

NOTES AND ADDITIONS TO THE FUNGUS

FLORA OF TASMANIA.

BY L. RODWAY, C.M.G.

Government Botanist.

Plate XXVI.

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Of the Agarics which may be gathered in Tasmania we have but a poor record. The reason is not far to seek; they are incapable of satisfactory preservation. The softness of their structure causes such a distortion in drying that means of critical comparison are lost. Certainly they may be preserved in spirits or formaline, but then the colour will go, and colour in this group of plants is of first importance. The only satisfactory way to proceed is to make a faithful water-colour copy, also accurate notes of all features, and trust that some expert may recognise and name them.

The following four species may certainly be added:—

Collybia protracta, Fr. Solitary, dark brown, almost black. Pileus to 5 cm., convex to plane, umbonate, smooth; gills deep, dark gray often with a lighter edge; stem long, slender, solid fibrous. Spores smooth, hyaline $9 \times 6 \mu$. Distinguished by its black colour, and very broad, crowded gills.

Found occasionally in partially shaded places.

Collybia butyracea, Bull. Pileus convex to plane, smooth, rather hygrophanous, mostly 5-10 cm., watery flesh coloured, browner when old; gills very numerous, delicate, white, receding with a decurrent tooth; stem cartilaginous, stuffed usually expanding at the base. Spores hyaline, smooth, $6 \times 3 \mu$.

Common, chiefly amongst wattle trees.

Flammula prasina, C. et M. Pileus convex, subumbonate, mostly 5 cm., dull green in centre fading to dull yellow towards the margin; gills fairly numerous dull yellow, receding with a decurrent tooth; stem bold, 5-10 cm., pale yellow, solid, pithy in middle. Spores brown, smooth, $8 \times 4 \mu$.

Common in forests.

Pholiota adiposa, Fr. Pileus convex, 5-10 cm., glutinous, yellow with darker squarrose scales; gills broad yellow then ferruginous, adnate slightly rounded; stem long, often bulbous, yellow, surface floccose, ringed.

Very common on dead wood.

Of other Hymenomycetous Fungi not hitherto recorded as Tasmanian:—

Hydium cyathiforme, Sch. With a central stem, squamous, very like a Thelephora, dark gray to white; spines short, white, crowded. Spores hyaline, globose, $3\ \mu$.

Radulum uolare, Fr. Resupinate, waxy developed into irregular blunt tubercles; dull yellowish.

On dead wood.

Plebia reflecta, Berk. Resupinate, upper margin reflexed, purplish brown, waxy, raised into irregular obtuse wrinkles more or less radiating.

On dead wood.

Boletus badius, Linn. A large coarse Bolet which only appears under introduced Pine trees. Surface brown, tubes yellow, becoming greenish blue when bruised.

Merulius aureus, Fr. Very thin and closely adhering, golden yellow, margin mycelioid, paler.

On dead wood.

Hymenochate purpurea, C. et Mor. Distinguished from the other members of the genus found in Tasmania by its purple colour.

On dead wood.

Clavaria rosea, Fr. Solitary or in small tufts, up to 2 cm., obtuse, rosy, slender below, spores globose, $3\ \mu$.

On the ground.

Hydnangium australiense often has the sterile base carried through the gleba to the apex, assuming the appearance of an obsolete stem. When this is so the pileus is generally open below, exposing the gleba, giving the plant all the characters of a *Secotium*.

Hydnangium microsporium, n.s. Globose, 6 mm. diameter, white to pale ochre. Peridium rather thick and tough. Gleba dense, orange, cavities small, packed with spores. Spores hyaline, globose, armed with short spines or warts, 5-6 μ . diameter.

Mt. Nelson Range.

Apparently near *Hydnangium Brisbaneensis*, differing mainly in colour and density of gleba.

Hydnangium densum, n.s. Globose, pale ochre, 1 cm. diameter. Peridium very thick and tough. Gleba marbled with black from the small spore cavities which are about 0.3 mm. diameter and densely packed with spores. Spores globose, brown, minutely echinulate, 9 μ .

Mt. Nelson Range.

A very curious species. In section the thick peridium and black spore cavities and general dense structure differ from other members of the genus.

Hydnangium alveolatum, C. et M. Subglobose, pale ochre, 5-10 cm. diameter. Peridium thin fleshy, gleba dense, cells pale ochre numerous, about 0.2 mm. diameter, dense; spores globose, minutely alveolate, 10-12 μ . diameter.

Valley at foot of Mt. Wellington.

Hysterangium atratum, n.s. Subglobose, 1.5-2 cm. diameter, dark brown, viscid. Peridium fleshy, tough, thin; gleba dark brown, canals small but very numerous. Spores dark brown, nearly globose 12 x 11 μ ., minutely alveolate.

Very like *H. neglectum*, but with very different spores.

Mt. Nelson Range.

Hysterangium obtusum, n.s. Irregularly globose 2 cm., violet when fresh. Peridium thick violet not easily separating from the gleba. Gleba pale slatey olive. Spores oblong, very obtuse, smooth, hyaline, 9 x 4 μ .

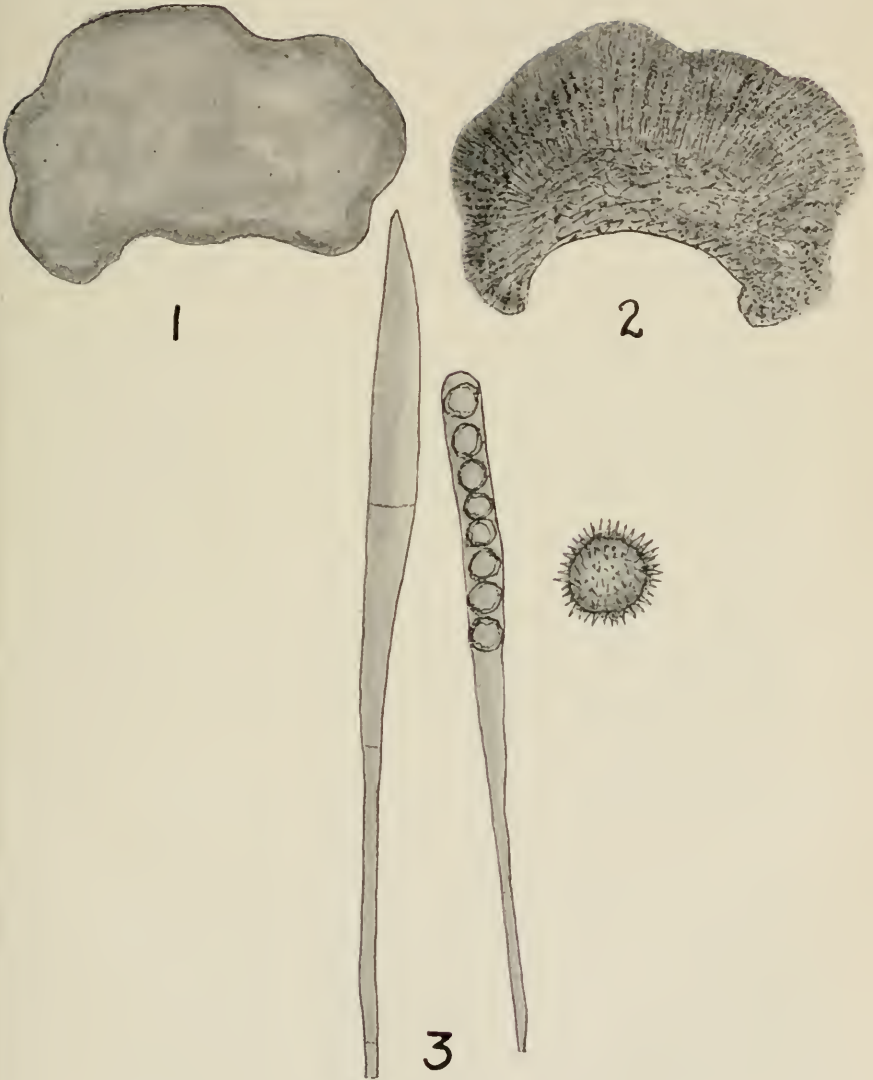
Differing from the *H. affine* in peridium and spores. Mt. Nelson Range.

Hymenogaster fulvus is described in P. et P. R.S. Tas., 1917, p. 109, as being black. It becomes so when old, but is pale gray when young.

Secotium ochraceum, n.s. Underground subglobose, 1-2 cm. diameter. Pale ochre-brown, surface verrucose, peridium very thin, hardly apparent; stem short, extending to the upper surface, but not produced laterally on the pileus. Gleba ochraceous, canals bold tortuous, dissepiments thin. Spores elliptic, subacute at both ends, pale-brown, smooth, 16 x 8 μ .

Very like forms of *S. gunnii*, but spores twice as long.

Cascades, Hobart.



SPRAGUEOLA MUCIDA, n.s.

Crucibulum simile, Mass. Usually many together, 8-10 mm. high, mouth expanding becoming revolute; externally tomentose. Spores colourless, subglobose, $4 \times 3 \mu$.

Tremella vinosa, Mass. This plant was described in the Kew Bulletin in October, 1899, from specimens gathered in Tasmania, but does not appear to have been recorded locally. The following is Maseo's description:—

Gelatinous, soft, gyroso-plicate, glabrous, vinous, 1-2 cm. broad. Basidia globose, sterigmata 4. Spores subglobose, hyaline, smooth 10μ .

Allied to *T. corrugata*, Sch.

On dead wood. Distinguished from all other Tasmanian Tremellas by the dark vinous colour.

Puccinia obtegens, Tul., also known as *Puccinia suaveolens*, Rostr. This is a rust fungus, which appears to be parasitic only on the California Thistle. It has recently appeared in Tasmania, and is showing much activity. Plants attacked by it become sickly, and do not flower. It may have, in the future, considerable value as a means of controlling the weed.

Amongst *Ascomyetes* the following may be recorded:—

Chlorosplenium aruginosum, Tul. Like other members of the genus it is of dark blue-green colour, and extends this colour to the wood on which it grows. The cups are thin, and often irregular in shape. It differs from our commoner *Chlor. omnivirens*, by the spores being shorter and narrower, being $12-14 \times 3-4 \mu$.

Trichopeziza sphaerula, Sacc. A minute yellow peziza, hairy on the external surface, growing on the bark of Sho and Bulloak.

Ciboria firma, Pers. In the description of the genus, the sporophore is stated to be borne on a long stem. Though the long-stemmed form is common in Tasmania, it is sometimes met with a stem so short as to approximate with the genus *Helotium*.

Helotium nigripes, Pers., is referred to in Cooke as the stem turning blackish, and the spores $5 \times 1.5 \mu$ long. A very common form, which is usually considered to be typical, has the whole external surface more or less black, and the spores $11 \times 3 \mu$.

Humaria bovina, Sacc. Concave to plane wavy, soft-fleshy, umber, with a dull greenish tint, smooth 5-10 mm. Spores oblong smooth 19-22 x 9-11 μ .

On cowdung, together with *Lochna stercorea*. *Ascobolos furfuraceus*, etc.

Dasyscypha eucalypti, Berk., is much more variable than indicated in Cooke's Handbook. It grows on all sorts of dead twigs and leaves, sometimes attains 4 mm. diameter, the disk is livid when fresh, deep orange when dry. Spores 16-24 x 4.5-8 μ .

Orbilina crystallina, n.s. Globose, waxy, gregarious, orange, 1-2 mm. diameter, surface crystalline, with large, prominent, pellucid cells. Hymenium at first covered with a crystalline membrane; as the hymenium expands the membrane bursts in the middle, and remains as a toothed margin; hymenium expands till it is broad, flat, to convex. Asci cylindrical-clavate 9 μ . diameter. Paraphyses few, filiform, yellow, 2.3 μ . Spores uniseriate, hyaline, smooth, elliptic with acute ends, 18 x 7 μ . The broad spores readily distinguish it.

Cascade estate, Hobart.

Spraguecola mucida, n.s. Ascophore sessile, subglobose, vaguely nodulose, about 5 mm. diameter, subterranean, growing on buried wood, white. Hymenium covering the entire surface. Asci cylindrical. Spores 8, globose, coarsely echinulate, 18 μ . diameter, uniseriate, paraphyses greatly exceeding the asci, filiform attenuate at apex, immersed in dense jelly. At maturity the jelly increases to 1-2 cm., carrying paraphyses and asci with it.

Underground. Mt. Nelson Range.

The genus is founded upon one rare American species—“only two specimens are known; these are in “the Kew Herbarium” (Masse). Our plant differs from the type in having globose instead of elliptical spores and the development of jelly is unique. The sessile habit of the genus is not common amongst *Geoglossae*, but the reduction of hypothecium and total absence of excipulum indicates its relation. The round spores suggest *Neolecta*, but habit and copious paraphyses are against it.

Cenangium furfuraceum, De Not. Cespitose and erumpent from a common base, everywhere black. Ascophores about 5 mm. high and broad, cupshaped but much distorted from mutual pressure, tough, externally

rough. Asci clavate, spores hyaline, spindle shaped with obtuse ends, slightly curved, $12 \times 2 \mu$

On dead eucalypt.

The hymenium in the typical European form is described as cinnamon, while ours is at least very dark brown, but otherwise there appears no distinction.

Paurocotylis nireus, *n.s.* In the definition of the genus, Berkeley gives no description of the spore formation, but under *P. pila* he refers to the spores being formed on pellucid peduncles. In the Tasmanian plant the spores are born singly in globose asci.

Subterranean or emerging, globose, pure white mostly 3-6 mm. diameter; dense and tough, canals very irregular. Asci globose 30-50 μ , numerous, entirely filling the canals, each on a long slender peduncle, and containing a single globose strongly echinulate spore 16 μ . diameter, epispore very thick.

On the ground Cascade estate, Hobart.

Sphaerosoma tasmanica, *n.s.* Subterranean, then partially emerging, globose-convolute, ochre to nearly white 1 cm. diameter, fleshy-cartilaginous, hollow, closed or opening on one side towards the base; hymenium covering the internal surface, wall 1.5 mm. thick. Asci linear, spores 8 uniseriate, elliptic, obtuse, coarsely echinulate $24 \times 16 \mu$. Paraphyses filiform, with a globose tip.

Cascade state, Hobart.

Very like *Hydnocystis cyclospora*, only very different spores, and not opening above.

Aulographum eucalypti, *C. et M.* Linear black apothecia, many on livid spots.

On leaves of *Euc. obliqua*, and other Eucalypts.

Microthyrium amygdalinum, *C. et M.* A shield shaped flat perithecium, superficial.

On the surface of leaves of *Euc. amygdalina* and others.

Erysiphe polygoni, *D.C.*, also known as *Erysiphe communis*, *Grev.*, is a mildew that is making its presence felt amongst garden flowers, especially Sweet Peas.

Hypocrea sulfurata, *Schreb.* C. G. Lloyd writes that our plant, commonly referred to *H. citrina*, *Pers.*, is erroneously determined: should be as above.

Cordyceps gracilis, Grev. A specimen of this has recently been gathered on Mt. Nelson Range. Two clubs emerged from a larva; stipes pale, about 1 cm., head oblong, yellow, about 4 mm. long.

Mr. Olliff, once Government Entomologist of New South Wales, renamed this as *C. scottianus*, but there was no apparent justification. As he also named a form of *C. robertsii* as new, under the name of *C. sclirkirii*, and another as *C. coxii*, and further resuscitated a plate of *C. taylori*, Berk., which had appeared in Hooker's Journ. Bot. N.S., Vol. II., 1843, and made it the type of a new species, under the name *C. trictenæ*, his suggested new species have not been generally accepted.

Cordyceps robertsii, Hook. The well known Vegetable Caterpillar of New Zealand has been recently gathered in a gully at the foot of Mt. Wellington. It is easy to overlook this, and probably diligent search will bring more to light.

Cystopus tragopogonis, Schr. Occurs on many different Composites, but is particularly abundant on the leaves of *Lagenophora emphyosopus*, forming conspicuous white patches.

Amongst the Incompletæ, the following interesting forms may be recorded:—

Dendrodochium molle, n.s. Subglobose from a broad base, 2-4 mm. diam., soft waxy-gelatinous, dull white. Conidiophores verticillate, conidia single, terminating long slender branches, 5 x 4 μ .

Common on dead wood, collapsing when dry into a flat scale.

Verticillium lateritium, Berk., forming broadly effused velvety orange-red or vermilion coloured patches. Sporophores erect, verticillately branched, conidia elliptic, red, 4-6 x 3 μ .

Common on dead vegetable substances.

Stilbum erythrocephalum, Ditm. Stem thick, tomentose, whitish, terminating in a turbinato-globose. rosy or deep red head; conidia elliptical, 4-6 x 2-2.3. hyaline, borne on slender septate, colourless conidiophores that are nodulose at the apex, 50-60 x 3-3.5 μ . (Masseé).

On rabbit's dung.

EXPLANATION OF PLATE XXVI.

SPRAGUEOLA MUCIDA, n.s.

1. Tuber x 10. 2. Section. 3. Ascus and Paraphysis, Spore.



1



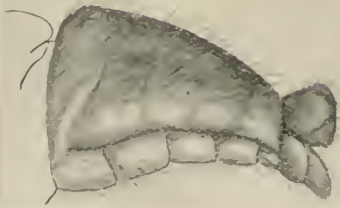
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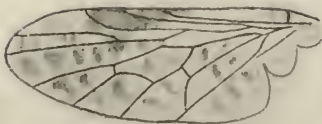
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