

ADDITIONS TO THE TASMANIAN FLORA.

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(Received 15th November. Read 15th November.

Issued separately 31st December, 1915.)

The few additions here made to our flora are all cryptogamic. Of the true mosses *Fissidens tasmanicus* and *Amblystegium austro-serpens* are endemic, and recently described by Prof. V. F. Brotherus, of Helsingfors. The second genus was not previously represented in Tasmania. Of the Hepatics, the presence of *Pallavicinius connivens* on our mountains is another connecting link with New Zealand flora. *Chiloseyphus kirkii* also was hitherto only recorded from New Zealand. *Calypogeia tasmanica* adds a new genus as well as species to our list. Of the two fungi it is not surprising that the *Geoglossum* appears as it is common in Australia, but the *Mitrula* has not hitherto been recorded south of the equator.

We now claim two *Geoglossums* and three *Mitulas*.

Geoglossum glabrum, Pers.

Geoglossum hirsutum, Pers.

Mitrula berterii, Mont.

Mitrula cucullata, Fries.

Mitrula olivacea, Sacc.

MOSESSES.

Fissidens tasmanicus, V. F. Brotherus. Plant about 1 cm.; leaves numerous, erecto-patent, linear, up to 1.8 mm. long; apex subacute; margin not bordered, entire; sometimes undulate or subserrulate above; nerve narrow, lost in the apex; lower part of the sheath with a band of about 4 long cells, just within the margin; cells rotundo-quadrate, irregular, about 10 μ . diameter; cuticle smooth.

Very close to *F. strictus*, H.f.W., to be distinguished by the band towards the margin of the sheath.

Submerged, Newman's Creek, Tasman Peninsula, W. A. Weymouth.

Amblystegium, Br. Sch.

This is one of the Genera into which the old genus *Hypnum* has been subdivided. An ill-defined group, it is differently accepted by botanists. Following Brotherus, Braithwaite, and many others, it is here understood as:—

Slender, pinnately branched, growing in wet places. Leaves equal in 5-8 rows, ovate or cordate straight, acute; nerve vanishing above the centre; cells small, elliptic to rhomboid, seldom narrow linear. Capsule, etc., as in *Hypnum*. Close to *Hypnum*, distinguished by the broader cells.

Amblystegium austro-serpens, Broth. Stems flaccid, about 1 cm. Leaves acutely acuminate from a rotund or ovate base, 0.5 mm. long; margin entire; nerve slender, lost above the middle; cells oblongo-rhomboid.

In stream at mouth of River Huon.

Drapanocladus sendtneri (Sch.). Long, slender, with short lateral branches. Leaves 1-2 mm. long, broadly lanceolate, falcate, with a tapering slender apex, but not very long, margin entire, nerve strong, lost remote from apex. Cells at the basal angle little enlarged, with thickened yellow walls.

Distinguished from *D. fluitans* by the shorter, broader, less curved leaves, margin entire, basal angulars yellow, thick walled. In *D. fluitans* the leaves are linear-lanceolate, very attenuated apex, very curved, nerve stronger, 2 mm. long, margin dentate near apex, basal angular cells, inflated hyaline.

In almost dry creek, McRobie's Gully. W. A. Weymouth. Determined by Prof. Brotherus.

Philonotis australis, Mitt. Stems mostly 2 cm. long; leaves erecto-patent, crowded, imbricate, lanceolate, with an acuminate apex, 1.3 mm. long, margin acutely dentate, nerve rotund, bold, dentate, shortly excurrent; cells rectangular, those of the base more quadrate. Resembling *P. tenuis* Tayl., only leaves smaller, more crowded, also of a more compact habit.

St. Mary's Pass. W. A. Weymouth. Determined by Prof. Brotherus.

Bartramidula pusilla (H. f. et W.), Schimper. This moss is dioecious. Antheridial plants, erect, about 1cm., leaves oblong, closely appressed, antheridia in the axils of the upper leaves.

This is responsible for the record of *Pleuridium nervosum* for Tasmania.

HEPATICS.

Marsupidium piliferum, *St.* Erect, 5-10 mm., simple. Leaves succubous, nearly transverse, broadly oblong, amplexicaul; apex with two long acute spinelike lobes.

Adamson Peak, Trowutta.

Aplozia alpina, *Spec. nov.* Stems weak, slender, often 2-3 cm. long. Leaves mostly distant, rotund, very concave, nearly transverse, mostly 0.7 mm. long, bracts rather longer. Perianth 2 mm. long, fusiform tapering to a narrow 3-lobed mouth, dorsal surface, with an obtuse keel, ventral with a broad, deep groove. All parts green. Stunted forms sometimes have a shorter perianth, with a wider 3-lobed mouth, and a small, shortly bifid bracteole.

Mt. Wellington plateau.

Pallavicinius connivens (*Col.*), *St.* Erect, from a terete rhizome, 1-2 cm., lower portion slender terete, upper part 2-3 times forked, broadly winged, flabellate, edges involute, margin strongly dentate. Fruit towards the base of the primary fork on the dorsal surface of the midrib. Involucro short, cup-shaped, with a fimbriate mouth; perianth broadly cylindric, 3-4 mm., mouth fimbriate. Spores yellow, marked with short, sinuate, shallow ridges or irregular papillae, 30 μ .

Mt. Wellington plateau, New Zealand.

Chiloscyphus kirkii, *St.* Differing from *C. conjugatus*, *Mitt.*, by its smaller size, ventral margin usually armed with one or two teeth, dorsal margin with a small dentate enlargement at the base, underleaves armed with a few short teeth, very slightly joined to the leaves, and the cuticle covered with relatively large, short papillae.

Gathered on Adamson Peak, Ida Bay, and Mt. Field. Also New Zealand.

Chiloscyphus cordifolius, *Nov. Spec.* Robust, 4-6 cm. long, densely pulvinate, yellow. Leaves erecto-homomal-lus, closely imbricate, alternate, rotund, 1 mm. long, rather broader than long, both bases cordate and free, margin entire, cells towards the margin 16 μ - diameter, lower ones 33 μ ., trigones as large as the cells, confluent, cuticle smooth. Underleaves rotund, concave, imbricate, free, 0.7 mm. long, margin entire, or with about 6 obtuse angles. Specimen sterile.

Adamson Peak.

Calypogeia Raddi.

Stems weak, simple, or with few branches proceeding from the axils of the underleaves. Leaves incubous, oblong, or ovate, apex entire obtuse or acute, rarely bidentate, margins entire. Underleaves rotund to reniform, apex usually bifid. The productive organs on very short branches arising from the axils of the underleaves. Sporophyte inserted in a descending fleshy marsupium.

The genus comes next in our flora to *Bazzanai* (*Mastigobryum*), but differs not only in the insertion of the sporophyte, but also in the shape and structure of the leaves.

Calypogeia tasmanica, *Spec. nov.* Slender, in loose mats, stems often 3-5 cm. long, with few, irregular, ventral branches. Leaves not crowded, but little overlapping, rotundo-ovate, apex entire, or occasionally bilobed near the apex, 1 mm. long; cells hexagonal, walls rather thin, trigones none, 30-45 μ . Underleaves free, sub-rotund, bifid or trifid, divided to the middle, lobes obtuse, half as long as the leaves. Specimen sterile.

Adamson Peak.

FUNGI.

Geoglossum hirsutum, *Pers.* Erect, clavate, black, 3-6 cm., high, densely velvety all over, upper half rather flattened and broader than the stipes, ascigerous. Asci clavate, spores 8, linear ends slightly narrowed, 7-15 septate, 110-150 x 5-6 μ ., light brown, paraphyses slender, septate, tips brown.

On tree-fern slopes of Mt. Wellington. Cosmopolitan.

Mitrula olivacea, *Sacc.* Dingy green, 3-4 cm. high, slender terete or flattened in the fertile portion, smooth. Asci narrow clavate. Spores 8, obliquely elliptic, with rounded ends, 14 x 6 μ ., colourless, smooth, not septate.

Gully near mouth of the Huon. Also Europe.