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Grevillea,

A QUARTERLY RECORD OF

CRYPTOGAMIC BOTANY

AND ITS LITERATURE

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

Author of "Handbook of British Fungi", "Fungi, their uses," Qc,
"Bust, Smut, Mildew, and Mould," fc, \$c.*

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NOTICE,

Pages 49 to 110 of Appendix, containing descriptions of British Hymenomyces, 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 Ms, m, and iv., will be proceeded with immediately.

Grevillea,

¼ QUARTERLY RECORD OF CRTPTOGAMIC 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, *JClotsch*.

Lentinus dactyliophorus, *Lev*.

Lenzites platyphyllus, *Cooke*.

Pileo subreniforrai (vel orbiculari) suberoso, albido, postice lato (vel centro), affixi, subtiliter velutino, præcipue margine radiato-6ii lea to, 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*.

Folyporus (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, siccò rugoso; hymenio albido, poris parce decurrentibus, rotundis, sequalibus, minutis ($\frac{1}{2}$ 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 differ? 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, *Kees*.

Polyporus (Mesopus) xanthopus, *Fries*.

Polyporus (Pleuropus) flabelliformis, in.

Polyporus (Pleuropus) aflinis, *Nees*.

Polyporus (Pleuropus) sanguineus, *Fries*.

Polyporus (Pleuropus) incurvus, *Cooke*.

Carnosus, demumcartilagineus, rigidus tennis 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 subsequalibus, rotundatis $\frac{1}{2}$ mm. Dissepimentis tenuibus.

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

Pileus $2\frac{1}{2}$ x 2 in. Stem 2-3 in. long, $\frac{1}{2}$ 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, concentric sulcato-zonatis, glabris, margine tenui acuto. Contextu fibroso tenui atro-purpureo. Hymenio atro-fuligineo, saepe glaucescente, poris minutissimis rotundis aequalibus ($\frac{1}{4}$ mm.) elongatis. *Polyporus phcBus*, 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 Herl*
*Berk, 2571**.

Pileo ungulato, crasso glabro, remote concentric sulcato, tuberculato, e fuligineo demum canescente, intus strposo-molli pallido lignicolori, cute crassa dura, margine obtuso pallidiore, hymenio ochraceo, tubulis elongatis stratosi, poris rotundatis minimis sequalibus ($\frac{1}{2}$ 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. pinico/a*, 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, subsequialibus (J mm. diam.) grunulis arenarum involventibus; contextu nigrino.

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.

Polypoxus (Xnodexmei) caliginosus, *Cesati, vix lerk.*

Polypoxus (Inodermei) cingulatus, *Berk, non Fries,*

Polypoxus (Inodermei) axatus, *Berk,*

Polyporus (Xnodexmei) cinexascens, *Ivies.*

Polyporus (Znodermei) bxunneo-pictus, *Berk.*

Polypoxus (Inodermei) hixsutus, *Fries.*

Polypoxus (Inodermei) substygius, *B. f. Br.*

Polypoxus (Xnodexmei) submembxanaceus, *Berk.*

Txametes xigida, *Berk.*

Txametes occidentalis, *Fries,*

Deedalea sanguinea, *Klotsch.*

Favolus scaber, *B. f. Br.*

Hexagona tenuis, *Berk.*

Beccaxia insignis, *Cesati.*

Cladodexxis dendritica, *Per9.*

Cladodexxis spongiosa, *Fries.*

Stexeum Mellisii, *Berk.*

Stexeum lobatum, *Kunze.*

Stexeum aterrimum, *Coolce.*

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

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

Allied to *S. pinceps* 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.

Stexeum involutum, *Klotsch.*

Guepinia flabellata, *Cooke.*

Csespitosa, flabellata, rubrofusca, postice attenuata, discoideo-affixa. supite 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[^] in. long, 1[^]2 inches broad. Attenuated downwards to the discoid base. Thinner than *G. helvelloides*.

Hypoxylon (Daldinia) concentricum, *Grew*

Phoma Camilleae, *Clce*,

Hypophylla. Peritbeciis sparsis mimitis, membranaceis (vix 0.1 mm.) poro pertusis. Sporis ellipticis, nucleis binis magnis repletis (0.1 X 0.05 mm.).

On leaves of *Camillea thea*. Jobore.

Sphaerella (*Laestadia*) *Camilleae*, *Cke*.

Epiphylla, sparsa. Peritbeciis semi-immersis, membranaceis (0.25 mm. diam.) atrofubcis. Ascis clavatis octosporis. Sporidiis biserialibus ellipticis, continuis (0.12 X 0.05 mm.) pallidis, hyalinis.

On leaves of *Camillea thea*. Jobore.

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*.

Xientinus villosus, *Fries*.

Lentinus blepharodes, *B. Sf C*.

Bolbitius mitraeformis, *Harvey*.

Lenzites erubescens, *Berk*.

Lenzites applanata, *Fr*.

Polyporus sanguineus, *Fr*.

Polyporus trichomallus, *B. Sf Mont*.

Polyporus Feei, *Fries*.

Polyporus Floridanus, *Berk*.

Polyporus versicolor, *Fr*.

Polyporus pinsitis, *Fr*.

Trametes versatilis, *Berk*.

Hexagona variegata, *Berk*.

Zrpex sinuosus, *Fr*.

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

Stereum lobatum, *Eunze*.

Cora pavonia, *Fries*.

Hirneola xufa, *Berk*.

Geaster Peruvianum, *Cooke*.

*Peridio exteriori coriaceo, pancifido (4-6) explanato, interiori pedicellato umbrino (J unc. diam) ; ore discoideo fimbriato-ciliato, depresso, subacuto, pallidiore ; capillitio profuso, crassiusculo, fusco; sporis globosis, minutis, pallide fulvis (*0.02-0.025 mm.).*

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

About equal in size to *Geaster Bryantiu*

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 Windas.

SOME EXOTIC FUNGI.

BY M. C. COOKE.

Polyporus (Hies.) *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 albedo pallido poris subrotundis minimis sequalibus (½ mm.) circa marginem sterili.

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

Pileus 1 in/broad stem, 1 in. long, ½ in. thick.

Mycenastrum (*Sterbeekia*) *lycopexdioides*, *Cooke*.

Album, pyriforme (1-1½ unc. lat. 2 unc. alt.), læve, glabrum, in stipite sterili productum; capillitio sporisque flavido-olivaceo, filis crassis, laevibus, plerumque simplicibus, hinc illic turgidis (0.005-0.015 mm. diam.). Sporis globosis laevibus (0.0045 mm.), spiculis rectis persistentibus oinatis.

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

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

Æcidium Cephalandrae, *Cooke*.

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

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

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

Puccinia Lagenophorae, *Cooke*.

I. *Æcidium Lagenophorae*. Epiphyllum. Maculis nullis. Peridiis sparsis, semi-immersis, lacerato-marginatis, albis, sporis globosis (0.012 mm.).

II. *Uredo Lagenophorae*. Soris sparsis minimis pulverulentibus fuscis, vel sequenter immixtis, sporis globosis (0.02 mm.), fuscis, episporio asperulo.

III. *Puccinia Lagenophorae*. Epiphylla, soris sparsis, atrofuscis, subpulverulentibus, sporis clavatis, medio constrictis, fuscis loculo supero obscuriore, obtuso, subgloboso, episporio incrassato, laevi, loculo infero in stipitem brevem attenuato (-0.01-0.045 x 0.02 mm.).

On living leaves of *Lagenophora Billardieri*. Omeo, Australia. *Puccinia Ipomeae*, *Cooke in, Jav. Amer. Fungi. No. 792*.

I. *Æcidium concolvuli*, var. *Ipomeae*. JSchweinitz.

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 (-0.05-0.06 x 0.02-0.03 mm.), pedicellis crassis, elongatis, hyalinis (0.06 mm. long, 0.004-0.01 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 letterpress 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 Lesqareux and Thomas P. James; six plates, 448 pp., 8vo. Boston: Cassino and Co. London: Triibner and Co.

SYNOPSIS PYRENOMYCETUM.

(Continued from Vol. xn., p. 113J

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** (Schivein).

Hypoxylon solidum (S.), Berk, in *Sacc. Syll. No. 1352. Herb. Berk. No. 8679.*

Ascis clavatis octosporis. Sporidiis biserialibus Janceolatis uniseptatis, medio constrictis, hyalinis, pallide fuscis (-OSS-'OOG-'OO? 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**, *CooTte*.

Ervtmpens, caespitosa. Peritheciis ceraceis subglobosis, atrofuscis, opacis, cum pressione difformibus, ab initio pulvere ferrugineo tectis, demum nudibns, ostiolo pertuso. Ascis clavatis, octosporis, sporidiis fusiformibus, uniseptatis, hyalinis ('025 X #005 m.).

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

431.* **Dialonectria ostiolorum**, Berk. § *Cooke in Herb. Berk.*

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

On *Xylaria rhopaloides*. Cuba.

534.* **Gibbexella calamia**, *Cooke*.

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

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

678. **Axospermum fultum**, *Hark.*, seenis 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. *Sphceria (Cordyceps) Fockei*, *Miquel Fungi Exot.*, p. 198'.

In truncis. Surinam.

Stem 1¹/₂ in. long, X line thick, black, capitulum ¹/₂-lin. 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 sub-clavato, obtusissimo vel sub-attenuato, ostiolis subprominulis, nigro-punctato, caeterum griseo-fusculis obducto, ascis angustis basi attenuatis obscuris, paraphysibus intermixtis, sporis simplicibus ellipticis obtusis. *Sphceria* (*Cordyceps*) *herculea*, Miquel Fung. Exot., p. 197.

In trunco denudato *Artocarpus incisus*. Paramaribo.

Stem 2-3 lines long, capitulum 1-4 in. long, f-1¹/₂ in. thick.

631. *Xylaria* **AKASCARENSIS**, Cooke.

Suberosa, claviformis, simplex. Clavula falcata, aequalis (7 unc. x | unc.) sicco rugulosa, rubro-fusca, deorsum in stipitem sequalem (circ. 3 unc. long) producta. Peritheciis atris, globosis subprominulis, ostiole atro punctiformi instructis. Contextu albo. Ascis immaturis.

On wood. Central Madagascar. Kev. R. Baron (3186) in Herb. Kevv.

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 •011–013 X •0045–005 mm., very similar to those of *At. placenta*.

Fam. 2. XYLARIÆ.

Stromaticas, compositas; perithecia subimmersa, carbonacea. Sporidia fusca.

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

A. XYLOGLOSSA. Clava undique fertili, stipite glabro.

a, Capitulum clavatum; stipite tenui, elongato.

* *Simplex*,

- | | |
|--|--|
| 582. englossa, <i>Fries.</i> ... 1227 | 592. exalbata, <i>Berk.</i> ... 1217 |
| 583. australis, <i>Co0&0,6rm;.xi.</i> 84 | 593. granimica-, <i>Mont.</i> ... 1189 |
| 584. involuta, <i>A7otec/i.Zitwn.vii.</i> | = = <i>ectogramma</i> , <i>B...mm</i> 1197 |
| = = <i>tabacina</i> , <i>Kickx.</i> 1228 | 594 m plan ax is, <i>CPR</i> 11^o |
| = = <i>telfairit</i> <i>Berk.</i> ... 1204 | 595. rhopaloides, <i>Mont.,,</i> 1234 |
| 585. <i>Wrightii,j5. # C...</i> 1212 | 596. <i>Schweinitzii, B. \$ C,</i> 1222 |
| 586. portoricensis, <i>#Zotec7*</i> . li70 | 597. leptopus, <i>Fr,</i> ... 1151 |
| 587. hypeerythra, <i>Mont.</i> 1286 | 598. protea, <i>Fr.</i> ... 1154 |
| 588. giyanensis, <i>Mont.</i> 1165 | 599. complanata, <i>Ces.</i> ... 1221 |
| 589. clavicularis, <i>KloL...</i> 1172 | 600. fissilis, <i>Ces.</i> ... 1186 |
| 590. gigantea, <i>Zipp.</i> ... 1226 | 601. <i>Berkeleyi, Mont., Greo.</i> xi. |
| 591. <i>o\oh&\$h*,Berk.,Grer.xi.</i> 84 | 85 |

602. rhytidoplaea, *Mont.* 1200
 603* zealandica, *Cooke...* 1209
 604. nigripes, *Klotsch., Linn.*
 vii. 203
 = *escharoidea*, *Berk.* 1184
 = *pzperiformis*, *Berk.* 1280
 = *mutabilis*, *Curr., Linn.*
 Trans.
 = *flagelliformis*, *Curr.,*
 Linn. Trans.
605. cubensis, *B. \$ C...* 1177
 606. Fockei, *Miq., Grev.* xii.
 607. *mu|t|fidsi, Kunze, Grev. x|* 85
 608. acicularis, *Bei k., Grev. xi. Sb*
 609. scopiformis, *Mont....* 1288
 610. cordovensis, *Berk., Grev.*
 xi. 85
 £11. retipes, *Lev.* ... 1198
 612. siculii, *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 ^/vL, *Grw.* xi. 85
 619. Gardneri, *Berk.* .. 1164
 620. portentosa, *Mont...* 1250
- b. Capitulum subclavatum ; stipite crassoj abbreviate vel obsolete
628. polymorpha, (rH>y.... 1150
 629. variabilis, *W. tyCurr.* 1156
 630. cerebriformis, *Cooke, Grev.*
 xi. 86
 631. gompbus, *Fr.* ... 1187
 632. inascarensis, *Cooke, Grev.*
 xii.
 633. papyriferfi, *Fr.* ... 1168
 634. conocephala, 5. ^ C. 1176
 635. Emerici, *Berk., Grev. x|* 86
 636. doiningensis, *Berk.* 1182
 637. Titan, *Berk.* ... 1207
 638. Poiteana, *Lev.* ... 1192
 639. cynogiossa, (7/fo., brm\ xii. l
 640. herculea, *Miq., Grev.* xii.
 641. regalis, *Cooke, Grev.* xi. 86
 642. obtusissima, *Berk.*.* 1194
 643. turgida, *Y. ... 1155
 644. lobata, *CW<*, *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. x| Sb*
 627. tentaculata, *Rav.* ... 1205
648. aenea, *Mont.* ... 1215
 649. allantoidea, *Berk.* ... 1178
 650. Thwaitesii, *B. l Grev.* xii. 1
 651. iistulosa, *Lev.* ... 1185
 652. dealbata, *B. & C.* ... 1223
 653. iistnea, *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, ^, ^ (7. ... 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, £*??•£.££/'. 5963
 669. piliceps, *Berk.* ... 1174
 670. pyramidata, *B. & W.* 1196
 671. inarasinoides, *B. &*
 Cooke ... 1161
 672. btillboidea, *Ka. \$Cke.* 1203
 673. cudonia, *B. fy C.* ... 1213
 674. obovata; *Berk.* ... 1191
 675. tuberiformis, *Berk.* 1225
 676. glebulosum, *Ces.* ... 1494
 677. globosa, *Mont.* 1426
 678. clavulus, *B. \$ C.* ... 1220

679. haemorrhoidalis, *B.* 680. intermedia, *Ces.* ... 1162
 £ *Br.* ... 1163 681. favosa, *Berk., Grev.xi.* 87
- d. Capitulum applanatum, subdiscoideum.*
682. frustulosa, ^, £ *C...* 1534 684. Berterii, *MonU* ... 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. scrnposa, *Mont.* ... 1252
688. bispidula, *B. £ C...* 1253 694. pohcladia, *Lev.* ... 1267
689. Beccariana, *Pass....* J243 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 abbreviate).*
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. inaequalis, *B. \$• C...* 1295
703. Kegeliana, *Lev.* ... 1190 709. fustis, *Mont., Grev.xi.* 87
704. pallida, *Cooke* ... 1237 710. myosurus, *Mont.* ... 1159
705. gramiuicola, *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. rhizomorpba, *Mont.* 1300
715. grandis, *Peck* ... 1284 720. adscendens, *Fr.* ... 1248
716. stuppea, *Wallr.* ... 1266 721. fasciculata, *Speg.* ... 1289
717. caespitulosa, *Ces.* ... 1287 722. coccophora, *MonU...* 1291
718. bulbosa, *Pers.* ... 1285
- c. Capitulum ovatum vel subglobosum.*
723. vaporaria, *Berk.* ... 1292 725. axifera, *Mont.* ... 1301
724. thyrus, *Berk.* ... 1206
- d. Stroma filiformia, peritbecia laxa.*
726. tricolor, *Fr.* ... 1297 729. axillaris, *W.\$Curr.* 1157
727. filiforraais, />. ... 1296 730. furcata, *Fr.* ... 1298
728. gracillima, *Mont....*]299 731. 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. oxjacentbre, *Lev.* ... 1271

737. Delitschii, *Avers.* ... 1272 739. massuln, *Ces.* ... 1262
 738. cnpressiformis, *Fr.* 1261 740. acuta, *Peck* ... 1277

b. Capitulum furcatum vel partitum.

741. cornu-damie, *Schivz.* 1278 748. subterranea, *Schwz.* 1281
 742. Fejeensis, *Berk.* ... 1274 749. ianthino-velutina, *M.* 1282
 743. hypoxylon, *Fr.* ... 1260 = *apeibce*, *Mont.* ... 1302
 744. Guepini, *Fr.* ... 1209 = *monilifera*_y ... *Berk.*,
 745. enpeliaca, *Ces.* ... 1269 *Gre.* xi. 87
 746. arbuscula, *Sacc.* ... 1276 750. Cullenise, *B. & Br.* 1254
 747. dichotoina, *Kunze.*... 1275 751. flabelliformis, *Schwz.* 1273

c. Capitulum subglobosum.

752. pedunculata, *Fr.* ... 1259 754. aristata, *Mont.* .. 1263
 753. Tulasnei, *Nke.* ... 1265 = *acicula*, *Ces.* ... 1216

IKCERTAQ SEDIS.

755. t(berosa, L[^].iw *Gavd.Voy.* 758. fulvo-lanata, *Berk.* 1313
756. furce]sLta, Berk., Grev.*i.\$8 **759. hystrix, Berk., Grev. xi. 88**
 757. xanthiceps, *Berk., Grev.* xi.88 -

GFN. 2. THAMNOMTCES, *Ehrb.*—Stroma teres vel filiformia.
 Perithecia siipeificialia laxa.

760. hippotrichoides, ^o^ 1303 765. Chamissonis, *Ehb.* 1308
 761. rostratus, *Mont.* ... 1304 766. annulatus, *Ehrb.* ... 1309
 var. similis, Berk. "767. chordalis, *Fr.* ... 1310
 762. adnatus, *Fchl.* ... 1305 768. fuciformis, *Berk.* ... 1311
 763. fragilis, *Roth.* ... 1306 769. annulipes, *Mont.* ... 1312
 764. hispidissimus, *Fr.*... 1307

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

a. Stroma 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, *£.£C.* 1319
 775. Javanica, *Mont.* MSS.

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

778. punctata (*Linn.*) ... 1321 781. heliscus, *Mont.* ... 1324
 779. (*Edipus, Mont.* ... 1322 782. macrorrhiza, *Speg.*]325
 = *incrassata*, *Jungh.* 783. scutellata, *Fr.* ... 1326
 780. pileiformis (*ifcr&.*)... 1323 784. ? cupularis (*Fr.*) ... 1327

GEN. 5. RHOPALOPSIS, *CooA-e.*—Densissime caespitosum,
 capituli abbreviati, breviter etipitati, vel in stromate intricato
 conge** ti.

a. Stromate simplici.

785. cajnopus (*Mont.*) ... 1488 789. confusnm (*B. & C.*), *Grev.*
 786. aggregating JF.tf.tf.) 1427 790. micropus (*Berk.*) ... 1491
 787. angolense (*W. & C.*) 1519 791. congestum (*B.fyBr.*) 1402
 788. clavus (*Fr.*) ... 5994 792. *BevkQeynimw, Cooke, Grev.*

h. Stromate multipartiti.

793. cetrarioides (*IV. & Curr.*) ... 1489 796. contracta (*Speg.*) ... 1233
 794. lichenoides (*B.*) 797. Kurziana (*CW.*), *Gw.* xii.
 795. Puiggarii (>S>0.)... ¹²³² 798. inicrocephala (*Mont.*) 1256
 799 « xylarioides (*Speg.*) 1490

GEX. 6. VSTULINA, TitZ[^]—Stroma repando-pulvinatum, erasum senio intus subcavum.

800. vulgaris, *Tul.* ... 1328 804. *tessnlntii, Berk., Grev.* xii. 3
 801. Brasiliensis, *Speg.*... 1329 805. pavimentosa (*Ces.*) 1374
 802. inacrosperma, *Mont* 1330 806. tuberiforaiis (*TFa/r.*) 1428
 803. zonata (*Lev.*) ... 1331

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

807. tubulina (4. #S.)... 1332

GEN. 8. NUMMULARXA.—Stroma disciforme, v cupuliforme, adnatum marginatnm.

SECT. A.—Disco concavo.

808. repanda, *Fr.* ... 1525 813. macrocenangium, *Cfi5.* 1411
 809. discreta, *Schw.* ... 1529 814. Moselei, *Berk.* ... 1421
 810. discincola, *Schw.* ... 1104 815. lutea, *A. & S.* ... 1528
 811. obularia, *Fr.* ... 1540 81b. succenturiata, *Töde.* 1527
 812. Baileyi, *B. & Br.* 817. gigas, *Plow.* ... 1531

SECT. B.—Disco ctfnvexo.

818. Bnlliardi, *Tul.* ... 1524 834. mauritanica, *J9. ^ Cke.*
 819. constricta, *Fr.* ... 1543 835. rumpens, *Cke.* ... 1140
 820. repandoides, i?W... 1526 836. placenta, *Kalch.* ... 1377
 821. clypeus, *Schw.* ... 1524 837. iuicroplaca, 2?.\$*/fa0. 1112
 822. glycirrhiza, *B. & C.* 1541 838. liypophlaBa, jff.^/2ai7. 1137
 823. macula, *Schw., Grev.* xii. 6 839. testndinea. Cfe., *Grev.* xii. 7
 824. regia, *DeNot.* ... 1538 840. tenuis, *Pass* ... 1537
 825. mediterranea, *JtfZVotf.* 1539 841. Phillyre®. *Mont.* ... 1116
 826. authracodes, *Fr.* ... 1383 842. hetemstoma, *Mont.* 1380
 827. comedens, *Ces.* ... 1389 843. scriblita, *Mont.* ... 1405
 828. dryophila, *Tul.* ... 1530 844. scutata, *B. & Cke., Grev.* 7
 829. pithodes, jg. & *Br.*... 1109 845. cycliscus, *Mont.* ... 1408
 830. fossu 1 ata, *M.* ... 1455 846. melanaspis, *Mont.* . 1419
 831. micro»ticta, *M.* ... 1415 847. ? Car. ibayense, 4fonf. 1400
 832. exutans, *Cke.* ... 1105 848. ? pachyloma, *Lev.*... 1417
 833. australis, *Cke., Grev.* xii. 6 849. ? sertata, *DR. & M.* 1372

GEN. 9. **DA. LDINIA**, *Be Not*—Stroma subsphaeroideum, 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. & Fr.</i>)	... 1518	857. Thouarsiana (<i>Lev.</i>)	1523

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

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

a. Perithecia monosticha.

858. cerebrinum, <i>Fee.</i>	... 1224	863. placentifforme, <i>B.</i>	... 1535
859. Wrightii, <i>B. & C.</i> ...	1533	864. suborbiculare, <i>Curr.</i>	1536
860. ccelatum, <i>Fr.</i>	... 5964	865. Broomeanum, <i>5. £ C.</i>	1460
861. corrugatum, <i>Fr.</i>	... 5965	866. viridi-rufum, <i>B. \$ E.</i>	5966
862. sclerophaeum, <i>5.#C.</i>	1341		

b. Perithecia stratosà.

867. Petersii, <i>B. \$ C.</i>	... 1406	868. ovinum, <i>Berk.</i>	5967
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II. PHYLACIA. Stroma erectum, laccatum.

a. Species perfectae.

869. turbinatum, <i>Berk.</i> ...	1422
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b. Species imperfectae.

870. sagraBanum, <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. SPHEROXYLON. Stroma superficiale, globosum or subglobosum.

a. Stroma coloratum, non nigrum.

875. coccinerm, <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. luridnm, <i>Ntke.</i>	... 1347
878. deciduum, <i>B. \$ Br.</i>	1403	888. Bagnisii, <i>Sacc.</i>	... 1348
879. enteromelum, <i>S/c/wz.</i>	1355	889. notatnm, <i>B. \$ (7....</i>	1360
880. suberosum, <i>J5.tf-C.</i> ...	1359	890. gilvum, <i>Jungh.</i>	... 1353
881. pulchellum, <i>Sacc.</i> ...	1333	891. scleroderma, <i>MonU</i>	1334
882. vera-crucis, <i>B.fyCke.</i>	5970	892. distillatum, <i>B. \$ Br.</i>	1340
883. argillaceuni, <i>Per*</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. \$ C.</i>	1386
896. teres (<i>Schwz ?</i>) <i>B. & C.</i>	1493'	901. avellana, <i>Ces.</i>	... 1425
897. majiisculum, <i>Cke.</i>	... 1369	902. Hookeri, <i>Berk.</i>	... 5973
898. malleolus, <i>B. \$ C.</i>	1413	903. noduloruui, <i>Lev.</i>	... 5974
899. hians, <i>B. \$ Cke.</i>	... 5972	904. fragaria, <i>Ces.</i>	... 1393

905. *colirerens*, *Pers.* ... 1370 910. *placenta*, *Link.* ... 1404
 906. *leucostigma*, *Lev.* ... 1391 911. *turbinulatum*, *Schwz.* 1407
 907. *comaropsis*, *Mont.* ... 1398 912. *campotrichum*^{il}/*ont.* 1409
 908. *bomba*, *Mont.* ... 1399 913. *porosum*, *Mont.* ... 1381
 909. *Murrayi*, *B. & C.* ... 1397 914. *glomiforme*, *B. & C.* 1364

IV. CLITOXYLON. *Stroma pulvinatum plus minus convexum, nec effusum.*

a. Stroma coloratum, non nigrum.

915. *xanthocreas*, *B. & C.* 1302, 923. *vididum*, *B. & Br.* ... 1356
 1361 924. *quisquilarum*, *Mont.* 1366
 916. *haematostroma*, *Mont.* 1435 925. *pruinatum*, *Klot.* ... 942
 917. *epiphleum*, *R. & C.* 1444 == *Holwayi*, *Ellis*... 5975
 918. *hypomiltum*, *Mont.* 1336 926. *discolor*, *B. & C.* ... 1363
 919. *decorticutum*, *Schwz.* 1351 927. *eterio*, *B. & Br.* ... 1133
 920. *irradians*, *Mont.* ... 1424 928. *endoxanthum*, *Mont.* 1362
 921. *discoideum*, *Cke.* ... 1346 929. *polyporoideum*, *2?*, *Grev.*
 922. *vinosum*, *Mont.* ... 1365 xii. 53

b. Stroma nigrum.

930. *leucocreas*, *B. & R.* 1388 947. *Catalpae*, *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. *stigmoidem*, *Ces*... 1378 951. *Javanicum*, *Lev.* ... 1382
 935. *annulatum*, *Schwz.* 1384 95*2. *Mascarensis*, *Berk.* 5979
 936. *Pouceanum*, *B. & Cke.*^{all} 953. *leucostonium*, *Cke.* 5980
 937. *durissimum*, *Schwz.* 1447 954. *pauperatum*, *Kurst.* 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. *Y&mosixm*, *Schwz.* ... 59rt2
 942. *callostroma*, *Schwz.* 1472 959. *monticulusum*, *Mont.* 1396
 943. *smilacolum*, *Howe.* 1371 960. *Mauritaiiicum*, *Z>.^J/*.1418
 944. *rimaruni*, *B. & Cke.* 5978 961. *Phoenix*, *Fr.* ... 1466
 945. *sassafras*, *Schwz.* ... 1451 962. *culmoruin*, *Cke.* ... 1416
 = *H. fuoicolor*, *B. & C.* 963. *Kurzianuin*, *Curr*... 1429
 946. *xanthostromum*, *Sch.* 1507

IV. PLACOXYLON. *Stromate late et vage effuso.*

a. Stroma coloratum, non nigrum.

964. *purpureum*, *Ntke.* ... 1430 973. *anthochroum*, *i? & 7?/*1442
 965. *perforatum*, *Schwz.* 1431 974. *fuscopurpureum*, *Sch.* 144(5
 966. *atropurpureum*, *-Fr.* 1433 975. *florideum*, *B. & C*... 1440
 967. *ruldgino&uin*, *Pers.* 1434 976. *ianthinum*, *Cke.* ... 5987
 968. *haamatites*, *Lev.* ... 5984 977. *atropunctatuui*, *>S^c/ia*;2.1102
 969. *trugodes*, *B. & Br.* 1439 978. *capnodes*, *Berk.* ... 1113
 970. *niurciilum*, *B. fy Br.* 1476 979. *jecorium*, *B. & Rav.* 1445
 971. *piceum*, *Ellis.* ... 5985 980. *crocopeplum*, *B. & C.* 1437
 972. *Feudleri*, *Berk.* ... 5986 981. *crocatum*, *Mont.* ... 1438

982. niniatum, *Cke.* ... 1432 984. ochraceofulvum, *B. \$ Cke.*
 983. subgilvum, *B. \$ Br.* 1443 985. chrysoconium, *£.£.ffr.* 1436
 b. Stroma nigrum.
 986. Cesatianum, *Cke.* 5989 1004. investiens, *Schwz.* 1470
 987. stygium, *Lev.* ... 1452 1005. concurrens, *B. \$ C.* 1474
 988. tormentosum, *Ces.* 1465 1006. crustaceum, *Ntke.* "1453
 989. stigmatum, *Cke.* 1453 1007. reticulatum, *K.* ... 1454
 990. oodes, *Berk.* ... 1456 1008. subtemmeum, *Fckl.* 1462
 991. bifrons, *Not.* ... 1483 1009. unitum, *Fr.* 1476
 992. seneum, *Ntke.* ... 1483 1010. colliculosum, *Schwz.* 1477
 993. hypoleucum, *B. fy Br.* 5990 1011. caries, *Schwz.* ... 1510
 994. epirhodium, *^ # R.* 1457 1012. allantoidium, *Cke.* 1480
 995. punctulatum, *^ ^.* 1534 1013. Michelianum, *Not.* 1482
 996. tinctor, *Berk.* ... 741 1014. illitum, *Schwz.* ... 1511
 997. macrosporum, *-ffar5<* 1473 1015. irregulare, *Cke.* ... 5991
 998. serpens, *Pers.* ... 1448 1016. glomeratum, *Cke.* 5992
 999. Archeri, *Bejk.* ... 1449 1017. Beaumontii, *^ ^ C.* 2848
 1000. effusum, *i ^ e.* ... 1450" 1018. atramentosum, *Sch.* 1503
 1001. Vogesiacum, *Pers.* 1454 1019. bipapillatum, *.#C.* 1467
 1002. fragile, *Ntke.* ... 1459 1020. incrustans, *P.* ... 1504
 1003. Lenormandi, *B. & C.* 1458

V. ENDOXYLON. Stromate matriee plus v minus immerso.

1021. udum, *P^r5.* ... 1485 = *confluens*, *Auct.*
 1022. minutum, *Ntke.* ... 1486 1024. Massara, *Not.* ... 1141
 1023. semi-immersum, *N.* 1487 1025. prorumpens, *Fr.*... 5993

DUBIÆ.

1026. sclerotoideum, *B.* 1351 1031. exertum, *Fr.* ... 1501
 1027. gangrena, *Ces.* ... 1858 1032. exaratum, *Schwz.* 1506
 1028. lobatum, *Fr.* ... 1499 1033. sphamostomum, *£c/i.* 1508
 1029. glomus, *j9. ^ C.* ... 1394 1034. hydnicolum, *Schwz.* 1471
 1030. Uranise, *Mont* ... 1500 1035. arecarium, *Bory.*... 1468

CALIFORNIAN FUNGI.

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

(Continued from Vol. xn., p. d7.)

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. <k Bâric.*

Gregaria. Perithecia minuta, membranacea, subglobosa, papillata, tecta. Sporis ellipticis, hyalinis (-006-007 x -004 min.).

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

Macropodia arctostaphyli, Cke. # Hark.

Epiphylla, sparsa. Peritheciis subglobosis, atris, erumpentibus. Sporis subglobosis, ellipticisve (-008 x '006 mm.) fuligineofuscis.

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

Sphaeropsis cupressi, Cke. \$ Hark.

Erumpens. Peritheciis atris, obtusis, primum tectis, demum erumpentibus, epidermide circumambieite arete adherentibus. Sporis ellipticis, continuis, hyalinis, cytoplasmate granuloso (-03 X •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 (•025 x -008 mm.).

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

Cercospora rubigo, Cke. 8f Hark.

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

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

Diatrype ceanothi, Che. \$ Hark.

Acerviis yerrucseformibus, innato-erumpentibus, atris, rotundatis, peridermio arete cinctis, intus concolori. Peritheciis coiuprescis difformibusque, ostiolis brevibus, stellato-sulcatis. Ascis clavatis, octosporis., Sporidiis cylindraceutis, curv-iliis, utrinque rotundatis, luteolis, hyalinis (-012-014 x '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, caespitulis in cortice nidulantibus priino 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 (-006-007 x -0015 mm.).

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

Valsaria majuscula, Cke. & Hark.

Tecta. Pustnlis sparsis, vix prominulis, peritheciis 6*10-coiupositis, demum cuticula perforantibus, ostiolis brevibus obtusis. Ascis amplis. Sporidiis majusculis, ellipticis, medio constrictis, utrinque rotundatis, uniseptatis, fuscis (-05 x '025 mm.).

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

Sometimes the large pporidia 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 *Afassaria*.

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, biseriatis, rectis quadri-nucleatis demum 2-4 cellularibus, hyalinis (-015-'017 X -003 mm.).

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

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

Sphaeria (Walirothiella) eunotiaespora, Cke. *Sf Bark.*

Superficialis, gregaria. Perithecii ob-pyriformibus (\ mm.) atris, subnitidis, laBvibus, fragilis. Ascis clavatis. Sporidiis ellipticis, medio inflatis, biseriatis, continuis ('03--'035 x '012--'014 mm.) plasmate granuloso.

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

Mixed with a species of *Diplodia*.

Sphaeria (Melanomma) seminis, Che. & Hark.

Superficialis, gregaria. Perithecii (\-\ mm.) atris, opacis, subglobosis, quandoque subconfluentibus, ostiolo pertuso. Ascis clavatis. Sporidiis cylindraccis, rectis curvulisve, 5 septatis, fuscis ('05 x -006 mm.).

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

Sphaeria (Anthostoma ?) gigaspora, Cke. *\$ Hark.*

Sparsa, subinimera, uiatrice substantia tubercula orbicularia elevata tecta, peritheciis globosis magnis (1[^]-2 mm.), ostiolo obtuso, Tiigro-punctatis. Ascis amplis, saccatis, octosporis. Sporidiis elongato-ellipticis, utrinque leniter attenuatis, continuis, atro-fuscis (-065--08 x "025--03 mm.).

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

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

Sphaeria (Anthostomella) oreodaphnes, Cke. *Sf Hark.*

Sparsa, epidermide innata, tecta. Perithecii globosis, epidermide tumidula et leniter nigrificata velatis, vix papillatis. Ascis cylindraccis, octosporis. Sporidiis arete ellipticis, utrinque rotundatis, fuscis (-014--015 x '004 mm.).

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

Sphaeria (Didymulla) megarrhizae, Cke. *\$ Hark.*

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

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

Sphseria (Didymella) lupini, Cke. # Hark.

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

hyalino-flaveolis (immaturis?). Cytoplasmate granulodo ("015-017X-006-007 mm.).

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

Sphaeria (Didymosphaeria) ceanothi, Cke. \$ Hark.

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

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

Sphaeria (Didymosphaeria) sarmenti, Cke. \$ Hark.

Sparsa. Peritheciis tectis, subglobosis, atris, lsevibus, demum applanatis, ostiolo brevi punctiformi. Ascis cylindrico-clavatis. Sporidiis ellipticis, uniseptatis, medio nee constrictis, fuscis (-012 x *005 mm.).

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

Sphaeria (Amphisphaeria) Wellingtoniae, Cke. \$ Hark.

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

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

Sphaeria (Amphisphaeria) decorticata, Cke. \$ Hark.

Primitus seriatis, intra fibrillas corticis nidulans, demum sub-superficialis. Peritheciis erumpentibus, subserialibus sparsive, subglobosis, atris, opacis (vix ^ mm. diam.) Ascis cylindraceis octosporis. Sporidiis ellipticis, uniseptatis, medio arete constrictis, cellulis subglobosis efformantibus, laste fuscis (*018x-009 mm.).

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

Sphaeria (Metasphaeria) plagarum, Cke. \$ Hark.

Gregaria, tecta, elevata. Peritheciis subglobosis, atris, carbonaceis, in plagas consociatis, cuticula elevata convexo tectis. Ascis clavatis, ses&ilibus, octosporis. Sporidiis lanci^olatis, inordinatis, triseptatis, hyalinis (*018-02 x'004 mm.), utrinque acutis.

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

Sphaeria (Leptosphaeria) ceanothi, Cke. \$ Hark.

Gregaria, tecta. Peritheciis minutis subglobosis, cpidermide velatis, ostiolo brevi, punctiformi. Ascis breviter clavatis, octosporis. Sporidiis sublanceolatis, triseptatis, hyalino-luteolis ('016-018 x-0045).

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

Sphaeria (Leptosphaeria) 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, liyalino-luteolis ('022-*025 x *005 mm.).

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

Sphaeria (Leptosphaeria) bicuspidata, Cke. \$ Hark.

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

triseptatis, constrictis, fuscis, utrinque hyalino-cuspidatis (-025 X 008 mm.), sine cuspes.

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

Sphaeria (*Leptosphaeria*) *Californica*, Cke. & Hark.

Densissime gregaria, tecta. Peritheciis hemisphaerico-prominulis, obtusis, atris diu epidermide velatis, demum apice subnudis. Ascis clavatis. Sporidiis biseriatis, sublanceolatis, utrinque obtusis, 4 septatis, cellula penultima subincrassata, pallide fuscis (-025--03X -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.

Sphaeria (*Leptosphaeria*) *anisometra*, Cooke.

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

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

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

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

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

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

Lignicola. Peritheciis sparsis, in tubercula ligneo ellipsoideo elevato griseo vel nigrescente nidulantibus, ostiolo brevi vix conspicuo, pertuso. Ascis cylindraceutis octosporis. Sporidiis uniserialibus, ellipticis, medio constrictis, triseptatis, septis 1-2 longitudinalibus percursis, laete brunneis (-018--02 x '01 mm.).

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

***Sphaeria* (*Thyridium*) *Garryae*, Che. & Hark.**

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

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

***Venturia Arctostaphyli*, Cke. !> Hark.**

Amphigena, sparsa, atra. Peritheciis subglobosis, superficialibus, strigosis (12--15) pilis rigidis acicularibus (*08 mm. long). Ascis obclavatis, sessilibus octosporis, sporidiis ellipticis, utrinque rotundatis, vix constrictis, uniseptatis, flavidis (#012-015 x '005 mm.)

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

***Sphaerella acicola*, Cke. & Hark.**

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

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

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

Sphaerella umbellulariae, *Cke. #Hail*>.

Hypophylla. Maculis suborbicularibus, confluentibusve et irregularibus, purpureo-brunneis, margins nigro-linitato. Peritheciis binae illic aggregatis, semi-immersis, atris. Ascis clavatis. Sporidiis biserialibus, arete ellipticis, uniseptatis, hyalinis ($^{\circ}015 \times ^{\circ}004$ mm.).

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

Meliolopsis heteromeles, *Ckc. SfHarli*.

Effusum, atrum. Mycelio subcrustaceo, moniliformi, rarooso intertexto, *Capnodium* immixti. Peritheciis globosis ($^{\circ}2$ mm. diam.) membranaeis, liberis; ascis clavatis, octosporis; sporidiis lanceolatis, 3-5 septatis, hyalinis ($-04X-008$ mm.).

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

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

Capnodium heteromeles, *C/ce. <£ Hark*.

Effusum, atrum, subvelutinum. Hyphis densissime intertextis, ramosis septatis moniliformibusque. Peritheciis cylindraceo-ventricosis, erectis, subtenuibus, simplicibus ($^{\circ}2 \times ^{\circ}02$ mm.). Sporidiis incertis (potius triseptatis, muriformibus, fuscis 'OISX'OOOj).

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

Only free sporidia seen, and hence uncertain.

Capnodium Rhamni, *Che. \$ Hark*.

Maculiforme, atrum. Hyphis repentibus, plerumque moniliformibus, ramosis, strato tenui efformantibus. Peritheciis erectis cylindricis, sursum attenuatis ($-3 \times ^{\circ}04$ mm.) simplicibus, ore finibriato. Sporidiis ellipticis, triseptatis, fuscis ($^{\circ}0r8-^{\circ}02 \times ^{\circ}008$ mm.) uno loculo transversaliter diviso. Conidiis liberis, fuscis, uniseptatis ($^{\circ}012 \times ^{\circ}006$ mm.).

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

Evidently distinct from *Capnodium rhamnicolum*, *Rabh*.

Capnodium tuba, *CJte. \$ Hark*.

Effusum, crustaceum, atrum. Hyphis intertextis, ramosis, repentibus alterum septatis, alterum moniliformibus, crustam crassum deciduum efformantibus. Peritheciis erectis, numerosis cylindraceis ($-12 \times ^{\circ}014$), sursum ciliato, divisis, infundibuliformi expansis, conidiis (?) ovatis continuis hyalinis repletis. Asci nondum visi.

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

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

Hypoderma eucalypti, *Che. fy Hark*.

Epiphylla, gregaria. Peritheciis lanceolatis linearibusque, erumpens, atris, opacis, labiis rotundatis, laxe connivens; ascis clavatis, sporidiis inordinatis, elongato-fusiformibus, continuis, hyalinis ($-03 \times ^{\circ}003$ 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. # Rarlc.*

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

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

Peziza (Pyrenopeziza) Heteromelis, *Phil. \$ Nark.*

Gregaria, erumpens, demum sessilis. Cupulis (*2-*5 mm.) sphaericis dein expansis, leniter scabrosis, atro-brunneis; margine serrato, disco fuligineo flavescens; ascis cylindraceo-clavatis. Sporidiis ellipticis (*01 x '005 mm.) flavotinctibus; paraphysibus filiformibus, ad apicem incrassatis, flavescensibus.

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

Dermatea Pini, *Phil. \$ Harit.*

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

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

Dermatea corni, *Phil. \$ Hark.*

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

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

Stictis Araucariae, *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 x -002 mm.) pluri-septatis, paraphysibus filiformibus, numerosissimis, furcatis.

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

Stictis Megarrhizae, *Phil. \$ Hark.*

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

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

Phacidium nigrum, *Coolie*.

Gregariuin, hypophylluui, erumpens, in maculas nigras conso-
ciatnm, demum laciniato-fissuratnm (*1 rain, diam.) disco fuligineo.
Ascis clavatis, octosporis. Sporidiis ellipticis, rectis, continuis,
hyalinis (-013--025 x -005--007 mm.). *

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

Phacidium Heteromelis, *Phil. \$ Hark.*

Gregarium, orbicnlare, tectum, dein laciniato-laceratum, disco
cinereo. Ascis clavatis vel cylindraceo-clavatis, octosporis.
Sporidiis ellipticis (-01--012 x -002--003 mm.) paraphysibus fili-
formibus, superne incrassatis.

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

Hysterium Eucalypti, *Phil. 8f Hark.*

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

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

Hystexium Lonicexae, *Phil. \$ Hark.*

Sparsum vel gregarium, ellipticum vel oblongo-lanceolatum,
(•5-•12 mm. long) parallelum, prominulum, striatum vel laeve,
labiis prominulis, in setate hiulcis. Ascis cylindraceo-clavatis,
octosporis. Sporidiis ellipticis vel subpyriformibus, muriformibus,
hyalinis, plerumque gelatina involutis ('02-•03 x -007-•011 mm.)
paraphysibus indistinctis.

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

Hypodexma Heteromelis, *Phil. \$ Hark.*

Gregaria, oblonga, rectis vel curvulis, applanata, vel leniter
elevata (-4-•8 mm. long). Ascis cylindraceis. Sporidiis filifor-
nibus (-065 x •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.

ON FRIES¹ 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 Fries¹ description of the *Agaricini* in his "Hymenomyces 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 Albinovanus, 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 purpurea 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; couleür 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 ^{k<}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 this 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 *virginus*, 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 *caejitleo-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 *fulvus*, swarthy, come into the former category; *coracznus*, raven-black, with a tinge of blue, into the latter. *Atratus* and *pullatus* mean simply "clothed in black." *Venigratus*, "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 (*Isdtis 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 *cērinus*, *croceus*, saffron-yellow, being a fuller shade. *Citilnus* is our lemon-yellow, yellow of wax.

The type of full yellow is *flavus*, gamboge-yellow, which at its fullest brilliancy is *jlavissimus*. *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. *Galbdnus*, 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 *Julmineus*, that of lightning, come in this place, but seem to have no very certain application.

*Pe7*siciniis* 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 (*Jielvolo-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 pompound, *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. *Isabellimis* 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,"⁷ 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. (Ilypholoma) 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 *leopinus* or *leochromus*; *fuluellus* 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*, Van dyke-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, blown umber, the colour of a "brown"⁷ 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. *Hysgznus* 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 *cinnabavinus* 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. *Rvbellus*, *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 *punicus* 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; *cerulescens* 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. *Porphyroleucus* 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. *Pausidcus* describes precisely the same green, from *pausæa* or *pausia*, a variety of olive; for Fries says of Ag. (*Clitocybe pausiacus*) 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.

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.*

Xienzites applanata, *Fr.*

Polyporus (Mesopus) rugosus, *Nees.*

Polypoxus (Mesopus) pansus, *Berk.*

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

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

Polypoqus, Pleuropus) lucidus, *Fr.*

Polyp or us (Pleuropus) sanguineus, *Fr.*

Folypoqus (Fomes) australis, *Fr.*

Polyp or us (Fomes) zimosus, *Berk.*

Folypoqus (Fomes) lateritius, *Coolie.*

Folypoqus (Fomes) ligneus, *Berk.*

Folypoqus (Fomes) fzaxineus, *Fr.*

Folypoqus (Fomes) mazmozatus, *Berk.*—This is the same as the *Pohjporus fasciatus* (Fries), of the Kew Herbarium, but *not* the *Folyporus fasciatus* (Fr.) of the Berkeley Herbarium.

Folypoqus (Mezismoidei) senex, *Nees.*

Folyporus (Fomes) —————?

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

Folypoqus (Fomes) sulcatus, *Coolie.*

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

On trunks. Demerara.

Pileus 6-9 inches across, 1^in. thick behind, gradually attenuated to the somewhat acute margin.

Folyporus (Fomes) geotropus, *Cite.*

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

On trunks. Demorara.

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.

Polyoxus (Finales) txichomallus, *B. % Mont.*

Folyporus (Polystictus) hirsutus, *Fr.*

Polyoxus (Polystictus) cer vino-nit ens, *Schrvx.* — 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.

Daedalea sprucei, *Berk.*

Stereum hydxophoxum, *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 dimusculus*, *Kalch.*, an ally of *Boletus scabe?* 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 Lamellae of the Agaricini," by the Rev. J. E. Vize, M.A.; "Some Recent Additions to our Mycologic Flora," by W. Phillips, F.L.S.; "Trinomialism in Zoology,"¹ 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^d 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 esculjnt 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."

SPHERIACEÆ IMPERFECTS 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*."¹

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 longuin attenuatis*."

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

Sporidia allantoid *01 mm. long.

4132. *Diatrype xhois*, *Schwein. Herb. Berk.*, Nor8735.

Sporidia allantoid -0075-*008 mm. long.

4133. *Valsaria Robinia*, 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 x *004 mm.

4144. *Cryptosposra corylina*, Fckl. *Sphceria versatilis*, Fries. *Herb. Berk.*, No. 8759. Specimen from *Schweintz.*

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

4145. **Diatrype soxida**, *Pers. Herb. Berk., No. 8752.*
Sporidia allantoid *012 mm. long.
4147. **Fuckelia gastxina** = *Sphceria irregularis (Fr.) in Herb. Berk.*
4149. **Sphaeria gxiseo-tecta**, *B. & Br. Herb. Berk., No. 8779.*
Villose and byssoid, not a *Diatrype*; asci clavate, sporidia bise-riate, cylindrical, hyaline, flexuous, '04 x '003 mm.
4150. **Diatrype fxiabilis (Pe?'s.) ex. herb., Schweinitz in Herb. Kewensis.**
Sporidia allantoid *01 mm. long.
4153. **Diatrype vaxiolosa**, *Schwein. in Herb. Berk., No. 8778.*
Sporidia allantoid '00y-'00b mm. long.
4154. Only a **Sphaeropsis** under the name of **Sphaeria subconfluens**,
^Schw.y in Herb. Berk., No. 8777.
4155. **Diatrype sambucivora**, *Srhweinitz in Herb' Berk., No. 8775.*
Sporidia allantoid -008 mm. long.
- 415G. **Diatrype collecta**, *Schwein. in Herb. Berk., No. 8776.*
Only minute stylospores found.
4157. **Diatrype annulans**, *Schweinitz in Herb. Berk., No. 8774.*
Sporidia allantoid -008 mm. long.
4160. **Eutypa oppansa**, *Fries in Herb. Berk., No. 8822.* Specimen from
Schweinitz.
Sporidia allantoid, about -01 mm.
4166. **Eutypa moxi-xubxae**, *Schweinitz in Herb. Berk., No. 8826.*
Sporidia cylindrical, scarcely curved, pale fuscous, -008 mm.
long.
4167. **Eutypa mela**, *Schw. 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 -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. **Diapoxthe concxescens**, *Schweinitz in Herb. Berk., No. 8815.*
Sporidia fusiform, quadri-nucleate, then uniseptate *012 mm. long.
4173. **Valsa juglandicola**, *Schweinitz in Herb. Berk., JVO. 8846.*
Sporidia allantoid, *006 X -002 mm.
4175. **Sphaeria pugillus**, *Schw. in Herb. Schweinitz, is a Sphaeronema.*
4177. **Valsa Sallei**, *Berk. in Herb., No. 8864.*
Sporidia allantoid, hyaline, very minute.
4178. **Valsa Cathaxtocaxpi**, *Lev. in Herb. Berk., No. 8860.*
Sporidia allantoid, hyaline *01 x '003 mm.
4180. **Valsa variolaria**, *Schweinitz in Herb. Berk., No. 8958.*
Sporidia allantoid -0078 X '0032 mm.
4181. **Valsa rubincola**, *Schweinitz in Herb. Berk., No. 8848.*
Sporidia allantoid -01 mm. long. In Herb. Schweinitz, sporidia
•009 X'002 mm.
4182. **Valsa radicum**, *Schweinitz in Herb. Berk., No. 8850.*
Sporidia allantoid *01 mm. long.

4183. **Valsa quadrifida**, Schwz. *Amer. Bor.*, 1378.
Sporidia allantoid, hyaline, -009 X '0032 mm.
4184. **Valsa (valsella) papyxifexae**, Schweinitz in *Herb. Berk.*, No. 8959.
Sporidia allantoid, numerous, minute.
4185. **Cytisopoxa** only, under, **Sphaexia oligostoma**, Schwein. in *Herb. Berk.*, 8852, and sterile in *Herb. Schweinitz*.
4186. **Valsa modesta**, Schwein. *Amer. Bor.*, No. 1337.
Sporidia allantoid -0078 X -0032 mm.
4187. **Valsa indistincta**, Schweinitz in *Herb. Berk.*, No. 8960.
Sporidia reniform, hyaline, -006 X #0045 mm.
4188. **Valsa (Eutypella) Halseyana**, Schwein. in *Herb. Berk.*, No. 8855.
Sporidia allantoid '008 mm. long.
4189. **Valsa (Eutypella) goniostoma** (Schweinitz).
Sporidia allantoid, hyaline -007 x '002 mm.
4190. **Valsa frustrum-coni**, Schwein. in *Herb. Berk.*, 8854.
The small specimen furnished only a *Cytisopora* with minute spores.
4191. **Valsa conseptata**, Schweinitz in *Herb. Berk.*, No. 8952.
Sporidia allantoid, hyaline, -0083 x *0032 mm.
4192. **Valsa ceanothi**, Schweinitz in *Herb. Berk.*, No. 8961.
Sporidia allantoid, -02 x '006 mm.
4193. **Valsa conspuxcata**, Schweinitz in *Herb. Berk.*, No. 8849.
Sporidia allantoid, hyaline, "006 X '002 mm.
4194. **Valsaxia Bignoniae**, Schweinitz in *Herb. Berk.*, No. 8856.
Sporidia olive brown, uniseptate, -015x*008 mm.
4195. **Aglaosporaxia pxofusa**, or scarce different, as **Sphaexia amoxphostoma**, Schweinitz in *Herb. Berk.*, No. 8851.
4196. **Eutypa allostoma**, Schweinitz in *Herb. Berk.*, 2fo.8853.
Sporidia allantoid, -009 x *003 mm.
4198. **Valsa axactina**, Fr. in *Herb. Berk.*, No. 8845, ex-herb Fries.
Sporidia allantoid, '01 mm. long.
4201. **Valsa defoxmis**, in *Herb. Schweinitz*.
Sporidia allantoid, hyaline, -006--008 x-0015 mm.
4203. **Cxyptosporaxia vasculosa**, in *Herb. Schweinitz*.
Sporidia cuneate, nucleate, *008 x *012 mm.
4208. **Valsa (Quatexnaxia) abnoxmis**, Fries., fide Schweinitz, *Herb. Berk.*, No. 8989.
Sporidia allantoid, hyaline, minute.
4210. **Sphaexia (Cxyptosporaxia) umbilicata**, Pers. *Herb. Berk.*, No. 8986,
is without fruit.
Sporidia oval, hyaline -0062 x #005 mm. in Herb. Schweinitz.
4211. **Eutypa dimoxpha**, Wallr. in *Herb. Berk.*, No. 8816.
N Sporidia allantoid, hyaline, *005 mm. long.
4213. **Valsa expexs**, Schweinitz in *Herb. Berk.*, No. 8990.
Sporidia allantoid, -02 nun long. In Herb. Schweinitz '018 X
•016 mm.
4214. **Valsa ximicola**, Schweinitz in *Herb. Berk.*, No. 8985.
Sporidia allantoid, '0065 mm.
4215. **Valsa xhizina**, Schweinitz in *Herb. Berk.*, No. 8988.
Sporidia allantoid, -009 x -003 mm.

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

Valsa apexta, *Fr. Syst. n. 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 *018 X *006 mm.

In ramis *Populinis*.

Valsa (Cxyptosorella) divergens, *Schneveinitz. Sphaeria divergent Schwein. Syn. Car., 123, 8. (circinata) divergens, Schw. Amer. Bor. % Jfo. 1393.*

Receptaculutu tumidiusculum, caespes sphaerularum 2-4 lineas diametro aequans suborbicularis, cingitur epidermide. Spluermle atrae vel cinerascens, ostiolis teretibus longissimis s. sphaerula sua triplo longioribus, divergentibus. Ascis octosporis ; sporidiis subellipticis, hyalinis, -002 x "007 mm., endochromate granuloso.

In ramis *Liquidambaris* dejectis.

BRITISH FRESH WATER ALGJE.

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 *Gudogonium 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.

SOCIETY 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 *Dothideaceae*, 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 *Sphceropsis* 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 oxbiculata**, Schweinitz. Herb. Berk. No. 9249.
Asci not seen. Stylospores subcylindrical, $\frac{1}{2}$ 022 x $\frac{1}{3}$ 003 mm.
5163. **D. Rhois**, Schwci?dtz. Herb. Berk. No. 9202.
No fruit.
5167. **D. Lauri-Borboniae**, Sclov. Herb. Berk. 9242.
Imperfect. No fruit. Perhaps *Asteroma*.
5168. **D. juglandicola**, Schw. Herb. Berk. 9271.
Is a *Pilidium*. Stylospores strongly arcuate, hyaline, '012 x $\frac{1}{3}$ 003 mm.- Perithecia membranaceous.
5169. **D. sassafras**, Schw. Herb. Berk. 9270.
Perhaps an *Asteroma*, but without fruit.
5172. **D. Ros**», Schw. Herb. Berk. 9276.
Is the common *Asteroma Rosce*, Fr.
5173. **D. maculans**, Sch?v. Herb. Berk. 9274.
Only consists of sterile brown spots.
5174. **D. Castaneae**, Sclov. 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 *Ecvostroma*, without fruit.
5177. **D. glycineos**, Schw. Herb. Berk. 9255.
Small, irregular, submembranaceous perithecia, without fruit.
- Either Phyllosticta or Phoma.**
5178. **B. conspurcata**, Berk. Herb. No. 9114.
Without fruit, probably an immature *Asterina*.
5182. **D. Baxringtoniae**, Berk. \$ Br. Herb. Berk. 9099.
Small ostiolate perithecia, without fruit. It is probably a *Phoma*.

5183. *D. IKlusae*, *KfoUch*.

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 •006 x "0015 mm.

5197. *D. Gentian*®, *Schw*. Herb. Berk. 9201.

Perithecia distinct, submembranaceous, gregarious. Spores narrowly elliptical, -008--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. cinexascens*, *Schwein*. Herb. Berk. 9285.

Is a *Phoma*, with spores elliptical, hyaline, -015 X-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, *0J 2 x *002 mm.

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

Cuticular spts 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 '003 X *002 mm.

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

Membranaceous perithecia, with filiform flexuous stylospores, •025 mm. long.

5211. *D. Phytolacca*, *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. ambrosia**, *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. Hyssopi**, *Schwein.* Herb. Berk. 9267.
Minute brown spots, without perithecia or spores.
5223. **D. fxigoxis**, *Schwein.* Herb. Berk. 9238.
Perithecia membranaceous. *Phoma*, with elliptical spores, '006 X -002 mm.
5224. **IK chalybea**, *Schwein.* Herb. Berk. 9240.
Perhaps an *Asteroma*, but without fruit.
5225. **D. denigxans**, *Schwii**. Herb. Berk. 9241.
Blackened spots, without fruit.
5226. **D. missouxiensis**, *Schwein.* Herb. Berk. 9224.
Diseased cells.
5227. **D. pomigena**, *Schwehi.* Herb. Berk. 9186.
• Minute membranaceous perithecia, with profusion of small oval spores, about $\frac{1}{3000}$ mm. long.
5228. **D. fxuetigena**, *Schn-ein.* 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. nigxescens**, *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. cepae**, *Schwein.* Herb. Berk. 9234.
Mostly a creeping brown mycelium, with here and there a small perithecium, perhaps of *Asteroma*, but without fruit.
5237. **3>. dioscoxae**, *Schwein.* Herb. Berk. 9235.
Phoma dioscorece. Spores elliptical, hyaline, $\frac{1}{1000}$ - $\frac{1}{1000}$ x $\frac{1}{1000}$ 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. filicum**, *Scliwein*. Herb. Berk. 9229.

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

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

D. Lixiodendxi, *Sch?vein*. 1951. Herb. Berk. 9272.

Ectostroma Liviodendri, Fr. No fruit.

D. petiolaris, *Schwcin*. 1935. Herb. Berk. 9267.

Blackened spots, but no spores.

D. Annonae, *Schn-ein*. 1954. Herb. Berk. 9268.

Ectostromoid spots, but no fruit.

D. gramma, *Schrcein*. 1888. Herb. JBerk. 9250.

Perithecia immature, no fruit. See Saccardo, 44=52.

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

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

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

This is a *Sphceropsis*. Spores oval, hyaline at first, ultimately dark brown, continuous, -25x*016 mm.

D. zaeae, *Schrctiu* No. 18G6. Herb. Berk. 9256.

Not distinguishable from *Gibberella Saubinetii*, M.

D. Schimperi, *Berk. Herb.* 9188. '

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

D. Coriariae, B. & C. Herb. Berk. 9135.

Is without fruit. Not the habit of *Phyllachora*

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

Is *Venturia circinans*, Sacc.

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

Is a *Diplodia*.

p. glum arum, 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. Traxini, Fr. Herb. Berk. 9146.

Is *Septoria fraxini*, Lasch.

D. coryli, *ScJiroein*. Herb, Berk. 9113. #

Entirely sterile. Perhaps a condition of *Gnomonia*.

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

Without fruit.

D. gzanulata, *Berk. \$ Cwrt.* Herb. Berk. 9124

Is a *TuberculariO* perhaps *T. granulata*.

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

Dothidea phlomidis, *Lev. Demid. Voy.* n. 108, t. 5,/. 2. Herb. Berk. 9197.

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

spicuis. Sporis cylindricis, simplicibus, pellucidis, obtusis, '02 X •004 mm.

In foliis *Phlomidis pungentis*, Sympheropol.

Phyllosticta Paliuxi (Lev.), Coolie.

Dothidea Paliuri, *Lev. Demid. Voy. n.*, 107, t. 5, / . 6. Herb. Berk. 9145.

Hypophylla, atra, maculaeformis. Peritheciis minutissimis, confertis, albo farctis, stromate tenui impositis. Sporidiis ovato-linearibus, pellucidis, curvatis, simplicibus, obtusis, '006 x *002 mm.

In foliis *Paliuri aculeati*. Yalta.

Septoxia pistaciae (Leu.), Cooke.

Dothidea pistaciae, *Lev. Demid. Voy. n.*, 108, t. v.f. 2. Herb. Berk. 9499.

Hypophylla, maculoseformis, atra, irregularis. Peritheciis innatis, confertis, minutissimis, ostiolis inconspicuis. Sporis filiformibus, curvatis, simplicibus, pellucidis, *05 mm. long.

In foliis *Pistacice*. Nikita.

NEW BRITISH FUNGI.

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

BY M. C. COOKE.

Agaricus (Flammula) gymnopodius. *Bull. t.* 601, / . 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 (7\ Howse).

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

Agaricus (Flammula) filius. *Fr. Icon. t.* 117, / . 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. *Kalchb. Icon. t.* 17, / . 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 tenuipea. *Coolie*.

The form described as *Boletus grq.nulatus*, 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. granulotus* 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 -012 x "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 th*t 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 duxiusculus. *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 amber squamules; tubes free, elongated, thin, livid, becoming tawny, pores white at length Qf the same colour.—*Kalchb. 4' Schnlz. Icon.*

In woods. Epping Forest.

About the size of *B. scaber*, with which it has probably been confounded. Pileus when dry cracking into small arcolae 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. Svctm. t.* 71, / . 2.

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

Forming a caespitose mass about six inches in diameter. The

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

Entoxrhiza 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 '02 by ^k017 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*.

XKEelanoteonium endogenum. *Unger. Exanth.*

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 mo Hugo.*

Hypomyces ater. *Fr. Grevillea xn., p. 80. «*

Irregularly effused, usually covering the entire fungus on which it is parasitic, black. Perithecia semi-immersed, with a conical ostiolum 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 ('03-035 X "005--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 Hymenomyces. 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 VoU x., p% 74.)*227. **Agaxicus (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 X 5 mill.

Pileus 1½ to 1½ in. across. Stem 1½ 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 1½ to 2 in. wide; with a tinge of green.

* **Agaricus (Pholiota) aegerita**, *Fr. Hymen.*, p. 219.

On elm tree. King's Lynn.

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

Cespitose. Pileus umbonate, moist, viscid, dirty white, imbricate, darker, brownish, squamulose with minute black fibrillae, 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 caespitose, 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^ to 2J 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 n., p. 116.

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

233. **Cortinarius (Kydrocrybe) 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 (Kydrocrybe) fasciatus**, *Fries Hymen.*, p. 399.
Grevillea vnr., jo. 78.

Reffley Wood. Oct. and Nov., 1883.

235. **Hydnum diversidens**, *Ir. Hymen.*, p. 609. *Sv. AtL Svamp.*, t. 71, l. 2. *Grevillea x*, n., 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, eyathiform, 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 (*007.01 x *004 mm.).

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

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

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

Scattered or ciordei, 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 (0.005-0.006 mm.).

On bark and wood of old elder trees. Shrewsbury.

Cups -5 mm. across, *8 mm. high.

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

Caespitose, 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 x 2 mk.

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

Castle Kising. March, 1882.

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

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

Nidularia conflens S. J. Fries et Nordh. *Symb. Gast.*, p. 3; *Tulasne Ann. des. Sc. Nat.*, 1844, p. 96; *Nidularia far et a (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 lawn-colour; splitting at the summit into a broadiah 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 -x the spores are subglobose (0.005 mm.). A few cystidia occur at intervals flask-shaped.

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

241. **Septoria stellariae**, *Rob. & Desm. Nat. xiv.*, p. 22. *Sacc. Mic. i.*, p. 182.

Spermatia rod-shaped, curved, 50-60 X 1 mk., indistinctly septate, hyaline.

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

242. **Ascochyta aceris**, *Fchl. Sym. p.* 387. **Cheilaria aceris**, *Lib.*

Didymosporium acexis, *Mont, llabh, tixsic*, 1756.

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

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

243. **Ramularia hellebori**, *Fell. Symb. My col.*, p. 361., *Sacc. Myc. n.* p. 381.

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

On *Helleborus*. 1884. Mr. Soppett.

244. **Ramulazia xosoe** (*Fckl.*) *Sacc. Mich. IT.*, p. 550. *Fungi Ital. t.* 1001. *Fusidium Rose urn, Fckl. Syn. p.* 370.

Spots subochraceous, minute, hyphse fasciculate, simple or branched, subdentate, hyaline, 30-35 x 2-2*5. Conidia fusiform, 15-20x2-2*5. Simple or pseudoseptate in the middle, hyaline.

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

245. **Hamulazia pratensis**, *Sacc. Mich. n.*, 550. *Fungi Ital. t.* 998.

Spots mostly on the leaves, rounded or oblong pallid, ochraceous, with red margins. Hypbae lax, terete, 30-40 x 4, obtuse and dentate at their apices. Simple or uniseptate, hyaline. Conidia cylindrical or subfusiform, moniliform, often uniseptate, 16-25 X 3-3*5 mk., hyaline.

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

246. **Sporotxiciuin. geochroura**, *Dem.*, *Sacc. Fungi Ital. t.* 743. *Mich. vol. ii. r. p.* 552.

Effused, velvety, ochraceous yellow; fertile hyphse erect, rough, subcontinuous, slightly branched. Conidia globose, 3-4 X 3-3*35, Contents granular, fulvous.

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

247. **Ovulaia aspexifolii**, *Sacc. My col. V&n. No.* 591. *Fungi Ven. Ser. v.*, p. 186.

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

248. **Amblyosporium umbellatum**, *Harz. Hyphom.*, p. 48, t. n., / 7. *Briarea aurea Jrfcl. Symb. p.* 359. *Sacc. My col. Ven. Spec. p.* 184,*. xvii., / 1-4. *Myc. i.yp.* 271. *Fungi Ital. t.* 703. *Amblyosporium boti'yitis, F/es. JBeitrag. p.* 99, t. xv., / 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. Hyphse rather thick, 20-25 mk. in diameter. Conidia 15-16 x 10-12 mk.

On decaying *Agariçs*. 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. persicinae*, Ditmar, but differing in the cluster being larger and vinous. Conidia subglobose or ovoid, 11-12 x 10 (not 7 to 8 mk. in diameter), basidia shorter, thicker, and simple.

On *Rcestelia lacerata*. Downham, July, 1884. On *ALcidium asperifolii*. Castle Rising, Oct., 1884.

251. **Urocystis Fischeri**, *Kořnicke. Hedwigia*, 1877, #.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 hypogaea**, Tul. *Fungi Hypogoei*, 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 rhceas*. North Wootton. July, 1882.

254. **Uxomyces poa**, Rbk.

I. *jdEcidiospores*, *ALcidium Ranunculi repentis*, and *ficarice*.

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. *Cceoiria hydrocotyles*, Link, *sp. plant n.*, p. 22.**

II. *Uredospores*. Sori j-mall, 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 geneially larger and rounded above, 40 to 45 mk. long, by 20 to 25 mk. wide.

Epping Forest. Oct., 1882.

256. ***Puccinia, perplexans*, Plow.**

I. *ufl&cidiospores*=*s&cidium 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. *AZcidiospores*=*sEcidium 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 x 12 x 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 x 15-26 mk.

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

II. and III. On *Phragmites communis*.

This *Pucciria* 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 *iEcidium* upon *Berberis vulgaris* nor upon any of the Rumices.

258. *Puccinia poarum*, Nielson.

I. *jEcidiospores = s&cidium 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. *jEcidiospores = d?cidium Jacobcea*, Grev. *iEcidia* 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. » Spermogonia on yellow spots, corresponding to the scidial 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.

IIT. *Teleutospores*. Sori erumpent, oblong or elongate; large, prominent, almost black ; hypoplyllous, surrounded by the ruptured epidermis. Spores on long, firmly attached pedicels, Blightly 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 Jacobcea*. 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.)

Agazicus (Tricholoma) vaxiegatus, Scop. Cam. 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. mtisans*, and it may be nothing more.

Agaricus (Collybia) velutipes, Fries; variety, **xubescens**, 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, aclnate, sinuate behind, white. Spores elliptic ($\bullet 006 \times \bullet 004$ mm.). *Cooke Must. 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.

Agaxicus (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, Ulustr., t.* 488.

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

Agaricus (Pholiota) luxurians, *Fr. Hym. Eur.* *Ag. (Pholiota) aegerita*. *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, l. B.

On oak trunks.

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

Agaricus (Pholiota) cruentatus, *Che. Sf 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, $\frac{1}{2}$ in. thick above. Gills 2 lines or more. Allied to *Ag. tubeivulosus* and *Ag. curvipes*. Taste insipid.

Agaticus (Znocybe) 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 cm. 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 (-009--011X-006--007 mm.). *Cooke Illus. t.* 473.

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

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

Agaricus (Flammula) clitopilus, *Cke. Sf 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[^]-3 inches, [^]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 (Naucozia) tziscopus, *Fries. Hym. Bur. 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*, umber 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.

Agazicus (Naucozia) azvalis, *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 $\frac{1}{2}$ to 1[^] inches. Stem 1[^] to 2[^] in. With a distinct bulb between the ascending and descending portion of the stem. It is probably a distinct variety. *Agazicus (Naucozia) glandifozmis*, *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, umber. Spores broadly almond-shaped (*01-012 x'006-008 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.

Agazicus (Naucozia) 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, /, 1; Cooke Illus. ined.*

In moist places. Scarboro*. (*G. Masee.*)

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. Masee:—"Pileus

bygrophanous, 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."
Agaxicus (Naucoxia) latissimus, Coolie. Ag. pediades, Smith in *Herb. Mils. 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.—*Coolce Illus. U 482.*

In churchyard. Ely.

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

Agaxicus (Naucoxia) stxiaepes, Cooke.

Ccespitose, 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 $1-1\wedge$ inches. Stem 2 to 3 inches long >2 lines thick.

Agaxicus (Galexia) mniophilus, Lascli. in Fries *Bym. 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 \lrcorner inch. Stem 2-3 in. long, a line thick.

Agaxicus (Psilocybe) axeolatus, 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 caespitose. Pileus at first white, with the cuticle entire, at length rufous and cracking into areolae, a much firmer plant than *A. spadicus*, 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 pxuinatus, Fr. *Hym Eur. 504.*

Pileus convex, then plane, rigid, dry, bay brown, becoming *purple, umber'-prumose*; stem firm, a little ventricose, even, smooth, *pantedgated 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, Schaeff., Grev. VIII 4.

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

Polyporus (Hispidi) Hexbexgii, 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 PYRENOAMYCETUM.

(Continued fr.m p. 45.)

We prefer to regard the *Dothideaceae* 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 *Discornycetes*.
3. *Stigmatoidei* = with the perithecia more or less discrete. Through this latter the *Dothideaceae* are united in one direction with the *Perisporiaceae* and in another with the *Spiceriaceae* (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 *Darluca filum*.
4261. *Sphaeria constellatio*, *Berk.* in Herb. 9071, is the same species with *Micropeltis orbicularis*, *Cooke*, *Mycocopron orbiculare* > *Sacc. Syll. No. 5360*.
5171. *Dphtidea subcuticularis*, *Schwein.* No, 1940.
Is most probably an *Asteroma*.
5176. *Dothidea Polygalaa*, *Schwein.*
Should be transferred to the neighbourhood of *Asteroma*.
5211. *Dothidea Phytolaccae*, *Schwein.* Herb. Berk. 9209.
Appears to be a *Phoma*.
- Dothidea macuiasformis* (*Desm.*) *Fckl. Fun. Rhcn. No. 1023.*
This is *Venturia Johnstoni* (B. & Br.)
5247. *Sphaeria examinans*, *BerJc.* & *Mont.*\
5395. *Sphaeria morbosa*, *Schwein.* j"

We cannot accept these two species amongst *Dothideaceae*? The former is allied to *Melogramma* and the latter to *Giblera*.

Hendersonia? *azundinis* (Lev). *Dothidea arundinis*, Lev. *Demid. Voy.* II. 109, t. v. f. 3. Herb. Berk. 911β

Maculis flavo-fuscentibus vel nullis. Peritheciis crumpentibus hypo-et epiphyllis globosis albo-farctis, 1-2 serialibus, stromati atro conjunctis, ostioliis obsoletis. Sporis cylindricis, utrinque rotundatis, triseptatis, plerumque curvulis, hyalinis (-035 x 005 mm.).

In foliis *Phragmitis*. Inkerman.

Dothidea geographica, *Fries Syst. Myc.* n., 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 *Lcestadia* or *Sphcerella*.

D. diospyri, *Beik. fy Curt.* in Herb. Berk.

There "are no cell^s" (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. catalpse, *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.* (*Sphaeria anethi*, *Pers.*)=*Phoma*.

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

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

Nothing found beyond a structure clobely 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 (-026 x 01 mm.).

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

Ascis clavatis. Sporidiis sublanceolatis, medio constrictis, hyalinis (-02 x 007 mm.).

Homostegia nigerrima (*Carrey.*)

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 Lespedezae** (*Schw.*) Sacc. Syll. 4269.

Ascis clavatis. Sporidiis ellipticis, continuis, hyalinis, '02 X •01 mm.

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

Ascis clavatis. Sporidiis ellipticis, continuis, hyalinis, •01-'012 X '005 mm.).

From, specimen in Herb. Berkeley.

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

Ascis clavatis. Sporidiis ellipticis, continuis, hyalinis.

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

Ascis clavatis, octosporis. Sporidiis biseriatis, sublanceolatis, continuis, hyalinis, -013 x'003 mm.

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

Epiphylla. Stromatibus pulvinatis, convexis, irregularibus, confluentibus, atris, nitidis, loculis immersis numerosis, ostiolis obscuris. Ascis clavato-cylindricis. Sporidiis ellipticis, continuis, hyalinis (-0J2X-005 mm.).

In foliis *Ficus infectorice*. Ceylon.

1054. **Phyllachora laurina**, *Che.*

Hypophylla, gregaria, erumpens. Stromatibus minutis, in maculis orbicularibus dispositis, atris, subangulosis, hemisphericis, intus albis. Ascis clavatis, subsessilibus. Sporidiis ellipticis, continuis, hyalinis (-016--018 x -005 mm.).

In foliis *Lauraceae*. Barra.

(Spruce, 543).

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

Amphigena. Stromate convexo, atro, nitido ('5 mm. diam.). Ascis clavatis. Sporidiis biseriatis, ellipticis continuis, hyalinis, •016-*018x-008mm.

In foliis *Guatterice*. Ceylon.

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

Hypophylla. Macula* fusca, irregulares, confluentia. Stromatibus gregariis, atris, oblongo-angulatis, convexis, minutis ; loculis immersis albis. Ascis clavatis ; sporidiis ellipticis, continuis, liyalinis, -01 x-004 mm.

In foliis *Hirtellce vesicates*. Amazons.

(Spruce, 615.)

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

Epiphylla. Stromate hemispherico-convexo, atro (§5 mm. diam.) opaco, ad basim contracto. Ascis clavatis. Sporidiis inordinatis, ellipticis, continuis, hyalinis ('008-'01 X '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 x 4 mm.) atro, nitido, lsevi. Ascis subclavatis. Sporidiis ellipticis, continuis (-013--018 x '006 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 ex sculpta**, Berk. Sacc. Syll. 5181.

Stromate orbiculari, nigro margine radiatim exsculpta, ostiolis papillaeformibus centralibus. Ascis breviter clavatis, sessilibus. Sporidiis ellipticis, continuis (immaturis) hyalinis, circa *012 x •004 mm.

1103. **Phyllachora musae** (Klotsch.). Sacc. Syll. 5183, 5243.

Ascis clavatis. Sporidiis ellipticis, rotundatis, continuis, hyalinis, -01--012 x -007 mm.

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

Hypophylla. Maculis atris, irregularibus, foliorum nervulis limitatis (2-3 mm.), loculis paucis, stromate elevatibus, subnitidis. Ascis clavatis. Sporidiis ellipticis, continuis, hyalinis (immaturis, circ. -01 mm. long).

In foliis. Cuba.

1119. **Phyllachora Luzulae** (Rdbh.) Sphseria LUZU1JB, *Rabh. Fungi Euro pan, No. 533.*

Ascis clavatis. Sporidiis ellipticis, utrinque rotundatis, continuis, hyalinis, -01 x *005 mm.

In foliis IMZU1CB.

1128. **Phyllachora leptostromoidea**, Cooke in *Bav. N. A. Fungi*,

Stromate irregulari, minuto, applanato, atro, subinde confluyente, ostiolis vix conspicuis. Ascis clavatis, octosporis. Sporidiis ellipticis, continuis, hyalinis "008 x §003 mm.

On fronds of *Pteris*. S. Carolina. (Rav. 1977.)

With just the appearance of a *Leptostroma*.

1173. **Phyllachora (Dothidella) Eugenia** (Thnm.). *Asteriia Eugenia*3 (Mont.), *ex-herb Thuemen.*

Amphigena. Stromate orbiculari, atro, ruguloso, subdepresso (ambitu nudo), loculis minutis. Ascis clavatis, octosporis. Sporidiis ellipticis, utrinque rotundatis, uniseptatis, hyalinis '018 x '008 mm.

On leaves of *Eugenia planipes*. Chili; Valdivia.

This is clearly *not* the *Asterina Eugeniae*, Mont. ; the fruit is different, and there is no radiating margin to the stroma.

11T5. **Phyllachoxa (Dothidella) Osyridis**, Cooke.

Epiphylla, orbiculata, applanata, atia, punctato-rugosa, regulariter disciformis (2-3 mm. diam.). Cellulis numerosis, minimis. Ascis clavatis octosporis. Sporidiis biserialibus, ovatis, uniseptatis, uuo loculo inulto miaori, hyalinis -012 x '006 mm.

On living leaves of *Osyris compressa*. Cape of Good Hope.

Sent by Prof. McOwan under the name of *Meliola amphitncha*, 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, flavescensibus (-02 x -005 mm.).

" In foliis. Guiana. (*Leprieur.*)

We do not find that this species has been anywhere*described.

1179. **Phyllachora (Dothidella) Salvador®**, *Cooke.*

Amphigena, irregularis, prominula, atra, rugosa, hinc illic in circulos disposita, loculis tenuibus albis. Ascis clavatis (*06 X •014), octosporis ; sporidiis ellipticis, uniseptatis, utrinque rotundatis, hyalinis (-012--014 x -006 mm.).

On leaves of *Salvadora Pevsica*. Socotra.

1180. **Phyllachora (Dothidella) Berkeleyana**, *Cooke.* Dothidea Baccharidis, B. § C. in *Herb. Berk.* No. 9161.

Amphigena, gregaria. Stromate elevato, hemisphaerico (4-7 mm. diam.), papillato-rugoso, opaco. Loculis minutis, plurimis immersis. Ascis clavatis. Sporidiis ellipticis, uniseptatis, hyalinis (-025 mm. long).

In foliis *Baccharidis*. Cuba. (No. 920.)

1201. **Phyllachora (Auerswaldia) viridispora**, *Cooke.*

Epiphylla, sparsa, ovbicularis, heinisphaerica (1-2 mm. diara.), atra, rugosa, intus alba. Ascis clavatis octosporis. Sporidiis biserialibus, ellipticis, diu continuis, binucleatis, hyalino-virescentibus (-016 x -0075 ad -018 x -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 (•02-¹022 x "005 mm.).

On coriaceous leaves. Brazil. (*Burchell.* No. 7768.)

1216. **Phyllachora (Roumegueria) Albizziae**, *Cooke.* Dothidea viventis, var. *Albizziae*, *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 (-025--027 X -007 mm.).

On living leaves of *Albizzia*. Natal. J. M. Wood.

1222. **Euryachora Lathyri** (*Lev.*), *Cooke.* *Herb. Berk.* No. 9198. Dothidea *Lathyri*, *Lev. Bemid. Voy. u.* 106, t. 5, f. 8.

Hypo-vel epiphylla. Peritheciis sparsis, hemisphericis, prominulis, astomis, albo factis, in stromate maculceformi irregulari aterrimo immersis. Ascis elongatis, cylindricis. Sporidiis ovatis, sporidiolis duobus includentibus (-012 x '008 mm.).

In foliis *Lathyri*. Son-dagh.

Whether this is the same as *Physa Jospora LatTiyri*, Mont. (Sacc. Syll. 168]), we cannot say. An examination of authentic specimens from Leveille results in placing it in *Dothideaceae*.

1233. **Dothidea (Bagnisiella) cercidis**, Cooke.

Erumpens, orbicularis, hemisphaericis, demum centro depressa, atra, opaca, loculis paucis. Ascis clavatis. Sporidiis biserialibus, elliptico-lanceolatis, continuis, hyalinis (*03 x '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. §C 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, saepe 2-4 nucleatis (*02-022 x '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**, Homosphaeria tesaellata, 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 pallid[^] viridibus; sporidiis globosis, concatenatis, Isevibus, hyaiinis.

Ad folia *Thibandice floribundae*. Nova Granada.

1270. **Dothidea Lonicerae**, Cooke.

Erumpens, suborbicularis, saepe confluens, pulvinata, planiuscula, atra (1 mm. diam.), loculis sparsis, periphericis. Ascis clavatis, octosporis. Sporidiis sublanceolatis, medio constrictis, uniseptatis, fuscis (-022--024 x '009 mm.).

On twigs of *Lonicera sempervirens*. Pennsylvania, U.S.A. (*Michener*. No. 4218.)

1280. **Homostegia Felvetii** (*Hepp.*). Zinds. Trans. Boy. Soc. Edin. xxiv. p. 450.

Ascis clavato-saccatis (-045 x *012 mm.), octosporis. Sporidiis ellipticis, uniseptatis, hyalinis vel subluteolis-011 x *006 mm.

Parasitic on *Sticta aurata*.

1284. **Homostegia? dubia**, Linda. Trans. Boy. Soc. Edin. XXIV. t. 30, l. 47-52.

Parasitic on *Sticta fossulata*, *S. granulata* and *S. rubella*. New Zealand.

Astexina maculaeformis (*Berh.*). *Dothidea maculoseformis*, Berk. Herb. No. 9128. (nee. Roberge.)

Epiphylla, atra, opaca, orbicularis, maculaeformis. Stromate discoidea, maculis piceis orbicularibus insidente, fibrillis radiantibus ambiente. Ascis ovoideis (-02 x -015 mm.). Sporidiis ellipticis, continuis (Fimmaturis), hyalinis (-005 x '003 mm.).

In foliis *Drymidis*. Valparaiso.

This is clearly distinct from *Asterina compacta*, Lev., which it somewhat resembles in habit.

Asterina quercigena (Bert.). *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 (-01 X '004 mm.).

In foliis *Quercuum*. Sikkim.

Asterina ? *Lauri-borboniae*, *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 (-03--22 mm.) applanatis, cum mycclio repente brunneo immixtis, ascis saccatis 4-8 sporis. Sporidiis (octosporis) -028--03 X '012--014 mm. (tetrasporis), '04 X '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. FHTLLACHORA, *Fcld.* 2>*P—Stroma subclypeatum vel breviter effusum, plerumque phyllogenium.

Sub-Gen. 1. MAZZANTIA, *Mont.*—Stroma subclypeatum, initio epidermide tectum, tenui carbonaceum, plerumque caulicolum.

* *Sporidia continua*, *hyalina*.

- | | |
|--|---|
| 1036. galii, <i>Mont.</i> ... 5083 | 1010. rhytismoides, <i>JVb</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. sepiura, <i>S. \$ P</i> ... 5086 | |

* *Sporidia uniseptata*, *hyalina*.

- | |
|---------------------------------------|
| 1043. Bicchiana, <i>Not.</i> ... 5278 |
|---------------------------------------|

Sub-Gen. EUPHTLLACHORA.—Stroma breviter effusum plerumque phyllogenium.

* *Sporidia continua hyalina*.

a. in dicotyledoneis.

- | | |
|---|--|
| 1044. <i>umi</i> (<i>Duv.</i>) ... 5091 | 1052. demersa, <i>Corda</i> ... 5094 |
| 1045. rhytismoides, <i>Ca.</i> 5093 | 1053. tetrantheraj, <i>B. & 5r.</i> 5095 |
| =• <i>microcenta</i> , <i>B.</i> 5098 | 1054. laurina, <i>Cke. Grev.</i> xiii. |
| 1046. repens, <i>Corda</i> ... 5108 | 1055. Guatterise, <i>B. SjfBr.</i> , |
| 1047. aspidea, <i>B.</i> ... 5110 | <i>Grev.</i> xiii. 63. |
| 1048. Thwaitesii, <i>B.</i> ... 5111 | 1056. incarcerata, <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. Gm</i> \ xiii. | 1059. lonchotheca, <i>Speg.</i> 5104 |

1060. cayennensis, *Fr.* ... 1734
 1061. tropicalis, *Speg.*... 5105
 1062. myrciaB, -^ 5106
 1063. rhopalina, *Mont.*... 5097
 1064. milicpnctata, *Dm.* 5099
 1065. xanthoxyli, *Lev.*... 4453
 1066. grevilleaa, *Lev.* ... 5107
 1067. inclusa, *B. * C.* ... 5116
 1068. crotonis, *Che.* ... 5115
 1069. depazeoides, *Desm.* 5100
 1070. tragic, *B. & C.* ... 5128
 1071. melianthi (*Thum.*) 6177
 1072. vesicata, C/£tf. *Grev.* xiii.
 1073. picea, *B. Sr O.* ... 5129
 1074. circumscripta, *B..* 5087
 1075. Wittrockii, *Erik**. 5130
 1076. dalbergias, *Niessl.* 5092
 1077. tenuis, *B.* ... 5114'
 1078. nitens, *Zw.* ... 1718
 1079. viventis, *Cke.* ... 5125
 1080. dolichogena, 2?.\$-i?r. 5126
 1081. trifolii (*Pers.*) !. 5184
 1082. labecula, *Lev.* ... 1723
 1083. melaena, *Rabh.* ... 5131
 1084. lespedezae, *Schw.*... 4269
 1085. phylloplaca, *Mont.* 5117
 1086. brasiliensis, *Speg.* 5118
 1087. fatiscens, *Schw.* ... 5119
 1088. Beaumontii, *B. \$ C.*
Grev. xiii. 63.
 1089. nitidissima, *B. \$ C.* 5120
 1090. lucens, *Cke.* ... 5121
 1091. euglypta, *Mont.* ... 5122
 1092. exanthematica, *Lev.*,
Grev. xiii. 64.
 1093. exsculpta, *Berk.* ... 5181
 1094. permeans, *B. \$ C.* 5179
 1095. interstitialis, *B. \$ C.*,
Grev. xiii. 64.
 1096. aloëtica, *B. \$ C..* 5152
 1097. **maculans**, *Mont., Syll.*
p. 193.
 1098. dalibardae, *Peck.*... 5124
 1099. heraclei, *Fr.* ... 5123

b. In monocotyledoneis.

1100. palmigena, *B. fy C.* 149L5
 1101. acrocomiae, *Mont.* 5147
 1102. -calamigenajA^jBr. 5148
 1103. musa3, *Klot.* 5183, 5243
 1104. strelitziae, *Che.* ... 5149
 1105. kniphofias, *K. %> C.* 5150
 1106. melanoplaca, *Desm.* 5151
 1107. graminis, *P.* ... 5132
 = *luteo-maculata*,
Schw. ... 4268
 = *punctum*, *Schw.* 4266
 = *zpanici*, *Schw.*... 4267
 = *androjiogonis*, \$wA273
 = *agro&tidis*, *Sv.* 4274
 1108. bambusaj, *Rabh.*... 1719
 1109. stenospora, *B. \$ Br.* 5133
 1110. cynodontis, *Sacc.*... 5134
 1111. bromi, *Fckl.* ...' 5135
 1112. pose, *Fckl.* ... 5136
 1113. sylvatica, *Sacc. \$ S.* 5137
 1114. tritici-gracilis, *Cast.* 5138
 1115. fuscescens, *Sp.* ... 5139
 1116. muhlenbergia3,jEWis5140
 1117. gangrena, *Fr.* ... 5141
 1118. Bonariensis, *Speg.* 5142
 1119. luzulse, *Rabh., Fung.*
Eur. 533
 1120. epityphse, *Cke.* ... 5143
 1121. junci, *Fr.* ... 5144
 1122. cyperi, *Rehm,* ... 5145
 1123. dasyliirii, *Peck.* ... 5146
 1124. caricis, *Fr.* ... 5242

c. In acotyledoneis.

1125. pteridis, *Reb.* ... 5153
 1126. flabella, *SWwz.* ... 5154
 1127. anomala, *B. & C.*... 5155
 1128. leptostromoidea, *Che.*,
Grev. xiiii. 66.
 1129. episphaeria, *Peek.* 5156

8 OPHIODOTHIS. *Sporidia filiformia*,

1130. edax, *B & Br.* .. 5350

Sporidiis ignotis.

a. In foliis arborum.

1131. rhytismoides, *Chev.* 5157 1136. acervulata, *Schw.* 5162
 1132. asteromorpha, *ScAw.* 5158 1137. latitans, *Fr.* ... 5164
 1133. impressa, *Fr.* ... 5159 1138. annulata, *Che.* ... 5165
 1134. Colensoi, *Berk.* ... 5160 1139. abortiva, *Desm.* ... 5166
 1135. orbiculata, *ScAw.* ... 5161 1140. xylostei, *Fr.* ... 5180

b. In foliis herbarum.

1141. brachystemonis, 1144. angelicse, *Fr.* ... 5193
Schw. ... 5185 1145. podagrarias, (*Roth.*) 5194
 1142. tragacanthae, *Lev.* 5191 1146. campanulas, *D. C.* ... 5195
 1143. Morthieri, *Fckl.* ... 5192 1147. punctiformis, *Fckl.* 5196

c. In caulibus herbarum.

1148. eupatorii, *B. & C.* ... 5198 1152. chenopodii, *Schw.* 5208
 1149. stipata, *Fr.* ... 5199 1153. elegans, *Schw.* ... 5313
 1150. deusta, *Fr.* ... 5200 1154. ramosa, *Schw.* ... 5215
 1151. phlogis, *Schw.* ... 5201 1155. effusa, *Schw.* ... 5222

d. In monocotyledoneis.

1156. aristidae, *Schw.* ... 5230 1159. thanotophora, *Lev.* 5241
 1157. setariae, *Sacc.* ... 5232 1160. membranacea, *Ces. Born.*
 1158. panici, *Schw.* ... 5238

** AUERSWALDIA. *Sporidia continua, fusca.*

1161. chasmeropis, *Cooke* 5248 1163. scabies, *K. & C.* ... 5250
 1162. Pringlei, *Pec&* ... 5249

J5j£ DOTHIDELLA. *Sporidia uniseptata, hyalina.*

a. In dicotyledoneis.

1164. tinctoria, *Tul.* ... 5251 1178. endocrypta, *Mont., Grev.*
 1165. hieronymi, *Sp.* ... 5252 xiii. 65.
 1166. betulina, *Fr.* ... 5256 1179. salvadorae, *Cke., Grev.*
 1167. achalensis, *Sp.* ... 5257 xiii. 65.
 1168. marginata, *Lev.* ... 5258 1180. Berkeleyana, *Cke., Grev.*
 1169. australis, *Sj?* ... 5259 xiii. 65.
 1170. tephrosia, *Lev.* ... 5260 = *baccharidis*, *B. & C.*
 1171. sordidula, *Lev.* ... 5265 1181. orbis, *Berk.* ... 5314
 1172. pulverulenta, ?.#C. 5267 1182. millepunctata, *B.#C.* 5273
 1173. *eugenitt*, *Thum., Grev.* xiii. 1183. rhynchosiae, *Lev.* ... 5274
 1174. scutula, *B. & Curt* 5270 1184. osbeckiaa, *B. \$ Br.* 5275
 1175. osyridis, *Cooke, Grev.* xiii. 1185. gracilis, ^p. ... 5277
 1176. Zollingeri, *Mont.* 1186. bullata, *Ws* ... 5180
 & *B.* ... 5271 1187. bullulata, *Berk.* ... 5315
 1177. oleandrina, *Z>/?.£l/.* 5272 1188. nitidula, *Zev.* ... 1886

ft. In monocotyledoneis.

1189. fallax, *Sacc.* ... 5253 1191. agrostidis, *FchL* ... 5255
 1190. helvetica, *Fc&Z.* ... 5254 1192. eletтари®, *B. & Br.* 5256

c. In acotyledoneis.

1193. basirufa, B. \$ C... 5266 1195. nervisequia, B. ... 5269
 1194. osmundas, B. \$ C. 5268

||| MICRODOTHIS. *Sporidia uniseptata, fusca.*

- J196. halepensis, Cke. ... 5308 1201. circinata, K. \$ Cke. 2712
 1197. sphaeroidea, Cke... 5309 1202. puncta, Cke. ... 2713
 1198. arduinae, 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. pentanisiae, Cke. ... 6114
 #5M & ROUMEGUERIA. *Sporidia 1-3 septata, hyalina.*
 1207. granulosa, KJ. ... 5331 1213. amphimelsena, M. 5344
 1208. Schwcinitzii, J5. ^C7. 5333 1214. dendritica, Cooke,
 1209. Goudotii, Lev. ... 5340 Grev. xiii; 65.
 1210. tetradeniaa, i?. ... 5341 12^15. albizzise, Coof, Gra; xiii.
 1211. magnolias, Cke. ... 5342 65.
 1212. rugodisca, C. \$ Ek. 5343

#*#*# MONTAGNELLA. *Sporidia triseptata, fusca.*

1216. tordillensis, Speg. 5329

Sporidia ignota.

1217. funesta. Fr. ... 5318

GEN. 2. EURYACHORA, Pfc^.—Stroma late effusum, minutissime punctulatum.

* *Sporidia continua, hyalina.*

a. Stroma tenuissimum.

1218. stellaris, Pers. ... 5245 1219. stellariaa, 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. kalmise, Peck. ... 5264
 1223. runiicis, Karst. ... 5262

#% MONTAGNELLA. *Sporidia 1-3 septata, fusciscentia.*

1226. heliopsidis, Schw. 5328 1227. platyplaca, B. ... 5332

|| OPHIODOTHIS. *Sporidia filiformia.*

1228. vorax, B. & Curl 5349

GEN. 3. DOTHIDEA. Fries. Stroma eruiipens, pulvinatum.

* BAGNISIELLA. *Sporidia continua, hyalina.*

a. Corticolae.

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.* = *clavuligera*, B. & Br. ... 5326 1236. moriformis, *J.cft.*... 5082
b. follicolae.
1237. catervaria, *J5.* 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?, *Schiv.* ... 5324 1243. oceanica, *Ces.* ... 5078

^ PLOWRIGHTIA. *Sporidia uniseptatay 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, *jE;ZZ2s*5295
 1248. berberidis, *Wahl.* 5289 1253. polita, *Fr.* ... 5316

|| EUDOTHIDEA. *Sporidia uniseptata, fusca.*

1254. sambuci, *Pers.* ... 5296 1261. smilacicola, *C.£G*r.* 5303
var. zealandiae, Cke. 1262. baccbaridis, *Cke.* 5304
 1255. amorphae, *Rabh.* ... 5297 1263. puccinioides, *D. C.* 5305
 1256. coluteje, ^ . \$ • C. «... 5298 1264. rutaj, *J/o^.* ... 5306
 1257. tetraspora, *B. fy Br.* 5299 1265. corylina, *C>b. \$ Hk.* 5307
—crystallophora, Berk. 1266. artemisiae, *Schw.* 5317
 1258. etrusca, *TVb^.* ... 5300 1267. bignonias, *T^r.* ... 5321
 1259. linderæ, *Ger.* ... 5301 1268. rhuina, *Schw.* ... 5325
1260. franguhe, Fckl. ... **5302** **1269. Ionicerx, Cooke, Grev.xiii**

#\% MONTAGNELLA. *Sporidia 1-3 septata.*

- a. oculis polyascis.*
1270. curumanuel, *Sp.* ... 5330 1271. durissima, *B.* ... 5345
b. oculis monoascis.
1272. monspeliensis, & ? ^ nis 5346

HI CURREYA. *Sporidia mnriformia^ fusca.*

1273. conorum, *Fckl.* ... 5347 1274. excavata, *Cfo.££7Z.*5348

*** SPECIES INCERT\E.

1275. atra, *Fr.* ... 5319 1277. paradoxa, *Fr.* ... 5322
 1276. myriococca, *Mont.* 5320 1278. encelium, *Schw.* 5327

GEN. 4. HOWOSTEGIA, *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*, ^ . \$Br. 5338

|| *Sporidia multiseptata, hyalina.*

1282. *nigerrima*, B. \$ Br. 2838

§% *Sporidia ignota.*

1283. *dubia*, £m̄ds. Grev. xiii. 66.-

GEN. 5. RHOPOGRAPHUS, ##<». *Stroma lineatum.*

* MONOGRAPHUS. *Sporidia continua, hyalina.*

1284. *aspidorum* (*Lib*). 4585

** SCHIRRHIA. Ntke. *Sporidia uniseptata, hyalina.*

1285. *rimosa*, A. & 8 < ... 5280 1288. *Castagnei*, Jflore*... 5293

1286. *depauperata*, *Desm.* 5281 1289 *calophylli*, B. \$Br. 5284

1287. *str.aiformis*, *Niessl* 5282

^*j. GENUINA. *Sporidia 3-5 septata, flavida.*

1290. *filicinus*, jPr. .. 5334 1292. *clavisporus*, PL... 5336

1291. *hysterioides*, *Ces.* 5335 1293. *hysteriiformis*, £ars*...5337

|| OPHIODOTHIS. *Sporidia filiformia.*

1294. *Haydeni*, B. % G. 5361

XYLARLE 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*) *oleaeformis*, *Lev. in Moritzi Syst. Verz.* (1846).

736.* *Xylaria* (*Xylodactyla*) *monticulosa*, *Lev. Ann. Sci. Nat.* xx. (1863), 292.

738 * *Xylaxia* (*Xylodactyla*) *metaefoxmis*, *Lev. Ann. Sci. Nat.* xx. (1863), 292.

769.* *Thamnomyces melanurus*, *Lev. Ann. Sci. Nat.* xx. (1863), 292.

849.* *Nummularia discoidea*, *Lev. Ann. Sci. Nat.* xx. (1863), 292.

NEW AND BARE BRITISH FUNGI.

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

(Continued from p. 54.)

259. *Puccinia Schcleriana*, *Plow and Magnvs.*This name was misprinted at p. 54 as *P. Schrcetriana*.260. *Caeoma laricis* (*Westd.*)

Sori small, J 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 *Finns Laiix 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* (*Rumania*) *Oocardii*, *Kalch.*

Cups scattered or gregarious, sessile, lenticular, glabrous; becoming unduhite-lobate, reddish brown, when dry blackish brown; asci cylindrical, broad; sporidia 8, broadly elliptical, smooth (-02--022 x 011--012 mk.); paraphyses filiform, clavate apices.

Peziza Oocardii, *Grevillea III., fig., 207.* *Cooke, Mycog., 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*, *Batsoh.*

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 (-01--012 mk.); paraphyses filiform, slender.

On *Jiuriperus Sabina*. Brandon. , Mr. Norgate. 1883.264. *Peziza* (*Dasyscypha*) *scxupulosa*, *Karst.* -

Gregarious, slender, sessile, subhemispherical or sub-solenei-form, whitish or yellowish white, or greyish, rough with papillae; asci cylindraco-clavate, or subcylindrical; sporidia elongated, or aciculari elongated (-014--008 x '001-002 mk.); paraphyses very slender.

Peziza scrupulosa, *Karst. Monogr. Pez. p. 178; Helotium scrupulosum Karst. Myco., Fenn. p. 152. Peziza tomipora, Phillips in Herb.*

On dead thornwood. Scarboro'. Mr G. E. Masee.

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 ink.) *Lachnella prasina*, *Quelet*. *Asso. Franc. Tavan. 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 x -0025 mk.); paraphyses filiform, slightly thickened above.

On branches of *Calluna wilgaris*. Near Clunbury, Salop. 1882.

Karst., Mongr., Pers. p. 171. Crumenula callunigena Karst., Myco. Fenn. p. 212.

Cups £ of a line broad. Seated on a brown tapesium, and resembles externally *Peziza Rosce*, *Pez.*

267. **Peziza (Mollisia) Mali** (*Be7wi*).

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 X -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 X "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. 8ys. Myc. IT. 127.*

Stipitate, slender, rosy-white, disc plane, stem equal; asci cylindraceo-clavate; sporidia 4 to 8, oblongo-elliptical, "01-014 X '004-'005 mkr. 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 *JEquisetum*. Sbelton Bough, n. Shrewsbury, April.

271. **Cenangium urceoliformis** (*Kars>t*).

Scattered, commonly solitary, erumpent, sessile or subsessile, subspherical, nigrant, fusco-furfuraceous, becoming concentrically sulcate and naked, at first closed, then opening v^hith a connivent mouth ; disc pallid-cinereous; asci cylindrical; sporidia filiform septate, *065 x '002 mk. Paraphyses filiform slender, often furcate.

Peziza urceoliformis, Karst. *Mongr. Pez.*, 172; *Crumenula urceoliformis*, Karst., *Myc. Fenn.*, 213.

On stems of *Vaccinium vitis idcea*. 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 *Vaccirdum* but otherwise it answers to the description.

272 **Phacidium striatum**, *n. s.*

Scattered, orbicular, rugoso-striate, splitting into 5-6 lacinise; disc fuliginous; asci clavate, attenuated towards the summit, sporidia 8, lanceolate, simple or 1 septate, -025--03 X "002--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. Sf Buck.*

Scattered, slightly immersed, circular or elongated, irregular, open; disc pallid-brown, not deeply depressed; margin mein-branaceous ; asci broadly clavate ; sporidia 8, biseriata, clavate or clavato-fusiform, six or seven times pseudo-septate, or muriform, •028--044 x -005--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 Juniper!**, *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 hypha? are attached to the base of the perithecia ; asci ovate 50 X 20, sporidia oval with pointed extremities, brown triseptate, biseriata 25 X 10 mk.

On Juniper twigs. Forres. Kev. 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 aTe possibly A. pithyphylai Ytfes .

275. **Eutypa velutina** (*Wallr.*), *Sacc. Fungi.*, *Tenet.*, *Ser.* iv. f. p. 16. *Fungi Ital. y 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 x 4-5 : spores sausage shaped, pale olivaceous, 7-9 X 2. Slightly curved.

Conidia *Trichosporium vehiturh*, rendering the surface of the matrix brown and velvety. Conidia obovate brown 6 X 4-5*5.

On *Acer campestre*s.

276. *Soxdaxia Spaxganicola*, *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 X 8 mm.

On dead *Sparganum*. Mr. Bucknall, Yattan, July, 1881.

277. *Anthostoma Xtalicum*, *Sacc. & Speg. Michel* I., 326, *Fungi Ital.*, t. 165., *8aeo.&ytt.,i.,p.297.*

Stroma superficial, variously effused, black, perithecia in groups decorticating the stems in which it occurs, subimmersed, gibboso-depressed ^ to ^ mill, in diameter, papillate black ; asci cylindrical 80-100 X 8-10 shortly stipitate, apex obtuse and sub-trifoveolate, packed between the filiform paraphyses, octosporous: sporidia ovate, oblong, 25 X 7-8 curved, brownish, 2, rarely 1, nucleate, provided at both ends with a very short hyaline appendage.

Near Bristol. Mr. Bucknall, 1882.

278. *Phomatospoxa endoptexis*, *N. sp.*

Perithecia globose, deeply buried in the stem, ostiola very minute ; neck long and cylindrical, reaching the surface; asci cylindrical, 30 x 5. Sporidia oblong, oval, hyaline, simple, uniseriate, 10-11 X 3 mill.

On *Pteris aquilina*. Mr. C. Bucknall. Leigh Wood, April, 1882.

279. *Didymella proximella* (*Karst.J. Sacc. Syll. i., p. 558, Spharillea Prox. Karst. Myc. Fenn. IT., p. 177, Sp. hyperopta Eehm. Ascom. No. 348, Didymosphceria Eunzei Niessl. Hedreigia, 1866, p. 106, flab. fixs. 2039.*

Perithecia amphigenous, scattered minute, spherical, papillate, pertuse, black, 100-200 mill, in diameter ; asci sessile, oblongo-clavate, 70-100 x 16-22. Sporidia eight, uni-or biseriate, subovoid-oblong, apex slightly but obtusely attenuated, uniseptate, superior division rather the larger, 2 to 4 nucleate, constricted at the septum, 20-24 x 8-10.

On *Carex ampullacea*. Forces. Rev Dr. Keith. On *C. hirta*, King's Lynn. Comes near *Sp. anarithma*, B. & Br.

280. *Didymosphaexia Wintexi*, *Niessl. Neue Kernpflz.p. 165. Sacc. 8yn.i.,p.7Q2.*

Perithecia scattered or rather gregarious, minute, hemispherical, then depressed, covered by the epidermis at first; matrix not discoloured, ostiola papillate, perforate; coriaceous-membranaceous, black ; asci clavate, stipitate, octosporous 60-80 x 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 X 4|-5 mk., paraphyses numerous, rather narrow.

On dead potato stems. Mr. A. Croall. Stirling, N.B.

281. *Mel an con is aoxis*, *N. sp.*

Stroma vrilloid, black, suborbicular or conico-truncate, 2-5 mill, in diameter, corticolous or lignicolous, circumscribed by a black line. Perithecia £-£ mill, in diam., 5-15 in a group; ostiola minute;

asci clavate, 65-70 x 10 ; sporidia hyaline, uniseptate, nucleate, slightly constricted, elliptical, 12-15 x 4-5, not appendiculate.

On *Acer*. Mr. W. B. Grove. 1883.

282. **Diapoxthe (Choxostate) pustulata** (Desm.), *Sacc.* Sp. **punctulata**, *Desm.* 13. *JYot.*, 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 x 3-4.

On *Acer pseudoplatanus*. Leigh Down. C. Bucknall. 1882.

283. **Diapoxthe (Euporthe) discors**, *Sacc.*=(*D. xumicis*, *Plow*, in *(Jrev.vn.,p. 197. Sacc. Syll. i.,j>. 644.)*

Stroma variously effused and interrupted, blackening the surface of the stems, not surrounded by a black line beneath; perithecia few, globose, ^ mill, in diameter; ostiola scarcely existing, punctiform; asci fusiform-clavate, 60-62 x 10-11, without paraphyses, octosporous; sporidia fusiform, curved, rather obtuse, 17-18 x 4-6, 4-nucleate hyaline.

On *Rumex obtusi/olius*. Castle Rising.

284. **Diapoxthe (Tetxastaga) obscurans**, *Sacc. Syll.i.,p. 675. Fungi Ten. 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, £ mill, in diameter, black; ostiola very short, not¹ projecting above the bark, but just piercing it; asci widely fusiform; octosporous 45-50 x 12 mill.; sporidia biseriate, rarely obtusely uniseriate; fusiform, rather obtuse at both ends, 12 x 4[^]-5 mill., uniseptate, very slightly constricted, 4-nucleate, hyaline.

On ash. Forres. Rev. Dr. Keith.

285. **Leptosphaexia pxaetexmissa** (*Karst.*), *Sacc. Syll n.,t 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 x 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 x 7-10; paraphyses crowded, sub-coalescent.

On *Rubus idceus*. Rev. Dr. Keith. Forres. June, 1882.

Comes near *Sp. abbreviate* Cooke, but is not in lines, nor are asci saccate.

* **Sphaexia fluviatilis**. *Ph. Sf PL Grev. x.p. 73, is Sphaexia Lemaneae (6Will. fy. Wor.)*, *Beitr. zu Morph. and Phys. d Pilz.. ui.,p.l., t 1.*

286. **Zignoella insculpta** (*Fr.*), *Sacc. Syll.ii.jp. 255,*

Perithecia semi-immersed, globose, brownish-black, papillate, then perituse, the upper part falling off; asci sessile, oblongo-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. Bydrage voor van Flora Nederland. Nederlandsch Bot. Yer., 18th May. 1871, p. 30, t. v., f. 9.

Rev. Dr. Keith. Forrcs. On holly twigs.

287. **Fenestella bipapillata** (Tul.) Sacc. **Valsa bipapillata**, Tul. *Carp.* IT., 206. *Sacc. Syll.* p. 327.

Perithecia globose, minute black, very smooth, immersed in the bark in valsoid 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 x 15-18, triseptate muriform.

On beech. Rev. Dr. Keith. Sp. 30 x 15; asci 150-200 X 15-18.

288. **Ophiobolus vulgaxis**, Sacc. *Mich.* n., p. 953. *Syll.* n., p. 338. **Rhapidophora vulgaris**, Sacc. *Mich.* u., p. 67.

Perithecia not seated upon discoloured spots of the matrix, innate, then erumpent, globose, conical, 1-1 mill, in diameter; asci cylindrical, 90-120 X 6-8 mill., sessile without paraphyses, octosporous; sporidia filiform, 80-100 x 1-1[^], uniform in diameter, multinucleate pale yellow.

On dead potato stalks. Stirling, N.B. Mr. A. Croall.

This differs from *O. porphyrogonus* (Tode), (*Sphceria rubella*, Pers.) in the smaller size of its fruit, and in the mycelium not producing purple or red discoloration of the matrix.

289. **Eleutheromyces longispora**, JV. 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 x 20-25, usually tetrasporous; sporidia hyaline, elongate fusiform, acute, uniseptate, with terminal cilia at both extremities, 50-60 x 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.* u., 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 X 20-25, octosporous; sporidia, biseriate oblong, 20 x 8-8[^], 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 x 10-11, octosporous; paraphyses branched; sporidia fusiform, finely uniseptate, hyaline, 16-18 X 3 to 4 mill. Karst. Myo. Fenn. ii., p. 216. Sphseria N. Flora 1863, p. 322.

On *Angelica* stems. Blaize Castle. Mr. C. Bucknall,

292. *Hypocrea axgillacea*, *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 x 8; sporidia separating into 16, subglobose hyaline, generally rather longer than wide, 4-5 x 4.

On soft rotten wood, apparently ash. Dersingham. 1 Nov., 1881.

293. *Hypocrea stromlina*, *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 X 5-5[^] mill.

On cones of spruce fir. Belmont. Hereford. Nov., 1878. Mr. James Kenny.

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 X 5-6; sporidia hyaline, separating into two parts, each of which is globose ; nucleate 4[^]-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 X 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. *Xiophiodexmum caricinum* (*Desm. 8f Rob.*), *Duly Byst. p. 47.*
Hysterium caticinum, *Rubin Herb. Deem. 14, Nat. 1847, p. 180.*
Sacc. Sjil 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 ; asciclavate, 60-70, mk. bacillaro-filiform, 50 X 1 ink.

On *Carex arcnaria*. Mintlynn. 30 Aug., 1884.

PRIECURSORES AD MONOGRAPHIA POLYPORORUE.

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 "Novae Symbol*" (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_M 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 (Eupolypoxus), Fries.

„Pileus carnoso lentus, dein induratas (raio e caseoso-floccoso fragilis) extus absque sulcis el zonis, sed contextus radians fibrosus (intus) saepe zonatus. Pori numquam stratosi.

A. **Ovinii** Mesopodcs, carnosì, terrestres.

* *Pileo impolitOy squamoso floccosove.*

- 1 tessulatas, *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. \$ Bav. Grev.* i. 38.
- 7 Ellisii, *Berk. Grev.* vii. p. 5
- 8 leucomelas, *Fr. Hym. Eur.* 523.
- 9 pescapra?, *Pers. Champ. Com.* t. 5.
v. scobinaceus, *Pers. Myc. Eur.* ii. 37.
- 10 asprellus, *Lev. Comm.* 14.
- 11 hydniceps, *B. & C. Cnbensis* No. 191.
- 12 **radicatus**, *Schw. tin. Amer. Bor.* 331.
- 13 Hartmanni, *Cooke Grev.* xii. 14.
- 14 ceeruleoporus, *Feck.* 26 *Report* 68.
- 15 olivaceo-fuscus, *B. \$ Br. Linn. Journ.* xiv. 46.
- 16 perscinus, *B. \$ Curt. Grev.* i. 39.
- 17 **myclodes**, *Kalch. Grev.* iv. 73.

**** *Pileo glabro.***

- 18 viscosus, *Pei*s. 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. Novae. Symb.* 32.**
 23 rutrosus, *Rost. Poly.* t. 22.
 24 fuliginus, *Fr. Hym. Eur.* 525.
 25 Campbells, *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 carnosio lenti, indurato, epixylo. Stipitis basi concolori, nee nigra. *Mesopus, lentus*, *Fr. Epic.* 11-20.

*** *Pileo impolito, squamoso villosove.***

- 29 lepideus, *Fr. Hym. Ear.* 526.
 30 lentus, *Berk. Outl. p.* 237.
 31 bruinalis, *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.
 (rhpidium, *Berk. Land. Jour.* 1847, 31§=*Favolus.*)
 42 **tubarius, *Quelet. Bull. Soc. Bot. Fr.* 1878, 289.**

**** *Pileo strigoso virgatove.***

- 43 vernalis, *Fr. Hym. Eur.* 527.
 44 virgatus, *B. ç Curt. Linn. Journ.* x. 304.
 *_# ***Pileo cupulceformi.***
 45 pocula (Schw.), *B. fy Curt. Proc. Am. Ac.* iv. 122.
 46 cupulaeformis, *B. & Curt. Grev.* \. 38.

|| *Pileo margine ciliato.*

- 47 arcularius, *Fr. Hym. Eur.* 526.
 =*P. agariceuSj Konig.*
 48 **«emulans, *B. & Curt. Fungi Cub.* 181.**
 49 ciliatus, *Fr. Hym. Eur.* 527.
 50 umbilicatus, *Berk. Hook. Journ.* 1851, 79.
 51 tricholoma, *Mont. Syll.* 153.
 52 rnbripes, *Rostk. Poly.* t. 16.
 53 similis, *Berk. Houk Journ.* 1843, 6S5.
 54 Binnendykei, *Kurz. in Herb. Berk.* 2279.
 55 flexipes, *Fr. Linn.* v. 515.
 =*apaluSj Beik. Hook. Jonrn.* 1843, 635.
 =*gracilis, Klot. &nn. Nat. Hist.* 1839.

*** *Pileo glabro.*

- 56 alveolarius, *Fr. Epicr.* 431.
 =*collybioides*₇ *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. Arariti, 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 pbaeoxanthus, *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.** Pilens primo spcmgioso-mpllis, 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. tabuloseformis, Berk. Hook. Journ. 1845, 302.
 (=*spectabilis, Fr. Novas. 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.* ¶. 48.
 85 anthelminticus, *Berk. Gard. Chron.* 1866, p. 753.,
 86 proteiporus, *Cooke Grev.* xii. 15.

D. **Melanopodes.** Meso-ant saepius 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 Miclielii, *Fr. Sys. Myc.* i. 343.
89 pallidus, Schulz. in Fr. Hym. gur. 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 glutinifer, *Berk. in Herb.*
 95 platyporus, *Berk. in Hook. Journ.* 1851, p. 81.
 96 infernalis, *Berk. Hook. Journ.* 1843, 687.
 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.
 z=nonscriptus, Berk. in Herb.
 107 Gayanus, *Lev. Ann. Sci. Nat.* 1846, 127.
 108 Leprienrii, *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. Novce Symb.*

* *Pileo glabrato.*

- 113 tephromelas, *Mont. Syll.* 155.
 114 tribticulus, *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 Gtev.
 11!) vera-crucis, *Berk. in Herb.* No. 2429.
 120 petaloides, *Fr. Kpicr.* 444.
 121 liturarius, *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 Hcev. 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 lenzitoides, *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. *Einerici*, *Berk. Grev.* x. 96.
 var. **russiceps, B. fr Br. Ceylon Fungi 449.**
 133 platotis, *B. fr Br. Linn. Trans.* ser. 2. ii. 401.
 134 dorcadideus, *B. fr Br. Linn. Trans.* ii. 401.
 135 fusco-lineatus, *B. fr Br. Linn. Trans.* ii. 401.
 136 ligoniformis, *Bon. Hedw.* xv. 76.
 137 *Dickinsii*, *Berk. Linn. Journ.* xvi. 50.
138 terebrans, B. fr Curt. Linn. Journ. x. 306.

F. Fzondosi. Pileus carnosus, firmus, floccoso-fibrosus, *azonus*, nee coriaceo-induratus. Cespites centrales, stipitati, e basi communi enati, plus minus concreti, ut in macris formis pileum centralem simplicem lobatum, subinde referant., Pori secedentes.

- 139 *Barrclieri*, *Viviani Ital.* 28, t. 36.
 140 uinbellatus, *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. fr Bav. Grev.* i. 49.
 147 subgiganteus, *S. fr Curt. Grev.* i. 49.
148 Beatiei, Banning 31s* 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. fr Br. Ceylon Fungi* No. 451.

G. Lobati. Pileo e carnosu lento sub coriaceo, plus minus *zonato*, intus fibroso. Pori adnati. Cseeepites laterals substipitati imbricato-niultiplices, 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. fy 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.

**** Gontextu Icete colorato.**

- 168 flammans, *Berk. Hook. Journ.* 1852, 139.
 169 Isetu3, *Cooke Grev.* xii. 16.

H. **Imbricati.** Pileo epelliculoso, caseoso, primo succoso-molli, dein arido fragili azono, poris secedentibus. Caespites ad caudices arborum sessiles, vulgo dimidiato in situ vero horizontal undique expansi centrales, priinitus ex unico tuberculo amorplio in pileolos innumeros explicati.

- 170 casearius, *Fr. Epic.* 449.
 171 sulphureus, *J*r. Epic.* 450.
 var. ceratonise, 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 nee, ob contextum (album) tenuiorem, setoso-hispido, poris snbsecedentibus albis. Adultiores nunc mollis nunc indurato, sed brevi putrescunt nee per hiemem persistunt.

*** Pileo tomentos.**

- 178 \actens, *Fr. Hym. Eur.* 546.
 =*8acchaj'inus* **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 anneniacus, *Berk. Hook. Journ.* 1856, 197.
 185 alutaceus, *Fr. Hym. Eur.* 51-5.
 186 testaceus, *Fr. Hym. Eur.* 545.
 187 undosus, *Peck. 34^ 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 ostreseformis, *Berk. Linn. Journ.* xvi. 46.
 194 semi-digitaliformis, *Berk. Linn. Journ.* xvi. 39.
 195 *Gxmni*^*Berk. Fl. Tasm.* 253.

- 196 angustus, *Berk. Fl. Tasni.* 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 versiculis, *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 *caBsius, (Schr.) Fr. Hym. Eur.* 547.
 205 mollis, *Fr. Hym. Eur.* 547.
 206 fimbriponis, *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. Novce. Symb.* 37.
 213 microscopicus, *Jungh. Fl. Java.* i. 52.
 214 semi-supinus, *B. # C. Grev.,x.* 50.
 215 semi-pileatus, *Peck. 34^ Report* 43.
 216 microstomus, *B. fy 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 caruoso 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 crocens, *Pers. Myc. Eur.* ii. 59.
 225 Spraguei, *B. \$ C. Grev.* i. 50.
 226 dialeptus, *Fr. Ep.* 456.
 227 *aesculi, Schwein. in Fri. Epic. 4:54:.*
 228 lseticolor, *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 casruleus, *Schum. Sadl.* 387.
 234 fcedatus, *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 *albns*, Buds. Fl. Ang. 626.
 242 *scanicus*, Fr. Hym. Eur. 549.
 243 *abruptus*, Berk. Linn. Journ. xvi. 42.
 244 *furnosus*, 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. Si/mb. 39.
 250 *fragrans*, Peck 30th Report 45.
 251 *Curreyanus*, Berk. in Herb. 2,820.
 252 ***dissitus*, B. fy Br. Ceylon Fungi No. 454.**
 253 *adustus*, Fr. Hym. Eur. 549.
 var. resupinatus {=*fumoso-griseus*, O. & 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. Set. Nat. 1846, 301.
 259 *dichrous*, Fr. Hym. Eur. 550.
 = *Gleporus 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. Halesia, B. fy C. Grev. i. 52.
- 261 ***adiposus*, B. § Br. Fr. Hym. Eur. 550.**
 var. arineniacus, Berk. Eng. FL v. 147.

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Grevillea,

A QUARTERLY RECORD OF CRPTOGAMIC 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. Wortlington 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 *Trichoioma*, the pink tinge of the spores being faint and quite of a different character to the spores in *Hyporhodium*. 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 Eu? 188.

Small. Pileus rather fleshy, hemispherical, obtuse, *atomate*, soft, *silicate*, white; stem delicately fistulose, *imbrescent*, inflated in a bullate manner at the base; gills free, whitish, then flesh-coloured.—Cooke Illus. L 518, fig. a.

On wood. Scarboro'. (G. Masseur.)

Pileus about half an inch broad, deeply sulcate. Stem about an inch long.

Agaricus (Pluteus) violarius, Masseur, in litt.

Pileus hemispherical, then nearly plane, velvety, even, watery dark purple, disc darkest, margin undulate. Flesh thick, grey;

stem thickest at 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. Masee.*)

Gregarious. Pileus $\frac{1}{2}$ -1 $\frac{1}{2}$ 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. Masee.*)

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 emarginate, 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. Hojlm. Ic. t. 14, f. 1. Cooke Illus. t. 519.*

In shady woods. Near Scarboro'. (*G. Masee.*)

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. 1.-621.*

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*) *pxatensis*, *Schceff. 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.

Agaxicus (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 Eev. M. J. Berkeley. It is larger than the typical form. Pileus 2-3 inches. Stem 2-3 inches long, half an inch thick.

Agaricus (Fanaeolus) egxegius, *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 2½ 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 SpliEeropsidae, 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 (-004 X '0015 mm.) on rather Jonger sporophores.

On fading leaves of *Bevberis asiatica*. Kew.

Fhoma Beckhausii, *Cooke*.

Perithecia subglobose, scattered, covered by the bark which is slightly elevated, very indistinct. Sporules sublanceolate, continuous, usually binucleate (-008-01 X -003 mm.)

On branches of *Viburnum lantana*—in conjunction with *Diaporthe Beckliausii*, Nke. Dartford; Kew.

Phoma scobina, *Coole*.

Perithecia subcutaneous, gregarious chiefly near the nodes, erumpent, cracking the cuticle, subglobose, black, depressed. Sporules fnsoid, or clavate, sometimes binucleate, hyaline, on straight sporophores (-01--012 x -003--0035 mm.).

On slender branches of *Fraxinus excelsior*, Kew, Darenth, Highgate.

Spermogones of *Diaporthe scobina*, with which it is usually associated.

Phoma lauxella, *Face*. *Syll. No.* 486.

In our specimens the sporules are oblong-elliptic, rounded at the ends, and -012 x "0035 mm.

On twigs of *Laurus nobilis*. Kew.

Phoma Yinifeiae, *Cooke*= *Phoma viticola*, *Sacc. Syll. No.* 463; *not Phoma viticola*, *Sacc. Syll. No.* 653.

Sporules '007 X "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 Yitis, *Bon.* (sp.-003--0035 x -001--002).

Phoma viniferae, *Cke.* (sp. -007 X -004 mm.).

Phoma Cookei, *Per.* (sp. -013 X '0045 mm.).

Phoma celastrinae, *Coolie*.

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 (-013 x -005 mm.) at first stipitate.

On small branches of *Euonytnus americanus*. Kew.

Phoma Fozsythiae, *Coohe*.

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 (-005 x '002 mm.) on short sporophores.

On twigs of *Forsythia*. Kew, March, 1885.

Phoma pxunorum. *Code*.

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 ('01 X -0045 mm.).

On dead twigs of *Prunus lauro-cerasus*. Kew, March.

Phoma radicans, *Coolce*.

Caulicolous., Perithecia gregarious on bleached spots, minute, punctiform, flattened, covered by the thin cuticle. Sporules numerous, oval, hyaline, with no distinct sporophores (.003 X •0015 mm.).

On still living branches of *Tecoma radicans*. Kew.

Phoma pruni-lusitanicae, *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 (01×004 mm.).

On twigs of *Primus lusitanica*. Kew.

Phoma Herminiera, *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 (01×0035 mm.), sporophores simple or furcate, elongated (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 ($007-008 \times 003$ 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 Philadelphus, *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 (012×0025 mm.) hyaline.

On stems of *Philadelphus*. Kew.

Distinct in habit and fruit from *P. Landeghemice*, 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 ($001-005 \times 002$ 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 ($008 \times 0025-003$ 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 (015×006 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 (\wedge mm. diam.). Sporules elliptical, continuous, hyaline, enucleate (015--018 x '005 mm.), sporophores not distinguished.

On living leaves of *Prunus lusitanica*. Kew.

Phoma lycopersici, *Cooke* (Phomaherbarum, *Cooke Fungi Britt.il.*, 415).

Caulicolous. Perithecia punctiform, black, densely gregarious, at first covered by the cuticle, ultimately more or less exposed. Sporules lanceolate, binucleate (-012 x '004 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 (*00f)--01 x '0035 mm.).

On stems of *Dipsacus sylvestris*. Kew, March,

Phoma polemonii, *Cooke*.

Caulicolous. Perithecia gregarious, globoso-depressed, black, shining, with a distinct acute ostiolum, soon becoming naked by the falling away of the thin cuticle. Sporules narrowly elliptical, not distinctly nucleate (-01 x '003 mm.).

On stems of *Polemonium cceruleum*. Kew, March.

Phoma alceaxum, *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 (-015 x '005 mm.).

On stems of *Althea rosea*. Kew.

Habit resembling *P. nebulosa*.

Phoma oaryophylli, *Cooke*.

Perithecia rather large, convex, black, shining, seated on indefinite bleached spots. Sporules fusiform, somewhat obtuse at the extremities, scarcely distinctly nucleate, hyaline (*009 X'003 mm.).

On calyces, and sometimes the flower stems, of cultivated pinks and carnations. Shrewsbury. (*Rev. W. Leighton.*)

Phoma Calystegiae, *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 (-0075--008 x-0035 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 (-01 x -0045--005 mm.), on short straight sporophores.

On stems of *Lysimachia vulgaris*. Kew.

Phoma soli dag inis, *Cooke*.

Caulicolous. Perithecia gregarious, numerous, at first covered by the cuticle, then convex, black and shining, pierced with a minute pore. Sporales narrowly elliptical ('009--01 x *002), binucleate, at first attached to very short stylospores.

On stems of *Solidago canadensis*. Kew Gardens, March.

Phoma Labiataxum, *Cooke*.

Caulicolous. Perithecia scattered, punctiform, minute, at length prominent, convex, black, shining, not papillate. Sporules oval, hyaline, colourless ('005 x '003 mm.), at first attached to short stylospores.

On dead stems of *Marrubium*. Kew Gardens, March.

Phoma acorii, *Coole*.

Follicolous. Perithecia gregarious, punctiform, minute, very numerous, seated beneath the cuticle, scarcely visible when dry, membranaceous, brown. Sporules oval or elliptical, obtuse (-00G-'008 x -003 mm.).

On dead leaves of *Acoms calamus*. Totteridge, Kew, March.

In conjunction with *Leplospharia 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 ('009-*01 x •003 mm.).

On stems of *Tamus commimis*. Neatishead, Norfolk, 1870.

It is to us uncertain whether different from *Phoma Tami*, Lamy Exs. No. 798.

Phoma onagraceaxum, *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 (-006--008 x -0035--004 mm.).

On stems of (*Enothera biennis* (-006--008 x -004). On stems of *Epilobium angustifolium* ('008 x *0035). Kew, March.

Phoma chamaeropsis, *Cooke*.

Perithecia erumpent, gregarious, subglobose, black, opaque, irregular in size, pierced. Sporules elliptical, obtuse, not nucleate, hyaline (-004--005 x -002 mm.).

On petioles of *Chamcsro'ps* and other palms. Kew.

Not unlike *P. cocoina*, but sporules about half as long.

Cytispora palmarum, *Cooke*.

Conceptacles innate-erumpent, loosely gregarious (£-1 mm. diam.), at first covered, at length cracking the cuticle. Cells few. Sporules sausage-shaped (allantoid), -006 x '001 mm., hyaline, profuse.

On palm petioles, &c. Kew.

Cytispora micxostoma, *Sacc. Syll.* 1486.

var. **Cotoneastri**. Sporules •006-'007x*0015 mm.

On *Cotoneaster frigida*. Kew.

var. Axnelanchieris. Sporules *005-"006 mm. long.

On Amelanchier. Kew.

Coniothyrium cassiaeconom, *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 (#006 x *004 mm.).

On stems of *Cassia mavylandica.* Kew.

Diplodina ammophilae, *Trail in Scot. Nat. i. 76.*

Perithecia scattered in the spaces between the nerves, oval, opening by a slightly papillate ostium on back of leaf, dark. Sporules hyaline, broadly fusiform (-03--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 Coryphae, *Coolie.*

Immersed, erumpent, cracking the cuticle in linear longitudinal fissures. Perithecia small, black, covered. Sporules subglobose, or oval, not constricted, uniseptate, with a thin epispore, pale fuliginous (•0H--017X-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 (*012 x -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 genistaxum, *Cooke.*

Somewhat scattered. Perithecia immersed in the bark, covered by the cuticle, scarcely visible, globose. Sporules elliptical, uniseptate, not constricted, rather pale brown (>012-*014x "006 mm.).

On twigs of *Genista cetrans* and *Coronilla emerus.* Kew.

Diplodia Paulowniae, *Cooke.*

Somewhat scattered. Perithecia subglobose, black, at length erumpent, but not superficial. Sporules elliptical, scarcely constricted, uniseptate, clear brown (-020--022 x '008 mm.).

On twigs of *Paulownia imperialis.* Kew.

Mixed with *Ploeosporu* and *Phoma.*

Hendersonia equiseti, *Trail in Scot. Nat. i. 76.*

Perithecia subdermal, with a small ostium, nearly spherical (about 180 m. in diam.). Sporules pale brown, fusiform, or nearly cylindrical, with rather obtuse ends (•012-*02x<002--003 mm.), triseptate.

In dead stems of *Equisetum.* Aberdeen.

Hendersonia sarmentorum, *West.* var. **Lauri**.

On *Laurus nobilis*. **Kew.**

Probably this species, but sporules $*018 \times '005$ mm., which exceeds that of the typical form considerably.

Hendersonia coronillae, *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 ($-012-006$ mm.), then elongated, straight, or slightly curved, triseptate ($*01 \times '007$ mm.).

On slender twigs of *Coronilla emwus*, and of *Baccharis halimifolia*. **Kew.**

Camarosporium Berberidis, *CooTce.*

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 ($022-025 \times *006-009$ mm., when mature).

On small twigs of *Berberis vulgaris*. **Kew, March.**

Hendersonia Fiedler!, *West. Sacc. Syll. No. 2299.*

var. **Symphoricarpi**, *Cooke.*

Sporidia triseptate ($-018 \times '004$ mm.), slightly coloured.

On slender twigs of *Symphoricarpus racemosus*. **Kew, Swanscombe.**

Hendersonia rubi, *Sacc. Syll. 2316.*

var. **rosarum** (= *H. rosce*, Fries.)

On wild rose. • **Kew Gardens, April, 1885.**

Camarosporium Limoniae, *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 ($*022-028 \times '007-01$ 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 ($'OS-'O^{\wedge} \times *006-007$ mm.), five to seven septate.

In dead leaves and stems of *Heleocharis palustris*. **Aberdeen.**

Camarosporium spiraeae, *Coolie.*

Scattered. Perithecia rather large, covered by the elevated cuticle, globose, black, erumpent. Sporules elliptical, mostly triseptate, with one or two transverse septae, not constricted, pale brown (-018×-0075 mm.).

On slender twigs of *Spiraea caliosa* and *S. opulifolia*. **Kew.**

Leptothyrium medium, *CooJie*.

Hypophyllous. Perithecia scattered, rather large ($\frac{1}{4}$ mm. diam.), depressed, circular, dark brown. Sporules crescent-shaped, narrow, attenuated to each extremity (-012--014 X '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. *Castaneecola*, *Cooke*.

Perithecia not more than half the diameter of those on oak leaves, but the fructification the same.

On leaves of *Castanea*. Darenth, 1874.

Gloeosporium Bexbexidis, *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 ('005 x '003 mm.).

On fading leaves of *Berberis asiatica* and other species. Kew Gardens, March.

Ovularia Bexbexidig, *Cooke*.

On the under surface, effused, greyish white, forming thin frosty-looking patches". Hyphae short, simple. Conidia oval or elliptical, hyaline (-015--018 x -008--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, biseriate, uniseptate, biguttulate, a little constricted at the septum, sometimes with a very small hyaline apiculus at each extremity, hyaline (-025-'028 X '005--007 mm.).

On branches of *sfEsculus hippocastanum*. Kew, Bushey Park, Hampto'n Court, and Honnington (Suffolk).

In many respects resembling *Cryptospora sEsculi*, Fckl., but distinctly uniseptate.

Valsa (Choxostate) *Ailanthi*, *Sacc. Syll. No. 2408*.

Stroma valsseoid. 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 ($\frac{1}{2}$ mm. diam.), ostiola elongated, cylindrical, connivent in a small black disc. Asci cylindrical fusiform (-05 x -007 mm.). Sporidia oblong, fusiform, quadriguttulate, then uniseptate, slightly constricted at the septum, hyaline (012--015 x '004 mm.).

At the extremity of young, dead twigs of *Ailanthus glandulosa*. Kew.

Diaporthe ophites, *Sacc. Sylh 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 (-012--013 X #0045-*005 mm.).

On dead twigs of *Hibiscus syriacus*.. Kow, March, 1885.

Mixed with *Phoma ophites*, Sacc.

Sphaeria (Physalospora) xosicola, *Fckl. 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 (-018 x '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.

Sphaerella (Lae stadia) r ho dor®, *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 (-80-'120 x '16). Sporidia elliptical, hyaline, continuous (perhaps *015 X '007 mm., but too immature to measure with certainty).

On living leaves of *Rhododendron*. Kew.

This can scarcely be the *Lcestadia rhododendri*, D.Not, of Saccardo's Sylloge.

Sphaerella (Laestadia) Xxidis, *die.*

Caulicolous. Perithecia loosely gregarious for some inches, punctiform, covered by the cuticle, which is pierced by the minute ostiolum. Asci clavate sessile, octosporous. Sporidia elliptical, slightly attenuated towards each extremity (•012--014 x '004-'005 mm.) hyaline.

On flower stalks of *Iris germanica*. Kew Gardens, March.

Ploeospora herb arum, var. **Zxidis**.

Sporidia 7 septate, muriform, bright amber colour, '04 x '016 mm.

On flower stalks of *Iris germanica*. Kew Gardens.

In company with *Sphcerella (Lcestadia) Iridis*.

Leptosphaeria (Xttetasphaeria) 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 -03-'035 x '006 mm.

On leaves of *Acorns 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 (-022 x '006 mm. in the upper half). Sporidia eight, minute, allantoid, hyaline (-006 x -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 *Bhytisma* :—

ulmi, *Fr. El.u.*, 128.

juglandis, *Schw. Am. Bor.* 2038.

smlilacis, *Schw. Fr. S. M. n.*, 570=Microthyrium.

pedicularis, *Klot. Fr. Sys. Myc. n.*, 602.

asteris, Schw. Syn. Car. 271.

solidaginis, *Schw. Am Bor.* 2034.

stellare, *Kickx. Bull. #n*a\=Euryachora.*

sedi, *Corda £ftm7i.=Euryachora.*

heraclei, Corda Sturm.

confluens, -*Fr. Sys. Myc. n.*, 570=Leptostroma.

elevatum, *Schw. Am. Bor.* 2044=Phoma.

silphii, *Schw. Am. Bor.* 2045=Leptostroma.

seriale, *Schw. Am. Bor.* 2041=Leptostroma.

padi, *Klot.*

robinise, *Schw. Am. Bor.* 2022=Ectostroma.

chrysanthemi, *Kirch. Lotos*, 1856, 205.

Euphorbias, *Schub. Fie. Fl. Z)r^srf.=Melampsora.*

Violas, *Kirch. Lotos.*, 1856, 205.

Bistortse, Lib. Crypt. Ard.

riccioides, *Zev.=Trabutia quercina.*

agglutinatum, *Schw Syn.* No. 2046.

Linnaese, *Strauss in £Wfli=Wittrockii.*

Empetri, *Fr. El. n.*, 127=Duplicaria.

maculans, *Mont. Syll.* 193=Phyllachora.

pandani, ^4?/7^s=Ailographum.

corrugatam, jFV.rsrPlacosphaeria.

minutulum, Grog, in Fungi Gall. 455.

zeinum, Ber. Act. Milan, 1844.

=Cotini, *Ces. Herb. Myc. n.*, 566.

Lathy

Onobr

D.C.,

}

Fr. Sys. Myc. II., 569.

Botryosphaeria mutila (*Sphaeria mutila*, Schwein. Amer. Bor. No. 1439, sec. spec.)

Stromate innate Peritheciis in series flexuosas erumpentibus, subconfluentibus, globosis, superiore parte prominente inaequali rugosa, intus albedo farcta. Ascis clavatis, octosporis. Sporidiis ellipticis, continuis, hyalinis (-02-'022 x -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 (•018 X '006 mm.), but the fragments are too imperfect and small for diagnosis.

Botryosphaeria subconnata (*Schweinitz Amer. Bor. No. 1443. Sacc. Syll. 4240. Wisteria valsarioidis, Ithm. in Ithm. Myc. Univ. No. 2166.*

According to authentic specimen in Herb. Berk. No. 9025.

On *Gossypium*.

Botryosphaeria Syringae, *Schweinitz Amer. Bor. No. 1667.*

Ascis elongato-clavatis, octosporis/ Sporidiis arete ellipticis, continuis, hyalinis (-026--028 X '008 mm.)

On branches of *Syringa*. United States [*Ellis 3111*].

Botryosphaeria callicarpae, *Cooke in Raw Amer. Fungi, No. 767.*

Longitudinaliter erumpens. Stroma elongatum. Peritheciis parvulis confluentibus, atris. Ascis clavatis. Sporidiis continuis, (immaturis).

On bark of *Callicarpa americana*. Darien, Georgia.

Botryosphaeria abrupta, *Berk. § Curt, in Herlf. Berk. No. 9013.*

Stromatibus erumpentibus, epidermide fissurato arete cinctis, subdiscoideis. Peritheciis globosis, semi-immersis, atris, demuni confluentibus, truncato-obtusis, abruptis, intus albus. Ascis clavatis, octosporis. Sporidiis elliptico-fusiformibus, utrinque Bubattenuatis, obtusis, continuis^ hyalinis, flavescentibus, intus granulosis (-022--024 x -01 mm.)

On *Cyrilla*. Carolina, U.S.

Botryosphaeria melathroa, *Berk. § Curt, in Herh. Berk. No. 0014.*

Stroma longitudinaliter effusum, inuatum, erumpens. Peritheciis ovatis confertis, subdiscretis, atris, ad apicem rotundatum, paululis. Ascis clavato-cylindricis. Sporidiis ellipticis, continuis ('02 X '008 mm.) hyalinis.

On *Cratogeomys cordatus*. Pennsylvania.

Botryosphaeria araliae, *Curt. Cat. 143.*

Stromatibus innato-erumpentibus, corticulis, subpulvinatis, nigris, plerumque lineato-aggregatis (1 mm. diam.), albo-farctis, peridermeo cinctis. Peritheciis vix distinctis, obtusiusculis, opacis. Ascis clavatis, octosporis. Sporidiis ellipticis, continuis, hyalinis (-018 x •008 mm.).

On bark of *Aralia spinosa*. Carolina.

Botiyosphaeria viburni, *Cooke*.

Stromatibus erumpentibus, gregariis, minimis (1-1.5 mm. diam.), corticulis, depresso-pulvinatis, atro-fuscis, superficie tuberculosis, albo-farctis. Peritheciis (6-10) subimmersis, vertice convexis, pertusis. Ascis clavatis. Sporidiis arete ellipticis, continuis, flavescenscentibus, intus granulosis (-018--021 X *008 mm.).

On branches of *Viburnum opulus*. United States.

Closely allied to *B. aralice*, Curt., of which it may be a variety.

Botryosphaeria hypoxicoxum, *Cooke in Herb. Berk, 9030 bis*.

Subelliptica, planiuscula, atra. Peritheciis parvulis, connatis, albo-farctis, epidermide fissa arete cinctis. Ascis clavatis, octosporis. Sporidiis anguste ellipticis, continuis, hyalinis (circa 0.2 x 0.05 mm. immaturis).

On stems of *Hypericum pvolifevum*. 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.

Botryosphaeria hypoxylloidea, *Cooke*.

Mox superficial, hypoxylloidea. Peritheciis minimis, in pustulas orbicularibus, convexis rugosis, atris, opacis, confluentibus. Ascis cylindrico-clavatis, octosporis. Sporidiis ellipticis, continuis, hyalinis, 0.12 x 0.05 mm.

On branches (unknown.) Australia.

Has just the habit and appearance of some species of *Ilyoxylon*, but not carbonaceous."

Botryosphaeria stotnatica, *Schweinitz in Herb. Berk. No. 8823*.

Latissime effusa, emergens, lignum atro inquinans. Peritheciis semi-immersis majusculis, ostioliis validis prominentibus, cylindraccis obtusis insignis. Ascis clavatis, octosporis, sporidiis ellipticis, continuis, fuscis -012--013 x -005 mm.

On rotten wood. Indiana, United States. (Schweinitz.)

Botryosphaeria (Myxmaecium) collematoides, *B. § Eav*.

Stromate effuso, tenui, atro. Peritheciis parvulis, ovalibus, congestis, demum apice applanato, opaco, botryoideo-aggregatis, subconfluentibus. Ascis cylindraccis, octosporis. Sporidiis ellipticis, uniseptatis, vix constrictis, fuscis ("015 x 0.07 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 pulvinate erumpentibus. Peritheciis numerosis, concentricis aggregatis, fuscis, epidermide cinnabarina cinctis. Ascis lineari-clavatis, 7-110 x 16-20 μ , paraphysatis; sporidiis octo-

nis irregulariter sulxlisticris, h¹aliniis *20-26x*5-7 //-, 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 Walterianum, *Rav. Fungi Car. iv. 35.*

Sporidiis uniseptatis, fuscis ('01--012 x '006 mm.).

Melogramma (Valsaria) Hookeri, *Cooke.*

Acervulis erumpentibus, discoideis,-atris. Peritheciis prominentibus, minimis, confluentibus, vel subdiscretis. Ascis clavatis. Sporidiis lanceolatis, uniseptatis, valde constrictis, fuscis '033--045 X -007 mm.

On bark. South Marocco (*Sir J. D. Hooker*).

Melogramma (Valsaria) phoradendri, *B. 6s Curt., Curt. Cat. 143.*

Peritheciis gregariis, tectis, demum cortice fissurato erumpentibus, atris, obtusis. Ascis subcylindricis. Sporidiis subellipticis, uniseptatis, leniter constrictis, fuscis #028-#03 x '01--012 mm.

On bark of *Phoradendron flavescens*. U. States.

Melogramma (Valsaxia) grandinea, *Berk.* nee *Diatrype grandinea*, *B. \$ llav.* *Melogramma insidens*, *Berk. in Orev. iv., 99, nee Schweinitz.*

Stromate effuso, subrotundo, fusco-nigro. Peritheciis emergentibus, confertis, ovatis, apice depresso subumbilicato. Ascis clavatis. Sporidiis ellipticis, uniseptatis, nee constrictis (*008 X '004 mm.) fuscis, diu continuis. *Berk. in Herb. 9020.*

On bark of *Fraxinus*. United States.

Melogramma platyxa, *BerU.^Sf 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--022 x '004 mm.). *Herb. Berk. No. 8678.*

On naked wood. Pennsylvania, U.S.

Melogramma Spraguei, *B. \$ C. No. 3904.*

Has no 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 meliae, *Curtis in Herb. nee Schweinitz.*

Acervulis erumpentibus, atris, subdiscoideis vel oblongis. Peritheciis prominentibus, demum subliberatis, rugosis, apice applanato. Ascis clavatis, majusculis octosporis. Sporidiis sublanceolatis, triseptatis, nee constrictis, rarius quinque-septatis (*038-'042 x *01 mm.) fuscis.

On *Meliiu* United States.

Sub.-Fain. II. IUIYTISM0IDEI.

GEN. 6. **RHYTISMA**, *Fries.*—Stroma applanatum, discoideum, vel effusum, pluriloculatum, primo clausum, demum in rimas flexuosas vel trans versales frustulatum rumpens.

*** Sporidia continua, hyalina.**

1295. maximum, *Fr. Syst. Myc.* 1299. *grewias*, *Kalch., Grev. ix.,*
 ii., 566. 32.
 1296. *Curtisii*, *B. \$ Rav., N.* 1300. *pongamiaa*, *B. £ Br.,*
Amer. Fungi. No. 780. ***Ceylon Fungi, 1128.***
 1297. *eugeniacearum*, *Cordalc.* 1301. *myrciae*, *Mont. Syll 193.*
 iv.,/. 130. 1302. *myrica*, *Mont. Syll 193.*
 1298. *Austini*, *Cfo., £m\ vii., 48.* 1303. *circumscissum*, *Lev. Ann.*
Sci. Nat, 1846, v., 254.

**** Sporidia uniseptata, hyalina.**

1304. *ustulatum*, *Cooke, Grev.* 1307. *spurcarium*, *B. fy Br_{m,j}*
 v., 17. ***Ceylon Fungi TSo. 1131.***
 1305. *maculosum*, *B. \$ Br.,* 1308. *leptospilum*. *B. \$ Curt.,*
Ceylon Fwigi No. 1126. ***Cuba Fungi No. 721.***
1306. pterygotfie, #fy Br. ^Ceylon 1309* ^Yi Qm x xm. B ^Cvrt ^Ceylon
Fungi, No. 1129. *Fungi No. 1127.*

^ Sporidia uniseptata\ fusca.

1310. *placentae*, *B. \$ Br., Ceylon* 1312. *astrocaryi*, *Mont. Syll,*
Fungi 1130. 194.
 1311. *porrigo*, *Cooke, Grev. x.,*
 129.

***** Sporidia 3 sejitata, hyalina.**

1313. *rubiae, fl/ow**. *Syll., p. 194.*

#S# Sporidia filiformia, hyalina.

1314. *acerinum*, *P^rs. ^ n. 104.* 1318. *andromedse*, *Fr. Syst.*
 1315. *punctatum*, *Fr. Syst. Myc.* *Myc. ii., 567.*
 ii., 569. 1319. *arbuti*, *Phil, G?w. vii.,*
 13J6. *salicinum*, *Fr. Syst. Myc.* 13. 1320. *urticas*, *Fr. Sys. Myc. ii.,*
 ii., 568. 570.
 v. *umbonatum*, *Rabh.*
 1317. *australe*, *D. R. fy M. j* 1321. *ilex-canadensis*, *ASCAU ^WI*
Mont. Syll 193. ***Bor., 2026.***

Sporidia ignotce.

1322. *fuscum*, *Fr. Linn. v., 551.* 1325. *ilicincola*, *Fr. Syst. Myc.*
 1323. *velatum*, *Schw. Syn. No.* ii., 568.
 270. 1326. *prini*, *Fr. Sys. Myc. ii.,*
1324. *Wi2kei, Curt. in Herb. Berk. 568.*

1327. vaccinii, *Fr. Sys. Myc.* ii., 567
 1328. decolorans, *Fr. Sys. Myc.* ii., 567
 1329. *jplicexun*, *Berk. Hoofc. Journ.*, 1854, 210
 1330. *viti*, *Schw. Am. Bor.* 2037.
 1331. nitidum, *Lev. A. S. N.*, 1846, v., 254
 1332. *abj*, *Lucun*, *Mont. & Berk.*
 1333. baulrinise, *Nees. PresL Reliq.* i., 1
 1334. magnoliae, *Schw. Amer. Bor.* 2039
 1335. psidii, *Zinn. iv.*, 118.
 1336. sassafras, *Schwz. Am Bor.* 2036
 1337. rliododendri, *Fr. Sys. Myc.* ii., 567
 1338. rufulum, *B. \$ Curt., Cuba Fungi* 722
 1339. atramentarium, *Ciut., Cuba* 716
 1340. gyrosum, *Mont. Syll.* 193
 1341. micraspis, *B. \$ Curt., Cuba* 720
 1342. conoideum, *Cke., Orev. v., 16*
 1343. durissimum, *Cke., Grev. v., 16*
 1344. monogramme, *B. \$ Curt. N. A. F.* 782
 1345. laciniatum, *Fr. Syst. Myc.* ii., 566
 1346. cone en tri cum, *B. \$ Curt., Cuba* 719
 1347. aceris-eriocarp, *Schw. Am. Bor.* 2032
 1348. lagerstrgemise, *Eabh. F. E.* 2310
 1349. austro-caledonicnm, *Crie. Bot. Jahrs.*, 1876, 108
 1350. nervalo, *A. \$ S. Consp. L 7, /.* 7
 1351. empetri, *White, Ann. N. //.* No. 1650

Herbicolce.

1352. hysterioides, *Fr. Sys. Myc.* ii., 571
 1353. bifrons, *Schiv. Am. Bor.* 2035
 1354. giganteum, *Fr. Sys. Myc.* ii., 567
 1355. cacti, *Att. mJ90r. 2040.*
 1356. asperulse, *Eabh. Itin.*

Sub.-Fam. III. STIGMATEOIDJE.

Perithecia plus minusve discreta, plerumque simplices et superficiales.

GEN. 7. **HTPOSPILA**, *Fr.* Perithecia plus minus discreta, pseudostromate phyllogeno immersa.

*** Sporidia uniseptata, hyalina.**

1357. bifrons, *D. C.* ... 3535
 1358. immunda, *Fckl.* ... 3536
 1359. ceuthosporioides, ... 2488

**** Sporidia 3 septata, hyalina.**

1360. pustulafP*,*j ... 3533
 1361. Rehmii, *Sacc.* ... 3534

^ . Sporidia Jiliformia.

1362. saligna, *Fr.* ... 4088
 1363. arctica, *Karst.* ... 4089
 1364. tigrina, *Fckl.* ... 4090
 1365. yulgaris, *Fckl.* ... 4091
 1366. populina, *Pers.* ... 4103
 1367. viburm, *i?z<6l\orra;.xii.44*

%% IlyrorTERis. *Sporidia continue**, *fusca*.

1368. bambusse, *Lev.* ... 1074

%% ISOTILEA. *Sporidia muriformia, fusca*.

1369. nyssao, *B. ç C.* ... 3875

GEN. 8. TRABUTIA, *Sacc. Syll. i., 449.*—Stroma phyllogenum, rhytismoidenin, atrum.

* *Sporidia continua, hyalina.*

1370. quercina, *Rud.* ... 1733 1372. tosta, *B. & C, North Am.*

1371. crytbrospora, *B. \$ C,* *Fungi 781*
Fungi 783

** *Sporidia uniseptata.*

1373. constellata, *B. \$ Br.,*
Ceylon F. 1132

GEN. 9. PARODIELLA, 5?; ^.—Peritbecia superficialia, globosa astoma, atra, basi foliis adnata.

* *Sporidia uniseptata, hyalina.*

1374. siinillima, *B. \$ C.* 5096

J *Sporidia uniseptata fusca.*

1375. grammodes, Z^.... 5279 = *eminafa, B.j-R.2114
= perisporioides, B. 2711

*** *Sporidia ignota.*

1376. zeinam, 5^r. ^c^ . Milan 1377. melioloides, JB. ^jBr. 1021
1844

= *cotini*, *Ces. Herb. Myc. ii., 566*

GEN. 10. STXGMATEA (*Fr.*) *Sacc. Syll. L, 541.*—Perithecia prominula, crassiuscnle contexta, ostiolo minuto.

I. EUSTIGMATEA. *Sporidia uniseptata.*

1378. Eobertiani, *Fr.* ... 2105 1384. sequoia, *Che.* ... 2110

1379. geranii, *Fr.* ... 2106 1385. sylvatica, *Sacc.* ... 6072

1380. confertissiraa, *Fckl.* 2107 1386. andromeda?, *Eehm.* 2111

1381. macnlceformis, *Fr.* 2108 1387. Jenensis, *Kunze* 2112

1382. Nicholsoni, *Cfce.* ... 6073 1388. sclerotidea (*Che*) 2113

1383. ranunculi, *Fr.* ... 2109

II. STIGMATULA. *Sporidia continua.*

1389. sutherlandiae, A^r. #C.2115 1391. gregaria, *CJce.* ... 2117

1390. rhynchosibB, *K. & C.* 2116 1392. submaculans, *Mont.* 2118

III. *Species dubice.*

1393. impressa, *Fr.* ... 2119 1397. polygonomm, *Fr.* 2123

1394. conferta, *Fr.* ... 2021 1398. ostruthii, *Fr.* ... 2124

1395. coriame, *Mont.* ... 2121 1399. ajgopodii, *Fr.* ... 2125

1396. lentisci, *Mont.* ... 2122

Fam. 4. MELOGRAMMJE, *Ntkc.* Peritheciis n stromate formatis vel in stroma confluentibus, apice subliferis, plerumque collo destitute.

GEN. 1. SARCOXYLON, *Cooke.* Stroma subglobosum, pallidum, perithecia immersa periphasrica membranacea.

* *Sporidia continua, fusca.*

a. episporio Isevi.

1400. compunctum, *Jungh.* 1231

b. episporio verrucoso.

1401. **lycogaloides, Berk...1342**

GEN. 2. BOTRYOSPHERIA, *Be Not.* Perithecia erumpenti-superficialia, basi stromatici suffulta, casspitosa vel confluentia.

* *Sporidia continua, hyalina.*

- | | |
|--|--|
| 1402. quercuum, <i>Schw...</i> 1762 | 1420. ficus, <i>Cooke</i> ... 6023 |
| = <i>fuliginosa</i> , <i>Pers.</i> | 1421. meliae, <i>Schw.</i> ... 1778 |
| 1403. mutila (<i>Fr.</i> , <i>Schwein.</i>) | 1422. hibisci, <i>Schw.</i> ... 1779 |
| <i>Grev.</i> xiii. 101 | 1423. prasstans, <i>J^{ev.}</i> ... 1780 |
| 1404. Berengeriana, <i>De Not.</i> | 1424. sorosia, <i>Lev.</i> ... 1781 |
| 1763 | 1425. lanaris, <i>Welw. & Curr.</i> 1782 |
| = <i>Mori</i> , <i>De Not.</i> | 1426. diplodioides, <i>D. R.</i> |
| 1405. arctostaphyli, <i>Floiu.</i> 1764 | & <i>M.</i> ... 1785 |
| 1406. juglandis, <i>Mont.</i> ... 1765 | 1427. vitis, <i>Schulz.</i> ... 17&7 |
| 1407. cerasi, <i>C. £. E.</i> ... 1766 | 1428. mascarensis, <i>Mont.</i> 1788 |
| 1408. advena, <i>Ces.</i> ... 1767 | 1429. horizontal, <i>B. \$C.</i> 1789 |
| = <i>melanops.</i> <i>Tul.</i> | 1430. liriiodendri, <i>Che.</i> ... 1798 |
| 1409. aterrima, <i>Fell.</i> ... 1768 | 1431. syringae, <i>Schw., Gr.</i> xiii. |
| 1410. crataegi, <i>Schw.</i> ... 1769 | 101 |
| 1411. pyriospora, <i>Ellis...</i> 1770 | 1432. callicarpse, <i>Cooke, Grev.</i> |
| 1412. ambigua, <i>Schw.</i> ... 1771 | xiii. 101 |
| 1413. wisterias, <i>Rehm.</i> ... 1772 | 1433. pseudotubulina, <i>Cfs.</i> 1379 |
| 1414. subconnata, <i>Schw.</i> 4240 | 1434. propullans, <i>Schw...</i> : 4239 |
| 1415. Delilei, <i>ZX R. \$ M.</i> 1773 | 1435. abrupta, <i>B. & C.</i> ; xiii. 101 |
| 1416. dothidea, <i>M. \$ N.</i> 1774 | 1436. mcl a throa, <i>B. \$'O.</i> xiii. 101 |
| = <i>ROSCB.</i> <i>Fr.</i> | 1437. aralias, <i>Curt. Cat.</i> 143 |
| 1417. persimon, <i>Schw.</i> .. 1775 | 1438. vibumi, <i>Cke, Gr.</i> , xiii. 102 |
| 1418. venenata, <i>C. & E.</i> 1776 | 1439. hypericorum, <i>Cke, Gr.</i> , xiii. |
| 1419. syconophila, DeNot. .1777 | 102 |

b. *sporidia minima.*

1440. rhizogena, *Berk.* ... 1786

1441. hypoxylodea, *Coo^*, (?r^[^] xiii. 102

c. *species inquirendce.*

- | | |
|--|--|
| 1442. graphidea, <i>B. & C.</i> 1791 | 1445. chnaumatica, <i>ITaZ/\</i> 1795 |
| 1443. escharoides, <i>Fr.</i> ... 1793 | 1446. calycanthi, <i>£c/w....</i> 1796 |
| 1444. polita, <i>Fr.</i> ... 1794 | 1447. castane*, <i>Schw.'..</i> 1797 |

c. MELOGRAMELLA. *Osiolis subio&tralis.** *Sporidia continua, hyalina.*1448. *ferruginea, Fckl...* 1799 1449. Van Vleeldi, *Schw.* 1800** *Sporidia continua, fusca.*1450. *decipiens, B.C.* ... 1126 1452. *stomatica, Schw., Grev,*1451. *hiascens, Fr.* ... 1125 xiii. 102* MYUMJECIUM. *Sporidia uniseptata, hyalina.*1453. *endoleucum, Sacc.* 2340 1455. *dicliamoides, B.&C.* 23871454. *collematoides, B. \$ Rav.,* 1456. *subaquila, B. j C.* 2366
Grev. xiii. 102#*# MELANOPH. *Sporidia biseptata, hyalina.*1457. *mirabilis, Fc&Z.* ... 3694GIN. 3. ENDOTHIA, *Fr.* *Stroma diatrypcum, crocatum, perithecia immersa nigricantia.** *Sporidia uniseptata, hyalina.*1458. *gyrosa, Scto.* ... 2342 1459. Parry, *jPaW., Or. xiii.* 102GKN. 4. FUEKELIA, *N.* *Stroma erumpens, subgloboso-pulvinata hypoxyleum, perithecia peripherica, immersa.** *Sporidia continua, fusca.*1460. *microspora, Karst* 1143 1464. *Morsei, J?#C.* ... 14411461. *gaatrina, 17/-.* ... 1129 = *Blakei, B. & C.* 13431462. *Plowrightii, NsL* 1134 1465. *rhenana, Fckl.* ... 11441463. *Carterii, J5. ^ Che., Grev.* 1466. *diathrauston, Eehm.* 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.* 3820b. *Stroma effusa.*1469. *grandinea, B. \$ Rav.* 1114GEN. 6. MELOGRAMMA, *Fr.* *Stromata erumpenti - subeffusa, perithecia botryoideo-aggregata, plurima stromata immersa prominulaque.** *Sporidia continua^ fusca.*1470. *examinans, B. \$ M.* 5247 1472. *atrofusca, B. \$ C. f Grev,*1471. *aceiis, C. 4' E.* ... 1423 xii., 51.1473. *insidens, Schwein.* 2341

** VALSARIA. *Sporidia uniseptata, fusca.*

a. pustulata.

1474. rubricosa, Fr. ... 2814 1480. cinnamomi, Ces. ... 2832
 1475. gemmata, B. \$ Rav. 1369 1481. Hookeri, Che, Gr. xiii. 103
 = *Walterianuniy* Rav. 1482. phoradendri, Curt., Grev.
 1476. eucalypti, Kalch. \$ xiii. 103
Che. ... 2823 1483. robiniae, Schw. ... 4133
 1477. asthiops, C.& E.... 2821 1184. gleditschi«, Schw. 1792
 1478. obesa, Schw. ... 2818 1485. dispar, Fr. ... 4148
 = *quadrata*, Schw. 1486. megalospora, Mont. 2739
 1479. toxici, Schw. ... 2826

b. subeffusa.

1487. grandinea, Berh., Grev. 1488. gregale, Schw. ... 1469
 xiii. 103 ' 2847

Sporidia triseptata, hyalina.

1489. platyroa, Berh. \$ Curt., Grev. xiii. 103

J! *Sporidia triseptata, fuscescentia.*

1490. vagans, Not. ... 3381 1493. homaleum, Fr. ... 3956
 = *Bulliardi*, Tul. = *omalogramma*, Fv. S. S.
 1491. fuscoporum, Schw. 3385 1494. Spraguei, Berk. †
 1492. Fuckelii, ATifte. ... 3386 , Curt. .. 3994

^^ THYRIDARIA. *Sporidia pluriseptata,*

a. pustulata.

1495. campylosporium, Fr. 3382 1500. delognensis, Speg. 3366
 1496. cylindrosporium, /?a&. 3388 1501. lateritia, Ellis ... 3368
 1497. Jackii, Rabh. ... 3389 1502. pulveracea, Karst. 3369
 1498. meliee, Curt, Gr. xiii. 103 1503. sainbuci, ifcirrt. ... 3370
 1499. incrustans, Sacc... 3365 1504. ailanthi, Rehm. ... 3371

Z> subeffusa.

1505. rubro-notata, £. ... 3367 1507. spiniferum, Walir. 3383
 1506. myriangioides, -B. /??. 3372

ALGJSE BRITANNICuE RARIORES EXSIOCATiE.

BY E. M. HOLMES.

FASCICULUS II.

This fasciculus, just issued, contains the following species :—

26. **Callithamnion bazbatum**, J. Ag.
 Hele, near Ilfracombe, August, 1883, E. M. Holmes.
 27. **Calothrix Crustacea**, Tjiur.
 Berwick-on-Tweed, October, 1884, E. Batters.
 28. **Castagnea contorta** a, Thur.
 Weymouth, September, 1884, E. M. Holmes.

29. **Ceramium divaricatum**, *Crn.*, on *Zostera*.
Weymouth, October, 1883, K. Holmes.
30. **Chant ran si a luxurians**, *Thur.*, on *Zostera*.
Weymouth, August, 1883, E. M. Holmes.
31. **Cladophora arctiuscula**, *Crn.*
Berwick-on-Tweed, September, 1884, E. M. Holmes.
32. **Cladophora prolifera**, *Xiitz.*
Weymouth, October, 1884, E. M. Holmes.
33. **Codioluxn longipes**, *Foslie.*
Berwick-on-Tweed, July, 1884, E. M. Holmes, and September,
1884, E. Batters.
34. **Ectocarpus insignis**, *Crn.*, on *Chondriopsis tenuissima*, *J. Ag.*
Bognor, August, 1884, E. M. Holmes.
35. **Ectocarpus reptans**, *Crn.*, on *Cladophora iratevirens* Harv., and
Chaetomorpha sorea, *Kg.*
Exmouth, June, 1882, and Weymouth, November, 1882, K.
Appleford.
36. **Ectocarpus terminalis**, *Kutz.*, 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.*
Jeisey, August, 1883, E. Batters.
41. **Grateloupia dichotoma**, *J. Ag.*
Newquay, July, 1884, E. M. Holmes.
42. **Lomentaria reflexa**, *J. Ag.* (Cystocarps.)
Ilele, near Ilfracombe, August, 1883, E. M. Holmes.
43. **Phyllitis Fascia**, *Kutz.*
Elie, July, 1882, and Berwick-on-Tweed, September, 1883,
E. Batters.
44. **Polysiphonia ceramiaeformis**, *Crn.*
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 multiRdum*, *J. Ag.*
Portland, Weymouth, October, 1884, E. M. Holmes.
48. **Sphacelaria caespitula**, *Lyngh.*, on *Saccorhiza bulbosa*, *Be la Pyl.*
Berwick-on-Tweed, September, 1883, E. Batters.
49. **Vaucheria dichotoma f. submarina**, *Lyngh.*
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. 21J***Phoma astragali**, *Cke. & Hk.*

Caulicola, tecta. Peritheciis depressis semi-immersis, epidermide velatis. Sporulis subfusoidis, binucleatis, byalinis ('008 X '002 mm.).

On stems of *Astragalus*. (Harkness, 2566.)

Phoma Lupini, *Cke. 2f Hk.*

Caulicola. Peritheciis gregariis, subcutaneis, subglobosis, atris, epidermide nitida tectis. Sporulis elongato-ellipticis, binucleatis, hyalinis (-02 X '006 mm.).

On stems of *Lupinus*. (Harkness, 1986.)

Phoma Polygalae, *Cke. f Hk.*

Caulicola. Peritheciis gregariis, subcutaneis, globoso-depressis, pertusis, epidermide nitida velatis. Sporulis subfusoidis, enucleatis, utrinque obtusis, hyalinis ('01 x '0025 mm.).

On stems of *Polygala*. (Harkness, 2351.)

Pleosporopsis heteromeles, *Che. § Hk.*

Hypophylla. Peritheciis gregariis, aurantio-fulvis, globoso-depressis, (^ mm.) glabris, pulpa pulverulenta flavida. Sporulis globosis, subpellucidis ('008 mm. diam.).

On dead leaves of *Heteromeles*. (Harkness, 1295, 2162.)

Sphaeropsis quercinum, *Cke. § Hk.*

Peritheciis sparsis, subcutaneis, globoso-depressis, vix prominulis. Sporulis subellipticis, continuis, utrinque rotundatis, demum olivaceo-fuliginis (-02--024 x '012 mm.).

On living oak branches. (Harkness, 2117*)

Sphaeropsis lupini, *Qke. 8f Hk.*

Caulicola, sparsa, erumpens. Peritheciis globoso-depressis, atris, demum semi-emergentibus, pertusis. Sporulis globoso-ovoideis, utrinque subacuminatis, continuis, demum atro-olivaceis ('015-*017 X -008--01 mm.).

On stems of *Lupinus*. (Harkness, 1989.)

Harknessia Arctostaphyli, *Che. fy Hk.*

Amphigena. Peritheciis innatis, erumpentibus, paululis (-J mm.), ore orbiculari elevato, sub-denticulato. Sporulis ellipticis, fuliginis ('02 x '009 mm.) deorsum pedicellatis, basidiis brevibus.

On leaves of *Arctostaphylos*. (Harkness, 2515.)

Rhabdospora chlorogali, *Che. 8f Hk.*

, Caulicola, gregaria. Peritheciis atris, punctiformibus, sub-depressis, cuticula hyalina tectis, demum erumpentibus semi-nudis. Sporulis bacillaribus utrinque obtusis, rectis flexuosisve, hyalinis, obscure nucleatis (-03 X '003 mm.).

On stems of *Chlorogalum*. (Harkness, 2509.)

Rhabdospora decorticata, Cke. Sf Hk.

Peritheciis eruxipenti-superficialibus, subglobosis, atris, papillatis, levisibus, sporulis filiformibus, flexuosis vel curvulis, hyalinis, continuis (-025 mm. longis.).

On decorticated *Acacia*. (Harkness, 2052.)

Vermicularia straminis, Cke. \$ Hk.

Peritheciis subgregariis, globoso-depressis, atris (^ mm. diam.) setis rigidis (*15 mm. long) sparsis, erectis ornatis. Sporulis cylindraceutis, utrinque rotundatis, rectis, continuis, hyalinis (-012 X '0035 mm.).

On straw. (Harkness, No. 2464.)

Diplodia fuchsia, Cke. & Hk.

Caulicola. Peritheciis subcutaneis, gregariis, globosis, atris, epidermide tectis, iiiiimquam erumpentibus. Sporulis ellipticis, uniseptatis, nee constrictis, fuscis (-028x*01 mm.).

On stems of *Fuchsia*. (Harkness, 23G6.)

Diplodia crassulae, Cke. & Hk.

Caulicola. Peritheciis* gregariis, subcutaneis, globosis, atris, demum epidermide fissurato erumpentibus. Sporulis ellipsoideis, uniseptatis, medio vix constrictis, fuscis (-02--022 x '008 mm.).

On stems of *Cvassula*. (Harkness, 2173.)

Diplodia phyllactinia, Cke. & Hk.

Epiphylla. Peritheciis gregariis, superficialibus, liberis, globosis (ut in *Erysipheis*). Sporulis ellipticis, uniseptatis, nee constrictis, fuscis (-012 X -005 mm.).

On leaves of *Acacia*, &c. (Harkness, 1992, 2053.)

Ameremporium geranii, Cke. & Hk.

Gregarium, erumpens, demum subliberatum. Peritheciis e globosis cupulatis, pilis nigricantibus, tenuibus, dense vestitis. Sporulis curvulis, utrinque attenuatis, continuis, hyalinis (*02 x-0035 mm.).

On stems of *Geranium*. (Harkness, 2424.)

Hendersonia scirpicola, Cke. \$ Hark.

Culmicola. Peritheciis minutis, punctiformibus, atris, semiimmersis, pertusis. Sporulis cylindraceutis, utrinque rotundatis, triseptatis, constrictis, fuscis (*02 X '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, brunncis, subopacis (-012--015 x*0075 mm.) nee constrictis.

On stems of *Sphacele*. (Harkness, 2512.)

Allied to // *diversispora*, but probably distinct.

Camasporium ellipticum, Cke. \$ Hk.

Caulicolum. Peritheciis gregariis, sub-globosis erumpentibus, mox semi-nudis, atris, pertusis. Sporulis ellipticis 2-4 septatis, loculo uno altrove longitudinaliter divisio, fuscis, nee constrictis, magnitudine variabilis (-01 X '007 ad -018 X-0075 mm.).

On stems of *Mesembryanthemum*. (Harkness, 2237.)

Xeptothyrium juncinum, *Che. \$ Hk.*

Gregarium. Peritheciis scutiformibus atris, opacis, planis demum concavis, orbicularibus. Sporulis cylindraceis obtusis, continuis, hyalino-olivaceis ('012 x '003 mm.) basidiis brevissimis suffultis.

On *Juncus*. (Harkness, 2568.)

Leptostroma sequoias, *Cke. \$ Hk.*

Gregarium, superficial, innatum, hysteriforme, atro-fuscum, nitidum, siccitate centro collapsum. Sporulis sublancoelatis, curvatis, continuis, hyalinis ('016 X '003 mm.).

On twigs of *Sequaria*. (Harkness, 2265.)

Trullula (Cesatia) junci, *Cke. \$ STc.*

Acervulis orbicularibus, convexis atris, minutis, erumpentibus; conidiis cylindraceis, vel subfusiformibus, nucleatis, continuis hyalinis, e basidiis brevissimis radiantibus ('02--025x '004 mm.).

On cyllms of *Juncus*. (Harkness, 2567.)

Myxosporium microsporum, *Cke. & Hk.*

Acervulis laxe gregariis, subcutaneo-erumpentibus, transverse-oblongis (vix 1 mm.), conidiis ovoideis, rectis, hyalinis (-004 x '003 mm.).

On pear tree branches. (Harkness, 1970.)

Gleosporium carpogenum, *Cite. & Hk.*

Acervulis innato-erumpentibus, pallidis, are lacerato; conidiis subellipticis vel clavatis, utrinque rotundatis, hyalinis (-018 x '006 '007 mm.).

On capsules of cotton wood. (Harkness, 2049.)

Tubercularia sphaeroidea, *Cke. \$ Hk.*

Stromatibus laxe gregariis, erumpentibus, hemisphaericis vel sphairoideis, atris; conidiis subcylindraceis, utrinque obtusis, rectis vel leniter curvulis, continuis, hyalinis (-006--007 x '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 ellipsoideis-elongatis, obtusis, rectis, hyalinis (-008--00D x '003 mm.j.

On stems of *Geranium*. (Harkness, 2126.)

Tubercularia insignia, *Cke. & Hk.*

Stroma erumpens, pallidum, subglobosum, pulverulentum. Conidiis minutissimis, subellipticis, hyalinis ('003x'0015 mm.), hyphis tenuibus, simplicibus, furcatisve congestis.

On twiga of *Pinus insignia*. (Harkness, 2170.)

Hymenula glumarum, *Che. \$ Ilk.*

Stromatibus erumpentibus, convexis mox confluentibus, pallide carnis. Conidiis subglobosis, continuis, hyalinis ('0035-'04 mm. diam.).

On glumes of wheat. (Harkness, 2347.)

Hyxnenula Lupini, *Cke.* ♂ *Hit.*

Stromatibus gregariis, punctiformibus, albidis, convexis dein confluentibus⁵, pulverulentibus. Conidiis profusis, ovalibus subglobosive, hyalinis (-004--005 x -003--0035 mm.).

On stems of *Lupinus*. (Harkness, 2063.)

Hymenula megarrhizae, *Cke.* \$ *We.*

Stromatibus gregariis, erumpentibus, carneis, convexo-applanatis, siccitate pulverulentibus. Conidiis subellipticis, continuis, hyalinis (-0045--005 x -0035 mm.).

On stems of *Megarrhiza*. (Harkness, 2082.)

Stxumella Vincae, *CJte.* \$ *Hk.*

Stromatibus gregariis, erumpentibus, subglobosis, spherigeformibus, atris; basidiis erectis, hyalinis, continuis, crassiusculis, arete congestis; conidiis ellipticis, continuis, atro-fuscis (*012 x'004 mm.).

On stems of *Vinca*. (Harkness, 2339.)

Hymenula phoxmicola, *Cke.* \$ *Hk.*

Stromatibus minutis, albidis, in lineas gregariis, convexis vel ellipticis, inter nervulas enatis. Conidiis ellipticis, continuis, hyalinis (-008 x-004 mm.).

On leaves, &c, of *Phormium*. (Harkness, 2224.)

PRJECURSOKES 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 extrorsuin divergentibus et porrectis indeque setoso-hispido, poris cum fibris carnis modo contiguis. Caro vulgo offert btratum intermedium, exteriori hispido minus divergens.

* *Contextu colorato.*

262 spongia, *Fr. Hym. Eur.* 542.

263 cuticularis, *Ball Champ*, t. 462.

var. *Herbergii*, *Eost. Poly.* t. 18.

var. *hispidioides*, *Peck 33rd Report* p. 21.

264 fibrillosus, *Kant. 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. Sciù Nat.* 1848, 122.

269 fruticum, *B. \$• Curt. Linn. Journ.* x. 310.

270 cucullatus, *B. çj 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, *Schivein. Syn. Car.* 893.
 277 Weinmanni, *Fr. Hym. Eur.* 552.
 278 hispidans, *Berk. Fr. Nova Syui.* 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 Jungbuhnii, *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 doxnum 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. Uym Eur.* 554.
 = *Michenerij* Berk, in Herb.
 = *morosusj* Kalchb. Bot. Zeit. 1870.
 297 soloniensis, *Fr. Hym. Eur.* 553.
 298 erubescens, *Fr. Hym. Eur.* 554.
 299 Afzelii, *Fr. Epicr.* 461.
 300 belveolus, *Rost. Poly.* t. 35.
 301 colossus, *Fr. Nova Symb.* 40.
 302 pilotas, *Schw. Amer. Bor.* 370.

** *Contextu albo.*

- 303 quercinus, *Schråd. Spic.* 157.
 304 betulinus, *Fr. Hym. Eur.* 555.
 = *albellus*, Peck., 30 Report, p. 45.
 305 leucocreas, *Cke. Grev. viii.* 55.
 306 palustris, *B. § XJurt. 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 naucinnus, *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 unguulatus, *Berk. Linn. Journ.* xiii. 165.

0. Lignescentes. Pileus pi its minus concentrice sulcato 1 striato et substantia vegeta quidam molli et succosa tamen coriacea simul unde siccitate coritracto et vulgo curvati.

A Fomitibus rcedunt 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 Fimgi*, 459.

** *Contextu pallido.*

f *Pileo rugoso zonato.*

- 325 Auberianus, *Mont. Cub.* t. xvi. f. 1.
 326 zonalis, *Berk. Ann. N. H.* x 375.
 = *inzcromegas*, *Mont. Syll.* 157.
 327 Tncurvus, *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 Venezuela^ *B. \$ Curt, in Herb.* 2,694
 335 Lindigii, *Lev. Ann. Sci. Nat.* 1863, xx. 295.
 tt *Pileo leevi.*
- 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 vulneratua, *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, restypinatus, margine tenuiter reflexo. Plerumque Polyporeos in staHu imperfectu.

343 pachylus, *Berk. in. Herb.* No. 2861.

344 ascoboloides, *Berk. Linn. Journ.* xiii. 162.

345 diffissus, *Berk. Fl. Nova Zeal.*

GEN. if. FOMSS. Fr. Nov. Symb. 31.

Pileus primitus lignoso-induratus (raro molles, plorantes) contextu floccoso intertexto, crusta rigicia obductus, azonus, sed demum concentrice sulcatus.

Fungi perennes (vulgo stratose) revisiscentes, sed stratum annuum vegetum tantum cst.

A. XUXesopodes. 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 rhizoinorpbus, *Mont. Syll.* 161.

351 hypoplastus, *Berk. Hook. Journ.* 1856, 174.

** *Stipite fascOy 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 Ada. Cur.* xiii. t. 7.

357 scleropodius, *Lev. Ann. Sci. Nat.* 1846, 123.

358 camerarius, *Berk. Hook. Journ.* 1856, 143.

359 Schombnrgkii, *Mont. and Berk. Hook. Journ.* 1844, 331.

360 calcigenns, *Berk. Hook. Journ.* 1843, 636.

361 omphalodes, *Berk. Hook. Journ.* 1866, 172.

^362 cassisecolor, *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,—*Foris 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.*

* Month of the pores contracted to a minute punctiform orifice, hence papillate, with the appearance of very thick dissepiments.

- 371 *semiclausus*, *Beil.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. Ada. Cur.* xiii. t. 3.
b japonicus (Fr.), *Thanh. Fl. Jap.* t. 39.
c cochlear, *Nees. A eta. Cur.* xiii. t. 6.
d gibbosus, *Nees. Ada. Cur.* xiii. t. 5.
e pisochapani, *Nees. Rumph. Amb.* vi. t. 576.
/ fornicatus, *Fr. Epicr.* 443.
 374 *lucidus*, *Fr. Epicr.* 442.
 375 *Curtisii*, *Berk. Hook. Journ.* 101.
 376 *nutans*, *Fr. Nova Symb.* 45.
 377 *longipes*, *Lev. Ann. Sci. Nat.* 1846, 123.
 378 *umbraculum*, *Fr. Epicr.* 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*, *Schceff. 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 *auriscalpinm*, *Pers. Gaud. Voy.* 169.
 393 *pudens*, *Berk. Hook. Journ.* 1852, 138.
 394 *Glaziovii*, *Berk, in Warm. Symb.* 1879, p. 34.
 395 *regulicolor*, *Berk, in Heib. No.* 2420.

_ *incentce sedis.*

- 396 *corrugis*, *Fr. Hym. Eur.* 536.
397 hirtus (Quel.), *Fr. Hym. Eur.* 536.

C. **Merismoidei**, *Fr.* E trunco tuberculove communi expli- cantur pileoh numerosissirai persistentc tenaci, contextu floccoso submolh fomentano, poris adnatis=Meris>nia suberosi, *Fr.Ep.* 451.

- 398 *graveolens*, *Schwein. Syiu Car.* 904.
 399 *senex* (Nees), *Mont. Syll.* 160.
 = *rhabarbarinus*, **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. Pilco floccoso-fomentario, primitus exsucco, hand carnobo 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. Eur.* 562.
 408 cytisinus, *Berk. Eng. Fl.* v. 142.
 409 hornodermus, *Mont Ann. Set. Nat.* 1856, 368.
 410 geotropus, *Cke. Grev.* xiii. 32.
 411 ligneus, *Berk. Ann. Nat. Hist.* 1839, 387.

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398 graveolei

399 senex (NI^{IG} in^torno alia J^eptosphceria annita = rhab^{ms} is^y B. ai*d Br.

attie del Gelso prodotte dai parassiti

