BARBELLA

Heinar Streimann†

Barbella M.Fleisch. ex Broth., *in* H.G.A.Engler & K.A.E.Prantl, *Nat. Pflanzenfam.* I, 3: 823 (1906); from the Latin *barbatus* (bearded, or with long tufts of weak hairs), referring to the long slender trailing habit.

Lecto: *B. compressiramea* (Renauld & Cardot) M.Fleisch. ex Broth.

Plants slender, medium-sized. Primary stems filiform, with loose leaves and sparse branches, subpinnate or pinnate, obtuse; secondary stems with complanate spreading leaves basally and filiform branches with appressed leaves. Branch leaves complanately spreading when dry or moist, rarely appressed, lanceolate, variously ovate to oblong, subulate or piliferous; leaf base hastate to cordate; margin erect, serrulate or entire; costa absent to indistinct and extending to mid-leaf. Laminal cells translucent, linear to oblong-rhomboidal, thin-walled, the papillae in the centre of cells often inconspicuous; alar cells generally well defined, lax, rectangular or subquadrate; basal cells divergent or not.

Calyptra mitrate, with a lobate base. Seta short, c. the same length as the capsule, often curved, smooth or scabrous. Capsules oblong to oblong-cylindrical; operculum rostrate. Peristome: exostome teeth papillose, with high lamellae; endostome segments almost as long as the teeth, linear to linear-lanceolate, usually perforated along the keel, minutely papillose; cilia usually absent.

This genus of c. 28 species is most diverse in the Neotropics and East Asia; one widespread species occurs in tropical and subtropical eastern Australia.

The stem leaves are appressed or loosely spreading when either dry or moist, and they have more weakly serrulate margins, less prominent papillae but better-developed alar regions. When the basal cells of the branch leaves become sublinear, then alar cells are absent.

References

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Streimann, H. (1993), *Barbella trichophora*, an older name for *B. cubensis* (Musci: Meteoriaceae), *Bryologist* 96: 223–225.

Barbella trichophora (Mont.) M.Fleisch. ex Broth., *in* H.G.A.Engler & K.A.E.Prantl, *Nat. Pflanzenfam.* I, 3: 824 (1906)

Isothecium trichophorum Mont., *Ann. Sci. Nat., Bot.*, sér. 2, 19: 238 (1843). T: "in insulis Sandwich." [Hawaiian Islands], 1836–37, *Gaudichaud*; *n.v.*

Meteorium cubense Mitt., *J. Linn. Soc., Bot.* 12: 435 (1869); *Barbella cubensis* (Mitt.) Broth., *in* H.G.A.Engler & K.A.E.Prantl, *Nat. Pflanzenfam.* I, 3: 824 (1906); *Dicladiella cubensis* (Mitt.) W.R.Buck, *J. Hattori Bot. Lab.* 75: 57 (1994). T: Cuba, *Wright 82*; holo: BM.

Meteorium enerve Thwaites ex Mitt., *J. Linn. Soc., Bot.* 13: 317 (1873); *Barbella enervis* (Thwaites ex Mitt.) M.Fleisch. ex Broth., *in* H.G.A.Engler & K.A.E.Prantl, *Nat. Pflanzenfam.* I, 3: 824 (1906). T: *sine loc*., *G.H.K.Thwaites 208*; holo: NY.

Neckera trichophoroides Hampe ex Müll.Hal., *Linnaea* 38: 668 (1874); *Pilotrichella trichophoroides* (Hampe ex Müll.Hal.) A.Jaeger, *Ber. Thätigk. St. Gallischen Naturwiss. Ges.* 1875–76: 259 (1877) [Ad. 2: 163]; *Meteorium trichophoroides* (Hampe ex Müll.Hal.) Mitt., *Trans. & Proc. Roy. Soc. Victoria* 19: 82 (1882); *Barbella trichophoroides* (Hampe ex Müll.Hal.) Broth., *in* H.G.A.Engler & K.A.E.Prantl, *Nat. Pflanzenfam.* I, 3: 824 (1906). T: summit of Mount Gower, Lord Howe Is.; holo: BM; iso: MEL.

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http://www.anbg.gov.au/abrs/Mosses_Online/Barbella.pdf (2012)

Meteorium compressum Mitt., *Trans. & Proc. Roy. Soc. Victoria* 19: 83 (1882); *Papillaria compressum* (Mitt.) Kindb., *Enum. Bryin. Exot*. 102 (1891). T: Brisbane R., Qld, *F.M.Bailey*; holo: NY(?) *n.v.*

For further synonomy, see H.Streimann, *J. Hattori Bot. Lab*. 69: 291 (1991).

Illustrations: H.C.Gangulee, *Mosses of Eastern India and adjacent Regions* 5: 1327 (1976); D.H.Norris & T.Koponen, *Acta Bot. Fenn*. 131: 37 (1985); H.Streimann, *op. cit*. 292, all as *B. cubensis.*

Plants pale green to yellow-green, glossy. Primary stems to 20 cm long, branched; secondary stems distantly short-branched, obtuse or flagelliform. Branch leaves 2.5–3.4 mm long, 0.3–0.5 mm wide, acuminate, concave; base hastate; margin incurved from the apex to the middle, variously denticulate at the base, occasionally with weak denticulations extending to the leaf apex; costa absent or weak. Laminal cells pellucid, weakly unipapillose; apical and upper cells linear to sublinear, (45–) 75–100 (–160) × 7–10 µm; median cells slightly thicker-walled, 100–130 × 7 µm; alar cells irregularly angular, thin- to thick-walled, c. 20 × 15 µm, their contents granular, extending across almost to mid-leaf at the base.

Calyptra to 1.2 mm long. Seta to 2 mm long. Capsules 1.5–2.0 mm long; operculum to 1.2 mm long. Peristome: exostome teeth yellowish, c. 0.65 mm long, finely attenuate, with large papillae above; endostome segments to 0.45 mm long; rudimentary cilia occasionally present. Spores 20–35 µm diam.

Occurs in eastern Qld and north-eastern N.S.W., from near sea-level to 1080 m; also extending from India through the Pacific (including Lord Howe Island) to Central and South America. A tropical and subtropical forest moss on trees, shrubs and vines, rarely on rotting wood.

Qld: Windsor Tableland, 39 km NW of Mossman, *H.Streimann 29677* (CANB, NICH, NY); Palm Camp, Bellenden Ker, *F.M.Bailey* (BM); Staircase Falls, Lamington Plateau, *I.G.Stone 14002* (MELU). N.S.W.: Myocum, Brunswick R., *W.W.Watts 3859* (NSW).

Barbella trichophora can be quite variable, even within a single colony. Thus, creeping stems often have short branches and broad short leaves, while pendent flagelliform stems tend to have appressed narrow leaves with filiform apices and more prominently denticulate leaf margins.