

From the *London Journal of Botany*, v. 3, 1844:  
185 – 194.

[Running title: “DECADES OF FUNGI”.]

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*Decades of FUNGI, by the* REV. M. J.  
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*First Decade, (With Two Plates, TAB. V. & VI.)*

It is intended under the above title to give notices of new or rare species of Fungi in the collection of Sir W. J. Hooker. Occasion also will be taken, of correcting former errors and making up omissions, where it is thought advisable to do so; localities of Fungi will be intercalated after the method adopted by Dr. Montagne in his “ Four Centuries of Cryptogamic Plants,” the intercalated species being distinguished by an asterisk. Small collections from different countries may thus be enumerated, while larger collections will furnish materials for distinct memoirs. It is much to be wished that collectors of Fungi, would take notes of the colour and substance of their species when gathered; the latter point, especially, being very essential towards ascertaining their affinities. The value of such annotations can best be appreciated by those who have to contend with all the difficulties, which arise in the examination of exotic forms; difficulties which are multiplied ten fold in the genus *Agaricus* from so many of our commoner forms, occurring with slight modifications in tropical or subtropical countries.

1. *Agaricus* (*Pleuropus* [*sic*: *Pleurotus*]) *nidiformis*, n. s. prægrandis; pileo carnoso cupulæformi glabro rufo; margine lobato-fisso tenui acuto; stipite centrali brevi compresso irregulari firmo glabro; lamellis ad basin stipitis decurrentibus latis distantibus, hic illic ramosis, ochraceis; interstitiis lævissimis vel reticulatis.

On the ground. Swan River. *Mr. Drummond.*

Pileus forming a cup 6 inches deep, 16 inches broad from margin to margin following the concavity of the cup, fleshy except at the lobed incised margin which is very thin and acute, perfectly smooth, reddish brown. Stem central irregular, 1½ inch high and thick, collecting by its mycelium a mass of small pebbles, compressed smooth of the same colour as the pileus. Gills very broad in the centre, distant, thick at the base, thin and acute at the edge, now and then branched, running down to the base of the stem, ochraceous with the edge umber when dry; interstices either perfectly even or remarkably reticulate in the same individual.

Allied to *Ag. ostreatus*, but a far more magnificent species; when fresh it must be one of the finest of the genus.

\* *Ag. fascicularis*, Huds.

Cape of Good Hope. *W. H. Harvey, Esq.*

\* *Ag. laccatus*, Scop.

Cape of Good Hope. *W. H. Harvey, Esq.*

2. *Bolbitius mitraformis*; Harv., pileo membranaceo mitraformi acuminato, supra medium striato; stipite gracili flexuoso candido minutissime albo-farinaceo, lamellis adscendentibus valde attenuatis angustissimis anastomosantibus, subinde furcatis. (TAB. VI. B.)

On tenacious clay containing a little iron. Devil's Mount, C.B.S. *W. H. Harvey, Esq.*, 1841.

Gregarious. Pileus 1 inch high, ⅓ of an inch broad, membranaceous, mitraform, much acuminate, becoming more so as the plant advances in age, finely striated more than half way up, margin very thin, ragged. Stem fistulose, nearly 2½ inches high, 1 line thick, white, often twisted, flexuous, sprinkled with very fine white meal. Gills, extremely narrow, ascending, much acuminate, anastomosing, sometimes forked, argillaceous. Spores broadly cymbiform with a minute, lateral peduncle.

Resembling in form *Ag. callosus*, but evidently allied to *Ag. titubans*, *Boltonii*, &c., now separated under the name

of *Bolbitius* on the same grounds as *Coprinus*. The species when dry, from its elongated pileus and twisted stem, has the air or [*sic*: of] a *Podaxon* in miniature.

Tab. V. B. fig. 1. *B. mitræformis*, *nat. size*. f. 2. portion of the gills, f. 3. spores, *both magnified*.

3. *Cantharellus* (*Pleuropus*) *capensis*, n. s., pileo orbiculari cupulæformi vel expanso membranaceo candido demum fuscescente villosa, vertice porrecto breviter stipitato; lamellis e centro radiantibus latiusculis subsimplicibus interstitiis reticulatis.

On decayed stalks of herbaceous plants. Summit of Table Mount C.B.S. *W. H. Harvey, Esq.*

Pileus  $\frac{1}{4}$ [-]<sup>5</sup>/<sub>12</sub> of an inch broad, orbicular, with the margin entire or very slightly lobed, white, at length dingy brown, villous, attached by a short stem arising from the elongated vertex. Gills broad for the size of the pileus, radiating from the centre, simple, or nearly so, not distinctly branched, with strongly marked subquadrate reticulations between them.

This species is distinguished from *Cantharellus Bryophilus* by the beautifully reticulated interstices of the simple gill-like folds.

4. *Polyporus* (*Pleuropus*) *brunneolus*, n. s. suberoso-coriaceus; pileo tenui reniformi-flabellari cervino-pallido crebri-zonato sericeo-nitente; margine acutissimo, stipite brevissimo; hymenio contextu que pileo subconcoloribus; poris minutis punctiformibus dissepimentis obtusiusculis. *Pol. modestus*, Berk. in Hook. Journ. of Bot.

Cuming. Philippine Isles, n. 2027.

Pileus renato-flabelliform,  $2\frac{1}{4}$  inches broad,  $1\frac{1}{4}$  inch long, very thin, but rigid and corky, of a pallid fawn-colour, with a silky lustre, elegantly marked with numerous very narrow concentric zones, and a few shallow furrows. Stem consisting of merely a round disc. Substance and hymenium nearly of the same colour with the pileus. Pores scarcely visible to the naked eye, rather long for the size of the species, punctiform, with the edge of the dissepiments rather obtuse.

This is a very elegant species, which I referred in the first instance to *Pol. modestus*, Kze. but that species, of which I have lately seen authentic specimens, resembles some states of *Pol. xanthopus* and *affinis*. The pilei are sometimes laterally connate though arising from a distinct base.

5. *P. (Apus) portentosus*, n. s. giganteus, pileo carnosio demum friabili pulvinateo vertice elevato glaberrimo azono cuticulo tenui alataceo vestito margine subtenui flexuoso; hymenio convexo poris pro ratione pilei brevibus parvis intus pallidis extus fuscis, demum secedentibus, dissepimentis tenuibus.

Swan River. *Mr. Drummond*, n. 125.

Stemless. Pileus a foot or more in diameter, 10 inches long, 6 inches thick, very light and brittle when dry, extremely convex, especially at the vertex, which is much elevated, pulvinate, with about three depressions which cause corresponding waves in the margin of the pileus, which is thin in proportion to the rest of the plant, clothed with a delicate perfectly smooth tan-coloured cuticle. Hymenium convex, extending to the edge of the pileus, which is not inflected; pores rather short, pale within, externally of a dark brown, at least in the dry plant, small,  $\frac{1}{72}$  of an inch broad, at length separating from the pileus.

This magnificent species is nearly allied to *Pol. betulinus*, with which it accords in many respects, but its general appearance is very different. The same species, apparently, was gathered in Brazil by Mr. Gardner, but the specimen is still imperfect though of a considerable size, and consequently the colour is deeper than it would be in the fully expanded pileus. It is also minutely scabrous, a character which would probably vanish with age.

\* *Pol. australis*, Fr.

Philippine Isles. *Cuming*, n. 2041.

\* *Pol. ochreo-laccatus*, Mont, in Ann. des Sc. Nat. Oct. 1842.

Philippine Isles. *Cuming*, n. 1979.

The varnished coat of this species is so extraordinary that at first I was inclined to think it artificial.\* It invests not only the pileus but the tubes themselves, and must, when the plant was gathered, have been moist, as the strong brown paper in which the specimens were wrapped adheres to the hymenium. I have now seen several specimens which are precisely in the same condition. It appears to me probable that the varnish is owing to an exusion from the tree at the point of growth, but even in this case, the species will remain good, the pores and manner of growth being very different from those of any state of *Pol. australis*, not to mention the pale ochraceous pileus.

\* Sir W. J. Hooker received a collection of Fungi from South Africa, almost every specimen of which had been varnished with a view to preserve it from insects.

6. *Pol. (Apus) tostus*, n. sp. dimidiatus, lignoso-coriaceus; pileo imbricato-confluenti lobato-multiplici tenui crebri-zonato, zonis hic illic elevatis radiatim rugosis, fusco variegato; basi effusâ; poris brevibus mediis angulatis, dissepimentis crassiusculis subacutis contextu que umbrino-pallidis.

Philippine Isles. *Cuming*, n. 2031.

Stemless, dimidiate imbricato-confluent from the division of the primary pileus about 6 inches broad, 3½ inches long, variously lobed, thin, flexible in well grown specimens, but otherwise rigid, concentrically zoned and sulcate, with some of the zones elevated and rugged from radiating interrupted ridges; these are frequently proliferous, producing small but perfect pilei, whose hymenium is directed towards the point of attachment; base more or less effused. The whole is covered with a very thin hard cuticle of a rich red-brown, variegated with paler obscurely pruinose bands. Pores middle-sized,  $\frac{1}{50}$  of an inch broad, shallow, pallid umber, like the substance, angular, often elongated and irregular from the oblique position of the pileus; dissepiments rather thick, subacute.

Belonging to the same group with *P. fraxineus*, but with an altogether different habit. I cannot point out any species

to which it bears a very close resemblance. This, like *P. ochreolaccatus*, was not described with the rest of the species collected by Mr. Cuming in consequence of its not being numbered. I have now, however, seen several specimens numbered as above.

7. *Hydnum Webbia*, n. s. totus resupinatus; subiculo effuso a matrice separabili crustaceo rigido fusco; aculeis brevibus conicis obtusiusculis plus minus seriatim cinereo-fuscis pruinosis.

Philippine Isles. *Cuming*, n. 2172.

Forming small, elongated, altogether resupinate patches, 2 inches or more long, thin, crust-like, separating easily from the matrix. Subiculum thin, very rigid, brown. Aculei very short, conical, slightly obtuse, not ciliated at the apex, arranged in irregular lines, cinereous-brown pruinose from short simple white flocci, which clothe the whole of the hymenium.

This species comes next to *H. squalinum* and *fusco-atrum*, like the former it approaches somewhat in character to *Irpex*. The spores are probably white. It occurs numbered as above in Mr. Webb's set of Cuming's Philippine collection. It does not exist in any of the other sets which I have had an opportunity of examining.

8. *Thelephora radicans*, n. s. pileo spathulato vel subfundibuliformi sublobato, supra fulvo striatulo, subtus fuligineo; stipite valido radicante. Surinam. *Hostmann*, n. 489.

Plant 1½ inch high, ¾ of an inch broad, spathulate or subfundibuliform, split on one side and slightly lobed, minutely striate, with raised lines, tawny, coriaceous. Stem ¾ of an inch high, 1½ line thick, incrassated at the base, and sending off strong branched roots. Hymenium nearly even, fuliginous; spores apparently fuliginous.

This is a far coarser species than *Thelephora aurantia*, to which it bears a slight resemblance, but differs in many respects. I have no doubt that in the recent plant the spores are fuliginous, but it is in general impossible to ob-

serve them accurately in dried specimens. The texture of the pileus is nearly that of *Thelephora involuta*, Kl. I have seen fine specimens of the present species in Dr. Montagne's collection marked Splitgerber, n. 1284. This species was not in the set of Hostmann's Fungi described in a former volume.

\* *Aseroe rubra*, Labill.—*Aseroe pentactina*, *Endl. Atakt. t.* 50. *Iconogr. Gen. Pl. cum Ic.* (Ic. NOSTR. TAB. V. A.) Sydney, N. S. Wales, *Mr. Ludwig Leichardt*.

Mr. Leichardt has communicated to Sir W. J. Hooker a drawing and description made from the recent plant of this remarkable Fungus, and we gladly avail ourselves of the opportunity of laying the one and the other before the public, (See TAB. V. A.). "The pileus," Mr. Leichardt observes, "is divided into 8 rays, each of which is forked; the divisions being acuminate and slightly twisted. The centre of this pileus is perforated by a rather large irregular aperture, by means of which there is a communication with the cavity of the stipes and the atmosphere. A dark brownish moist matter covers the upper surface of the disc. The rays are of a fine bright scarlet above, while the under surface and stipes are of a pale rose-colour. An attentive observation with a lens exhibits minute openings, one at the base of each ray, which communicates with larger holes immediately beneath the upper layer of the disc, (*f.* 4.) The stipes, about 1½ in length,\* is hollow, as shown in the transverse section at *f.* 6, the walls being composed of a simple series of longitudinal cells, which enlarge upwards towards the disc, as shown at *f.f.* 4 and 5. The stipes is at the base surrounded by the volva to half its length. In making a vertical section of the volva (*f.* 2.) an external and internal membrane are readily distinguished, between which a mucous substance is lodged. On the inner membrane, from the point of connection of the base of the stipes and volva, seven whitish bands radiate. The roots are cylindrical, of loose tissue, anastomosing with each other.

\* The figure, which is said to be of the natural size, represents a longer stipes. — ED.

“This singular Fungus was found in the government demesne by Lieut. Lynd, Barrack Master at Sydney, growing early in April on rotten wood, not fifteen yards from the seaside.”

TAB. V. A. *Aseroe rubra*.—Fig. 1. Plant, *nat. size*; f. 2. vertical section of the volva, *ditto*; f. 3. transverse section of the same, *ditto*; f. 4. a vertical section of a portion of the disc and of the ray, showing the small aperture leading into the large cavity, *mag.*; f. 5. vertical section of the cells of the stipes enlarging upwards, *mag.*; f. 6. transverse section of the stipes, *nat. size.*; f. 7. transverse section of a portion of the disc and ray, showing the parietes [*walls*] of the large cells of the former, with wavy lines, *mag.*

9. *Aseroe viridis*, Berk. et Hook. fil.; volvâ globosâ sublobatâ; stipite transversim rugoso, à receptaculo omnino discreto; radiis subtus lævibus, sulco divisis; stipite receptaculoque viridibus. (TAB. V. B.) Clay banks on hills near Kai Patika, Bay of Islands, New Zealand. *J. D. Hooker, Esq. M.D.*

Volva globose,  $\frac{3}{4}$  of an inch broad, thick, dirty white, slightly and obtusely lobed. Stem 1 inch high of a metallic green as well as the receptacle, attenuated below, gradually increasing upwards,  $\frac{1}{3}$  of an inch thick at the top, wrinkled transversely, especially above, separated from the fructifying rays by a distinct groove. Receptacle horizontal, divided into 7–8 rays almost to the point of its connection with the stem. Rays much attenuated, forked, almost plain and smooth beneath, with a strong groove leading downwards from the point of division till it reaches the base, and then curving round on either side to the bifurcation of the neighbouring ray, convex above, their extremities extremely attenuated and cirrhose; at the base of each is seated a distinct wart-like rugulose body which supports the fructifying mass; and in the centre, an orbicular body with a small perforation leading into the cavity of the stem; each fructifying mass has a minute pore above.

This appears to be quite distinct from *Aseroe rubra*; differing from that species in colour, in the transversely wrinkled

stem; and in the receptacle, whose rays are grooved beneath, not being confluent with the stem. The number of rays is very variable in this genus; it appears therefore that *Aseroe pentactina*, Endlicher, is not to be distinguished from *A. rubra*. It will be seen in Bauer's figure of *A. pentactina*, that the receptacle is perfectly confluent with the stem, and that the cells of the rays are similar to those of the stems. This is by no means the case in the present species. Each half ray is connected with its neighbour by a distinct groove, whence it would almost seem as if the bifurcate rays arose from the confluence of two neighbouring half rays, presenting a sort of analogy to the staminal crown in *Asclepiadia*. This, however, is perhaps rather apparent than real, though it presents one of those curious resemblances which are so striking in every division of organized beings.

TAB. V. B.—*Aseroe viridis*; *f.* 1. Plant, *nat. size.*; *f.* 2. the same with the volva cut through, *ditto*.

#### BROOMEIA, n. g.

*Peridium duplex, utrumque persistens; exterius incompletum, confluendo stromatiforme individuorum plurimorum commune, suberosum, ab interiore papyraceo apice fimbriato dehiscente cujus basin tantum investit discretum. Capillitium laxum, peridio undique adnatum; sporæ inspersione echinulatae; flocci nodosi.*—Fungus *gregarius, odor massam confertam ex individuis plurimis constantem efformans quorum singulorum basis in peridio exteriori communi immergitur, sed puncto tantum affigitur. Nomen dedi in honorem amicissimi, C. E. Broome, armigeri, Tuberacearum Anglicarum accuratissimi indagatoris, cujus pene solius laboribus extant hodie viginti species indigenae fungorum hypogæorum,*

10. *Broomeia congregata*, n. s. (TAB. VI. A.)

On rotten wood. Found in the district of Albany, C.B.S. by *Mr. J. Backhouse*, 1838.

Forming a mass 5–6 inches in diameter, consisting of above 150 individuals. The external peridium is represented by an uniform corky stroma  $\frac{1}{4}$  of an inch thick, of a pinkish

grey, investing the matrix, and common to the whole mass. On the surface of this, and sunk into it to about a fourth part of their height are crowded the numerous slightly oblong individuals, but perfectly distinct from it except at the very base, where there is not the slightest trace of a peduncle. Interior peridium  $\frac{5}{12}$  of an inch high,  $\frac{4}{12}$  broad, paper-like, minutely granulated above, where it is of a rich chestnut brown when moist, paler with a pinkish tinge below. Orifice beautifully fimbriated, seated in a slightly depressed circular disc. Capillitium converging from the inner walls towards the centre; flocci simple, slightly nodose, through their whole length inarticulate, without any trace of an internal membrane; spores abundant red-ochre globose or slightly angular echinulate, containing a subglobose variously sized nucleus. The corky base consists of irregular branched anastomosing inarticulate threads. When fresh or moistened it exhales a strong scent of aniseed, and presents when cut an appearance somewhat like that of the flesh of *Fistulina hepatica*.

No genus can be more distinct. Its affinities with *Geaster* are so striking that they need scarcely be indicated. It is to W. H. Harvey, Esq. that I am indebted for my specimen.

TAB. VI. A. *Fig.* 1. *Broomeia congregata*, *nat. size*; *f.* 2. section of ditto, *slightly mag.*; *f.* 3. flocci and spores, *mag.*; *f.* 4. spores and flocci *magnified 780 diameters*, after a sketch by Dr. Montagne; *f.* 5. flocci of stroma, *mag.*

\* *Sphæria* (*Connatæ*) *cænopus*, Fr.

Cuming. Philippine Islands, n. 2163.

I have seen no specimen from this locality except in Mr. Webb's set of the Philippine collection.