

# MYCOLOGICAL NOTES.

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## CONCERNING THE PHALLOIDS.

PHALLUS IRPICINUS (Plate 116, Fig. 4 and Fig. 211).—We have received a specimen of this plant in alcohol from Dr. Chas. Bernard, Buitenzorg, Java. It is a common plant in Java, but not known from other regions. We

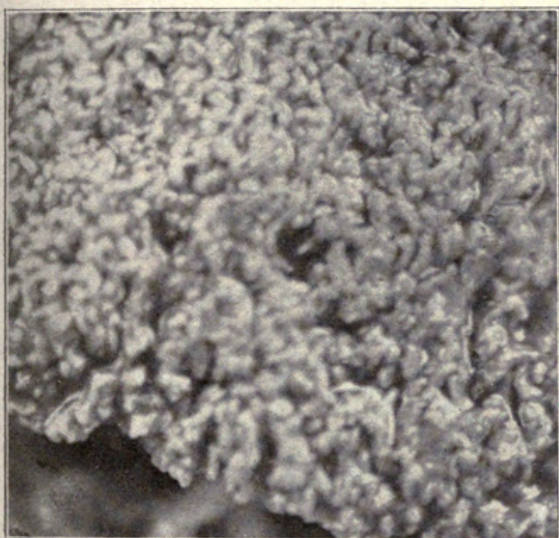


Fig. 211.

Pileus surface of *Phallus irpicinus* x 6.

are quite well satisfied now that it is the same plant that Berkeley called *Phallus merulinus*.<sup>1</sup> In general appearance *Phallus irpicinus* conforms to others of the section of the genus *Phallus* with veils, but no other species is known with the same pileate structure. The external surface of the pileus (see fig. 211, which is an enlargement six diameters), is convoluted, and the gleba covers the interspaces between these folds.<sup>2</sup> This structure is somewhat similar to that of the genus *Itajahya*, and both might, with good reason be classed together as a genus, or

put as a section of *Phallus*. The best account of *Phallus irpicinus* has been given by Penzig in his article on the Javanese phalloids.

CLATHRUS TREUBII (Fig. 212).—Dr. Charles Bernard, Buitenzorg, Java, favors us with an alcoholic specimen of his recently named species, and also a photograph of an unusually large specimen (which is reduced one-third). We have already given a figure

<sup>1</sup>No specimen of Berkeley's exists, and he never formally "described" it, so I presume he will have to lose the name and the advertisement in connection with it. There is, however, no doubt about the truth. First, it is a common plant in Java, where Berkeley's specimen came from, and second, the phalloids of Java are well known, and no other species occurs there which conforms to his remarks,—“the reticulations of the pileus are gill-like and ochraceous head rivulose. It occurs at all seasons, and appears to be the most frequent.” It is certain that *Phallus merulinus* is not a synonym for *Phallus indusiatus*, as stated by Fischer. Berkeley's name is a much better name than *Phallus irpicinus*, and for that reason might be taken, though not fully, in keeping with the latest rules.

<sup>2</sup>This is very much the same hymenium nature as the genus *Merulius*, and Berkeley's name, therefore, was not inapt. I can see no resemblance to the genus “*Irpex*,” and consider the name very badly chosen.



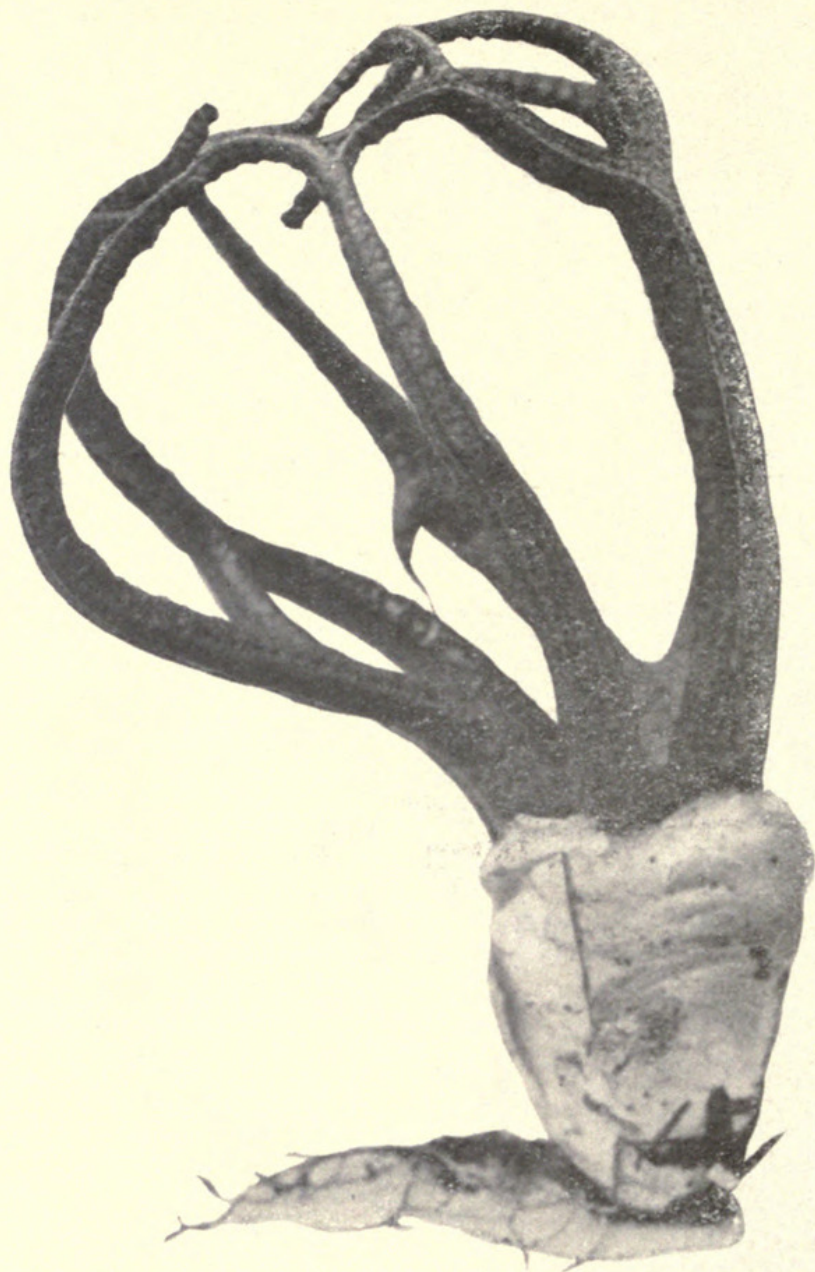


Fig. 212 -

CLATHRUS TREUBII.

The upper figure is a large specimen reduced one-third. The lower figure shows the manner in which the plant breaks up when old.



and account of this plant on page 334. It is a very distinct species with large meshes, and the primary arms somewhat columnal. It is known only from Java. Dr. Bernard also sends me a photograph illustrating the manner in which the old plants break up. The arms above in the clathrate portion are reduced in diameter, and in old specimens they break apart, and the primary arms separate. With the aid of photography Dr. Bernard has given us a perfect knowledge of this species.



Fig. 213.  
*Simblum gracile*  
(Ceylon)

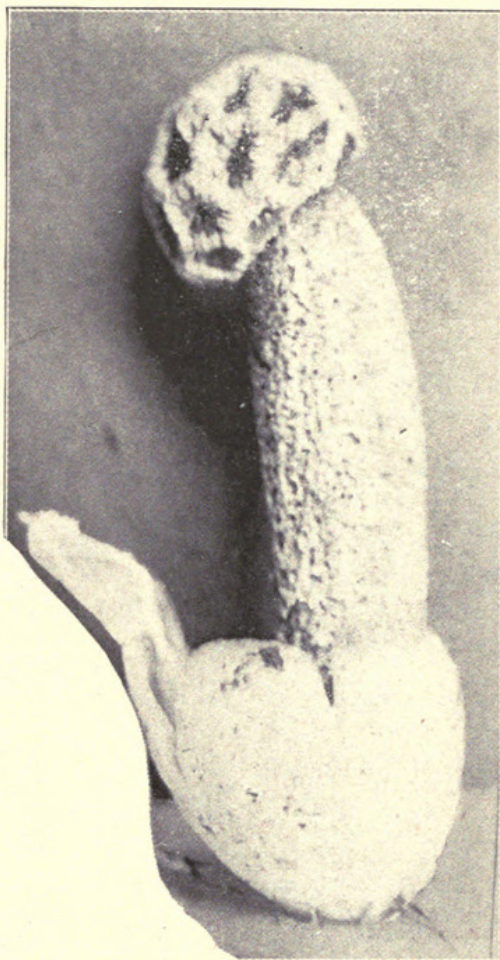


Fig. 214.  
*Simblum Texense*  
(Texas)

**SIMBLUM GRACILE** (Fig 213).—We are glad to present a photograph of *Simblum gracile* received from Dr. Charles Bernard, Java. It is a common and well known plant in Java and has been well illustrated by Penzig. The species is of particular interest to us in the United States because the question has been raised as to whether it is the same as our American species *Simblum Texense*. I am satisfied now it is quite distinct, for all of the Javanese illustrations show a globose head contracted into the stem, and different meshes from our American plant. The difference will be better appreciated by comparing Dr. Bernard's figure (Fig. 213) with that from Professor Long, (Fig. 214). Little is known about the original



species, *Simblum periphragmoides* of Mauritius<sup>1</sup> but Hooker's figure, which is well borne out by the specimen now at Kew, differs very much from both of these species, and I think we have three yellow *Simblums* quite distinct and worthy of names. *Simblum flavescens* as illustrated by Berkeley from a colored figure by Kurtz (now to be found at Kew) is I think the same as *Simblum gracile*.

**THAT RED LYSURUS.**—Mr. Harold Murray, of the Manchester Museum, of Manchester, England, writes me that the red *Lysurus* that he found is really white, merely having red arms. Mr. Murray is disposed to refer it to *Lysurus Clarazianus* of South America. I suspect if we really knew the truth about the matter all "species" of described *Lysurus* (except *L. Mokusin*) would be found to be very much the same thing.

**COLUS HIRUDINOSUS** (Figs. 215 and 216).—Thanks to Rev. C. Torrend, who sent us alcoholic material, we are enabled to give photographs and enlargements of this phalloid. We have always felt that the familiar figure of Tulasne, usually reproduced, does not represent this plant as well as does the most of Tulasne's work, and the original cut by Cavalier was very poor. As will be seen from the figure, *Colus hirudinosus* is a clathrate plant, the clathrate receptacles being supported on columns which are reunited at the base into a stipe. Rev. Torrend informs me that he finds specimens almost devoid of a stipe and suggests that the plant might be classed as a *Clathrus*. It is a small phalloid, our figure 216 representing the natural size of the specimens received in alcohol. The color is bright red and the plant is said to be very slightly foetid. We think our photographs will tell the rest of the story.

**HISTORY AND DISTRIBUTION.**—*Colus hirudinosus* is only known from the Mediterranean regions<sup>2</sup>. It was first collected in Corsica by a man named Soleirol, in 1820, who sent the specimens to Montagne and the specimens are now in Montagne's herbarium, labeled in his writing—"Clathrus hirudinosus Nobis". It was published by Cavalier and Séchier fifteen years later under the name *Colus hirudinosus*<sup>3</sup> from specimens that were collected in the vicinity of Toulon, France. Father Torrend finds it, not infrequently, in the vicinity of Lisbon, Portugal. It is known from the Maritime Alps and the Pyrenees and from Algeria and as previously stated was first collected in Corsica. The orig-

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<sup>1</sup> It is evidently a rare plant in Mauritius and Chas. O'Connor who is now observing the fungi of Mauritius has not as yet found it.

<sup>2</sup> Notwithstanding that Cooke copied Tulasne's figure and included it in the Australian Handbook there is no evidence that the plant ever grew in Australia.

<sup>3</sup> While the plant is advertised as "Cavalier and Séchier" it is evident to me it should bear the trade name of "Montagne". Cavalier and Sechier were local men who undoubtedly got all their information from Montagne and the fact that they used the specific name on Montagne's specimen was surely not a mere coincidence. They did not mention Montagne in their article but took all the credit (?) to themselves which, however, is customary in such conditions.



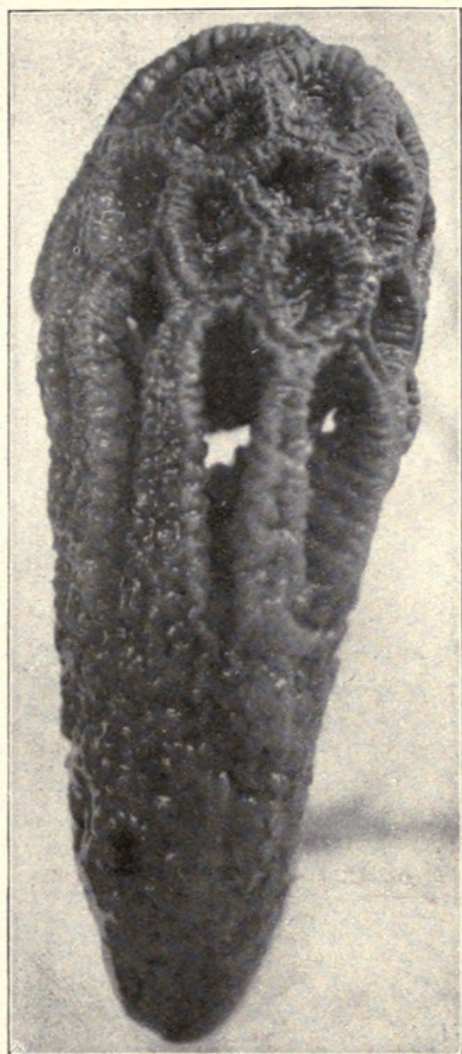


Fig. 215.



Fig. 217.



Fig. 216

- Fig. 216. *Colus hirudinosus*, natural size.  
 Fig. 215. Same without volva, enlarged x 4.  
 Fig. 218. *Jansia rugosa*, natural size:  
 Fig. 217. Same, pileus enlarged x 6.



Fig. 218.



inal collectors found it only on manure<sup>3</sup> but Father Torrend advises me he does not find it in such situations, but in the sand.

**LYSURUS BOREALIS.**—We have received a beautiful, large dried specimen of this phalloid from Mr. Geo. B. Fessenden, of Boston. We present a photograph of it (Fig. 219), in order to show what can



Fig. 219.

*Lysurus borealis* (from dried specimen).

be done in drying phalloids if they are carefully dried. We believe everything can be learned from this specimen of Mr. Fessenden's that could be learned from the growing plant, particularly as he favors us with a memorandum of its colors when fresh. Mr. Fessenden's specimen convinces us pretty thoroughly of the correctness of the opinion we have previously taken that the species of *Lysurus* originally from Ceylon, called *Lysurus Gardneri*, and then from Australia, called *Anthurus australiensis*, and then from this country, called *Anthurus borealis*, are all one and the same plant.

**MUTINUS ELEGANS.**—Mr. C. C. Hammer, of Connecticut, has forwarded us some eggs of *Mutinus elegans* in a younger condition than the section we showed in our Plate 93. The disposition of the gleba in the very young egg is different from what we had supposed. It is a thick layer surrounding the upper portion of the young stipe, as shown in Fig. 220, made from Mr. Hammer's speci-



Fig. 220.



Fig. 221.

men. At a later stage the stem elongates and pushes up through the gleba, as shown in Fig. 221, which was made from the egg of the same species in a later state.

<sup>3</sup> We stated in our "Phalloids of Australasia" that it "grows only on manure", which it develops is erroneous. We had this impression from the notes of the original collector (Soleirol) who stated that it differs from *Clathrus cancellatus* in its habitat. He found it in Corsica originally, only "sur les bouses de vaches" and later specimens he sent were "sur les fientes d'animaux".



PHALLUS DUPLICATUS OF MAURITIUS.—Those who have compared our figures 222 and 223, originally printed on page 371 of *Mycological Notes*, may reasonably question if they represent



Fig. 222.

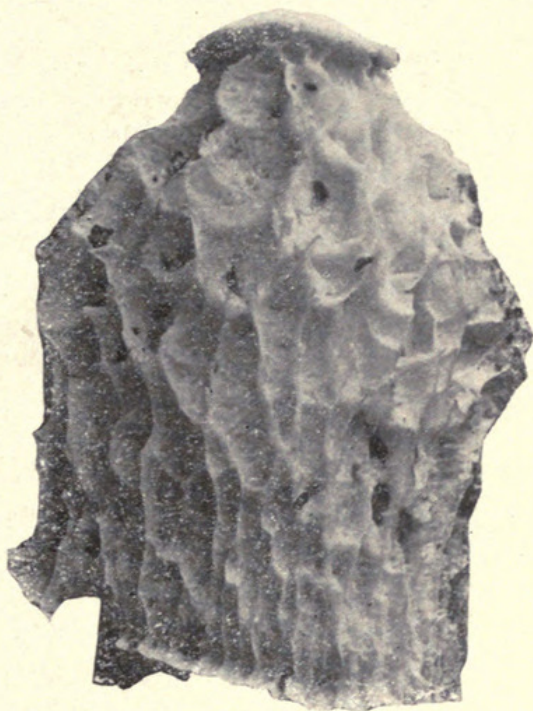


Fig 223.

the same species. One of the problems constantly confronting the systematist is, what amount of variation may be allowed the same species. We should be better able to judge of this matter if we had abundant collections of phalloids from the tropics, and could compare the reticulations of the pilei. However, we would rather err on the side of liberality than of narrowness in the consideration of species. There is no more difference in the reticulations of the Mauritius form and the American form that we have called *Phallus duplicatus* than there is in the illustrations of *Phallus indusiatus*, as shown in Moeller's photographs from Brazil, and Mr. Moeller states he finds *there* all connecting forms. The pileus of Mr. O'Conner's species, Fig. 222, is very similar to that represented by Penzig as a phalloid from Java, which he called *Phallus favosus*, but that species has no veil. The Mauritius form does not have as strong an apical collar as the American, and it perhaps would have been better to have given it a separate name to indicate this form.

*JANSIA RUGOSA* (Fig. 218 and Fig. 217 enlarged six diameters).—In a fine lot of alcoholic phalloids that Dr. Bernard sent us from Java is a specimen of *Jansia rugosa* which was so beautifully



illustrated by Penzig. The genus *Jansia* is very similar to the genus *Mutinus*, but the gleba-bearing portion differs markedly from the stipe, being more of the nature of a pileus at the apex of the stipe. In this species as will be seen from our enlargement (Fig. 217) it is strongly rugulose and the plant is well named.<sup>1</sup> There are two species of *Jansia* in Java, as fully brought out in Penzig's paper. Both are very small plants and the other species *Jansia elegans* is less frequent. (See Figures on page 385).

HISTORY.—There is no question, as Fischer has learned from examination of the types at Berlin, but that this is the same plant as called *Floccomutinus Nymanianus* and poorly illustrated. As both the name and the work were poor we prefer to adopt the better work done by Penzig. Whether or not the genus *Jansia* is the same as the genus *Floccomutinus*, it is difficult to decide from the original figure and description of the latter genus. From Fischer's work they seem to me distinct. There is another alleged species by Cesati from Borneo, *Mutinus borneensis*, which I suspect will eventually prove to be the same as *Jansia rugosa*.

## TORRENDIA PULCHELLA.

We are pleased to give figures, illustrating this unique genus, which are made from alcoholic material received from Rev. C. Torrend, Portugal. The genus *Torrendia* is something out of the ordinary and is widely removed from all previously known *Gastromycetes*. It is a fleshy plant most nearly related I think to the *Hymenogasters*, but with the general appearance (see Fig. 224) of a little *Amanita*. It is enclosed in a volva when young that in the mature plant remains as a cup at the base. The stem lengthens as the plant develops from the egg and is entirely distinct from the pileus. The pileus is a convex hemispherical cap of a soft, fleshy nature, homogeneous to the eye, but under the microscope is seen to consist of chambers filled with hyaline spores. The spores (Fig. 225) are narrowly elliptical, hyaline, smooth, with granular contents and measure about 6 x 16 mic. The entire plant is pure white and the size is shown in our Fig. 224.

HISTORY AND DISTRIBUTION.—There is but one species, *Torrendia pulchella*, known and it was described in 1901. It grows in the sand and has only been collected by its discoverer, Rev. C. Torrend, in Portugal. It has no very close relations to any other known plant, differing from most *Gastromycetes* in not having pulverulent spores; from all phalloids in the permanent chambers of the pileus; and from the *Hymenogasters* entirely in its pileate nature. Being restricted as far as known to the Iberian peninsula it is very appropriately named after Rev. C. Torrend who has done so much to make known the mycology of this region.

WANTED EGGS.—Should any of my friends find the undeveloped eggs of *Lysurus borealis* (or *Anthurus borealis* as often called) I hope they will do me the favor to send me a few in formalin or alcohol. I should like to "study the structure".

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<sup>1</sup> That is specifically. Generically it was named after a local botanist of Java. Dr. Penzig missed an opportunity when he did not name the genus after the phaenogamic genus *Piper* of the tropics, for the gleba-bearing portion has the same general appearance as the fruit of the genus *Piper*, and it would have been a most excellent name for it.



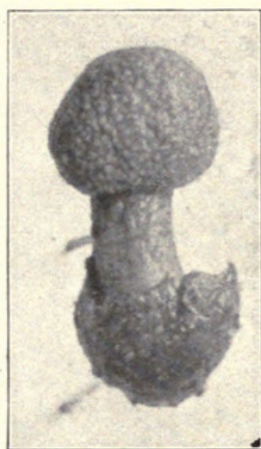


Fig. 224.

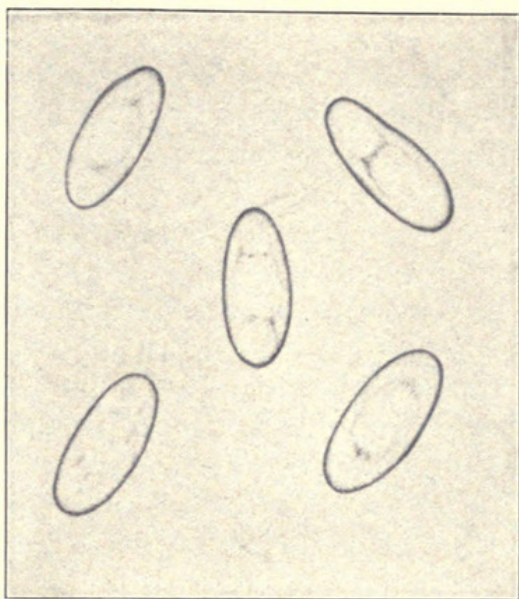


Fig. 225.

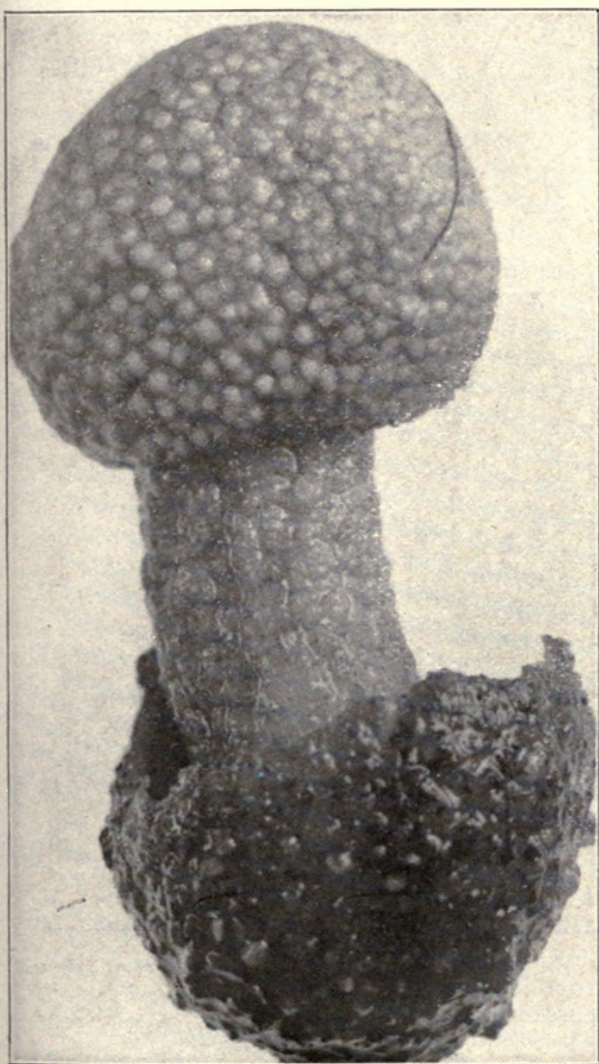


Fig. 226.

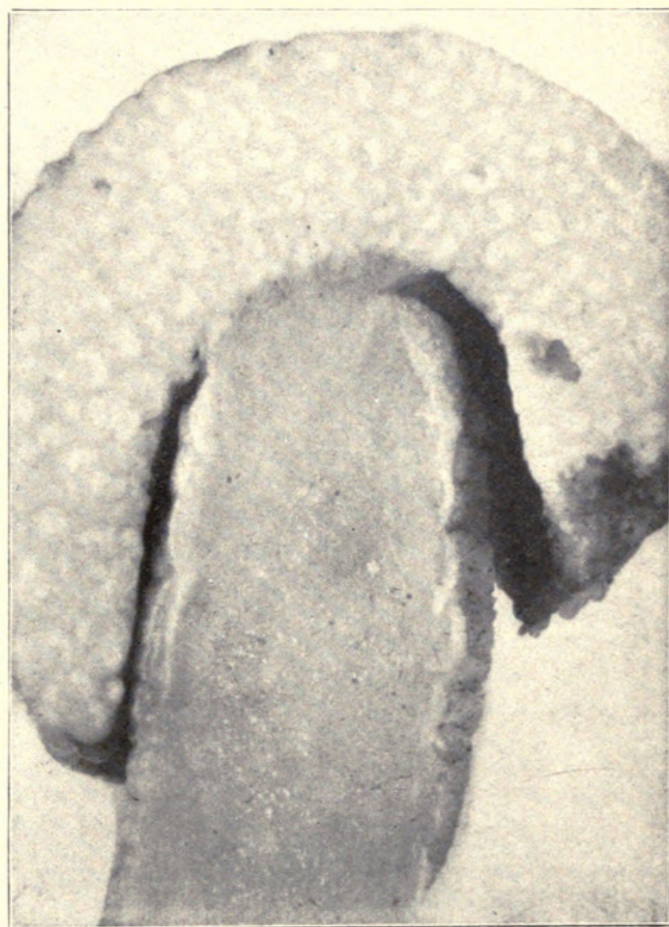


Fig. 227.

TORRENDIA PULCHELLA.

Fig. 224 natural size.

Fig. 226 enlarged x 4.

Fig. 225 Spores (x 1000.)

Fig. 227, section enlarged x 6.



## THE GENUS MATULA.

There has been a very bad muddle made with reference to the genus *Matula*, as found in the latest text-books, Saccardo, and Engler and Prantl. This can be traced originally to ambiguous work on the part of Berkeley. The genus *Matula* is a curious genus, closest, I think, to the *Nidulariaceae*. It consists of little cup-shaped plants, looking superficially like a little *Peziza*. The color is white, or pale, and the texture, when dry, is rather hard and horny, though when fresh and moist is said to be somewhat gelatinous. The spores are very numerous, and seem to fill almost the entire interior of the plant. They are contained in cells or chambers, and the walls of the chambers in the plants partially persist and partially disappear. Fig. 229 is by Masee, showing his idea of an enlarged cross section of a cup. I do not know the method of dehiscence, but Father Rick, in one of his letters to me, mentions it. I have never seen a plant that had opened. The spores remind me of those of the large-spored species of *Cyathus*. They are perfectly globose, 18 to 20 mic., hyaline with thick spore walls (about 3 mic.). They do not appear to me to be basidial spores (neither do *Cyathus* spores, cfr. *Nidulariaceae*, p. 6). Mr. Petch, of Ceylon, who has studied their development writes me that they are borne singly on side branches of indefinite, long hyphae, with nothing resembling a basidia.<sup>1</sup> They seemed to be packed very densely in the chambers of the plant.

RELATIONS.—The relations appear to be entirely with the *Nidulariaceae*. The spores are the same, but are contained in chambers in the tissue, not in separate peridioles. The structure is very much like that of *Torrendia*. The genus has no relations to the *Thelephoraceae*, where it is placed (in a foot note) in Saccardo.

HISTORY.—When Berkeley wrote on the plants of Cuba, he established a genus *Michenera* in the *Thelephoraceae*, and called the species *Michenera Artocreas*.<sup>2</sup> It had peculiar "lemon-shaped" large spores, borne, of course, on the surface (and now demonstrated to be conidial spores). The genus *Matula*, Berkeley first received from Ceylon, and he made a new genus for it, *Artocreas*, and called the plant *Artocreas poroniaeformis*. It had the spores in cells in the interior of the plant, as Berkeley knew, for there is a sketch (by Broome) showing such structure with the type specimen. Berkeley made no reference to it, however, and states "a species of the same very distinct genus, *Artocreas Micheneri*, occurs in the United States." As *Artocreas Micheneri* appears to be simply a transposition of the previously published *Michenera Artocreas*, it has been usually assumed that the genus *Artocreas* was an inadvertent publication, and that Berkeley intended to write *Michenera*,<sup>3</sup> hence the Ceylonese species is included in *Michenera* in Saccardo and Engler and Prantl, though it has not

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<sup>1</sup> When the genus *Matula* was established it was said to have basidia, in fact, a picture was shown of them. I am afraid a good deal of such work is largely made up, and I would personally prefer to rely on the observations of Mr. Petch. It is a subject, however, I know nothing about.

<sup>2</sup> "The genus *Michenera*, as far as the type species (*M. Artocreas*) at least is concerned, can not be accepted. *Michenera Artocreas*, as shown by culture, is undoubtedly merely a conidial form of a *Corticium*, probably *C. subgiganteum*."—W. G. FARLOW.

<sup>3</sup> I had that impression myself when I was at Kew, and did not investigate as closely as I should have done. When I look the subject up now I note that Berkeley does not cite the same collection numbers for *Artocreas Micheneri* that he does for *Michenera Artocreas*.



the slightest structural relation to it. Massee afterwards brought out the genus *Matula*,<sup>4</sup> and gave full account of its structure, basing it on the Ceylonese species. Saccardo compiled it in a foot note under the Thelephoraceae, which is rather a strange proceeding, if he believes Massee's account. I do not see any grounds for not taking the genus *Matula*, unless it should develop that the genus does grow in the United States, and that *Artocreas Micheneri* is different from *Michenera Artocreas*.

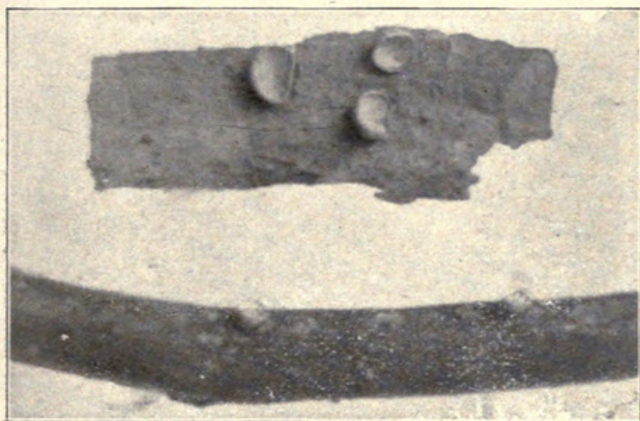


Fig. 228.

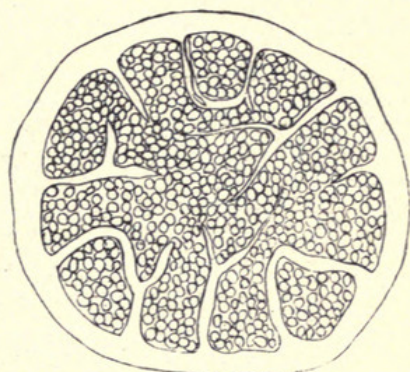


Fig. 229

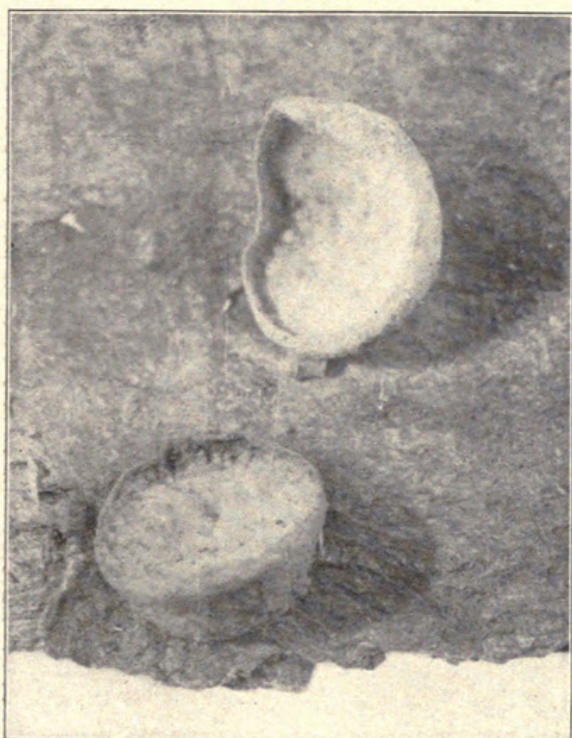


Fig. 230.

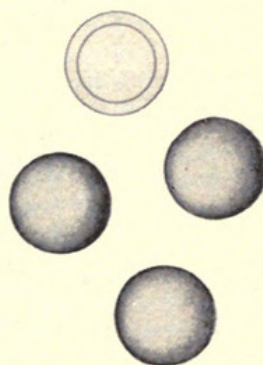


Fig. 231.

#### THE GENUS MATULA.

Fig. 228, plants natural size.

Fig. 230, cups enlarged x 6.

Fig. 229, section of cup enlarged, from Massee.

Fig. 231, spores and section enlarged x 500.

**SPECIES.**—There have been two species of *Matula* proposed (assuming that the plant called *Artocreas Micheneri* from the United States is the same as *Michenera Artocreas* of Cuba). These are *Matula poroniaeformis* of Ceylon and *Matula Rompelii* of Brazil (published as *Michenera Rompelii*). From the relatively scanty material that I have I can not say whether they are the same or not, but they are very close. They have the same shape, color, size, struc-

<sup>4</sup> The name is more appropriate than elegant.



ture and spores.<sup>5</sup> The only difference I can note is that the Ceylonese plant has a thicker cup, over two mm. thick, while my specimens from Brazil are a scant mm. thick. I am inclined to think that in time they will prove to be exactly the same plant.<sup>6</sup>

## LIGHT ON BOVISTA TOMENTOSA.

Ever since we began work with the puff balls, there has always been one species of Europe that was a mystery to us. This is *Bovista tomentosa*, as illustrated by Vittadini and Quèlet, (cfr. page

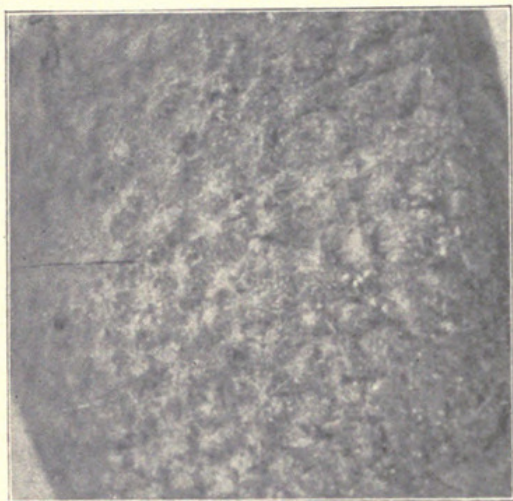


Fig. 232.

Cortex of *Bovista tomentosa* enlarged, x 6.

263). We have never seen any *Bovista* from Europe with a *tomentose* cortex, but we have always had faith in Vittadini's work, as we have worked after him enough to know there was something back of everything he wrote, and that Vittadini did not belong to that class of mycologists who imagine things. We believe that light has been thrown on *Bovista tomentosa* from specimens *received from Australia*. It is a long ways to go to hunt up evidence as to European plants. The genus *Bovista* is a rare genus in Australia, strange to say, and neither of the common species of Europe and America, *Bovista plumbea*, *nigrescens* and *Pila*, is known to occur there. I found at Kew a single collection of a *Bovista* from New Zealand named by Berkeley, *Bovista brunnea*. It had a smooth peridium, and was well named *brunnea*, as its chief distinction from the common *Bovista plumbea* of Europe seemed to be that the peridium *was brown*. Then we received a specimen from some unknown friend in New Zealand, and then the same *brown* species from two European correspondents (Professor C. Massalongo, Italy, and Professor Jos. Rompel, Switzerland). We referred the European collections to the New Zealand species. Plants since received from Walter W. Froggatt and also Walter Gills, Australia, are this same *brown* species, but both are accompanied by young specimens and the cortex is composed of small spines (might be called tomentose) and it is the only true *Bovista* that does not have a *smooth* cortex. (See Fig. 232, enlarged x 6.) We feel that this is a solution of the *Bovista tomentosa* puzzle of Europe and that *Bovista brunnea* is an old specimen of *Bovista tomentosa*. I ought to add that Dr. Hólos has gotten the matter right as far as the European species is con-

<sup>5</sup> The spores of both species are unusually uniform in size, a scant 20 mic., and a little smaller, not more than one or two microns in the Brazilian plant. In the type specimens I do not find any spores over 20 mic., and the measurement, "24-28 mic.," is too large.

<sup>6</sup> When Father Rick found the spores of his plant to be scarcely 20 mic. in diameter, he was justified in not referring it to the Ceylonese species, described as having spores "24-28 mic." But like many so-called "new species," it will develop, I think, that it was based simply on the error of the "old species."



cerned and that Fuckel's Exsic. No. 1884, belongs here as he states, but I take no stock in his reference of the American species, *Bovista minor* and *Bovistella dealbata*, to the same species.

## A MAMMOTH FORM OF LYCOPERDON PULCHERRIMUM.

What would undoubtedly have been a "new species", had it been sent separately, was received from E. Bartholomew, Stockton, Kansas. It was a large, turbinate plant (See Fig. 233) more of the

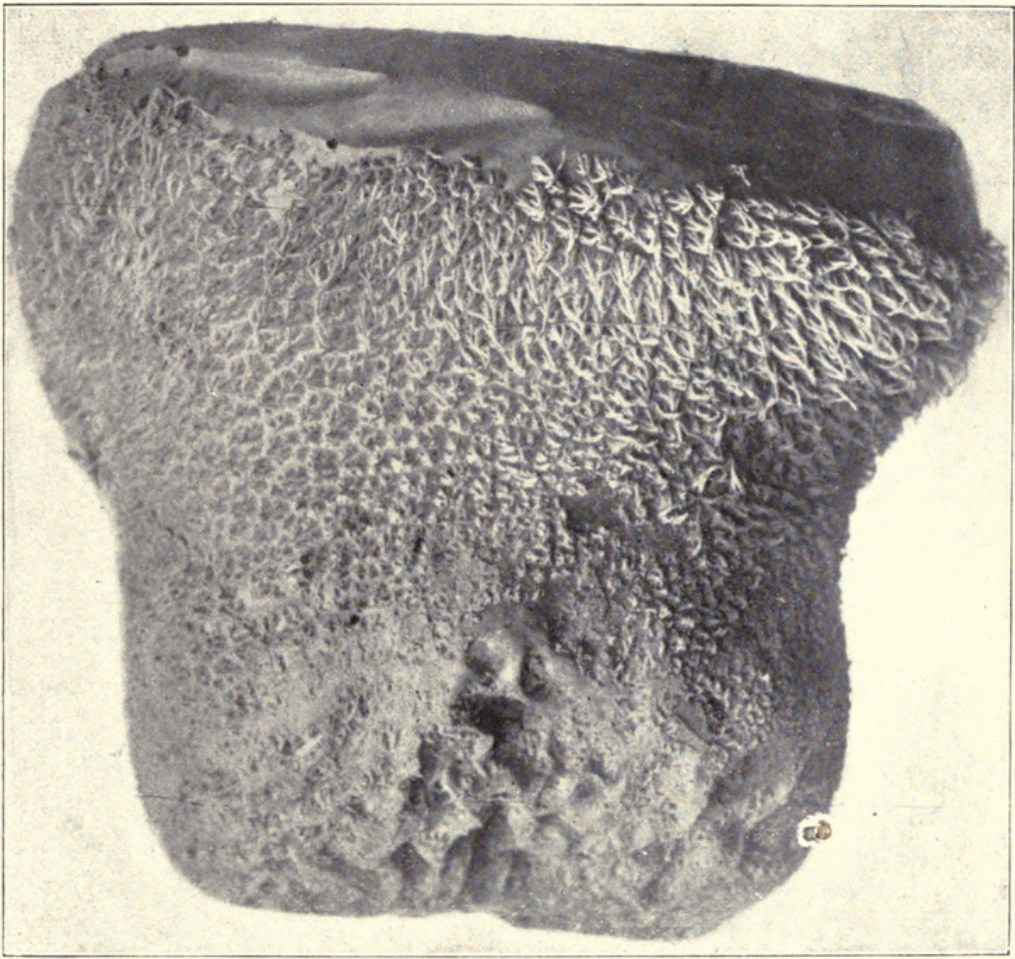


Fig. 233.

*Lycoperdon pulcherrimum* (mammoth form)

shape of a *Calvatia* than of any *Lycoperdon* of our eastern states. It had exactly the same cortex, gleba color, capillitium and spores as *Lycoperdon pulcherrimum* and was accompanied by smaller plants that are exactly our usual form of this species. We, therefore, have to refer it to our eastern species, but if sent alone it would have been a good "new species". Shape and size do not seem to count for much in the puff balls, and our species develop more luxuriant forms in the west than in our eastern states.



## POLYSACCUM ALBUM.

When I examined the types of this species, which are small, smooth and white, I thought it was a young specimen of *Polysaccum pisocarpium*, and have so referred it (*Lyc. of Aus.*, p. 12). I have just received from R. T. Baker, Sydney, Australia, two fine specimens



Fig. 234.

(Fig. 234) which are mature, and appear to me as being different from the European plant, hence I conclude that *Polysaccum album* is a good species as "species" of *Polysaccum* run. While it is so close to *P. pisocarpium* that it is difficult to explain the difference, Mr. Baker's specimens are white, smooth and firm. When fresh I think they are especially liable to discoloration if bruised, and the tissue paper in which they are wrapped is stained, and the specimens are spotted black, evidently where bruised. It is probable that *Polysaccum marmoratum* is based on this character which all "species" of

*Polysaccum* seem to have, of spotting when bruised. The "type" specimens of *marmoratum* are rather the shape of *crassipes* than that of *pisocarpium*. The genus *Polysaccum* consists in reality of one polymorphic species, and it is a simple matter to so designate it and dump all the specific names into one. Different collections, however, differ so much from each other that this treatment will not satisfy the average systematist who would separate the marked forms. But unless his experience is limited, he will be embarrassed to definitely refer to these forms or "species" the specimens he examines. Contrasting Mr. Baker's specimen with the usual collection of *Polysaccum pisocarpium*, it differs markedly in its smooth, white peridium, and is hence a good "species" as far as any species of *Polysaccum* are "good."

LETTERS.—The Letters we have issued from time to time are principally reports of specimens received and are not sent to our regular mailing list. We have sent them chiefly to those whose names appear in the reports of plants in each letter. However, those desiring to complete sets for binding can secure these Letters by sending request to the Lloyd Library, No. 224 West Court Street, Cincinnati, Ohio, specifying the numbers missing from their sets. We have just reprinted Letter No. 1, and can at present supply any of the back numbers. Nineteen Letters have been issued to date.



## THE GASTROMYCETES OF SCHWEINITZ'S HERBARIUM.

During a recent visit I made to Schweinitz's herbarium, I studied his specimens of Gastromycetes very carefully with reference to his published determinations. I had previously worked with them, but it was when I first began with the Gastromycetes, and I feel in much better position to pass on them now than at the time of my former visit.

The following is a complete account of the specimens preserved in the herbarium, using the names as found in Schweinitz's published list:

Of the phalloids, only *Phallus indusiatus* and *Phallus duplicatus* exist. Both are in too poor a condition to pass an opinion on, but a veil can only be plainly seen on the former.

*Tuber cibarium* is only represented by a fragment from Europe.

*Rhizopogon albus* is *Rhizopogon luteolus*. *Rhizopogon virens* is very scantily represented, and *Rhizopogon aestivus* is probably not a *Rhizopogon*.

*Nidularia striata* is *Cyathus striatus*. *Nidularia campanulata*, *Nidularia Crucibulum*, *Nidularia juglandicola*, and *Nidularia scutellaris* are all the same plant—*Crucibulum vulgare*. *Nidularia stercorea*, *Nidularia melanosperma*, and *Nidularia rugisperma* are all *Cyathus stercoreus*. *Nidularia fascicularis* is *Cyathus vernicosus*. There are no specimens of *Nidularia pulvinata* in the collection but one from Lusatia (labeled *Nidularia farcta*), which is, without doubt, the same thing, viz.: *Nidularia pisiformis*.

*Arachnion album*, a nice type, as now well known.

The next thirteen species in Schweinitz's list, with the exception of *Sphaerobolus stellatus* (which is correct), are none of them nowadays held to belong to the Gastromycetes. Only half of them are now represented in the herbarium.

*Elaphomyces cervinum* and *Scleroderma spadiceum* are both *Elaphomyces*, I judge, but as to the species I can not say, as I am not informed as to the *Tuberaceae*.

*Scleroderma citrinum* and *Scleroderma verrucosum* are both *Scleroderma aurantium*. *Scleroderma Cepa* and *Scleroderma polyrhizon* are both *Scleroderma Cepa*. *Scleroderma Lycoperdioides* is not represented, and I have always suspected, from the description, that it is the common species which we now know as *Scleroderma tenerum*. As I become more familiar with this species, I am more convinced that it was the plant Schweinitz had, but unfortunately there is no specimen to confirm it.

"*Uperrhiza Boscii*"—there is no specimen. I think no one knows what plant Bosc figured under the name.

*Mitremyces lutescens*—there are four specimens on the sheet. One, a young specimen, full of spores; the other three have the peridia broken away, and are little more than rooting bases. The young specimen is, externally, typically *Mitremyces Ravenelii*, and the spores confirm it. On scraping the broken plants, I obtained the same oblong spores, and I am assured now that the plants are all *Mitremyces Ravenelii*. Schweinitz was so clear in his writings that I can not but feel he had a correct knowledge of *Mitremyces lutescens*, notwithstanding the contradictory evidence of his herbarium, and, it will readily be seen, that I would have good grounds to juggle the accepted definitions of the *Mitremyces* species on the evidence of Schweinitz's herbarium, if I were so disposed. *Mitremyces cinnabarinus* is typically that plant.

*Actinodermium Sterrebeckii* is *Scleroderma Geaster*.

*Geaster pectinatus* is doubtfully correct. The endoperidium is not enough pedicellate. More probably, I think it is an old specimen of *Geaster Archerii*,



the exoperidium reflexed, the fleshy layer gone, so as to give the endoperidium a subpedicellate effect. *Geaster quadrifidus* is *Geaster coronatus*, a large specimen, and a rare plant in the United States. *Geaster minimus* is the type of this well-known species; *Geaster rufescens* is as we now know it. *Geaster hygrometricus* and *Geaster fibrillosus* are both the former.

*Bovista gigantea* is wrong. It has lilac spores, and is *Calvatia lilacina*. *Bovista craniiformis* is *Calvatia craniiformis*, as now known. Professor Morgan told me that before adopting the specific name he sent a plant to Philadelphia and had it compared with Schweinitz's type. *Bovista nigrescens* is *Bovista Pila*. Schweinitz could hardly have been expected to distinguish between these two species, as it is solely a microscopic spore difference. *Bovista nigrescens* is not known to occur in the United States. *Bovista plumbea* has the general, external appearance of being correct, and I think I so passed it on my previous visit. The microscope shows, however, that it has entirely different capillitium and spores, and is an immature *Catastoma*, the same species as the next. *Bovista candida* is *Catastoma circumscissum*, as now known. This plant, and its larger-spored form, have been taken to be a new species at least a dozen times, and including the juggled ones, has probably twenty different names. Schweinitz's name, *candida*, is the earliest one I have thus far succeeded in unearthing.<sup>1</sup>

*Lycoperdon pratense* is not in good condition, but is, I think, old decorticated specimen of *Lycoperdon cruciatum*. *Lycoperdon echinatum*, from its white spines, is *Lycoperdon pulcherrimum*. *Lycoperdon piriforme* is correct, and also *Lycoperdon quercinum* is a form of it. *Lycoperdon excipuliforme* and *Lycoperdon perlatum* are both *Lycoperdon gemmatum*. *Lycoperdon utriforme* is too fragmentary to name.

*Tylostoma brumale* and *Tylostoma squamosum*. It would be hazardous to pass an opinion on such specimens as these. The former is too large to be typical of the European plant (*mammosum*).

The remainder of Schweinitz's *Gastromycetes* are all *Myxomycetes*, hence do not fall in my line of work.

DO YOU KNOW A FETID PUFF BALL?—I am told by Rev. J. Rick (now in Brazil) that he once collected in Holland a *Lycoperdon* that was *truly fetid* when fresh. We know that Bonorden described a *Lycoperdon foetidum*, but he found so many new species that no one else ever found that we have not placed much stress on any of his "finds." Rev. Rick's observations, however, can be relied upon, and I hope mycologists in Europe will be on the lookout for a *fetid* puff ball.

LATIN TERMS.—In our work on the Nidulariaceae we used several Latin words where the English would have been better. Thus, "funiculus" for funicle, "tunica" for tunic. We did not do this to show the little Latin we may know, as we do not question that we show how little that is quite frequently without intention. We wrote the article at Paris, out of touch with English dictionaries and our reference works (Tulasne and Saccardo) were in Latin. We did not know what the corresponding English words were for these terms, nor in fact if there were any.

THE "CAPILLITIUM" OF NIDULARIACEAE.—None of the Nidulariaceae have capillitium, although it has been a tradition of the subject ever since De Toni mis-read Tulasne's account and defined *Cyathus* as having "sporaefilamentis immixtae". Dr. Hóllós on Plate 28 shows spores and "capillitium" of several species. What he takes for capillitium is the hyaline, nodular strands of the funiculus, and have the same relation to capillitium that a kite string has to the frame work of a kite. You must not believe everything you see in print, nor all the pictures, even if they are put forth as "science".

<sup>1</sup> Professor McGinty writes me that he calls it "*Catastoma candidum* (Schw.) McGinty," or "*Disceda candidum* (Schw.) McGinty," depending on whether he is writing for American or European jugglers.



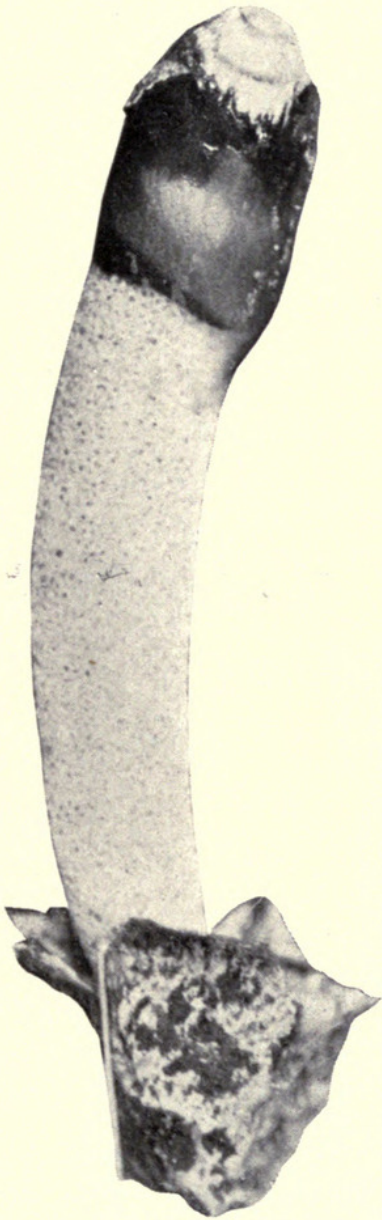


Fig. 1.



Fig. 2.

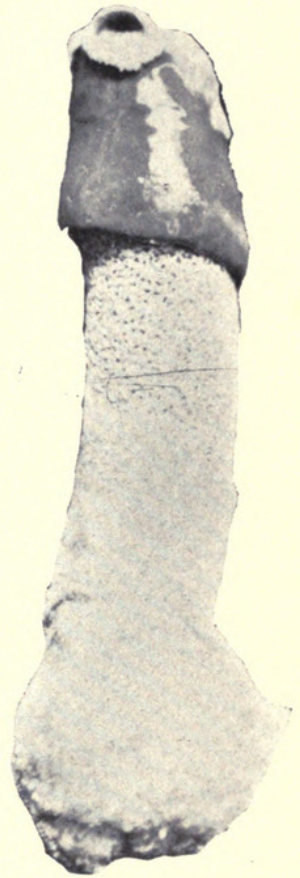


Fig. 3.

Photograph by W. H. Long, Jr., Texas.

PHALLUS RUBICUNDUS.





Fig. 4.

Photograph of the type specimen, given me by Professor Patouillard.

PHALLUS IRPICINUS.





Lloyd, C. G. 1908. "Mycological Notes, No. 30." *Mycological writings of C. G. Lloyd* 2, 381–396.

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