

SPLACHNACEAE

*Bernard Goffinet*¹

Splachnaceae Grev. & Arn., *Mem. Wern. Nat. Hist. Soc.* 5: 442 (1824).

Type: *Splachnum* Hedw.

Dioicous acrocarpous mosses, green above, green to reddish below, rarely exceeding 5 cm in height. Stems orthotropic, with a well-defined central strand, surrounded by large parenchymatous cells with thin orange walls (reddish near the cortex); cortical cells narrow, thick-walled, reddish. Rhizoids dark red, papillose. Axillary branches infrequent to common. Female plants robust; leaves ovate-acute to ovate-lanceolate, erect-spreading, moderately crisped when dry; margin plane, entire, serrulate or serrate; costa single, ending below apex or excurrent, with up to 6 layers of stereids, covered by narrow moderately thick-walled rectangular cells on the adaxial and the abaxial surfaces; laminal cells thin-walled, flat to slightly bulging; basal cells rectangular; upper cells short-rectangular to quadrate, hexagonal and nearly isodiametric. Male plants slender, loosely foliated, with leaf size and differentiation increasing toward apex.

Perigonia bulbous, forming a massive head; perigonial bracts strongly differentiated, ovate and long-acuminate; perichaetial leaves similar to vegetative leaves. Calyptra mitrate, lobed at base, bottle-shaped, yellow. Setae straight or slightly bent, smooth or scabrous in lower half; central strand present; cortical cells smaller than inner cells. Capsules exserted, erect; urn smaller than hypophysis, or hypophysis long and as wide as urn, tapering into seta and concolorous with urn, or much larger than urn, globose, to twice as broad as long and whitish; stomata absent or restricted to the hypophysis, phaneroporous; operculum conical. Peristome single; exostome of 8 teeth, incurved or recurved. Spores unicellular, thin-walled, smooth to faintly granulate, seemingly dispersed in clusters of variable size.

This family includes six genera and approximately 70 species. These mosses occur primarily in the temperate zones of both hemispheres, except for *Brachymitrium* Taylor and *Moseniella* Broth. which are restricted to tropical latitudes. Only *Tayloria* and five species (one endemic) occur in Australia.

The family and most of its species are well known to bryologists for their coprophilous habitat (including dung and other decaying animal remains). Although the Australian species are seemingly not restricted to these substrata, they certainly flourish there.

References

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TAYLORIA

Tayloria Hook., *J. Sci. Arts* 2(3): 144 (1816); named after the English botanist Thomas Taylor (1786–1848).

Type: *T. splachnoides* (Schwägr.) Hook.

Eremodon Brid., *Bryol. Univ.* 1: 233 (1826), *nom. illeg.*, type of earlier name included (ICBN, Art. 52.1).

Plants erect. Leaves ovate-acute to ovate-lanceolate; laminal cells thin-walled, smooth, rectangular below, hexagonal or rectangular to quadrate above. Capsules exserted; hypophysis well differentiated, broad and whitish to narrow and pale to reddish. Exostome of 8 teeth. Chromosome number not known.

Tayloria comprises 40 species; five are endemic to Australasia, but only *T. gunnii* is known only from Australia. Koponen (1982) arranged the species of *Tayloria s. str.* among four subgenera, two of which are represented in Australia. Her classification rests exclusively on sporophytic characters, in particular the architecture of the peristome and the differentiation of exothelial cells. *Tayloria callophylla*, *T. gunnii* and *T. purpurascens* belong to subg. *Eremodon*, which is defined by the peristome being composed of eight small teeth that are bent inward when dry. Subgenus *Pseudotetraplodon* accommodates species with eight reflexed peristome teeth and thus includes *T. octoblepharum* and *T. tasmanica*.

References

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Koponen, A. & Koponen, T. (1978), The identity of *Splachnum turbinatum* and *Tayloria henryae* (Musci, Splachnaceae), *Ann. Bot. Fenn.* 15: 89–91.

Sainsbury, G.O.K. (1955), A handbook of New Zealand mosses, *Bull. Roy. Soc. New Zealand* 5: 1–490.

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|----|--|----------------------------|
| 1 | Leaves broad and obovate, concave; costa ending well below apex | 2. T. gunnii |
| 1: | Leaves ovate-lanceolate; costa percurrent to excurrent | 2 |
| 2 | Peristome teeth incurved when dry at maturity (1:)..... | 3 |
| 2: | Peristome teeth recurved when dry at maturity..... | 4 |
| 3 | Leaves strongly serrulate to serrate; capsules pale brown (2) | 1. T. callophylla |
| 3: | Leaves entire to serrulate; capsules dark reddish brown | 4. T. purpurascens |
| 4 | Hypophysis strongly inflated, much broader than urn, grey-white at maturity (2:) | 5. T. tasmanica |
| 4: | Hypophysis typically narrower or only slightly broader than urn, dark brown at maturity..... | 3. T. octoblepharum |

1. *Tayloria callophylla* (Müll.Hal.) Mitt., *Trans. & Proc. Roy. Soc. Victoria* 19: 65 (1882)

Dissodon callophyllus Müll.Hal., *Bot. Zeitung (Berlin)* 9: 546 (1851); *Splachnum callophyllum* (Müll.Hal.) Wilson, in J.D.Hooker, *Fl. Tasman.* 2: 198 (1859). T: “Terra van Diemen, ad truncos et terra humida loco ‘Stern tree valley’ montis Wellington nuncupati” [Mt Wellington, Tas.], 1850, *S.Mossman* 824; lecto: NY, *fide* B.Goffinet, *Fl. Australia* 51: 410 (2006); isolecto: BM, JE; para: *S.Mossman* 824 (BM, E?, NY).

Plants to 4 cm tall. Leaves ovate-lanceolate or obovate from a narrow base, and contracted to an acumen extending 20% of the leaf length, 2–4 times longer than wide, to 5 mm long and 1.5 mm wide; margin strongly serrulate to serrate from the lower 20% up, decurrent by 1 (rarely 2) rows of cells; costa c. 120 µm wide, ending below or in the base of acumen, green or red. Laminal cells slightly bulging; marginal cells short rectangular at the base, cells of serrulation longer, 60–210 × 20–50 µm; inner basal cells long-rectangular (except the most basal cells), 90–180 × 30–45 µm; upper cells 45–120 × 30–55 µm; cells of acumen long and narrow.

Perichaetial leaves similar to vegetative leaves, but more erect. Setae straight or slightly bent, to 20 mm long and 0.3 mm thick, yellow, smooth. Capsules fusiform, to 5 mm long and 1.5 mm wide, yellow to pale brown; mouth narrow; urn to 3 mm long; neck to 2 mm, typically darker than urn, tapered and narrower than urn; exothecial cells of urn short-rectangular with oblate lumina above; anticlinal walls with heavy inward bulging thickening (lumina bone-shaped); exothecial cells of hypophysis longer, with irregular lumina, thickening heavy and bulging. Stomata few, scattered in upper part of neck. Operculum conical, to 0.3 mm long. Exostome teeth yellow, inserted well below capsule mouth, erect, with apices bent inward when dry, completely closing the capsule mouth when moist, to 255 μm long and 115 μm wide; OPL vertically lamellate; PPL thicker than OPL, densely reticulate to papillose at apex. Spores 7–9 μm diam.

In Australia, known only from the type locality in southern Tas., on “on trunks and humid soil”; also in New Zealand.

Tayloria callophylla is readily recognised by its serrate to spinose leaf margins. Its sporophyte resembles that of *T. octoblepharum*, except for the incurved rather than recurved peristome. Its occurrence in Tasmanian was considered doubtful by Dalton *et al.* (1991). The lectotype and one paratype (BM and NY) were, according to the label information, collected in Tasmania in 1850. However, this species has not been collected subsequently in Australia.

The specimen held in E and one of the two samples in BM bear a label with the number “123” and the date 1850. The locality description and the collector match those of the type collection, but the number does not. It is possible that the specimen is a duplicate of the original collection; whether it belongs to the lectotype (824) or the paratype (823) is not clear. Furthermore, the label of the specimen in E has “New Zealand”; this annotation seems to have been added later, since the handwriting differs slightly.

2. *Tayloria gunnii* (Wilson) J.H. Willis, *Victorian Naturalist* 67: 30 (1950)

Splachnum gunnii Wilson, *London J. Bot.* 7: 26, t. 1B (1848). T: on dead fern trees, Acheron River, Tas., R.C. Gunn 1625; lecto: BM, *vide* B.Goffinet, *Fl. Australia* 51: 410 (2006); isolecto: BM, NY, PC.

Splachnum grumii Paris, *Index Bryol.*, Suppl. 4: 364 (1905); *nom. inval.* (orthographic variant).

Tetraplodon gunnianum Rodway, *Pap. & Proc. Roy. Soc. Tasmania* 1913: 200 (1914); *nom. illeg.*; type of earlier name included (ICBN, Art. 52.1).

Tayloria obtusissima Broth., *Oefvers. Förh. Finska Vetensk.-Soc.* 37: 164 (1895). T: Falls Track, Mt Wellington, Tas., W.A. Weymouth 1797; lecto: H-BR, *vide* B.Goffinet, *Fl. Australia* 51: 410 (2006); isolecto: BM, CHR, NY.

Illustrations: W. Wilson, *J. Bot.* 7: 26, t. 1 (1848); J.H. Willis, *Victorian Naturalist* 67: 31, fig. A (1950); G.A.M. Scott & I.G. Stone, *The Mosses of Southern Australia* 266, pl. 50 (1976).

Dioicous(?). Plants to 3 (–9) cm tall. Leaves obovate-acute, less than twice as long as wide, concave, to 4 mm long and 2.5 mm wide; margin serrulate in upper half, decurrent by 1 (rarely 2) rows of cells; costa c. 60 μm wide, ending c. 6–10 cells below apex, green or red, composed of a central strand of stereids, with narrow moderately thick-walled rectangular cells on the adaxial and the abaxial surfaces. Laminal cells bulging; marginal laminal cells rectangular at the base and quadrate toward apex, 60–200 \times 45–60 μm ; submarginal cells narrower, c. 15 μm wide; inner basal cells long (except the most basal cells), 90–180 \times 30–40 μm ; upper cells 45–105 \times 30–45 μm .

Perigonia not seen. Perichaetial leaves similar to vegetative leaves, except for being slightly squarrose-recurved from a sheathing base. Calyptra not seen. Setae straight or slightly bent, to 10 mm long and 0.5 mm thick, dark red, scabrous at least in lower half. Capsules to 3 mm long and 2.5 mm wide, reddish brown or yellow with a reddish mouth; mouth narrow; urn to 2 mm long, with the base tapering to the strongly differentiated hypophysis, the latter broader than long, whitish and shrivelled when dry; exothecial cells of urn oblate, becoming progressively shorter toward apex, horizontal anticlinal walls extremely thickened, outer wall very thin and collapsing upon drying; exothecial cells of hypophysis elongate to irregular in shape, broader than those of the urn, (moderately) thick-walled but with broad lumina. Stomata few, with reddish guard cells. Operculum to 0.3 mm long. Exostome teeth yellow to

orange, inserted well below capsule mouth, erect, with apices bent inward when dry, completely closing in the capsule mouth when moist, to 210 µm long and 135 µm wide; OPL vertically striate; PPL thicker than OPL, papillose to striate-papillose above. Spores 9–12 µm diam.

Endemic to Tas. where it grows probably exclusively on dung; occurs primarily in wet-sclerophyll forest at altitudes of 300–1100 m.

Tas.: Cradle Mtn, *C.Skewes 41* (WELT); *loc. id.*, L.Rodway (HO); *loc. id.*, *A.Moscal 23250* (HO).

Tayloria gunnii is easily recognised by the broad hypophysis of the capsules and the obovate and concave leaves with large, lax cells. Although most specimens are up to c. 3 cm in height, the type of *T. obtusissima* reaches 9 cm. While all collections examined bear capsules, male sex organs have not been observed. If the species is indeed dioicous, it is possible that male plants are simply overlooked or ignored in the field in favour of the sporophyte-bearing female plants.

As with *T. tasmanica*, the coprophilous condition is not always obvious in old populations.

3. *Tayloria octoblepharum* (Hook.) Mitt., *Trans. & Proc. Roy. Soc. Victoria* 19: 65 (1882)

Splachnum octoblepharum Hook., *Musc. Exot.* 2: 167 (1819); *Eremodon octoblepharum* (Hook.) Hook.f., *Fl. Nov.-Zel.* 2: 94 ('1855') [1854]; *Dissodon octoblepharum* (Hook.) Paris, *Index Bryol.* 385 (1896). T: "In truncis arborum emortuarum in Insula Van Diemen" [Tas.], *R.Brown*; lecto: BM, *vide* B.Goffinet, *Fl. Australia* 51: 410 (2006) [2 duplicates]; isolecto: BM, E, G.

Splachnum octoblepharum Hook. var. *pyriforme* Hook.f. & Wilson, *Fl. Antarct.* 1: 123 (1844); *Dissodon plagiopus* (Mont.) Müll.Hal. var. *pyriformis* (Hook.f. & Wilson) A.Jaeger, *Ber. Tätigk. St. Gallischen Naturwiss. Ges.* 1872–73: 194 (1874); *Tayloria octoblepharum* (Hook.) Mitt. var. *pyriformis* (Hook.f. & Wilson) Watts & Whitel., *Proc. Linn. Soc. New South Wales* 30 (Suppl.): 108 (1906). T: Campbell's Island, [J.D.]Hooker; lecto: NY, *vide* B.Goffinet, *Fl. Australia* 51: 410 (2006).

Splachnum octoblepharum Hook. var. *major* Hook.f. & Wilson, *Fl. Antarct.* 1: 124 (1844); *Dissodon plagiopus* (Mont.) Müll.Hal. var. *major* (Hook.f. & Wilson) A.Jaeger, *Ber. Tätigk. St. Gallischen Naturwiss. Ges.* 1872–73: 194 (1874); *Tayloria octoblepharum* (Hook.) Mitt. var. *major* (Hook.f. & Wilson) Watts & Whitel., *Proc. Linn. Soc. New South Wales* 30 (Suppl.): 108 (1906). T: Campbell's Island, [J.D.]Hooker; lecto: NY, *vide* B.Goffinet, *Fl. Australia* 51: 410 (2006).

Dissodon cuspidatus Müll.Hal., *Syn. Musc. Frond.* 1: 142 (1848), *nom. illeg.*, based on the same type as *T. octoblepharum*.

Dissodon plagiopus var. *minor* Müll.Hal. & Hampe, *Linnaea* 26: 491 (1855). T: "Irish Town"; *nom. inval. n.v.*

Dissodon novae-valesiae Müll.Hal., *Genera Musc. Frond.* 124 (1900); *Tayloria novae-valesiae* (Müll.Hal.) Watts & Whitel., *Proc. Linn. Soc. New South Wales* 30 (Suppl.): 107 (1906). T: "Östliche Australien, von der Provinz Victoria durch die Provinz Neu-Süd-Wales bis nach Queensland"; *syn: n.v.*

Dissodon nanocarpus Müll.Hal., *Genera Musc. Frond.* 124 (1900), *nom. inval.*

Dissodon pallescens Müll.Hal. ex Watts & Whitel., *Proc. Linn. Soc. New South Wales* 30 (Suppl.): 108 (1906); *Tayloria pallescens* Watts & Whitel., *Proc. Linn. Soc. New South Wales* 30 (Suppl.): 108 (1906), *nom. inval.* (in synonym.). T: Murrumbidgee, Vic., 1886, *F.M.Reader*; *syn: CHR.*

Illustrations: J.H.Willis, *Victorian Naturalist* 67: 31, fig. G (1950); G.A.M.Scott & I.G.Stone, *The Mosses of Southern Australia* 266, pl. 50 (1976); R.D.Seppelt, *The Moss Flora of Macquarie Island* 265, fig. 103 (2004).

Plants to 2 cm tall. Leaves ovate-spathulate, acuminate, to 3.5 mm long and 1.5 mm wide; margin typically entire, rarely serrulate, reflexed in mid-leaf, decurrent by 1 or 2 rows of cells; costa c. 140 µm wide, ending c. 6–10 cells below apex in lower leaves and short-excurrent in upper leaves, with an awn to 1.2 mm long, green or more commonly red, at least in older leaves. Laminal cells bulging; marginal cells rectangular at the base and quadrate toward apex, 60–150 × 15–30 µm; inner basal cells long-rectangular (except the most basal cells), 75–180 × 20–40 µm; upper cells 45–110 × 20–45 µm.

Perigonia bulbous, terminal; perigonal leaves ovate, abruptly contracted into a long acumen. Perichaetial leaves larger than vegetative leaves and with a long-excurrent costa. Calyptra to 1.2 mm long. Setae straight to flexuose, to 11 mm long and 0.1 mm thick, orange-yellow. Capsules fusiform, to 4.5 mm long and 0.5 mm wide, yellowish green to reddish brown; mouth narrow; urn urceolate, to 1.1 mm long, usually dark reddish brown; neck well

differentiated, to 4 mm long, gradually tapered to seta, concolorous with the urn or paler, occasionally arcuate, hollow and with a pseudocolumella at maturity; exothelial cells of urn short-rectangular to quadrate to wider than long; walls strongly thickened; lumina quadrate to irregular or narrowly oblate towards mouth; columella protruding from urn at maturity. Stomata few, in upper part of neck. Operculum conical or more rarely nearly flat, to 0.3 mm long. Exostome teeth yellow to orange, inserted well below capsule mouth, recurved when dry, completely closing in the capsule mouth when moist, to 180 μ m long and 135 μ m wide; OPL thick, papillose-vermicular; PPL thin, smooth. Spores 9–12 μ m diam.

Known from W.A., S.A., south-eastern Qld, N.S.W., A.C.T., Vic. and Tas.; mainly in *Eucalyptus* forests, from sea level to 1600 m. Also in Papua New Guinea, New Zealand, Campbell Is., Chatham Is., Auckland Is. and Macquarie Is.

W.A.: Cannington, S of Perth, G.E. & G. DuRietz 4676: 5 (WELT). S.A.: NW of Mt Gambier, K.Stove 975 (CANB). Qld: Palling Yard Ck, Stanthorpe, H.Streimann 52935 (NY). N.S.W.: Central Tablelands, W.W.Watts 10141 (NSW). A.C.T.: Brindabella Ra., H.Streimann 1354 (CANB). Vic.: Bonang, H.Streimann 35420 (MICH). Tas.: Arthurs L., Central Highlands, A.Moscal 17248 (HO).

Tayloria octoblepharum is by far the most common of the Australian species, and thus, not surprisingly, the most variable, particularly in the shape and size of the leaves. However, spathulate leaves, broadly reflexed margins, the filiform acumen and fusiform capsules with recurved peristome teeth are diagnostic. One specimen (Streimann 53094, NY) was found with two setae rather than one emanating from a single perichaetium. The variety *pyriforme* was distinguished by the narrow apophysis, a feature that is common and not particularly stable within populations, hence the variety is not recognised here. Similarly, var. *major* is placed in synonymy with the typical variety. This was defined by the 16 teeth being paired but not fused, a character that the only type material uncovered at NY failed to reveal, since all capsules were immature.

Buck *et al.* (*Key to the Genera of Australian Mosses* 107, 2002) referred to this species as *T. octoblepharis*, rather than *T. octoblepharum*. The use of “*octoblepharum*” as an adjective rather than a noun may, however, be erroneous. Indeed, as pointed out by Buck (pers. comm.), Hooker compared the peristome of this *Tayloria* to that of the genus *Octoblepharum*. Consequently, it appears that he is using the epithet “*octoblepharum*” as a noun in apposition, rather than an adjective. Thus it should remain unchanged in *Tayloria* as “*octoblepharum*”.

The species tends to be coprophilous, with many populations sampled from cattle dung or other animal remains. However, numerous collections refer to tree trunks, soil and even rocks as substrata. Although this may suggest that *T. octoblepharum* is a facultative coprophile, it is possible that the original “animal” substratum was simply no longer obvious at the time of collection.

4. *Tayloria purpurascens* (Hook.f. & Wilson) Broth., *Nat. Pflanzenfam.* I, 3: 502 (1903)

Splachnum purpurascens Hook.f. & Wilson, *London J. Bot.* 3: 539 (1844). T: “Campbell’s island [Campbell Is.]; in moist bogs, amongst grass; altitude 1000 feet”, J.D.Hooker; lecto: BM, *vide* B.Goffinet, *Fl. Australia* 51: 411 (2006); isolecto: BM [4 duplicates], E.

Plants to 2 cm tall. Leaves broadly ovate-spathulate, to 3 mm long and 1.7 mm wide, acute, terminated by a short hairpoint (c. 0.4 mm long); margin entire to serrulate, reflexed in mid-leaf; costa c. 100 μ m wide, ending c. 6–10 cells below apex in lower leaves and percurrent in upper leaves, green or more typically red at least in older leaves. Laminal cells plane to somewhat bulging; marginal cells rectangular at the base and quadrate toward apex, 60–165 \times 25–30 μ m; inner basal cells long-rectangular (except the most basal cells), 75–210 \times 20–30 μ m; upper cells 45–110 \times 30–45 μ m.

Perigonia bulbous, terminal; perigonial leaves ovate, abruptly contracted into a long acumen. Perichaetial leaves larger than vegetative leaves, with a long-excurrent costa. Calyptra not seen. Setae straight to flexuose, to 8 mm long and 0.2 mm thick, orange-yellow. Capsules fusiform, to 2 mm long and 0.5 mm wide, dark reddish brown; mouth narrow; urn fusiform (widest in the middle) to 1 mm long, dark reddish brown; neck well differentiated, to 1 mm long, gradually tapered to the seta, concolorous with the urn, hollow and with a

pseudocolumella at maturity; exothecial cells of urn short-rectangular to quadrate to mostly wider than long; walls strongly thickened, with horizontal walls thicker than vertical ones; lumina quadrate to irregular to mostly narrowly oblate in upper half. Stomata few in upper part of neck. Operculum conical, to 0.2 mm long. Exostome teeth reddish orange, inserted well below capsule mouth, incurved when dry, to 150 μm long and 90 μm wide; OPL thick, lamellate; PPL equally thick, papillose. Spores less than 10 μm diam.

The label for the only Australian collection indicates N.S.W., but it lacks more detailed information. This species is considered coprophilous by Koponen (1977).

N.S.W.: locality unknown, *F. Mueller* (NY).

Tayloria purpurascens is characterised by the dark reddish brown, fusiform capsules with 8 incurved teeth lining the capsule mouth. Although it superficially resembles *T. octoblepharum*, sporophytic features (i.e. long capsules with incurved peristome) clearly link it to *T. callophylla*.

Sainsbury (1955) and Koponen (1982) considered this species to be endemic to the islands of New Zealand. Ramsay (Census of New South Wales mosses, *J. Linn. Soc. New South Wales* 2: 455–534, 1984) tentatively included *T. purpurascens* in her checklist of mosses of New South Wales based on an unreliable record from the Central Tablelands, and Streimann & Klazenga (*Cat. Austral. Mosses* 202, 2002) excluded it from the Australian bryoflora. I have only seen a single Australian collection of *T. purpurascens*. The specimen is small but bears three well-developed capsules, and it agrees with material from New Zealand. The gametophyte is reminiscent of *T. callophylla* in that the leaves are somewhat serrulate (but not serrate), but the dark reddish capsule and the ornamentation of the peristome point to *T. purpurascens*. The specimen is from Jaeger's herbarium, and the label simply reads "*Dissodon purpurascens* Hpe (?), New South Wales, F. de Müller". The name "F. de Müller" confirms that the label was prepared by someone other than Mueller himself.

5. *Tayloria tasmanica* (Hampe) Broth., *Nat. Pflanzenfam.* I, 3: 502 (1903)

Tetraplodon tasmanicus Hampe, *Linnaea* 40: 302 (1876). T: "Mount. Tovers Lake Peddu" [mountain towards L. Pedder?], Tas., 1875, *Schuster*; holo: *n.v.*

Illustration: J.H. Willis, *Victorian Naturalist* 67: 31, fig. D (1950).

Plants to 2.5 cm tall. Female plants: leaves ovate-acute to ovate-lanceolate, to 3.5 mm long and 0.8 mm wide (typically 2–5 times longer than wide); margin decurrent by 1 (rarely 2) rows of cells; costa excurrent, c. 60 μm wide; mucro at least partially bistratose, with a stereid band ending in the lower half; basal marginal cells of lamina 120–180 \times 25–30 μm ; inner basal cells short- to long-rectangular, to 200 \times 60 μm , often red-pigmented; upper cells 18–90 \times 15–45 μm .

Male plants: stems and branches bearing gametangia, slender, loosely foliated, with leaf size and differentiation increasing toward apex; sterile branches with leaves similar to but smaller than vegetative leaves of female plants, to 1.5 mm long; subapical branches common. Perichaetial leaves not differentiated from vegetative leaves, except for a percurrent costa in innermost leaves. Calyptra to 1.2 mm long. Setae to 13 mm long and 0.4 mm thick, dark red, scabrous at least in lower half. Capsules to 1.3 mm long and 0.8 (–1.0) mm wide; urn to 0.5 mm long, slightly conical, glossy, reddish brown, brown at mouth; hypophysis \pm globose to twice as broad as long, whitish and shrivelled when dry, pale brown when moist, reddish brown in lower portion; tissue of hypophysis lax, spongy, red, differentiated in the upper portion in a pseudocolumella central to an air chamber; exothecial cells of urn oblate throughout, becoming progressively shorter toward apex; horizontal anticlinal walls uniformly thick; axial anticlinal walls unevenly thickened, with the lumen bone-shaped in T.S.; outer wall very thin and collapsing upon drying; exothecial cells of hypophysis elongate to irregular in shape, broader than those of the urn, thin-walled, not pigmented, or faintly so when old, separating from inner cells of hypophysis at or after maturity; neck below hypophysis typically short, rarely to 1.5 mm long. Stomata lacking. Operculum conical, to 0.3 mm long. Exostome teeth strongly recurved when dry, incurved and completely closing in the capsule mouth when moist, pale yellow, inserted well below the

capsule mouth, to 310 µm long, slightly more than half lying below the capsule mouth; OPL with dense irregular short striation below, horizontally short-striate to papillose in upper half; PPL seemingly very thin, smooth or faintly papillose. Spores 9–12 µm diam.

Known from Tas., and from a single population sampled on Subantarctic Macquarie Is. in 1893 by Rodway (WELT M32030); grows on damp to wet soil in heathland, bryophyte-dominated peatland and in alpine scrub; found from sea level to about 1200 m.

Tas.: NW of Cathedral Hill, *A.Moscal 24188* (HO); Adamson Peak, Dec. 1913, *L.Rodway* (WELT).

The capsules, with the hypophysis visible as a broad band between the dark reddish brown urn and the base of the capsule, are similar to those of *T. gunnii* from which this species differs by its narrower, acuminate leaves. The gametophyte of *T. tasmanica* resembles that of *T. octoblepharum*, but the leaf acumen of the latter is much longer.

It is surprising that none of the collections are reported to grow on dung or other animal remains. Indeed, the shape and colour of the capsule and the sticky spores are consistent with insect-mediated spore dispersal. Considering that all collections examined bear capsules, it is possible that lack of evidence for coprophily is an artifact due to the species only being collected when capsules are produced, which may occur long after the decomposition of the substratum.

Excluded Names

Tetraplodon mnioides (Hedw.) Bruch & Schimp., *Bryol. Eur.* 3: 215 (1844)

A specimen reminiscent in all its features of *T. mnioides s. lat.*, and in particular of *T. lamii* Reimers, is filed under *Tayloria octoblepharum* in BM. This is labelled “Australia, RM 2958”. *Tetraplodon mnioides s. lat.* is a widespread species, being primarily circumboreal with disjunct occurrences in southern South America (as *T. fuegianum* Besch.) in New Guinea (as *T. lamii*), and in the mountains of Central Africa. The genus *Tetraplodon* is not known from Australia. Given that the annotations on the specimen are rather obscure, it is suggested that this specimen has been erroneously annotated as originating from Australia.

Tayloria maidenii Broth., *Proc. Linn. Soc. New South Wales* 41: 583 (1916)

T: Merritt’s Camp, Mt Kosciuszko, N.S.W., *J.H.Maiden & W.Forsyth 184*; lecto: H-BR, *vide* A.J.Fife & B.Goffinet, *Bryologist* 106: 309 (2003); isolecto: FH, S.

This species is characterised by an erect, smooth, gymnostomous capsule. In the protologue, Brotherus presents no justification for placing it in the Splachnaceae. Koponen (1982) suggested that the species does not belong here and Fife & Goffinet (*Bryologist* 106: 309–310, 2003) synonymised the name with *Entosthodon laxus* (Hook.f. & Wilson) Mitt. (Funariaceae), an Austral-Andean species known from Tasmania, Victoria and New South Wales (A.J.Fife, *Hikobia* 13: 473–490, 2001).