

## MESOCHAETE

Scott R. Gilmore<sup>1</sup>

*Mesochaete* Lindb., *J. Linn. Soc., Bot.* 11: 463 (1870); from the Greek *mesos* (middle) and *chaite* (a hair).

Type: *M. undulata* Lindb.

Dioicous. Plants large to very large, to 8 cm long, often forming small mats, yellow-green to olive-green. Stems thick, rigid, sparingly branched, tomentose at the base. Rhizoids smooth, orange-brown. Propagula absent. Leaves complanate, 4-ranked, crisped when dry, asymmetrical; margin distinct, thickened, with single multicellular teeth towards apex; costa strong, excurrent, dividing leaf unevenly; upper laminal cells small, isodiametric; most basal cells more elongate. Perichaetia in leaf axils. Calyptra not seen. Capsules elongate, arcuate, broadly sulcate. Peristome double. Spores globose, smooth.

This endemic genus of two species is found in moist habitats along the east coast of Australia.

*Mesochaete* is distinctive due to the large size of the plants and the 4-ranked, complanate leaf arrangement.

### Reference

Stone, I.G. (1983), A re-evaluation of the species of *Mesochaete* Lindb. (Rhizogoniaceae), *J. Bryol.* 12: 351–357.

Plants very large, to 8 cm long; laminal cells 12–30 µm wide ..... **1. *M. taxiforme***  
Plants large, to 5 cm long; laminal cells 8–13 µm wide..... **2. *M. undulata***

**1. *Mesochaete taxiforme*** (Hampe) Watts & Whitel., *Proc. Linn. Soc. New South Wales* 30 (Suppl.): 150 (1906)

*Rhizogonium taxiforme* Hampe, *Linnaea* 40: 313 (1876). T: Johnstone R., [Qld], *W.Hill* 293; holo: B? (destroyed?); iso: BM n.v., *fide* I.G.Stone, *J. Bryol.* 12: 357 (1983).

*Mesochaete grandiretis* Dixon, *Proc. Roy. Soc. Queensland* 53(2): 31 (1942). T: Platypus Ck, Cairns, Qld, 3 Jan. 1936, *H.Flecker* 1225; holo: BM; iso: CANB. Baron Gorge, Kuranda, Qld, 3 July 1936, *S.Egan* 1932; para: BM, BRI; Burrows Ck, Cairns, Qld, 21 Sept. 1936, *H.Flecker* 2351 (2551 in Dixon, *Proc. Roy. Soc. Queensland* 53: 31, 1942); para: BM.

Illustrations: I.G.Stone, *op. cit.* 353, fig. 1; facing page 354, pl. 1a–e; 355, fig. 2i–l.

Plants very large, to 8 cm long. Stems simple to sparingly branched, reddish at base, yellow-green above. Leaves large, erect-spreading, 3.4–6.0 mm long, 1.5–2.7 mm wide; apex rounded to acute; margin of distinct very elongated cells with multicellular teeth in the upper third of the leaf; costal cells c. 12 µm wide; laminal cells isodiametric, 12–30 µm.

Perichaetial bracts triangular-lanceolate; costa strong, ending just below the apex to percurrent; marginal cells with a thickened outer wall, entire to denticulate. Sporophyte not seen.

Found on soil in moist, shaded areas north of Townsville, north-eastern Qld.

Qld: Mt Misery, *M.M.J. van Balgooy* 1618 (CANB); Blue Water Ck, *H.Streimann* 28414 (CANB); Mt Lewis, *D.H.Norris* 41672 (CANB).

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<sup>1</sup> 7494 Andrea Crescent, Lantzville, British Columbia, Canada V0R 2H0

Cite as: S.R.Gilmore, *Australian Mosses Online*. 36. *Rhizogoniaceae: Mesochaete*.  
[http://www.anbg.gov.au/abrs/Mosses\\_Online/Rhizogoniaceae\\_Mesochaete.pdf](http://www.anbg.gov.au/abrs/Mosses_Online/Rhizogoniaceae_Mesochaete.pdf) (2012)

**2. Mesochaete undulata** Lindb., *Öfvers Förh. Kongl. Svenska Vetensk.-Akad.* 12: 70 (1870); *J. Linn. Soc., Bot.* 11: 463 (1870)

*Mnium undulatum* (Lindb.) Müll.Hal., *Genera Musc. Frond.* 143 (1901); *Rhizogonium undulatum* (Lindb.) A.Jaeger, *Ber. Tägk. St. Gallischen Naturwiss. Ges.* 1873–74: 224 (1875). T: New England, [N.S.W.], *F.Mueller*; syn?: NSW *n.v.*, *vide* I.G.Stone, *J. Bryol.* 12: 357 (1983).

*Rhizogonium plumaeforme* Hampe, *Proc. Linn. Soc. New South Wales* 30 (Suppl.): 148 (1906). T: Rockingham's Bay, Qld, *W.Kellaway*; syn?: MEL *n.v.*

Illustrations: G.A.M.Scott & I.G.Stone, *The Mosses of Southern Australia* 323, pl. 60 (1976); I.G.Stone, *J. Bryol.* 12: facing page 354, pl. 1f; 355, fig. 2a–h (1983).

Plants large, to 5 cm long. Stems simple to sparingly branched, red at the base, yellow-green above. Leaves large, imbricate, erect-spreading, rounded to bluntly acute, 1.8–4.5 mm long, 0.6–1.8 mm wide; margin of distinct very elongated cells with multicellular teeth more than half-way down leaf on one side; costal cells c. 7 µm wide; laminal cells isodiametric, 8–13 µm.

Perichaetial bracts lanceolate; marginal cells with a heavily thickened outer wall, denticulate; costa percurrent. Setae pale brown, 15–35 mm long. Capsules erect, elongate, cylindrical, c. 5 mm long; operculum bluntly rostrate. Peristome papillose. Spores 8–9 µm. *n* =10, *vide* H.P.Ramsay, *Austral. J. Bot.* 22: 316 (1974).

This species is found in coastal areas of southern Qld, N.S.W. and Vic.; usually on rocks or on soil beside streams.

Qld: "Natural Bridge", Cave Ck, *H.Streimann 6011* (CANB). N.S.W.: Richmond River State Forest, *H.Streimann 7049* (CANB); O'Sullivan's Gap Nature Reserve, *H.Streimann 51994* (CANB). Vic.: Genoa River Gorge, *J.H.Willis s.n.* (MELB).