

## PAPILLIDIOPSIS

Helen P. Ramsay<sup>1</sup>

*Papillidiopsis* (Broth.) W.R.Buck & B.C.Tan, *Acta Bryolichenol. Asiatica* 1: 11 ('1989') [1990]; the name refers to its similarity to (the Greek suffix *-opsis*) *Trichosteleum* sect. *Papillidium*.

*Trichosteleum* sect. *Papillidiopsis* Broth., *Nat. Pflanzenfam.* I, 3: 1119 (1908); *Rhaphidostichum* sect. *Papillidiopsis* (Broth.) M.Fleisch., *Musc. Buitenzorg* 4: 1309 (1923).

Lecto: *P. bruchii* (Dozy & Molke.) W.R.Buck & B.C.Tan.

Polyoicous, sometimes pseudautoicous. Plants with long creeping stems and branches. Primary stems stoloniferous; branches complanate, often flagelliform. Stem leaves appressed ovate-lanceolate, long-acuminate; branch leaves erect-spreading, often 5-ranked, ovate-lanceolate to oblong-lanceolate, concave, narrowed at the base, abruptly contracted distally into an obtuse to acute apex, ecostate or costa short and double; margins serrulate above, entire and plane below. Laminal cells weakly to strongly unipapillose over the lumina; papillae restricted to cells in the upper half of leaf; alar cells in a single row, inflated, often thick-walled, a few enlarged, with 1 row of supra-alar cells.

Perichaetia on stems; perichaetial leaves erect, long-acuminate, serrate above, ecostate; cells smooth, not papillose. Seta smooth below, papillose above. Capsule small, ovoid; operculum obliquely rostrate; exothecial cells strongly collenchymatous and mammillose. Peristome double, alternate exothecial cells strongly collenchymatous and mammillose. Peristome double, alternate; exostome teeth 16, grooved, cross-striate below, papillose above; endostome segments 16, with high basal membrane. Spores medium-sized, papillose. Chromosome number not known.

A genus of 11 species, *Papillidiopsis* is known from Africa, the Seychelles, Sri Lanka, SE Asia and Malesia; one species occurs in tropical Australia.

*Papillidiopsis* differs from *Trichosteleum*, which also has unipapillose laminal cells, in having somewhat ranked, often strongly concave leaves with abruptly constricted apices, flagelliferous branch tips, the presence of well-differentiated supra-alar cells, and papillae confined to upper laminal cells but absent in perichaetial leaves. In *Trichosteleum*, papillae are present over most or all laminal cells, often including those of perichaetial leaves, and supra-alar cells are absent or only slightly differentiated.

### References

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<sup>1</sup> c/- National Herbarium of New South Wales, Mrs Macquaries Road, Sydney, New South Wales 2000.

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**Papillidiopsis ramulina** (Thwaites & Mitt.) W.R.Buck & B.C.Tan, *Acta Bryolichenol. Asiatica* 1: 13 ('1989') [1990], as var. *ramulina*

*Sematophyllum ramulinum* Thwaites & Mitt., *J. Linn. Soc., Bot.* 13: 319 (1873). T: Ceylon [Sri Lanka], *G.H.K.Thwaites 244*; holo: NY.

Illustrations: B.C.Tan, *op. cit.* 98, figs 6–14; W.R.Buck, D.H.Vitt & W.M.Malcolm, *Key to the Genera of Australian Mosses* 14 (2002); H.P.Ramsay, W.B.Schofield & B.C.Tan, *op. cit.* 31, fig. 14.

Plants somewhat complanate when dry, forming in loose glossy pale green mats. Stems more than 20 mm long, irregularly branched; branches 3–5 mm long. Branch leaves erect-spreading, somewhat falcate, ovate to ovate-oblong, 1.5–2.0 mm long, rather wrinkled when dry; apices  $\pm$ constricted, short, acute, occasionally short-acuminate; margins almost entire, with a few teeth near the extreme apex. Laminal cells linear to vermicular, 45–70  $\times$  5–8  $\mu$ m, oval to short-oblong at the apex, occasionally thick-walled.

Perichaetial leaves similar in size to vegetative leaves, lanceolate, somewhat flat, long-acuminate and with distinct marginal serrulation throughout; alar cells absent. Seta at least 10 mm long. Capsule ovoid, 0.5–1.0 mm long. Peristome with exostome and endostome of similar length. [Australian specimens lack sporophytes; peristome details from Buck & Tan (1989).]

Occurs in Malaysia, Borneo, the Philippines, Papua New Guinea, Taiwan and China, and in north-western and northern Australia (W.A. and N.T.); collected from creek banks and on damp, shaded rocks near waterfalls; not yet known from north-eastern Qld.

W.A.: upper reaches of Barker R., 2 km N of Mount Hart HS, NW Kimberley, *D.J.Edinger 426* (AD); Barker River Gorge, 4 km N of Mount Hart HS, *D.J.Edinger 493* (AD). N.T.: Nourlangie Rock, near Koongarra, Kakadu Natl Park, *L.A.Craven 5809* (CANB, DNA); Curtain Falls, Pethericks Rainforest, 38 km SE of Batchelor, *H.Streimann 48187* (CANB); Yeuralba Ck, 35 km from Katherine Gorge, *D.Lucas 55* (DNA).

*Papillidiopsis ramulina* has concave, oblong-ovate leaves that are wrinkled when dry and have a constricted and occasionally slightly acuminate apex. The laminal cells are unipapillose abaxially on the upper part of the leaf. Australian plants are slightly larger than those from elsewhere.

A second variety, var. *brongersmae* (Zanten) B.C.Tan, T.J.Kop. & D.H.Norris, has recently been reported from Papua New Guinea (Tan *et al.*, 2011).