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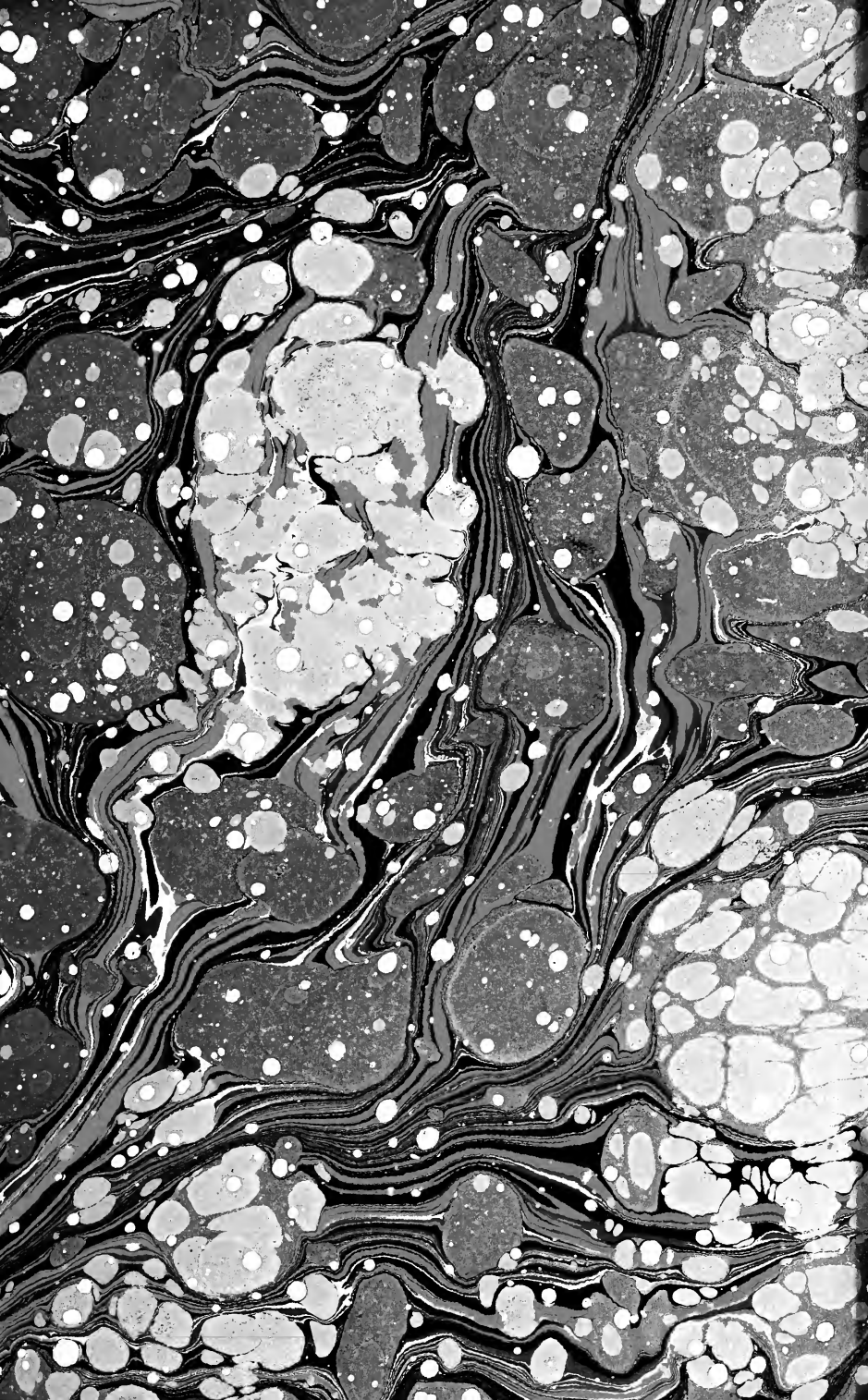


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# Grevillea,

A QUARTERLY RECORD OF

CRYPTOGAMIC BOTANY

AND ITS LITERATURE

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EDITED BY M. C. COOKE, M.A., A.L.S.,

*Author of "Handbook of British Fungi," "Fungi, their uses," &c.,  
"Rust, Smut, Mildew, and Mould," &c., &c.*

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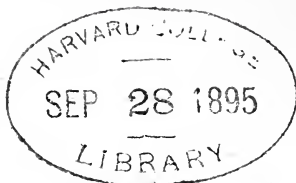
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# Grevillea,

A QUARTERLY RECORD OF CRYPTOGAMIC BOTANY  
AND ITS LITERATURE.

## FUNGI OF PERAK.

By M. C. COOKE.

This collection was made under the superintendence of Dr. Geo. King, of the Calcutta Botanic Garden.

**Lentinus exilis**, *Klotsch.*

**Lentinus dactyliophorus**, *Lev.*

**Lenzites platyphyllus**, *Cooke.*

Pileo subreniformi (vel orbiculari) suberoso, albido, postice lato (vel centro), affixi, subtiliter velutino, præcipue margine radiato-sulcato, dein striato, contextu concolore tenui (2 mm.) lamellis subdistantibus, latissimis (1 unc.) furcatis, ochroleucis.

On rotten wood. Gopong. Malay Peninsula. Aug., 1840. (No. 607.)

Pileus from 2 to 6 inches broad. Size and habit of *L. ochrophyllus*, B., but gills more distant, much broader, and the pileus distinctly radiato-sulcate, or striate. The mycelium, running under the bark, is of a bright orange colour.

**Lenzites applanata**, *Fries.*

**Polyporus (Melanopus) hemicapnodes**, *Berk.*, var. **dimorphus**.

Pileo coriaceo-membranaceo lento quandoque infundibuliformi, alias reniformi, vel lobato, vel fissurato, pallido vel ochroleuco, subtiliter striatulo, initio leniter sericeo, demum glabrescente. Stipite centrali, lateralive, gracili, erecto, basi discoideo, nigro-velutino, sicco rugoso; hymenio albido, poris parce decurrentibus, rotundis, æqualibus, minutis ( $\frac{1}{8}$  mm. diam.).

On dead logs. Gopong. Malay Peninsula. (No 665.)

Pileus scarcely exceeding 1 in. diam. Stem about the same length, 1 line thick. It is evidently allied to *P. Leprieurii*, but differs in several important points. The pileus is sometimes infundibuliform, or discoid, with the stem central, but more usually reniform, with the stem lateral. The pilei of two or three specimens are sometimes confluent.

**Polyporus (Mesopus) rugosus**, *Nees*.

**Polyporus (Mesopus) xanthopus**, *Fries*.

**Polyporus (Pleuropus) flabelliformis**, *Kl.*

**Polyporus (Pleuropus) affinis**, *Nees*.

**Polyporus (Pleuropus) sanguineus**, *Fries*.

**Polyporus (Pleuropus) incurvus**, *Cooke*.

Carnosus, demum cartilagineus, rigidus tenuis stipitatus. Pileo semi-orbiculari vel reniformi, repetito purpureo-zonato, ruguloso, pruinoso, albido, margine acuto inflexo, crispato-lobato, stipite laterali brevi vel elongato ruguloso, concolori, hymenio concavo pallido. Poris minutis subæqualibus, rotundatis  $\frac{1}{5}$ - $\frac{1}{8}$  mm. Dissepimentis tenuibus.

On rotten logs. Goping. Malay Peninsula. (No. 610.)

Pileus  $2\frac{1}{2} \times 2$  in. Stem 2-3 in. long,  $\frac{1}{4}$  in. thick. Strongly resembling pale forms of *Poly. zonalis*, Berk., but with a distinct and often long lateral stem.

**Polyporus (Placodermei) cornubovis**, *Cooke*.

Maximus, lignoso-suberosus, induratus, imbricatus, nigrescens. Pileis dimidiatis postice confluentibus, decurrentibus, concentrice sulcato-zonatis, glabris, margine tenui acuto. Contextu fibroso tenui atro-purpureo. Hymenio atro-fuligineo, sæpe glaucescente, poris minutissimis rotundis æqualibus ( $\frac{1}{8}$  mm.) elongatis. *Polyporus phæus*, Berk. in Herb. No. 2666.

On rotten logs. Goping. Malay Peninsula.

Masses from 1 to 2 feet in breadth, pilei 6-8 inches long, scarcely exceeding half an inch thick behind, very hard, shining when cut like "buffalo-horn." Berkeley's specimen was from Khasia (India). The specific name being preoccupied, has been changed as above.

**Polyporus (Placodermei) senex**, *Berk. & Mont.*

**Polyporus (Placodermei) introstuppeus**, *Berk. & Cooke in Herb. Berk. 2571\**.

Pileo ungulato, crasso glabro, remote concentrice sulcato, tuberculato, e fuligineo demum canescente, intus stuposo-molli pallido lignicolori, cute crassa dura, margine obtuso pallidiore, hymenio ochraceo, tubulis elongatis stratosi, poris rotundatis minimis æqualibus ( $\frac{1}{4}$  mm.) dissepimentis crassis obtusis.

On trees in open jungle. Perak. (No. 587.) And on walnut. N.W. India,

Pileus from 8 to 12 in. broad, 6-9 inches long, 5 inches thick, allied to *P. scansilis*, B. and P., *P. pinicola*, Fr.

**Polyporus (Placodermei) australis**, *Fries*.

**Polyporus (Placodermei) kermes**, *Berk.*

**Polyporus (Placodermei) Auberianus**, *Mont.*

**Polyporus (Placodermei) Thwaitesii**, *Berk. & Br.*

**Polyporus (Polystictus) arenosus**, *Cooke*.

Pileo subtenui rigido, zonato, lineato-rugoso, antice pallido, lignicolori, postice atro-purpureo, plerumque discoideo-affixo;



hymenio pallido, poris mediis rotundatis, subæqualibus ( $\frac{1}{4}$  mm. diam.) granulis arenarum involventibus; contextu umbrino.

On logs laying on sandy ground. Goping. Malay Peninsula. Aug., 1880.

Pileus 2-3 in. broad, 1-2 lines thick. Externally very similar to *Polyporus Parishii*, Berk, but differing in its decided brown substance, and in the hymenium enclosing particles of sand in the process of growth, which characterized the whole of some twenty specimens.

**Polyporus (Inodermei) caliginosus**, *Cesati, viz Eerk.*

**Polyporus (Inodermei) cingulatus**, *Berk. non Fries.*

**Polyporus (Inodermei) aratus**, *Berk.*

**Polyporus (Inodermei) cinerascens**, *Fries.*

**Polyporus (Inodermei) brunneo-pictus**, *Berk.*

**Polyporus (Inodermei) hirsutus**, *Fries.*

**Polyporus (Inodermei) substygius**, *B. & Br.*

**Polyporus (Inodermei) submembranaceus**, *Berk.*

**Trametes rigida**, *Berk.*

**Trametes occidentalis**, *Fries.*

**Dædalea sanguinea**, *Klotsch.*

**Favolus scaber**, *B. & Br.*

**Hexagona tenuis**, *Berk.*

**Beccaria insignis**, *Cesati.*

**Cladoderris dendritica**, *Pers.*

**Cladoderris spongiosa**, *Fries.*

**Stereum Mellisii**, *Berk.*

**Stereum lobatum**, *Kunze.*

**Stereum aterrimum**, *Cooke.*

Rigido-coriaceum, ambienti-liberum, nigrum. Pileo semi-circulari, sublobato, flexuosoque, concentrice sulcato-zonato, glabrescente, contextu nigro-fusco, nigro-purpureo vergente; hymenio glabro, atro-fuligineo, pruinoso, demum nigrescente.

On rotten wood in open dry ground. Goping. Malay Peninsula. Aug., 1860. (*H. Kunstler.*)

Allied to *S. princeps* and *S. scytale*. Pileus 2 to 3 inches broad, very rigid, but fragile, 1 mm. thick and upwards. Substance purplish black. The pilei are often more or less connate at the base in a thick irregular common stem.

**Stereum involutum**, *Klotsch.*

**Guepinia flabellata**, *Cooke.*

Cæspitosa, flabellata, rubrofusca, postice attenuata, discoideo-affixa. stipite proprio nullo, pileo margine lobato inciso, hinc illic profunde diviso, utrinque glabro, hymenio subpallidiori.

On rotten logs. Goping. Malay Peninsula. (No. 646.)

Pileus 2-2 $\frac{1}{2}$  in. long, 1 $\frac{1}{2}$ -2 inches broad. Attenuated downwards to the discoid base. Thinner than *G. helvelloides*.

**Hypoxylon (Daldinia) concentricum**, *Grev.*

**Phoma Camilleæ**, Oke.

Hypophylla. Peritheciis sparsis minutis, membranaceis (vix .1 mm.) poro pertusis. Sporis ellipticis, nucleis binis magnis repletis (.01 × .005 mm.).

On leaves of *Camillea thea*. Johore.

**Sphærella (Læstadia) Camilleæ**, Oke.

Epiphylla, sparsa. Peritheciis semi-immersis, membranaceis (.25 mm. diam.) atrofusciis. Ascis clavatis octosporis. Sporidiis biserialibus ellipticis, continuis (.012 × .005 mm.) pallidis, hyalinis.

On leaves of *Camillea thea*. Johore.

Both of the above together on the same leaves.

## FUNGI OF PERUVIAN ANDES.

By M. C. COOKE.

The following small collection was made by Pearce several years ago, and now added to the Herbarium at Kew :—

**Schizophyllum commune**, Fries.

**Lentinus villosus**, Fries.

**Lentinus blepharodes**, B. & C.

**Bolbitius mitræformis**, Harvey.

**Lenzites erubescens**, Berk.

**Lenzites applanata**, Fr.

**Polyporus sanguineus**, Fr.

**Polyporus trichomallus**, B. & Mont.

**Polyporus Feei**, Fries.

**Polyporus Floridanus**, Berk.

**Polyporus versicolor**, Fr.

**Polyporus pinsitis**, Fr.

**Trametes versatilis**, Berk.

**Hexagona variegata**, Berk.

**Irpex sinuosus**, Fr.

**Irpex durescens** (Cooke), described as *Hydnum*.

**Stereum lobatum**, Kunze.

**Cora pavonia**, Fries.

**Hirneola rufa**, Berk.

**Geaster Peruvianum**, Cooke.

Peridio exteriori coriaceo, paucifido (4-6) explanato, interiori pedicellato umbrino ( $\frac{3}{4}$  unc. diam); ore discoideo fimbriato-ciliato, depresso, subacuto, pallidiore; capillitio profuso, crassiusculo, fusco; sporis globosis, minutissimis, pallide fulvis (.002-.0025 mm.).

On the ground. Peruvian Andes. (*Herb Kewensis*.)

About equal in size to *Geaster Bryantii*.



## BACTERIA AND YEAST FUNGI.\*

This neat and useful little volume makes its appearance just at the time when it is wanted, is amply illustrated, and seems to be carefully and judiciously prepared. We note with satisfaction the announcement in the preface of the sources of information and assistance. It is always a mistake to ignore such help, as is often done by young authors, and hence we commend Mr. Grove for taking the precaution to disarm criticism on this point. The organisms included in this "Synopsis" are acknowledged to be difficult and obscure, so that some little courage was necessary to make the attempt, and we congratulate the author on his success. Although we fear that we must be included with those who doubt the majority of these organisms being autonomous Fungi at all, yet no other course was open but to treat them as such, in the present condition of our knowledge, and until the contrary is proven. "The nonsense which Hallier and Co. tried to introduce into the science" at one time threatened to bring the study of the Schizomycetes into contempt, and we quite appreciate the way in which our author has summarily disposed of them. Of course we may hold a different opinion, or at least suspend our judgment, concerning a small number of the species introduced into this volume, but are by no means disposed to be dogmatic. From the conclusion of the paragraph on page 80, we infer that a more congenial feeling is now predominant in certain quarters than we have recognized in the past. Referring to Brefeld, it states, "and the present long and tedious treatise is filled *ad nauseam* with peevish contentious disputations against De Bary and Van Tieghem, and all others who differ from his opinions." There is only one line in the present volume that we should have preferred to have seen excluded; for the rest we must welcome it, not only for the absence of all "peevish contentious disputations," but for the service it will render to the mycologist and the microscopist, to whom we recommend it as essential to the completeness of even a small library of practical manuals for daily use.

A word or two *apropos* of the Appendix A "On the unit of Microscopical measurement." Twenty years ago, and nearly every important country in Europe employed a different unit. In 1866 the Editor of this Journal, in a paper read at the Quekett Microscopical Club, pointed out the folly and inconvenience of such a course, and initiated the movement for the adoption of the French millimetre as the unit of microscopical measurement, and by circular corresponded with every Society of Microscopists then known on the Continent, with the view of bringing about this change. To this end he was appointed Honorary Secretary for Foreign Correspondence to the Club in question, and, for once, England was in advance, and not in the rear.

\* "A Synopsis of the Bacteria and Yeast Fungi, and allied Species" (Schizomycetes and Saccharomycetes), by W. B. Grove, B.A.; fcap. 8vo., 112 pp., 87 figs. Chatto and Windus.

## SOME EXOTIC FUNGI.

BY M. C. COOKE.

**Polyporus (Mes.) veluticeps, Cooke.**

Pileo lento orbiculari, centro umbilicato velutini-tomentoso pallido, obscure concentrice lineato-zonato, margine acuto fusco, stipite erecto, abrupte nigro glabro, contextu pallido, hymenio albido pallido poris subrotundis minimis æqualibus ( $\frac{1}{4}$  mm.) circa marginem sterili.

On wood. Senna Mozambique (Sir J. Kirk, July, 1859).

Pileus 1 in. broad stem, 1 in. long,  $\frac{1}{4}$  in. thick.

**Mycenastrum (Sterbeeckia) lycoperdioides, Cooke.**

Album, pyriforme (1-1 $\frac{1}{2}$  unc. lat. 2 unc. alt.), læve, glabrum, in stipite sterili productum; capillitio sporisque flavido-olivaceo, filis crassis, lævibus, plerumque simplicibus, hinc illic turgidis (.005-.015 mm. diam.). Sporis globosis lævibus (.0045 mm.), spiculis rectis persistentibus ornatis.

Amongst moss. Nila valley, Garhwal (India), 12,000 feet.

This, together with *M. Oregonense*, Ellis, and *M. leiospermum*, will belong to a sub-genus, for which the name of *Sterbeeckia* may be revived, in which the spores are small and smooth, and the capillitium branched, but without the spinulose projections.

**Æcidium Cephalandræ, Cooke.**

Hypophylla. Maculis orbicularibus, fuscis, parvulis, peridiis (4-6 vix ultra), albidis, semi-immersis, leniter fimbriatis, sporis flavidis.

On *Cephalandra palmata*. Natal (Wood, 829).

Spots not more than 1-3 mm. in diameter. Probably this is related to *Puccinia Cephalandræ*, Thum, and *Uredo dolichospora*, Thum, or one of them.

**Puccinia Lagenophoræ, Cooke.**

I. *Æcidium Lagenophoræ*. Epiphyllum. Maculis nullis. Peridiis sparsis, semi-immersis, lacerato-marginatis, albis, sporis globosis (.012 mm.).

II. *Uredo Lagenophoræ*. Soris sparsis minimis pulverulentibus fuscis, vel sequenter immixtis, sporis globosis (.02 mm.), fuscis, episporio asperulo.

III. *Puccinia Lagenophoræ*. Epiphylla, soris sparsis, atro-fuscis, subpulverulentibus, sporis clavatis, medio constrictis, fuscis loculo supero obscuriore, obtuso, subgloboso, episporio incrassato, lævi, loculo infero in stipitem brevem attenuato (.04-.045  $\times$  .02 mm.).

On living leaves of *Lagenophora Billardieri*. Omeo, Australia.

**Puccinia Ipomeæ, Cooke in Rav. Amer. Fungi. No. 792.**

I. *Æcidium convolvuli*, var. *Ipomeæ*. Schweinitz.

III. Epiphylla, soris in circulos supra *Æcidiis* efformantibus, vel hypophyllis, cum *Æcidiis* vetustis immixtis, atro fuscis, pulverulentibus. Sporis elliptico-fusiformibus, magnis medio constrictis, leniter asperulis, atro fuscis (.05-.06  $\times$  .02-.03 mm.), pedicellis crassis, elongatis, hyalinis (.06 mm. long, .004-.01 mm. crass.)

On *Ipomea*. Darien, Georgia, U.S. (Rav., No. 4000).

On *Batatas paniculata*. Natal (Wood, No. 882).

The North American and South African plant appear to be identical and possibly not distinct from *P. crassipes*, B. and C.

## MOSSES OF NORTH AMERICA.\*

The volume before us is clearly printed, in excellent type, on good paper, and in every sense promising. Examination of details soon brings the satisfactory conclusion that the promise is well fulfilled, and that this is a useful and valuable contribution to Bryological literature. The plates, on which each genus is illustrated, remind us at once of those in Wilson's "Bryologia," but the letter-press is bolder and more distinct. It is just one of those books which can be used with pleasure, and we congratulate the publishers on the performance of their share of the enterprise. More important still, however, is the matter than the manner, and here again we think that the Bryologist will confess himself satisfied. The surviving author will feel thankful that his labours are brought to a close, for it is no light thing to undertake a "manual" of this kind, as we know from experience, and it is to be hoped that he will be gratified by its reception. To say that the work is fully up to the standard of the time, and has been carefully prepared and edited, is perhaps not a very glowing eulogium, but one which will commend itself to the student. We have heard it stated that it is the duty of a reviewer to hunt up all the faults in a work he can possibly find, and expose them. This is not exactly our estimate of duty, and if it were we must confess that it would puzzle us to find anything in the present book to grumble at. Experience in the use of a work of this kind is always the best test, but one which requires time. It does not appear to us that the authors have any reason to doubt the verdict of experience. It seems to us an honest bit of good work, and we do not hesitate to commend it to our readers. Alas! that we have not such a manual for British Mosses. Wilson's is out of print, and it must be long ere Braithwaite's can be hoped to be completed. The preface to this present volume thus concludes—and with it our hearty commendation:—"This 'Manual of American Mosses' is believed to include descriptions of all the species of mosses (about nine hundred) that are as yet known to occur on the North American Continent within the limits of the United States and northward. It includes the results of the researches of Sullivant and myself, continued until 1872, as well as those of James, Austin, and Rau; and also such species as have been described by European Bryologists, Schimper, Mitten, Mueller, Hampe, Lindberg, &c."

\* "Manual of the Mosses of North America," by Leo Lesquereux and Thomas P. James; six plates, 448 pp., 8vo. Boston: Cassino and Co. London: Trübner and Co.

## SYNOPSIS PYRENOMYCETUM.

(Continued from Vol. XII., p. 113.)

The following genus will be placed after *Hypocrea* as—

GEN. 6 bis. **CLIBANITES**, Karst. Gregaria vel confluens, in stromate subgelatinoso nidulans.

174.\* **C. paradoxa**, Karst. *Myc.*, f. 168.

By a mistaken notion as to its character and affinities this genus has hitherto been placed with the *Discomycetes*.

The following corrections and additions will also be made.

149.\* **Hypocrea (Hypocreopsis) solida** (Schwein).

*Hypoxylon solidum* (S.), Berk. in *Sacc. Syll.* No. 1352. *Herb. Berk.* No. 8579.

Ascis clavatis octosporis. Sporidiis biserialibus lanceolatis uniseptatis, medio constrictis, hyalinis, pallide fuscis ( $\cdot 035 \cdot 006 \cdot 007$  mm.).

This curious species is fleshy, not in the least carbonaceous, the perithecia are membranaceous, almost obsolete, and its nearest ally is clearly *Hypocreopsis riccioidea* (Bolton).

243.\* **Nectria ferruginea**, Cooke.

Erumpens, cæspitosa. Peritheciis ceraceis subglobosis, atrofuscis, opacis, cum pressione difformibus, ab initio pulvere ferrugineo tectis, demum nudibus, ostiolo pertuso. Ascis clavatis, octosporis, sporidiis fusiformibus, uniseptatis, hyalinis ( $\cdot 025 \times \cdot 005$  m.).

On living leaves, bracts, &c., of *Styphelia* (probably *S. viridiflora*). Omeo. Australia.

431.\* **Dialonectria ostiolorum**, Berk. & Cooke in *Herb. Berk.*

Parasitica, sparsa ochroleuca. Peritheciis globosis minutis ( $\cdot 1 \cdot 2$  mm.) leniter furfuraceis, superficialibus, ostiolo pertuso. Ascis cylindraceo-clavatis, octosporis. Sporidiis ellipticis, hyalinis, uniseptatis ( $\cdot 012 \times \cdot 005$  mm.).

On *Xylaria rhopaloides*. Cuba.

534.\* **Gibberella calamia**, Cooke.

Peritheciis gregariis, confertis, vertice obtuso conico, demum subcollabentibus opacis, violaceo-cæruleis. Ascis clavatis, mox diffluentibus. Sporidiis nunc ellipticis nunc cylindricis, medio constrictis, valde irregularibus, muriformi-cellulosis, hyalinis ( $\cdot 025 \cdot 03 \times \cdot 022$  mm. vel.  $\cdot 04 \cdot 05 \times \cdot 02 \cdot 022$  mm.).

Surrounding the fruits of *Calamus fasciculatus*. Vizagapatam, S. India.

578. **Acrospermum fultum**, Hark., seems to be identical with *A. corrugatum*, Ellis.

606. **Xylaria Fockei** (Miquel), Sacc., No. 4516.

Stipite cylindrico, receptaculum ellipsoideum vel obovoideum obtusum superante, tota intus coriaceo-cornea vel carbonaceo nigrescens, extus nigrescens, crustula gilvo-albida partim obducta, interque ostiola atra punctuliformia tenere subradiatim nigropunctulata, sporis naviculari-ellipticis acutis simplicibus. *Sphæria* (*Cordyceps*) *Fockei*, Miquel *Fungi Exot.*, p. 198.

In truncis. Surinam.

Stem  $1\frac{1}{3}$  in. long, 1 line thick, black, capitulum  $\frac{1}{2}$ -1 in. long, much thicker than the stem.

639. **Xylaria herculea** (Miquel), Sacc., No. 4527.

Receptaculo coriaceo corneo, intus albido, extrorsum nigrescente ac carbonaceo-crustaceo, brevissime stipitato, oblongo vel subclavato, obtusissimo vel sub-attenuato, ostiolis subprominulis, nigro-punctato, cæterum griseo-fuscula obducto, ascis angustis basi attenuatis obscuris, paraphysibus intermixtis, sporis simplicibus ellipticis obtusis. *Sphæria* (*Cordyceps*) *herculea*. Miquel Fung. Exot., p. 197.

In trunco denudato *Artocarpi incisæ*. Paramaribo.

Stem 2-3 lines long, capitulum 1-4 in. long,  $\frac{3}{4}$ -1 $\frac{1}{2}$  in. thick.

631. **Xylaria Mascarensis**, Cooke.

Suberosa, clavæformis, simplex. Clavula falcata, æqualis (7 unc.  $\times$   $\frac{3}{4}$  unc.) sicco rugulosa, rubro-fusca, deorsum in stipitem æqualem (circ. 3 unc. long) producta. Peritheciis atris, globosis subprominulis, ostiole atro punctiformi instructis. Contextu albo. Ascis immaturis.

On wood. Central Madagascar. Rev. R. Baron (3186) in Herb. Kew.

There is no doubt of the position of this species, in proximity to *X. gomphus*, Fr., although without fruit.

820. **Nummularia glycyrrhiza**, Schweinitz.

Specimens having been found in a fertile condition, the following dimensions have been determined:—Sporidia  $\cdot 011\text{--}\cdot 013 \times \cdot 0045\text{--}\cdot 005$  mm., very similar to those of *N. placenta*.

## Fam. 2. XYLARIÆ.

Stromaticæ, compositæ; perithecia subimmersa, carbonacea. Sporidia fusca.

GEN. 1. **XYLARIA**, Hill.—Stroma teres, fruticulosum, clavatum v. filiforme, perithecia subimmersa.

A. XYLOGLOSSA. Clava undique fertili, stipite glabro.

a. Capitulum clavatum; stipite tenui, elongato.

\* Simplex.

582. euglossa, Fries. ... 1227	592. exalbata, Berk. ... 1217
583. australis, Cooke, Grev. xi. 84	593. grammica, Mont. ... 1189
584. involuta, Klotsch. Linn. vii.	= <i>ectogramma</i> , B.... 1197
= <i>tabacina</i> , Kickx. 1228	594. melanaxis, Ces. ... 1160
= <i>telfairii</i> , Berk. ... 1204	595. rhopaloides, Mont.... 1234
585. Wrightii, B. & C.... 1212	596. Schweinitzii, B. & C. 1222
586. portoricensis, Klotsch. 1170	597. leptopus, Fr. ... 1151
587. hyperythra, Mont. 1236	598. protea, Fr. ... 1154
588. guyanensis, Mont. 1165	599. complanata, Ces. ... 1221
589. clavicularis, Klot.... 1172	600. fissilis, Ces. ... 1186
590. gigantea, Zipp. ... 1226	601. Berkeleyi, Mont., Grev. xi.
591. olobapha, Berk., Grev. xi. 84	85



602. rhytidophlæa, *Mont.* 1200  
 603. zealandica, *Cooke* ... 1209  
 604. nigripes, *Klotsch., Linn.*  
     vii. 203  
     = *escharoidea*, *Berk.* 1184  
     = *piperiformis*, *Berk.* 1280  
     = *mutabilis*, *Curr., Linn.*  
     *Trans.*  
     = *flagelliformis*, *Curr.,*  
     *Linn. Trans.*
605. cubensis, *B. & C.*... 1177  
 606. Fockei, *Miq., Grev.* xii.  
 607. multifida, *Kunze, Grev.* xi. 85  
 608. acicularis, *Berk., Grev.* xi. 85  
 609. scopiformis, *Mont.*... 1288  
 610. cordovensis, *Berk., Grev.*  
     xi. 85  
 611. retipes, *Lev.* ... 1198  
 612. sicala, *P. & B.* ... 5943  
 613. columnifera, *Mont.* 1218

\*\* *Furcata.*

614. diceras, *Lev.* ... 1180  
 615. biceps, *Speg.* ... 1179  
 616. divaricata, *Fee* ... 1181  
 617. arenicola, *W. & Curr.* 1158  
 618. Mellisii, *Berk., Grev.* xi. 85  
 619. Gardneri, *Berk.* .. 1164  
 620. portentosa, *Mont.*... 1250
- b. Capitulum subclavatum; stipite crasso, abbreviato vel obsoleto.*
628. polymorpha, *Grev.*... 1150  
 629. variabilis, *W. & Curr.* 1156  
 630. cerebriiformis, *Cooke, Grev.*  
     xi. 86  
 631. gomphus, *Fr.* ... 1187  
 632. mascarensis, *Cooke, Grev.*  
     xii.  
 633. papyrifera, *Fr.* ... 1168  
 634. conocephala, *B. & C.* 1176  
 635. Emerici, *Berk., Grev.* xi. 86  
 636. domingensis, *Berk.* 1182  
 637. Titan, *Berk.* ... 1207  
 638. Poiteana, *Lev.* ... 1192  
 639. cynoglossa, *Cke., Grev.* xii. 1  
 640. herculea, *Miq., Grev.* xii.  
 641. regalis, *Cooke, Grev.* xi. 86  
 642. obtusissima, *Berk.*... 1194  
 643. turgida, *Fr.* ... 1155  
 644. lobata, *Cooke, Grev.* xi. 86  
 645. zeylanica, *Berk.* ... 1210  
 646. lingua, *Lev.* ... 1193  
 647. castorea, *Berk.* ... 1246
621. scotica, *Cooke* ... 1202  
 622. ruginosa, *Mont.* ... 1201  
 623. tortuosa, *Sow.* ... 1208  
 624. gracilis, *Klot.* ... 1188  
 625. rhizocola, *Mont.* ... 1199  
 626. Willsii, *Berk., Grev.* xi. 85  
 627. tentaculata, *Rav.* ... 1205
648. aenea, *Mont.* ... 1215  
 649. allantoidea, *Berk.* ... 1178  
 650. Thwaitesii, *B., Grev.* xii. 1  
 651. fistulosa, *Lev.* ... 1185  
 652. dealbata, *B. & C.* ... 1223  
 653. fistuca, *Berk.* ... 1171  
 654. siphonia, *Fr.* ... 1153  
 655. curta, *Fr.* ... 1152  
 656. plebeja, *Ces.* ... 1195  
 657. echinata, *Lev.* ... 1183  
 658. anisopleura, *Mont.*... 1219  
 659. microceras, *Mont.*... 1211  
 660. platypoda, *Lev.* ... 1235  
 661. enterogena, *Mont.*... 1214  
 662. fulvella, *B. & C.* ... 1166  
 663. phosphorea, *Berk.*... 1167  
 664. salmonicolor, *Berk., Grev.*  
     xi. 87  
 665. clavulata, *Schw.* ... 1238  
 666. pumila, *Fr.* ... 1169  
 667. Capensis, *Lev.* ... 5951

*c. Capitulum subglobosum.*

668. cretacea, *Berk. & Br.* 5963  
 669. piliceps, *Berk.* ... 1174  
 670. pyramidata, *B. & W.* 1196  
 671. marasmoides, *B. &*  
     *Cooke* ... 1161  
 672. stilboidea, *Ka. & Cke.* 1203
673. cudonia, *B. & C.* ... 1213  
 674. obovata, *Berk.* ... 1191  
 675. tuberiformis, *Berk.* 1225  
 676. glebulosum, *Ces.* ... 1494  
 677. globosa, *Mont.* 1426  
 678. clavulus, *B. & C.* ... 1220

679. hæmorrhoidalis, *B.* ... 1163 680. intermedia, *Ces.* ... 1162  
 & *Br.* ... 1163 681. favosa, *Berk., Grev.* xi. 87

*d. Capitulum applanatum, subdiscoideum.*

682. frustulosa, *B. & C.* ... 1534 684. Berterii, *Mont.* ... 1395  
 683. pauxillum, *Ces.* ... 1375 685. natalensis, *Berk. in Herb.*

*B. XYLOCORYNE. Clava undique fertili, stipite villosa.*

*a. Capitulum clavatum ; stipite tenui elongato.*

686. spathulata, *B. & Br.* 1257 692. multiplex, *Kunze* ... 1244  
 687. longipes, *Nke.* ... 1240 693. scruposa, *Mont.* ... 1252  
 688. hispidula, *B. & C.* ... 1255 694. polycladia, *Lev.* ... 1267  
 689. Beccariana, *Pass.* ... 1243 695. radicata, *B. & C.* ... 1251  
 690. fastigiata, *Fr.* ... 1242 696. comosa, *Mont.* ... 1253  
 691. geoglossum, *Schwz.* 1245 697. tenuissima, *Fr.* ... 1258

*b. Capitulum clavatum, stipite abbreviato.*

698. corniformis, *Mont.* 1239 700. alpina, *Speg.* ... 1249  
 699. aphrodisiaca, *W. & C.* 1241

*c. Capitulum subglobosum.*

701. collabens, *Mont.* ... 1247

*C. XYLOSTYLA. Clava apice sterili, stipite glabro.*

*a. Capitulum clavatum, simplex vel cristatum.*

702. ventricosa, *B., Grev.* xi. 87 708. inæqualis, *B. & C.* ... 1295  
 703. Kegelian, *Lev.* ... 1190 709. fustis, *Mont., Grev.* xi. 87  
 704. pallida, *Cooke* ... 1237 710. myosurus, *Mont.* ... 1159  
 705. graminicola, *Ger.* ... 1286 711. mucronata, *Schwz.* 1279  
 706. coronata, *West* ... 1175 712. phyllophila, *Ces.* ... 1293  
 707. cristata, *Speg.* ... 1290 713. phyllocharis, *Mont.* 1294

*b. Capituli connati vel ramosi.*

714. digitata, *Fr.* ... 1283 719. rhizomorpha, *Mont.* 1300  
 715. grandis, *Peck* ... 1284 720. adscendens, *Fr.* ... 1248  
 716. stuppea, *Wallr.* ... 1266 721. fasciculata, *Speg.* ... 1289  
 717. cæspitulosa, *Ces.* ... 1287 722. coccophora, *Mont.* ... 1291  
 718. bulbosa, *Pers.* ... 1285

*c. Capitulum ovatum vel subglobosum.*

723. vaporaria, *Berk.* ... 1292 725. axifera, *Mont.* ... 1301  
 724. thyrsus, *Berk.* ... 1206

*d. Stroma filiformia, perithecia laxa.*

726. tricolor, *Fr.* ... 1297 729. axillaris, *W. & Curr.* 1157  
 727. filiformis, *Fr.* ... 1296 730. furcata, *Fr.* ... 1298  
 728. gracillima, *Mont.* ... 1299 731. areolata, *Lev.* ... 5955

*D. XYLODACTYLA. Clava apice sterili, stipite villosa.*

*a. Capitulum clavatum simplex.*

732. trachelina, *Lev., Ann. Sci. Nat., 1860, 304* 734. persicaria, *Schwz.* ... 1268  
 733. apiculata, *Cooke* ... 1264 735. carpophila, *Fr.* ... 1270  
 736. oxyacanthæ, *Lev.* ... 1271

- |                                    |      |                               |      |
|------------------------------------|------|-------------------------------|------|
| 737. Delitschii, <i>Auers.</i> ... | 1272 | 739. massula, <i>Ces.</i> ... | 1262 |
| 738. cupressiformis, <i>Fr.</i>    | 1261 | 740. acuta, <i>Peck</i> ...   | 1277 |

*b. Capitulum furcatum vel partitum.*

- |                                  |      |  |      |
|----------------------------------|------|--|------|
| 741. cornu-damæ, <i>Schwz.</i>   | 1278 | 748. subterranea, <i>Schwz.</i>          | 1281 |
| 742. Fejeensis, <i>Berk.</i> ... | 1274 | 749. ianthino-velutina, <i>M.</i>        | 1282 |
| 743. hypoxylon, <i>Fr.</i> ...   | 1260 | = <i>apeibæ</i> , <i>Mont.</i> ...       | 1302 |
| 744. Guepini, <i>Fr.</i> ...     | 1269 | = <i>monilifera</i> , ... <i>Berk.</i> , |      |
| 745. eupeliaca, <i>Ces.</i> ...  | 1269 | Grev. xi. 87                             |      |
| 746. arbuscula, <i>Sacc.</i> ... | 1276 | 750. Culleniæ, <i>B. &amp; Br.</i>       | 1254 |
| 747. dichotoma, <i>Kunze</i> ... | 1275 | 751. flabelliformis, <i>Schwz.</i>       | 1273 |

c. Capitulum subglobosum.

- |      |                                 |     |      |      |                                |     |      |
|------|---------------------------------|-----|------|------|--------------------------------|-----|------|
| 752. | <i>pedunculata</i> , <i>Fr.</i> | ... | 1259 | 754. | <i>aristata</i> , <i>Mont.</i> | ..  | 1263 |
| 753. | <i>Tulasnei</i> , <i>Nke.</i>   | ... | 1265 |      | <i>= acicula</i> , <i>Ces.</i> | ... | 1216 |

INCERTÆ SEDIS.

755. *tuberosa*, *Lev. in Gaud. Voy.* 758. *fulvo-lanata*, *Berk.* 1313  
756. *furcellata*, *Berk., Grev. xi. 88* 759. *hystrix*, *Berk., Grev. xi. 88*  
757. *xanthiceps*, *Berk., Grev. xi. 88*

GEN. 2. **THAMNOMYCES**, *Ehrb.*—Stroma teres vel filiformia. Perithecia superficialia laxa.

- |   |  |
|---|--|
| 760. hippotrichoides, <i>Sow.</i> 1303  | 765. Chamissonis, <i>Ehrb.</i> 1308    |
| 761. rostratus, <i>Mont.</i> ... 1304   | 766. annulatus, <i>Ehrb.</i> ... 1309  |
| <i>var. similis, Berk.</i>              | 767. chordalis, <i>Fr.</i> ... 1310    |
| 762. adnatus, <i>Fckl.</i> ... 1305     | 768. fuciformis, <i>Berk.</i> ... 1311 |
| 763. fragilis, <i>Roth.</i> ... 1306    | 769. annulipes, <i>Mont.</i> ... 1312  |
| 764. hispidissimus, <i>Fr.</i> ... 1307 |  |

GEN. 3. **CAMILLEA**, *Mont.*—Stroma verticale, apice truncatum. Perithecia circa apicem verticaliter immersa.

*a.* Stromate elongato.

770. Leprieurii, *Mont.* ... 1314    772. mucronata, *Mont.*... 1318  
771. bacillum, *Mont.* ... 1315

*b. Stromate-abbreviato.*

773. cyclops, *Mont.* ... 1316    776. macromphala, *Mont.* 1412  
774. labellum, *Mont.* ... 1317    777. Surinamensis, *B. & C.* 1319  
775. Javanica, *Mont.* MSS.

GEN. 4. **PORONIA**, Fr.—Stroma cupuliforme, stipitatum.

- |                              |      |                             |      |
|------------------------------|------|-----------------------------|------|
| 778. punctata (Linn.) ...    | 1321 | 781. heliscus, Mont. ...    | 1324 |
| 779. Ædipus, Mont. ...       | 1322 | 782. macrorrhiza, Speg. ... | 1325 |
| = incrassata, Jungh.         |      | 783. scutellata, Fr. ...    | 1326 |
| 780. pileiformis (Berk.) ... | 1323 | 784. ? cupularis (Fr.) ...  | 1327 |

GEN. 5. **RHOPALOPSIS**, *Cooke*.—Densissime cæspitosum, capituli abbreviati, breviter stipitati, vel in stromate intricato congesti.

*a.* Stromate simplici.

- |   |  |
|---|--|
| 785. cænopus ( <i>Mont.</i> ) ... 1488      | 789. confusum ( <i>B. &amp; C.</i> ), <i>Grev.</i> |
| 786. aggregatum ( <i>W. &amp; C.</i> ) 1427 | 790. micropus ( <i>Berk</i> ) ... 1491             |
| 787. angolense ( <i>W. &amp; C.</i> ) 1519  | 791. congestum ( <i>B. &amp; Br.</i> ) 1402        |
| 788. clavus ( <i>Fr.</i> ) ... 5994         | 792. Berkeleyanum, <i>Cooke, Grev.</i>             |

*b. Stromate multipartiti.*

- |  |  |
|--|--|
| 793. cetrarioides ( <i>W.</i> &<br><i>Curr.</i> ) ... 1489 | 796. contracta ( <i>Speg.</i> ) ... 1233         |
| 794. lichenoides ( <i>B.</i> )                             | 797. Kurziana( <i>Curr.</i> ), <i>Grev.</i> xii. |
| 795. Puiggarii ( <i>Speg.</i> ) ... 1232                   | 798. microcephala( <i>Mont.</i> ) 1256           |
|  | 799. xylarioides ( <i>Speg.</i> ) 1490           |

GEN. 6. **USTULINA**, *Tul.*—Stroma repando-pulvinatum, cras-  
sum senio intus subcavum.

- |                                 |          |                                     |        |
|---------------------------------|----------|-------------------------------------|--------|
| 800. vulgaris, <i>Tul.</i>      | ... 1328 | 804. tessulata, <i>Berk., Grev.</i> | xii. 3 |
| 801. Brasiliensis, <i>Speg.</i> | ... 1329 | 805. pavimentosa ( <i>Ces.</i> )    | 1374   |
| 802. macrosperma, <i>Mont.</i>  | 1330     | 806. tuberiformis ( <i>Wallr.</i> ) | 1428   |
| 803. zonata ( <i>Lev.</i> )     | ... 1331 |                                     |        |

GEN. 7. **BOLINIA**, *Nitschke*.—Stroma effusum, perithecia immersa, collis longiusculis.

807. tubulina(
- A. & S.*
- )... 1332

GEN. 8. **NUMMULARIA.**—Stroma disciforme, v cupuliforme, adnatum marginatum.

SECT. A.—Disco concavo.

- |                                   |      |                                    |      |
|-----------------------------------|------|------------------------------------|------|
| 808. repanda, <i>Fr.</i> ...      | 1525 | 813. macrocenangium, <i>Ces.</i>   | 1411 |
| 809. discreta, <i>Schw.</i> ...   | 1529 | 814. Moselei, <i>Berk.</i> ...     | 1421 |
| 810. discincola, <i>Schw.</i> ... | 1104 | 815. lutea, <i>A. &amp; S.</i> ... | 1528 |
| 811. obularia, <i>Fr.</i> ...     | 1540 | 816. succenturiata, <i>Tode.</i>   | 1527 |
| 812. Baileyi, <i>B. &amp; Br.</i> |      | 817. gigas, <i>Plow.</i> ...       | 1531 |

SECT. B.—Disco convexo.

- |   |   |
|---|---|
| 818. Bulliardi, <i>Tul.</i> ... 1524        | 834. mauritanica, <i>B. &amp; Cke.</i>      |
| 819. constricta, <i>Fr.</i> ... 1543        | 835. rumpens, <i>Cke.</i> ... 1140          |
| 820. repandoides, <i>Fckl.</i> ... 1526     | 836. placenta, <i>Kalch.</i> ... 1377       |
| 821. clypeus, <i>Schw.</i> ... 1524         | 837. microplaca, <i>B. &amp; Rav.</i> 1112  |
| 822. glycirrhiza, <i>B. &amp; C.</i> 1541   | 838. hypophlæa, <i>B. &amp; Rav.</i> 1137   |
| 823. macula, <i>Schw., Grev.</i> xii. 6     | 839. testudinea, <i>Cke., Grev.</i> xii. 7  |
| 824. regia, <i>DeNot.</i> ... 1538          | 840. tenuis, <i>Pass.</i> ... 1537          |
| 825. mediterranea, <i>DeNot.</i> 1539       | 841. Phillyreæ, <i>Mont.</i> ... 1116       |
| 826. anthracodes, <i>Fr.</i> ... 1383       | 842. heterostoma, <i>Mont.</i> 1380         |
| 827. comedens, <i>Ces.</i> ... 1389         | 843. scriblita, <i>Mont.</i> ... 1405       |
| 828. dryophila, <i>Tul.</i> ... 1530        | 844. scutata, <i>B. &amp; Cke., Grev.</i> 7 |
| 829. pithodes, <i>B. &amp; Br.</i> ... 1109 | 845. cycliscus, <i>Mont.</i> ... 1408       |
| 830. fossulata, <i>M.</i> ... 1455          | 846. melanaspis, <i>Mont.</i> . . 1419      |
| 831. microsticta, <i>M.</i> ... 1415        | 847. ? Carabayense, <i>Mont.</i> 1400       |
| 832. exutans, <i>Cke.</i> ... 1105          | 848. ? pachyloma, <i>Lev.</i> ... 1417      |
| 833. australis, <i>Cke., Grev.</i> xii. 6   | 849. ? sertata, <i>DR. &amp; M.</i> 1372    |

GEN. 9. **DALDINIA**, *De Not.*—Stroma subsphæroideum, cortice carbonaceo nigricante intus fibrosum concentricè zonatum.

- |   |  |
|---|--|
| 850. concentrica ( <i>Bolt.</i> ) 1515              | 854. Feei, <i>Sacc.</i> ... 1520       |
| 851. vernicosa ( <i>Schw.</i> )... 1516             | 855. cingulata, <i>Lev.</i> ... 1521   |
| 852. durissima ( <i>Fr.</i> ) ... 1517              | 856. loculata ( <i>Lev.</i> ) ... 1522 |
| 853. asphalatum ( <i>Link. &amp; Fr.</i> ) ... 1518 | 857. Thouarsiana ( <i>Lev.</i> ) 1523  |

GEN. 10. **HYPOXYLON**.—Stroma effusum vel subglobosum. solidum, perithecia in stromate innato-prominula, collis subnullis.

I. MACROXYLON. Maxima, indurata, irregularis, intus fibrosa.

a. Perithecia monosticha.

- |  |  |
|--|--|
| 858. cerebrinum, <i>Fee.</i> ... 1224      | 863. placentiforme, <i>B.</i> ... 1535     |
| 859. Wrightii, <i>B. &amp; C.</i> ... 1533 | 864. suborbiculare, <i>Curr.</i> 1536      |
| 860. cœlatum, <i>Fr.</i> ... 5964          | 865. Broomeanum, <i>B. &amp; C.</i> 1460   |
| 861. corrugatum, <i>Fr.</i> ... 5965       | 866. viridi-rufum, <i>B. &amp; R.</i> 5966 |
| 862. sclerophæum, <i>B. &amp; C.</i> 1341  |  |

b. Perithecia stratosæ.

- |  |                                    |
|--|------------------------------------|
| 867. Petersii, <i>B. &amp; C.</i> ... 1406 | 868. ovinum, <i>Berk.</i> ... 5967 |
|--|------------------------------------|

II. PHYLACIA. Stroma erectum, laccatum.

a. Species perfectæ.

869. turbinatum, *Berk.*... 1422

b. Species imperfectæ.

- |   |                                     |
|---|-------------------------------------|
| 870. sagraeanum, <i>Mont.</i> 1320      | 873. Carteri, <i>Berk.</i> ... 5961 |
| 871. globosum, <i>Lev.</i> ... 1426     | 874. ramulosum, <i>Schwz.</i> 5962  |
| 872. poculiformis, <i>Lev.</i> ... 5968 |                                     |

II. SPHÆROXYLON. Stroma superficiale, globosum or subglobosum.

a. Stroma coloratum, non nigrum.

- |   |  |
|---|--|
| 875. coccineum, <i>Bull.</i> ... 1333       | 885. rutilum, <i>Tul.</i> ... 1344         |
| 876. Howeianum, <i>Peck.</i> 1338           | 886. Laschii, <i>Ntke.</i> ... 1345        |
| 877. commutatum, <i>Ntke.</i> 1350          | 887. luridum, <i>Ntke.</i> ... 1347        |
| 878. deciduum, <i>B. &amp; Br.</i> 1403     | 888. Bagnisii, <i>Sacc.</i> ... 1348       |
| 879. enteromelum, <i>Schwz.</i> 1355        | 889. notatum, <i>B. &amp; C.</i> ... 1360  |
| 880. suberosum, <i>B. &amp; C.</i> ... 1359 | 890. gilvum, <i>Jungh.</i> ... 1353        |
| 881. pulchellum, <i>Sacc.</i> ... 1335      | 891. scleroderma, <i>Mont.</i> 1334        |
| 882. vera-crucis, <i>B. &amp; Cke.</i> 5970 | 892. distillatum, <i>B. &amp; Br.</i> 1340 |
| 883. argillaceum, <i>Pers.</i> ... 1337     | 893. botrys, <i>Ntke.</i> ... 1349         |
| 884. palumbinum, <i>Quel.</i> 1339          | 894. fuscum, <i>Pers.</i> ... 1368         |

b. Stroma nigrum.

- |  |   |
|--|---|
| 895. multiforme, <i>Fr.</i> ... 1376                 | 900. areolatum, <i>B. &amp; C.</i> 1386 |
| 896. teres ( <i>Schwz?</i> ) <i>B. &amp; C.</i> 1493 | 901. avellana, <i>Ces.</i> ... 1425     |
| 897. majusculum, <i>Cke.</i> ... 1369                | 902. Hookeri, <i>Berk.</i> ... 5973     |
| 898. malleolus, <i>B. &amp; C.</i> 1413              | 903. nodulorum, <i>Lev.</i> ... 5974    |
| 899. hians, <i>B. &amp; Cke.</i> ... 5972            | 904. fragaria, <i>Ces.</i> ... 1393     |



905. cohærens, *Pers.* ... 1370    910. placenta, *Link.* ... 1404  
 906. leucostigma, *Lev.* ... 1391    911. turbinulatum, *Schwz.* 1407  
 907. coniaropsis, *Mont.* ... 1398    912. campotrichum, *Mont.* 1409  
 908. bomba, *Mont.* ... 1399    913. porosum, *Mont.* ... 1381  
 909. Murrayi, *B. & C.* ... 1397    914. glomiforme, *B. & C.* 1364

IV. CLITOTYLON. Stroma pulvinatum plus minus convexum, nec effusum.

a. Stroma coloratum, non nigrum.

915. xanthocreas, *B. & C.* 1302,    923. vividum, *B. & Br.* ... 1356  
     1361    924. quisquilarum, *Mont.* 1366  
 916. hæmatostroma, *Mont.* 1435    925. pruinatum, *Klot.* ... 942  
 917. epiphlæum, *R. & C.* 1444       = *Holwayi*, *Ellis.* ... 5975  
 918. hypomiltum, *Mont.* 1336    926. discolor, *B. & C.* ... 1363  
 919. decorticutum, *Schwz.* 1354    927. eterio, *B. & Br.* ... 1133  
 920. irradians, *Mont.* ... 1424    928. endoxanthum, *Mont.* 1362  
 921. discoideum, *Cke.* ... 1346    929. polyporoideum, *B., Grev.*  
 922. vinosum, *Mont.* ... 1365       xii. 53

b. Stroma nigrum.

930. leucocreas, *B. & R.* 1388    947. Catalpæ, *Schwz.* ... 1509  
 931. lucidulum, *Mont.* ... 1390    948. approximans, *Ces.* ... 1481  
 932. microsporum, *Ces.* ... 1417    949. exsurgens, *Mont.* ... 1387  
 933. exiguum, *Cke.* ... 5976    950. transversum, *Schwz.* 1505  
 934. stigmoideum, *Ces.* ... 1378    951. Javanicum, *Lev.* ... 1382  
 935. annulatum, *Schwz.* 1384    952. Mascarensis, *Berk.* 5979  
 936. Pouceanum, *B. & Cke.* 5977    953. leucostomum, *Cke.* 5980  
 937. durissimum, *Schwz.* 1447    954. pauperatum, *Karst.* 1373  
 938. chalybeum, *B. & Br.* 945    955. Ayresii, *Berk.* ... 5981  
 939. obesum, *Fr.* ... 1401    956. undosum, *Lev.* ... 1410  
 940. marginatum, *Schwz.* 1414    957. spondylinum, *Fr.* ... 1542  
 941. polyspermum, *Mont.* 1479    958. ramosum, *Schwz.* ... 5982  
 942. callostroma, *Schwz.* 1472    959. monticulosum, *Mont.* 1396  
 943. smilacicum, *Howe.* 1371    960. Mauritanicum, *D. & M.* 1418  
 944. rimarum, *B. & Cke.* 5978    961. Phœnix, *Fr.* ... 1466  
 945. sassafras, *Schwz.* ... 1451    962. culmorum, *Cke.* ... 1416  
     = *H. fucicolor*, *B. & C.*    963. Kurzianum, *Curr.* ... 1429  
 946. xanthostromum, *Sch.* 1507

IV. PLACOXYLON. Stromate late et vage effuso.

a. Stroma coloratum, non nigrum.

964. purpureum, *Ntke.* ... 1430    973. anthochroum, *B & Br.* 1442  
 965. perforatum, *Schwz.* 1431    974. fuscopurpureum, *Sch.* 1446  
 966. atropurpureum, *Fr.* 1433    975. florideum, *B. & C.* ... 1440  
 967. rubiginosum, *Pers.* 1434    976. ianthinum, *Cke.* ... 5987  
 968. hæmatites, *Lev.* ... 5984    977. atropunctatum, *Schwz.* 1102  
 969. trugodes, *B. & Br.* 1439    978. capnodes, *Berk.* ... 1113  
 970. murcidum, *B. & Br.* 1478    979. jecorinum, *B. & Rav.* 1445  
 971. piceum, *Ellis.* ... 5985    980. crocopeplum, *B. & C.* 1437  
 972. Fendleri, *Berk.* ... 5986    981. crocatum, *Mont.* ... 1438

982. *miniaturum*, Cke. ... 1432      984. *ochraceofulvum*, B. & Cke.  
 983. *subgilvum*, B. & Br. 1443      985. *chrysoconium*, B. & Br. 1436  
     *b. Stroma nigrum.*  
 986. *Cesatianum*, Cke. 5989      1004. *investiens*, Schwz. 1470  
 987. *stygium*, Lev. ... 1452      1005. *concurrans*, B. & C. 1474  
 988. *tormentosum*, Ces. 1465      1006. *crustaceum*, Ntke. 1453  
 989. *stigmatum*, Cke. 1453      1007. *reticulatum*, K. ... 1454  
 990. *oodes*, Berk. ... 1456      1008. *subterraneum*, Fckl. 1462  
 991. *bifrons*, Not. ... 1483      1009. *unitum*, Fr. ... 1476  
 992. *æneum*, Ntke. ... 1483      1010. *colliculosum*, Schwz. 1477  
 993. *hypoleucum*, B. & Br. 5990      1011. *caries*, Schwz. ... 1510  
 994. *epirhodium*, B. & R. 1457      1012. *allantoideum*, Cke. 1480  
 995. *punctulatum*, B. & R. 1534      1013. *Michelianum*, Not. 1482  
 996. *tinctum*, Berk. ... 741      1014. *illitum*, Schwz. ... 1511  
 997. *macrosporum*, Karst. 1473      1015. *irregulare*, Cke. ... 5991  
 998. *serpens*, Pers. ... 1448      1016. *glomeratum*, Cke. 5992  
 999. *Archeri*, Berk. ... 1449      1017. *Beaumontii*, B. & C. 2848  
 1000. *effusum*, Ntke. ... 1450      1018. *atramentosum*, Sch. 1503  
 1001. *Vogesiacum*, Pers. 1454      1019. *bipapillatum*, B. & C. 1467  
 1002. *fragile*, Ntke. ... 1459      1020. *incructans*, P. ... 1504  
 1003. *Lenormandi*, B. & C. 1458

V. ENDOXYLON. Stromate matrice plus v minus immerso.

1021. *udum*, Pers. ... 1485      = *confluens*, Auct.  
 1022. *minutum*, Ntke. ... 1486      1024. *Massaræ*, Not. ... 1141  
 1023. *semi-immersum*, N. 1487      1025. *prorumpens*, Fr. ... 5993

DUBLÆ.

1026. *sclerotoideum*, B. 1351      1031. *exertum*, Fr. ... 1501  
 1027. *gangrena*, Ces. ... 1358      1032. *exaratum*, Schwz. 1506  
 1028. *lobatum*, Fr. ... 1499      1033. *sphæriostomum*, Sch. 1508  
 1029. *glomus*, B. & C. ... 1394      1034. *hydnicolum*, Schwz. 1471  
 1030. *Uranis*, Mont. ... 1500      1035. *arecarium*, Bory.... 1468

CALIFORNIAN FUNGI.

By M. C. COOKE AND W. H. HARKNESS.

(Continued from Vol. XII, p. 97.)

The following is an enumeration of the new and rare species collected by Dr. Harkness in California, in continuation. Species previously known, amounting to some hundreds, have not been enumerated, as they would occupy more space than we are able to set apart for the purpose.

**Phoma solani**, Cke. & Hark.

Gregaria. Perithecia minuta, membranacea, subglobosa, papillata, tecta. Sporidia ellipticis, hyalinis ( $0.006-0.007 \times 0.004$  mm.).

On *Solanum*. Harkness (No. 2300).

**Macropodia arctostaphyli**, Cke. & Hark.

Epiphylla, sparsa. Peritheciis subglobosis, atris, erumpentibus. Sporis subglobosis, ellipticisve ( $\cdot 008 \times \cdot 006$  mm.) fuliginofuscis.

On leaves of *Arctostaphylos*. California. Harkness (No. 2480).

**Sphæropsis cupressi**, Cke. & Hark.

Erumpens. Peritheciis atris, obtusis, primum tectis, demum erumpentibus, epidermide circumambiente arcte adherentibus. Sporis ellipticis, continuis, hyalinis, cytoplasmate granuloso ( $\cdot 03 \times \cdot 01$  mm.).

On bark of *Cupressus macrocarpus*. California. Harkness (No. 2064).

**Didymaria clematidis**, Cke. & Hark.

Hypophylla. Maculis griseo-fuscis, subellipticis. Sporis elliptico-elongatis hyalinis, demum uniseptatis, breviter pedicellatis ( $\cdot 025 \times \cdot 008$  mm.).

On leaves of *Clematis*. Harkness (No. 2543).

**Cercospora rubigo**, Cke. & Hark.

Epiphylla, vel hypophylla. Maculis ferrugineis, ellipticis irregularibusque. Hyphis brevissimis, sparsis. Sporis cylindricis rectis curvulisque, utrinque obtusis, 3-4 septatis, hyalinis ( $\cdot 035 \cdot 04 \times \cdot 004$  mm.).

On leaves of *Spiræa*. Harkness (No. 2527).

**Diatrype ceanothi**, Cke. & Hark.

Acervulis verrucæformibus, innato-erumpentibus, atris, rotundatis, peridermio arcte cinctis, intus concolori. Peritheciis compressis difformibusque, ostiolis brevibus, stellato-sulcatis. Ascis clavatis, octosporis. Sporidiis cylindræis, curvulis, utrinque rotundatis, luteolis, hyalinis ( $\cdot 012 \cdot 014 \times \cdot 002$  mm.).

On branches of *Ceanothus*. California. Harkness (No. 2541).

**Diatrype asterostoma**, var. *minor*.

On *Rhododendron*. Harkness (No. 2527).

**Valsa agnostica**, Cke. & Hark.

Erumpens, subrotunda convexa, cæspitulis in cortice nidulantibus primo tectis, demum disco sub-orbiculari nudo. Peritheciis (8-12) subglobosis, atris, in stromate pallido aggregatis, ostiolis brevibus rectis, obtuso-rotundatis, nitidis. Ascis subclavatis, octosporis. Sporidiis allantoideis, rectis curvulis-que, biserialibus, hyalinis ( $\cdot 006 \cdot 007 \times \cdot 0015$  mm.).

On branches of *Ribes*. California. Harkness (No. 2554).

**Valsaria majuscula**, Cke. & Hark.

Tecta. Pustulis sparsis, vix prominulis, peritheciis 6-10 compositis, demum cuticula perforantibus, ostiolis brevibus obtusis. Ascis amplis. Sporidiis majusculis, ellipticis, medio constrictis, utrinque rotundatis, uniseptatis, fuscis ( $\cdot 05 \times \cdot 025$  mm.).

On branches of *Salix*. California. Harkness (No. 1997).

Sometimes the large sporidia are extruded, and form blackened spots around the ostiola, as in *Massaria*, but this is by no means a constant feature. The absence of any hyaline investment of the sporidia also confirm this as a *Valsaria* rather than *Massaria*.

**Diaporthe (Euporthe) gorgonoidea**, Cke. & Hark.

Stromate effuso, cortice facile solubili tecto, ligni superficiem nigrificante v. crustam interruptam sistente, intus nigro-limitato; peritheciis globosis, ligno immersis, plerumque dense stipatis; ostioliis cylindricis, gracilibus flexuosis, maxime elongatis. Ascis cylindrico-clavatis, octosporis. Sporidiis fusiformibus, biserialis, rectis quadri-nucleatis demum 2-4 cellularibus, hyalinis ( $.015-.017 \times .003$  mm.).

On Australian *Acacia*. California. Harkness (No. 2525).

Closely allied to *D. medusæa* and *D. fasciculata*.

**Sphæria (Wallrothiella) eunotiæspora**, Cke. & Hark.

Superficialis, gregaria. Peritheciis ob-pyriformibus ( $\frac{1}{2}$  mm.) atris, subnitidis, lævibus, fragilis. Ascis clavatis. Sporidiis ellipticis, medio inflatis, biserialis, continuis ( $.03-.035 \times .012-.014$  mm.) plasmate granuloso.

On Australian *Acacia*, decorticated. California. Harkness (No. 2111).

Mixed with a species of *Diplodia*.

**Sphæria (Melanomma) seminis**, Cke. & Hark.

Superficialis, gregaria. Peritheciis ( $\frac{1}{3}-\frac{1}{2}$  mm.) atris, opacis, subglobosis, quandoque subconfluentibus, ostiolo pertuso. Ascis clavatis. Sporidiis cylindraceis, rectis curvulisve, 5 septatis, fuscis ( $.05 \times .006$  mm.).

On twigs of *Baccharis*. California. Harkness (No. 2511).

**Sphæria (Anthostoma?) gigaspora**, Cke. & Hark.

Sparsa, subimmersa, matrice substantia tubercula orbicularia elevata tecta, peritheciis globosis magnis ( $1\frac{1}{2}-2$  mm.), ostiolo obtuso, nigro-punctatis. Ascis amplis, saccatis, octosporis. Sporidiis elongato-ellipticis, utrinque leniter attenuatis, continuis, atrofusis ( $.065-.08 \times .025-.03$  mm.).

On decorticated twigs. California. Harkness (No. 2266).

In habit resembling *Sphæria cubicularis*, Fr., but with much larger sporidia, and, as in that species, the perithecia fall out, leaving holes not unlike a large *Stictis*.

**Sphæria (Anthostomella) oreodaphnes**, Cke. & Hark.

Sparsa, epidermide innata, tecta. Peritheciis globosis, epidermide tumidula et leniter nigrificata velatis, vix papillatis. Ascis cylindraceis, octosporis. Sporidiis arcte ellipticis, utrinque rotundatis, fuscis ( $.014-.015 \times .004$  mm.).

On leaves of *Umbellularia*. California. Harkness (No. 2459).

**Sphæria (Didymulla) megarrhizæ**, Cke. & Hark.

Sparsa, tecta. Peritheciis subglobosis, mox depressis, atris, ostiolo papillatis. Ascis subclavatis. Sporidiis biserialibus, ellipticis, uniseptatis, vix constrictis, hyalinis, pallide luteolis ( $.012-.014 \times .006$  mm.).

On *Megarrhiza Californica*. California. Harkness (Nos. 2087, 2088).

**Sphæria (Didymella) lupini**, Cke. & Hark.

Sparsa, punctiformia. Peritheciis tectis, globoso-depressis, leniter papillatis. Ascis clavatis. Sporidiis ellipticis, uniseptatis,

hyalino-flaveolis (immaturis?). Cytoplasmate granuloso ( $.015-.017 \times .006-.007$  mm.).

On stems of *Lupinus*. California. Harkness (No. 2074).

**Sphæria (Didymosphæria) ceanothi**, Cke. & Hark.

Tecta, sparsa. Peritheciis globoso-applanatis, atris, breviter papillatis. Ascis amplis, clavatis, octosporis. Sporidiis ellipticis, uniseptatis, medioconstrictis, atro-fuscis ( $.035 \times .015$  mm.).

On twigs of *Ceanothus*. California. Harkness (No. 2542).

**Sphæria (Didymosphæria) sarmenti**, Cke & Hark.

Sparsa. Peritheciis tectis, subglobosis, atris, lævibus, demum applanatis, ostiolo brevi punctiformi. Ascis cylindrico-clavatis. Sporidiis ellipticis, uniseptatis, medio nec constrictis, fuscis ( $.012 \times .005$  mm.).

On "Canary Vine." California. Harkness (No. 1957).

**Sphæria (Amphisphæria) Wellingtoniæ**, Cke. & Hark.

Gregaria, immersa. Peritheciis atris, elongato-compressis, hysterioideis, striatis, opacis ( $.15-.18$  mm. long,  $.08$  mm. lat.), poro pertusis. Ascis cylindræis, 8 sporis. Sporidiis ellipticis, uniseptatis, fuscis, vix constrictis, loculo utroque uniguttulato ( $.012-.014 \times .008$  mm.).

On bleached wood of *Sequoia*. California (No. 2218).

**Sphæria (Amphisphæria) decorticata**, Cke. & Hark.

Primitus seriatis, intra fibrillas corticis nidulans, demum sub-superficialis. Peritheciis erumpentibus, subserialibus sparsive, subglobosis, atris, opacis (vix  $\frac{1}{2}$  mm. diam.) Ascis cylindræis octosporis. Sporidiis ellipticis, uniseptatis, medio arcte constrictis, cellulis subglobosis efformantibus, læte fuscis ( $.018 \times .009$  mm.).

On decorticated branches of *Quercus*. California (No. 2502).

**Sphæria (Metasphæria) plagarum**, Cke. & Hark.

Gregaria, tecta, elevata. Peritheciis subglobosis, atris, carbonaceis, in plagas consociatis, cuticulâ elevatâ convexo tectis. Ascis clavatis, sessilibus, octosporis. Sporidiis lanceolatis, inordinatis, triseptatis, hyalinis ( $.018-.02 \times .004$  mm.), utrinque acutis.

On bark of *Eucalyptus*. California. Harkness (Nos. 2516, 2345).

**Sphæria (Leptosphæria) ceanothi**, Cke. & Hark.

Gregaria, tecta. Peritheciis minutis subglobosis, epidermide velatis, ostiolo brevi, punctiformi. Ascis breviter clavatis, octosporis. Sporidiis sublanceolatis, triseptatis, hyalino-luteolis ( $.016-.018 \times .0045$  mm.).

On small twigs of *Ceanothus*. California. Harkness (No. 2536).

**Sphæria (Leptosphæria) odora**, Cke. & Hark.

Tecta, subsparsa. Peritheciis mediis, globosis, atris, in cortice nidulantibus, epidermide convexo tectis, ostiolo punctiformi. Ascis clavatis octosporis. Sporidiis lanceolatis, biseriatis, primum uniseptatis, demum triseptatis, hyalino-luteolis ( $.022-.025 \times .005$  mm.).

On branches of *Umbellularia*. California. Harkness (No. 2563).

**Sphæria (Leptosphæria) bicuspidata**, Cke. & Hark.

Sparsa, tecta. Peritheciis innatis subprominulis, globosis, atris, ostiolo brevi. Ascis clavatis, octosporis. Sporidiis fusiformibus,



triseptatis, constrictis, fuscis, utrinque hyalino-cuspidatis ( $\cdot 025 \times \cdot 008$  mm.), sine cuspes.

On twigs of *Baccharis*. California. Harkness (No. 2517).

**Sphæria (Leptosphæria) Californica**, Cke. & Hark.

Densissime gregaria, tecta. Peritheciis hemisphærico-prominulis, obtusis, atris diu epidermide velatis, demum apice subnudis. Ascis clavatis. Sporidiis biserialis, sublanceolatis, utrinque obtusis, 4 septatis, cellula penultima subincrassata, pallide fuscis ( $\cdot 025 \cdot 03 \times \cdot 008$  mm.).

On *Araucaria imbricata* (Nos. 2330, 2331, 2332).

On *Sarothamnus* (Nos. 2396, 2299).

On *Rhododendron*, (No. 2538).

On *Euonymus*, twigs and leaves (Nos. 2238, 2358).

Differs from *S. anisometra* in the perithecia being densely gregarious, so as sometimes to blacken the twigs for some inches, and in the brown sporidia, although it is probable that the sporidia in *S. anisometra*, when old, acquire a brownish colour.

**Sphæria (Leptosphæria) anisometra**, Cooke.

On leaves of *Eucalyptus* (Nos. 2308, 2410).

On twigs of *Eucalyptus* (Nos. 2022, 2373).

**Sphæria (Teichospora) eucalypti**, Cke. & Hark.

Sparsa. Peritheciis subsuperficialibus, parvis, subglobosis, atris. Ascis cylindræis, octosporis. Sporidiis uniserialibus, ellipticis, medio leniter constrictis, 5-7 septatis muriformibusque, fuscis ( $\cdot 02 \cdot 022 \times \cdot 008$  mm.).

On dead bark of *Eucalyptus*. California (No. 2400).

**Sphæria (Thyridium) personatum**, Cke. & Hark.

Lignicola. Peritheciis sparsis, in tubercula ligneo ellipsoideo elevato griseo vel nigrescente nidulantibus, ostiolo brevi vix conspicuo, pertuso. Ascis cylindræis octosporis. Sporidiis uniserialis, ellipticis, medio constrictis, triseptatis, septis 1-2 longitudinalibus percursis, læte brunneis ( $\cdot 018 \cdot 02 \times \cdot 01$  mm.).

On decorticated *Acacia*. California. Harkness (No. 2111).

**Sphæria (Thyridium) Garryæ**, Cke. & Hark.

Gregaria sparsave. Peritheciis semi-immersis, subglobosis atris ( $\frac{1}{2}$  mm. diam.) poro pertusis. Ascis cylindræis 4-8 sporis. Sporidiis ellipticis, 7 septatis muriformibusque, hyalinis demum flavido-fuscis ( $\cdot 04 \cdot 045 \times \cdot 015 \cdot 018$  mm.). Episorio crasso hyalino.

On bleached decorticated twigs of *Garrya*. California. Harkness (No. 2559).

**Venturia Arctostaphyli**, Cke. & Hark.

Amphigena, sparsa, atra. Peritheciis subglobosis, superficialibus, strigosis ( $\cdot 12 \cdot 15$ ) pilis rigidis acicularibus ( $\cdot 08$  mm. long). Ascis obclavatis, sessilibus octosporis, sporidiis ellipticis, utrinque rotundatis, vix constrictis, uniseptatis, flavidis ( $\cdot 012 \cdot 015 \times \cdot 005$  mm.).

On dead leaves of *Arctostaphylos*. California (No. 2552).

**Sphærella acicola**, Cke. & Hark.

Sparsa, minuta, subinnata. Peritheciis globoso-depressis, membranaceis, fuscis. Ascis breviter clavatis octosporis, sporidiis clavato-

ellipticis, uniseptatis, hyalinis, flavidis ( $\cdot 007 \times \cdot 003$  mm.) uno loculo subgloboso, altero angustiore subconico.

On leaves of *Pinus*. Harkness (No. 2303).

**Sphærella umbellulariæ**, Cke. & Hark.

Hypophylla. Maculis suborbicularibus, confluentibusve et irregularibus, purpureo-brunneis, margine nigro-limitato. Peritheciis hinc illic aggregatis, semi-immersis, atris. Ascis clavatis. Sporidiis biserialibus, arcte ellipticis, uniseptatis, hyalinis ( $\cdot 015 \times \cdot 004$  mm.).

On fading leaves of *Umbellularia*. California (No. 2569.)

**Meliolopsis heteromeles**, Cke. & Hark.

Effusum, atrum. Mycelio subcrustaceo, moniliformi, ramoso intertexto, *Capnodio* immixti. Peritheciis globosis ( $\cdot 2$  mm. diam.) membranaceis, liberis; ascis clavatis, octosporis; sporidiis lanceolatis, 3-5 septatis, hyalinis ( $\cdot 04 \times \cdot 008$  mm.).

On leaves of *Heteromeles*. California (No. 2425).

Mixed indiscriminately with *Capnodium Heteromeles*, of which it can scarcely be any condition.

**Capnodium heteromeles**, Cke. & Hark.

Effusum, atrum, subvelutinum. Hyphis densissime intertextis, ramosis septatis moniliformibusque. Peritheciis cylindraceo-ventricosus, erectis, subtenuibus, simplicibus ( $\cdot 2 \times \cdot 02$  mm.). Sporidiis incertis (potius triseptatis, muriformibus, fuscis  $\cdot 018 \times \cdot 009$ ).

On leaves of *Heteromeles*. California (No. 2425).

Only free sporidia seen, and hence uncertain.

**Capnodium Rhamni**, Cke. & Hark.

Maculæforme, atrum. Hyphis repentibus, plerumque moniliformibus, ramosis, strato tenui efformantibus. Peritheciis erectis cylindricis, sursum attenuatis ( $\cdot 3 \times \cdot 04$  mm.) simplicibus, ore fimbriato. Sporidiis ellipticis, triseptatis, fuscis ( $\cdot 018 - \cdot 02 \times \cdot 008$  mm.) uno loculo transversaliter diviso. Conidiis liberis, fuscis, uniseptatis ( $\cdot 012 \times \cdot 006$  mm.).

On leaves of *Rhamnus*. California (No. 2482).

Evidently distinct from *Capnodium rhamnecolum*, Rabh.

**Capnodium tuba**, Cke. & Hark.

Effusum, crustaceum, atrum. Hyphis intertextis, ramosis, repentibus alterum septatis, alterum moniliformibus, crustam crassum deciduum efformantibus. Peritheciis erectis, numerosis cylindraceis ( $\cdot 12 \times \cdot 014$ ), sursum ciliato, divisis, infundibuliformi expansis, conidiis (?) ovatis continuis hyalinis repletis. Asci nonnum vis.

On *Umbellularia* leaves. California (No. 2395).

The whole crustaceous coating of the leaves flakes off in drying.

**Hypoderma eucalypti**, Cke. & Hark.

Epiphylla, gregaria. Peritheciis lanceolatis linearibusque, erumpens, atris, opacis, labiis rotundatis, laxe connivens; ascis clavatis, sporidiis inordinatis, elongato-fusiformibus, continuis, hyalinis ( $\cdot 03 \times \cdot 003$  mm.).

On leaves of *Eucalyptus*. California. Harkness (No. 2402).

## DISCOMYCETES OF CALIFORNIA.

By W. PHILLIPS, F.L.S., AND DR. W. H. HARKNESS.

**Peziza (Hymenoscypha) chloromela**, *Phil. & Hark.*

Sparsa, vel congregata, stipitata (1 mm. long), glabra, atro-viridis, stipite pallidiori, disco plano, immarginato, luteo-viridi (.6 mm.). Ascis cylindraceo-clavatis, octosporis, sporidiis fusiformibus vel clavatis, plerumque curvulis, hyalinis, virido-tinctis (.02-.025 × .004-.005 mm.) paraphysibus filiformibus, indistinctis, adhærentibusque, gelatino hymenio granuloso.

On leaves of *Sequoia sempervirens*. California. Harkness (No. 1951).

**Peziza (Pyrenopeziza) Heteromelis**, *Phil. & Hark.*

Gregaria, erumpens, demum sessilis. Cupulis (.2-.5 mm.) sphaericis dein expansis, leniter scabrosis, atro-brunneis; margine serrato, disco fuligineo flavescente; ascis cylindraceo-clavatis. Sporidiis ellipticis (.01 × .005 mm.) flavotinctis; paraphysibus filiformibus, ad apicem incrassatis, flavescentibus.

Underside of leaves of *Heteromeles arbutifolia*. California. Dr. Harkness (1987).

**Dermatea Pini**, *Phil. & Hark.*

Cæspitosa vel sparsa, subsessilis, globosa, demum patelliformis. ceraceo-coriacea, furfuracea, ochraceo-incarnata, margine indistincto, disco concolori, applanato. Ascis clavatis, octosporis. Sporidiis oblongo-ellipticis, 3-4 nucleatis (.017-.02 × .006-.008 mm.) paraphysibus linearibus, superne incrassatis, furcatis.

On *Pinus*. California. Harkness (2505).

**Dermatea corni**, *Phil. & Hark.*

Cæspitosa vel sparsa, minuta, primo tecta, demum erumpens, turbinata, furfuracea, vitellina, margine distincto; disco plano vel subdepresso, obscuriore. Ascis late clavatis. Sporidiis oblongo-ellipticis (.025-.03 × .008 mm.) paraphysibus filiformibus, superne clavato-incrassatis, furcatis.

On twigs of *Cornus*. California. Harkness (No. 2259).

**Stictis Araucariæ**, *Phil. & Hark.*

Sparsa, immersa, demum erumpens, epidermide elongato-fissurato, cupulis discoideis vel subellipticis, disco pallide-cinereo, margine demum reflexo, albo. Ascis cylindraceo-clavatis. Sporidiis filiformibus (.05-.075 × .002 mm.) pluri-septatis, paraphysibus filiformibus, numerosissimis, furcatis.

On leaves of *Araucaria*. California. Harkness (No. 2524).

**Stictis Megarrhizæ**, *Phil. & Hark.*

Gregaria, minuta, immersa (.1-.3 mm.) margine albo, crenulato; disco minime profundo, pallide flavo. Ascis cylindraceo-clavatis, octosporis. Sporidiis filiformibus (.075-.08 × .003 mm.) pluri-septatis; paraphysibus filiformibus.

On twigs of *Megarrhiza Californica*. California. Harkness (No. 2057).

**Phacidium nigrum**, Cooke.

Gregarium, hypophyllum, erumpens, in maculas nigras conso-  
ciatum, demum laciniato-fissuratum (.1 mm. diam.) disco fuligineo.  
Ascis clavatis, octosporis. Sporidiis ellipticis, rectis, continuis,  
hyalinis (.013-.025  $\times$  .005-.007 mm.).

On underside of leaves of *Andromeda*. Darien, Georgia.  
Ravenel (No. 3211).

**Phacidium Heteromelis**, Phil. & Hark.

Gregarium, orbiculare, tectum, dein laciniato-laceratum, disco  
cinereo. Ascis clavatis vel cylindracco-clavatis, octosporis.  
Sporidiis ellipticis (.01-.012  $\times$  .002-.003 mm.) paraphysibus fili-  
formibus, superne incrassatis.

On underside of leaves of *Heteromeles arbutifolia*. California.  
Harkness. No 2124.

**Hysterium Eucalypti**, Phil. & Hark.

Sparsum vel gregarium (.5 mm.) minutum, ellipticum, rarissime  
striatum, erumpens, sessile; labiis clausis tumidis. Ascis clavatis.  
Sporidiis biseriatis, oblongis, plus minusve curvatis, tri-septatis,  
fuscis (.016-.02  $\times$  .004-.006 mm.).

On bark of *Eucalyptus*. California. Harkness (2405).

**Hysterium Lonicerae**, Phil. & Hark.

Sparsum vel gregarium, ellipticum vel oblongo-lanceolatum,  
(.5-.12 mm. long) parallelum, prominulum, striatum vel læve,  
labiis prominulis, in ætate hiulcis. Ascis cylindracco-clavatis,  
octosporis. Sporidiis ellipticis vel subpyriformibus, muriformibus,  
hyalinis, plerumque gelatinâ involutis (.02-.03  $\times$  .007-.011 mm.)  
paraphysibus indistinctis.

On decorticated *Lonicera*. California. Harkness (No. 2472).

**Hypoderma Heteromelis**, Phil. & Hark.

Gregaria, oblonga, rectis vel curvulis, applanata, vel leniter  
elevata (.4-.8 mm. long). Ascis cylindraccis. Sporidiis filiformi-  
bus (.065  $\times$  .002 mm.) paraphysibus filiformibus.

On underside of leaves of *Heteromeles arbutifolia*. California.  
Harkness (2123).

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# Grevillea,

A QUARTERLY RECORD OF CRYPTOGAMIC BOTANY  
AND ITS LITERATURE.

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## ON FRIES' NOMENCLATURE OF COLOURS :\*

*An examination of the epithets used by him in describing the  
coloration of the Agaricini.*

BY HENRY THORNTON WHARTON, M.A.

The subject of colour-names is so vast and intricate that in the following paper I have confined myself to the consideration of those only which occur in Fries' description of the *Agaricini* in his "*Hymenomycetes Europaei*." Even in this restricted field I have found nearly 200 names of colours, although, with one or two exceptions, I have avoided reference to compound names; if I had considered the complete list that I originally made I should have had to describe about 840. Perhaps I have omitted some few as it is, for I have had to go over some 20,000 lines of concisely-written Latin to find those that I have gathered together for examination here.

In so long a list of names it is fortunate that not every one requires separate consideration. I have enumerated not only the colour-names used for descriptive purposes by Fries himself, but also most of those used as specific. And in making specific names there is a natural tendency to use a colour-name absolutely synonymous with another, simply from the fact of the most obvious one having been already used. For instance, a describer wishes to name a white species *Agaricus albus*; but when he finds that name is preoccupied, he names his species *Ag. candidus*. Still we need not conclude that he had the strict classical Latin differences of the two words in his mind's eye; he probably never thought that *Ag. albus* was so named because it was of a dead white, nor in speaking of *Ag. candidus* need he have meant to imply that it was of a glistening white, as Cicero might have done. This exigency has burdened the list of colour-names with a good deal of useless lumber, but the principle is one that, in the interpretation of specific names, must never be forgotten.

\* Read before the Woolhope Naturalists' Field Club, Oct. 13, 1884.

Another difficulty that constantly presents itself is the indefiniteness with which colour-names were used in classical times. In trying to make out what Fries intended to describe, we are continually hampered by a divergence from the ancient use of the very words he uses; and although the knowledge of each usage is necessary to a complete understanding of the subject, it is my endeavour here to make out the idea in Fries' mind, and only to that end to use the light that can be thrown on the subject from classical sources. Perhaps the best instance of the vague way in which the ancient Romans used the names of colours is to be found in a line by Albinovānus, a Latin poet contemporary with, and a friend of, Ovid's, who flourished about A.D. 28; he describes a woman's arms as whiter than the "purple" snow:

*Brachia purpureâ candidiora nive.*

Of course, "purple" here only means "glistening" or "dazzling," but such a use of words does not accord with modern ideas.

Much of the difficulty that surrounds the nomenclature of colours is also due to there being no authoritative code. In each branch of art or knowledge at the present day different names are used for the same colours. The "purple" of the cardinal is crimson; the "pink" of the huntsman is scarlet. An artist calls his colours by the names under which he buys them of his colour-man. But a milliner wants to invent a fresh name with each change of fashion, and the words we get from the fashionable journals are veritable marvels; couleur de crapaud mort, eau de Nile, elephant-grey, London smoke, mushroom-colour, being specimens. Fortunately "they have their day, and cease to be." An amusing instance was given me lately by an omnibus-driver. One of his passengers had been much struck by a pair of horses he had been driving, a dun and a strawberry-roan, in the horsey-man's language; the passenger, a tailor, described the one as "drab," and the other as a "claret-mixture."

Consequently mycologists must be a law unto themselves, and if we are willing to hold the illustrious Fries as our law-giver, we must study, not so much what colour-names *should* mean, as in what sense he used them.

Perhaps the only wonder is that there is such a limited number of colour-names after all. If we have a clear idea of a dozen colours, we must remember that we can get 479,001,600 permutations out of them, by mixing each with every other, even in similar proportions. For our names to be of any use we must group around each one those shades which most closely assimilate to the named type, and indicate their differences as far as we can by compound words, or qualifying adjectives, or suffixes, or affixes. We all have an idea of the colour of gold, for example, but look at a sovereign, together with a dozen pieces of jewellery made at various times and places, and you will soon see what a very comprehensive,

or, as the logicians say, extended, signification such a colour-name may have. And if a bright and definite colour may be so varied, how much more variable may a less pronounced one be!

Much has been written on the science of colours, but I know no book that deals at all exhaustively with their nomenclature. Field's "Chromatography" has a wide reputation among artists, but it is of little use to us. Neither is the classical work of Chevreul, the oldest professor in the world, who still, in his ninety-ninth year, lectures on chemistry in Paris.

We need not be much troubled about classification, for a very simple method is sufficient for our purposes. But it is as well to know how chromatographers ordinarily classify colours; and to this end I copy the following from one of the many editions of Field's book:—

Neutral	colours :	white, black.
Primary	„ :	yellow, red, blue.
Secondary	„ :	orange, green, purple.
Tertiary	„ :	citrine, russet, olive.
Semi-neutral	„ :	brown, maroon, grey.

I propose to group the whites and blacks with the greys that come between them; to range the oranges, citrines, and browns after the yellows; to include the russets and maroons as subordinate to the reds; to take the purples as variations of the blues; and to comprehend the olives under the greens. Sombre colours dominate so conspicuously among Fungi that we understand their coloration best by regarding their lowly hues as variants from types that owe their names to their very brilliancy. Their complications are so great that it is often difficult, even as it is, to refer them to their proper types; a trouble that was ever present to me when I preliminarily essayed to classify them.

I would begin with the whites and the blacks, and their intermediate greys; I at once discard the trammels that the chromatographers lay down for our deception, when they say that these, in their extremes, are no colours at all.

And first, of the *whites*. My list shows nineteen distinct terms for these. But most of them are made up on the principle that I have already laid down as of constant occurrence, viz., that they owe their appearance to the natural and obvious terms having been already used. The classical distinction of *albus* meaning a dead white, and *candidus* a shining white, has little prominence in Fries' description. To Fries, *albus* is white, and perfect whiteness admits of no qualification. If *albus*, as a specific name, is pre-occupied, *albellus*, *albescens*, *albidior*, *albidus*, and *albineus* can only express the idea of whiteness, but seem used rather for "whitish." *Albicans* and *candicans* should strictly mean "becoming white." *Argenteus* and *argyraceus*, are a silvery white, silvered. *Dealbatus*, white-washed or plastered, *cerussatus*, coloured with white-lead, and *argillaceus*, like white clay, seem to connote texture or surface along with whiteness. *Eburneus*, ivory-white,

*ermineus*, ermine-white, *niveus*, snow-white, and *virgineus*, virgin or pure white, have no more distinction than the English terms by which they are naturally translated.

Between the extremes of white and black there can be great varieties of greys, and the pure greys run into the blues and browns, so that they are best studied in three groups. Of the pure greys, *canus* and *incanus* are the nearest to white; just as we call white hair or a white horse "grey." *Cinereus* is the grey of wood-ashes, *cinerascens* is becoming such a grey; *griseus* seems to be a little darker, and *lividus* is darker still and inclining to brown. *Cretaceo-pallidus* is a pale chalky grey. *Nigrescens* and *nigricans* do not mean so much dark grey as a grey that turns black with age.

Of greys that incline to blue, *caesius* is the palest; it was the classical term for the blue-grey of the eye. *Glaucus* is a grey that inclines to green, and *glaucescens* denotes a paler shade of the same colour. *Livens* and *lividus* are bluish or leaden-grey, much like *molybdus* and *plumbeus*. *Ardosiacus* is a dull lead-colour. *Ag. (Collybia) tylicolor* and *Ag. (Omphalia) oniscus* seem to owe their specific names to their likeness in colour to a kind of cod-fish known as *oniscus*, and so mean rather a light grey, and not the dark slate-grey of the woodlouse we describe under the name of *Oniscus*. *Chalybaeus* is a steel or iron-grey; Fries, under *Cortinarius sciophyllus*, explains it as *caeruleo-fuscus*, dusky blue.

Of the brown-greys, *murinus*, mouse-colour, is the palest (cf. *Paxillus extenuatus*, Fries, p. 402). *Myochrous* should have the same signification, but is used by Fries for a dusky umber. *Argillaceus* is a light brownish ash-colour. *Fuscus*, dusky, is rather a vague term, but it is almost too brown to be classed under the greys at all; *fuscescens* means becoming dusky. *Ravidus* is a dark grey. *Fumosus*, *fuliginus*, and *fuliginosus* are best translated smoky, and not, as the latter might be, sooty black.

Pure blacks fortunately do not admit of much variation, although since an absolute black is rarely seen, several terms occur. *Ater* is strictly a lustreless black, and *niger* is a glistening black; *piceo-ater*, black as pitch, and *furrus*, swarthy, come into the former category; *coracinus*, raven-black, with a tinge of blue, into the latter. *Atratus* and *pullatus* mean simply "clothed in black." *Denigratus*, "blackened," is used for a dark dusky brown, and not black at all. *Nigerrimus*, "black as black can be," seems rather pleonastic, but Fries uses it in his descriptions (*Ag. Panaeolus hypomelas*, p. 313).

The next group, the yellows, under which I range the oranges, citrines, and browns, presents the greatest difficulties of all, and it is hard to get them into satisfactory order. Canon Du Port, in the interesting paper which we had the pleasure of hearing him read last year, cleared up many doubtful points, but his range was more limited than that which I set myself here.

The type of pale yellow seems to be *luteus*, like the flowers of

the plant woad (*Isâtis tinctoria*). Paler than this are *luteolus* and *sulphureus*, sulphur-yellow. *Stramineus*, straw-coloured, denotes a paler and less pure yellow, Naples yellow, of which a deeper, duller shade is *cērīnus*, *croceus*, saffron-yellow, being a fuller shade. *Citrīnus* is our lemon-yellow, yellow of wax.

The type of full yellow is *flavus*, gamboge-yellow, which at its fullest brilliancy is *flavissimus*. *Flavidus* is a paler yellow, purer and richer than *luteus*. *Vitellinus*, like the yolk of an egg, is used by Fries, as the Canon reminded us last year, to describe the Chantarelle (*Cantharellus cibarius*). Not far off *flavus* is *aureus*, gold-coloured, which seems to me most like the Cadmium yellow of artists; its diminutive, *aureolus*, does not seem to be a very different shade. *Galbānus*, the colour of the gum galbanum, is a greenish yellow.

The orange-yellows, made up of yellow and red, not brown, are typically two; *aurantius* being a full orange, Cadmium orange, and *aurantiacus* a paler orange, containing less red. *Igneus* and *flammeolus*, denoting the colour of flame, and *fulmineus*, that of lightning, come in this place, but seem to have no very certain application.

*Persicinus* and *persicolor*, are difficult to describe more intelligibly than by peach colour. *Armeniacus*, apricot-coloured, is explained by Fries as tawny-cinnamon (*fulvo-cinnamomeus*) or yellowish-tan (*helvolo-alutaceus*).

The browns are as extensive as the greys, and comprise every tint between impure yellow and the deepest burnt-umber. Their distinctions are best understood by grouping them into yellow-browns, red-browns, and true browns.

Of the yellow-browns *cinnamomeus*, cinnamon, a light yellowish brown, is the palest and most familiar. *Gilvus* is a yellower shade; *Ag. (Clitocybe) splendens* may be taken in illustrating the type of the colour, a yellowish tan, as it was formerly known as *Ag. gilvus*; classically, *gilvus* was an epithet of a dun or cream-coloured horse. *Alutaceus* has rather a wide signification, but it seems best translated by buff or tan. When it is lighter and yellower it is *helvolus*, the epithet of "white" wine and "white" grapes in Pliny: in describing *Cortinarius iliopodius*, Fries explains *helvolus* by *alutaceus*, but there must have been some distinction in his mind between the two terms, for he uses the compound, *helvolo-alutaceus* as "dusky cinnamon," a fact which appears to show that even Fries himself was not so clear in the application of colour-names as we should like to be. *Crustulinus* seems to be the colour of toast, much darker and warmer than that of a cracknel-biscuit. *Ochraceus* is yellow-ochre, and *melleus*, honey-yellow, is dingier and less yellow; *luridus*, sallow or wan, is still paler and less yellow, almost like that which builders call "stone-colour." *Rhabarbarinus* is the light brownish yellow of Turkey rhubarb. *Isabellinus* is a light brownish-yellow or dirty cream-colour. The word has a history, and was first used of unwashed linen. The



Infanta of Spain, daughter of Philip II., made a vow in 1601 that she would not change her linen until her husband had taken Ostend; as that city did not fall till three years after, she must have saved her washing-bill at the price of some discomfort.

Fawn-colour does not fall very conspicuously into any of my three divisions of browns, but most of us know the hue so denoted; *cervicolor*, *cervinus*, and *hinnuleus* all seem to mean much the same. *Cervinus* is applied to the darkest shade, and Fries explains *hinnuleus* as a tawny-cinnamon (p. 380).

The brownish ochrey yellow colour known to artists as "gall-stone," only with an inclination to a dirty green, is denoted by *ictericus* or *icterinus*.

The brightest of the red-browns is *lateritius*, the colour of old red tiles; its paler shade, that of *Ag. (Hypholoma) sublateritius* is familiar to us all. *Testaceus*, brick-coloured, is a reddish brown or rusty bay, almost Venetian red. *Fulvus* is tawny, the colour of a lion, and is also known as *leoninus* or *leochromus*; *fulvellus* seems to be paler and redder, and very like that which gives its name to *Ag. (Collybia) nitellinus*, dormouse-colour. *Helvus* is a light bay or "cow-colour," like *vaccinus*. *Badius* is a reddish-brown, the colour of a "bay" horse; *spadiceus*, date-brown, is a duller and darker shade. *Hepaticus*, liver-coloured, is a darker and redder brown than bay. *Ustalis* denotes a warm reddish bay, between red-ochre and brown-madder.

Of the true browns, the type is *brunneus*, Vandyke-brown. *Coffeatus*, like roasted coffee, is very similar. *Ligneo-brunneus* is a lighter or wood-brown. The apparently extinct *Ag. (Lepiota) Paulletii* is described by Fries as *colore "de noisette,"* which must mean a light nut-brown or hazel. *Umbrinus* is a dark brown, brown umber, the colour of a "brown" horse; indeed, the scale of colours used in describing horses, from dun through chestnut, bay, and brown to black, shows how, in ordinary language, the name of a colour is always taken as of a very extensive connotation, because it is hard to decide where one colour ends and another begins.

We now come to the reds and their varieties. The palest is *carneus*, with *carneolus* and *incarnatus*, flesh-coloured. *Hysginus* is a more distinctly red flesh-colour. *Roseus* and *rosaceus* imply a rosy pink; *rosellus* seems to mean inclined to pink. There must be some difference between the shades of scarlet or vermilion distinguished as *cinnabarinus* and *miniatus*, because each is compounded with the other as *cinnabarino-miniatus*, but I have not succeeded in finding out what the difference is. *Coccineus*, cochineal red, is a deeper scarlet, carmine. *Sanguineus*, blood-red, is nearly similar. *Rufus*, *ruber*, and *russus* are less pure reds. *Rubescens* is merely becoming red. *Rubellus*, *rufidulus*, and *rufulus* are reddish. *Rubens* is a brick-red; *rutilus*, *rutilans* a purplish brick-red. *Vinaceus* is reddish rather than claret-coloured, but it does not seem to be ever used in descriptions. Less pure reds

are *castaneus*, chestnut; *ferrugineus* and *rubiginosus*, rust-red; and *puniceus*, which is an almost purple red.

Blues are so rare among Fungi that very few names are required for them. *Ceruleus* is a pale blue, azure; *cærulescens* is becoming blue. *Azureus*, *lazulinus*, and *cyaneus* are rather ultramarine. *Cyanellus* is almost sky-blue. *Purpureus* is a bluish purple; *violaceus*, violet, is a reddish purple; *lilacinus* is lilac or mauve. *Ianthinus* and *ionides* alike refer to a violet colour. *Porphyro-leucus* should mean purplish-white, but *Ag.* (*Tricholoma*) *porphyroleucus*, Bulliard, is described by Fries as "sooty or dusky, becoming red."

The type of the greens is *viridis*, but it is of no definite hue; *virescens* and *viridans* mean turning green. *Aerugineus* and *aeruginosus* refer to a verdigris or rather bluish-green. *Olivaceus* is olive-green, *olivascens* denoting the preliminary stage of becoming green. *Pausiäcus* describes precisely the same green, from *pausëa* or *pausia*, a variety of olive; for Fries says of *Ag.* (*Clitocybe*) *pausiäcus* that the gills are olivaceous.

Before I had made the attempt of which you have the outcome now, to elucidate Fries' use of the names of colours, I was unwilling to ask for much of your indulgence. But now that I have done my best, and feel how poor my best has been, I must ask you to look on my essay, not as a final determination, but as a framework about which can be arranged the experience of others. No invention is ever so valuable to its inventor as it is to those who can bring it to perfect use. May what I have tried to accomplish here be at least the opening of the door for the truth that must in the end prevail.

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## BRITISH DISCOMYCETES.

We omitted in our last issue to announce that Mr. W. Phillips, F.L.S., of Shrewsbury, is preparing for issue a work containing full descriptions of all the genera and species of the British Discomycetes, which will virtually be a revised edition of that portion of our "Handbook of British Fungi." We need not remind our readers that no one more capable to undertake this duty could be found, as Mr. Phillips has devoted himself with untiring perseverance to the critical study of the Discomycetes, and especially those of our own islands, for many years. Unhesitatingly we have placed all our own material at his disposal, with the offer of any assistance which we can give him, and we have no doubt the work will be prosecuted with vigour.

It will be issued in one volume, cloth, and will not exceed ten shillings; but in order to its publication, if possible, at a lower price, the names of subscribers are solicited, which should be sent forthwith to Mr. W. Phillips, Canonbury, Shrewsbury, from whom prospectus and any further details may be obtained.

# DEMERARA FUNGI.

The following is an enumeration of a collection of Fungi from Demerara, recently exposed at the Forestry Exhibition at Edinburgh, and now transferred to the Royal Herbarium at Kew:—

**Lentinus velutinus**, *Fr.*

**Lenzites applanata**, *Fr.*

**Polyporus (Mesopus) rugosus**, *Nees.*

**Polyporus (Mesopus) pansus**, *Berk.*

It seems almost impossible to indicate any line of separation between *P. pansus*, B., and *P. camerarius*, B.

**Polyporus (Pleuropus) flabelliformis**, *K.*—Large form, with the stem nearly obsolete.

**Polyporus, Pleuropus) lucidus**, *Fr.*

**Polyporus (Pleuropus) sanguineus**, *Fr.*

**Polyporus (Fomes) australis**, *Fr.*

**Polyporus (Fomes) rimosus**, *Berk.*

**Polyporus (Fomes) lateritius**, *Cooke.*

**Polyporus (Fomes) ligneus**, *Berk.*

**Polyporus (Fomes) fraxineus**, *Fr.*

**Polyporus (Fomes) marmoratus**, *Berk.*—This is the same as the *Polyporus fasciatus* (Fries), of the Kew Herbarium, but *not* the *Polyporus fasciatus* (Fr.) of the Berkeley Herbarium.

**Polyporus (Merismoidei) senex**, *Nees.*

**Polyporus (Fomes)**———?

A resupinate form of some large species, which it is difficult to identify.

**Polyporus (Fomes) sulcatus**, *Cooke.*

Pileo durissimo, convexo-plano, reniforme, glabro, opaco, umbrino, concentrice dense profundoque sulcato, cute crasso indurato; contextu albo, fuligineo maculato; tubulis abbreviatis, stratosi, albidis; poris rotundatis, minutis, albis, dissepimentis crassiusculis. Hymenio convexo, margine sterili.

On trunks. Demerara.

Pileus 6-9 inches across, 1½ in. thick behind, gradually attenuated to the somewhat acute margin.

**Polyporus (Fomes) geotropus**, *Cke.*

Pileo suberoso-lignoso, durissimo, incrustato, concentrice sulcato, radiato-rugoso, postice subtuberculoso, glabrato, pallido; margine acuto, incurvo; contextu albo; tubulis abbreviatis stratosi, poris minutissimis, rotundis, albis pallescentibus.

On trunks. Demerara.

Pileus 4 to 10 inches broad, 1-2 inches thick behind, substance not fibrous or zoned, allied to *P. ulmarius*, somewhat resembling large coarse specimens of *P. auberianus*, M. in habit, but more friable, and very subject to the attack of insects.

**Polyporus (Funales) trichomallus**, *B. & Mont.*

**Polyporus (Polystictus) hirsutus**, *Fr.*

**Polyporus (Polystictus) cervino-nitens**, *Schwz.*—This is most closely allied to *P. albo-cervinus*, *Berk.*; so close that some of the forms seem to possess the characters of both. In our opinion the species of *Polyporus* require a most careful revision.

**Dædalæa sprucei**, *Berk.*

**Stereum hydrophorum**, *Berk.*

## FUNGUS FORAYS, 1884.

HACKNEY NATURAL HISTORY SOCIETY.—The Foray of this Society was made on Saturday, 27th September, to Epping Forest. Although the general Foray did not commence till after noon, some of the members were on the ground and commenced the search early in the morning. It was expected that the dry season would have its effect in limiting considerably the number of fungi to be found, and this was in reality the case, for long walks had to be taken in order to secure a very limited number of species. Most of the baskets contained only common species, but two interesting additions to the British Flora were determined. One of these was *Hydnum diversidens*, *Fr.*, found by Mr. H. T. Wharton and Mr. J. C. Webb, on a trunk near Fairmead; the other was *Boletus duriusculus*, *Kalch.*, an ally of *Boletus scaber*, and probably may have been confounded with it in times past. After tea at Fairmead Lodge, the specimens were laid out in an ante-room, and examined leisurely by the party, information concerning them being furnished by the President, and Messrs. Worthington Smith, H. T. Wharton, and James English.

ESSEX FIELD CLUB.—Two days having been selected for the Foray this year, the members met at Loughton on Friday, October 3rd, and, accompanied by the Rev. Canon Du Port, Mr. W. Phillips, of Shrewsbury, Mr. Worthington Smith, and M. C. Cooke, proceeded towards Monk's Wood, in Epping Forest, then through other portions of the Forest, reaching Buckhurst Hill in the afternoon, when the specimens were arranged on tables in the large ball-room of the "Roebuck," and duly named, labelled, and classified, Mr. T. Howse having sent *Hydnum erinaceum*, and *Boletus aurantiporus*, and other species, from Guildford. On the following day other portions of the Forest were explored, terminated by a tea at five o'clock, and a meeting thereafter, at which the results of the two days' Foray—as far as they could be ascertained at the time—were reported, and Mr. Worthington Smith read a paper on the "Politics of the Potato-Fungus." Notwithstanding that the season was unfavourable, a good exhibition was made, and a great number of visitors were clustered around the tables until a late hour. The Rev. J. M. Crombie exhibited

an excellent collection of the Lichens of Epping Forest, and a large number of microscopes at a central table displayed objects allied to the subject of the day in a most efficient manner. Between 20 and 30 species, not before recorded, were added to the Epping Forest Catalogue.

LEICESTER PHILOSOPHICAL SOCIETY.—The first Fungus Excursion of the Biological Section of this Society was made in Charnwood Forest on Wednesday, October 8th. The morning was by no means promising, and consequently but few members came to the starting post. About noon the rain began a continuous drizzle, which, by 3 p.m., settled into a regular downpour. Foraging had to be conducted for some time under considerable difficulty, and finally abandoned. No rare species were met with, but an accurate list was kept of all that were examined and determined during the day, so that, in the evening, when the results were compared, it was found that some forty species had been added to the list of the Fungi of Leicestershire. The sole lady of the party exhibited some very characteristic sketches which she had made of several species of *Agaricini*, and we then, as now, entreated her to persevere, and, by so doing, perform good service for Leicestershire botany.

THE WOOLHOPE CLUB FORAY.—The usual week at Hereford commenced on October 13th, and the first excursion to Leominster for Croft Ambury on the 14th. The walk was pleasant, the weather and company agreeable, and the view extensive and picturesque; but many of the baskets remained almost empty, most of the time being occupied in marching up a hill and then marching down again. On the 15th a short excursion to Haywood Forest was much more satisfactory in its results. On the 16th the general excursion was to Dinmore, where the beautiful *Cortinarius triumphans* was found, again under birches, the only previously known locality being Haywood Forest. On October 17th. the last, and worst, excursion was made in Eastnor Park, near Ledbury. During the evenings the following papers were read at the soirées:—"Notes on the Edible Fungi of North Italy," by A. S. Bicknell; "On Colour Nomenclature in Fungi," by H. T. Wharton, M.A.; "British Species of Nidularia," by W. Phillips; "The Spermogonia of the Uredines," by C. B. Plowright; "Researches into the Oospores of some Fungi," by the Rev. J. E. Vize, M.A.; "On Bunt," by C. B. Plowright; "Recent Views on the Lamellæ of the Agaricini," by the Rev. J. E. Vize, M.A.; "Some Recent Additions to our Mycologic Flora," by W. Phillips, F.L.S.; "Trinomialisism in Zoology," by H. T. Wharton, M.A.; and "Some Gigantic Fungi," by M. C. Cooke.

The week was conspicuously deficient in novelties, which were chiefly confined to those sent from a distance. A. O. Walker, Esq., of Chester, sent a box of specimens from North Wales, which contained nothing rare. H. T. Wharton exhibited *Agaricus*



*Elvensis* from Kingsbury. W. G. Smith sent *Hydnum coralloides* from Newark. C. Bucknall brought *Cortinarius papulosus* from near Bristol. T. Howse also sent a box of specimens from Guildford. Excepting *Ag. melleus*, the white-spored Agarics were very scarce.

*Polyporus intybaceus* was found for the first time in Herefordshire. *Geaster fimbriatus* occurred plentifully in Eastnor Park. *Lactarius flexuosus* was again found in Haywood Forest. *Hygrophorus cossus* rather plentifully at Dinmore, but novelties were conspicuously absent, and critical discussion unusually wanting in vigour for lack of material. Some of the sub-genera were not represented by a single species.

Very large specimens of *Agaricus melleus* were measured in Haywood Forest, ten, and ten-and-a-half, inches in diameter of the pileus. Curious malformations of the same ubiquitous species were found at Dinmore.

HERTFORDSHIRE NATURAL HISTORY SOCIETY.—The Cryptogamic Meeting and Fungus Foray in the neighbourhood of St. Albans was held on Saturday afternoon, November 1st. The leaves had been falling briskly for two or three days, and consequently covered many of the few species of Fungi on the ground. Two or three small woods and Gorhambury Park were explored, but only 43 species were recorded, of which 15 had not been recorded for previous Forays. Nearly all the Fungi found were of common species, and these represented by few individuals. The most noteworthy species was *Agaricus (Collybia) longipes*, Bull. Numerous specimens of *Agaricus (Tricholoma) personatus*, in excellent condition, were taken from Gorhambury Park, and operated upon afterwards to test their esculent qualities, as also were several individuals of *Ag. (Tricholoma) nudus*, in both cases with satisfactory results. The Fungi found at the Foray were determined by M. C. Cooke and Worthington G. Smith.

These are the only Forays of which we are enabled to report from personal observation. The general impression in all localities is, undoubtedly, that the number of Fungi seen was far inferior to that of very many previous years. Some say "the worst for twenty years."

## DISEASES OF FIELD AND GARDEN CROPS.\*

This little volume, which is published at the low price of four shillings and sixpence, should be in the hands of every farmer and gardener, as well as every student of Fungi. It presents in a handy and popular form a careful digest of what is known, and what is supposed to be known, of the principal diseases of plants caused by Fungi. Originally delivered as lectures to the Institute of Agriculture at the British Museum, and since carefully revised

\* Diseases of Field and Garden Crops, chiefly such as are caused by Fungi; by Worthington G. Smith, F.L.S., with 143 figures. Macmillan and Co.

and somewhat extended, this volume is intended for practical agriculturists, and appears to set forth with fairness the arguments on both sides in certain vexed questions which enter into the subjects discussed. Of course it is not difficult to see in which direction the writer's own opinions tend, but there is no personality, and no assumption of dogmatism, or any attempt to sneer at and quarrel with those from whom he feels bound to differ. On the whole we feel prepared to endorse the views, deemed in some quarters heretical, which the writer favours, and though sometimes it has been our honour to be linked together as a "pair of heretics," the opprobrium has not yet convinced either of his error, or induced a desire to recant. Time is on our side, and we are content to wait.

We cannot enumerate the thirty-eight chapters into which the book is divided, but in it will be found Potato Diseases, Onion and Cabbage Diseases, the Corn Mildews, Ergot of Grain, Smut, and many others, all profusely illustrated, and described in plain language, so as to require no glossary.

It is not our intention to enter upon any of the subjects here treated, since we have neither time nor inclination for that particular "vanity and vexation of spirit" denominated controversy. No additional progress has been made in the arguments during some years, in spite of the volumes of "words" which have been written. The premises are the same, the deductions are the same, the missing links, and the fallacious conclusions, are all as they were, it is only variations that have been played, but the fundamental tune is the same. "We cannot believe a proposition only by wishing, or only by dreading, to believe it," says Mill,\* and further he adds, for the benefit of such as seek to do it, that "it makes him shrink from the irksome labour of a rigorous induction, when he has a misgiving that its results may be disagreeable; and in such examination as he does institute, it makes him exert that which is in a certain measure voluntary, his attention unfairly, giving, a larger share of it to the evidence which seems favourable to the desired conclusion, a smaller to that which seems unfavourable. It operates, too, by making him look out eagerly for reasons, or apparent reasons, to support opinions which are conformable, or to resist those which are repugnant, to his interests or feelings; and when the interests or feelings are common to great numbers of persons, reasons are accepted and pass current, which would not for a moment be listened to in that character if the conclusion had nothing more powerful than its reasons to speak in its behalf. The natural or acquired partialities of mankind are continually throwing up philosophical theories, the sole recommendation of which consists in the premises they afford for proving cherished doctrines, or justifying favourite feelings; and when any one of these theories has been so thoroughly discredited as no longer to serve the purpose, another is always ready to take its place. This propensity, when exercised in favour

\* "System of Logic," p 483.

of any widely-spread persuasion or sentiment, is often decorated with complimentary epithets; and the contrary habit of keeping the judgment in complete subordination to evidence, is stigmatised by various hard names, as scepticism, immorality, coldness, hard-heartedness, and similar expressions, according to the nature of the case."

People may be educated in some things, but they are not made logicians by Act of Parliament. Logic is not one of the fashions of the age in which we live, or some of the sophistries we hear of would have a "short life and a merry one."

### SPHÆRIACEÆ IMPERFECTÆ COGNITÆ.

Under this heading in Saccardo's Sylloge, he enumerates no less than 420 species of which the fructification was unknown to him. Whether this list might not with little trouble have been considerably reduced, we will not stay to enquire. Suffice it to say that we have taken the first 89 species, belonging to the *Compositæ*, and subjected them to examination, with the following result.

We are indebted to Mr. W. C. Stevenson, of Philadelphia, for the determination of some of the species in the Schweinitzian Herbarium, for which we had not access to authentic specimens. The numbers at the left refer to the corresponding numbers in the "Sylloge."

4126. **Rosellinia pardalios**, B. & C., *Herb. Berk.*, No. 8691.

Sporidia elliptical, brown, .008 mm. long.

4129. **Diatrype pilulifera**, Schwein. in *Herb. Berk.*, No. 8727.

Hardly appears to be the species of Fries. There is no "collum longum attenuatis."

4131. **Diatrype euphorea**, Fr., *Herb. Berk.*, 8731.

Sporidia allantoid .01 mm. long.

4132. **Diatrype rhois**, Schwein. *Herb. Berk.*, No. 8735.

Sporidia allantoid .0075-.008 mm. long.

4133. **Valsaria Robiniæ**, Schw. in *Herb. Berk.*, No. 8728.

Sporidia elliptical, uniseptate, brown .02 mm.

4134. **Diatrype virescens**, Schwein. *Herb. Berk.*, No. 8730.

Sporidia allantoid, pale fuscous, .008 mm.

4137. **Diatrype smilacicola**, Schwein. in *Herb. Berk.*, No. 8739. *Sacc. Syll.*, No. 739.

Sporidia allantoid, .012-.014 mm. long.

4142. **Diatrype concolor**, Schwein. *Herb. Berk.*, No. 8746.

Sporidia allantoid, .0075-.008 mm. long.

4143. **Diatrype albo-pruinosa**, Schweinitz.

Sporidia allantoid, pale fuscous, .02-.022 × .004 mm.

4144. **Cryptospora corylina**, Fckl. *Sphæria versatilis*, Fries. *Herb. Berk.*, No. 8759. Specimen from Schweinitz.

Sporidia cylindrical, flexuous, nucleate, hyaline, .05 mm. long.

4145. **Diatrype sordida**, *Pers. Herb. Berk., No. 8752.*  
Sporidia allantoid  $\cdot 012$  mm. long.
4147. **Fuckelia gastrina** = *Sphæria irregularis (Fr.) in Herb. Berk.*
4149. **Sphæria griseo-tecta**, *B. & Br. Herb. Berk., No. 8779.*  
Villose and byssoïd, not a *Diatrype*; asci clavate, sporidia biserial, cylindrical, hyaline, flexuous,  $\cdot 04 \times \cdot 003$  mm.
4150. **Diatrype friabilis** (*Pers.*) *ex. herb. Schweinitz in Herb. Kewensis.*  
Sporidia allantoid  $\cdot 01$  mm. long.
4153. **Diatrype variolosa**, *Schwein. in Herb. Berk., No. 8778.*  
Sporidia allantoid  $\cdot 007\text{--}\cdot 008$  mm. long.
4154. Only a **Sphæropsis** under the name of **Sphæria subconfluens**, *Schw., in Herb. Berk., No. 8777.*
4155. **Diatrype sambucivora**, *Schweinitz in Herb. Berk., No. 8775.*  
Sporidia allantoid  $\cdot 008$  mm. long.
4156. **Diatrype collecta**, *Schwein. in Herb. Berk., No. 8776.*  
Only minute stylospores found.
4157. **Diatrype annulans**, *Schweinitz in Herb. Berk., No. 8774.*  
Sporidia allantoid  $\cdot 008$  mm. long.
4160. **Eutypa oppansa**, *Fries in Herb. Berk., No. 8822.* Specimen from *Schweinitz.*  
Sporidia allantoid, about  $\cdot 01$  mm.
4166. **Eutypa mori-rubræ**, *Schweinitz in Herb. Berk., No. 8826.*  
Sporidia cylindrical, scarcely curved, pale fuscous,  $\cdot 008$  mm. long.
4167. **Eutypa mela**, *Schweinitz in Herb. Berk., No. 8793.*  
Apparently not distinct from *E. maura*.
4168. Apparently an **Eutypa**, but without fruit, *Herb. Berk., 8825.*
4169. **Eutypa elevans**, *Schweinitz in Herb. Berk., No. 8817.*  
Sporidia allantoid  $\cdot 008$  mm. long.
4170. **Eutypa denigrata**, *Schwein. in Herb. Berk., No. 8813.*
4171. **Eutypa confusa**, *Schweinitz in Herb. Berk., No. 8817, 8819.*  
Ostiola rugose, sporidia allantoid.
4172. **Diaporthe concrescens**, *Schweinitz in Herb. Berk., No. 8815.*  
Sporidia fusiform, quadri-nucleate, then uniseptate  $\cdot 012$  mm. long.
4173. **Valsa juglandicola**, *Schweinitz in Herb. Berk., No. 8846.*  
Sporidia allantoid,  $\cdot 006 \times \cdot 002$  mm.
4175. **Sphæria pugillus**, *Schw. in Herb. Schweinitz, is a Sphæronema.*
4177. **Valsa Sallei**, *Berk. in Herb., No. 8864.*  
Sporidia allantoid, hyaline, very minute.
4178. **Valsa Cathartocarpi**, *Lev. in Herb. Berk., No. 8860.*  
Sporidia allantoid, hyaline  $\cdot 01 \times \cdot 003$  mm.
4180. **Valsa variolaria**, *Schweinitz in Herb. Berk., No. 8958.*  
Sporidia allantoid  $\cdot 0078 \times \cdot 0032$  mm.
4181. **Valsa rubincola**, *Schweinitz in Herb. Berk., No. 8848.*  
Sporidia allantoid  $\cdot 01$  mm. long. In *Herb. Schweinitz*, sporidia  $\cdot 009 \times \cdot 002$  mm.
4182. **Valsa radicum**, *Schweinitz in Herb. Berk., No. 8850.*  
Sporidia allantoid  $\cdot 01$  mm. long.

4183. **Valsa quadrifida**, Schwz. *Amer. Bor.*, 1378.  
Sporidia allantoid, hyaline,  $\cdot 009 \times \cdot 0032$  mm.
4184. **Valsa (valsella) papyrifera**, Schweinitz in *Herb. Berk.*, No. 8959.  
Sporidia allantoid, numerous, minute.
4185. **Cytispora** only, under, **Sphæria oligostoma**, Schwein. in *Herb. Berk.*, 8852, and sterile in *Herb. Schweinitz*.
4186. **Valsa modesta**, Schwein. *Amer. Bor.*, No. 1337.  
Sporidia allantoid  $\cdot 0078 \times \cdot 0032$  mm.
4187. **Valsa indistincta**, Schweinitz in *Herb. Berk.*, No. 8960.  
Sporidia reniform, hyaline,  $\cdot 006 \times \cdot 0045$  mm.
4188. **Valsa (Eutypella) Halseyana**, Schwein. in *Herb. Berk.*, No. 8855.  
Sporidia allantoid  $\cdot 008$  mm. long.
4189. **Valsa (Eutypella) goniostoma** (Schweinitz).  
Sporidia allantoid, hyaline  $\cdot 007 \times \cdot 002$  mm.
4190. **Valsa frustrum-coni**, Schwein. in *Herb. Berk.*, 8854.  
The small specimen furnished only a *Cytispora* with minute spores.
4191. **Valsa conseptata**, Schweinitz in *Herb. Berk.*, No. 8952.  
Sporidia allantoid, hyaline,  $\cdot 0083 \times \cdot 0032$  mm.
4192. **Valsa ceanothi**, Schweinitz in *Herb. Berk.*, No. 8961.  
Sporidia allantoid,  $\cdot 02 \times \cdot 006$  mm.
4193. **Valsa conspurcata**, Schweinitz in *Herb. Berk.*, No. 8849.  
Sporidia allantoid, hyaline,  $\cdot 006 \times \cdot 002$  mm.
4194. **Valsaria Bignoniæ**, Schweinitz in *Herb. Berk.*, No. 8856.  
Sporidia olive brown, uniseptate,  $\cdot 015 \times \cdot 008$  mm.
4195. **Aglaospora profusa**, or scarce different, as **Sphæria amor-phostoma**, Schweinitz in *Herb. Berk.*, No. 8851.
4196. **Eutypa allostoma**, Schweinitz in *Herb. Berk.*, No. 8853.  
Sporidia allantoid,  $\cdot 009 \times \cdot 003$  mm.
4198. **Valsa aractina**, Fr. in *Herb. Berk.*, No. 8845, ex-herb Fries.  
Sporidia allantoid,  $\cdot 01$  mm. long.
4201. **Valsa deformis**, in *Herb. Schweinitz*.  
Sporidia allantoid, hyaline,  $\cdot 006\text{--}\cdot 008 \times \cdot 0015$  mm.
4203. **Cryptospora vasculosa**, in *Herb. Schweinitz*.  
Sporidia cuneate, nucleate,  $\cdot 008 \times \cdot 012$  mm.
4208. **Valsa (Quaternaria) abnormis**, Fries., fide Schweinitz, *Herb. Berk.*, No. 8989.  
Sporidia allantoid, hyaline, minute.
4210. **Sphæria (Cryptospora) umbilicata**, Pers. *Herb. Berk.*, No. 8986,  
is without fruit.  
Sporidia oval, hyaline  $\cdot 0062 \times \cdot 005$  mm. in *Herb. Schweinitz*.
4211. **Eutypa dimorpha**, Wallr. in *Herb. Berk.*, No. 8816.  
Sporidia allantoid, hyaline,  $\cdot 005$  mm. long.
4213. **Valsa expers**, Schweinitz in *Herb. Berk.*, No. 8990.  
Sporidia allantoid,  $\cdot 02$  mm. long. In *Herb. Schweinitz*  $\cdot 018 \times \cdot 016$  mm.
4214. **Valsa rimicola**, Schweinitz in *Herb. Berk.*, No. 8985.  
Sporidia allantoid,  $\cdot 0065$  mm.
4215. **Valsa rhizina**, Schweinitz in *Herb. Berk.*, No. 8988.  
Sporidia allantoid,  $\cdot 009 \times \cdot 003$  mm.



The following two species appear to have been omitted, as we fail to trace them in the Index :—

**Valsa aperta**, *Fr. Syst.* II. 407., *Schwein. Amer. Bor.*, No. 1381.

Circinata, perithecia exigua, cortici interiori immersa, subinde irregulariter aggregata, superne crusta tegente juncta. Ostiola peritheciis duplo longiora, erumpentia, primo pro more convergenti a dein erecta, apice perforata. Ascis clavato-cylindricis. Sporidiis allantoides, hyalinis  $\cdot 018 \times \cdot 006$  mm.

In ramis *Populinis*.

**Valsa (Cryptosporella) divergens**, *Schweinitz. Sphæria divergens* *Schwein. Syn. Car.*, 123, *S. (circinatæ) divergens*, *Schw. Amer. Bor.*, No. 1393.

Receptaculum tumidiusculum, cæspes sphæricularum 2-4 lineas diametro æquans suborbicularis, cingitur epidermide. Sphæculæ atræ vel cinerascens, ostiolis teretibus longissimis s. sphæcula sua triplo longioribus, divergentibus. Ascis octosporis; sporidiis subellipticis, hyalinis,  $\cdot 002 \times \cdot 007$  mm., endochromate granuloso.

In ramis *Liquidambaris* dejectis.

## BRITISH FRESH WATER ALGÆ.

This work is now complete in two volumes, cloth, gilt tops. There are only a very limited number of copies left, of which the published price is £4 10s.

Since the appearance of the last part we have been apprised by Mr. F. Bates, of Leicester, of the discovery of *Ælogonium excisum* (page 157) in Leicestershire. The only previous locality recorded in these islands was Ireland. Also another closely-allied species, not referable to any yet recorded as British, but not at present satisfactorily determined.

From time to time we shall endeavour to announce all additions, of which we are assured, in the pages of this journal.

## SOCIÉTÉ MYCOLOGIQUE.

We have received a prospectus of this Society, which it is proposed to establish in France, with our friends Dr. Quelet as President, and M. Boudier as Vice-President. This Society is to be composed of French members and foreign members, and is to be divided into four sections, besides a section for the colonies, each section to have its own mycologic Session, and a general session annually. Annual subscription ten francs for members, and five francs for corresponding members; to each, in proportion, the publications of the Society will be sent. The Secretary is Dr. A. Mougeot, Bruyeres, Vosges, France. All persons giving in their adhesion to the programme before the 30th December will be entitled Founders.

## SYNOPSIS PYRENOMYCETUM.

(Continued from p. 16.)

Notwithstanding that it is a severe tax upon our fully-occupied time, we have endeavoured to proceed with the examination and revision of the *Pyrenomyces* embodied in Saccardo's "Sylloge." Present observations will be confined to the *Dothideaceæ*, although it is impossible to complete that family in the present number. First of all we will endeavour to clear the way by excluding a number of species which it would be folly to retain under the name of *Dothidea*, in the hope of some perfect form being found at a very remote time. There is no doubt that the genus *Dothidea* was somewhat imperfectly understood by Schweinitz and others, since *Diplodia* and *Sphæropsis* as well as *Dothiora* were often included in it.

A very unprofitable examination of the following authentic specimens from Schweinitz in the Berkeley Herbarium may be accepted as a sufficient reason for excluding them all from any enumeration of the species of *Phyllachora*.—

5161. ***Dothidea orbiculata***, *Schweinitz*. Herb. Berk. No. 9249.  
Asci not seen. Stylospores subcylindrical,  $\cdot 022 \times \cdot 003$  mm.
5163. ***D. Rhois***, *Schweinitz*. Herb. Berk. No. 9202.  
No fruit.
5167. ***D. Lauri-Borboniæ***, *Schw.* Herb. Berk. 9242.  
Imperfect. No fruit. Perhaps *Asteroma*.
5168. ***D. juglandicola***, *Schw.* Herb. Berk. 9271.  
Is a *Pilidium*. Stylospores strongly arcuate, hyaline,  $\cdot 012 \times \cdot 003$  mm. Perithecia membranaceous.
5169. ***D. sassafras***, *Schw.* Herb. Berk. 9270.  
Perhaps an *Asteroma*, but without fruit.
5172. ***D. Rosæ***, *Schw.* Herb. Berk. 9276.  
Is the common *Asteroma Rosæ*, Fr.
5173. ***D. maculans***, *Schw.* Herb. Berk. 9274.  
Only consists of sterile brown spots.
5174. ***D. Castaneæ***, *Schw.* Herb. Berk. 9275.  
Only discoloured spots. No indication of being a *Dothidea* in a young state.
5175. ***D. lauricola***, *Schw.* Herb. Berk. 9273.  
Spots resembling *Ectostroma*, without fruit.
5177. ***D. glycineos***, *Schw.* Herb. Berk. 9255.  
Small, irregular, submembranaceous perithecia, without fruit. Either *Phyllosticta* or *Phoma*.
5178. ***D. conspurcata***, *Berk.* Herb. No. 9114.  
Without fruit, probably an immature *Asterina*.
5182. ***D. Barringtoniæ***, *Berk. & Br.* Herb. Berk. 9099.  
Small ostiolate perithecia, without fruit. It is probably a *Phoma*.

5183. **D. Musæ**, *Klotsch*.

Is the same species as recorded under No. 5243.

5185. **D. brachystemonis**, *Schwein*. Herb. Berk. 9251.

No trace of fruit.

5188. **D. Xanthii**, *D. C.*—There is every reason for considering this to be *Puccinia Xanthii*, Schw.

5190. **D. exasperans**, *Schw.* Herb. Berk. 9252.

Perithecia membranaceous. *Phyllosticta exasperans*. Spores  $\cdot 006 \times \cdot 0015$  mm.

5197. **D. Gentianæ**, *Schw.* Herb. Berk. 9201.

Perithecia distinct, submembranaceous, gregarious. Spores narrowly elliptic,  $\cdot 008\text{--}\cdot 01$  mm. Doubtless a *Phoma* or *Phyllosticta*. And *Dothidia orbicularis*, Berk. in Herb. No. 9144, is also the same species.

5199. **D. stipata** (*Fr.*) *Schwein*. Herb. Berk. 9253.

Without fruit. Not a *Dothidea*.

5202. **D. cinerascens**, *Schwein*. Herb. Berk. 9285.

Is a *Phoma*, with spores elliptical, hyaline,  $\cdot 015 \times \cdot 004$  mm., mixed with the mycelium of *Cladoeporium*?

5203. **D. Asclepiadis**, *Schwein*. Herb. Berk. 9278.

Sterile. Seems to be a small *Sclerotium*.

5204. **D. Impatientis**, *Schwein*. Herb. Berk. 9280.

Thin, effused, black spots, an inch or more in length, but wholly sterile.

5205. **D. Silphii**, *Schw.* Herb. Berk. 9288.

Masses of dark brown mycelium, with a small *Phoma*. Spores elliptical,  $\cdot 012 \times \cdot 002$  mm.

5206. **D. dispersa**, *Schwein*. Herb. Berk. 9283.

Cuticular spots of brown mycelium, without cells, perithecia, or spores. Somewhat the appearance of a *Leptostroma*.

5207. **D. conferta**, *Schwein*. Herb. Berk. 9236.

No indication of fruit. Not the habit of a *Phyllachora*.

5209. **D. ornans**, *Schwein*. Herb. Berk. 9237.

A small *Phoma*, with minute oval spores, about  $\cdot 003 \times \cdot 002$  mm.

5210. **D. hibiscicola**, *Schwein*. Herb. Berk. 9279.

Membranaceous perithecia, with filiform flexuous stylospores,  $\cdot 025$  mm. long.

5211. **D. Phytolaccæ**, *Schwein*. Herb. Berk. 9209.

Without fruit. Probably a *Phoma*.

5212. **D. inelegans**, *Schwein*. Herb. Berk. 9232.

Perhaps an *Asteroma*, but without fruit.

5214. **D. crustacea**, *Schwein*. Herb. Berk. 9286.

Black, effused, fragile crust, but without perithecia or spores.

5216. **D. polygonati**, *Schwein*. Herb. Berk. 9266.

With the habit of *Phoma*, but without fruit.

5217. **D. nodicola**, *Schwein*. Herb. Berk. 9230.

Membranaceous perithecia, filled with subspherical hyaline granules.

5218. **D. elliptica**, *Schwein.* Herb. Berk. 9228.  
Blackened crustaceous spots, but no fruit.
5219. **D. ambrosiæ**, *Schwein.* Herb. Berk. 9227.  
Without fruit. Not a *Phyllachora*.
5220. **D. viticola**, *Schwein.* Herb. Berk. 9226.  
With the habit of *Phoma*, but without fruit.
5221. **D. Hyssopti**, *Schwein.* Herb. Berk. 9267.  
Minute brown spots, without perithecia or spores.
5223. **D. frigoris**, *Schwein.* Herb. Berk. 9238.  
Perithecia membranaceous. *Phoma*, with elliptical spores,  $\cdot 006 \times \cdot 002$  mm.
5224. **D. chalybea**, *Schwein.* Herb. Berk. 9240.  
Perhaps an *Asteroma*, but without fruit.
5225. **D. denigrans**, *Schwein.* Herb. Berk. 9241.  
Blackened spots, without fruit.
5226. **D. missouriensis**, *Schwein.* Herb. Berk. 9224.  
Diseased cells.
5227. **D. pomigena**, *Schwein.* Herb. Berk. 9186.  
Minute membranaceous perithecia, with profusion of small oval spores, about  $\cdot 003$  mm. long.
5228. **D. fructigena**, *Schwein.* Herb. Berk. 9187.  
Appears to be rather a compact kind of *Sporidesmium*, no distinct perithecia, no cavity, and no spores. An uncertain production, should be examined in a fresh state.
5231. **D. delicatula**, *Schwein.* Herb. Berk. 9281.  
Thin patches of radiating mycelium.
5233. **D. nigrescens**, *Schwein.* Herb. Berk. 9282.  
Some incipient black mould.
5234. **D. canaliculata**, *Schwein.* Herb. Berk. 9296.  
This is certainly, from the specimen, *Puccinia cellulosa*, Berk.
5235. **D. penicillata**, *Schwein.* Herb. Berk. 9244.  
With the habit of *Phoma*, but without fruit.
5236. **D. cepæ**, *Schwein.* Herb. Berk. 9234.  
Mostly a creeping brown mycelium, with here and there a small perithecium, perhaps of *Asteroma*, but without fruit.
5237. **D. dioscoreæ**, *Schwein.* Herb. Berk. 9235.  
*Phoma dioscoreæ*. Spores elliptical, hyaline,  $\cdot 006\text{--}\cdot 007 \times \cdot 0025$  mm.
5238. **D. panici**, *Schwein.* Herb. Berk. 9287.  
Without fruit.
5239. **D. lineola**, *Schwein.* Herb. Berk. 9284.  
A small *Phoma*, with very minute spores.
5240. **D. scapincola**, *Schwein.* Herb. Berk. 9277.  
Possibly a *Phoma*, but sterile.

5244. **D. flicum**, *Schwein.* Herb. Berk. 9229.

Not to be distinguished from *Leptostroma litigiosum*. Desm.

To these may be added the following, which are not inserted in Saccardo's Sylloge :—

**D. Liriodendri**, *Schwein.* 1951. Herb. Berk. 9272.

*Ectostroma Liriodendri*, Fr. No fruit.

**D. petiolaris**, *Schwein.* 1955. Herb. Berk. 9267.

Blackened spots, but no spores.

**D. Annonæ**, *Schwein.* 1954. Herb. Berk. 9268.

Ectostromoid spots, but no fruit.

**D. gramma**, *Schwein.* 1888. Herb. Berk. 9250.

Perithecia immature, no fruit. See Saccardo, 4452.

**D. atra** (Fr.) *Schwein.* 1869. Herb. Berk. 9259.

Linear stylospores, .008 mm. long, produced in cavities or cells.

**D. radicalis**, *Schwein.* 1874. Herb. Berk. 9262.

This is a *Sphaeropsis*. Spores oval, hyaline at first, ultimately dark brown, continuous,  $.25 \times .016$  mm.

**D. zeæ**, *Schwein.* No. 1866. Herb. Berk. 9256.

Not distinguishable from *Gibberella Saubinetii*, M.

**D. Schimperii**, *Berk.* Herb. 9188.

From Mount Sinai. Habit of *Dothidea*, but without fruit.

**D. Coriariæ**, *B. & C.* Herb. Berk. 9135.

Is without fruit. Not the habit of *Phyllachora*

**D. Robergei**, *Desm.* Herb. Berk. 9157.

Is *Venturia circinans*, Sacc.

**D. dulcamaræ**, *Berk.* in Herb. No. 9167.

Is a *Diplodia*.

**D. glumarum**, *B. & Curt.* in Herb. Berk. 9181.

Is evidently *Gibberella Saubinetii*, M.

**D. hymenicola**, *B. & Br.* Herb. Berk. 9184.

Is *Homostegia lichenum*, Somm. The asci are perfectly distinct and clavate, sporidia biseriate.

**D. vernicosa** (Fr.) *Schwein.* Herb. Berk. 9243.

Habit of *Phoma*, but sterile.

**D. Fraxini**, *Fr.* Herb. Berk. 9146.

Is *Septoria fraxini*, Lasch.

**D. coryli**, *Schwein.* Herb. Berk. 9113.

Entirely sterile. Perhaps a condition of *Gnomonia*.

**D. diospyri**, *Schwein.* 1907. Herb. Berk. 9248.

Without fruit.

**D. granulata**, *Berk. & Curt.* Herb. Berk. 9124

Is a *Tubercularia*, perhaps *T. granulata*.

**Phoma phlomidis** (*Lev.*), *Cooke.*

*Dothidea phlomidis*, *Lev. Demid. Voy.* II. 108, t. 5, f. 2. Herb. Berk. 9197.

Epiphylla. Peritheciis sparsis, atris, prominulis, ostiolis incon-



spicuis. Sporis cylindricis, simplicibus, pellucidis, obtusis,  $\cdot 02 \times \cdot 004$  mm.

In foliis *Phlomidis pungentis*, Sympheropol.

**Phyllosticta Paliuri** (*Lev.*), *Cooke*.

Dothidea Paliuri, *Lev. Demid. Voy.* II., 107, t. 5, f. 6. Herb. Berk. 9145.

Hypophylla, atra, maculæformis. Peritheciis minutissimis, confertis, albo fartis, stromate tenui impositis. Sporidiis ovato-linearibus, pellucidis, curvatis, simplicibus, obtusis,  $\cdot 006 \times \cdot 002$  mm.

In foliis *Paliuri aculeati*. Yalta.

**Septoria pistaciæ** (*Lev.*), *Cooke*.

Dothidea pistaciæ, *Lev. Demid. Voy.* II., 108, t. v. f. 2. Herb. Berk. 9499.

Hypophylla, maculæformis, atra, irregularis. Peritheciis innatis, confertis, minutissimis, ostiolis inconspicuis. Sporis filiformibus, curvatis, simplicibus, pellucidis,  $\cdot 05$  mm. long.

In foliis *Pistaciæ*. Nikita.

## NEW BRITISH FUNGI.

(Continued from Vol. XII., p. 100.)

By M. C. COOKE.

**Agaricus (Flammula) gymnopodius.** *Bull. t.* 601, f. 1.

Dark ferruginous. Pileus fleshy, campanulate then convex, squamulose; stem solid, becoming smooth, equal; gills very decurrent, arcuate, crowded.—*Fr. Hym. Eur. p.* 244. *Cooke Illus. t.* 431.

On pine sawdust. Munstead (*T. Howse*).

Stem 2 in., or more, long. Pileus 2-3 in. broad.

**Agaricus (Flammula) filius.** *Fr. Icon. t.* 117, f. 1.

Pileus fleshy, thin, convex then plane, smooth, moist after rain, gilvous; stem fistulose, long, smooth, pallid, reddish within; gills adnate, rather crowded, white then pallid.—*Cooke Illus. t.* 432.

On the ground in woods. Haywood Forest.

Stem 3-6 in. long,  $\frac{1}{2}$  in. thick, equal or attenuated below, pallid, becoming reddish at the base, and within. Pileus 2-3 in. broad, even, smooth, with rather viscid cuticle, pale orange-red with the disc rufous. The figure in illustrations has too yellow a tone, and is printed rather too dark in the pileus, which it was impossible to alter without cancelling the plate.

**Agaricus (Psathyra) helobius.** *Kalshb. Icon. t.* 17, f. 4.

Pileus submembranaceous, conical campanulate, soon plane, somewhat umbonate, with concentric elevated ridges at the disc, otherwise radiately rugose, fuliginous, margin striate brown; stem fistulose, slender, umber becoming reddish, clad with

fugacious whitish flocci; gills adnate, rounded behind, rather crowded, fuliginous.—*Fr. Hym. Eur.* 308.

Moist places in pine woods. Coed Coch (*Rev. M. J. Berkeley*).

***Boletus tenuipes.*** *Cooke.*

The form described as *Boletus granulatus*, var. *tenuipes*, in "Grevillea," vol. xii., p. 43, has occurred again this year several times in Epping Forest. The bright, clear yellow pores are very distinctive, conjoined with the other characters already indicated, and, in fact, it cannot be united, with any reason, to *B. granulatus* or *B. bovinus*, hence we have applied to it the above specific name.

On the ground in woods. Epping Forest, several localities. Oct., 1884.

***Boletus candicans.*** *Fr. Hym. Eur.* 507.

Pileus leathery, smooth and polished when dry, dirty white with a faint greenish tinge of colour, margin irregular, somewhat crenate; stem lemon white, reticulated, solid; flesh changing rapidly from white to indigo-blue when exposed to the light; tubes lemon, with their orifices uneven and irregular in size. Spores  $\cdot 012 \times \cdot 005$ . *Boletus pachypus*, Smith *Illus. t.* 17. *Boletus elephantinus*, with. *Arr.*, ed. iii., vol. 4, p. 317.

In open places, amongst grass.

Emulating *B. pachypus* in size, and long known in this country, but included with that species. Fries considers it sufficiently distinct to merit the specific name which he assigned to it, although Withering's has priority, if it is the same species, of which there is little doubt.

***Boletus duriusculus.*** *Kalch. Fr. Hym. Eur.* 515.

Pileus globose then hemispherical, soft, smooth, viscid when moist, whitish tawny, then dirty chestnut-colour (often olivaceous), stem attenuated at the base, ventricose, whitish, normally densely punctate with delicate umber squamules; tubes free, elongated, thin, livid, becoming tawny, pores white at length of the same colour.—*Kalchb. & Schulz. Icon.*

In woods. Epping Forest.

About the size of *B. scaber*, with which it has probably been confounded. Pileus when dry cracking into small arcolæ in a tessellated manner. Flesh firm, white, on contact with the air becoming coppery-red, passing into greyish-violet, with the margin and base remaining white. Stem very firm, "edible, delicious."

***Hydnam diversidens.*** *Fries. Hym. Eur.* 609.

Pileus fleshy, inclining to stipitate, greatly deformed, white, densely clad on the upper surface with variable erect incised teeth, margin entire, furnished with clavate teeth, and beneath invested with regular entire subulate spines.—*Fr. Sver. Svam. t.* 71, *f.* 2.

On trunks. Near Fairmead in Epping Forest. Sept.-Oct., 1884 (H. T. Wharton and J. C. Webb).

Forming a cæspitose mass about six inches in diameter. The

pilei confluent at the base. Odour and taste similar to *H. repandum*. Edible.

**Entorrhiza cypericola** (*Magn.*). *Weber. Bot. Zeit.*, Vol. 41, p. 369, t. 4.

Swellings generally white, oval, nearly smooth, from the size of a pin's head to that of a small pea. The outer layers after a time tend to become brown in colour, rendering the whole tumour brown. In the cells of the cortex lie the spores, connected by mycelium filaments. These filaments are wavy or spirally twisted, or collected in coils. The spores are produced at the tips of wavy or spiral branches, thinner than the ordinary branches from which they arise. They become round, and of an average  $\cdot 02$  by  $\cdot 017$  mm. The outer layer of the spore becomes covered with rather large warts, and is usually of a deep yellow or reddish-yellow colour.—*Prof. Trail in Scottish Naturalist*. Oct., 1884.

On roots of *Juncus bufonius*.

**Melanotœnium endogenum**. *Unger. Ewanth.*

The attacked plants become stunted. Stems dark, usually dull purplish or blackish throughout, or at the nodes. The cortex is much crowded with the spores of the fungus, usually collected in groups. The spores are more or less angular from mutual pressure, brown, varying considerably in shade or depth of colour.—*Prof. Trail in Scottish Naturalist*. Oct., 1884.

On stems of *Galium mollugo*.

**Hypomyces ater**. *Fr. Grevillea* XII., p. 80.

Irregularly effused, usually covering the entire fungus on which it is parasitic, black. Perithecia semi-immersed, with a conical ostium of the same colour. Asci cylindrical, sporidia lanceolate, acute at each extremity, usually beaked at one end, continuous, hyaline, sometimes the rostrum seems to be divided from the body of the spore by an incipient septum ( $\cdot 03\text{--}035 \times \cdot 005\text{--}006$  mm.).

On small undetermined *Agarics*. Carlisle (*Dr. Carlyle*).

A very distinct species, agreeing perfectly with the specimens from Fries.

## BRITISH HYMENOMYCETES.

We must again direct the attention of our readers to the paragraph on page 97, in which it is announced that the Rev. John Stevenson is prepared to issue a "Flora of British Fungi," containing full descriptions of all the British Hymenomycetes. This work is proposed to occupy 2 vols., at half-a-guinea each, and we are assured will be sent to press as soon as sufficient subscribers are obtained to warrant the venture. It is to be hoped that all who are interested in British Botany will favour Mr. Stevenson with their support, and that we shall soon hear that the list has attained a sufficient length for him to send the first volume to the press. We believe that we are correct in stating that it is intended to embody all the valuable information contained in Fries's "Monographia," so far as relates to British species. Communications to be sent to the Rev. John Stevenson, Glamis, Forfar, N.B.

## NEW AND RARE BRITISH FUNGI.

BY W. PHILLIPS, F.L.S., AND CHARLES B. PLOWRIGHT.

*(Continued from Vol. x., p. 74.)***227. Agaricus (Lepiota) felinus**, *Pers. Syn.*, p. 201. *Fr. Hym.*, p. 32.

Pileus ovato-campanulate, then expanded, umbonate, submembranaceous, with a very dull, almost black centre, squamose, each minute scale being tipped with a black speck; margin striate, crenulate, thin, tender, and fragile; stem hollow, enlarged below; ring large, fragile, evanescent; gills white, free, subdistant, serratulate. Spores oval or oval-elliptical,  $10 \times 5$  mill.

Pileus  $1\frac{1}{2}$  to  $1\frac{3}{4}$  in. across. Stem  $1\frac{3}{4}$  to 2 in. high, 1-2 lines thick.

In fir woods. Amongst moss. Middleton, 1876. North Wootton, 1880.

This is a very pretty fragile species. The white pileus, with an almost black umbo, is very striking; the lower part of the stem has often a very delicate reddish tinge.

**228. Agaricus (Clitocybe) vermicularis**, *Fr. Hymen.*, p. 98.

Pileus slightly fleshy, umbilicate then reflexed, infundibuliform, repand, even, smooth, moist, becoming pale; stem hollow, soon compressed, smooth, shining, and, as well as the decurrent very crowded thin gills, white.

Somewhat fragile, pileus of a beautiful red or flesh-colour, then tan (almost hygrophanous). Most frequently undulato-lobed. —Fries.

Forres, N.B. Rev. Dr. Keith.

**\* Agaricus (Omphalia) Postii**, *Fr. Hymen.*, p. 157.

King's Lynn. C.B.P. July, 1883.

**229. Agaricus (Pluteus) salicinus**, *Pers. Fr. Hymen.*, p. 659.

Pileus rather fleshy, convexo-plane, subumbonate, disc darker, floccoso-rugose; stem stuffed, fibrillose, bluish-white; gills free, rosy.

In the interior of a hollow pollard willow. South Wootton. Sept. 11, 1882.

Pileus about  $1\frac{1}{2}$  to 2 in. wide; with a tinge of green.

**\* Agaricus (Pholiota) ægerita**, *Fr. Hymen.*, p. 219.

On elm tree. King's Lynn.

**230. Agaricus (Hypholoma) hypoxanthus**, *N. sp.*

Caspite. Pileus umbonate, moist, viscid, dirty white, umbo darker, brownish, squamulose with minute black fibrillæ, which are evanescent; gills purple brown, crowded, narrow, edge white, adnate, seceding, sometimes forked; pileus subcarnose, except the centre, which is a thick fleshy umbo; stem curved, hollow, incrassated below, whitish, smooth above, floccoso-squamose below. Base with a distinct yellow tinge; mycelium orange-yellow.

This agaric has been regarded as *A. storea*, but incorrectly so. It is always cæspitose, and has hitherto occurred either on rotten beech wood or under beech trees.

Forres, 1882. High Beech. Epping Forest.

Pileus about 2 in. across. Stem 2 to 4 in. high, by 3 lines thick.

231. **Russula Du Portii**, *Phil.*, n. s.

Pileus compact, fleshy, firm, convexo-plane, depressed, smooth, dry, centre rufous or flesh-red; margin bluish, even, obtuse; stem spongy-stuffed, minutely striate, glabrous, white; gills rounded behind, broad, distant, white.

In a wood. Mattishall, Norfolk. The Rev. Canon DuPort.

Pileus  $1\frac{1}{2}$  to  $2\frac{3}{4}$  in. broad; stem 1 in. or more high, and 5 to 8 lines broad.

The flesh turns reddish brown when cut, and the odour is that of the common crab.

232. **Cortinarius (Phlegmacium) porphyropus**, *Fr. Hymen.*, p. 351.  
*Grevillea* II., p. 116.

Terrington St. Clement's. In a mossy meadow under trees. Oct., 1883.

233. **Cortinarius (Hydrocybe) scandens**, *Fr. Hymen.*, p. 396. **variety.**

Pileus submembranaceous, conical, then expanded, at first tawny-ferruginous, when moist honey-coloured, when dry alutaceous, umbo fleshy, margin striate; stem fistulose, flexuous, smooth, apex thickened, base attenuated white; gills adnate, thin, rather distant, tawny, cinnamon, edge of the same colour.

In fir woods. North Wootton Heath. Oct. and Nov., 1883.

This small species occurred in great abundance in clusters on the ground, amongst fir leaves.

234. **Cortinarius (Hydrocybe) fasciatus**, *Fries Hymen.*, p. 399.  
*Grevillea* VIII., p. 78.

Reffley Wood. Oct. and Nov., 1883.

235. **Hydnum diversidens**, *Fr. Hymen.*, p. 609. *Sv. Atl. Svamp.*, t. 71, f. 2. *Grevillea* XIII., p. 46.

On beech. Near Guildford. Mr. T. Howse. Oct., 1883. Found also in Epping Forest on hornbeam by Dr. Wharton, Oct., 1884.

236. **Cyphella Pimii**, *Phil.*

Fasciculate, cyathiform, erect or pendant, membranaceous, pubescent, white or very pale yellow; stem rather slender, crooked, enlarged upwards; margin of cup somewhat incised; basidia cylindraceo-clavate; spores subpyriform, colourless ( $0.007-0.01 \times 0.004$  mm.).

On dead herbaceous stems in water. Dublin. Mr. Greenwood Pim.

About 2 lines high and cup 1 line wide. The basidia have sometimes only two spicules, generally four.

237. **Cyphella brunnea**, *Phil.*

Scattered or crowded, sessile, cupulate, dirty-brown, clothed near the margin with a grey pruina; margin incurved, lacerated, mouth



oblique; hymenium smooth, discoloured-brown; flesh paler, subgelatinous; basidia clavate, two to four spicules; spores colourless, globose ( $\cdot 005$ - $\cdot 006$  mm.).

On bark and wood of old elder trees. Shrewsbury.

Cups  $\cdot 5$  mm. across,  $\cdot 8$  mm. high.

238. **Clavaria striata**, Pers. *Fries Hymen.*, p. 675.

Cæspitose, fistulose, subfuliginous; clubs very long, flexuous, somewhat twisted, sparsely striate. Pers.  *Ic. et Descrip.*, t. 3, f. 5.

On the ground. General Cemetery, Shrewsbury.

The clubs were decidedly striate.

239. **Tremella (Coryne) foliicola**, Fckl. *Symb. Myc.*, p. 402. *Sacc. Fungi Ital.*, No. 1024.

Scattered, crowded, subsessile, granular, globose, the upper part whitish, gelatinous, the lower brown, hard and dry; when dry cupulate. Conidia on the apices of branched sterigmata, fusiform curved, simple, hyaline  $6 \times 2$  mk.

On the lower surfaces of the leaves of *Rubus fruticosus*, with *Phragmidium*.

Castle Rising. March, 1882.

240. **Nidularia confluens**, Fries et Nordh.

Rootless, peridium subglobose, smooth, villous; sporangia orbicular, wrinkled, brown (*Fries. et Nordh.*).

*Nidularia confluens*, Fries et Nordh. *Symb. Gast.*, p. 3; *Tulasne Ann. des. Sc. Nat.*, 1844, p. 96; *Nidularia farcta (confluens)* Fries. *Sys. Myc.* ii., p. 301.

On dead wood (pine). Forres. The Rev. Dr. Keith.

About twice the size of a pea, adhering by a broad base to the wood, crowded and partly confluent, very irregular, villous, nearly even, persistent, pale fawn-colour; splitting at the summit into a broadish lacerated opening; internally glabrous, and filled with the orbicular lentiform sporangia, which are brown, wrinkled, and shining, and are immersed in a gelatinous matter which is very adhesive. The hymenium lines a very narrow opening in the sporangium; the basidia are variable in shape, but mostly clavate, bearing one, two, or three spicules; the spores are subglobose ( $\cdot 005$  mm.). A few cystidia occur at intervals flask-shaped.

The spores of this species distinguish it at once from *N. pisi-formis*.

241. **Septoria stellaræ**, Rob. & Desm. *Nat. xiv.*, p. 22. *Sacc. Mic. I.*, p. 182.

Spermatia rod-shaped, curved,  $50-60 \times 1$  mk., indistinctly septate, hyaline.

On *Stellaria*. Forres. Rev. Dr. Keith, 1882.

242. **Ascochyta aceris**, Fckl. *Sym.* p. 387. **Cheilaria aceris**, Lib. **Didymosporium aceris**, Mont. *Rabh. Exsic.*, 1756.

Spots brown, irregularly rounded. Perithecia minute, black, discrete. Spores oblong, very pale brownish, uniseptate,  $8$  to  $10 \times 3-4$  mk.

On living leaves of *Acer campestre*. Rev. J. E. Vize. Oct., 1884.

243. **Ramularia hellebori**, *Fekl. Symb. Mycol.*, p. 361., *Sacc. Myc.* II. p. 381.

Spots on the leaves rounded, amphigenous, whitish, with black margins. Hyphæ fasciculate, nodulose, white, simple,  $20 \times 3$  mk. Conidia fusiform,  $24-30 \times 4-5$  mk.; simple or centrally uniseptate, hyaline.

On *Helleborus*. 1884. Mr. Soppett.

244. **Ramularia rosæ** (*Fekl.*) *Sacc. Mich.* II., p. 550. *Fungi Ital.* t. 1001. *Fusidium Roseum*, *Fekl. Syn.* p. 370.

Spots subochraceous, minute, hyphæ fasciculate, simple or branched, subdentate, hyaline,  $30-35 \times 2-2.5$ . Conidia fusiform,  $15-20 \times 2-2.5$ . Simple or pseudoseptate in the middle, hyaline.

On the under surface of living leaves of *Salix viminalis*. North Wootton, 1884.

245. **Ramularia pratensis**, *Sacc. Mich.* II., 550. *Fungi Ital.* t. 998.

Spots mostly on the leaves, rounded or oblong pallid, ochraceous, with red margins. Hyphæ lax, terete,  $30-40 \times 4$ , obtuse and dentate at their apices. Simple or uniseptate, hyaline. Conidia cylindrical or subfusiform, moniliform, often uniseptate,  $16-25 \times 3-3.5$  mk., hyaline.

On *Rumex acetosa*. North Wootton Heath, 1882.

246. **Sporotrichum geochroum**, *Desm. Sacc. Fungi Ital.* t. 743. *Mich.* vol. II., p. 552.

Effused, velvety, ochraceous yellow; fertile hyphæ erect, rough, subcontinuous, slightly branched. Conidia globose,  $3-4 \times 3-3.5$ . Contents granular, fulvous.

On rotten wood. Mr. G. B. Brown, Ealing.

247. **Ovularia asperifolii**, *Sacc. Mycol. Ven.* No. 591. *Fungi Ven. Ser.* v., p. 186.

King's Lynn. On *Symphytum officinale*. 24 May, 1882.

248. **Amblyosporium umbellatum**, *Harz. Hyphom.*, p. 48, t. II., f. 7. *Briarea aurea* *Fekl. Symb.* p. 359. *Sacc. Mycol. Ven. Spec.* p. 184, t. XVII., f. 1-4. *Myc.* I., p. 271. *Fungi Ital.* t. 703. *Amblyosporium botrytis*, *Fres. Beitr.* p. 99, t. xv., f. 17-21.

Spores ellipsoid, longitudinally striate, rather large, at first white then beautiful saffron yellow, not truly contiguous but connected together in a moniliform manner by apiculi or sterigmata. Hyphæ rather thick, 20-25 mk. in diameter. Conidia  $15-16 \times 10-12$  mk.

On decaying *Agarics*. King's Lynn, 1883.

249. **Myxotrichum cancellatum**, *Phil. n.s.*

Forming little patches; spherical, cinereous; flocci long, subulate, black, simple, except at the base, where the anastomosing branches form a hollow network surrounding the spore-mass; spores very minute, elliptical, nearly colourless ( $.003$  mm. long.)

On dead stems of *Bartsia odontites*, under a bell-glass. Shrewsbury. Dec., 1882.

Spheres, exclusive of flocci, .2 mm. diameter. This species differs from other British species in the flocci not radiating from the centre of the spore-mass, but arising from a beautiful latticed framework surrounding the spore-mass like a spherical cage. It is near *M. ochracea*, B. & B., but it has no deflexed branches on the flocci, and the spores (conidia) are elliptical.

250. **Tubercularia vinosa**, Sacc. *Mycol. Venet.* No. 1089. Michel. p. 262. *Fungi Ital.* No. 963.

Very similar to *T. persicinæ*, Ditmar, but differing in the cluster being larger and vinous. Conidia subglobose or ovoid, 11-12 × 10 (not 7 to 8 mk. in diameter), basidia shorter, thicker, and simple.

On *Ræstelia lacerata*. Downham, July, 1884. On *Æcidium asperifolii*. Castle Rising, Oct., 1884.

251. **Urocystis Fischeri**, Körnicke. *Hedwigia*, 1877, p. 34.

*Uredo Agropyri*, Preuss. *Urocystis Agropyri*, F. v. W.

Spore-balls with 1 or 2, more rarely 3, central spores, 20 to 45 mk. in diameter. Central spores intersecting, somewhat larger than those of *Ur. occulta*, generally 17-19 mk. Accessory spores firmly attached in large numbers, quite encircling the central spores, almost as darkly coloured.

On the leaves of *Carex glauca*. Mr. Soppett, Nov., 1884.

252. **Ustilago hypogæa**, Tul. *Fungi Hypogæi*, 1862, p. 196.

Spores rounded or rounded-polygonal, 20 to 24 mk. long, by 14-20 wide; dark brown, scarcely transparent; contents very oleaginous.

Forming a compact mass around the root-stock of *Linaria spuria*, intersected with white fibres.

Freshwater, Isle of Wight. Dr. John Lowe, 1869.

253. **Entyloma bicolor**, Zopf.

Spores spherical, elliptical or polygonal, of very various sizes, (about 12-17 mk. in diameter, to 23 mk. long). Epispore gelatinous, of variable thickness, at first colourless, afterwards brown. Conidia on simple or branched conidiophores, which emerge through the stomata on the under surface of the leaves in clusters. Cylindrical, curved, smaller at the base, rounded above, simple or septate, colourless, 10 to 22 long by 3 mk. wide.

On the leaves of *Papaver rhæas*. North Wootton. July, 1882.

254. **Uromyces poa**, Rbh.

I. *Æcidipores*, *Æcidium Ranunculi repentis*, and *ficariæ*.

II. *Uredospores*. Sori rounded, elliptical, lanceolate or linear, long, covered by the epidermis, which at length splits longitudinally. Spores roundish, elliptical or ovate, finely echinulate, orange-yellow, 16 to 25 mk. in diameter, without paraphyses.

III. *Teleutospores*. Sori small, punctiform, or rather elongate, covered by the epidermis. Spores rather long, thin, pedicels very varying and irregularly formed, mostly elliptical or ovate, brown

with a smooth equally thick epispore, 17 to 24 mk. in diameter, sometimes as much as 40 mk. long, by 13 to 16 mk. wide.

I. On *Ranunculus repens* and *R. ficaria*.

II. and III. On *Poa trivialis* and *pratensis*.

Extremely abundant in all parts of Great Britain.

255. **Puccinia hydrocotyles**, (Pers.) Grevillea IX., 14. *Cæoma hydrocotyles*, Link. sp. plant II., p. 22.

II. *Uredospores*. Sori small, scattered, principally upon the upper surface of the leaves; sometimes in circular groups, clustered round a larger central sorus; rarely confluent, rarely cauline. Spores irregularly oval, subglobose, or obovate, 20 to 30 mk., finely echinulate, pale brown.

III. *Teleutospores*. Mixed with the uredospores, oblong or ovate, slightly constricted, on moderately long, hyaline, firmly-attached pedicels; brown, upper cell generally larger and rounded above, 40 to 45 mk. long, by 20 to 25 mk. wide.

Epping Forest. Oct., 1882.

256. **Puccinia perplexans**, Plow.

I. *Æcidiospores*=*Æcidium Ranunculi acridis*.

II. *Uredospores*. Sori elliptical elongate, or linear on both surfaces of the leaves, but especially on the upper, sometimes confluent, soon exposed by the rupture of the cuticle. Spores globose oval or subovate, golden yellow, finely echinulate, 30 to 35 mk. long by 20 to 25 mk., wall with or without capitate paraphyses.

III. *Teleutospores*. Sori small, sometimes punctiform, but generally elongate linear or elongate oval. Covered by the cuticle, black, often clustered, sometimes confluent. Spores very irregular in form and size. Pedicels very short, oblong, subfusiform or clavate; upper cell rounded, truncate or attenuated, often obliquely; central constriction little or none, lower cell generally wedge-shaped, brown, smooth, epispore often apparently granular, 40 to 60 mk. long by 10 to 12 mk. wide

I. On *Ranunculus acris*.

II. and III. On *Alopecurus pratensis*. *Avena elatior* and *Poa* sp?

Near King's Lynn. May and June, 1883.

257. **Puccinia Magnusiana**, Krön.

I. *Æcidiospores*=*Æcidium Ranunculi repentis* and *bulbosi*.

II. *Uredospores*. Generally on small elongated pale yellowish spots, small elliptical lanceolate or linear, yellow, spores roundish, obovate or oblong, finely echinulate, orange yellow,  $21-35 \times 12 \times 201$  mk., mixed with paraphyses.

III. *Treleutospores*. Sori on small yellow, often confluent, spots, very numerous, scattered small, rather pulvinate, elliptical or linear on the stems often forming very long blackish lines. Spores on rather long firmly attached pedicels, oblong or clavate,

attenuated below towards the pedicels; apex much thickened, rounded, truncate, or more or less conical. Central constriction slight or absent, chestnut brown, 30-35  $\times$  15-26 mk.

I. On *Ranunculus repens* and *bulbosus*.

II. and III. On *Phragmites communis*.

This *Puccinia* has hitherto been regarded as a variety of *P. graminis* occurring upon reeds. The presence of paraphyses with the uredospores does not accord with these species; germinating teleutospores of *P. magnusiana* produced no *Æcidium* upon *Berberis vulgaris* nor upon any of the Rumices.

258. ***Puccinia poarum*, Nielson.**

I. *Æcidiospores*=*Æcidium tussilaginis*.

II. *Uredospores*. Sori rounded, elliptical, or linear, scattered or irregularly grouped, orange yellow or foxey-red. Spores spherical or elliptical, with a verrucose uneven epispore, orange yellow, 20 to 30 mk. in diameter.

III. Sori very variable in form and size scattered or in circular clusters; covered by the epidermis. Spores on very short, generally brown, pedicels, very variously formed; apex much thickened, often attenuated, dark brown, as much as 50 mk. long by 24 mk. wide.

I. On *Tussilago farfara*.

II. and III. On *Poa annua*, *pratensis* and *trivialis*. Exceedingly common in all parts of Great Britain.

The teleutospore sori are often in circles or parts of circles.

259. ***Puccinia Schroettriana*, Plow and Magnus.**

I. *Æcidiospores*=*Æcidium Jacobæa*, Grev. *Æcidia* in circular clusters, mostly upon the under side of the radical leaves; edges reflexed, torn, whitish. Spores rounded, polygonal, yellow, finely echinulate, 15 to 20 mk. in diameter. Spermatogonia on yellow spots, corresponding to the *æcidial* groups, but on the upper surface of the leaves.

II. *Uredospores*. On yellow discoloured spots, sori elongate or rounded, generally hypophyllous, some naked, spores subglobose or ovate or oval, yellowish brown, rough, 25 to 30 mk. by 14 to 20 mk.

III. *Teleutospores*. Sori erumpent, oblong or elongate; large, prominent, almost black; hypophyllous, surrounded by the ruptured epidermis. Spores on long, firmly attached pedicels, slightly constricted at the centre; upper cell subglobose, oval, or attenuated above; apex much thickened, rounded, or pointed; lower cell wedge-shaped, often paler than the upper; brown, smooth, 60 to 80 by 15 to 20 mk.

I. On *Senecio Jacobæa*. II. and III. On *Carex arenaria*.  
North Wootton Heath. Skegness, 1883.



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# Grevillea,

A QUARTERLY RECORD OF CRYPTOGAMIC BOTANY  
AND ITS LITERATURE.

## NEW BRITISH FUNGI.

By M. C. COOKE.

(Continued. from p. 47.)

**Agaricus (Tricholoma) variegatus**, Scop. Carn. 434.

Pileus fleshy, soon flattened, dry, and, as well as the tough stuffed stem, *squamulose with reddish flocci*; gills emarginate, crowded, pallid yellowish or whitish, edge equal, *quite entire*, of the same colour. *Fr. Hym. Eur.* 53.

On rotten wood. Epping. (*J. English.*)

Smaller and more slender than *A. rutilans*, from which it can scarcely be separated as a distinct species. In the specimens collected the stem was pallid yellowish and scarcely floccose, the gills whitish. Easily mistaken for an abnormal form of *Ag. rutilans*, and it may be nothing more.

**Agaricus (Collybia) velutipes**, Fries; variety, **rubescens**, Cooke.

Pileus *viscid*, about an inch, bright *ferruginous brown*, obscurely striate, stem as in the type, velvety dark brown, internally becoming blackish below, white above; gills *becoming spotted with brown*.

Amongst fir leaves. Largo, N.B. (*W. G. Smith.*)

This peculiar variety will be figured in the supplement to the "Illustrations." It may be considered by some to claim rank as a distinct species, on account of the viscid pileus and spotted gills, but being found so late as November (1872), the time at which *Ag. velutipes* is most flourishing, strengthens the impression that it is only a variety of that species.

**Agaricus (Collybia) leucomyosotis**, Cooke & Smith.

Pileus convex then expanded, sometimes obtusely umbonate pale mouse-coloured, disc darker, paler at the margin, whole plant becoming pallid, almost white when dry, *strong scented*, rather fragrant, margin faintly striate, stem hollow, very brittle, slightly pruinose above, pallid, white at the base, and obtuse. Gills thick, moderately distant, adnate, sinuate behind, white. Spores elliptic ( $0.006 \times 0.004$  mm.). *Cooke Illust. Supp. ined.*

On Sphagnum, in bogs, Wimbledon Common and other places, May, 1868. (*W. G. Smith.*)

Pileus about an inch. Stem reaching to 4 or 5 inches, about 2 lines thick. Habit very much resembling the figure in Fries' *Icones* of *Ag. (Naucoria) myosotis*, hence the name.

**Agaricus (Leptonia) formosus**, *Fr. Hym. Eur.* 205.

Pileus submembranaceous, convexo-plane, rather umbilicate, faintly striate, *waxy-yellow*, *squamulose with adpressed scattered brownish fibrils*, stem stuffed, striate, smooth, shining, yellow; gills adnate, rather distant, pallid yellow.

var. **suavis**, *Lasch.*

Stem becoming blue. *Cooke, Illustr.*, t. 488.

Amongst *Equisetum*. Scarboro'. (*G. Masee.*)

**Agaricus (Pholiota) luxurians**, *Fr. Hym. Eur.* Ag. (*Pholiota*) *ægerita*. *Phillips in Cooke Illus.* t. 365.

Pileus fleshy, convex, gibbous, then expanded, unequal, *silky* then squamulose; stem stuffed, rigid, somewhat squamulose, white becoming rufescent, ring *apical*, torn, fugacious; gills adnexed, then decurrent, crowded, greyish, flesh colour, becoming brownish. *Batt. t.* 23, f. B.

On oak trunks.

Cæspitose. Pileus at first white, then yellowish; at length reddish tawny, flesh white.

**Agaricus (Pholiota) cruentatus**, *Cke. & Smith.*

Pileus fleshy, convex then expanded, obtuse, dry, yellow, breaking up into darker adpressed scales; margin incurved; stem of the same colour as the pileus, curved, solid, attenuated at the base and rooting, dark red brown and sparsely squamulose below, ring fibrillose; flesh pale yellow, at length changing to cinnabar colour. Gills rather distant, emarginate, finally separating from the stem, yellow then clay colour. *Cooke Illus.* t. 502.

On oak stump, and also on burnt ground. Aug., 1872. (*W. G. Smith.*)

Pileus about 2 inches diam., yellow then turning red. Stem 2 inches long,  $\frac{1}{4}$  in. thick above. Gills 2 lines or more. Allied to *Ag. tuberculosus* and *Ag. curvipes*. Taste insipid.

**Agaricus (Inocybe) incarnatus**, *Bresadola, Fung. Trid.* t. 53.

Pileus fleshy, convex campanulate, then expanded and gibbous, or broadly umbonate, fibrillose then squamulose, margin fimbriate, yellowish then *rufescent* or tinged with flesh colour (6-8 c.m. broad). Stem solid, attenuated and somewhat rooting at the base, rather fibrillose, rosy flesh colour, white and mealy at the apex. *Flesh* of the pileus white, *becoming deep red when broken*, odour strong and persistent of pears, taste mild. Gills crowded, sinuate, adnate behind, broad, rather fringed at the edge, whitish, then greyish cinnamon; *at length spotted with red*, or wholly rufescent. Spores subovate ( $\cdot 009\text{--}\cdot 011 \times \cdot 006\text{--}\cdot 007$  mm.). *Cooke Illus.* t. 473.

In woods near Bristol and at Dinedor. Oct., 1884.

Stem more robust than in *A. pyriodorus*, which this species resembles in habit and odour.

**Agaricus (Flammula) clitopilus**, *Che. & Smith.*

Pileus rather fleshy, convex, disc depressed and umbilicate, smooth, dry, purplish brown (madder brown), stem ventricose, erect, hollow, fuliginous, with a few scattered fibrils towards the base, and brown within, gills scarcely crowded, ventricose, slightly adnexed, pallid. *Cooke Illus. t. 500.*

Amongst firs. Stonehouse, Gloucester. Nov., 1867.

Pileus 2 inches. Stem  $2\frac{1}{2}$ -3 inches,  $\frac{1}{2}$  in. thick in the middle. Allied to *Ag. Weinmanni*, Fries, of which it may possibly be a variety, but differing in the pileus not being virgate, in the ventricose hollow stem, and in the gills not being decurrent.

**Agaricus (Naucoria) triscopus**, *Fries. Hym. Eur. 259.*

Pileus rather fleshy, conical, then hemispherical, obtuse, then convex and umbonate, even, smooth, bay-brown, ochraceous when dry, stem minutely fistulose, filiform, smooth, ferruginous, amber at the base; gills adnate, thin, rather crowded, dark ferruginous. *Cooke Illus. t. 458, b.*

On old wood in a cellar. Kilburn. (*H. T. Wharton.*)

Pileus about half-an-inch broad, stem an inch long.

**Agaricus (Naucoria) arvalis**, *Fries. Hym. Eur. 261.*

Pileus rather fleshy, tough, convex then plane, growing pale when dry. Stem fistulose (stuffed) thin pulverulent, becoming yellowish, with a long filiform root; gills adnexed, rather distant, tawny then ferruginous. *Cooke Illus. t. 479, variety.*

On the ground.

The plant figured is not the typical form. Pileus  $\frac{3}{4}$  to  $1\frac{1}{2}$  inches. Stem  $1\frac{1}{2}$  to  $2\frac{1}{2}$  in. With a distinct bulb between the ascending and descending portion of the stem. It is probably a distinct variety.

**Agaricus (Naucoria) glandiformis**, *Cooke.*

Pileus at first obtusely campanulate, becoming somewhat hemispherical, or filbert-shaped, nut-brown, smooth, even, stem erect, elongated, equal, stuffed then hollow, pallid, sometimes twisted. Gills very broad, rounded behind, adnate, amber. Spores broadly almond-shaped ( $\cdot 01\text{--}\cdot 012 \times \cdot 006\text{--}\cdot 008$  mm.). *Agaricus nuceus*, Smith, in *Herb. Mus. Brit.* *Cooke Illus. t. 490, b.*

On the ground. Teignmouth, Devon. Oct., 1867.

Pileus nearly an inch broad and high, nut-brown colour, disc darker. Stem 3-4 inches long, 2 lines thick, pallid.

**Agaricus (Naucoria) myosotis**, *Fr. Hym. Eur., 261.*

Pileus rather fleshy, convex, expanded, rather umbonate, covered with a viscid pellicle, becoming discoloured; stem hollow, slender, pallid, clad with squamose fibrils, which form a cortinate veil; gills adnate, decurrent, rather distant, at length ferruginous brown, edge serrate, white.—*Fr. Icon. t. 125, f. 1; Cooke Illus. ined.*

In moist places. Scarborough. (*G. Massee.*)

Pileus of a peculiar colour, from olivaceous or greenish-brown to yellowish.

The specimens which will be figured are of rather larger size than usual. The following notes are given by Mr. Massee:—"Pileus



hygrophanous, viscid when moist, minutely rugulose, dark honey-yellow, disc darker, silky veil remaining in tufts at the margin; gills rather distant, ventricose with a decurrent tooth, margin minutely serrulate, paler, at first pale yellow with a pink tinge, then ferruginous. Stem long, hollow, striate, mealy at the apex, whitish, then rufous, with silky fibrillose scales and evanescent fibrillose ring." Pileus 2 inches, stem 6 inches. These features accord admirably with the lengthened description in Fries "Monographia."

**Agaricus (Naucoria) latissimus**, Cooke. Ag. pediades, Smith in *Herb. Mus. Brit.*

Pileus subglobose, then hemispherical, with a fleshy disc, margin at first incurved; stem attenuated downwards, *rooting*, hollow, smooth, dark-brown below, pallid above, gills *very broad*, rounded behind, slightly adnate, tawny-umber.—Cooke *Illus. t.* 482.

In churchyard. Ely.

Pileus  $\frac{1}{2}$  to  $1\frac{1}{2}$  inches broad. Stem  $1\frac{1}{2}$  to 2 in. long, 2-4 lines thick at the apex.

**Agaricus (Naucoria) striæpes**, Cooke.

*Cæspitose*, or gregarious. Pileus campanulate, obtuse, then expanded, ochraceous, smooth, even. Stem erect or flexuous, equal, hollow, white, *longitudinally striate*, gills rather distant, slightly adnate behind, tawny ferruginous.—Cooke *Illus. t.* 478.

Amongst grass on lawn. Kew Gardens.

Pileus  $1-1\frac{1}{2}$  inches. Stem 2 to 3 inches long, 2 lines thick.

**Agaricus (Galera) mniophilus**, Lasch. in Fries *Hym. Eur.* 270.

Pileus membranaceous, campanulate, somewhat papillate, striate, *tawny yellow*, stem equal, flexile, yellowish, *mealy at the apex*, floccose at the base, gills obtusely adnate, ascending, broad, rather distant, *yellowish*, then ochraceous.—Cooke *Illust. t.* 466, a.

Amongst moss. Epping Forest.

Pileus about  $\frac{1}{2}$  inch. Stem 2-3 in. long, a line thick.

**Agaricus (Psilocybe) areolatus**, Klotsch in Hook. *Fl.*, v. 112.

This rare and remarkable species, which has not been recorded as occurring anywhere since it was found by Klotsch at Glasgow, has turned up in a garden at Stoke Newington. An admirable figure was secured by Mr. Worthington Smith, and will be published in the "Illustrations." The notes made at the time were, "Densely *cæspitose*. Pileus at first white, with the cuticle entire, at length rufous and cracking into areolæ, a much firmer plant than *A. spadiceus*, not brittle. Stem striate, pulverulent, especially towards the apex, hollow; gills with a distinct white edge, at first very pale, spores very dark, almost black, broadly almond-shape."

**Boletus pruinatus**, Fr. *Hym Eur.* 504.

Pileus convex, then plane, rigid, dry, bay brown, becoming *purple*, *umber-pruinose*; stem firm, a little ventricose, even, smooth, *variegated with red and yellow*; tubes adnate, yellow, pores minute, round.

In grassy woods. (W. G. Smith.)

Flesh white, turning slightly bluish or greenish.

**Boletus spadiceus**, Schæff., Grev. VIII. 4.

This species, heretofore recorded only for Scotland, has been figured by Mr. Worthington Smith from specimens found at Stoke Pogis in 1872.

**Polyporus (Hispidi) Herbergii**, Rostk. *Poly. t.* 18, Grev. VIII. 5.

This species, recorded hitherto only for Scotland, was found by the late Mr. F. Currey in Kent. Has since been found by Mr. Howse, near Guildford, and by ourselves last year at Langley, Herts. It can hardly be considered a form of *P. spongia*, to which Fries has referred it, but is related rather to *P. cuticularis*.

## SYNOPSIS PYRENOMYCETUM.

(Continued from p. 45.)

We prefer to regard the *Dothideaceæ* as including three sub-families, viz. :—

1. *Dothideoidei* = the more typical subfamily.
2. *Rhytismoidei* = embracing the six or seven genera into which it is probable that the old genus *Rhytisma* will be divided, but which some authors relegate to the *Discomycetes*.
3. *Stigmatoidi* = with the perithecia more or less discrete. Through this latter the *Dothideaceæ* are united in one direction with the *Perisporiaceæ*, and in another with the *Sphæriaceæ* (in a broad sense).

The affinities of *Rhytismoidei*, are, to our mind, stronger in the direction of *Dothidea* than in that of *Phacidium*. Although this may be very much a matter of opinion.

The following species require correction :—

4270. *Dothidea iridis*, Schwein. Herb. Berk. 9300.

According to this specimen is *Darlucella filum*.

4261. *Sphæria constellatio*, Berk. in Herb. 9071, is the same species with *Micropeltis orbicularis*, Cooke, *Myiocopron orbiculare*, Sacc. Syll. No. 5360.

5171. *Dothidea subcuticularis*, Schwein. No. 1940.

Is most probably an *Asteroma*.

5176. *Dothidea Polygalæ*, Schwein.

Should be transferred to the neighbourhood of *Asteroma*.

5211. *Dothidea Phytolaccæ*, Schwein. Herb. Berk. 9209.

Appears to be a *Phoma*.

*Dothidea maculæformis* (Desm.) Fckl. Fun. Rhen. No. 1023.

This is *Venturia Johnstoni* (B. & Br.)

5247. *Sphæria examinans*, Berk. & Mont. }

5395. *Sphæria morbosa*, Schwein. }

We cannot accept these two species amongst *Dothideaceæ*. The former is allied to *Melogramma* and the latter to *Gibbera*.

**Hendersonia?** *arundinis* (Lev). *Dothidea arundinis*, Lev. *Demid. Voy.* II. 109, t. v. f. 3. Herb. Berk. 9193

Maculis flavo-fuscentibus vel nullis. Peritheciis erumpentibus hypo-et epiphyllis globosis albo-farctis, 1-2 serialibus, stromati atro conjunctis, ostiolis obsoletis. Sporidis cylindricis, utrinque rotundatis, triseptatis, plerumque curvulis, hyalinis ( $\cdot 035 \times \cdot 005$  mm.).

In foliis *Phragmitis*. Inkerman.

*Dothidea geographica*, *Fries Syst. Myc.* II., 560.

Has only minute stylospores, and appears to be a *Phoma*.

*D. epilobii*, *Fr. Scler. Suec.* No. 421.

There are small membranaceous perithecia on the black spots, which contain small pyriform asci with immature sporidia. Probably either *Læstadia* or *Sphærella*.

*D. diospyri*, *Berk. & Curt.* in Herb. Berk.

There are no cells (pseudo-perithecia), and no fruit of any kind, only the blackened spots. It has somewhat the appearance of a *Dothidea* or *Asteroma*, preferably the latter.

*D. catalpæ*, *Berk. & Curt.* in Curtis' Catalogue, 151.

Similar in character to *D. diospyri*, but equally without cells or fruit.

5166. *D. abortiva*, *Desm.*

Several specimens have been examined, and nothing found but a structure resembling that of a *Sclerotium*, and no indication of fruit.

*D. anethi*, *Fries.* (*Sphæria anethi*, *Pers.*)=*Phoma*.

Does not belong to *Dothideaceæ*. Not a trace of asci to be found.

5189. *D. solidaginis* (*Schw.*) in Herb. Berk.

Nothing found beyond a structure closely resembling *Sclerotium*.

5229. *D. culmicola*, *Schwein.* in Herb. Berk. No. 9211.

Has the habit of *Leptostroma*, but without fruit. Cannot pertain to this family even if thecasporous.

*Dothidea ventricosa*, *Mont.* in Herb. Berk. No. 9177.

On branches of *Ricinus*. Is a species of *Physalospora*.

5170. *Dothidea* (*Microdothis*) *melastomatis*, *Kunze & Fr.* in Herb. Kewensis.

Ascis amplis, clavatis. Sporidiis ellipticis, medio constrictis, fuscis ( $\cdot 026 \times \cdot 01$  mm.).

*Phyllachora* (*Dothidella*) *bullata*, *Fr. (nee Berk.)* in Herb. Berk. 9112.

Ascis clavatis. Sporidiis sublanceolatis, medio constrictis, hyalinis ( $\cdot 02 \times \cdot 007$  mm.).

**Homostegia nigerrima** (*Currey.*)

*Dothidea Jerdoni*, *Blox.* in Herb. Berk.

*Dothidea stictophora*, *B. & Br.* in Herb. Berk.

*Pleospora nigerrima*, *Sacc. Syll.* No. 3838.

Imperfectly and inaccurately described by Currey. There are

but few and very short hairs on the confluent stroma. The structure is manifestly that of *Dothidea*. Sporidia hyaline, very rarely with a transverse septum.

The following additions will have to be made:—

1084. **Phyllachora Lespedezæ** (*Schw.*) Sacc. Syll. 4269.

Ascis clavatis. Sporidiis ellipticis, continuis, hyalinis,  $\cdot 02 \times \cdot 01$  mm.

1081. **Phyllachora trifolii** (*Pers.*) Sacc. Syll. 5184.

Ascis clavatis. Sporidiis ellipticis, continuis, hyalinis,  $\cdot 01\text{--}\cdot 012 \times \cdot 005$  mm.).

From specimen in Herb. Berkeley.

1124. **Phyllachora caricis** (*Fr.*) Sacc. Syll. 5242

Ascis clavatis. Sporidiis ellipticis, continuis, hyalinis.

1065. **Phyllachora xanthoxyli** (*Lev.*) Sphaeria xanthoxyli, *Sacc. Syll.* 4453. Herb. Berk. 9078.

Ascis clavatis, octosporis. Sporidiis biseriatis, sublanceolatis, continuis, hyalinis,  $\cdot 013 \times \cdot 003$  mm.

1051. **Phyllachora infectoria**, *Cke.*

Epiphylla. Stromatibus pulvinatis, convexis, irregularibus, confluentibus, atris, nitidis, loculis immersis numerosis, ostioliis obscuris. Ascis clavato-cylindricis. Sporidiis ellipticis, continuis, hyalinis ( $\cdot 012 \times \cdot 005$  mm.).

In foliis *Ficus infectoriae*. Ceylon.

1054. **Phyllachora laurina**, *Cke.*

Hypophylla, gregaria, erumpens. Stromatibus minutis, in maculis orbicularibus dispositis, atris, subangulosis, hemisphericis, intus albis. Ascis clavatis, subsessilibus. Sporidiis ellipticis, continuis, hyalinis ( $\cdot 016\text{--}\cdot 018 \times \cdot 005$  mm.).

In foliis *Lauraceæ*. Barra.

(Spruce, 543).

1055. **Phyllachora Guatteriae**, *Berk.* Dothidea Guatteriae, *Berk. in Herb.*, No. 9082.

Amphigena. Stromate convexo, atro, nitido ( $\cdot 5$  mm. diam.): Ascis clavatis. Sporidiis biseriatis, ellipticis continuis, hyalinis,  $\cdot 016\text{--}\cdot 018 \times \cdot 008$  mm.

In foliis *Guatteriae*. Ceylon.

1072. **Phyllachora vesicata**, *Cooke.*

Hypophylla. Maculae fuscae, irregulares, confluentia. Stromatibus gregariis, atris, oblongo-angulatis, convexis, minutis; loculis immersis albis. Asci clavatis; sporidiis ellipticis, continuis, hyalinis,  $\cdot 01 \times \cdot 004$  mm.

In foliis *Hirtellæ vesicatae*. Amazons.

(Spruce, 615.)

1088. **Phyllachora Beaumontii** (*B. & C.*) Dothidea Beaumontii, *Berk. in Herb.* No. 9070.

Epiphylla. Stromate hemisphaerico-convexo, atro ( $\cdot 5$  mm. diam.) opaco, ad basim contracto. Ascis clavatis. Sporidiis inordinatis, ellipticis, continuis, hyalinis ( $\cdot 008\text{--}\cdot 01 \times \cdot 004$  mm.).

In foliis *Cerasi*. Alabama, U.S.

1092. **Phyllachora exanthematica** (Lev.). *Dothidea in Herb. Berk.* No. 9088.

Hypophylla vel amphigena. Stromate elliptico, convexo ( $3 \times 4$  mm.) atro, nitido, lævi. Ascis subclavatis. Sporidiis ellipticis, continuis ( $0.13-0.18 \times 0.06$  mm.) hyalinis.

In foliis coriaceis. Marquesas and Mauritius.

The sporidia vary in the specimens from the two localities, chiefly in their length, but the external features are the same. We do not find it described by Leveille.

1093. **Phyllachora exsculpta**, Berk. Sacc. Syll. 5181.

Stromate orbiculari, nigro margine radiatim exsculpta, ostiolis papillæformibus centralibus. Ascis breviter clavatis, sessilibus. Sporidiis ellipticis, continuis (immaturis) hyalinis, circa  $0.12 \times 0.04$  mm.

1103. **Phyllachora musæ** (Klotzsch.). Sacc. Syll. 5183, 5243.

Ascis clavatis. Sporidiis ellipticis, rotundatis, continuis, hyalinis,  $0.1-0.12 \times 0.07$  mm.

1095. **Phyllachora interstitialis** (B. & C.). *Dothidea interstitialis*, B. & C. in *Herb. Berk.* 9085.

Hypophylla. Maculis atris, irregularibus, foliorum nervulis limitatis (2-3 mm.), loculis paucis, stromate elevatibus, subnitidis. Ascis clavatis. Sporidiis ellipticis, continuis, hyalinis (immaturis, circ.  $0.1$  mm. long).

In foliis. Cuba.

1119. **Phyllachora Luzulæ** (Rabh.) *Sphæria Luzulæ*, Rabh. *Fungi Europæi*, No. 533.

Ascis clavatis. Sporidiis ellipticis, utrinque rotundatis, continuis, hyalinis,  $0.1 \times 0.05$  mm.

In foliis *Luzulæ*.

1128. **Phyllachora leptostromoidea**, Cooke in Rav. N. A. *Fungi*.

Stromate irregulari, minuto, applanato, atro, subinde confluyente, ostiolis vix conspicuis. Ascis clavatis, octosporis. Sporidiis ellipticis, continuis, hyalinis  $0.08 \times 0.03$  mm.

On fronds of *Pteris*. S. Carolina. (Rav. 1977.)

With just the appearance of a *Leptostroma*.

1173. **Phyllachora (Dothidella) Eugeniæ** (Thum.). *Asterina Eugeniæ* (Mont.), ex-herb Thuemen.

Amphigena. Stromate orbiculari, atro, ruguloso, subdepresso (ambitu nudo), loculis minutis. Ascis clavatis, octosporis. Sporidiis ellipticis, utrinque rotundatis, uniseptatis, hyalinis  $0.18 \times 0.08$  mm.

On leaves of *Eugenia planipes*. Chili; Valdivia.

This is clearly *not* the *Asterina Eugeniæ*, Mont.; the fruit is different, and there is no radiating margin to the stroma.

1175. **Phyllachora (Dothidella) Osyridis**, Cooke.

Epiphylla, orbiculata, applanata, atra, punctato-rugosa, regulariter disciformis (2-3 mm. diam.). Cellulis numerosis, minimis. Ascis clavatis octosporis. Sporidiis biserialibus, ovatis, uniseptatis, uno loculo multo minori, hyalinis  $0.12 \times 0.06$  mm.



On living leaves of *Osyris compressa*. Cape of Good Hope.

Sent by Prof. McOwan under the name of *Meliola amphitricha*, Fr.

1178. **Phyllachora (Dothidella) endocrypta** (Mont.). Dothidea endocrypta, Mont. in Herb. Berk. No. 9115.

Epiphylla, stromate discoideo, atro, opaco (5-8 mm. diam.), loculis minutis immersis. Ascis cylindrico-clavatis, octosporis. Sporidiis, biserialibus, ellipticis, uniseptatis, utrinque rotundatis, hyalinis, flavescentibus ( $\cdot 02 \times \cdot 005$  mm.).

In foliis. Guiana: (Leprieur.)

We do not find that this species has been anywhere described.

1179. **Phyllachora (Dothidella) Salvadoræ**, Cooke.

Amphigena, irregularis, prominula, atra, rugosa, hinc illic in circulos disposita, loculis tenuibus albis. Ascis clavatis ( $\cdot 06 \times \cdot 014$ ), octosporis; sporidiis ellipticis, uniseptatis, utrinque rotundatis, hyalinis ( $\cdot 012\text{--}\cdot 014 \times \cdot 006$  mm.).

On leaves of *Salvadora Persica*. Socotra.

1180. **Phyllachora (Dothidella) Berkeleyana**, Cooke. Dothidea Baccharidis, B. & C. in Herb. Berk. No. 9161.

Amphigena, gregaria. Stromate elevato, hemisphærico (4-7 mm. diam.), papillato-rugoso, opaco. Loculis minutis, plurimis immersis. Ascis clavatis. Sporidiis ellipticis, uniseptatis, hyalinis ( $\cdot 025$  mm. long).

In foliis *Baccharidis*. Cuba. (No. 920.)

1201. **Phyllachora (Auerswaldia) viridispora**, Cooke.

Epiphylla, sparsa, orbicularis, hemisphærica (1-2 mm. diam.), atra, rugosa, intus alba. Ascis clavatis octosporis. Sporidiis biserialibus, ellipticis, diu continuis, binucleatis, hyalino-virescentibus ( $\cdot 016 \times \cdot 0075$  ad  $\cdot 018 \times \cdot 008$  mm.), demum uniseptatis.

On living leaves. Jamaica. (D. Morris.)

1215. **Phyllachora (Roumegueria) dendritica**, Cooke.

Epiphylla, subrotunda, elliptica vel confluens, convexa, atra, nitida, in maculas dendroideas collecta, precipue supra nervulis foliorum disposita; intus alba, cellulis paucis. Ascis clavatis. Sporidiis sublanceolatis, medio leniter constrictis, uniseptatis, binucleatis, demum triseptatis, hyalinis ( $\cdot 02\text{--}\cdot 022 \times \cdot 005$  mm.).

On coriaceous leaves. Brazil. (Burchell. No. 7768.)

1216. **Phyllachora (Roumegueria) Albizziaë**, Cooke. Dothidea viventis, var. Albizziaë, Cooke.

Epiphylla, minuta, convexa, nitida (vix 1 mill. diam.), loculis paucis (1-4). Ascis clavatis, breviter stipitatis. Sporidiis lanceolatis, medio constrictis, uniseptatis, binucleatis, demum triseptatis hyalinis ( $\cdot 025\text{--}\cdot 027 \times \cdot 007$  mm.).

On living leaves of *Albizzia*. Natal. J. M. Wood.

1222. **Euryachora Lathyri** (Lev.), Cooke. Herb. Berk. No. 9198. Dothidea Lathyri, Lev. Demid. Voy. II. 106, t. 5, f. 8.

Hypo-vel epiphylla. Peritheciis sparsis, hemisphericis, prominulis, astomis, albo farctis, in stromate maculæformi irregulari aterrimo immersis. Ascis elongatis, cylindricis. Sporidiis ovatis, sporidiolis duobus includentibus ( $\cdot 012 \times \cdot 008$  mm.).

In foliis *Lathyri*. Son-dagh.

Whether this is the same as *Physalospora Lathyri*, Mont. (Sacc. Syll. 1681), we cannot say. An examination of authentic specimens from Leveille results in placing it in *Dothideaceæ*.

1233. **Dothidea (Bagnisiella) cercidis**, Cooke.

Erumpens, orbicularis, hemisphæricis, demum centro depressa, atra, opaca, loculis paucis. Ascis clavatis. Sporidiis biserialibus, elliptico-lanceolatis, continuis, hyalinis ( $\cdot 03 \times \cdot 01$  mm.).

On branches of *Cercis canadensis*. Carolina, U.S.A. In Herb. Berk. No. 9030.\*

1236. **Dothidea Rhamni**, Mont. in Herb. Berk. No. 9173. D. clavuligera, B. & Br. in Herb. Berk. No. 9174.

Erumpens. Stromate discoideo vel elliptico, rugoso-papillato, atro, opaco (2 mm. diam.). Ascis cylindrico-clavatis, octosporis. Sporidiis sublanceolatis, continuis, hyalinis, sæpe 2-4 nucleatis ( $\cdot 02\text{--}\cdot 022 \times \cdot 005$  mm.).

Ad cortice *Rhamni*. France, England.

Found mixed with *Dichomera Saubinetii*. Possibly the sporidia are ultimately pseudo-triseptate, by division of the endochrome, as would appear from the English specimen, which has the fruit more mature than in the authentic specimen from Montague.

1243. **Dothidea (Bagnisiella) tessellata**, Hormosphæria tessellata, Lev. Ann. Sci. Nat., 4 Ser. xx. 297. (1863).

Conceptaculis gregariis, discretis, erumpentibus, globosis, tessellato-rimosis, macula albida convexa, demum nigra insidentibus, ostiolis (quando conspicuis) papillatis; ascis pallide viridibus; sporidiis globosis, concatenatis, lævibus, hyalinis.

Ad folia *Thibaudiae floribundæ*. Nova Granada.

1270. **Dothidea Lonicerae**, Cooke.

Erumpens, suborbicularis, sæpe confluens, pulvinata, planiuscula, atra (1 mm. diam.), loculis sparsis, periphericis. Ascis clavatis, octosporis. Sporidiis sublanceolatis, medio constrictis, uniseptatis, fuscis ( $\cdot 022\text{--}\cdot 024 \times \cdot 009$  mm.).

On twigs of *Lonicera sempervirens*. Pennsylvania, U.S.A. (Michener. No. 4218.)

1280. **Homostegia Felvetii** (Hepp.). Linds. Trans. Roy. Soc. Edin. xxiv. p. 450.

Ascis clavato-saccatis ( $\cdot 045 \times \cdot 012$  mm.), octosporis. Sporidiis ellipticis, uniseptatis, hyalinis vel subluteolis  $\cdot 011 \times \cdot 006$  mm.

Parasitic on *Sticta aurata*.

1284. **Homostegia? dubia**, Linds. Trans. Roy. Soc. Edin. xxiv. t. 30, f. 47-52.

Parasitic on *Sticta fossulata*, *S. granulata* and *S. rubella*. New Zealand.

**Asterina maculæformis** (Berk.). *Dothidea maculæformis*, Berk. Herb. No. 9128. (nec. Roberge.)

Epiphylla, atra, opaca, orbicularis, maculæformis. Stromate discoidea, maculis piceis orbicularibus insidente, fibrillis radiantibus ambiente. Ascis ovoides ( $\cdot 02 \times \cdot 015$  mm.). Sporidiis ellipticis, continuis (? immaturis), hyalinis ( $\cdot 005 \times \cdot 003$  mm.).

In foliis *Drymidis*. Valparaiso.

This is clearly distinct from *Asterina compacta*, Lev., which it somewhat resembles in habit.

**Asterina quercigena** (*Berk.*). *Dothidea quercigena*, in *Herb. Berk.* No. 9107.

Epiphylla vel amphigena. Perithecio orbiculari (1-2 mm.), convexo, rugoso, atro, apaco, margine radiante fibroso, ascis clavatis. Sporidiis ellipticis, continuis (immaturis), hyalinis ( $\cdot 01 \times \cdot 004$  mm.).

In foliis *Quercuum*. Sikkim.

**Asterina ? Lauri-borboniæ**, *Schwein.* Sacc. Syll. No. 5167. *Herb. Berk.* 9242.

**Asterina conspurcata**, *Berk.* Sacc. Syll. No. 5178. *Herb. Berk.* 9114.

**Asterina tenella**, *Cooke.*

Epiphylla, effusa, tenuis, atra. Peritheciis minutis ( $\cdot 03\text{--}\cdot 22$  mm.) applanatis, cum mycelio repente brunneo immixtis, ascis saccatis 4-8 sporis. Sporidiis (octosporis)  $\cdot 028\text{--}\cdot 03 \times \cdot 012\text{--}\cdot 014$  mm. (tetrasporis),  $\cdot 04 \times \cdot 022$  mm. pallide-fuscis.

On leaves of *Persea Carolinensis*. Carolina, U.S. (*Rav.* 2499 bis.)

### Fam. 3. DOTHIDEACEÆ, *Fr.*

#### Sub-Fam. I. DOTHIDEOIDEI.

GEN. 1. **PHYLLACHORA**, *Fehl. p.p.*—Stroma subclypeatum vel breviter effusum, plerumque phyllogenum.

Sub-Gen. 1. MAZZANTIA, *Mont.*—Stroma subclypeatum, initio epidermide tectum, tenui carbonaceum, plerumque caulicolum.

\* *Sporidia continua, hyalina.*

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|---|--|
| 1036. galii, <i>Mont.</i> ... 5083        | 1040. rhytismoides, <i>Not...</i> 5088 |
| 1037. napelli, <i>Ces.</i> ... 5084       | 1041. deplanata, <i>Not.</i> ... 5089  |
| 1038. Niesslii, <i>Thum.</i> ... 5085     | 1042. Gougetiana, <i>Mont.</i> 5090    |
| 1039. sepium, <i>S. &amp; P.</i> ... 5086 |  |

\*\* *Sporidia uniseptata, hyalina.*

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|---------------------------------------|
| 1043. Bicchiana, <i>Not.</i> ... 5278 |
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Sub-Gen. EUPHYLLACHORA.—Stroma breviter effusum plerumque phyllogenum.

\* *Sporidia continua hyalina.*

a. in dicotyledoneis.

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|---|---|
| 1044. ulmi ( <i>Duv.</i> ) ... 5091       | 1052. demersa, <i>Corda</i> ... 5094        |
| 1045. rhytismoides, <i>Ca.</i> 5093       | 1053. tetrantheræ, <i>B. &amp; Br.</i> 5095 |
| = <i>microcenta</i> , <i>B.</i> 5098      | 1054. laurina, <i>Cke. Grev.</i> xiii.      |
| 1046. repens, <i>Corda</i> ... 5108       | 1055. Guatteria, <i>B. &amp; Br.,</i>       |
| 1047. aspidea, <i>B.</i> ... 5110         | <i>Grev.</i> xiii. 63.                      |
| 1048. Thwaitesii, <i>B.</i> ... 5111      | 1056. incarceration, <i>B.</i> ... 5101     |
| 1049. ficuum, <i>Niessl.</i> ... 5112     | 1057. granulosa, <i>Lev.</i> ... 5102       |
| 1050. Decaisneana, <i>Lev.</i> 5113       | 1058. explanata, <i>Lev.</i> ... 5103       |
| 1051. infectoria, <i>Cke. Grev.</i> xiii. | 1059. lonchotheca, <i>Spæg.</i> 5104        |

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|---|--|
| 1060. cayennensis, <i>Fr.</i> ... 1734          | 1082. labecula, <i>Lev.</i> ... 1723                                 |
| 1061. tropicalis, <i>Speg.</i> ... 5105         | 1083. melaena, <i>Rabh.</i> ... 5131                                 |
| 1062. myrciæ, <i>Lev.</i> ... 5106              | 1084. lespedezeæ, <i>Schw.</i> ... 4269                              |
| 1063. rhopalina, <i>Mont.</i> ... 5097          | 1085. phylloplaca, <i>Mont.</i> ... 5117                             |
| 1064. millepunctata, <i>Dm.</i> ... 5099        | 1086. brasiliensis, <i>Speg.</i> ... 5118                            |
| 1065. xanthoxyli, <i>Lev.</i> ... 4453          | 1087. fatiscens, <i>Schw.</i> ... 5119                               |
| 1066. grevilleæ, <i>Lev.</i> ... 5107           | 1088. Beaumontii, <i>B. &amp; C.</i> ,<br><i>Grev.</i> xiii. 63.     |
| 1067. inclusa, <i>B. &amp; C.</i> ... 5116      | 1089. nitidissima, <i>B. &amp; C.</i> ... 5120                       |
| 1068. crotonis, <i>Cke.</i> ... 5115            | 1090. lucens, <i>Cke.</i> ... 5121                                   |
| 1069. depazeoides, <i>Desm.</i> ... 5100        | 1091. euglypta, <i>Mont.</i> ... 5122                                |
| 1070. tragiæ, <i>B. &amp; C.</i> ... 5128       | 1092. exanthematica, <i>Lev.</i> ,<br><i>Grev.</i> xiii. 64.         |
| 1071. melianthi ( <i>Thum.</i> ) ... 6177       | 1093. exsculpta, <i>Berk.</i> ... 5181                               |
| 1072. vesicata, <i>Cke. Grev.</i> xiii.         | 1094. permeans, <i>B. &amp; C.</i> ... 5179                          |
| 1073. picea, <i>B. &amp; C.</i> ... 5129        | 1095. interstitialis, <i>B. &amp; C.</i> ,<br><i>Grev.</i> xiii. 64. |
| 1074. circumscripta, <i>B.</i> ... 5087         | 1096. aloëtica, <i>B. &amp; C.</i> ... 5152                          |
| 1075. Wittrockii, <i>Eriks.</i> ... 5130        | 1097. maculans, <i>Mont., Syll.</i><br>p. 193.                       |
| 1076. dalbergiæ, <i>Niessl.</i> ... 5092        | 1098. dalibardæ, <i>Peck.</i> ... 5124                               |
| 1077. tenuis, <i>B.</i> ... 5114                | 1099. heraclei, <i>Fr.</i> ... 5123                                  |
| 1078. nitens, <i>Lev.</i> ... 1718              |  |
| 1079. viventis, <i>Cke.</i> ... 5125            |  |
| 1080. dolichogena, <i>B. &amp; Br.</i> ... 5126 |  |
| 1081. trifolii ( <i>Pers.</i> ) ... 5184        |  |

*b. In monocyledoneis.*

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|--|--|
| 1100. palmigena, <i>B. &amp; C.</i> ... 1495   | 1110. cynodontis, <i>Sacc.</i> ... 5134              |
| 1101. acrocomiæ, <i>Mont.</i> ... 5147         | 1111. bromi, <i>Fckl.</i> ... 5135                   |
| 1102. calamigena, <i>B. &amp; Br.</i> ... 5148 | 1112. poæ, <i>Fckl.</i> ... 5136                     |
| 1103. musæ, <i>Klot.</i> ... 5183, 5243        | 1113. sylvatica, <i>Sacc. &amp; S.</i> ... 5137      |
| 1104. strelitziae, <i>Cke.</i> ... 5149        | 1114. tritici-gracilis, <i>Cast.</i> ... 5138        |
| 1105. kniphofiae, <i>K. &amp; C.</i> ... 5150  | 1115. fuscescens, <i>Sp.</i> ... 5139                |
| 1106. melanoplaca, <i>Desm.</i> ... 5151       | 1116. muhlenbergiæ, <i>Ellis</i> ... 5140            |
| 1107. graminis, <i>P.</i> ... 5132             | 1117. gangrena, <i>Fr.</i> ... 5141                  |
| = luteo-maculata,<br><i>Schw.</i> ... 4268     | 1118. Bonariensis, <i>Speg.</i> ... 5142             |
| = punctum, <i>Schw.</i> ... 4266               | 1119. luzulæ, <i>Rabh., Fung.</i><br><i>Eur.</i> 533 |
| = panici, <i>Schw.</i> ... 4267                | 1120. epityphæ, <i>Cke.</i> ... 5143                 |
| = andropogonis, <i>Sw.</i> ... 4273            | 1121. junci, <i>Fr.</i> ... 5144                     |
| = agrostidis, <i>Sw.</i> ... 4274              | 1122. cyperi, <i>Rehm.</i> ... 5145                  |
| 1108. bambusæ, <i>Rabh.</i> ... 1719           | 1123. dasylirii, <i>Peck.</i> ... 5146               |
| 1109. stenospora, <i>B. &amp; Br.</i> ... 5133 | 1124. caricis, <i>Fr.</i> ... 5242                   |

*c. In acotyledoneis.*

- |  |  |
|--|--|
| 1125. pteridis, <i>Reb.</i> ... 5153       | 1128. leptostromoidea, <i>Cke.</i> ,<br><i>Grev.</i> xiii. 64. |
| 1126. flabella, <i>Schwz.</i> ... 5154     | 1129. episphæria, <i>Peck.</i> ... 5156                        |
| 1127. anomala, <i>B. &amp; C.</i> ... 5155 |  |

\* OPHIODOTHIS. *Sporidia filiformia.*

1130. edax, *B & Br.* ... 5350

\*\* *Sporidiis ignotis.*

## a. In foliis arborum.

- |   |                                       |
|---|---------------------------------------|
| 1131. rhytismoides, <i>Chev.</i> 5157   | 1136. acervulata, <i>Schw.</i> 5162   |
| 1132. asteromorpha, <i>Schw.</i> 5158   | 1137. latitans, <i>Fr.</i> ... 5164   |
| 1133. impressa, <i>Fr.</i> ... 5159     | 1138. annulata, <i>Cke.</i> ... 5165  |
| 1134. Colensoi, <i>Berk.</i> ... 5160   | 1139. abortiva, <i>Desm.</i> ... 5166 |
| 1135. orbiculata, <i>Schw.</i> ... 5161 | 1140. xylostei, <i>Fr.</i> ... 5180   |

## b. In foliis herbarum.

- |   |   |
|---|---|
| 1141. brachystemonis, <i>Schw.</i> ... 5185 | 1144. angelicæ, <i>Fr.</i> ... 5193     |
| 1142. tragacanthæ, <i>Lev.</i> 5191         | 1145. podagrariæ, ( <i>Roth.</i> ) 5194 |
| 1143. Morthieri, <i>Fckl.</i> ... 5192      | 1146. campanulæ, <i>D. C.</i> ... 5195  |
|   | 1147. punctiformis, <i>Fckl.</i> 5196   |

## c. In caulibus herbarum.

- |  |                                      |
|--|--------------------------------------|
| 1148. eupatorii, <i>B. &amp; C.</i> ... 5198 | 1152. chenopodii, <i>Schw.</i> 5208  |
| 1149. stipata, <i>Fr.</i> ... 5199           | 1153. elegans, <i>Schw.</i> ... 5313 |
| 1150. deusta, <i>Fr.</i> ... 5200            | 1154. ramosa, <i>Schw.</i> ... 5215  |
| 1151. phlogis, <i>Schw.</i> ... 5201         | 1155. effusa, <i>Schw.</i> ... 5222  |

## d. In monocotyledoneis.

- |                                       |                                      |
|---------------------------------------|--------------------------------------|
| 1156. aristidæ, <i>Schw.</i> ... 5230 | 1159. thanotophora, <i>Lev.</i> 5241 |
| 1157. setariæ, <i>Sacc.</i> ... 5232  | 1160. membranacea, <i>Ces. Born.</i> |
| 1158. panici, <i>Schw.</i> ... 5238   |                                      |

\*\* AUERSWALDIA. *Sporidia continua, fusca.*

- |                                       |  |
|---------------------------------------|--|
| 1161. chæmeropis, <i>Cooke</i> 5248   | 1163. scabies, <i>K. &amp; C.</i> ... 5250 |
| 1162. Pringlei, <i>Peck.</i> ... 5249 |  |

\*\*\* DOTHIDELLA. *Sporidia uniseptata, hyalina.*

## a. In dicotyledoneis.

- |   |   |
|---|---|
| 1164. tinctoria, <i>Tul.</i> ... 5251       | 1178. endocrypta, <i>Mont., Grev.</i> xiii. 65. |
| 1165. hieronymi, <i>Sp.</i> ... 5252        |   |
| 1166. betulina, <i>Fr.</i> ... 5256         | 1179. salvadoræ, <i>Cke., Grev.</i> xiii. 65.   |
| 1167. achalensis, <i>Sp.</i> ... 5257       |   |
| 1168. marginata, <i>Lev.</i> ... 5258       | 1180. Berkeleyana, <i>Cke., Grev.</i> xiii. 65. |
| 1169. australis, <i>Sp.</i> ... 5259        | = <i>baccharidis</i> , <i>B. &amp; C.</i>       |
| 1170. tephrosia, <i>Lev.</i> .. 5260        |   |
| 1171. sordidula, <i>Lev.</i> ... 5265       | 1181. orbis, <i>Berk.</i> ... 5314              |
| 1172. pulverulenta, <i>B. &amp; C.</i> 5267 | 1182. millepunctata, <i>B. &amp; C.</i> 5273    |
| 1173. eugeniæ, <i>Thum., Grev.</i> xiii.    | 1183. rhynchosia, <i>Lev.</i> ... 5274          |
| 1174. scutula, <i>B. &amp; Curt.</i> 5270   | 1184. osbeckiæ, <i>B. &amp; Br.</i> 5275        |
| 1175. osyridis, <i>Cooke, Grev.</i> xiii.   | 1185. gracilis, <i>Sp.</i> ... 5277             |
| 1176. Zollingeri, <i>Mont.</i>              | 1186. bullata, <i>Fries</i> ... 5180            |
| & <i>B.</i> ... 5271                        | 1187. bullulata, <i>Berk.</i> ... 5315          |
| 1177. oleandrina, <i>DR. &amp; M.</i> 5272  | 1188. nitidula, <i>Lev.</i> ... 1886            |

## b. In monocotyledoneis.

- |  |  |
|--|--|
| 1189. fallax, <i>Sacc.</i> ... 5253    | 1191. agrostidis, <i>Fckl.</i> ... 5255  |
| 1190. helvetica, <i>Fckl.</i> ... 5254 | 1192. elettaræ, <i>B. &amp; Br.</i> 5256 |



## c. In acotyledoneis.

1193. basirufa, *B. & C.*... 5266    1195. nervisequia, *B.* ... 5269  
 1194. osmundæ, *B. & C.* 5268

\*\*\* MICRODOTHIS. *Sporidia uniseptata, fusca.*

1196. halepensis, *Cke.* ... 5308    1201. circinata, *K. & Cke.* 2712  
 1197. sphæroidea, *Cke.*... 5309    1202. puncta, *Cke.* ... 2713  
 1198. arduinæ, *K. & Cke.* 5310    1203. hemispherica, *Berk.* 5312  
 1199. oleifolia, *K. & Cke.* 5311    1204. spilomea, *Berk.* ... 5313  
 1200. viridispora, *Cke., Grev.* 1205. melastomatis, *Fr.*... 5170  
       xiii. 65.    1206. pentanisæ, *Cke.* ... 6114

\*\*\* ROUMEGUERIA. *Sporidia 1-3 septata, hyalina.*

1207. granulosa, *Kl.* ... 5331    1213. amphimelæna, *M.* 5344  
 1208. Schweinitzii, *B. & C.* 5333    1214. dendritica, *Cooke,*  
 1209. Goudotii, *Lev.* ... 5340       *Grev.* xiii. 65.  
 1210. tetradeniæ, *B.* ... 5341    1215. albizziæ, *Cooke, Grev.* xiii.  
 1211. magnoliæ, *Cke.* ... 5342       65.  
 1212. rugodisca, *C. & Hk.* 5343

\*\*\*\*\* MONTAGNELLA. *Sporidia triseptata, fusca.*

1216. tordillensis, *Speg.* 5329  
       *Sporidia ignota.*  
 1217. funesta, *Fr.* ... 5318

GEN. 2. **EURYACHORA**, *Fekl.*—Stroma late effusum, minutissime punctulatum.

\* *Sporidia continua, hyalina.*

## a. Stroma tenuissimum.

1218. stellaris, *Pers.* ... 5245    1219. stellariæ, *Lib.* ... 5246  
       b. Stroma crassiusculum.

1220. lathyri, *Lev. Grev.* xiii. 65.

\*\* *Sporidia uniseptata, hyalina.*

1221. bullata, *Berk.* ... 5292    1224. Lorentziana, *Speg.* 5263  
 1222. sedi, *Link.* ... 5261    1225. kalmiæ, *Peck.* ... 5264  
 1223. rumicis, *Karst.* ... 5262

\* MONTAGNELLA. *Sporidia 1-3 septata, fuscescentia.*

1226. heliopsidis, *Schw.* 5328    1227. platyplaca, *B.* ... 5332  
       \*\* OPHIODOTHIS. *Sporidia filiformia.*  
 1228. vorax, *B. & Curt.* 5349

GEN. 3. **DOTHIDEA**, *Fries.* Stroma erumpens, pulvinatum.

\* BAGNISIELLA. *Sporidia continua, hyalina.*

## a. Corticolæ.

1229. australis, *Speg.* ... 5076    1231. cercidis, *Cke. Grev.* xiii.  
 1230. moricola, *C. & E.* 5077    1232. ilicis, *Cooke.* ... 5079

1233. tamaricis, *Cooke*. ... 5080    1235. viburni-dentata,  
 1234. rhamni, *Mont.* = *clavuli-*    *Schwz.* ... 5326  
       *gera*, *B. & Br.* ... 5326    1236. moriformis, *Ach.* ... 5082  
   *b. foliicolæ.*
1237. catervaria, *B.* 1783. 5109    1240. coccodes, *Lev.* ... 1717  
 1238. drymidis, *Lev.* ... 5081           = *cubensis*, *B.*  
 1239. melastomatum, *Lev.* 5170    1241. tessellata, *Lev.*, *Grev.* xiii.

\*\* AUERSWALDIA. *Sporidia continua, fusca.*

1242. robinia, *Schw.* ... 5324    1243. oceanica, *Ces.* ... 5078

\* PLOWRIGHTIA. *Sporidia uniseptata, hyalina.*

1244. ribesia, *Pers.* ... 5285    1249. periclymeni, *Fckl.* 5290  
 1245. virgultorum, *Fr.* ... 5286    1250. hippophaës, *Pass.* 5291  
 1246. mezerei, *Fr.* ... 5287    1251. Martianoﬀiana, *N.* 5294  
 1247. insculpta, *Wallr.* 5288    1252. tuberculiformis, *Ellis* 5295  
 1248. berberidis, *Wahl.* 5289    1253. polita, *Fr.* ... 5316

\*\* EUDOTHIDEA. *Sporidia uniseptata, fusca.*

1254. sambuci, *Pers.* ... 5296    1261. smilacicola, *C. & Ger.* 5303  
       *var. zealandia, Cke.*    1262. baccharidis, *Cke.* 5304  
 1255. amorphæ, *Rabh.* ... 5297    1263. puccinioides, *D. C.* 5305  
 1256. coluteæ, *B. & C.* ... 5298    1264. rutæ, *Mont.* ... 5306  
 1257. tetraspora, *B. & Br.* 5299    1265. corylina, *Cke. & Hk.* 5307  
       = *crystallophora*, *Berk.*    1266. artemisia, *Schw.* 5317  
 1258. etrusca, *Not.* ... 5300    1267. bignonia, *Fr.* ... 5321  
 1259. linderæ, *Ger.* ... 5301    1268. rhuina, *Schw.* ... 5325  
 1260. frangulæ, *Fckl.* ... 5302    1269. lonicera, *Cooke, Grev.* xiii

\*\*\* MONTAGNELLA. *Sporidia 1-3 septata.*

*a. loculis polyascis.*

1270. curumanuel, *Sp.* ... 5330    1271. durissima, *B.* ... 5345

*b. loculis monoascis.*

1272. monspeliensis, *Seynes* 5346

\*\*\* CURREYA. *Sporidia muriformia, fusca.*

1273. conorum, *Fckl.* ... 5347    1274. excavata, *Cke. & Ell.* 5348

\*\*\*\* SPECIES INCERTÆ.

1275. atra, *Fr.* ... 5319    1277. paradoxa, *Fr.* ... 5322  
 1276. myriococca, *Mont.* 5320    1278. encœlium, *Schw.* 5327

GEN. 4. **HOMOSTEGIA**, *Fckl.* Parasiticum. Stroma subplanum, vel hemisphericum fragilissimum.

\* *Sporidia uniseptata, hyalina.*

1279. Pelvetii (*Hepp*). *Grev.* xiii. 66.

\* *Sporidia uniseptata, fusca.*

1280. lichenum, *Somm.* 5339

\* \* *Sporidia 3 septata, fusca.*

1281. *Piggotii*, *B. & Br.* 5338

\*\* *Sporidia multiseptata, hyalina.*

1282. *nigerrima*, *B. & Br.* 2838

\*\*\* *Sporidia ignota.*

1283. *dubia*, *Linds.* *Grev.* xiii. 66.

GEN. 5. **RHOPOGRAPHUS**, *Nitke.* *Stroma lineatum.*

\* **MONOGRAPHUS.** *Sporidia continua, hyalina.*

1284. *aspidiorum* (*Lib.*) 4585

\*\* **SCHIRRHIA.** *Nitke.* *Sporidia uniseptata, hyalina.*

1285. *rimosa*, *A. & S.* ... 5280    1288. *Castagnei*, *Mont.* ... 5293

1286. *depauperata*, *Desm.* 5281    1289. *calophylli*, *B. & Br.* 5284

1287. *striæformis*, *Niessl* 5282

\* \* **GENUINA.** *Sporidia 3-5 septata, flavida.*

1290. *filicinus*, *Fr.* .. 5334    1292. *clavisporus*, *Pk.* ... 5336

1291. *hysterioides*, *Ces.* 5335    1293. *hysteriiformis*, *Karst.* 5337

\* \* **OPHIODOTHIS.** *Sporidia filiformia.*

1294. *Haydeni*, *B. & C.* 5361

## XYLARIÆ ADDENDA.

The following omitted species should be inserted in the places indicated in the list published at page 11 :—

601.\* **Xylaria** (**Xyloglossa**) **Trianae**, *Lev. Ann. Sci. Nat.* xx. (1863),  
p. 292.

613.\* **Xylaria** (**Xyloglossa**) **cylindrica**, *Lev. Ann. Sci. Nat.* xx. (1863),  
p. 292.

679.\* **Xylaria** (**Xyloglossa**) **oleæformis**, *Lev. in Moritzi Syst. Verz.*  
(1846).

736.\* **Xylaria** (**Xylodactyla**) **monticulosa**, *Lev. Ann. Sci. Nat.* xx.  
(1863), 292.

738 \* **Xylaria** (**Xylodactyla**) **metæformis**, *Lev. Ann. Sci. Nat.* xx.  
(1863), 292.

769.\* **Thamnomycetes melanurus**, *Lev. Ann. Sci. Nat.* xx. (1863), 292.

849.\* **Nummularia discoidea**, *Lev. Ann. Sci. Nat.* xx. (1863), 292.

## NEW AND RARE BRITISH FUNGI.

BY W. PHILLIPS, F.L.S., AND CHARLES B. PLOWRIGHT.

(Continued from p. 54.)

259. **Puccinia Schœleriana**, *Plow and Magnus*.This name was misprinted at p. 54 as *P. Schrœtriana*.260. **Cœoma loricis** (*Westd.*).

Sori small,  $\frac{1}{2}$  to 5 mill. long, on yellow spots, surrounded by the whitish epidermis. Spores roundish or elliptical, often rather angular, finely verrucose, orange yellow, 16 to 24 mk. long by 12 to 17 mk. wide.

Around the periphery of the sori are a number of somewhat clavate empty cells, crowded together and superimposed.

On *Pinus Larix* L. Near King's Lynn. Shrewsbury, and Forres, N.B. May, 1884.

261. **Peziza (Cochlearia) aurantia**. *Oed.*

Var. **atro-marginata**. *Phil. and Plow., in Gard. Chron.*, Feb., 1882.

Cups from 4 lines to 1 in. broad; disc blood-red, wrinkled; margin black owing to the presence of minute septate bristle-like hairs; the tuberculate sporidia are frequently furnished with thread-like appendages at their extremities, pointing in opposite directions obliquely to the axis of the sporidia.

On a clay bank. Clenchwarton, Norfolk. February, 1882.

262. **Peziza (Humaria) Oocardii**, *Kalch.*

Cups scattered or gregarious, sessile, lenticular, glabrous; becoming undulate-lobate, reddish brown, when dry blackish brown; asci cylindrical, broad; sporidia 8, broadly elliptical, smooth ( $\cdot 02\text{--}\cdot 022 \times \cdot 011\text{--}\cdot 012$  mk.); paraphyses filiform, clavate apices.

*Peziza Oocardii*, Grevillea III., fig., 207. Cooke, *Mycogr.*, fig., 47. *Peltidium Oocardii*, Kalchbrenner in Rabh., F.E. 521; Karst. *Myc. Fenn.* p. 84.

On wood in damp places. Forres. N.B. The Rev. Dr. Keith.

Cups 2 to 3 lines broad.

263. **Peziza (Dasyscypha) Cupressi**, *Batsch.*

Gregarious, sessile or shortly stipitate, hemispherical, becoming plane, between fleshy and waxy; margin obtuse entire, glabrous, villous at the base; disc orange-yellow, paler externally; asci cylindrical; sporidia 8, globose, smooth ( $\cdot 01\text{--}\cdot 012$  mk.); paraphyses filiform, slender.

On *Juniperus Sabina*. Brandon. Mr. Norgate. 1883.

264. **Peziza (Dasyscypha) scrupulosa**, *Karst.*

Gregarious, slender, sessile, subhemispherical or sub-solenei-form, whitish or yellowish white, or greyish, rough with papillæ; asci cylindraceo-clavate, or subcylindrical; sporidia elongated, or aciculari elongated ( $\cdot 014\text{--}\cdot 008 \times \cdot 001\text{--}\cdot 002$  mk.); paraphyses very slender.

*Peziza scrupulosa*, Karst. *Monogr. Pez.* p. 178; *Helotium scrupulosum* Karst. *Myc.*, *Fenn.* p. 152. *Peziza tomipora*, Phillips in *Herb.*

On dead thornwood. Scarboro'. Mr G. E. Massee.

Cups .2 mm. broad, clothed with very minute white hair, which break up at the joints into two or three oblong portions.

265. **Peziza (*Dasyscypha*) *prasina***, *Quelet*.

Cups sessile, appanate, thin, waxy, soft, olivaceous, clothed with flexuous, hyaline, afterwards fiery-red hairs; hymenium plane, greenish-brown, then of a beautiful green, at length becoming pale; sporidia fusiform, curved (.012 mk.) *Lachnella prasina*, *Quelet*. *Asso. Franc. l'avan. des sc.* 1880.

On *Glyceria fluitans*. Mr. Cedric Bucknall.

266. **Peziza *callunigena***. *Karst.*

Cup solitary, subglobose, sessile, blackish-brown, naked, striate, mouth connivent; asci cylindrical; sporidia 8, filiform, attenuated at the apices, straight, simple or faintly 3-septate (.04-.06  $\times$  .0025 mk.); paraphyses filiform, slightly thickened above.

On branches of *Calluna vulgaris*. Near Clunbury, Salop. 1882.

*Karst., Mongr., Pers. p. 171. Crumenula callunigena Karst., Myco. Fenn, p. 212.*

Cups  $\frac{1}{4}$  of a line broad. Seated on a brown tapesium, and resembles externally *Peziza Rosæ*, *Pez.*

267. **Peziza (*Mollisia*) *Mali*** (*Rehm*).

Gregarious, small, at first globose, then urceolate, finally more or less expanded; margin when dry involute, paler, scabrous; disc greenish-yellow; asci clavate; sporidia oblong, obtuse, hyaline, .009  $\times$  .003 mk. Paraphyses filiform. *Pezizella Mali*, *Rehm. Ascomycetes No. 460.*

On dead holly bark. Near Shrewsbury.

268. **Peziza (*Mollisea*) *filicum***, *Phil. n. s.*

Gregarious, minute, at first globose, then cupulate, at length expanded, white, glabrous; asci clavato-cylindrical; sporidia 8, oblongo-elliptical, straight or curved, 2-3 nucleate, becoming pseudo 1-2 septate; paraphyses extremely slender.

On stems of *Lastrea Filix-mas*. Shobden, Herefordshire.

Cups 1-3 mm. broad.

This differs from *Peziza Aspidiicola*, B. & Br. in the perfectly glabrous exterior of the cups, and the much larger and nucleated sporidia.

269. **Peziza (*Mollisea*) *jugosa***, *n. s.*

Crowded, globose, vertically rugose, scabrous, black, mouth contracted, disc cinereous; asci clavate; sporidia 8; oblongo-elliptical or fusiform, 3-5 nucleate, becoming 3-5 pseudo-septate, .014-.018  $\times$  .003-.005 mk. Paraphyses numerous, adherent.

On dead herbaceous stems. King's Lynn.

Cups 2 mm. broad. This is near *P. atrata*.

270. **Helotium *rhodoleucum*** *Fr. Sys. Myc. II. 127.*

Stipitate, slender, rosy-white, disc plane, stem equal; asci cylindraco-clavate; sporidia 4 to 8, oblongo-elliptical, .01-.014  $\times$  .004-.005 mk. Paraphyses filiform.

Substance watery pellucid; stem glabrous, 1 line long, frequently reaching to 3 lines. Cup orbicular, entire, 1-2 lines broad.



On decayed stems of *Equisetum*. Shelton Rough, n. Shrewsbury. April.

271. **Cenangium urceoliformis** (Karst).

Scattered, commonly solitary, erumpent, sessile or subsessile, subspherical, nigricant, fusco-furfuraceous, becoming concentrically sulcate and naked, at first closed, then opening with a connivent mouth; disc pallid-cinereous; asci cylindrical; sporidia filiform septate,  $0.065 \times 0.002$  mk. Paraphyses filiform slender, often furcate.

*Peziza urceoliformis*, Karst. Mongr. Pez., 172; *Crumenula urceoliformis*, Karst., Myc., Fenn., 213.

On stems of *Vaccinium vitis idæa*. Grantown. N.B. Rev. Dr. Keith.

The sporidia in our specimens are very much larger than those in Dr. Karsten's, and it occurs on a different species of *Vaccinium* but otherwise it answers to the description.

272 **Phacidium striatum**, n. s.

Scattered, orbicular, rugoso-striate, splitting into 5-6 laciniae; disc fuliginous; asci clavate, attenuated towards the summit, sporidia 8, lanceolate, simple or 1 septate,  $0.025-0.03 \times 0.002-0.004$  mk. Paraphyses filiform, curved at the apices, numerous.

On dead stems of *Rubus*. Dinmore, Herefordshire.

This bears some resemblance externally to *Phacidium rugosum* Fr., but has totally different sporidia.

273. **Stictis pteridina**, Phil. & Buck.

Scattered, slightly immersed, circular or elongated, irregular, open; disc pallid-brown, not deeply depressed; margin membranaceous; asci broadly clavate; sporidia 8, biseriate, clavate or clavato-fusiform, six or seven times pseudo-septate, or muriform,  $0.028-0.044 \times 0.005-0.009$  mk. Paraphyses adherent. *Stictis Pteridina*, Phil. and Buck., in Fungi of the Bristol District pt. vi.

On *Pteris aquilina*. Leigh Wood near Bristol. Mr. Cedric Bucknall.

274. **Capnodium Juniperi**, n. op.

Perithecia globoso-cylindrical, contracted at the base, about 200 mik. high by 100 mk. wide, seated upon a thick dense felt of black mycelium, of which numerous black septate hyphæ are attached to the base of the perithecia; asci ovate  $50 \times 20$ , sporidia oval with pointed extremities, brown triseptate, biseriate  $25 \times 10$  mk.

On Juniper twigs. Forres. Rev. Dr. Keith.

The mycelium envelops the twigs in a thick woolly black mass, in which are often entangled the fallen leaves of the juniper. The antennaroid threads of which this mass is composed are possibly *A. pithyophila*, Nees.

275. **Eutypa velutina** (Wallr.), Sacc., *Fungi*, Venet., Ser. iv., p. 16. *Fungi Ital.*, t. 472., Wallr., *Fl. Crpt.*, No. 4066.

Stroma widely extended, perithecia globose, black, sunk in the wood, shortly attenuated in the neck, ostiola conico-rounded smooth, shining, just emerging; asci fusiform, stipitate, sporiferous part  $35 \times 4.5$ : spores sausage shaped, pale olivaceous,  $7.9 \times 2$ . Slightly curved.

Conidia *Trichosporium velutum*, rendering the surface of the matrix brown and velvety. Conidia obovate brown  $6 \times 4.5-5$ .

On *Acer campestre*.

276. **Sordaria Sparganica**, *N. Sp.*

Perithecia black, globose, superficial, covered with black matted hairs, ostiola prominent rounded: sporidia, elliptical, dark brown, truncate at one end, from which springs a cylindrical hyaline appendage. Sporidia,  $12 \times 8$  mm.

On dead *Sparganium*. Mr. Bucknall, Yattam, July, 1881.

277. **Anthostoma Italicum**, *Sacc. & Speg. Michel I., 326, Fungi Ital., t. 165., Sacc. Syll., I., p. 297.*

Stroma superficial, variously effused, black, perithecia in groups decorticating the stems in which it occurs, subimmersed, globoso-depressed  $\frac{1}{3}$  to  $\frac{1}{2}$  mill. in diameter, papillate black; asci cylindrical  $80-100 \times 8-10$  shortly stipitate, apex obtuse and sub-trifoveolate, packed between the filiform paraphyses, octosporous: sporidia ovate, oblong,  $25 \times 7-8$  curved, brownish, 2, rarely 1, nucleate, provided at both ends with a very short hyaline appendage.

Near Bristol. Mr. Bucknall, 1882.

278. **Phomatospora endopteris**, *N. sp.*

Perithecia globose, deeply buried in the stem, ostiola very minute; neck long and cylindrical, reaching the surface; asci cylindrical,  $30 \times 5$ . Sporidia oblong, oval, hyaline, simple, uniseriate,  $10-11 \times 3$  mill.

On *Pteris aquilina*. Mr. C. Bucknall. Leigh Wood, April, 1882.

279. **Didymella proximella** (*Karst.*), *Sacc. Syll. I., p. 558, Sphærillea Prox. Karst. Myc. Fenn. II., p. 177, Sp. hyperopta Rehm. Ascom. No. 348, Didymosphæria Kunzei Niessl. Hedwigia, 1866, p. 106, Rab. Exs. 2039.*

Perithecia amphigenous, scattered minute, spherical, papillate, pertuse, black,  $100-200$  mill. in diameter; asci sessile, oblongo-clavate,  $70-100 \times 16-22$ . Sporidia eight, uni- or biseriate, subovoid-oblong, apex slightly but obtusely attenuated, unisepate, superior division rather the larger, 2 to 4 nucleate, constricted at the septum,  $20-24 \times 8-10$ .

On *Carex ampullacea*. Forres. Rev Dr. Keith. On *C. hirta*, King's Lynn. Comes near *Sp. anarithma*, B. & Br.

280. **Didymosphæria Winteri**, *Niessl. Neue Kernpilze, p. 165. Sacc. Syll. I., p. 702.*

Perithecia scattered or rather gregarious, minute, hemispherical, then depressed, covered by the epidermis at first; matrix not discoloured, ostiola papillate, perforate; coriaceo-membranaceous, black; asci clavate, stipitate, octosporous  $60-80 \times 10-12$ ; sporidia bi-rarely uniseriate, lanceolate or oblong lanceolate, rather obtuse, centrally, or rather above the centre, uniseptate, constricted, straight or slightly curved, greenish-yellow or olivaceous,  $11-14 \times 4\frac{1}{2}-5$  mk., paraphyses numerous, rather narrow.

On dead potato stems. Mr. A. Croall. Stirling, N.B.

281. **Melanconis aceris**, *N. sp.*

Stroma valloid, black, suborbicular or conico-truncate, 2-5 mill. in diameter, corticolous or lignicolous, circumscribed by a black line. Perithecia  $\frac{1}{2}-\frac{1}{3}$  mill. in diam., 5-15 in a group; ostiola minute;

asci clavate, 65-70  $\times$  10; sporidia hyaline, uniseptate, nucleate, slightly constricted, elliptical, 12-15  $\times$  4-5, not appendiculate.

On *Acer*. Mr. W. B. Grove. 1883.

282. **Diaporthe (Chorostate) pustulata** (Desm.), Sacc. **Sp. punctulata**, Desm. 13. Not., 70, 1846. **Aglaospora pustulata**, Tul. Carp. II., p. 163. Sacc. Syll. I., p. 610.

Erumpent, pustulate, scattered in the pallid certical stroma, circumscribed by a black line; disc subconvex, black, perithecia, 4-12, crowded in the middle, ostiola prominent, rather thick, umbilicate; nucleus white, then blackish; asci oblong, cylindrical, obtuse, octosporous; sporidia fusiform, 4 nucleate hyaline, not appendiculate, 16-19  $\times$  3-4.

On *Acer pseudoplatanus*. Leigh Down. C. Bucknall. 1882.

283. **Diaporthe (Euporthe) discors**, Sacc.=(**D. rumicis**, Plow. in Grev. VII., p. 197. Sacc. Syll. I., p. 644.)

Stroma variously effused and interrupted, blackening the surface of the stems, not surrounded by a black line beneath; perithecia few, globose,  $\frac{1}{2}$  mill. in diameter; ostiola scarcely existing, punctiform; asci fusiform-clavate, 60-62  $\times$  10-11, without paraphyses, octosporous; sporidia fusiform, curved, rather obtuse, 17-18  $\times$  4-5, 4-nucleate hyaline.

On *Rumex obtusifolius*. Castle Rising.

284. **Diaporthe (Tetrastaga) obscurans**, Sacc. Syll. I., p. 675. *Fungi Ven. Ser. IV.*, p. 7.

Stroma widely spreading round the affected branch, limited by a black line; perithecia discrete, in clusters of 4 to 6, surrounded by a black line, forming a slightly elevated but obscure swelling under the bark, globose, depressed,  $\frac{1}{4}$  mill. in diameter, black; ostiola very short, not projecting above the bark, but just piercing it; asci widely fusiform; octosporous 45-50  $\times$  12 mill.; sporidia biseriate, rarely obtusely uniseriate; fusiform, rather obtuse at both ends, 12  $\times$  4 $\frac{1}{2}$ -5 mill., uniseptate, very slightly constricted, 4-nucleate, hyaline.

On ash. Forbes. Rev. Dr. Keith.

285. **Leptosphaeria prætermissa** (Karst.), Sacc. Syll. II., p. 26.

Perithecia clustered, covered by the cuticle, which is more or less discoloured, spherical, base flattened; ostiola prominent, but often obsolete, widely perforate, smooth, even, black, 5 mill. wide; asci cylindraco-subclavate, 110  $\times$  10-11 mill.; sporidia 8, uniseriate oblong, obtuse at both ends, straight or curved, 3-septate, more or less constricted at the septa, very pale, yellowish-brown, 18-32  $\times$  7-10; paraphyses crowded, sub-coalescent.

On *Rubus idæus*. Rev. Dr. Keith. Forbes. June, 1882.

Comes near *Sp. abbreviata*, Cooke, but is not in lines, nor are asci saccate.

\* **Sphaeria fluviatilis**. Ph. & Pl. Grev. x., p. 73, is **Sphaeria Lemaneæ** (Cohn. & Wor.), Beitr. zu Morph. and Phys. d. Pilz., III., p. 1., t. 1.

286. **Zignoëlla insculpta** (Fr.), Sacc. Syll. II., p. 255.

Perithecia semi-immersed, globose, brownish-black, papillate, then pertuse, the upper part falling off; asci sessile, oblongato-cylindrical, 150 long by 15 to 20 mill. wide; sporidia eight, ob-

liquely uniseriate, curved, hyaline or pale yellowish, consisting of two elongato-subfusiform nucleate bodies, connected by a long, narrowly contracted isthmus, which is at length divided in the middle by a septum, 70 mill. long by 7-8 wide.

Fries *Elenchus* ii., p. 95. Oudem. *Býdrage voor van Flora Nederland.* Nederlandsch Bot. Ver., 18th May. 1871, p. 30, t. v., f. 9.

Rev. Dr. Keith. Forres. On holly twigs.

287. **Fenestella bipapillata** (Tul.), Sacc. **Valsa bipapillata**, Tul. *Carp.* ii., 206. *Sacc.* *Syll.* p. 327.

Perithecia globose, minute black, very smooth, immersed in the bark in valsoïd clusters of from 5 to 8, very slightly, or not at all rostrate, collapsing when dry; asci cylindrical, 180-200 by 16-18, very obtuse, slightly attenuated below, octosporous with very long paraphyses, sporidia uniseriate, ovate, lanceolate, with a pallid papilla at both ends, 32-40  $\times$  15-18, triseptate muriform.

On beech. Rev. Dr. Keith. Sp. 30  $\times$  15; asci 150-200  $\times$  15-18.

288. **Ophiobolus vulgaris**, Sacc. *Mich.* ii., p. 953. *Syll.* ii., p. 338. **Rhapidophora vulgaris**, Sacc. *Mich.* ii., p. 67.

Perithecia not seated upon discoloured spots of the matrix, innate, then erumpent, globose, conical,  $\frac{1}{6}$ - $\frac{1}{4}$  mill. in diameter; asci cylindrical, 90-120  $\times$  6-8 mill., subsessile without paraphyses, octosporous; sporidia filiform, 80-100  $\times$  1-1 $\frac{1}{2}$ , uniform in diameter, multinucleate pale yellow.

On dead potato stalks. Stirling, N.B. Mr. A. Croall.

This differs from *O. porphyrogonus* (Tode), (*Sphaeria rubella*, Pers.) in the smaller size of its fruit, and in the mycelium not producing purple or red discolouration of the matrix.

289. **Eleutheromyces longispora**, *N. sp.*

Perithecia crowded, superficial, elongated, whitish-yellow, 450 to 500 mill. high by 200 mill. wide at the base; ostiola acutely pointed; asci clavato-elongate or subfusiform, 130-150  $\times$  20-25, usually tetrasporous; sporidia hyaline, elongate fusiform, acute, uniseptate, with terminal cilia at both extremities, 50-60  $\times$  5-8 mill.

On the remains of some *Myxogaster*. Holt House Woods, King's Lynn. 4th Sept., 1882.

The acute ostiola are composed of a number of converging narrow straight cells placed side by side.

290. **Nectria fibricola**, *Plow.* *Sacc.* *Mich.* ii., p. 152.

Perithecia scattered, globoso-conoid, pale, yellowish-red, 200 mill. wide 400 mill. high, ostiola obtusely conical, walls of perithecia thin, and parenchymatous; asci clavate, 90  $\times$  20-25, octosporous: sporidia, biseriate oblong, 20  $\times$  8-8 $\frac{1}{2}$ , uniseptate, slightly constricted, obtuse at both ends, 4 nucleate, hyaline, abnormally triseptate.

On rotting string. King's Lynn. 1881.

291. **Nectria dacrymycella** (*Nyl.*), *Karst.*

Perithecia, when young, immersed, afterwards naked, hemispherical, prominent, apex slightly depressed, subtremelloid,

orange yellow, minute, about 2 mill. wide, or slightly more, smooth; asci fusoid,  $70-80 \times 10-11$ , octosporous; paraphyses branched; sporidia fusiform, finely uniseptate, hyaline,  $16-18 \times 3$  to 4 mill. Karst. Myc. Fenn. ii., p. 216. *Sphæria* N. Flora 1863, p. 322.

On *Angelica* stems. Blaize Castle. Mr. C. Bucknall.

292. **Hypocrea argillacea**, *N. sp.*

Pulvinate, clay-coloured, rather thin, 1 to 3 mill. in diameter; perithecia rather large, darker, prominent, pale brown; ostiola minute, prominent; asci cylindrical, octosporous,  $60-70 \times 8$ ; sporidia separating into 16, subglobose hyaline, generally rather longer than wide,  $4-5 \times 4$ .

On soft rotten wood, apparently ash. Dersingham. 1 Nov., 1881.

293. **Hypocrea strobilina**, *N. sp.*

Discoid, stroma whitish, thin, 1 to 4 mill. across; perithecia yellowish (honey-coloured), rather large; asci cylindrical; octosporous; sporidia separating into two halves, each of which is subglobose; hyaline  $5-6 \times 5-5\frac{1}{2}$  mill.

On cones of spruce fir. Belmont. Hereford. Nov., 1878.

Mr. James Renny.

The hyaline sporidia are unusually large.

294. **Hypocrea splendens**, *N. sp.*

Subglobose, then expanded, golden-yellow, then reddish-orange, when old with a tinge of brown, fleshy, thick, hemispherical, then convex, bearing perithecia on the whole of the upper surface, 3 to 6 mill. across; flesh yellowish-white, firm; perithecia minute, darker; asci cylindrical, octosporous,  $80-90 \times 5-6$ ; sporidia hyaline, separating into two parts, each of which is globose; nucleate  $4\frac{1}{2}-5$  mill. in diameter.

On laurel sticks. Leicestershire. Mr. T. Howse. Oct., 1881.

295. **Hypocrea viscidula**, *N. sp.*

Stroma at first globose, flattened above, then discoid, becoming cupulate, 5 to 10 mill. across; margin thin; at length repand and revolute, at first straw-coloured, viscid, shining, flesh firm, whitish, becoming yellow; disc dotted with dark green perithecia; asci cylindrical, octosporous,  $130-150 \times 10-11$ ; sporidia olivaceous green, soon separating into two parts, each of which is subglobose; nucleate dark green, 6-8 mill. in diameter.

On wood and bark of *Pinus sylvestris*. Brandon. 7th Nov., 1881.

A well marked species of large size, and characterised by the large size of its olivaceous sporidia.

296. **Lophioderium caricinum** (*Desm. & Rob.*), *Duby Hyst.* p. 47.

**Hysterium caricinum**, *Robin Herb. Desm.* 14, *Nat.* 1847, p. 180. *Sacc. Syll.* p. 797.

On pallid, withered spots, covered by the epidermis, scattered, oval, either slightly acute or obtuse at both ends, flat, black; opaque, minutely tuberculate, at length opening with a pallid disc, lips thin; asci clavate, 60-70, mk. bacillaro-filiform,  $50 \times 1$  mk.

On *Carex arenaria*. Mintlynn. 30 Aug., 1884.



## PRÆCURSORES AD MONOGRAPHIA POLYPORORUM.

By M. C. COOKE.

We have often been solicited to undertake a revision of the genus *Polyporus* of Fries, with critical notes. For two years we have cherished the hope of seeing this accomplished, and done something to facilitate it, but so many other, and pressing, claims upon our attention have from time to time postponed the attempt. At length we have resolved upon issuing our preliminary lists, imperfect though they may be, in order to indicate the arrangement we have decided to adopt. It will be seen that the method is based upon the suggestions of Fries in his "*Novæ Symbolæ*" (1851), with a few unimportant modifications.

Our present intention is to publish, in a collected form, all the scattered descriptions of the species known, with measurements of the pores, &c., and such critical notes as we can furnish, of the species described by Fries, Berkeley, Leveille, Montagne, ourselves, and others, as derived from authentic specimens. Meanwhile the preliminary lists may be of service, although they must not be accepted as absolute, either as to the sequence of species or the specific value of every name. As we are anxious to examine for ourselves every species possible, progress is necessarily slow. We desire, above all things, to make the work practically useful, therefore any suggestions of *omitted* species will receive grateful consideration.

**POLYPORUS (Eupolyporus), Fries.**

Pileus carnosus lentus, dein induratas (raro e caseoso-floccoso fragilis) extus absque sulcis el zonis, sed contextus radians fibrosus (intus) saepe zonatus. Pori numquam stratosi.

A. **Ovini.** Mesopodes, carnosii, terrestres.

\* *Pileo imposito, squamoso floccosove.*

- 1 tessulatus, *Fr. Hym. Eur.* 523.
- 2 tuberaster, *Fr. Hym. Eur.* 523.
- 3 subsquamosus, *Fr. Hym. Eur.* 523.
- 4 nodipes, *Berk. Hook. Journ.* 1852, 136.
- 5 ovinus, *Fr. Hym. Eur.* 523.
- 6 flavo-virens, *B. & Rav. Grev.* i. 38.
- 7 Ellisii, *Berk. Grev.* vii. p. 5
- 8 leucomelas, *Fr. Hym. Eur.* 523.
- 9 pescapræ, *Pers. Champ. Com.* t. 5.  
v. scobinaceus, *Pers. Myc. Eur.* ii. 37.
- 10 asprellus, *Lev. Comm.* 14.
- 11 hydniceps, *B. & C. Cubensis* No. 191.
- 12 radicatus, *Schwein. Amer. Bor.* 331.
- 13 Hartmanni, *Cooke Grev.* xii. 14.
- 14 cæruleoporus, *Peck.* 26 *Report* 68.
- 15 olivaceo-fuscus, *B. & Br. Linn. Journ.* xiv. 46.
- 16 persicinus, *B. & Curt. Grev.* i. 39.
- 17 myclodes, *Kalch. Grev.* iv. 73.

\*\* *Pileo glabro.*

- 18 viscosus, *Pers. Myc. Eur.* ii. 41.
- 19 xoilopus, *Rost. Poly.* t. 10.
- 20 virellus, *Fr. Hym. Eur.* 525.
- 21 politus, *Fr. Hym. Eur.* 525.
- 22 poripes, *Fr. Novæ. Symb.* 32.
- 23 rutrosus, *Rost. Poly.* t. 22.
- 24 fuliginus, *Fr. Hym. Eur.* 525.
- 25 Campbelli, *Berk. Hook. Journ.* 1854, 228.
- 26 nanus, *Mont. Syll.* 153.
- 27 griseus, *Peck. 26 Report* 68.
- 28 popanoides, *Cooke Grev.* ix. 97.

B. **Lenti.** Mesopodes e carnosos lenti, indurato, epixylo. Stipitis basi concolori, nec nigra. *Mesopus, lentus*, *Fr. Epic.* 11-20.

\* *Pileo imposito, squamoso villosos.*

- 29 lepidus, *Fr. Hym. Eur.* 526.
- 30 lentus, *Berk. Outl.* p. 237.
- 31 brumalis, *Fr. Hym. Eur.* 526.
- var. floccopus*, *Rost. Poly.* t. 13.
- 32 callochrous, *Lev. Ann. Sci. Nat.* 1844, 181.
- 33 Weddellii, *Mont. Ann. Sci. Nat.* v. 366.
- 34 scabriceps, *B. & C. Fungi Cub.* No. 190.
- 35 penetralis, *Smith Journ. Bot.* 1875, 98.
- 36 fractipes, *B. & Curt. Grev.* i. 39.
- 37 maculatus, *Berk. Hook. Journ.* 1851, 80.
- 38 dibaphus, *B. & Curt. Grev.* i. 36.
- 39 luridus, *B. & Curt. Grev.* i. 39.
- 40 delicatus, *B. & Curt. Grev.* i. 39.
- 41 orbicularis, *Sauter Hedw.* xv. 150.
- (rhipidium, *Berk. Lond. Jour.* 1847, 319=*Favolus*.)
- 42 tubarius, *Quelet. Bull. Soc. Bot. Fr.* 1878, 289.

\*\* *Pileo strigoso virgatove.*

- 43 vernalis, *Fr. Hym. Eur.* 527.
- 44 virgatus, *B. & Curt. Linn. Journ.* x. 304.

\*\*\* *Pileo cupulæformi.*

- 45 pocula (Schw.), *B. & Curt. Proc. Am. Ac.* iv. 122.
- 46 cupulæformis, *B. & Curt. Grev.* i. 38.

\*\*\* *Pileo margine ciliato.*

- 47 arcularius, *Fr. Hym. Eur.* 526.
- =*P. agariceus*, *Konig.*
- 48 æmulans, *B. & Curt. Fungi Cub.* 181.
- 49 ciliatus, *Fr. Hym. Eur.* 527.
- 50 umbilicatus, *Berk. Hook. Journ.* 1851, 79.
- 51 tricholoma, *Mont. Syll.* 153.
- 52 rubripes, *Rostk. Poly.* t. 16.
- 53 similis, *Berk. Hook. Journ.* 1843, 635.
- 54 Binnendykei, *Kurz. in Herb. Berk.* 2279.
- 55 flexipes, *Fr. Linn.* v. 515.
- =*apalus*, *Berk. Hook. Journ.* 1843, 635.
- =*gracilis*, *Klot. Ann. Nat. Hist.* 1839.

\*\*\* *Pileo glabro.*

- 56 alveolarius, *Fr. Epicr.* 431.  
     = *collybioides*, *Kalch. Grev.* x. 94.  
 57 incendarius, *Fr. Hym. Eur.* 527.  
 58 corylinus, *Vivian Ital.* t. 1.  
 59 tiliae (*Schulz*), *Fr. Hym. Eur.* 528.  
 60 fuscidulus, *Schrad. Spic.* 153.  
 61 leptocephalus, *Fr. Hym. Eur.* 528.  
 62 cremoricolor, *Berk. Hook. Journ.* 1851, 79.  
 63 columbiensis, *Berk. Hook. Journ.* 1842, 454.  
 64 stipitarius, *B. & Curt. Fungi Cub.* No. 183.  
     *var. Armitii, Muell & Kalch. Grev.* x. 94.  
 65 humilis, *Peck 26th Report* 69.  
 66 pachypus, *Mont. Syll.* 154.  
 67 cyathiformis, *Lev. Ann. Sci. Nat.* 1848, 181.  
 68 trachypus, *Mont. Syll.* 154.  
 69 phæoxanthus, *Mont. Syll.* 154.  
 70 acicula, *B. & Curt. Fungi Cub.* 184.  
 71 tuba, *B. & Curt. Fungi Cub.* 189.  
 72 discoideus, *B. & Curt. Fungi Cub.* 187.  
 73 craterellus, *B. & Curt. Fungi Cub.* 188.  
 74 pisiformis, *Kalch. Grev.* x. 98.

(*P. favularis, Fr. Nov. Sym.* 34 = *Favolus.*)

**C. Spongiosa.** Pileus primo spongioso-mollis, aquum bibulus, tomentosus, dein suberosus coriaceusve. Stipes curtus difformis. Pori difformis, pruina irrorati, decolorantes. *Fr. Hym. Eur.* 528.

\* *Contextu fusco.*

- 75 maximus, *Fr. Hym. Eur.* 529.  
 76 Schweinitzii, *Fr. Syst. Myc.* i. 351.  
     *var. tabulæformis, Berk. Hook. Journ.* 1845, 302.  
     (= *spectabilis, Fr. Novæ. Symb.* 32.)  
 77 endocrocinus, *Berk. Hook. Journ.* 1847, 320.  
 78 ? glomeratus, *Peck. 24th Report* 78.  
 79 vallatus, *Berk. Hook. Journ.* (1852) 138.

\*\* *Contextu albido.*

- 80 biennis, *Fr. Hym. Eur.* 529.  
 81 sericellus, *Sacc. Myc. Ven.* 818.  
 82 rufescens, *Fr. Syst. Myc.* i. 351.  
     *var. abortivus, Peck.*  
 83 heteroporus, *Fr. Hym. Eur.* 543.  
 84 laciniatus, *Pers. Myc. Eur.* ii. 48.  
 85 anthelminticus, *Berk. Gard. Chron.* 1866, p. 753.  
 86 proteiporus, *Cooke Grev.* xii. 15.

**D. Melanopodes.** Meso-aut sæpius pleuropodes. Stipite toto aut basi nigricante. Pileo e carnosio lento induratoque.

\* *Pileo squamoso floccosove.*

- 87 squamosus, *Fr. Sys. Myc.* i. 343.  
     (*Boucheanus, Klotsch Linn.* viii. 318 = *Favolus.*)

- 88 *Michelii*, *Fr. Sys. Myc.* i. 343.  
 89 *pallidus*, *Schulz. in Fr. Hym. Eur.* 533.  
 90 *melanopus*, *Fr. Sys. Myc.* i. 347.  
     *var. cyathoides*, *Swartz.*  
     *var. leprodes*, *Rostk. Poly.* t. 15.  
 91 *versiformis*, *Berk. Hook. Journ.* 1852, 137.  
 92 *Trogii*, *Fr. Nova Symb.* 34.  
     (*Philippinensis*, *Berk. Hook. Journ.* 1842, 148=*Favolus*.)

\*\* *Pileo glabrato.*

- 93 *Rostkovii*, *Fr. Hym. Eur.* 534.  
 94 *glutiniifer*, *Berk. in Herb.*  
 95 *platyporus*, *Berk. in Hook. Journ.* 1851, p. 81.  
 96 *infernalis*, *Berk. Hook. Journ.* 1843, 637.  
 97 *picipes*, *Fr. Syst. Myc.* i. 353.  
 98 *fissus*, *Berk. Hook. Journ.* 1847, 318.  
 99 *varius*, *Fr. Syst. Myc.* i. 352.  
 100 *semi-nigrita*, *B. & Cooke, Linn. Journ.* xv. 377.  
 101 *elegans*, *Bull. Champ.* t. 46.  
     *var. nummularius*, *Bull. t.* 124.  
     *var. minimus*, *Fr. Hym. Eur.* 536.  
 102 *hemicapnodes*, *B. & Br. Linn. Journ.* xiv. 47.  
     *var. dimorphus*, *Cke. Grev.* xiii. 1.  
 103 *guianensis*, *Mont. Syll.* 153.  
 104 *glabratus*, *Kalch. Hedwigia* xv. 114.  
 105 *alpinus*, *Sauter Hedwigia* 1876, 33.  
 106 *Guilfoylei*, *B. & Br. Linn. Trans.* ii. p.  
     =*nonscriptus*, *Berk. in Herb.*  
 107 *Gayanus*, *Lev. Ann. Sci. Nat.* 1846, 127.  
 108 *Leprieurii*, *Mont. Syll.* 155.  
 109 *Blanchettianus*, *Mont. Syll.* 155.  
 110 *vernicosus*, *Berk. Hook. Journ.* 1856, 175.  
 111 *atratus*, *Fr. Nova. Symb.* 124.  
 112 *dictyopus*, *Mont. Syll.* 155.

E. **Petaloides.** Pileus e carnosus lentus, exacte lateralis (postice non marginatus). Stipite toto pallido, vulgo brevissimo, basi scutata lignis putridis adnato, in linea recta cum pileo, priorum more, vulgo striato-vergato ut in omnibus vicinis azono. *Fr. Novæ Symb.*

\* *Pileo glabrato.*

- 113 *tephromelas*, *Mont. Syll.* 155.  
 114 *tristiculus*, *Mont. Ann. Sci. Nat.* 1854, 129.  
 115 *peltatus*, *Fr. Nova. Symb.* 36.  
 116 *dendriticus*, *Fr. Nova. Symb.* 37.  
 117 *putidus*, *Fr. Nova. Symb.* 35.  
 118 *vibecinus*, *Fr. Fungi Natal* 6.  
     *var. antilopum*, *Kalch. in Grev.*  
 119 *vera-crucis*, *Berk. in Herb.* No. 2429.  
 120 *petaloides*, *Fr. Epicr.* 444.  
 121 *litrarius*, *B. & Curt. Sill. Journ.* xi. (1851) 94.  
 122 *annularis*, *Fr. Nova Symb.* 36.

- 123 anisoporus, *Mont. Syll.* 156.
- 124 trigonus, *Lev. Ann. Sci. Nat.* 1846, 125.
- 125 udus, *Jungh. in Hæv. Tids.* vii. 285.
- 126 miniatus, *Jungh. Java* 65.
- 127 sanguineus, *Fr. Epicr.* 444.
- 128 obovatus, *Jungh. Jav.* 68.
- 129 phlebophorus, *Berk. Fl. N. Zeal.* ii. 177.
- 130 decolor, *Berk. Hook. Journ.* 1856, 195.
- 131 lenzitioides, *Berk. in Videns Medd. Kjob.* 1879, 34.

\*\* *Pileo subsquamoso vel floccoso.*

- 132 grammocephalus, *Berk. Lond. Journ.* i. 147.  
     = *Muelleri*, *Kalch. Grev.* x. t. 145.  
     *var. Emerici*, *Berk. Grev.* x. 96.  
     *var. russiceps*, *B. & Br. Ceylon Fungi* 449.
- 133 platotis, *B. & Br. Linn. Trans.* ser. 2. ii. 401.
- 134 dorcadideus, *B. & Br. Linn. Trans.* ii. 401.
- 135 fusco-lineatus, *B. & Br. Linn. Trans.* ii. 401.
- 136 ligoniformis, *Bon. Hedw.* xv. 76.
- 137 Dickinsii, *Berk. Linn. Journ.* xvi. 50.
- 138 terebrans, *B. & Curt. Linn. Journ.* x. 306.

**F. Frondosi.** Pileus carnosus, firmus, floccoso-fibrosus, *azonus*, nec coriaceo-induratus. Cæspites centrales, stipitati, e basi comuni enati, plus minus concreti, ut in macris formis pileum centralem simplicem lobatum, subinde referant. Pori secedentes.

- 139 Barrelieri, *Viviani Ital.* 28, t. 36.
- 140 umbellatus, *Fr. Epic.* 446.
- 141 frondosus, *Fr. Epic.* 446.
- 142 Colensoi, *Berk. Fl. N. Zeal.* ii. 178.
- 143 intybaceus, *Fr. Epic.* 446.
- 144 cristatus, *Fr. Epic.* 447.
- 145 confluens, *Fr. Epic.* 447.
- 146 amygdalinus, *Berk. & Rav. Grev.* i. 49.
- 147 subgiganteus, *B. & Curt. Grev.* i. 49.
- 148 Beatiei, *Banning 31st Report N.Y. Mus.*
- 149 anax, *Berk. Grev.* xii. 37.
- 150 botryoides, *Lev. Ann. Sci. Nat.* 1846, 128.
- 151 rubricus, *Berk. Hook. Journ.* 1851, 81.
- 152. eurocephalus, *B. & Br. Ceylon Fungi* No. 451.

**G. Lobati.** Pileo e carnosus lento sub-coriaceo, plus minus zonato, intus fibroso. Pori adnati. Cæspites laterales substipitati imbricato-multiplices, stipitibus plus minus connatus vel e tubere communi enatis.

- 153 giganteus, *Fr. Epic.* 448.
- 154 Berkeleyi, *Fr. Nova. Symb.* 40.
- 155 acanthoides, *Bull. Champ.* t. 486.
- 156 lobatus, *Gmel. Fr. Epic.* 448.
- 157 Pauletii, *Fr. Epic.* 449.
- 158 distortus, *Schwein. Syn. Car.* 903.
- 159 candidus, *Fr. Epic.* 449.
- 160 osseus, *Kalch. Enum.* t. 160.



- 161 floriformis, *Quel. in Bresadola Fungi Trid.*
- 162 secernibilis, *Berk. Hook. Journ.* 1847, 500.
- 163 armoracius, *Berk. in Fr. Nova. Symb.* 37.
- 164 trichrous, *Berk. & Curt.* (nomen nudus).
- 165 anthracophilus, *Cooke Grev.* xii. 16.
- 166 Glaziovii, *Berk. Vid. Medd. Kjob.* 1879, 34.
- 167 Warmingii, *Berk. Vid. Medd. Kjob.* 1879, 32.

\*\* *Contextu læte colorato.*

- 168 flammans, *Berk. Hook. Journ.* 1852, 139.
- 169 lætus, *Cooke Grev.* xii. 16.

**H. Imbricati.** Pileo epelliculoso, caseoso, primo succoso-molli, dein arido fragili azono, poris secedentibus. Cæspites ad caudices arborum sessiles, vulgo dimidiato in situ vero horizontali undique expansi centrales, primitus ex unico tuberculo amorpho in pileolos innumeros explicati.

- 170 casearius, *Fr. Epic.* 449.
- 171 sulphureus, *Fr. Epic.* 450.  
     *var. ceratonix, Fr. Hym. Eur.* 552.
- 172 retiporus, *Cooke Grev.* xii. 15.
- 173 discolor, *Klotsch. Linn.* viii. 483.
- 174 Telfairii, *Klotsch. Linn.* viii. 483.
- 175 imbricatus, *Fr. Epic.* 450.
- 176 alligatus, *Fr. Epic.* 450.
- 177 sordulentus, *Mont. Syll.* 160.

**I. Mollis.** Anodermei, pileo caseoso, primo aquose mollis fragili, flocculoso nec, ob contextum (album) tenuiorem, setoso-hispido, poris subsecedentibus albis. Adultiores nunc mollis nunc indurato, sed brevi putrescunt nec per hiemem persistunt.

\* *Pileo tomentoso.*

- 178 lacteus, *Fr. Hym. Eur.* 546.  
     =*saccharinus, B. & C. in Herb.*
- 179 leucomallus, *B. & C. Fungi Cub.* 214.
- 180 tephronotus, *Berk. Fl. Tasm.* ii. 252.
- 181 tephroleucus, *Fr. Hym. Eur.* 545.
- 182 sordidus, *Cke. Grev.* xiii. *ined.*
- 183 epileucus, *Fr. Hym. Eur.* 545.
- 184 armeniacus, *Berk. Hook. Journ.* 1856, 197.
- 185 alutaceus, *Fr. Hym. Eur.* 545.
- 186 testaceus, *Fr. Hym. Eur.* 545.
- 187 undosus, *Peck. 34th Report* p. 42.
- 188 corrivalis, *Berk. Linn. Journ.* xiii. 162.
- 189 molliusculus, *Berk. Hook. Journ.* 1847, 320.
- 190 Keithii, *B. & Br. Ann. Nat. Hist.* No. 1,430.
- 191 verecundus, *B. & C. Fungi. Cub.* 220.
- 192 appendiculatus, *B. & Br. Ceylon Fungi* 453.
- 193 ostreæformis, *Berk. Linn. Journ.* xvi. 46.
- 194 semi-digitaliformis, *Berk. Linn. Jour.* xvi. 39.
- 195 Gunnii, *Berk. Fl. Tasm.* 253.

- 196 angustus, *Berk. Fl. Tasm.* 253.  
 197 corium, *Berk. Hook. Journ.* 1852, 163.

\*\* *Pileo glabro.*

- 198 fragilis, *Fr. Hym. Eur.* 546.  
 199 nitidulus, *B. & C. Amer. Acad.* iv. 122.  
 200 versicutis, *B. & C. Fungi Cub.* 215.  
 201 albogilvus, *B. & C. Fungi Cub.* 216.  
 202 trabeus, *Rostk. Poly.* t. 28.  
 203 Kerensis, *Pass. Nuovo. Giorn. Ital.*  
 204 cæsius, (*Schr.*) *Fr. Hym. Eur.* 547.  
 205 mollis, *Fr. Hym. Eur.* 547.  
 206 fimbriporus, *Schwein. Amer. Bor.* 355.  
 207 obductus *Berk. Hook. Journ.* 1845, 304.  
 208 stipticus, *Fr. Hym. Eur.* 546.  
 209 chioneus, *Fr. Hym. Eur.* 546.  
 210 pallescens, *Fr. Hym. Eur.* 546.  
 211 destructor, *Fr. Hym. Eur.* 547.  
     *var. undulatus, Fr. Hym. Eur.* 547.  
 212 trichocoma, *Fr. Novæ. Symb.* 37.  
 213 microscopicus, *Jungh. Fl. Java.* i. 52.  
 214 semi-supinus, *B. & C. Grev.* x. 50.  
 215 semi-pileatus, *Peck. 34th Report* 43.  
 216 microstomus, *B. & C. Cuban Fungi* 218.  
 217 evolutus, *B. & C. Cuban Fungi* 217.  
 218 cerifluus, *B. & C. Grev.* i. 50.  
 219 campylus, *Berk. Fl. Tasm.* ii. 252.  
 220 pulchellus, *Sacc. Myc. Ven.* 50.  
 221 argentatus, *Cooke Grev.* xiii. *ined.*  
 222 comtulus, *Berk. (Fr. Nova. Sym.* 81).

**L. Dichroi.** Anodermei. Pileo carnoso lento (etiam juniorum tenaci) molli, elastico, ob contextum fibroso-floccosum villosotomentoso, poris subadnatis coloratis. Semper molles subflexiles.  
 = *Anodermei lenti.* *Fr. Ep.*

\* *Contextu colorato.*

- 223 simulans, *B. & Curt. Herb.* 2,543.  
 224 croceus, *Pers. Myc. Eur.* ii. 59.  
 225 Spraguei, *B. & C. Grev.* i. 50.  
 226 dialeptus, *Fr. Ep.* 456.  
 227 aesculi, *Schwein. in Fri. Epic.* 454.  
 228 laticolor, *Berk. Linn. Journ.* xvi. 46.  
 229 nidulans, *Fr. Hym. Eur.* 548.  
 230 endozonus, *Fr. Nova. Symb.* 38.  
 231 dryophilus, *Berk. Hook. Journ.* 1847, 321.  
 232 rutilans, *Pers. Ic. et Desc.* t. 6, f. 4.  
 233 cæruleus, *Schum. Saell.* 387.  
 234 fædatus, *Berk. Linn. Journ.* xvi. 41.  
 235 rubidus, *Berk. Hook. Journ.* 1847, 500.  
 236 Beckleri, *Berk. Linn. Journ.* x. 162.  
 237 pallido-cervinus, *Schwein. Amer. Bor.* 371.  
 238 calvescens, *Berk. Ann. Nat. Hist.* 1839 390.

- 239 gilvus, *Schw. Syn. Car.* 897.  
 240 scruposus, *Fr. Epicr.* 473.  
     = *var. isidioides*, *Berk. Hook. Journ.* 1843, 515.  
         \*\* *Contextu albo.*  
 241 albus, *Huds. Fl. Ang.* 626.  
 242 scanicus, *Fr. Hym. Eur.* 549.  
 243 abruptus, *Berk. Linn. Journ.* xvi. 42.  
 244 fumosus, *Fr. Hym. Eur.* 549.  
 245 Lindheimeri, *B. & Curt. Grev.* i. 50.  
 246 digitalis, *Berk. Hook. Journ.* 1852, 139.  
 247 demissus, *Berk. Hook. Journ.* 1845, 52.  
 248 rhinocephalus, *Berk. Fl. Tasm.* ii. 253.  
 249 diffusus, *Fr. Nova. Symb.* 39.  
 250 fragrans, *Peck 30th Report* 45.  
 251 Curreyanus, *Berk. in Herb.* 2,820.  
 252 dissitus, *B. & Br. Ceylon Fungi* No. 454.  
 253 adustus, *Fr. Hym. Eur.* 549.  
     *var. resupinatus* (= *fumoso-griseus*, C. & E.).  
 254 crispus, *Fr. Hym. Eur.* 550.  
 255 kymatodes, *Rostk. Poly.* t. 24.  
 256 intercalaris, *B. & Cooke Linn. Journ.* xv. 380.  
 257 hypo-citrinus, *Berk. Linn. Journ.* xv. 50.  
 258 candidulus, *Lev. Ann. Sci. Nat.* 1846, 301.  
 259 dichrous, *Fr. Hym. Eur.* 550.  
     = *Gleoporus conchoides*, Mont.  
     *var. nigro purpurascens*, *Schw. Am. Bor.* 360.  
     *var. isabellinus*, *Schwein. Am. Bor.* 899.  
     *var. Macowani*, *Kalchb. Grev.* x. 54.  
 260 amorphus, *Fr. Hym. Eur.* 550.  
     *var. irregularis*, *Sow. t.* 423.  
     *var. roseoporis*, *Rostk. t.* 12.  
     *var. Halesiæ*, *B. & C. Grev.* i. 52.  
 261 adiposus, *B. & Br. Fr. Hym. Eur.* 550.  
     *var. armeniacus*, *Berk. Eng. Fl.* v. 147.

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# Grevillea,

A QUARTERLY RECORD OF CRYPTOGAMIC BOTANY  
AND ITS LITERATURE.

## NEW BRITISH FUNGI.

By M. C. COOKE.

(Continued from p. 61.)

**Agaricus frumentaceus**, Bull. Cooke Illus. t. 470.

The plate issued in "Illustrations" was copied from a drawing made by Mr. Worthington Smith from specimens sent to him from Forres by the Rev. Dr. Keith. Never having been so fortunate as to see this species, we accepted the designation attached to the drawing, and published it as an *Entoloma*, under the impression that it was the *Agaricus* (*Entoloma*) *frumentaceus*, Berk. & Br. Dr. Keith has kindly drawn our attention to this figure, at the same time stating his conviction that the original specimens were those of an undoubted *Tricholoma*, the pink tinge of the spores being faint and quite of a different character to the spores in *Hyporhodii*. Whatever, therefore, the plant of Berkeley and Broome may be, to which they attach the name of *frumentaceus*, and include in the subgenus *Entoloma*, it cannot be the species figured as above, since Dr. Keith must have had ample material to judge, and no one would doubt his ability to form an authoritative opinion. Plate 470 must, therefore, be corrected to *Ag.* (*Tricholoma*) *frumentaceus*, Bull. We may add that the majority of Continental mycologists contend that Bulliard's species is a *Tricholoma*, and both the size and form of the spores given in our plate certainly are more in accordance with those usually found in *Tricholoma* than those of *Entoloma*.

**Agaricus (Pluteus) semibulbosus**, Fr. Hym Eur. 188.

Small. Pileus rather fleshy, hemispherical, obtuse, *atomate*, *soft*, *sulcate*, *white*; stem delicately fistulose, *pubescent*, *inflated* in a bullate manner *at the base*; gills free, whitish, then flesh-coloured.—Cooke Illus. t. 518, fig. a.

On wood. Scarboro'. (*G. Massee*.)

Pileus about half an inch broad, deeply sulcate. Stem about an inch long.

**Agaricus (Pluteus) violarius**, Massee, *in litt.*

Pileus hemispherical, then nearly plane, velvety, even, watery dark purple, disc darkest, margin undulate. Flesh thick, grey;



stem thickest at the base and pale umber, attenuated upwards and whitish, silky, fistulose, sprinkled below with delicate black fibrils, gills crowded, margin serrulate, whitish then brightish flesh-colour.—*Cooke Illus. t. 518, fig. b.*

On a stump. Scarboro'. (*G. Massee.*)

Gregarious. Pileus  $\frac{1}{2}$ - $1\frac{1}{4}$  inch. Stem 1 in. long, 1 line thick at the apex. Smell none. Taste pleasant. Spores spherical, smooth. Paper in which the specimens were dried stained bright violet.

**Agaricus (Pluteus) ephebius**, *Fr. Hym. Eur.* 186.

Pileus fleshy, convex then flattened, obtuse, clad with a bluish tomentum, margin naked; stem stuffed, smooth, minutely striate; gills free, yellowish, then flesh-coloured.—*Cooke Illus. t. 517.*

On rotten wood. Helmsley, Yorks. (*G. Massee.*)

Pileus from 1 to 2 inches broad. Stem 1 to 2 inches long, often curved, and sometimes turning bluish.

**Agaricus (Inocybe) perbrevis**, *Weinm. Ross. p.* 185.

Pileus rather fleshy, convex, obtusely umbonate, fibrous or squamose, margin rather striate, at length cracked; stem stuffed, short, pallid, clad with white fibrils, somewhat attenuated at the base, gills uncinately adnexed, rather distant, whitish, then tawny or clay-coloured.—*Fr. Hym. Eur.* 233. *Hoffm. Ic. t. 14, f. 1. Cooke Illus. t. 519.*

In shady woods. Near Scarboro'. (*G. Massee.*)

Small but rather firm, tawny or rufous, becoming yellowish. Pileus about an inch. Stem scarcely an inch long, cortinate, pruinose at the apex. Flesh white.

**Agaricus (Psalliota) augustus**, *Fr. Hym. Eur.* 278.

Pileus globose, then hemispherical, at length expanded, very obtuse, disc even, circumference fibrillose-squamose, *stem solid*, thick, smooth; ring superior very broad, *externally cracked* into angular scales; gills crowded, narrow, pallid then brown, remote, leaving a collar round the stem.—*Fr. Sver. Svamp. t. 38. Cooke Illus. t. 521.*

In woods.

A very large and fine species. Pileus 4-5 inches broad. Stem  $1\frac{1}{2}$ -2 in. thick, attenuated upwards, white, but tinged with red when bruised. Flesh soft, white, unchangeable. Gills never acquiring a flesh-colour.

**Agaricus (Psalliota) pratensis**, *Schæff. Icon. t.* 96.

Pileus fleshy, ovoid then expanded, becoming smooth or squamulose, whitish then cinereous; *stem stuffed*, thickened at the base, naked; ring median simple, deciduous; gills free, narrow, acute, *rounded behind*, cinereous, at length brown.—*Fr. Hym. Eur.* 279. *Cooke Illus. t. 525.*

In pastures and woods. Pulborough, Sussex.

Pileus 2-3 inches broad. Stem 2 in. long, half an inch thick and more. Odour and taste pleasant.

**Agaricus (Psalliota) subgibbosus, Fr. Hym. Eur. 281.**

Pileus rather fleshy, convex then plane, umbo even, smooth, but the circumference silky, fibrillose. Stem hollow, thin, ring fugacious, gills remote, white, then cinereous brown.

In woods, &c. Pleasure grounds, Kew.

The form figured in Cooke's Illustrations, t. 532, is referred provisionally to this species, on the recommendation of the Rev. M. J. Berkeley. It is larger than the typical form. Pileus 2-3 inches. Stem 2-3 inches long, half an inch thick.

**Agaricus (Panæolus) egregius, Massee.**

Pileus ovate-campanulate, smooth, even, viscid when moist, bright orange brown, disc darker, fleshy, exceeding the gills at the margin, with a trace of agglutinated down on the pileus, virgate when dry; flesh ochraceous; stem thickened at the base, solid, fibrillose, readily splitting longitudinally, brown without and within, duller than the pileus, white and cottony at the base, smooth at the apex. Gills broad, ventricose, adnexed, crowded, thin, brownish-black, edge entire paler, dry not deliquescent, spores brown, then blackish-purple, oblong-ovate with a minute apiculus. Smell none.

On the ground, Scarboro'. (G. Massee.)

Pileus  $2\frac{1}{2}$  inches high, 2 inches broad. Stem 5 inches long, half an inch thick. Gills half an inch broad in the centre. A very remarkable species, with somewhat the habit of a *Coprinus*.

We would willingly have avoided describing the following species of incomplete fungi, except in conjunction with the ascomycetous species to which they are accredited, but, as the "Sylloge" includes their allies, as if they were autonomous, we have no other alternative. As we purpose commencing in our next issue a catalogue of the British Sphærospideæ, brought up to date, we have made no reference here to the large number of described species which have come to our knowledge since the publication of the "Handbook," as these will be contained in the proposed catalogue. Specimens of the majority have been deposited in the Herbarium of the Royal Gardens at Kew.

**Phyllosticta asiatica, Cooke.**

Spots orbicular or irregular, tawny, circumscribed by a dark purplish-brown border, which passes into crimson as it spreads into the leaf. Perithecia few, mostly on the upper surface, gregarious on the spots, very minute, black, punctiform. Sporules very small, hyaline ( $0.004 \times 0.0015$  mm.) on rather longer sporophores.

On fading leaves of *Berberis asiatica*. Kew.

**Phoma Beckhausii, Cooke.**

Perithecia subglobose, scattered, covered by the bark which is slightly elevated, very indistinct. Sporules sublanceolate, continuous, usually binucleate ( $0.008-0.01 \times 0.003$  mm.)

On branches of *Viburnum lantana*—in conjunction with *Diaporthe Beckhausii*, Nke. Dartford; Kew.

**Phoma scobina**, Cooke.

Perithecia subcutaneous, gregarious chiefly near the nodes, erumpent, cracking the cuticle, subglobose, black, depressed. Sporules fusoid, or clavate, sometimes binucleate, hyaline, on straight sporophores ( $\cdot 01\text{--}\cdot 012 \times \cdot 003\text{--}\cdot 0035$  mm.).

On slender branches of *Fraxinus excelsior*. Kew, Darent, Highgate.

Spermogones of *Diaporthe scobina*, with which it is usually associated.

**Phoma laurella**, Sacc. Syll. No. 486.

In our specimens the sporules are oblong-elliptic, rounded at the ends, and  $\cdot 012 \times \cdot 0035$  mm.

On twigs of *Laurus nobilis*. Kew.

**Phoma viniferæ**, Cooke = *Phoma viticola*, Sacc. Syll. No. 463; not *Phoma viticola*, Sacc. Syll. No. 653.

Sporules  $\cdot 007 \times \cdot 004$  mm., without nuclei.

On twigs of *Vitis vinifera*. Kew.

The three species (so called) of *Phoma* on vine twigs, found in Britain, are—

**Phoma vitis**, Bon. (sp.  $\cdot 003\text{--}\cdot 0035 \times \cdot 001\text{--}\cdot 002$ ).

**Phoma viniferæ**, Cke. (sp.  $\cdot 007 \times \cdot 004$  mm.).

**Phoma Cookei**, Per. (sp.  $\cdot 013 \times \cdot 0045$  mm.).

**Phoma celastrinæ**, Cooke.

Gregarious or aggregated. Perithecia globose, black, covered by the cuticle, which is pierced by the punctiform shining black ostiola. Spores lanceolate, attenuated to each extremity, binucleate, hyaline ( $\cdot 013 \times \cdot 005$  mm.) at first stipitate.

On small branches of *Euonymus americanus*. Kew.

**Phoma Forsythiæ**, Cooke.

Very loosely gregarious. Perithecia punctiform, subglobose, immersed in the bark, which is slightly elevated, and at length pierced by the minute ostiola. Sporules elliptical, minute, enucleate, hyaline ( $\cdot 005 \times \cdot 002$  mm.) on short sporophores.

On twigs of *Forsythia*. Kew, March, 1885.

**Phoma prunorum**, Cooke.

Densely gregarious at the extremities of the small twigs, covered by the elevated but not discoloured bark, which at length becomes split in a narrow longitudinal fissure. Perithecia subglobose, black, of medium size. Sporules broadly lanceolate, attenuated towards each extremity, binucleate, hyaline ( $\cdot 01 \times \cdot 0045$  mm.).

On dead twigs of *Prunus lauro-cerasus*. Kew, March.

**Phoma radicans**, Cooke.

Caulicolous. Perithecia gregarious on bleached spots, minute, punctiform, flattened, covered by the thin cuticle. Sporules numerous, oval, hyaline, with no distinct sporophores ( $\cdot 003 \times \cdot 0015$  mm.).

On still living branches of *Tecoma radicans*. Kew.

**Phoma pruni-lusitanicæ, Cooke.**

Gregarious. Perithecia subglobose, collected about the extremities of slender twigs, elevating but scarce discolouring the cuticle, which is pierced by the minute ostiola. Sporules fusiform, binucleate, hyaline ( $\cdot 01 \times \cdot 004$  mm.).

On twigs of *Prunus lusitanica*. Kew.

**Phoma Herminieræ, Cooke.**

Perithecia small, densely gregarious, nestling in the bark, and at first covered with the cuticle, which is soon split in a stellate manner, exposing the black depressed perithecia. Sporules lanceolate, binucleate, hyaline ( $\cdot 01 \times \cdot 0035$  mm.), sporophores simple or furcate, elongated ( $\cdot 04$  mm.) thin.

On bark of *Herminiera elaphroxylon*. Grown at Kew.

**Phoma platanoidis, Cooke.**

Perithecia subcutaneous, erumpent, gregarious, splitting the epidermis so that the twigs are rough, like a rasp. Sporules fusiform, rather acute, binucleate, hyaline ( $\cdot 007\text{--}\cdot 008 \times \cdot 003$  mm.) on straight sporophores, which are twice the length of the sporules, or more.

On slender twigs of *Acer pseudoplatanus*. Kew.

In company with *Calospora platanoidis*, of which probably the spermogonia.

**Phoma Philadelphi, Cooke.**

Perithecia rather small, generally gregarious in lines, covered by the cuticle which is scarcely elevated, immersed in the bark, depressed, black, pierced. Sporules cylindrical, obtuse at the ends, not nucleate ( $\cdot 012 \times \cdot 0025$  mm.) hyaline.

On stems of *Philadelphus*. Kew.

Distinct in habit and fruit from *P. Landeghemiae*, which occurs on smaller branchlets.

**Phoma rhododendri, Cooke.**

Sub-gregarious, on small dead twigs which are bleached, small, covered by the cuticle which is elevated, but scarcely discoloured. Perithecia subglobose, black. Sporules minute, oval, hyaline, without nuclei ( $\cdot 004\text{--}\cdot 005 \times \cdot 002$  mm.).

On twigs of *Rhododendron*. Kew.

**Phoma amelanchieris, Cooke.**

Sub-gregarious, corticolous. Perithecia immersed in the bark, elevating and cracking the cuticle, globose, black, of medium size. Sporules subfusiform, obtuse, binucleate ( $\cdot 008 \times \cdot 0025\text{--}\cdot 003$  mm.), on thin curved sporophores which are three times as long.

On *Amelanchier* branches. Kew.

**Phoma dispersa, Cooke.**

Hypophyllous. Perithecia scattered, rather large, subglobose, erumpent then subsuperficial, black, opaque. Sporules elliptical, continuous, hyaline, without nuclei ( $\cdot 015 \times \cdot 006$  mm.).

On fallen leaves of *Platanus*. Kew.

**Phoma collabens**, Cooke.

Epiphyllous. Perithecia scattered over brown spots of dead tissue on living leaves, orbicular, shining, rugose, soon depressed, sub-superficial ( $\frac{1}{4}$  mm. diam.). Sporules elliptical, continuous, hyaline, enucleate ( $0.15-0.18 \times 0.05$  mm.), sporophores not distinguished.

On living leaves of *Prunus lusitanica*. Kew.

**Phoma Lycopersici**, Cooke (Phoma herbarum, Cooke *Fungi Britt.* II., 415).

Caulicolous. Perithecia punctiform, black, densely gregarious, at first covered by the cuticle, ultimately more or less exposed. Sporules lanceolate, binucleate ( $0.12 \times 0.04$  mm.).

On stems of tomato. Forden. (*Rev. J. E. Vize.*)

**Phoma dipsaci**, Cooke.

Caulicolous. Perithecia gregarious but not crowded, subglobose, papillate, elevating and at length piercing the cuticle. Sporules sublanceolate obtuse, binucleate ( $0.09-0.1 \times 0.035$  mm.).

On stems of *Dipsacus sylvestris*. Kew, March.

**Phoma polemonii**, Cooke.

Caulicolous. Perithecia gregarious, globoso-depressed, black, shining, with a distinct acute ostium, soon becoming naked by the falling away of the thin cuticle. Sporules narrowly elliptical, not distinctly nucleate ( $0.1 \times 0.03$  mm.).

On stems of *Polemonium caeruleum*. Kew, March.

**Phoma alcearum**, Cooke.

Caulicolous. Perithecia very numerous, densely gregarious in extensive patches, punctiform, membranaceous, fuscous, becoming darker with age, depressed, covered by the cuticle. Sporules elliptical, obtuse, enucleate, hyaline ( $0.15 \times 0.05$  mm.).

On stems of *Althea rosea*. Kew.

Habit resembling *P. nebulosa*.

**Phoma caryophylli**, Cooke.

Perithecia rather large, convex, black, shining, seated on indefinite bleached spots. Sporules fusiform, somewhat obtuse at the extremities, scarcely distinctly nucleate, hyaline ( $0.09 \times 0.03$  mm.).

On calyces, and sometimes the flower stems, of cultivated pinks and carnations. Shrewsbury. (*Rev. W. Leighton.*)

**Phoma Calystegiæ**, Cooke.

Caulicolous, gregarious. Perithecia prominent, rather large comparatively, subglobose, elevating the blackened cuticle, sometimes seated on irregular bleached spots. Sporules sublanceolate, narrowed towards each extremity, binucleate, hyaline ( $0.075-0.08 \times 0.035$  mm.).

On dead stems of *Calystegia sepium*. Kew, Highgate, Dartford.

**Phoma Lysimachiae**, Cooke.

Caulicolous. Loosely gregarious, punctiform. Perithecia black, slightly elevating the blackened cuticle, minute, subglobose. Sporules broadly lanceolate, binucleate ( $0.1 \times 0.045-0.05$  mm.), on short straight sporophores.

On stems of *Lysimachia vulgaris*. Kew.



**Phoma solidaginis**, Cooke.

Caulicolous. Perithecia gregarious, numerous, at first covered by the cuticle, then convex, black and shining, pierced with a minute pore. Sporules narrowly elliptical ( $\cdot009\text{--}\cdot01 \times \cdot002$ ), binucleate, at first attached to very short stylospores.

On stems of *Solidago canadensis*. Kew Gardens, March.

**Phoma Labiatarum**, Cooke.

Caulicolous. Perithecia scattered, punctiform, minute, at length prominent, convex, black, shining, not papillate. Sporules oval, hyaline, colourless ( $\cdot005 \times \cdot003$  mm.), at first attached to short stylospores.

On dead stems of *Marrubium*. Kew Gardens, March.

**Phoma acori**, Cooke.

Foliicolous. Perithecia gregarious, punctiform, minute, very numerous, seated beneath the cuticle, scarcely visible when dry, membranaceous, brown. Sporules oval or elliptical, obtuse ( $\cdot006\text{--}\cdot008 \times \cdot003$  mm.).

On dead leaves of *Acorus calamus*. Totteridge, Kew, March.

In conjunction with *Leptosphaeria acorella*.

**Phoma tamicola**, Cooke.

Caulicolous. Perithecia gregarious, subglobose, soon depressed, covered by the blackened cuticle, which is at length pierced by the minute ostiola. Sporules obtusely fusiform, binucleate ( $\cdot009\text{--}\cdot01 \times \cdot003$  mm.).

On stems of *Tamus communis*. Neatishead, Norfolk, 1870.

It is to us uncertain whether different from *Phoma Tami*, Lamy Exs. No. 798.

**Phoma onagracearum**, Cooke.

Caulicolous. Perithecia scattered, covered by the cuticle, which is slightly elevated and ultimately fissured or pierced, seldom gregarious. Sporules elliptical, binucleate, with short sporophores ( $\cdot006\text{--}\cdot008 \times \cdot0035\text{--}\cdot004$  mm.).

On stems of *Oenothera biennis* ( $\cdot006\text{--}\cdot008 \times \cdot004$ ). On stems of *Epilobium angustifolium* ( $\cdot008 \times \cdot0035$ ). Kew, March.

**Phoma chamæropis**, Cooke.

Perithecia erumpent, gregarious, subglobose, black, opaque, irregular in size, pierced. Sporules elliptical, obtuse, not nucleate, hyaline ( $\cdot004\text{--}\cdot005 \times \cdot002$  mm.).

On petioles of *Chamærops* and other palms. Kew.

Not unlike *P. cocoina*, but sporules about half as long.

**Cytispora palmarum**, Cooke.

Conceptacles innate-erumpent, loosely gregarious ( $\frac{1}{2}\text{--}1$  mm. diam.), at first covered, at length cracking the cuticle. Cells few. Sporules sausage-shaped (allantoid),  $\cdot006 \times \cdot001$  mm., hyaline, profuse.

On palm petioles, &c. Kew.

**Cytispora microstoma**, Sacc. Syll. 1486.

var. *Cotoneastri*. Sporules  $\cdot006\text{--}\cdot007 \times \cdot0015$  mm.

On *Cotoneaster frigida*. Kew.

var. **Amelanchieris**. Sporules  $\cdot 005$ - $\cdot 006$  mm. long.

On *Amelanchier*. Kew.

**Coniothyrium cassiæcolum**, Cooke.

Perithecia gregarious, globose, covered with the thin cuticle, prominent, at length often free, brown, irregular in size. Sporules oval, unicellular, without nucleus, pellucid, pale brown ( $\cdot 006 \times \cdot 004$  mm.).

On stems of *Cassia marylandica*. Kew.

**Diplodina ammophilæ**, Trail in Scot. Nat. i. 76.

Perithecia scattered in the spaces between the nerves, oval, opening by a slightly papillate ostiolum on back of leaf, dark. Sporules hyaline, broadly fusiform ( $\cdot 03$ - $\cdot 012$  mm.), uniseptate; cells very distinctly outlined. Each end of the spore bears a short mucoid appendage, or papilla.

On dead leaves of *Ammophila arundinacea*. Aberdeen.

**Diplodia Coryphæ**, Cooke.

Immersed, erumpent, cracking the cuticle in linear longitudinal fissures. Perithecia small, black, covered. Sporules subglobose, or oval, not constricted, uniseptate, with a thin episore, pale fuliginous ( $\cdot 014$ - $\cdot 017 \times \cdot 01$ ).

On petioles of fan palms. Kew.

**Diplodia inconspicua**, Cooke.

Hypophyllous. Perithecia minute, immersed, inconspicuous, gregarious, over the whole under surface of the leaf, covered by the cuticle, which is not discoloured. Sporules elliptical, not constricted, uniseptate, pale brown ( $\cdot 012 \times \cdot 006$  mm.).

On dead leaves of *Buxus sempervirens*. Kew.

Very different from *D. Buxi*. Difficult to distinguish, as the cuticle is hardly elevated and but slightly darker over the minute perithecia, which latter are about one-tenth of a millimetre in diameter.

**Diplodia genistarum**, Cooke.

Somewhat scattered. Perithecia immersed in the bark, covered by the cuticle, scarcely visible, globose. Sporules elliptical, uniseptate, not constricted, rather pale brown ( $\cdot 012$ - $\cdot 014 \times \cdot 006$  mm.).

On twigs of *Genista aetnensis* and *Coronilla emerus*. Kew.

**Diplodia Paulowniæ**, Cooke.

Somewhat scattered. Perithecia subglobose, black, at length erumpent, but not superficial. Sporules elliptic, scarcely constricted, uniseptate, clear brown ( $\cdot 020$ - $\cdot 022 \times \cdot 008$  mm.).

On twigs of *Paulownia imperialis*. Kew.

Mixed with *Plæospora* and *Phoma*.

**Hendersonia equiseti**, Trail in Scot. Nat. i. 76.

Perithecia subdermal, with a small ostiolum, nearly spherical (about 180 m. in diam.). Sporules pale brown, fusiform, or nearly cylindrical, with rather obtuse ends ( $\cdot 012$ - $\cdot 02 \times \cdot 002$ - $\cdot 003$  mm.), triseptate.

In dead stems of *Equisetum*. Aberdeen.

**Hendersonia sarmentorum**, West. var. **Lauri**.

On *Laurus nobilis*. Kew.

Probably this species, but sporules  $\cdot 018 \times \cdot 005$  mm., which exceeds that of the typical form considerably.

**Hendersonia coronillæ**, Cooke.

Perithecia scattered or gregarious, covered by the cuticle, which is slightly elevated, subglobose or depressed. Sporules at first like those of *Diplodia*, elliptical, uniseptate, brown ( $\cdot 012$ - $\cdot 006$  mm.), then elongated, straight, or slightly curved, triseptate ( $\cdot 018 \times \cdot 007$  mm.).

On slender twigs of *Coronilla emerus*, and of *Baccharis halimifolia*. Kew.

**Camarosporium Berberidis**, Cooke.

Gregarious. Perithecia small, subglobose, covered by the slightly-elevated cuticle, with the habit of a *Phoma*. Sporules variable in size, at first pale and uniseptate, elliptical, not constricted, at length triseptate, constricted at each septum, with the two central cells longitudinally divided, clear brown ( $\cdot 022$ - $\cdot 025 \times \cdot 006$ - $\cdot 009$  mm., when mature).

On small twigs of *Berberis vulgaris*. Kew, March.

**Hendersonia Fiedleri**, West. Sacc. Syll. No. 2299.

var. **Symphoricarpi**, Cooke.

Sporidia triseptate ( $\cdot 018 \times \cdot 004$  mm.), slightly coloured.

On slender twigs of *Symphoricarpus racemosus*. Kew, Swanscombe.

**Hendersonia rubi**, Sacc. Syll. 2316.

var. **rosarum** (= *H. rosæ*, Fries.)

On wild rose. Kew Gardens, April, 1885.

**Camarosporium Limoniæ**, Cooke.

Gregarious. Perithecia covered by the elevated cuticle, which is ultimately fissured, depressed, brown, scarcely papillate. Spores elliptical, rounded at the ends, triseptate, sometimes, but not constantly, with one cell longitudinally divided, scarcely constricted at the septa, becoming of a clear nut-brown colour ( $\cdot 022$ - $\cdot 028 \times \cdot 007$ - $\cdot 01$  mm.), at first shortly pedicellate.

On twigs and spines of *Citrus trifoliata*. Kew.

**Stagonospora heleocharidis**, Trail in Scot. Nat. I. 76.

Perithecia scattered, subdermal, with a small ostiolum, nearly spherical (130 to 170 m. diam.). Sporules pale yellowish, fusiform ( $\cdot 03$ - $\cdot 04 \times \cdot 006$ - $\cdot 007$  mm.), five to seven septate.

In dead leaves and stems of *Heleocharis palustris*. Aberdeen.

**Camarosporium spirææ**, Cooke.

Scattered. Perithecia rather large, covered by the elevated cuticle, globose, black, erumpent. Sporules elliptical, mostly triseptate, with one or two transverse septæ, not constricted, pale brown ( $\cdot 018 \times \cdot 0075$  mm.).

On slender twigs of *Spiræa callosa* and *S. opulifolia*. Kew.

**Leptothyrium medium**, Cooke.

Hypophyllous. Perithecia scattered, rather large ( $\frac{1}{2}$  mm. diam.), depressed, circular, dark brown. Sporules crescent-shaped, narrow, attenuated to each extremity ( $\cdot 012\text{--}\cdot 014 \times \cdot 002$  mm.).

On dead leaves of *Quercus*. Gomshall, 1874.

Scattered over the whole under surface, without any discoloured spots. Similar in habit to *L. macrothecium*, but with larger spores.

var. **Castanæcola**, Cooke.

Perithecia not more than half the diameter of those on oak leaves, but the fructification the same.

On leaves of *Castanea*. Darenth, 1874.

**Glœosporium Berberidis**, Cooke.

Hypophyllous. Pustules gregarious, numerous, convex, seated on broad discoloured patches of the fading leaves, sometimes occupying the whole surface; pustules pallid, spots brown with a bright red margin. Conidia ovoid, hyaline ( $\cdot 005 \times \cdot 003$  mm.).

On fading leaves of *Berberis asiatica* and other species. Kew Gardens, March.

**Ovularia Berberidis**, Cooke.

On the under surface, effused, greyish white, forming thin frosty-looking patches. Hyphæ short, simple. Conidia oval or elliptical, hyaline ( $\cdot 015\text{--}\cdot 018 \times \cdot 008\text{--}\cdot 009$  mm.).

On fading leaves of *Berberis asiatica* and other species. Kew Gardens.

**Valsa (Chorostate) Hippocastani**, Cooke.

Pustules composed of a few perithecia (6-8) nestling in the bark, and elevating the cuticle, which is at length pierced by the short convergent ostiola. Perithecia subglobose, depressed, usually forming definite clusters, black. Asci clavate, sessile, eight-spored. Sporidia fusiform, biserial, uniseptate, biguttulate, a little constricted at the septum, sometimes with a very small hyaline apiculus at each extremity, hyaline ( $\cdot 025\text{--}\cdot 028 \times \cdot 005\text{--}\cdot 007$  mm.).

On branches of *Æsculus hippocastanum*. Kew, Bushey Park, Hampton Court, and Honnington (Suffolk).

In many respects resembling *Cryptospora Æsculi*, Fekl., but distinctly uniseptate.

**Valsa (Chorostate) Ailanthi**, Sacc. Syll. No. 2408.

Stroma valsæoid. Pustules scattered, small (5-6 perithecia), seated on and immersed in the wood, with the stroma circumscribed, at first covered by the epidermis, and when fissured encircled by it. Perithecia roundish ( $\frac{1}{3}$  mm. diam.), ostiola elongated, cylindrical, connivent in a small black disc. Asci cylindrical fusiform ( $\cdot 05 \times \cdot 007$  mm.). Sporidia oblong, fusiform, quadriguttulate, then uniseptate, slightly constricted at the septum, hyaline ( $\cdot 012\text{--}\cdot 015 \times \cdot 004$  mm.).

At the extremity of young, dead twigs of *Ailanthus glandulosa*. Kew.

**Diaporthe ophites**, Sacc. *Syll.* No. 2595.

Stroma broadly effused in the bark and the surface of the wood, forming variable brown and black spots, limited internally by a black line. Perithecia gregarious, globose, of medium size, imbedded in the bark (rarely in the wood). Ostiola filiform, about as long as the diameter of the perithecium. Asci fusiform. Sporidia biseriate, shortly fusiform, uniseptate, slightly constricted, quadri-nucleate, rather obtuse at each end, hyaline ( $\cdot 012\text{--}\cdot 013 \times \cdot 0045\text{--}\cdot 005$  mm.).

On dead twigs of *Hibiscus syriacus*. Kew, March, 1885.

Mixed with *Phoma ophites*, Sacc.

**Sphæria (Physalospora) rosicola**, Fekl. Sacc. *Syll.* 1662.

Perithecia gregarious, covered by the shining blackened cuticle, minute, globose, black, with a white nucleus, ostiola somewhat prominent, papillate, perforated. Asci fasciculate, oblong-ovate (sub-cylindrical?) eight spored. Sporidia obovate oblong, narrower at one end, simple, granular, hyaline ( $\cdot 018 \times \cdot 009$  mm.).

On *Rosa canina*. Kew, April, 1885.

Probably this species, but in the absence of any knowledge of the size of the sporidia in Fuckel's specimens, it must be uncertain.

**Sphærella (Læstadia) rhodoræ**, Cooke.

Epiphyllous. Perithecia gregarious, seated upon large irregular ferruginous spots, immersed in the parenchyma, subglobose, black, piercing the cuticle with the punctiform ostiola. Asci clavate, without paraphyses ( $\cdot 80\text{--}\cdot 120 \times \cdot 16$ ). Sporidia elliptical, hyaline, continuous (perhaps  $\cdot 015 \times \cdot 007$  mm., but too immature to measure with certainty).

On living leaves of *Rhododendron*. Kew.

This can scarcely be the *Læstadia rhododendri*, D. Not. of Saccardo's *Sylloge*.

**Sphærella (Læstadia) Iridis**, Cke.

Caulicolous. Perithecia loosely gregarious for some inches, punctiform, covered by the cuticle, which is pierced by the minute ostiolium. Asci clavate sessile, octosporous. Sporidia elliptical, slightly attenuated towards each extremity ( $\cdot 012\text{--}\cdot 014 \times \cdot 004\text{--}\cdot 005$  mm.) hyaline.

On flower stalks of *Iris germanica*. Kew Gardens, March.

**Plæospora herbarum**, var. **Iridis**.

Sporidia 7 septate, muriform, bright amber colour,  $\cdot 04 \times \cdot 016$  mm.

On flower stalks of *Iris germanica*. Kew Gardens.

In company with *Sphærella (Læstadia) Iridis*.

**Leptosphæria (Metasphæria) acorella**, Cooke.

Scattered, epiphyllous. Perithecia minute, subglobose, at first covered, then erumpent, and the upper portion exposed, slightly papillate, black. Asci clavate, eight-spored. Sporidia fusiform, biseriate, five septate, constricted a little at the central septum, at first nucleate, hyaline  $\cdot 03\text{--}\cdot 035 \times \cdot 006$  mm.

On leaves of *Acorus calamus*—mixed with *Phoma acori*. Totteridge. Kew.



**Diatrype Brassicæ, Cooke.**

Stroma broad, black, indeterminate, sometimes spreading two or three inches, in which the perithecia are immersed, and into the subjacent tissue, circumscribed by a black line. Perithecia globose, sometimes scattered, but mostly aggregated in definite groups of 6 or 8, elevating the stroma in a convex disc, ostiola obtuse, almost obsolete, or elongated and flexuous 1-2 mm. long. Asci stipitate, clavate ( $\cdot 022 \times \cdot 006$  mm. in the upper half). Sporidia eight, minute, allantoid, hyaline ( $\cdot 006 \times \cdot 0015$  mm.).

On dead cabbage stems. Kew.

Of course this is quite distinct from *Diatrype coramblycola*, B. & Br., which is a *Diaporthe*, and is a most characteristic species.

## SYNOPSIS PYRENOMYCETUM.

(Continued from p. 72.)

The following species do not appear to belong to *Rhytisma* :—

ulmi, *Fr. El.* II., 128.

juglandis, *Schw. Am. Bor.* 2038.

smilacis, *Schw. Fr. S. M.* II., 570=*Microthyrium*.

pedicularis, *Klot. Fr. Sys. Myc.* II., 602.

asteris, *Schw. Syn. Car.* 271.

solidaginis, *Schw. Am. Bor.* 2034.

stellare, *Kickx. Bull. Brux.*=*Euryachora*.

sedi, *Corda Sturm.*=*Euryachora*.

heraclei, *Corda Sturm.*

confluens, *Fr. Sys. Myc.* II., 570=*Leptostroma*.

elevatum, *Schw. Am. Bor.* 2044=*Phoma*.

silphii, *Schw. Am. Bor.* 2045=*Leptostroma*.

seriale, *Schw. Am. Bor.* 2041=*Leptostroma*.

padi, *Klot.*

robiniae, *Schw. Am. Bor.* 2022=*Ectostroma*.

chrysanthemi, *Kirch. Lotos*, 1856, 205.

Euphorbiæ, *Schub. Fic. Fl. Dresd.*=*Melampsora*.

Violæ, *Kirch. Lotos.*, 1856, 205.

Bistortæ, *Lib. Crypt. Ard.*

riccioides, *Lev.*=*Trabutia quercina*.

agglutinatum, *Schw. Syn.* No. 2046.

Linnææ, *Strauss in Sturm*=*Wittrockii*.

Empetri, *Fr. El.* II., 127=*Duplicaria*.

maculans, *Mont. Syll.* 193=*Phyllachora*.

pandani, *Ayres*=*Ailographum*.

corrugatam, *Fr.*=*Placosphæria*.

minutulum, *Grog. in Fungi Gall.* 455.

zeinum, *Ber. Act. Milan*, 1844.

=*Cotini*, *Ces. Herb. Myc.* II., 566.

Lathyri D.C.,                    }  
Onobrychidis D.C.,            } *Fr. Sys. Myc.* II., 569.

**Botryosphæria mutila** (*Sphæria mutila*, Schwein. Amer. Bor. No. 1439, sec. spec.)

Stromate innato. Peritheciis in series flexuosas erumpentibus, subconfluentibus, globosis, superiore parte prominente inaequali rugosa, intus albido farcta. Ascis clavatis, octosporis. Sporidiis ellipticis, continuis, hyalinis ( $\cdot 02\text{--}\cdot 022 \times \cdot 009$  mm.)

On *Populus*, &c. United States.

Probably this has been merged in the very unsatisfactory species called *B. Berengeriana*, de Not.; but it certainly has priority. We have no doubt of Schweinitz having in some of his specimens, under this name, a species with narrow elliptical brown sporidia ( $\cdot 018 \times \cdot 006$  mm.), but the fragments are too imperfect and small for diagnosis.

**Botryosphæria subconnata** (*Schweinitz Amer. Bor. No. 1443. Sacc. Syll. 4240. Wisteria valsarioidis, Rehm. in Thum. Myc. Univ. No. 2166.*)

According to authentic specimen in Herb. Berk. No. 9025.

On *Gossypium*.

**Botryosphæria Syringæ**, *Schweinitz Amer. Bor. No. 1667.*

Ascis elongato-clavatis, octosporis. Sporidiis arcute ellipticis, continuis, hyalinis ( $\cdot 026\text{--}\cdot 028 \times \cdot 008$  mm.)

On branches of *Syringa*. United States (*Ellis 3111*).

**Botryosphæria callicarpæ**, *Cooke in Rav. Amer. Fungi, No. 767.*

Longitudinaliter erumpens. Stroma elongatum. Peritheciis parvulis confluentibus, atris. Ascis clavatis. Sporidiis continuis, (immaturis).

On bark of *Callicarpa americana*. Darien, Georgia.

**Botryosphæria abrupta**, *Berk. & Curt. in Herb. Berk. No. 9013.*

Stromatibus erumpentibus, epidermide fissurato arcute cinctis, subdiscoideis. Peritheciis globosis, semi-immersis, atris, demum confluentibus, truncato-obtusis, abruptis, intus albus. Ascis clavatis, octosporis. Sporidiis elliptico-fusiformibus, utrinque subattenuatis, obtusis, continuis, hyalinis, flavescentibus, intus granulosus ( $\cdot 022\text{--}\cdot 024 \times \cdot 01$  mm.)

On *Cyrilla*. Carolina, U.S.

**Botryosphæria melathroa**, *Berk. & Curt. in Herb. Berk. No. 9014.*

Stroma longitudinaliter effusum, innatum, erumpens. Peritheciis ovatis confertis, subdiscretis, atris, ad apicem rotundatum, paululis. Ascis clavato-cylindricis. Sporidiis ellipticis, continuis ( $\cdot 02 \times \cdot 008$  mm.) hyalinis.

On *Cratægus cordatus*. Pennsylvania.

**Botryosphæria araliæ**, *Curt. Cat. 143.*

Stromatibus innato-erumpentibus, corticolis, subpulvinatis, nigris, plerumque lineato-aggregatis (1 mm. diam.), albo-farctis, peridermeo cinctis. Peritheciis vix distinctis, obtusiusculis, opacis. Ascis clavatis, octosporis. Sporidiis ellipticis, continuis, hyalinis ( $\cdot 018 \times \cdot 008$  mm.).

On bark of *Aralia spinosa*. Carolina.

**Botryosphæria viburni**, *Cooke*.

Stromatibus erumpentibus, gregariis, minimis ( $\frac{1}{2}$ - $\frac{3}{4}$  mm. diam.), corticulis, depresso-pulvinatis, atro-fuscis, superficie tuberculosis, albo-farctis. Peritheciis (6-10) subimmersis, vertice convexis, pertusis. Ascis clavatis. Sporidiis arcte ellipticis, continuis, flavescens, intus granulosis ( $.018$ -. $.021 \times .008$  mm.).

On branches of *Viburnum opulus*. United States.

Closely allied to *B. araliæ*, Curt., of which it may be a variety.

**Botryosphæria hypericorum**, *Cooke in Herb. Berk. 9030 bis*.

Subelliptica, planiuscula, atra. Peritheciis parvulis, connatis, albo-farctis, epidermide fissa arcte cinctis. Ascis clavatis, octosporis. Sporidiis anguste ellipticis, continuis, hyalinis (circa  $.02 \times .005$  mm. immaturis).

On stems of *Hypericum proliferum*. United States (No. 2864).

Although the sporidia are so immature that it is difficult to distinguish clearly their form and size, yet the habit and structure is so distinctly that of the present genus, that it has been inserted, subject to some reservation as to the sporidia.

**Botryosphæria hypoxylodea**, *Cooke*.

Mox superficialis, hypoxylodea. Peritheciis minimis, in pustulas orbicularibus, convexis rugosis, atris, opacis, confluentibus. Ascis cylindrico-clavatis, octosporis. Sporidiis ellipticis, continuis, hyalinis,  $.012 \times .005$  mm.

On branches (unknown.) Australia.

Has just the habit and appearance of some species of *Hypoxylon*, but not carbonaceous.

**Botryosphæria stomatica**, *Schweinitz in Herb. Berk. No. 8823*.

Latissime effusa, emergens, lignum atro inquinans. Peritheciis semi-immersis majusculis, ostiolis validis prominentibus, cylindraceis obtusis insignis. Ascis clavatis, octosporis, sporidiis ellipticis, continuis, fuscis  $.012$ -. $.013 \times .005$  mm.

On rotten wood. Indiana, United States. (Schweinitz.)

**Botryosphæria (Myrmæcium) collematoides**, *B. & Rav.*

Stromate effuso, tenui, atro. Peritheciis parvulis, ovalibus, congestis, demum apice applanato, opaco, botryoideo-aggregatis, subconfluentibus. Ascis cylindraceis, octosporis. Sporidiis ellipticis, uniseptatis, vix constrictis, fuscis ( $.015 \times .007$  mm.).

On bark. United States.

This species, *M. insidens*, Schw., and *M. grandinea*, Berk., have been confounded together, but they are all manifestly distinct, although similar in habit and external appearance.

**Endothia Parryi** (*Farlow*.)

Stromatibus pulvinatis erumpentibus. Peritheciis numerosis, concentricis aggregatis, fuscis, epidermide cinnabarina cinctis. Ascis lineari-clavatis,  $.76$ -. $110 \times .16$ -. $20 \mu$ , paraphysatis; sporidiis octo-

nis irregulariter subdistichis, hyalinis  $20\text{--}26 \times 5\text{--}7 \mu$ , uniseptatis, ellipsoideis, subacutis, parce constrictis. *Dothidea Parryi*, Farlow, MSS.

On *Agave Shawii*. S. W. States of N. America.

**Melogramma (Valsaria) gemmata**, Berk. & Rav. *North Amer. Fungi*. No. 831. Hypoxylon gemmatum, Sacc. *Syl.* No. 1369. Hypoxylon Waltherianum, Rav. *Fungi Car.* IV. 35.

Sporidiis uniseptatis, fuscis ( $01\text{--}012 \times 006$  mm.).

**Melogramma (Valsaria) Hookeri**, Cooke.

Acervulis erumpentibus, discoideis, atris. Peritheciis prominentibus, minimis, confluentibus, vel subdiscretis. Ascis clavatis. Sporidiis lanceolatis, uniseptatis, valde constrictis, fuscis  $035\text{--}045 \times 007$  mm.

On bark. South Marocco (*Sir J. D. Hooker*).

**Melogramma (Valsaria) phoradendri**, B. & Curt., *Curt. Cat.* 143.

Peritheciis gregariis, tectis, demum cortice fissurato erumpentibus, atris, obtusis. Ascis subcylindricis. Sporidiis subellipticis, uniseptatis, leniter constrictis, fuscis  $028\text{--}03 \times 01\text{--}012$  mm.

On bark of *Phoradendron flavescens*. U. States.

**Melogramma (Valsaria) grandinea**, Berk. nec *Diatrype grandinea*, B. & Rav. *Melogramma insidens*, Berk. in *Grev.* IV., 99, nec *Schweinitz*.

Stromate effuso, subrotundo, fusco-nigro. Peritheciis emergentibus, confertis, ovatis, apice depresso subumbilicato. Ascis clavatis. Sporidiis ellipticis, uniseptatis, nec constrictis ( $008 \times 004$  mm.) fuscis, diu continuis. Berk. in *Herb.* 9020.

On bark of *Fraxinus*. United States.

**Melogramma platyroa**, Berk. & Curt. Hypoxylon platyrous, Berk. in *Herb.*

Peritheciis botryoideo-aggregatis, erumpentibus, subeffusis, rarius liberis, pulvere griseo subtus conspersis. Ascis clavatis, octosporis. Sporidiis fusiformibus, triseptatis, hyalinis ( $02\text{--}022 \times 004$  mm.). *Herb. Berk.* No. 8678.

On naked wood. Pennsylvania, U.S.

**Melogramma Spraguei**, B. & C. No. 3994.

Has nō affinity with *Thyridium*. It occurs on small branches, and not on the naked wood. The sporidia have only an occasional transverse septum, so that they cannot possibly be termed "murali-divisa."

**Melogramma meliæ**, Curtis in *Herb.* nec *Schweinitz*.

Acervulis erumpentibus, atris, subdiscoideis vel oblongis. Peritheciis prominentibus, demum subliberatis, rugosis, apice applanato. Ascis clavatis, majusculis octosporis. Sporidiis sublanceolatis, triseptatis, nec constrictis, rarius quinque-septatis ( $038\text{--}042 \times 01$  mm.) fuscis.

On *Melia*. United States.

*Sub.-Fam. II. RHYTISMOIDEI.*

GEN. 6. **RHYTISMA**, *Fries.*—Stroma applanatum, discoideum, vel effusum, pluriloculatum, primo clausum, demum in rimas flexuosas vel transversales frustulatum rumpens.

\* *Sporidia continua, hyalina.*

- |  |  |
|--|--|
| 1295. maximum, <i>Fr. Syst. Myc.</i> ii., 566.                 | 1299. grewiæ, <i>Kalch., Grev. ix.</i> , 32.                     |
| 1296. Curtisii, <i>B. &amp; Rav., N. Amer. Fungi.</i> No. 780. | 1300. pongamiæ, <i>B. &amp; Br., Ceylon Fungi</i> , 1128.        |
| 1297. eugeniacearum, <i>Corda Ic.</i> iv., f. 130.             | 1301. myrciæ, <i>Mont. Syll.</i> 193.                            |
| 1298. Austini, <i>Cke., Grev. vii.</i> , 48.                   | 1302. myricæ, <i>Mont. Syll.</i> 193.                            |
|  | 1303. circumscissum, <i>Lev. Ann. Sci. Nat.</i> , 1846, v., 254. |

\*\* *Sporidia uniseptata, hyalina.*

- |  |  |
|--|--|
| 1304. ustulatum, <i>Cooke, Grev.</i> v., 17.                   | 1307. spurcarium, <i>B. &amp; Br., Ceylon Fungi</i> No. 1131.  |
| 1305. maculosum, <i>B. &amp; Br., Ceylon Fungi</i> No. 1126.   | 1308. leptospilum, <i>B. &amp; Curt., Cuba Fungi</i> No. 721.  |
| 1306. pterygotæ, <i>B. &amp; Br., Ceylon Fungi</i> , No. 1129. | 1309. filicinum, <i>B. &amp; Curt., Ceylon Fungi</i> No. 1127. |

\*  
\*\* *Sporidia uniseptata, fusca.*

- |   |   |
|---|---|
| 1310. placentæ, <i>B. &amp; Fr., Ceylon Fungi</i> 1130. | 1312. astrocaryi, <i>Mont. Syll.</i> , 194. |
| 1311. porrigo, <i>Cooke, Grev. x.</i> , 129.            |   |

\*  
\*\*  
\*\*\* *Sporidia 3 septata, hyalina.*

1313. rubiæ, *Mont. Syll.*, p. 194.

\*  
\*\*  
\*\*\* *Sporidia filiformia, hyalina.*

- |   |  |
|---|--|
| 1314. acerinum, <i>Pers. Syn.</i> 104.                  | 1318. andromedæ, <i>Fr. Syst. Myc.</i> ii., 567.     |
| 1315. punctatum, <i>Fr. Syst. Myc.</i> ii., 569.        | 1319. arbuti, <i>Phil., Grev. vii.</i> , 13.         |
| 1316. salicinum, <i>Fr. Syst. Myc.</i> ii., 568.        | 1320. urticæ, <i>Fr. Sys. Myc.</i> ii., 570.         |
| v. umbonatum, <i>Rabh.</i>                              |  |
| 1317. australe, <i>D. R. &amp; M., Mont. Syll.</i> 193. | 1321. ilex-canadensis, <i>Schw. Am. Bor.</i> , 2026. |

*Sporidia ignotæ.*

- |   |   |
|---|---|
| 1322. fuscum, <i>Fr. Linn.</i> v., 551.   | 1325. ilicincola, <i>Fr. Syst. Myc.</i> ii., 568. |
| 1323. velatum, <i>Schw. Syn.</i> No. 270. | 1326. prini, <i>Fr. Sys. Myc.</i> ii., 568.       |
| 1324. Blakei, <i>Curt. in Herb. Berk.</i> |   |



1327. *vaccinii*, *Fr. Sys. Myc.* ii., 567  
 1328. *decolorans*, *Fr. Sys. Myc.* ii., 567  
 1329. *piceum*, *Berk. Hook. Journ.*, 1854, 210  
 1330. *vitis*, *Schw. Am. Bor.* 2037.  
 1331. *nitidum*, *Lev. A. S. N.*, 1846, v., 254  
 1332. *abyssinicum*, *Mont. & Berk.*  
 1333. *bauhiniæ*, *Nees. Presl. Reliq.* i., 1  
 1334. *magnoliæ*, *Schw. Amer. Bor.* 2039  
 1335. *psidii*, *Rud. Linn.* iv., 118.  
 1336. *sassafras*, *Schw. Am. Bor.* 2036  
 1337. *rhododendri*, *Fr. Sys. Myc.* ii., 567  
 1338. *rufulum*, *B. & Curt., Cuba Fungi* 722  
 1339. *atramentarium*, *B. & Curt., Cuba* 716  
 1340. *gyrosum*, *Mont. Syll.* 193  
 1341. *micraspis*, *B. & Curt., Cuba* 720  
 1342. *conoideum*, *Cke., Grev.* v., 16  
 1343. *durissimum*, *Cke., Grev.* v., 16  
 1344. *monogramme*, *B. & Curt., N. A. F.* 782  
 1345. *laciniatum*, *Fr. Syst. Myc.* ii., 566  
 1346. *concentricum*, *B. & Curt., Cuba* 719  
 1347. *aceris-eriocarpæ*, *Schw. Am. Bor.* 2032  
 1348. *lagerstræmiæ*, *Rabh. F. E.* 2310  
 1349. *austro-caledonicum*, *Crie. Bot. Jahrs.*, 1876, 108  
 1350. *nervale*, *A. & S. Consp.* t. 7, f. 7  
 1351. *empetri*, *White, Ann. N. H.* No. 1650

*Herbicolæ.*

1352. *hysterioides*, *Fr. Sys. Myc.* ii., 571  
 1353. *bifrons*, *Schw. Am. Bor.* 2035  
 1354. *giganteum*, *Fr. Sys. Myc.* ii., 567  
 1355. *cacti*, *Schw. Am. Bor.* 2040.  
 1356. *asperulæ*, *Rabh. Itin.*

*Sub.-Fam. III. STIGMATEOIDÆ.*

Perithecia plus minusve discreta, plerumque simplices et superficiales.

GEN. 7. **HYOSPILA**, *Fr.* Perithecia plus minus discreta, pseudostromate phyllogeno immersa.

\* *Sporidia uniseptata, hyalina.*

1357. *bifrons*, *D. C.* ... 3535  
 1358. *immunda*, *Fckl.* ... 3536  
 1359. *ceuthosporioides*, *B.* 2488

\*\* *Sporidia 3 septata, hyalina.*

1360. *pustula* (*Pers.*) ... 3533  
 1361. *Rehmii*, *Sacc.* ... 3534

\*\*\* *Sporidia filiformia.*

1362. *saligna*, *Fr.* ... 4088  
 1363. *arctica*, *Karst.* ... 4089  
 1364. *tigrina*, *Fckl.* ... 4090  
 1365. *vulgaris*, *Fckl.* ... 4091  
 1366. *populina*, *Pers.* ... 4103  
 1367. *viburni*, *Buck. Grev.* xii. 44

\*\*\* HYPOPTERIS. *Sporidia continua, fusca.*

1368. bambusæ, *Lev.* ... 1074

\*\*\* ISOTHÆA. *Sporidia muriformia, fusca.*

1369. nyssæ, *B. & C.* ... 3875

GEN. 8. **TRABUTIA**, *Sacc. Syll. i.*, 449.—Stroma phyllogenum, rhytismoideum, atrum.

\* *Sporidia continua, hyalina.*

1370. quercina, *Rud.* ... 1733    1372. tosta, *B. & C., North Am.*

1371. erythrospora, *B. & C., Fungi 781*

*Fungi 783*

\*\* *Sporidia uniseptata.*

1373. constellata, *B. & Br., Ceylon F.* 1132

GEN. 9. **PARODIELLA**, *Speg.*—Perithecia superficialia, globosa astoma, atra, basi foliis adnata.

\* *Sporidia uniseptata, hyalina.*

1374. simillima, *B. & C.* 5096

\* *Sporidia uniseptata fusca.*

1375. grammodes, *Kze....* 5279    = *seminata*, *B. & R.* 2114  
= *perisporioides*, *B.* 2711

\*\*\* *Sporidia ignota.*

1376. zeinam, *Ber. Act. Milan* 1844    1377. melioloides, *B. & Br.* 1021

= *cotini*, *Ces. Herb. Myc. ii.*, 566

GEN. 10. **STIGMATEA** (*Fr.*), *Sacc. Syll. i.*, 541.—Perithecia prominula, crassiuscule contexta, ostiolo minuto.

I. EUSTIGMATEA. *Sporidia uniseptata.*

1378. Robertiani, *Fr.* ... 2105    1384. sequoia, *Cke.* ... 2110

1379. geranii, *Fr.* ... 2106    1385. sylvatica, *Sacc.* ... 6072

1380. confertissima, *Fckl.* 2107    1386. andromedæ, *Rehm.* 2111

1381. maculæformis, *Fr.* 2108    1387. Jenensis, *Kunze.* ... 2112

1382. Nicholsoni, *Cke.* ... 6073    1388. sclerotidea (*Cke.*) 2113

1383. ranunculi, *Fr.* ... 2109

II. STIGMATULA. *Sporidia continua.*

1389. sutherlandiæ, *K. & C.* 2115    1391. gregaria, *Cke.* ... 2117

1390. rhynchosiæ, *K. & C.* 2116    1392. submaculans, *Mont.* 2118

III. *Species dubiæ.*

1393. impressa, *Fr.* ... 2119    1397. polygonorum, *Fr.* 2123

1394. conferta, *Fr.* ... 2021    1398. ostruthii, *Fr.* ... 2124

1395. coriariæ, *Mont.* ... 2121    1399. ægopodii, *Fr.* ... 2125

1396. lentisci, *Mont.* ... 2122

*Fam.* 4. MELOGRAMMÆ, *Ntke.* Peritheciis a stromate formatis vel in stroma confluentibus, apice subliberis, plerumque collo destitutis.

GEN. 1. **SARCOXYLON**, *Cooke.* Stroma subglobosum, pallidum, perithecia immersa periphærica membranacea.

\* *Sporidia continua, fusca.*

a. episporio lævi.

1400. compunctum, *Jungh.* 1231

b. episporio verrucoso.

1401. lycogaloides, *Berk.*... 1342

GEN. 2. **BOTRYOSPHERIA**, *De Not.* Perithecia erumpenti-superficialia, basi stromatici suffulta, cæspitosa vel confluens.

\* *Sporidia continua, hyalina.*

- |   |   |
|---|---|
| 1402. quercuum, <i>Schw.</i> ... 1762     | 1420. ficus, <i>Cooke</i> ... 6023            |
| = <i>fuliginosa</i> , <i>Pers.</i>        | 1421. meliæ, <i>Schw.</i> ... 1778            |
| 1403. mutila (Fr.) <i>Schwein.</i>        | 1422. hibisci, <i>Schw.</i> ... 1779          |
| <i>Grev.</i> xiii. 101                    | 1423. præstans, <i>Lev.</i> ... 1780          |
| 1404. Berengeriana, <i>De Not.</i>        | 1424. sorosia, <i>Lev.</i> ... 1781           |
| 1763                                      | 1425. lanaris, <i>Welw. &amp; Curr.</i> 1782  |
| = <i>Mori</i> , <i>De Not.</i>            | 1426. diplodioides, <i>D. R.</i>              |
| 1405. arctostaphyli, <i>Flow.</i> 1764    | <i>&amp; M.</i> ... 1785                      |
| 1406. juglandis, <i>Mont.</i> ... 1765    | 1427. vitis, <i>Schulz.</i> ... 1787          |
| 1407. cerasi, <i>C. &amp; E.</i> ... 1766 | 1428. mascarensis, <i>Mont.</i> 1788          |
| 1408. advena, <i>Ces.</i> ... 1767        | 1429. horizontalis, <i>B. &amp; C.</i> 1789   |
| = <i>melanops.</i> <i>Tul.</i>            | 1430. liriodendri, <i>Cke.</i> ... 1798       |
| 1409. aterrima, <i>Fckl.</i> ... 1768     | 1431. syringæ, <i>Schw., Gr.</i> xiii.        |
| 1410. cratægi, <i>Schw.</i> ... 1769      | 101   |
| 1411. pyriospora, <i>Ellis.</i> ... 1770  | 1432. callicarpæ, <i>Cooke, Grev.</i>         |
| 1412. ambigua, <i>Schw.</i> ... 1771      | xiii. 101                                     |
| 1413. wisteriæ, <i>Rehm.</i> ... 1772     | 1433. pseudotubulina, <i>Ces.</i> 1379        |
| 1414. subconnata, <i>Schw.</i> 4240       | 1434. propullans, <i>Schw.</i> ... 4239       |
| 1415. Delilei, <i>D. R. &amp; M.</i> 1773 | 1435. abrupta, <i>B. &amp; C.</i> , xiii. 101 |
| 1416. dothidea, <i>M. &amp; N.</i> 1774   | 1436. melathroa, <i>B. &amp; C.</i> xiii. 101 |
| = <i>Rosæ</i> , <i>Fr.</i>                | 1437. araliæ, <i>Curt. Cat.</i> , 143         |
| 1417. persimon, <i>Schw.</i> .. 1775      | 1438. viburni, <i>Cke, Gr.</i> , xiii. 102    |
| 1418. venenata, <i>C. &amp; E.</i> 1776   | 1439. hypericorum, <i>Cke, Gr.</i> , xiii.    |
| 1419. syconophila, <i>De Not.</i> 1777    | 102   |

b. *sporidia minima.*

1440. rhizogena, *Berk.* ... 1786    1441. hypoxylloidea, *Cooke, Grev.*

xiii. 102

c. *species inquirendæ.*

1442. graphidea, <i>B. &amp; C.</i> 1791	1445. chnaumatica, <i>Wallr.</i> 1795
1443. escharoides, <i>Fr.</i> ... 1793	1446. calycanthi, <i>Schw.</i> ... 1796
1444. polita, <i>Fr.</i> ... 1794	1447. castaneæ, <i>Schw.</i> ... 1797

## d. MELOGRAMELLA. Ostiolis subrostratis.

\* *Sporidia continua, hyalina.*1448. ferruginea, *Fckl.*... 1799 1449. Van Vleckii, *Schw.* 1800\*\* *Sporidia continua, fusca.*1450. decipiens, *D.C.* ... 1126 1452. stomatica, *Schw., Grev.*1451. hiascens, *Fr.* ... 1125 xiii. 102\* MYRMÆCIUM. *Sporidia uniseptata, hyalina.*1453. endoleucum, *Sacc.* 2340 1455. dichænoïdes, *B. & C.* 23871454. collematoides, *B. & Rav.*, 1456. subaquila, *B. & C.* 2366  
*Grev.* xiii. 102\*\*\* MELANOPS. *Sporidia biseptata, hyalina.*1457. mirabilis, *Fckl.* ... 3694GEN. 3. **ENDOTHIA**, *Fr.* Stroma diatrypeum, crocatum, perithecia immersa nigricantia.\* *Sporidia uniseptata, hyalina.*1458. gyrosa, *Schw.* ... 2342 1459. Parryi, *Farl., Gr.* xiii. 102GEN. 4. **FUCKELIA**, *N.* Stroma erumpens, subgloboso-pulvinata hypoxyleum, perithecia peripherica, immersa.\* *Sporidia continua, fusca.*1460. microspora, *Karst.* 1143 1464. Morsei, *B. & C.* ... 14411461. gastrina, *Fr.* ... 1129 = *Blakei*, *B. & C.* 13431462. Plowrightii, *Nsl.* 1134 1465. rhenana, *Fckl.* ... 11441463. Carterii, *B. & Cke., Grev.* 1466. diathrauston, *Rehm.* 1385  
xii., 51GEN. 5. **CAMAROPS**, *Karst.* Stroma crustaceum, emergens, hypoxyleum, perithecia immersa.

a. Stroma limitata.

\* *Sporidia uniseptata, fuscidula.*1467. hypoxylodes, *Karst.* 2849\*\* *Sporidia pluriseptata, fusca.*1468. giganteum, *Mont.* 3820

b. Stroma effusa.

1469. grandinea, *B. & Rav.* 1114GEN. 6. **MELOGRAMMA**, *Fr.* Stromata erumpenti-superficialia, subgloboso-pulvinata vel subeffusa, perithecia botryoideo-aggregata, plurima stromata immersa prominulaque.\* *Sporidia continua, fusca.*1470. examinans, *B. & M.* 5247 1472. atrofusca, *B. & C., Grev.*1471. aceris, *C. & E.* ... 1423 xii., 51.1473. insidens, *Schwein.* 2341

\*\* VALSARIA. *Sporidia uniseptata, fusca.*

## a. pustulata.

- |  |  |
|--|--|
| 1474. rubricosa, <i>Fr.</i> ... 2814               | 1480. cinnamomi, <i>Ces.</i> ... 2832    |
| 1475. gemmata, <i>B. &amp; Rav.</i> 1369           | 1481. Hookeri, <i>Cke, Gr.</i> xiii. 103 |
| = <i>Walterianum</i> , <i>Rav.</i>                 | 1482. phoradendri, <i>Curt., Grev.</i>   |
| 1476. eucalypti, <i>Kalch. &amp; Cke.</i> ... 2823 | xiii. 103                                |
| 1477. æthiops, <i>C. &amp; E.</i> ... 2821         | 1483. robinia, <i>Schw.</i> ... 4133     |
| 1478. obesa, <i>Schw.</i> ... 2818                 | 1184. gleditschia, <i>Schw.</i> 1792     |
| = <i>quadrata</i> , <i>Schw.</i>                   | 1485. dispar, <i>Fr.</i> ... 4148        |
| 1479. toxici, <i>Schw.</i> ... 2826                | 1486. megalospora, <i>Mont.</i> 2739     |

## b. subeffusa.

- |                                      |                                      |
|--------------------------------------|--------------------------------------|
| 1487. grandinea, <i>Berk., Grev.</i> | 1488. gregale, <i>Schw.</i> ... 1469 |
| xiii. 103                            | 2847                                 |

\*\*\* *Sporidia triseptata, hyalina.*

- |   |           |
|---|-----------|
| 1489. platyroa, <i>Berk. &amp; Curt., Grev.</i> | xiii. 103 |
|---|-----------|

\*\*\* *Sporidia triseptata, fusciscentia.*

- |  |   |
|--|---|
| 1490. vagans, <i>Not.</i> ... 3381     | 1493. homaleum, <i>Fr.</i> ... 3956               |
| = <i>Bulliardii</i> , <i>Tul.</i>      | = <i>omalogramma</i> , <i>Fr. S. S.</i>           |
| 1491. fuscosporum, <i>Schw.</i> 3385   | 1494. Spraguei, <i>Berk. &amp; Curt.</i> ... 3994 |
| 1492. Fuckelii, <i>Nitke.</i> ... 3386 |   |

\*\*\* THYRIDARIA. *Sporidia pluriseptata.*

## a. pustulata.

- |  |  |
|--|--|
| 1495. campylosporum, <i>Fr.</i> 3382     | 1500. delognensis, <i>Speg.</i> 3366   |
| 1496. cylindrosporum, <i>Rab.</i> 3388   | 1501. lateritia, <i>Ellis</i> ... 3368 |
| 1497. Jackii, <i>Rabh.</i> ... 3389      | 1502. pulveracea, <i>Karst.</i> 3369   |
| 1498. melia, <i>Curt., Gr.</i> xiii. 103 | 1503. sambuci, <i>Karst.</i> ... 3370  |
| 1499. incrustans, <i>Sacc.</i> ... 3365  | 1504. ailanthi, <i>Rehm.</i> ... 3371  |

## b. subeffusa.

- |  |                                      |
|--|--------------------------------------|
| 1505. rubro-notata, <i>B.</i> ... 3367       | 1507. spiniferum, <i>Wallr.</i> 3383 |
| 1506. myriangioides, <i>B. &amp; R.</i> 3372 |                                      |

## ALGÆ BRITANNICÆ RARIORES EXSICCATÆ.

BY E. M. HOLMES.

## FASCICULUS II.

This fasciculus, just issued, contains the following species :—

26. **Callithamnion barbatum**, *J. Ag.*  
Hele, near Ilfracombe, August, 1883, E. M. Holmes.
27. **Calothrix crustacea**, *Thur.*  
Berwick-on-Tweed, October, 1884, E. Batters.
28. **Castagnea contorta**, *Thur.*  
Weymouth, September, 1884, E. M. Holmes.



29. **Ceramium divaricatum**, *Crm.*, on *Zostera*.  
Weymouth, October, 1883, K. Holmes.
30. **Chantransia luxurians**, *Thur.*, on *Zostera*.  
Weymouth, August, 1883, E. M. Holmes.
31. **Cladophora arctiuscula**, *Crm.*  
Berwick-on-Tweed, September, 1884, E. M. Holmes.
32. **Cladophora prolifera**, *Kütz.*  
Weymouth, October, 1884, E. M. Holmes.
33. **Codiolum longipes**, *Foslie.*  
Berwick-on-Tweed, July, 1884, E. M. Holmes, and September,  
1884, E. Batters.
34. **Ectocarpus insignis**, *Crm.*, on *Chondriopsis tenuissima*, *J. Ag.*  
Bognor, August, 1884, E. M. Holmes.
35. **Ectocarpus reptans**, *Crm.*, on *Cladophora lætevirens* Harv., and  
*Chaetomorpha ærea*, *Kg.*  
Exmouth, June, 1882, and Weymouth, November, 1882, K.  
Appleford.
36. **Ectocarpus terminalis**, *Kütz.*, on *Corallina*.  
Newquay, July, 1884, E. M. Holmes.
37. **Ectocarpus virescens**, *Thur.*  
Weymouth, November, 1883, K. Holmes.
38. **Elachista stellulata**, *Aresch.*, on *Dictyota*.  
Weymouth, August, 1882, E. M. Holmes.
39. **Euthora cristata**, *J. Ag.*, on *Laminaria Cloustoni*, *Le Jol.*  
Berwick-on-Tweed, September, 1882, E. Batters.
40. **Gigartina Teedii**, *J. Ag.*  
Jersey, August, 1883, E. Batters.
41. **Grateloupia dichotoma**, *J. Ag.*  
Newquay, July, 1884, E. M. Holmes.
42. **Lomentaria reflexa**, *J. Ag.* (*Cystocarps.*)  
Hele, near Ilfracombe, August, 1883, E. M. Holmes.
43. **Phyllitis Fascia**, *Kütz.*  
Elie, July, 1882, and Berwick-on-Tweed, September, 1883,  
E. Batters.
44. **Polysiphonia ceramiæformis**, *Crm.*  
Swanage, April, 1884, E. M. Holmes.
45. **Polysiphonia Rhunensis**, *Born.*  
Ilfracombe, August, 1883, E. M. Holmes.
46. **Porphyra leucosticta**, *Thur.*  
Joppa, near Edinburgh, June, 1883, G. W. Traill.
47. **Rivularia parasitica**, *Chauv.*, on *Nemalion multifidum*, *J. Ag.*  
Portland, Weymouth, October, 1884, E. M. Holmes.
48. **Sphacelaria cæspitula**, *Lyngb.*, on *Saccorhiza bulbosa*, *De la Pyl.*  
Berwick-on-Tweed, September, 1883, E. Batters.
49. **Vaucheria dichotoma f. submarina**, *Lyngb.*  
Weymouth, September, 1884, E. M. Holmes.
50. **Vaucheria piloboloides**, *Thur.*  
Weymouth, September, 1884, E. M. Holmes.

## CALIFORNIAN FUNGI.

BY M. C. COOKE, AND DR. H. W. HARKNESS.

(Continued from p. 21.)

**Phoma astragali**, Cke. & Hk.

Caulicola, tecta. Peritheciis depressis semi-immersis, epidermide velatis. Sporulis subfusoides, binucleatis, hyalinis ( $.008 \times .002$  mm.).

On stems of *Astragalus*. (Harkness, 2566.)

**Phoma Lupini**, Cke. & Hk.

Caulicola. Peritheciis gregariis, subcutaneis, subglobosis, atris, epidermide nitida tectis. Sporulis elongato-ellipticis, binucleatis, hyalinis ( $.02 \times .006$  mm.).

On stems of *Lupinus*. (Harkness, 1986.)

**Phoma Polygalæ**, Cke. & Hk.

Caulicola. Peritheciis gregariis, subcutaneis, globoso-depressis, pertusis, epidermide nitida velatis. Sporulis subfusoides, enucleatis, utrinque obtusis, hyalinis ( $.01 \times .0025$  mm.).

On stems of *Polygala*. (Harkness, 2351.)

**Pleosporopsis heteromeles**, Cke. & Hk.

Hypophylla. Peritheciis gregariis, aurantio-fulvis, globoso-depressis, ( $\frac{1}{2}$  mm.) glabris, pulpa pulverulenta flavida. Sporulis globosis, subpellucidis ( $.008$  mm. diam.).

On dead leaves of *Heteromeles*. (Harkness, 1295, 2162.)

**Sphæropsis quercinum**, Cke. & Hk.

Peritheciis sparsis, subcutaneis, globoso-depressis, vix prominulis. Sporulis subellipticis, continuis, utrinque rotundatis, demum olivaceo-fuliginis ( $.02-.024 \times .012$  mm.).

On living oak branches. (Harkness, 2117.)

**Sphæropsis lupini**, Cke. & Hk.

Caulicola, sparsa, erumpens. Peritheciis globoso-depressis, atris, demum semi-emergentibus, pertusis. Sporulis globoso-ovoideis, utrinque subacuminatis, continuis, demum atro-olivaceis ( $.015-.017 \times .008-.01$  mm.).

On stems of *Lupinus*. (Harkness, 1989.)

**Harknessia Arctostaphyli**, Cke. & Hk.

Amphigena. Peritheciis innatis, erumpentibus, paululis ( $\frac{1}{3}$  mm.), ore orbiculari elevato, sub-denticulato. Sporulis ellipticis, fuliginis ( $.02 \times .009$  mm.) deorsum pedicellatis, basidiis brevibus.

On leaves of *Arctostaphylus*. (Harkness, 2515.)

**Rhabdospora chlorogali**, Cke. & Hk.

Caulicola, gregaria. Peritheciis atris, punctiformibus, sub-depressis, cuticulâ hyalinâ tectis, demum erumpentibus semi-nudis. Sporulis bacillaribus utrinque obtusis, rectis flexuosisve, hyalinis, obscure nucleatis ( $.03 \times .003$  mm.).

On stems of *Chlorogalum*. (Harkness, 2509.)

**Rhabdospora decorticata**, Cke. & Hk.

Peritheciis erumpenti-superficialibus, subglobosis, atris, papillatis, lævibus, sporulis filiformibus, flexuosis vel curvulis, hyalinis, continuis ( $\cdot 025$  mm. longis.).

On decorticated *Acacia*. (Harkness, 2052.)

**Vermicularia straminis**, Cke. & Hk.

Peritheciis subgregariis, globoso-depressis, atris ( $\frac{1}{3}$  mm. diam.) setis rigidis ( $\cdot 15$  mm. long) sparsis, erectis ornatis. Sporulis cylindræis, utrinque rotundatis, rectis, continuis, hyalinis ( $\cdot 012 \times \cdot 0035$  mm.).

On straw. (Harkness, No. 2464.)

**Diplodia fuchsiae**, Cke. & Hk.

Caulicola. Peritheciis subcutaneis, gregariis, globosis, atris, epidermide tectis, numquam erumpentibus. Sporulis ellipticis, uniseptatis, nec constrictis, fuscis ( $\cdot 028 \times \cdot 01$  mm.).

On stems of *Fuchsia*. (Harkness, 2366.)

**Diplodia crassulæ**, Cke. & Hk.

Caulicola. Peritheciis gregariis, subcutaneis, globosis, atris, demum epidermide fissurato erumpentibus. Sporulis ellipsoideis, uniseptatis, medio vix constrictis, fuscis ( $\cdot 02 - \cdot 022 \times \cdot 008$  mm.).

On stems of *Crassula*. (Harkness, 2173.)

**Diplodia phyllactinæ**, Cke. & Hk.

Epiphylla. Peritheciis gregariis, superficialibus, liberis, globosis (ut in *Erysipheis*). Sporulis ellipticis, uniseptatis, nec constrictis, fuscis ( $\cdot 012 \times \cdot 005$  mm.).

On leaves of *Acacia*, &c. (Harkness, 1992, 2053.)

**Amerosporium geranii**, Cke. & Hk.

Gregarium, erumpens, demum subliberatum. Peritheciis e globosis cupulatis, pilis nigricantibus, tenuibus, dense vestitis. Sporulis curvulis, utrinque attenuatis, continuis, hyalinis ( $\cdot 02 \times \cdot 0035$  mm.).

On stems of *Geranium*. (Harkness, 2424.)

**Hendersonia scirpicola**, Cke. & Hark.

Culmicola. Peritheciis minutis, punctiformibus, atris, semi-immersis, pertusis. Sporulis cylindræis, utrinque rotundatis, triseptatis, constrictis, fuscis ( $\cdot 02 \times \cdot 005$  mm.).

On culms of *Scirpus*. (Harkness, 2548.)

**Hendersonia varians**, Cke. & Hk.

Caulicola. Peritheciis gregariis erumpentibus, demum semi-nudis, depresso-globosis atris. Sporulis ovalibus, uniseptatis dein bi-vel triseptatis, magnitudine variabilis, brunneis, subopacis ( $\cdot 012 - \cdot 015 \times \cdot 0075$  mm.) nec constrictis.

On stems of *Sphacele*. (Harkness, 2512.)

Allied to *H. diversispora*, but probably distinct.

**Camarosporium ellipticum**, Cke. & Hk.

Caulicolum. Peritheciis gregariis, sub-globosis erumpentibus, mox semi-nudis, atris, pertusis. Sporulis ellipticis 2-4 septatis, loculo uno alterove longitudinaliter divisus, fuscis, nec constrictis, magnitudine variabilis ( $\cdot 01 \times \cdot 007$  ad  $\cdot 018 \times \cdot 0075$  mm.).

On stems of *Mesembryanthemum*. (Harkness, 2237.)

**Leptothyrium juncinum**, Cke. & Hk.

Gregarium. Peritheciis scutiformibus atris, opacis, planis demum concavis, orbicularibus. Sporulis cylindraceutis obtusis, continuis, hyalino-olivaceis ( $.012 \times .003$  mm.) basidiis brevissimis suffultis.

On *Juncus*. (Harkness, 2568.)

**Leptostroma sequoiæ**, Cke. & Hk.

Gregarium, superficiale, innatum, hystericiforme, atro-fuscum, nitidum, siccitate centro collapsum. Sporulis sublanceolatis, curvatis, continuis, hyalinis ( $.016 \times .003$  mm.).

On twigs of *Sequaria*. (Harkness, 2265.)

**Trullula (Cesatia) junci**, Cke. & Hk.

Acervulis orbicularibus, convexis atris, minutis, erumpentibus; conidiis cylindraceutis, vel subfusiformibus, nucleatis, continuis hyalinis, e basidiis brevissimis radiantibus ( $.02-.025 \times .004$  mm.).

On culms of *Juncus*. (Harkness, 2567.)

**Myxosporium microsporum**, Cke. & Hk.

Acervulis laxè gregariis, subcutaneo-erumpentibus, transverse-oblongis (vix 1 mm.), conidiis ovoideis, rectis, hyalinis ( $.004 \times .003$  mm.).

On pear tree branches. (Harkness, 1970.)

**Glaeosporium carpogenum**, Cke. & Hk.

Acervulis innato-erumpentibus, pallidis, ore lacerato; conidiis subellipticis vel clavatis, utrinque rotundatis, hyalinis ( $.018 \times .006-.007$  mm.).

On capsules of cotton wood. (Harkness, 2049.)

**Tubercularia sphæroidea**, Cke. & Hk.

Stromatibus laxè gregariis, erumpentibus, hemisphæricis vel sphæroideis, atris; conidiis subcylindraceutis, utrinque obtusis, rectis vel leniter curvulis, continuis, hyalinis ( $.006-.007 \times .002$  mm.), hyphis tenuibus.

On stems of *Geranium*. (Harkness, 2078.)

**Tubercularia Geranii**, Cke. & Hk.

Stromatibus subgregariis, roseis, magnis (plerumque 1 mm. diam.), sub-globoso-erumpentibus, pulverulentibus. Conidiis ellipsoideo-elongatis, obtusis, rectis, hyalinis ( $.008-.009 \times .003$  mm.).

On stems of *Geranium*. (Harkness, 2126.)

**Tubercularia insignis**, Cke. & Hk.

Stroma erumpens, pallidum, subglobosum, pulverulentum. Conidiis minutissimis, subellipticis, hyalinis ( $.003 \times .0015$  mm.), hyphis tenuibus, simplicibus, furcatisve congestis.

On twigs of *Pinus insignis*. (Harkness, 2170.)

**Hymenula glumarum**, Cke. & Hk.

Stromatibus erumpentibus, convexis mox confluentibus, pallide carneis. Conidiis subglobosis, continuis, hyalinis ( $.0035-.04$  mm. diam.).

On glumes of wheat. (Harkness, 2347.)

**Hymenula Lupini**, Cke. & Hk.

Stromatibus gregariis, punctiformibus, albidis, convexis dein confluentibus, pulverulentibus. Conidiis profusis, ovalibus subglobosisve, hyalinis ( $\cdot 004\text{--}\cdot 005 \times \cdot 003\text{--}\cdot 0035$  mm.).

On stems of *Lupinus*. (Harkness, 2063.)

**Hymenula megarrhizæ**, Cke. & Hk.

Stromatibus gregariis, erumpentibus, carneis, convexo-applanatis, siccitate pulverulentibus. Conidiis subellipticis, continuis, hyalinis ( $\cdot 0045\text{--}\cdot 005 \times \cdot 0035$  mm.).

On stems of *Megarrhiza*. (Harkness, 2082.)

**Strumella Vincæ**, Cke. & Hk.

Stromatibus gregariis, erumpentibus, subglobosis, sphaeriæformibus, atris; basidiis erectis, hyalinis, continuis, crassiusculis, arcte congestis; conidiis ellipticis, continuis, atro-fuscis ( $\cdot 012 \times \cdot 004$  mm.).

On stems of *Vinca*. (Harkness, 2339.)

**Hymenula phormicola**, Cke. & Hk.

Stromatibus minutis, albidis, in lineas gregariis, convexis vel ellipticis, inter nervulas enatis. Conidiis ellipticis, continuis, hyalinis ( $\cdot 008 \times \cdot 004$  mm.).

On leaves, &c., of *Phormium*. (Harkness, 2224.)

## PRÆCURSORES AD MONOGRAPHIA POLYPORORUM.

-By M. C. COOKE.

(Continued from p. 87.)

**M. Hispidi.** Anodermei = pileo primo valde spongioso-aquoso dein firmo elastico, facto e fibris validis extrorsum divergentibus et porrectis indeque setoso-hispido, poris cum fibris carnis modo contiguis. Caro vulgo offert stratum intermedium, exteriori hispido minus divergens.

\* *Contextu colorato.*

262 spongia, *Fr. Hym. Eur.* 542.

263 cuticularis, *Bull. Champ.* t. 462.

var. *Herbergii*, *Rost. Poly.* t. 18.

var. *hispidioides*, *Peck 33rd Report* p. 21.

264 fibrillosus, *Karst. Fung. Fenn.* 311.

265 hispidus, *Fr. Hym. Eur.* 551.

266 birretum, *Kalch. Hedw.* xv. 114.

267 hypo-coccineus, *Berk. Hook. Journ.* 1847, 319.

268 macroporus, *Lev. Ann. Sci. Nat.* 1848, 122.

269 fruticum, *B. & Curt. Linn. Journ.* x. 310.

270 cucullatus, *B. & Curt. Grev.* i. 51.

271 rheades, *Pers. Myc. Eur.* ii. 69.

272 unicolor, *Schwein. Syn. Car.* 71.

273 corruscans, *Fr. Hym. Eur.* 551.

274 Hausmanni, *Fr. Hym. Eur.* 552.



\*\* *Contextu albo.*

- 275 symphyton, *Schwein. Syn. Car.* 951.  
 276 undulatus, *Schwein. Syn. Car.* 893.  
 277 Weinmanni, *Fr. Hym. Eur.* 552.  
 278 hispidans, *Berk. Fr. Nova Sym.* 37.  
 279 pelliculosus, *Berk. Hook. Journ.* 1848, vii. 575.  
 280 spiculiferus, *Cke. in Grev. ined.*  
 281 fissilis, *B. & Curt. Grev.* i. 50.  
 282 albo-stygius, *B. & Curt. Fungi Cub.* 223.  
 283 galactinus, *Berk. Hook. Journ.* 1847, 321.  
 284 Junghuhnii, *Fries. Nova Symb.* 40.  
 285 spumeus, *Sow. Fungi*, t. 211.  
 286 borealis, *Fr. Hym. Eur.* 552.  
     *var. montanus, Fr. Hym. Eur.* 553.  
     *var. spathulatus, Fr. Hym. Eur.* 553.  
 287 obtusus, *Berk. Ann. Nat. Hist.* 1839, 390.  
 288 Hobsoni, *Berk. in Herb.* 3,987.  
 289 labyrinthicus, *Schwein. Syn. Car.* 950.  
 290 leucospongia, *Cke. Grev.* xi. 106.  
 291 pubescens, *Fr. Hym. Eur.* 553.  
 292 substuppeus, *B. & Cke. Linn. Journ.* xv. 381.

**N. Suberosi.** Pileo primitus sub-carnoso, succoso, dein indurato, crusta tenuiori tecto, poris tenuibus demum subsecedentibus.—*Fr. Epic.* Nos. 133-143.

\* *Contextu colorato.*

- 293 dryadeus, *Fr. Hym. Eur.* 553.  
 294 rubiginosus, *Rost. Poly.* t. 32.  
 295 resinosus, *Fr. Hym. Eur.* 554.  
 296 benzoinus, *Fr. Hym. Eur.* 554.  
     = *Micheneri*, *Berk. in Herb.*  
     = *morosus*, *Kalchb. Bot. Zeit.* 1870.  
 297 soloniensis, *Fr. Hym. Eur.* 553.  
 298 erubescens, *Fr. Hym. Eur.* 554.  
 299 Afzelii, *Fr. Epicr.* 461.  
 300 helveolus, *Rost. Poly.* t. 35.  
 301 colossus, *Fr. Nova Symb.* 40.  
 302 pilotæ, *Schw. Amer. Bor.* 370.

\*\* *Contextu albo.*

- 303 quercinus, *Schrad. Spic.* 157.  
 304 betulinus, *Fr. Hym. Eur.* 555.  
     = *albellus*, *Peck.*, 30 Report, p. 45.  
 305 leucocreas, *Cke. Grev.* viii. 55.  
 306 palustris, *B. & Curt. Grev.* i. 51.  
 307 officinalis, *Fr. Hym. Eur.* 555.  
 308 flavescens, *Mont. Ann. Sci. Nat.* v. 368.  
 309 portentosus, *Berk. Hook. Journ.* 1844.

- 310 medullaris, *Berk. Hook. Journ.* 1852, 140.
- 311 naucinus, *Fr. Nova Symb.* 41.
- 312 nivosus, *Berk. Hook. Journ.* 1856, 196.
- 313 eucalyptorum, *Fr. Pl. Preuss.* 135.
- 314 elatinus, *Berk. Hook. Journ.* 1852, 140.
- 315 Schulzeri, *Fr. Hym. Eur.* 556.
- 316 paradoxus, *Fr. Hym. Eur.* 555.
- 317 strumosus, *Fr. Epicr.* 462.
- 318 natalensis, *Fr. Natal* 13.
- 319 ungulatus, *Berk. Linn. Journ.* xiii. 165.

O. **Lignescentes.** Pileus plus minus concentrice sulcato l striato et substantia vegeta quidam molli et succosa tamen coriacea simul unde siccitate contracto et vulgo curvati.

A Fomitibus recedunt vegetatione annua, substantia primitus molli subfibrosa, poris numquam stratosis.

\* *Contextu albo.*

- 320 induratus *B. in Mellis, St. Helena*, 380.
- 321 hypopolius, *Kalch. Grev.* x. 99.
- 322 salignus, *Fr. Hym. Eur.* 544.
- 323 impolitus, *Fr. Nova Symb.* 42.
- 324 cartilagineus, *B. & Br. Ceylon Fungi*, 459.

\*\* *Contextu pallido.*

† *Pileo rugoso zonato.*

- 325 Auberianus, *Mont. Cub. t. xvi. f. 1.*
- 326 zonalis, *Berk. Ann. N. H.* x. 375.  
= *micromegas*, *Mont. Syll.* 157.
- 327 incurvus, *Cke. Grev.* xiii. 2.
- 328 contractus, *Berk. Hook. Journ.* 1847, 503.
- 329 lignosus, *Klot. Fries Epicr.* 471.
- 330 cubensis, *Mont. Syll.* 160.
- 331 havanensis, *B. & C. Linn. Journ.* x. 310.
- 332 Liebmanni, *Fr. Nova Symb.* 43.
- 333 durus, *Jungh. Fl. Java.* 62.
- 334 venezuelæ, *B. & Curt. in Herb.* 2,694
- 335 Lindigii, *Lev. Ann. Sci. Nat.* 1863, xx. 295.

†† *Pileo lævi.*

- 336 plebius, *Berk. Fl. N. Zeal.* ii. 179.
- 337 testudo, *Berk. Linn. Trans.* 2, ii. 401.
- 338 atypus, *Lev. Ann. Sci. Nat.* 1884, 184.

\* \* *Contextu fusco.*

- 339 vulneratus, *Lev. Ann. Sci. Nat.* 1844, 188.
- 340 dorcas, *Berk. Ann. Nat. Hist.* 1862, 195.
- 341 Dozyanus, *Lev. Ann. Sci. Nat.* 1848, 123
- 342 anebus, *Berk. Hook. Journ.* 1847, 504.

**P. Resupinati.** Anodermeus, mollis, resupinatus, margine tenuiter reflexo. Plerumque Polyporeos in statu imperfectu.

343 pachylus, *Berk. in. Herb.* No. 2861.

344 ascoboloides, *Berk. Linn. Journ.* xiii. 162.

345 diffissus, *Berk. Fl. Nova Zeal.*

GEN. II. **FOMES.** *Fr. Nov. Symb.* 31.

Pileus primitus lignoso-induratus (raro molles, plorantes) contextu floccoso intertexto, crusta rigida obductus, azonus, sed demum concentrice sulcatus.

Fungi perennes (vulgo stratoſe) reviviscentes, sed stratum annum vegetum tantum est.

**A. Mesopodes.** Pileus integer, glaber, stipes distinctus, verticalis, simplex.

\* *Stipite glabro, nigricante.*

346 nigripes, *Fr. Epic.* 435.

347 diabolicus, *Berk. Hook. Journ.* 1856, 174.

348 rufoatratus, *Berk. Hook. Journ.* 1856, 174.

349 incrustatus, *Fr. Nova Symb.* 45.

350 rhizomorphus, *Mont. Syll.* 161.

351 hypoplastus, *Berk. Hook. Journ.* 1856, 174.

\*\* *Stipite fusco, pruinoso vel tomentoso.*

352 augustus, *Berk. Hook. Journ.* 1856, 143.

353 rhinocerotis, *Cooke Enum. Polyp.* 150.

354 rudis, *Berk. Ann. Nat. Hist.* iii. 1839, 323.

355 pullatus, *Berk. in Herb.* 2340.

356 rugosus, *Nees. Nova Acta. Cur.* xiii. t. 7.

357 scleropodius, *Lev. Ann. Sci. Nat.* 1846, 123.

358 camerarius, *Berk. Hook. Journ.* 1856, 143.

359 Schomburgkii, *Mont. and Berk. Hook. Journ.* 1844, 331.

360 calcigenus, *Berk. Hook. Journ.* 1843, 636.

361 omphalodes, *Berk. Hook. Journ.* 1866, 172.

362 cassiæcolor, *Berk. Hook. Journ.* 1856, 171.

363 pansus, *Berk. Hook. Journ.* 1856, 169.

364 xylodes, *Berk. Hook. Journ.* 1856, 171.

365 heteromorphus, *Lev. Ann. Sci. Nat.* 1846, 123.

366 procerus, *Berk. Hook. Journ.* 1856, 171.

367 exilis, *Berk. Hook. Journ.* 1856, 173.

\*\* \* **OCELLATI.**—*Poris contractis ocellatis.*\*

368 ocellatus, *Berk. Hook. Journ.* 1856, 172.

369 pallidus, *Berk. Hook. Journ.* 1856, 176.

370 variabilis, *Berk. Hook. Journ.* 1856, 193.

*var. mesostictus, Berk.*

*var. ellipticus, Berk.*

\* Mouth of the pores contracted to a minute punctiform orifice, hence papillate, with the appearance of very thick dissepiments.

371 semiclausus, *Berk. Hook. Journ.* 1856, 193.

*var. spathularius, Berk.*

372 brunneopictus, *Berk. Hook. Journ.* 1856, 176.

**B. Pleuropodes**, *Fr.* Pileus horizontalis hand circinatus, glaber, crustato-laccatus, stipes simplex, adscendens, corticatus vel definite lateralis vel excentricus.

\* *Stipite laccato.*

373 amboinensis, *Fr. Epicr.* 442.

*a lingua, Nees. Acta. Cur.* xiii. t. 3.

*b japonicus (Fr.), Thunb. Fl. Jap.* t. 39.

*c cochlear, Nees. Acta. Cur.* xiii. t. 6.

*d gibbosus, Nees. Acta. Cur.* xiii. t. 5.

*e pisochapani, Nees. Rumph. Amb.* vi. t. 576.

*f fornicatus, Fr. Epic.* 443.

374 lucidus, *Fr. Epic.* 442.

375 Curtisii, *Berk. Hook. Journ.* 101.

376 nutans, *Fr. Nova Symb.* 45.

377 longipes, *Lev. Ann. Sci. Nat.* 1846, 125.

378 umbraculum, *Fr. Epic.* 435.

\*\* *Stipite pruinoso vel velutino.*

379 dealbatus, *B. & C. Grev.* i. 39.

380 polydactylus, *Berk. Hook. Journ.* 1856, 196.

381 superpositus, *Berk. Linn. Journ.* xiii. 161.

382 deformis, *Schæff. Icon.* t. 264.

383 languidus, *Fr. Fungi Guin.*

384 obsoletus, *Fr. Epicr.* 54.

385 atropurpureus, *Berk. Hook. Journ.* 1856, 194.

386 macer, *Berk. Hook. Journ.* 1856, 176.

387 hemibaphus, *Berk. Hook. Journ.* 1856, 193.

388 placopus, *Lev. Ann. Sci. Nat.* 1846, 124.

389 mastoporus, *Lev. Ann. Sci. Nat.* 1844, 182.

390 testaceus, *Lev. Ann. Sci. Nat.* 1846, 126.

391 opacus, *Mont. & Berk. in Mont. Syll.* 161.

392 auriscalpium, *Pers. Gaud. Voy.* 169.

393 pudens, *Berk. Hook. Journ.* 1852, 138.

394 Glaziovii, *Berk. in Warm. Symb.* 1879, p. 34.

395 regulicolor, *Berk. in Herb.* No. 2420.

\* \* *incertæ sedis.*

396 corrugis, *Fr. Hym. Eur.* 536.

397 hirtus (*Quel.*), *Fr. Hym. Eur.* 536.

**C. Merismoidei**, *Fr.* E trunco tuberculove communi explicantur pileoli numerosissimi persistente tenaci, contextu floccoso submolli fomentario, poris adnatis=Merisma suberosi, *Fr. Ep.* 451.

398 graveolens, *Schwein. Syn. Car.* 904.

399 senex (*Nees*), *Mont. Syll.* 160.

= *rhaborbarinus*, *Berk.*

- 400 crassus, *Fr. Hym. Eur.* 543.  
 401 fuliginosus, *Fr. Hym. Eur.* 543.  
 402 anthracophilus, *Cooke Grev.* xii. 16.  
 403 cornubovis, *Cooke Grev.* xiii. 2.

**D. Fomentarii.** Pileo floccoso-fomentario, primitus exsucco, haud carnosio spongiosove, crusta dura cornea tecto, poris demum stratosis.

\* *Contextu albo, albidove.*

- 404 scansilis, *Berk. Linn. Journ.* xvi. 53.  
 405 enteroleucus, *Fr. Epic.* 468.  
 406 volvatus, *Peck, 27 Report,* 98.  
 407 ulmarius, *Fr. Hym. Fur.* 562.  
 408 cytisinus, *Berk. Eng. Fl.* v. 142.  
 409 hornodermus, *Mont. Ann. Sci. Nat.* 1856, 368.  
 410 geotropus, *Cke. Grev.* xiii. 32.  
 411 ligneus, *Berk. Ann. Nat. Hist.* 1839, 387.

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### NOTICE.

Pages 49 to 110 of Appendix, containing descriptions of British Hymenomycetes, in continuation from the preceding volume, will, in binding, be placed at the end, or may be kept as a separate work. They are, in effect, the letterpress to the plates contained in Vols. I. and II. of "Illustrations of British Fungi." Further instalments, in continuation, for Vols. III. and IV., will be proceeded with immediately.



