NEW AND RARE BRITISH FUNGI.

By Carleton Rea, B.C.L., M.A., &c.

WITH PLATES 5 and 6.

Lepiota medioflava Boud. Bull. Soc. Myc. Fr. X. (1894) 59, t. I. f. 1.

On decaying cocoanut fibre and soil in greenhouse, Hebden Bridge, James Needham, October, 1911. Naturalist (1912) March, 86.

Tricholoma humile var. *evectum* Grove. Journ. Bot. L. (1912) 9.

Pileus 7.5-9 cm. wide, plane then depressed and concave, glabrous, smooth, hygrophanous, fuscous becoming paler; margin entire, not striate; flesh pallid. Stem 7.5-8 cm. long, 8 mm. thick, slightly thickened at the apex and wider at the base, fibrous, stuffed, somewhat fuscous, punctato-squamulose, somewhat striate, whitish, pulverulent upwards. Gills crowded, sinuate, pale ochraceous, thin, edge entire. Spores very white, oval, $6-7 \times 4.5\mu$.

On heaps of dead leaves, Studley Castle, Warwickshire, September-October.

Clitocybe incana Quél. sub *Omphalia orbiformis* Fr. var. *incana*. As. Fr. (1886) 485; Fl. Myc. 241; and see plate 5.

Pileus 3-5 cm. wide, convexo-plane then depressed, hygrophanous, pruinose, mouse grey, margin white. Stem 4-6 cm. long, 4-6 mm. thick, stuffed, straight or slightly curved, pearl grey, white floccose at the base. Flesh soft, greyish. Smell none. Gills 2-4 mm. wide, decurrent with a tooth, greyish becoming somewhat ochraceous. Spores white, globose, 3μ diam.

Amongst fir needles, Swarraton, Hants, 31st October, 1912, Rev. W. L. W. Eyre.

Resembling *Clitocybe expallens* but differing in the white margin of the pileus which is not cyathiform and the small, round spores.

Collybia phaeopodia (Bull.) Fr. Syst. Myc. I., 122; Hym. Eur. 113.

On bare soil in nettle-bed, garden corner, Sandsend, September, 1911. Naturalist (1912) 87.

13-14 x 3-4 μ

Orifice of pores.

Boletus reticulatus (Schaeff.) Boud.

x 3, μ

E.A. Rea del.

Clitocybe incana Quel.

West, Newman chr.

E.A. Rea del. *Hygrophorus (Limacium) squamulosus* Rea. West, Newman chr. *Boletus pinicola* (Vitt.)

Mycena Iris Berk. var. *caerulea* Rea.

This variety differs from the type in the pure blue colour of the pileus, the absence of blue fibrillae on the pileus and stem, and the grey stem white pulverulent at the apex. Spores white, elliptical, apiculate, $8.9 \times 5\mu$.

Inside a hollow tree, Nant-y-frith, Denbighshire, 17th May, 1910, Mr. W. B. Allen.

Hygrophorus (Limacium) squamulosus Rea. Clare Island Survey XIII., 26; and see plate 6.

Pileus 5-7 cm. wide, convex then expanded, subumbonate, glutinous, *floccosely squamulose* beneath the gluten, and *tomentose* at the incurved margin *over the base of the gills*, yellow olivaceous, fuscous at the centre. Flesh whitish becoming yellowish towards the lower half of the stem. Stem 6-8 cm. long, 1.2-5 cm. thick, equal or enlarged downwards, solid, glutinous, of the same colour as the pileus, white and mealy at the apex. Gills 5-10 mm. wide, sinuato-adnate, white, somewhat crowded, margin irregular. Taste agreeable. Smell pleasant. Spores white, globose, $3.5-4 \times 3.5\mu$.

On the ground, Old Deer Park Wood, Mount Browne, county Mayo, 5th October, 1911.

At first sight somewhat resembling some forms of *Hygrophorus olivaceo-albus* but at once distinguished by the floccose squamules and tomentose margin of the pileus in which latter respect it resembles *Tricholoma album*.

Pluteus sororiata Karst. Myc. Fenn. III., 101 (1876).

On rotting branch, Mulgrave Woods, September, 1911. Naturalist (1912) 87.

Inocybe haemacta Berk. & Cke. var. *rubra* Rea.

This well marked variety differs from the type in the blood red colour of the pileus and stem which is only tinged verdigris green at the extreme base although the flesh is tinged with verdigris green for some considerable distance upwards.

On bare garden soil, Drumälan, Drumnadrochit, Inverness-shire, 17th September, 1908.

Inocybe abjecta Karst. Hattsv., 456; Sacc. Syll. V., 768; Massee Ann. Bot. XVIII., 480.

Pileus 1-3.5 cm. wide, subcampanulate or convex then expanded, sometimes subumbonate, brownish, becoming ochraceous-brown when dry, *everywhere covered with white fibrils*, disc with whitish subsquarrose squamules. Stem 2.5-4 cm. long, 4-8 mm. thick, solid, equal or fusiform, rather tough,

flexuous, pallid, *everywhere covered with white fibrous squamules*, apex white-pruinose. Flesh persistently white. Gills 6-7 mm. wide, adnate, ventricose in front, rather distant, pale cinnamon-olive, margin minutely flocculoso-crenulate at first. Spores ferruginous, pip-shaped, $14-16 \times 6-7\mu$, one guttulate, smooth. Cystidia scanty, ventricose, $50-65 \times 13-16\mu$.

Amongst sand, Culbin Sandhills, 17th September, 1912, Mr. A. D. Cotton.

Easily known by the white fibrils on the pileus and stem; it somewhat resembles *Inocybe maculata*, which has white adpressed squamules on the pileus.

Flammula carnosa Mass. British Fungi 290.

Growing in small fascicles on wood, found by Mr. A. Clarke, at the Castle Howard Fungus Foray, September, 1909. Naturalist (1912) 87.

Pluteolus Mulgravensis Mass. & Crossl.

Pileus somewhat fleshy, convex then expanded and umbonate, flocculose, becoming broken up into squamules, striate, grey, 5-6 cm. across; gills free, crowded, white then cinnamon, broad; stem stuffed, smooth, almost equal, base somewhat clavate, whitish, 4 cm. long; spores elliptical, ochraceous-brown, $9-10 \times 4-5\mu$.

On wood, Mulgrave Woods, September, 1911.

Differs from *P. reticulatus* and *P. aleuriatus* in the umbonate, striate cap becoming squamulose, and in the larger spores. Naturalist (1912) 85.

Cortinarius (Phlegmacium) turbinatus (Vent.) Fr. var. *lutescens* Rea.

Differs from the type in the yellow flesh of the pileus and stem.

Monk's Risborough, Buckinghamshire, 8th October, 1907, Rev. D. C. O. Adams.

Psaliota amethystina Quél. As. Fr. 1884; Fl. Myc. 71; Roz. & Rich. t. 18, f. 1-5.

Pileus 3-5 cm. wide, convex then expanded, umbonate, villose or fibrillose, *white* becoming either *rose* or *lilac* or *amethyst* coloured from the centre outwards. Stem 3-6 cm. long, 5-10 mm. thick, subbulbous at the base, stuffed with a silky pith, fragile, glabrous, white. Ring white, satiny. Flesh thin, white. Smell like *Psaliota silvicola*. Taste pleasant. Gills 6-7 mm. wide, ventricose, crowded, free, light grey then bay-brown.

Spores brownish purple, roundish oblong, $5-7 \times 4\mu$, one- to two-guttulate.

On the ground Haslemere, Surrey, September, 1910, Miss Phœbe Keef, and 19th August, 1912, Mr. E. W. Swanton. Easily distinguished in the *Minores* section by the white pileus becoming coloured from the centre outwards.

Hypholoma aellopum Fr. in Vet. Ak. Förh. 1873; Hym. Eur. 292.

On rotting stump, Mulgrave Woods, September, 1911. Naturalist (1912) 87.

Coprinus Friesii Quél. Jur. et Vosg. I., 129, t. 23, f. 5; Fl. Myc. 51; Fr. Hym. Eur. 331; Clare Island Survey Pt. XIII., 5, 9, 22.

Pileus membranaceous, ovoid, elliptical, then expanding, 1-2 cm. high and across, *floccosely pulverulent, snow white*, then striate, margin becoming greyish violet. Stem 2 cm. long, slender, *white*, pulverulent, swollen and floccose at the base. Gills free, narrow, crowded, white then violaceous and finally brownish-black. Spores bay, subglobose, 10μ diam., Clare Island and Belclare, H. C. Hawley.

Coprinus frustulosum Sacc. Myc. Ven. Spec. p. 35, t. 6, f. 10-14, from Atti della Soc. Ven.-Trent II.; Massee Revision of the Genus *Coprinus*, Annals of Bot. X, 168.

Pileus 3-6 cm. wide, 1 cm. high, ovate then campanulate, covered up to the yellow umbo *with rosy red micaceous meal*. Stem 1.5-12.5 cm. long, conical then cylindrical, very brittle, *white*, glistening, hollow, smooth, mealy at the apex. Gills free. Spores $8 \times 6\mu$.

Caespitose amongst long grass near a post and under the shade of a *Rhododendron*, Inval, Haslemere, Surrey, 3rd September, 1912, teste Mr. E. W. Swanton.

Easily known by the rosy red micaceous meal on the surface of the pileus and the white glistening stem.

Boletus sphaerocephalus Barla. Ch. de Nice, t. 36; Quél. Fl. Myc. 415.

Pileus globose, 10-20 cm. wide, ochraceous yellow, more deeply coloured at the centre and sometimes tinged with brown, margin *light yellow*, with fragments of the ring attached. Flesh very thick, soft, watery, light yellow, *bluish* under the cuticle. Stem ventricose, 4-6 cm. long, 3-4 cm. thick, furrowed, tawny yellow becoming darker. Ring membranaceous, shaggy, usually evanescent. Tubes short, decurrent, orifice of pores

round or angular, bright yellow becoming tawny or brownish with age. Spores olivaceous, $8-10 \times 3-4\mu$, biguttulate.

Boldre Wood, New Forest, Hampshire, C.R.

Boletus reticulatus (Schaeff.) Boud. Schaeff. t. 108; Boud. Soc. Bot. Fr. XXIII., 321; Icon. Myc. IV. 74 t. 146; and see plate 5.

Pileus 8-15 cm. and more broad, ochraceous yellow or greyish fawn, *finely tomentose*, fleshy, convex, often cracked in dry weather. Stem 6-9 cm. long, 4-6 cm. thick, often obese and a little constricted at the base, concolorous or paler, *reticulated to the base*. Flesh white, slightly coloured under the cuticle and at the base of the tubes, firm. Smell and taste pleasant. Tubes small, 1 mm. across, round, fairly long, free or almost free, greenish yellow. Spores olivaceous, oblong fusiform, one-three-guttulate, $13-18 \times 4-5\mu$.

On the ground under Oaks, Wyre Forest, Worcestershire, 29th June, 1894. Swarraton, Hampshire, 22nd August, 1912, Rev. W. L. W. Eyre.

Easily distinguished from *Boletus edulis* by its paler, tomentose pileus and the stem reticulated to the base, it also generally occurs earlier in the year from the month of May onwards and but rarely in the autumn.

Boletus pinicola (Vitt.) Rea. Vitt. Fung. Mang. 170; and see pl. 6.

Pileus 9-20 cm. wide, convex, *rich chestnut colour* bordered with a narrow white line at the margin, fleshy, slightly viscid when moist, then *dry* and *floccose*. Stem 9-15 cm. long, 4-8 cm. thick, *concolorous*, rugose, slightly reticulate, subbulbous. Flesh white, reddish under the epidermis. Tubes 15-20 mm. long, adnate, ventricose, greenish, round or angular at their orifices, 1 mm. across. Spores olivaceous, fusiform, 1-3-guttulate, $15-18 \times 4-5\mu$.

Amongst Pine needles, Inverey, Aberdeenshire, 2nd October, 1908. C.R.

Easily known amongst the Edules section by the dry, floccose, rich chestnut colour of the pileus and stem.

Polyporus sulphureus (Bull.) Fr. var. *albolabyrinthiporus* Rea.

This variety differs from the type in the white, labyrinthiform, torn pores and the flesh which is white from the first.

Inside a hollow Oak, Garnstone Castle, Herefordshire, 11th November, 1911, Mr. R. B. Johnstone.

Polyporus Boucheanus Klotzsch. Fr. Hym. Eur. 533; Lloyd Syn. Sec. Ovinus of *Polyporus* 86.

Pileus fleshy, plane or cyathiform, yellowish, with small squamae. Pores large, angular, decurrent, white. Stem short, pale, hirsute, excentric or often lateral. Spores $7 \times 12\mu$, hyaline, smooth.

On a dead branch, Swarraton, Hants, Rev. W. L. W. Eyre, teste Lloyd letter no. 42, 7. On an Oak, Looe, Cornwall, Dr. A. Adams, August, 1912.

"In fact, except as to its small size and pale stem, it is *squamosus* as to colour, flesh, pores, texture and spore," l.c. 86.

Polyporus tephroleucus Fr. Syst. Myc. I., 360.

On decaying, prostrate trunk, High Greenwood, near Hebden Bridge, August, 1911, Mr. James Needham. [Description given from fresh specimen] Naturalist (1912) 87.

Fomes euonymi Kalchb. Enum. II., 1232; Fr. Hym. Eur. 560. Kalchbr. Icon. Sel. Hym. 55, t. 35, f. 3.

On *Euonymus europaeus*, Grange Park, January, 1895, Rev. W. L. W. Eyre, teste Lloyd letter no. 42, 7.

Fomes australis Fr. Elench. 108; Nov. Symb. 47; Hym. Eur. 556.

Pileus 15-30 cm. and more across, deep umber chestnut or paler, convexo-plane, dimidiate, sessile, incrustated on the surface with a sticky resinous coating which finally dries up into tubercular ridges and becomes *laccate* and shining, margin sterile. Pores *elongate*, stratose, 2-3 cm. or more in length, reddish umber; orifice minute, round, at first white then fuscous. Flesh *very thin*, 2-4 mm. thick, soft, *deep umber chestnut*. Smell aromatic. Spores ochraceous, smooth, broadly elliptical, $10-12 \times 7-8\mu$, one-guttulate, truncate at the base.

On *Ulmus glabra*, Benthall Works, Broseley, Salop, 3rd October, 1912, Mr. W. B. Allen.

Resembling *Fomes resinaceus* in its laccate pileus but differing in the very thin, deep umber chestnut flesh and the long pores which greatly exceed the thickness of the flesh at all stages.

Polystictus stereoides Fr. Syst. Myc. I., 369; Quél. Fl. Myc. 390.

Pileus coriaceous, effuso-reflexed, reniform, 2-3 cm. wide, rigid, *thin*, pubescent then glabrous, *greyish fuscous* with con-colourous, depressed, narrow zones. Flesh creamy white. Pores medium size, unequal, *daedaloid*, *white*. Spores ellipsoid, 9μ long.

On a Fir stump, Swarraton, Hants, Rev. W. L. W. Eyre, teste Lloyd letter no. 42, 7.

Poria rancida Bres. Fungi. Trident. II., 96, pl. 208, f. 1.

On the ground among decaying pine needles, Mulgrave Woods, September, 1910. Specimen sent to C. G. Lloyd. " *Poria rancida* Bres. I have collected this same species in France on pine needles, and it was confirmed by Bresadola." Naturalist (1912) 87.

Peniophora aurantiaca Bres. Fungi Trident. II. 37, pl. 144, f. 2. Fungi Polon. 103. *Gloeopeniophora* v. H. et L. Beitr. (1908) 13.

On decaying wood, Mulgrave Woods, September, 1911. Identified by Miss Wakefield. Naturalist (1912) 88.

AURICULARIOPSIS R. Maire in "Recherches cytologiques & sur les Basidiomycètes" Bull. Soc. Myc. Fr. XVIII. (1902) 102.

This new genus is established for the reception of *Cyphella ampla* Lév. It is distinguished from *Cyphella* by its gelatinous consistency; some authors have wrongly transferred it to the genus *Auricularia* which has transversely septate basidia, but like the latter it shrivels up in dry weather and swells out in wet weather.

Auriculariopsis ampla (Lév.) R. Maire. *Cyphella ampla* Lév. Ann. Sc. nat. 1848, Fr. Hym. Eur. 662. *Auricularia Leveillei* Quéf. Soc. Bot. Fr. 1870, Fl. Myc. 25. *Corticium flocculentum* Fr. Epicr. 559; Hym. Eur. 647.

Cups gelatinous, 4-12 mm. across when moist and fully expanded, thin, hoodshaped and inverted when dry, externally tomentose and pale in colour. Hymenium at length wrinkled and veined, fawn or bright brown, margin white. Spores boat-shaped, 8-10 × 3-4 μ , white, hyaline.

On a dead twig, Cambridge, 27th November, 1912, Mr. F. T. Brooks.

Cyphella villosa (Pers.) Quéf. var. *stenospora* Bourdot & Galzin, Bull. Soc. Myc. Fr. XXVI., 225.

Minute 1.5-4mm. across, densely caespitose, hairs rough, pointed, 3-4 μ diam.; spores oblong, narrow, attenuated a little obliquely at the base, 8-10 × 3-4 μ . Basidia 15-18 × 6-8 μ .

On dead fronds of *Lastraea Filix-mas*, *Athyrium Filix-femina*, &c., Inver, Dunkeld, Perthshire, 29th October, 1912, Mr. Charles McIntosh.

Clavaria Crosslandii Cotton in Naturalist (1912) 86.

Plants small, unbranched, isolated or fasciculate, greyish-white or grey, becoming darker with age; smell and taste

slight, pleasant. Clubs very slender, brittle, 2-3 cm. high, 1-3 mm. thick, pruinose, cylindrical, apex usually pointed. Stem hardly distinct. Flesh somewhat darker than the hymenium. Internal structure pseudoparenchymatous in transverse section, cells $5-8\mu$ diam. Basidia $20-25 \times 4-5\mu$, contents granular, sterigmata 4, erect. Spores hyaline, smooth, pip-shaped, $4-5 \times 2.5-3\mu$.

Hab. In short grass. Mulgrave Woods, September 1910 and 1911. Comm. C. Crossland and W. N. Cheesman.

"The grey colour and small size which cannot fail to strike the observer, are good field characters by which to recognise the present species. From the drab-coloured *C. tenuipes* it is distinguished by its slender, brittle clubs, and from *C. fumosa* by its fasciculate instead of densely tufted habit. *C. acuta*, which the new species resembles in size, habit and texture, differs in the complete absence of the grey tinge. The microscopic characters confirm its title to specific distinction, the small basidium and spores marking it off from allied species. Amongst continental species *C. Crosslandii* most nearly approaches *C. affinis* Pat. et Doas. but this plant differs according to the published descriptions (no type is preserved), (1) in the distinct stem; (2) in becoming yellow on drying; (3) in the slightly punctulate spores. Though, on both occasions, a few clubs only were met with, the specimens agreed precisely, and were sufficient to show the essential characters."

Lycoperdon candidum Pers. Syn 146. *Lycoperdon separans* Peck New York Nat. Hist. Mus. Bot. Report XXVI., 73 (1874); Morgan "North American Fungi" Jour. Cincinnati Socy. of Nat. History April, 1891, 5. *Lycoperdon cruciatum* Rostk. in Sturm Deutschl. Fl. Bd. III., Hft. XVIII., 19, t. 8 (1844); Lloyd Myc. Notes 214; Naturalist (1906).

In a field on Haste Hill, Haslemere, 12th September, 1912, Mr. E. W. Swanton.

Geaster coronatus (Schaeff.) Schröt; Lloyd The Geastrae 31; *Geastrum quadrifidum* Pers. var. *minus* (Schmiedel) Pers. Syn., 133. *Geaster fornicatus* (Huds.) Fr. Sys. III., 12; Rabh. Krypt.-Fl. I., 912; Eng. & Prantl Pflanzen-familien I. Teil, abt. 2, 322.

Exoperidium fornicate, the mycelial layer forming an imperfect cup to which the arched segments of the fibrillose layer are loosely attached at the tips. The cup is not perfect as in *Geaster fornicatus* (Huds.) Berk. but the mycelium is so strongly developed that adhering dirt and pine-needles represent an ir-

regular mass rather than a definite cup. Segments of the arched fibrillose layer usually four, sometimes five, deeply cut, but relatively short as compared to the segments of *G. fornicatus*. Fleshly layer light coloured, partially adherent or sometimes entirely peeled off. Inner peridium oblong, tapering to a short pedicel at the base and to an acute mouth at the apex, covered with minute granular particles. Mouth definite. Spores globose, 4μ , rough.

In my paper on British Geasters last year I said this small fornicate Geaster, so abundant in the coniferous woods on the Continent, had never been recorded for Britain. On the 4th September, 1912, Miss E. M. Wakefield kindly sent me a specimen of this species for confirmation; it was from the Stroud Valley, Cotswold Hills, Gloucestershire. Subsequently Mr. J. Ramsbottom informed me that there are five specimens of this species in the Broome Herbarium gathered near Lucknam Grove, six miles west of Chippenham, Wiltshire, in October, 1867.

Galactinia brunneo-atra (Desm.) Boud.; Desm. Esp. nouv. (1836) 9; Sacc. Syll. VIII., 92; Boud. Hist. et class. Disc., 49; Icon. Myc. IV., 164, pl. 298; Journ. Bot. LI. (1912) 189.

On the sandy flats by the sea, from Formby to Ainsdale, Lancashire, Mr. H. J. Wheldon.

PUSTULARIA Fckl. Boud. Hist. et class. Disc., 52.

Ascophores cup-shaped, entire, pale, ochraceous or greyish, slightly tomentose rather than furfuraceous, sessile, rarely stipitate. Asci 8-spored, not turning blue with iodine. Spores elliptical, generally two-guttulate and accompanied with other granules. Paraphyses thin, hyaline or slightly coloured, scarcely thickened at the apex and not recurved. Growing on the ground.

Pustularia patavina Cke. & Sacc. Mycogr. f. 360; Sacc. Syll. VIII., 193; Boud. Icon. Mycol. IV., 189, pl. 340.

Ascophore 5-1 cm. across, sessile, palish orange-ferruginous, whitish on the outside, disc cup-shaped, finally a little flattened, tomentose, ochraceous-ferruginous, margin crenate. Paraphyses linear, branched from the base, very slightly thickened at the apex, scarcely coloured. Asci not turning blue with iodine, slightly attenuated at the base, $200-260 \times 15-20\mu$. Spores large, white, fusiform, smooth, two guttulate and accompanied with many granules, $24-26 \times 10-13\mu$.

Amongst moss on an old charcoal bed at Kinfauns, Perthshire, July to September, 1912, Mr. James Menzies (teste Monsieur E. Boudier).

TRICHARIA Boud. Hist. et class. Disc. 57.

Ascophores cup-shaped, hairy, the hairs on the exterior generally brown, disc greyish or yellowish, rarely white. Asci fairly large, 8-spored, not turning blue with iodine. Paraphyses straight, a little branched. Spores smooth, rarely verrucose, not guttulate, sometimes containing some small granules that collect together. Growing on the ground.

Tricharia gilva Boud. in Cke. Mycogr. f. 406; Sacc. Syll. VIII., 185; Boud. Icon. Mycol. IV., 194, pl. 347; Nat. (1906) 8.

Ascophores greyish-fuliginous, scattered, rarely caespitose, 3-8 mm. across, sessile, cup-shaped becoming plane, clothed externally with septate, rough, pointed hairs, which are fasciculate at the margin and more flexuose at the base. Paraphyses linear, not thickened at the apex, uncoloured. Asci slightly attenuated at the base, cylindrical, 8-spored, not turning blue with iodine, $200 \times 15-16\mu$. Spores white, elliptical, scarcely granular inside, sometimes having when immature one or two small guttae which disappear, $13-16 \times 9-11\mu$.

On excavated clay soil amongst grass by the hedge side of a road in the suburbs of Perth, June and July, 1912, Mr. James Menzies.

Sepultaria foliacea (Schaeff.) Boud. Icon. Mycol. IV., 201, t. 359; Schaeff. t. 319.

Ascophore of medium or fairly large size, subterranean, globose and closed at first, then splitting up into large triangular segments like a Geaster, leaving a deep cup with the margin bent back in star-shaped pieces; disc dirty white slightly tinged with livid, externally clothed with wavy, flexuous, smooth, septate, brown hairs. Paraphyses simple or branched from the base, hyaline, septate, very slightly thickened at the apex. Asci large, attenuated at the base, not becoming blue with iodine, fairly wide, cylindrical, $380-400 \times 20-25\mu$. Spores ovoid, large, white, smooth, having one large gutta when mature accompanied with other granules when immature, $25-28 \times 15-18\mu$.

On sandy clay in and near an Old Red Sandstone quarry amongst the finer mosses near Perth, August to October, 1912, Mr. J. Menzies (teste Monsieur E. Boudier).

ANTHRACOBIA Boud., Hist. et class. Disc. 64.

Ascophores densely caespitose, small, orange coloured, clothed externally with fasciculate, short, obtuse hairs which make the margin under a lens appear black punctate. Asci cylindrical, narrower than in *Ciliaria*. Paraphyses thickened at the apex, becoming green with iodine. Spores elliptical, smooth, guttulate. Growing on charcoal.

Anthracobia nitida Boud. Hist. et class. Disc. 65; Icon. Mycol. IV., 219, pl. 388.

Ascophore 1-3 mm. wide, sessile, plano-convex, margin minutely dentate, orange-red, externally paler and granulose with fasciculate, short, obtuse, triseptate, fulvous hairs, $60-80 \times 15\mu$. Asci cylindrical, 8-spored, attenuated at the base, $220 \times 15\mu$. Paraphyses clavate, $8-10\mu$ thick at the apex, filled with orange granules that become blue with iodine. Spores oblong-elliptical, white, biguttulate rarely accompanied by many small granules, smooth, $18-19 \times 8-9\mu$.

Distinguished from *Anthracobia melaloma* by its brighter colour, smaller size, more clavate paraphyses and smaller spores with guttae less divided up. On charcoal heaps, especially on the fine ash left by the more complete combustion of the wood, July to October, 1912, Kinfauns, Perthshire, Mr. James Menzies (teste Monsieur E. Boudier). Densely caespitose and accompanied by *Anthracobia maurilabra* (Cke.) Boud.

Humaria rubens Boud. Bull. Soc. Myc. Fr. XII., 13, pl. III., f. 3; Icon. Mycol. IV., 224, pl. 396; Naturalist Jan. (1899), 27; Fungus Fl. of Yorkshire, 258.

Gregarious, usually amongst the finer mosses, over a large area on the Sidlaw Hills following the andesite rocks to the outcrop on the Dundee road near Perth, August and September, 1912, Mr. James Menzies (teste Monsieur E. Boudier).

Microglossum arenarium Rostr. Med. om. Gronland, 3, 606 (1891); Bot. Tidssk. XVIII., 76 (1892); Bot. Cent. Beiheft, 3 (1893). *Leptoglossum latum* Pk. Bull. Torr. Bot. Club XXII., 210 (1895). *Mitrula arenaria* (Rostr.) Mass. Ann. Bot. XI., 283 (1897). *Corynetes arenarius* Durand "The Geoglossaceae of North America" Annal. Mycol. VI., 417 (1908); Boud. Discomy. d'Eur., 87.

Plants single or caespitose, broadly clavate, black, 1-4 cm. high; ascigerous portion about half the total length, .5-2 cm. broad, irregularly bent or contorted, compressed, furrowed, black; stem brownish-black or olive-black, pruinose or squamulose. Asci stout, clavate-cylindrical, apex narrowed, pore blue with iodine, $100-125 \times 12-15\mu$; spores eight, biseriate above, uniseriate below, hyaline, smooth, cylindrical or cylindric-oblong, ends rounded, straight or curved, $25-35 \times 6\mu$, contents for a long time continuous, finally becoming at least four septate (probably ten or more); paraphyses brown, cylindrical, septate, longer than the asci, 3μ thick below, the apices usually somewhat clavate, thickened and more or less curved.

In sand, September, Greenland, Labrador, Newfoundland,

Jutland (Denmark). A well-marked northern species characterized by the *long, conspicuous, brown paraphyses*.

Amongst sand, Culbin Sandhills, 15th and 17th September, 1912. I am greatly indebted to Miss E. M. Wakefield for her kind assistance in identifying this species.

Ombrophila nigripes (Pers.) Boud. *Helotium* Fr. Summa, 356. *Peziza* Pers. Syn., 661; Fr. Syst. Myc. II., 132.

Minute, subgelatinous, stipitate. Disc .5-2 mm. across, plane then concave with the margin projecting, glabrous, pale whitish or yellowish. Stem 4-6 mm. long, .5 mm. thick, becoming black in the basal two thirds, white at the apex. Asci cylindrical, 15-24 $\times$ 3-4 μ , 4-spored. Spores 1-seriate, hyaline, continuous, oblong, 5-6 $\times$ 1.5-2 μ .

On dead leaves of *Picea excelsa* near Perth, 18th October, 1912, Mr. James Menzies.

Easily known by its long black stem and small pale disc.

I have to thank Mr. J. Ramsbottom for his kind assistance in determining this species.

Dasyscypha perplexa Boud. Hist. et class. Disc., 120; Icon. Mycol. IV., 298, pl. 510.

Ascophores minute, .5-1 mm. across, stipitate, white, cup-shaped then plane, densely velvety, disc milk white becoming slightly ochraceous when dry; stem .5-1 mm. long, concolorous, straight or flexuous, pubescent, hairs uncoloured, septate, cylindrical more or less flexuous, covered with evanescent granules, 100 $\times$ 4-5 μ , flesh white. Paraphyses fusiform, very pointed, septate at the base, internally granular, greatly exceeding the asci. Asci clavate, 8-spored, foramen immarginate, 40-45 $\times$ 6-7 μ . Spores fusiform-oblong, white, sometimes a little granular inside, 10-12 $\times$ 2-3 μ .

On dead root stocks and stems of *Dactylis glomerata* at Muirhall, near Perth, February and March, 1912, Mr. James Menzies.

PEZICULA Tul. Boud. Hist. et class. Disc. 159.

Ascophores small, bright coloured, almost immarginate, not urceolate, very slightly furfuraceous on the outside, generally stalked and more turbinate. Asci large, very slightly smaller towards the base, 6-8-spored, foramen not or only a little marginate. Paraphyses dichotomously branched upwards, clavate at the apex. Spores oblong, often curved, guttulate or filled with oily granules which disappear on germination, continuous at first then finally many-septate.

Growing on dead branches of trees and shrubs.

Pezicula eucrita Karst, Mycol. Fenn. I., 166; Boud. Icon. Mycol. IV., 330, pl. 559.

Small, .5-1.5 mm. across, shortly stipitate, turbinate, thick, yellowish-ferruginous. Ascophores arising from a very short and thick stem, disc convex, slightly marginate, neither urceolate nor patelliform, sometimes only a little umbilicate, stem darker in colour, flesh concolorous. Paraphyses sparsely septate, slightly coloured, dichotomously branched, a little thickened at the apex. Asci large, broad, 8-spored, very slightly smaller at the base, foramen immarginate, $80-100 \times 17-20\mu$. Spores at first white then slightly coloured, oblong-cylindric, somewhat fusiform, straight or curved, guttulate and filled with granules, at first continuous then finally many-septate, after germination they lose all their guttae and granulations, $32-40 \times 7-9\mu$.

On bark of *Pinus sylvestris* Bidston, Cheshire, 12th January, 1912, and 16th August, 1912, Dr. J. W. Ellis.