I have just gotten a phalloid from W. G. Garner, Waikonini Orchard, Peel Forest, New Zealand, which when I soaked it out I thought must be the same as Berkeley's figure. The columns are united at the top, and at the bottom form a tube, hence the plant is a Pseudocolus in my view. There are six arms, two are still united at the top, the other four are broken but were sans doubt originally united. The color is red, and the gleba is borne on the inner side of each column, which is fluted on the back with the "umbilical scar," hence the plant must belong to the clathroid alliance. From Berkeley's figure that we reproduced, one would be justified in referring this plant here for it seems to be the same, but Berkeley's scanty text states "apicibus liberis," which does not apply at all.

We call the plant Pseudocolus Archeri. Should it develop in the next hundred years or so that it is or is not Berkeley's species, the name is as good as any, although Mr. Archer has little to do with it.

NOTE 87.—**Hydnum geogenium.** The receipt of a fresh specimen collected by George E. Morris, in Maine, settles in my mind a subject that has long bothered me. It is the same plant evidently as plants collected by Karsten and found at Upsala, and same surely as that of Fries' Icones.

The trouble has been that the only specimen from Fries I have seen (at Kew) appeared to me to have grown dimidiate and Fries placed the species in Hym. Europaei next to Hydnum septentrionales, a dimidiate species. The species is misplaced here. It belongs next to Hydnum aurantiacum, having the same texture and manner of growth.

Hydnum geogenium is a peculiar species in its color. The fresh plant received from Mr. Morris has the surface covered with a canary yellow tomentum, but the teeth and the dried plant have a greenish cast.

The spores are tubercular, globose, but appear of a paler color than others in this related section.

NOTE 88.—**Fomes gilvus,** sent by O. M. Oleson, from California, a subligneous (Fomes) form of Polyporus gilvus, like which it has the same context color and setae, but is evidently perennial. In our Eastern States Polyporus gilvus does not take this perennial form although it does in tropical countries. Such a form was named by Montagne, Polyporus inamaeus.

NOTE 89.—**Lenzites erubescens,** received from Rev. J. Rick Brazil. It is the only stipitate Lenzites known. I think this plant is very badly named. Rev. Rick advises me that it is "first pure yellow then reddish." The dried plant is dark fawn (No. 3, 307, R. C.) about the same as Lenzites saepiaria. There is nothing "erubescent" about it. Lèveillè called it Lenzites Guilleminiana, but fortunately this uncouth name does not have to be used. Only in recent years Hennings made the remarkable discovery that it was a "new species" of Lentinus which he called Lentinus Schomburgkii. As this is the only stipitate species of Lenzites known, Henning's reference to the genus Lentinus was

not so bad, although the context is more ligneous than the usual Lentinus. His claim that it was a "new species" is noteworthy only as indicating his unfamiliarity with the "old species."

NOTE 90.—**Ganodermus renidens,** from Rev. J. Rick, Brazil. I am glad to get a nice specimen of this plant from Rev. Rick, as it is the first specimen I have gotten. It is rare in Brazil. In my pamphlet on Stipitate Polyporoids I put this species in Amaurodermus. It should go, I think, in section Ganodermus. The spores, which were described as subglobose, are mostly piriform and the hyaline membrane is quite distinct, forming an apiculate base. I saw none where the base had collapsed, as is usual in Ganodermus, but it is essentially the Ganodermus character. I make them about 10 x 12 and they are distinctly rough. Rev. Rick considers this also Polyporus formissimus of Spegazzini. I do not know this species, but the description appears to me to apply rather to Ganodermus Oerstedii.

NOTE 91.—**Stereum Burtianum,** from Prof. A. Yasuda, Japan. I have received two collections of this from Japan from Prof. Yasuda. It was named and figured a few years ago by Prof. Peck from the United States, but is very rare with us and the types at Albany are all that are known in this country. I have seen American specimens in two museums of Europe, however, labeled Stereum Harknesii, but it is only a manuscript name and think was never published.

NOTE 92.—**Stereum affine.** I have received from Dr. G. B. Zenker, Africa, a nice collection of this common tropical species. While it is common in the tropics, it is usually in museums misreferred to Stereum elegans. Dr. Zenker's collection is said to be a "type" of Thelephora Amigenatska, discovered by Hennings. Though there is no specimen in the cover at Berlin, I presume from the description this is correct. Dr. Hennings evidently named it for Dr. Zenker, however, as being "Thelephora cfr. aurantiaca Berk.," as specimens so named are found in various museums. As Berkeley never named any specimen "Thelephora aurantiaca," it would be quite difficult to make the comparison as requested.

NOTE 93.—**Cladoderris Floridanus.** Usually growing on top of log, and then cup shaped with short stipe. When on the side of log flabelliform or orbicular, reduced to a short stipe-like attachment at the base. Upper surface reddish brown, zoned, with appressed, compact, thin, tomentose pad near base. Hymenial surface reddish brown, densely minutely papillate, disposed in narrow ridges, but not with the branching, strong veins of other species of Cladoderris. Cystidia none. Spores compressed globose 2½ x 3, hyaline, smooth, with a small gutta near the end.

Growing on frondose wood and quite rare at Bayard, Florida.

As only recently I hunted up all the species of Cladoderris in the museums of Europe, and expressed the opinion that but one valid species had been named in the last sixty years, I was a little surprised to find one growing in Florida.

NOTE 94.—**An English tradition corrected.**—Cordyceps gracilis not Cordyceps entomorrhiza. For more than a hundred years the English mycologists have been recording as their most frequent species, Cordyceps entomorrhiza, which was originally named from England. I presume I have seen not less than fifty different collections in the London museums labeled "Cordyceps entomorrhiza Dickson," and in the entire lot not one that is correctly named. In fact, Cordyceps entomorrhiza seems to be a very rare species in Europe and I have never seen an English specimen. It was one of the first Cordyceps to be named from England by Dickson, in 1785, in his "Plantarum Cryptogamarum Brittanniae," and he gave a characteristic and unmistakable figure of it. It is a slender species with a globose head. The perithecia are protruding so that the head is rough, resembling to no small degree the fruit of a Ranunculus. About forty years later Greville illustrated and named Cordyceps gracilis. It is a more obese species than Cordyceps entomorrhiza and the perithecia are included so that it is perfectly smooth and even. There is little resemblance between it and Cordyceps entomorrhiza and the two species should never have been confused.

Cordyceps gracilis is common in Britain, and the error got started that gracilis was a synonym for entomorrhiza and has been copied and handed down through all the English mycological books. How the error originated it is hard at this late date to explain, but when Berkeley first met Cordyceps gracilis, a single specimen, he referred it to Dickson's figure, but he noted the difference and commented on it, but thought evidently it was probably due to variation of a single specimen. Afterwards when specimens became more common with him he forgot the difference apparently. Tulasne in his classical work on the genus took the name Cordyceps entomorrhiza from British source (specimen from Broome) and renamed Dickson's plant Cordyceps cinerea. It is hardly possible that Tulasne ever saw the original figure of Dickson, for Tulasne was too keen and critical an observer to mistake Dickson's figure, or to confuse two species that have so little resemblance to each other as these two have. No one has ever presumed even in England to go behind Tulasne, and thus it became the common custom to call Cordyceps gracilis by Dickson's name Cordyceps entomorrhiza. In this account I have only used the generic name Cordyceps, although the earlier writers called it Sphaeria and Tulasne called it Torrubia. These unimportant features have no bearing on the error.

Cordyceps entomorrhiza as far as I have learned has never been found in England since Dickson collected and figured it in 1785. Cordyceps gracilis is common and many collections have been made. By what strange chance Dickson happened to find this rare species and not the more common one is hard to explain, but it led to an error that has persisted now more than a hundred years. Whether it is feasible now to correct

this error and change the custom is a question, for when an untruth has been started it is hard to head it off. It seems hardly logical to continue calling a plant "Cordyceps entomorrhiza Dickson" which the most casual observer should note has little resemblance to Dickson's excellent figure.

NOTE 95.—**Stipitate Polyporus volvatus.** I have received drawings from Prof. S. Kawamura, Tokyo, Japan, illustrating the stipe found on Polyporus volvatus in Japan. Prof. Kawamura advises me that it is abundant, growing on dead trunks of Pinus densiflora, and the larger number of them have stipes, imbedded in the holes made by boring insects. It is very rarely in Japan that sessile specimens are found. In our country just the reverse is the case. Of Polyporus volvatus, every specimen in our museum is sessile, not one having any indication of a stem. The stipitate form was collected once in this country, as has been noted in my publications, but it is extremely rare.

NOTE 96.—**Tremella fusiformis.** I have made a statement somewhere that Tremella fusiformis does not occur in the United States. Recently I saw in Ravenel's herbarium, British Museum, a specimen that had been determined by Berkeley as "Tremella lutescens." It appears to me to be a fusiformis. As fusiformis is a frequent species in the tropics, it would not be surprising if it were found in our Southern States. The misnamed picture in Atkinson's work, however, has no resemblance to it, and its previous record in American mycology is without value.

In a conversation with Prof. Beardslee, Asheville, N. C., I judged from the description he gave me of a Tremella he found at Asheville, that he has collected Tremella fusiformis. No specimen was saved, however, and the subject is therefore not sure.

NOTE 97.—**Phalloids of Australia.** In a letter from Edmund Jarvis, Brisbane, he reports as being common two species, Mutinus pentagonus and Phallus multicolor. I was under the impression that Mutinus pentagonus was a rare species in Australia, but of course we do not know much about the actual occurrence of Australian species. The form of Phallus multicolor which Mr. Jarvis notes has "a bright orange red pileus, much convoluted, and a pale pink, slender veil, not much larger in diameter than the stipe." Many more observations will have to be made and much more data secured before one can form any idea of the value of the color variations shown by phalloids.

NOTE 98.—**Cordyceps insignis.** The curious fungi that proceed from the bodies of dead insects, grubs and worms were called by Cooke, not inaptly, "plant worms." They are usually club shaped, resembling in general form simple Clavarias. We have in the United States but one common species, viz., Clavaria militaris, that is frequently sent to me by my correspondents. The club is bright orange, and it is attached at the base to larva of some Lepidoptera.

The next most frequent species is Cordyceps insignis that passes in our tradition as Cordyceps herculea. Ellis, Peck, Morgan, Seaver, Kellerman, Hard, and others have so called it, assuming that it was Sphaeria herculea of Schweinitz's description. Had either of these done a little more investigating with a little less assumption, they would have found that "Sphaeria herculea" is not a Cordyceps at all. Cordyceps insignis always grows on a large, white grub. It is rather infrequent around Cincinnati, but has been found by most of the latter-day mycologists. Strange as it may seem, it was never picked up by any of Berkeley's correspondents, who found in our Southern States several much rarer species than this. Ravenel found a single specimen that he sent Cooke (after Berkeley had retired from the game), who, not being hampered with our local traditions in America, discovered it was a "new species" and named it as above. Patouillard, I believe, also claims to have discovered it was a "new species," but if so, it was subsequent to Cooke's discovery, and hence must fall a victim of that sacred law of priority. I have known for some years that our plant could not be Cordyceps herculea, having ascertained that this species is not a Cordyceps, but I did not know what to call it until my recent visit to Kew. I was waiting patiently for light from New York, knowing that they were making learned investigations on Pyrenomycetes, but when the article on Cordyceps appeared, I was disappointed to find there was nothing new, only the same old compilations, and the same old mistakes.

It was easier for me to decide that Sphaeria herculea in Schweinitz herbarium could not possibly be a Cordyceps, than to find out what it is. It is so evident at the first glance to note that it has an entire different appearance from a Cordyceps, that it seems strange that Ellis and Seaver, both of whom claim to be authorities on the genus Cordyceps, and have written systematic accounts of it, should have been tripped up, after having inspected it.

But I do not know that the joke is on me as much as it is on them. I examined it closely twice and could not decide what it was, and it was only by running down a clue from an unexpected source that I recognized the specimen. It is Cauloglossum transversarium, a Gastromycete, and a plant that I know well and have published in detail. The half specimen is glued down, and I considered it from an outside view only. That it is a Gastromycete was not even suggested to me. Had I seen the "insides" I think that I should have recognized it at first.