

METEORIUM

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Meteorium (Brid.) Dozy & Molk., *Musc. Frond. Ined. Archip. Ind.* 157 (1848); from the Greek *meteoros* (raised, suspended or pertaining to things or phenomena in the air), in reference to the aerial trailing habit of this moss.

Polytrichum subg. *Meteorium* Brid., *Bryol. Univ.* 2: 264 (1827)

Lecto: *M. polytrichum* Dozy & Molk.

Plants medium to large, robust. Stems terete, loosely or densely branched; branches often long, turgid, with obtuse apices. Branch leaves erect, imbricate, ovate-oblong to ovate, occasionally plicate; apex generally cucullate, rounded-obtuse; acumen short or long, flexuose; basal corners rounded, often auriculate, undulate; margin incurved, entire or weakly serrulate; costa single, reaching 50–65% of the leaf length. Laminal cells mostly with 1 large central papilla, irregularly thick-walled; median cells elliptic, rhomboidal, elongate-rhomboidal to sublinear, thick-walled at the corners, occasionally shorter towards the apices and margins; apical cells smooth; basal cells near the costa longer, linear-rectangular, the walls thicker, porose; alar cells absent; cells at the basal corners elliptic, rectangular, subquadrate to sublinear, arranged in divergent or arcuate rows.

Calyptra cucullate, long-hairy. Seta longer than the capsule, densely papillose. Capsules erect, ovate to ovate-oblong; operculum conical, with a long oblique beak. Peristome: exostome densely papillose, the lamellae rather high; endostome segments densely papillose, as long as the teeth, narrowly perforated along the keel; cilia rudimentary or absent.

This genus of c. 30 species is most diverse in the Neotropics and in the eastern Palaeotropics. One species in eastern Qld.

References

Streimann, H. (1991), Taxonomic studies on Australian Meteoriaceae (Musci). 2: The genera *Aerobyopsis*, *Barbella*, *Floribundaria*, *Meteoriopsis*, *Meteorium* and *Weymouthia*, *J. Hattori Bot. Lab.* 69: 277–312.

Wu, S.-H. & Lin, S.-H. (1986), A taxonomic study of the genus *Meteorium* (Meteoriaceae, Musci) of Taiwan, *Yushania* 3(4): 5–16 (1986).

***Meteorium polytrichum* Dozy & Molk., *Musc. Frond. Ined. Archip. Ind.* 161 (1848)**

Meteorium buchananii f. *polytrichum* (Dozy & Molk.) Gangulee, *Mosses Eeastern India* 5: 1296 (1976). T: *n.v*

Neckera miqueliana Müll.Hal., *Syn. Musc. Frond.* 2: 138 (1850); *Meteorium miquelianum* (Müll.Hal.) M.Fleisch. ex Broth., in H.G.A.Engler & K.A.E.Prantl, *Nat. Pflanzenfam.* I, 3: 818 (1906). T: Buitenzorg, Java, [Indonesia], *F.A.W.Miquel*; *n.v.*

Papillaria baileyi Broth., *Bot. Centralb.* 36: 86 (1888); *Meteorium baileyi* (Broth.) Broth., in H.G.A.Engler & K.A.E.Prantl, *Nat. Pflanzenfam.* I, 3: 818 (1906). T: Brisbane R., Qld, *F.M.Bailey*; holo: H; iso: MEL.

Illustrations: A.Noguchi, *J. Hattori Bot. Lab.* 41: 253 (1976); D.H.Norris & T.Koponen, *Acta Bot. Fenn.* 131: 32 (1985); H.Streimann, *J. Hattori Bot. Lab.* 69: 304 (1991), all as *M. buchananii* f. *polytrichum*.

Plants large, rigid, golden green to dark green. Stems to 30 cm long; branches short, julaceous, prominently 3-plicate, erect, conspicuously appressed when dry, not always so on branches. Branch leaves, 2.0–3.1 mm long, 0.7–1.2 mm wide; base cordate; margin serrate or rarely entire, slightly undulate at the base; costa c. two-thirds the leaf length; acumen slender

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or gradually attenuating to a long point. Acumen cells linear-elongate to narrowly rhomboidal, $17\text{--}25 \times 5\text{--}7 \mu\text{m}$; upper cells rhomboidal, $25\text{--}45 \times 5\text{--}7 \mu\text{m}$; median cells $20\text{--}41 \times 5\text{--}7 \mu\text{m}$; auricles with divergent cells, weakly papillose; cells in basal corners c. $17 \times 8 \mu\text{m}$, more rectangular, thicker than surrounding cells, occasionally golden brown.

Calyptra oblong, c. 1.5 mm long. Seta to 7 (–10) mm long, rarely scabrous. Capsules oblong, to 1.5 mm long. Peristome: exostome teeth and endostome segments to 0.5 mm long. Spores $15\text{--}30 \mu\text{m}$ diam.

Common at altitudes of (100–) 600–900 (–1080) m in north-eastern Qld, but much rarer farther south in Qld; grows on trees, shrubs and vines in tropical rainforest and forest remnants, rarely in *Eucalyptus* savannah; often found in large pure colonies on tree trunks. Also known from India, SE Asia, China and Fiji.

Qld: Big Tableland, 26 km S of Cooktown, *H.Streimann* 30893 (CANB, NY); Windsor Tableland, 39 km NW of Mossman, *H.Streimann* 29680 (CANB, H, NICH, NY); Conway S.F., 16 ENE of Proserpine, *H.Streimann* 37411 (CANB); Lamington Natl Park, *H.P.Ramsay* R208 (NSW).

Some leaves blacken with age. The leaf base is often asymmetrical, and the cells are commonly smooth in the acumen. Stem leaves are less concave than branch leaves, with a long, erect or \pm flexuose, linear-lanceolate acumen. The basal angles are rounded, cordate or auriculate.