Grevillea,

A MONTHLY RECORD OF CRYPTOGAMIC BOTANY AND ITS LITERATURE.

BRITISH FUNGI.

By the Editor.

(Continued from Page 139.*)*

Puccinia Bistortæ. *D.C.*

Spots none ; sori scattered, minute, numerous, rufous, hypophyllous, suborbicular, spores ovoid or oblong, obtuse, rounded, bright brown, stem very short.—*De Can., Flor. Fr.* v. 61. *Corda Icon.* iv., *f.* 61. *Libert. Exs., No.* 91. *Puccinia vivipara, Grev., MSS.*

On leaves of *Polygonum viviparum*, near Mar Lodge. Aug., 1822 (Dr. Greville). On *Polygonum Bistorta*, near Liverpool. *(R. McL.)*

Uromyces excavata. *D.C.*

Spots none or yellowish ; sori scattered, surrounded by the inflated epidermis ; spores brown, obovate, shortly pedunculate and sessile.—*Uredo excavata, D.C., Fl. Fr., vol. ii., p.* 227. *Berk. Exs. No.* 119. *Cœoma excavum, Lk. sp. ii.*, p. 34.

On *Euphorbia exigua*, in company with *Æcidium Euphorbiæ.*

King's Cliff, Norths.

Omitted in Berkeley's "Outlines" and Cooke's "Handbook," through oversight.

Æcidium Parnassiæ. *Graves.*

Hypophyllous, spots pallid, cups laxly disposed in subrotund tufts, yellowish-brown, urceolate, margin thick, nearly entire, spores pallid.—*Graves, in Duby. Bot. Gall., ii.*, 904.

On leaves of *Parnassia palustris.* Near Glasgow. (Dr. Greville.)

This will follow No. 1626 in the "Handbook of British Fungi."

Synchytrium. *De Bary.*

Cellules often numerous, aggregated, involved in a common membrane, forming sori, endochrome orange, delicately granulose ; zoogonidia globose, rarely oval or oblong.—*Rabh. Algæ Europ., ii.*, 284.

Entophytal, with the habit of *Uredo*, seated in the parenchyma of terrestrial plants.

Synchytrium taraxaci. *De By. & Wor.*

Cellules variable, seated beneath the cuticle of living leaves.—*Cohn's Beitrage, p.* 39. *B. & Br. Ann. N.H.*, 1388.

On leaves of common dandelion. Batheaston.

Zoogonidia ·00013 m.m. diam.

Synchytrium mercurialis. *Fuckel.*

Tubercles confluent on the nerves of the leaves, hemispherical, greenish, depressed above, umbilicate; sori oblong, grey; zoospores globose, uninucleate, hyaline.—*Fuckel F. Rhen., No.* 1607. *Schroet in Cohn's Beitr., p.* 40. —*B. & Br. Ann. N. H.*, 1389.

On leaves of *Mercurialis perennis.* Batheaston. April.

Spores echinulate, ·0012-·0015 in.

Synchytrium anemones. *Wor.—Schroet in Cohn Beitr., p.* 40. *B. & Br. Ann. N.H.*, 1389.* *Chytridium anemones, D'By., in Rabh. Algæ Eur. ii., p.* 284.

On leaves and petals of *Anemone nemorosa.*

Spilocæa pomi. *Fr.*

Spots often confluent, at first covered by the thin cuticle, which is soon broken and evanescent; spores densely adnate, subglobose or oval.—*Fries Sys. Myc. iii.*, 504. *Grevillea, ii., p.* 64.

On apples.

Doubtless only a condition of *Cladosporium.*

Mitrula alba. *Sm.* (*Grevillea, i., p.* 136, *t.* x., *fig.* 7.)

Amongst submerged leaves.

Vibrissea Margarita. *White.*

Simple, head orbicular, orange-red, margin hisped, stem cylindrical, hirsute with black articulated hairs, internally white. Asci and sporidia ?—*Buchanan White, in "Scottish Naturalist" for Jan.*, 1874.

On dead sticks. Sept. Oct.

Rhizina lævigata. *Fr.*

Orbicular, even, brown, margin prominent, granulose beneath, fibrils pallid; asci cylindrical; sporidia broadly fusiform, acuminate, binucleate, uniseriate, hyaline.—*Fries Sys. Myc., ii.*, 33. *Octospora rhizophora, Hedw. Musc. Frond, ii., t.* 5, *f.* A.

On stumps,

[Plate 22, fig. 1. Ascus with sporidia and paraphysis. *b*, sporidia × 320.]

Peziza (Aleuria) isabellina. *Sm.* (*Grevillea, i., p.* 136, *t. ix., fig.* 1-4.)

On decayed coniferous wood.

Peziza (Aleuria) undata. *Sm.* (*Grevillea, i., p.* 136, *t. x., figs.* 1-6.)

On tree-fern stems.

Peziza (Humaria) Chateri. *Sm.* (*Grevillea, i., p.* 120, *t. viii, f.* 1-2.)

Peziza (Mollisia) Bullii. *Sm.* (*Grevillea, i., p.* 120, *t. viii., f.* 3.)

Peziza (Dasyscypha) lasia. *B. & Br.*

Cups globose, erumpent, orange, at length opening with a torn, dentate mouth, externally gummy; asci elongated; sporidia fusi-

form, paraphyses urn-shaped above, sometimes uniseptate, intermixed with short flocci.—*B. & Br. Ann. N. H.*, 1391, *t.* 8, *f.* 10.

On elm. Langridge. Mar.

Cups smaller when on bark; sporidia ·0005 in. by ·0001 in.

[Plate 22, fig. 2. *a*, paraphysis; *b*, ascus with sporidia; *c*, sporidia; *d*, tip of paraphysis.—*B. & Br.*]

RHYPAROBIUS. *Boudier.*

Cups very minute, scarce conspicuous to the naked eye, waxy, marginate, sessile; disc plane; asci prominent; when dry margin inflexed, rounded; paraphyses rare, short, septate; asci minute but broad, polysporous, dehiscing with a convex operculum; sporidia very minute, hyaline.—*Boudier, Mem. Asc., pp.* 47.

Rhyparobius dubius. *Boud.*

Scattered, just conspicuous under a lens, pale grey or tawny, pellucid, rounded; margin not distinct; asci oblong or oblong-ovate; sporidia 128 (?), oblong-ovate, minute, hyaline.—*Boud. Ann. Sci. Nat.* (1869) x., *p.* 240. *B. & Br. Ann. N. H.* 1392.

On rabbit's dung. Bathford.

Rhyparobius Cookei. *Boud. (Grevillea, i., p.* 132.*)* *B. & Br. Ann. N. H.* 1393.

On dog's dung. Batheaston.

Rhyparobius argenteus. *B. & Br.*

Very minute, silvery white, ciliated with soft hairs; asci short; sporidiiferous cysts elliptic, seated towards the apex; sporidia fusiform; paraphyses furcate.—*B. & Br. Ann. N. H.*, 1394, *t.* 9, *f.* 11.

On rabbit's dung; for the most part attached to filaments of *Mucor*.

Cups ·004 in. across; asci ·004 in. long; sporidia normally 64 in each cyst ·0007 in. long, ·00025-·0003 in. wide. Scarcely visible to the naked eye; asci opening with a little lid, which splits vertically. Comes near to *R. felinus*, B, but has soft hairs, and is of a pure white; tips of paraphyses slightly enlarged.

[Plate 22, fig. 3—*a*, asci with cyst; *b*, paraphysis; *c* sporidia.—*B. & Br.*]

Rhyparobius woolhopensis. *Renny.*

Minute, scattered, at first pure white, then dingy; cups with a thick stem-like base, which is tuberculate, covered above with close-set hairs which fringe the margin, at length expanding, the hairs disappearing with age; substance of base vesicular; paraphyses simple; asci clavate; sporidia fusiform (normally 64).—*B. & Br. Ann. N. H., No.* 1395, *t.* 9, *f.* 12.

On bird's dung, mixed with filaments of *Mucor*.

Cups $\frac{1}{2}$ line (·041 in.) high; sporidia ·0007 in. long; cells of base often ·0015-·0018 in. long.

[Plate 22, fig. 4—*a*, ascus with cyst; *b*, sporidia.—*B. & Br.*]

Bulgaria purpurea. *Fckl.*

Receptacles as in *Bulgaria sarcoides*, but larger and more robust;

asci scarcely stipitate, cylindrical; sporidia biseriate, lanceolate, sometimes curved, multinucleate, hyaline; paraphyses filiform, not thickened at the tips. *Coryne purpurea*, *Fckl. Sym. Myc.*, *p.* 284. *Fckl. Fungi Rhen.*, *No.* 1135.

On rotten wood. Epping.

Sporidia (·0007 in.) ·02 m.m. long, whereas in *B. sarcoides* they are only half that length. The cups exceed 1 inch in diameter.

Dothidea filicina. *Fr.* Cooke's "Handbook of British Fungi," No. 2427.

The description of the fruit in the work above quoted is erroneous, as I find upon re-examination. It should be as follows:—

Asci elliptical; sporidia biseriate, broadly fusiform, straight or curved, 3-5 septate, constricted, with a short apiculus at either end, amber-coloured, ·0014 in. long.

Nectria citrino-aurantia. *Lecr.*

Cæspitose, pale orange; perithecia very minute.—*Lecr. in Desm. exs. ii.*, *No.* 778. *Rabh. Fung. Eur.*, *No.* 325. *Tul. Sel. Fung. Carp. Vol. iii.*

On sticks. Batheaston (C. E. Broome).

Remarkable for the exceedingly minute perithecia.

Sphæria (Pertusæ) pædida. *B. & Br.*

Perithecia ovate, rugose, opaque, free, brownish-black; ostiolum conical, at length deciduous; asci linear; sporidia uniseriate, contracted in the middle.—*B. & Br. Ann. N. H.*, *No.* 1396, *pl.* x., *f.* 13.

On beech. April.

Quite superficial, confluent; sporidia ·0005-·0006 in. × ·0002-·0003 in.

[Plate 22, fig. 5—*a*, ascus with sporidia; *b*, sporidia.—*B. & Br.*]

Sphæria (macrospora) Scirpi. *Fckl.* (*Grevillea*, *ii.*, *p.* 48.)

On *Typha*. May.

Sphæria (Immersæ) nigrofactæ. *Cooke.*

Gregarious, on blackened spots. Perithecia globose, opaque black, rough, immersed or semi-immersed, ostiola thick, prominent, sometimes alone appearing above the surface of the matrix; asci cylindrical, tetrasporous, sporidia linear, multiseptate, yellowish. Paraphyses slender, hyaline, simple.

On old cabbage stems. Eastbourne (C. J. Muller). April.

Allied to *Sphæria bacillata*, C., but perithecia nearly double the size, the sporidia are not much more than half as long (·0045 in.) and appear to be always limited to four in an ascus.

SCHIZOTHYRIUM. *Desm.*

Perithecia sessile, simple, rather fleshy, rounded or ovate, flattened or slightly convex, minute, punctiform, dehiscing by a longitudinal fissure; nucleus gelatinous; asci fixed, erect; sporidia ovoid.—*Desm. Ann. Sci. Nat.* (1849), xi., 360.

Schizothyrium Ptarmicæ. *Desm.*

Innate, black, somewhat shining, rounded or ovate. Asci cylin-

drical, or somewhat clavate ; sporidia minute, ovoid.—*Desm., Ann. des Sci. Nat.* (1849), *xi.*, 360. *Labrella ptarmicæ, in Grevillea, ii.*, 57.

On *Achillea Ptarmica.*

Sphinctrina coremioides. *B. & Br.*

Perithecia stipitate, globose, externally setulose ; hymenium downy from the projecting paraphyses ; asci linear, soon absorbed ; sporidia globose, concatenate.—*B. & Br., in Gard. Chron.*, 1872, *p.* 40, *with fig. B. & Br. Ann. N. H., No.* 1398.

On pear roots. Painswick. Nov.

Sporidia ·00025 in. ·006 m.m. diam., forming chains at the tips of the elongated pedicels of the asci, which are soon absorbed.

Phacidium radians. *Rob.*

Erumpent, black ; receptacles minute, rounded, or oblong, globose, then flattened, solitary and scattered, or confluent in radiating lines ; disc fuliginous. Asci clavate ; sporidia oblong, straight, or slightly curved.—*Desm , in Ann. des Sci. Nat.* (1842), *xvii. p.* 116. *Rickx. Flor. Hand.* 1, *p.* 459.

On living leaves of *Campanula patula.* Summer. Near Worcester *(Edwin Lees).*

Sporidia (·00035 in.) ·01 m.m. long.

Chætomium rufulum. *B. & Br.*

Perithecia subglobose, cellular, rufous, springing from a thin mycelium ; asci short, obtuse, sporidia eight, globose, granulate, biseriate.—*B. & Br. Ann. N. H., No.* 1397, *pl. x., fig.* 14.

On a paper box under a bell glass. April.

Sporidia when young, ·0004-·0005, mature, ·0007 in. Perithecia globose, with a pointed apex, composed of about three rows of coarse cells, of a pallid ochre at first, attached by a few threads. Ostiolum (if any) very inconspicuous ; asci mostly curved, obtuse at either end, the narrow base soon losing all signs of attachment and floating freely in the perithecium ; sporidia spherical, strongly granulated, of a pale-brown tint, containing a small nucleus.

[Plate 22, fig. 6.—*a*, *b*, asci ; *c*, sporidium.—*B. & Br.*]

Chætomium glabrum. *B.* (Cooke " Handbook," No. 1934.)

Asci linear ; sporidia globose, uniseriate, smooth, (·0005 in.) ·0127 m.m. diam.—*B. & Br. Ann. N. H., No.* 1397,* *t, x., fig.* 13.

On the same matrix *Lycogala parietinum* occurs, and we have little doubt that it is a mere state of the *Chætomium.* The asci are mixed up with yellow threads, and it is probable that, as in other *Chætomia* they are often absorbed, leaving the sporidia free, and thus appearing to be the spores of a *Myxogaster.*

[Plate 22, fig 7.—*a*, asci with sporidia and paraphyses ; *b*, sporidia.—*B. & Br.*]

Ailographum vagum. *Desm.*

Receptacles innate-superficial, amphigenous, scattered, elliptic, ovate, or linear, simple or furcate, black, opaque, lips closely con-

nivent when dry, acute, asci elliptical; sporidia very minute, hyaline, oblong, simple.—*Desm. Ann. Sc. Nat.*, 2 ser., *xix.*, *p.* 362. *Duby, Hist.*, *p.* 38.

On dry coriaceous leaves, as holly, ivy, &c. Epping.

Perithecia scarcely visible to the naked eye.

A WORD MORE ON THE "AGUE PLANT."

By Wm. Archer.

The appearance of a further notice of the "Ague Plant," so-called, in the preceding number but one of this Journal (No. 21, March, 1874), recalls attention to the former record of it communicated by Dr. Bartlett (No. 6, Dec., 1872, p. 95), and it, at the same time, reminds me of the Editor having been so good as to forward me, shortly after that occasion, some specimens of this supposed dreadful form of vegetation, bringing home to me as well the fact that, owing to many and various avocations, I had left over communicating to him the result of an examination, until, indeed, the matter had at last altogether escaped me.

Meantime I perceive by the number referred to (p. 141) that its identity has since been made out, and quite correctly, as simply *Botrydium argillaceum* (Wallr.), or perhaps better, *Hydrogastrum granulatum* (Linn.), Desv. Indeed, on reading over the original account of the "Ague Plant," as given from Dr. Bartlett in this Journal (p. 95, Dec., 1872), I could not but suspect that this was in fact the very plant (though he called it a "fungus") in which Dr. Salisbury believed he had discovered the "malarial essence," though I fancy there are few European observers who would not be disposed to acquit the little Hydrogastrum of being the "cause of the ague."

Nevertheless I might be excused some little trepidation and misgiving on opening the little package containing the specimen, all the way from Iowa, fearing that concentrated within might be imported a very unwelcome visitant. It was, no doubt, a relief, and I certainly must own to have been quite reassured, even upon a mere inspection by the unaided eye, when I did summon courage to open the little box, to see the poor little Hydrogastrum sure enough, as I had previously conjectured, showing its little withered, depressed, and collapsed rounded fronds, dotted over the surface of the dry mud. With very little compunction I placed a specimen with some water under the microscope, and found it, as indeed the majority of the examples proved to be, in the condition described by Reinsch, of which I gave an extract in this Journal ("Grevillea," No. 7, Jan., 1873, p. 107), following Mr. Parfitt's communication on this plant (l. c., p. 103), that is showing the cell, here making up the whole "plant," densely filled with rounded, rather thick-