

CHAETOMITRIUM¹

Heinar Streimann†

Chaetomitrium Dozy & Molk., *Musc. Frond. Ined. Archip. Ind.* 117 (1846); from the Greek *chaite* (a bristle or long hair) and *mitra* (a head dress or turban), referring to the hairy calyptra.

Type: *C. elongatum* (Dozy & Molk.) Dozy & Molk.

Autoicous or dioicous. Plants small to medium-sized. Stems long, creeping, generally regularly pinnate, occasionally with clusters of filamentous gemmae among the ultimate branch leaves. Leaves spreading or appressed; margins usually dentate; border lacking; costa short and double, or absent. Laminal cells linear, papillose, usually prorate, rarely smooth.

Perichaetial leaves as large or larger than vegetative leaves. Calyptra mitrate or cucullate. Seta papillose or spiny. Capsules \pm inclined; operculum rostrate. Exostome teeth striolate, not furrowed.

A tropical genus of about 70 species, with c. 65 occurring in SE Asia, Malesia and the Pacific. One species in north-eastern Australia.

Reference

Streimann, H. (1997), Taxonomic Studies on Australian Hookeriaceae (Musci). 1. Introduction, and the genera *Achrophyllum*, *Callicostella*, *Chaetomitrium* and *Cyclodictyon*, *J. Hattori Bot. Lab.* 82: 281–304.

Chaetomitrium tahitense (Sull.) Mitt., in B.C.Seemann, *Fl. Vitiensis* 392 (1873), as *taitense*

Hookeria tahitensis Sull., *Proc. Amer. Acad. Arts Sci.* 3: 79 (1854), as *taitense*. T: Tahiti, Society Islands; holo: US.

Chaetomitrium geheebii Broth., *Öfvers. Förh. Finska Vetensk.-Soc.* 37: 165 (1895). T: Johnston River, Qld, 1885, *Berthoud*; syn: *n.v.*; “Camp 1, Nova Guinea”, [Papua New Guinea], *W.McGregor*; syn: *n.v.*

Chaetomitrium nematosum Broth., *Öfvers. Förh. Finska Vetensk.-Soc.* 33: 106 (1891). T: Harvey’s Creek, Russell River, Qld, 1889, *F.M.Bailey* 614 *p.p.*; lecto: BRI, *vide* H.Streimann, *op. cit.* 295; isolecto: H; Bellenden Ker Range, Qld, 1889, *F.M.Bailey*; syn: BRI.

Illustrations: H.O.Whittier, *Mosses of the Society Islands* 268 (1976); H.Streimann, *op. cit.* 296.

Dioicous(?). Plants medium-green, pale to medium dull green, often drying to straw-coloured. Stems 4–5 cm long, with short branches. Filamentous gemmae among upper leaves, c. 0.7 mm long, divided into quadrate segments c. 30 μ m long. Leaves irregularly spreading when dry, erect to erecto-patent when moist, \pm complanate, oblong-lanceolate, 1.08–1.63 mm long, 0.31–0.41 (–0.77) mm wide, variably acuminate; upper margin denticulate; costa very faint, to one-third the leaf length, 15–20 μ m wide at the base. Laminal cells thin-walled, unipapillose by projecting cell ends, rarely with up to 3 papillae per cell; apical cells linear, c. 35–40 \times 6 μ m, thick-walled, slightly sinuose; upper, median and basal cells linear, 35–60 \times 3–5 μ m; cells occasionally brownish at the extreme base, quadrate to short-rectangular, c. 20 \times 15 μ m. Rhizoids axillary, in dense clusters, red-brown, very weakly papillose, to 0.8 mm long, 15–21 μ m wide; cells c. 95 μ m long.

¹ Now part of the family Symphiodontaceae [Goffinet, B., Buck, W.R. & Shaw, A.J. (2012), *Classification of the Bryophyta*. <http://www.eeb.uconn.edu/people/goffinet/Classificationmosses.html>].

Cite as: H.Streimann, *Australian Mosses Online. 11. Hookeriaceae: Chaetomitrium*. http://www.anbg.gov.au/abrs/Mosses_Online/Chaetomitrium.pdf (2012)

Perichaetia axillary. Inner perichaetial leaves broadly lanceolate, 1.2–1.7 mm long, 0.3–0.6 mm wide, long-acuminate, ecostate; margin dentate to strongly ciliate-dentate, occasionally with a few distant groups of denticulations. Laminal cells thin-walled, epapillose; upper and median cells linear, c. $90 \times 6 \mu\text{m}$; basal cells irregularly rectangular, $40\text{--}60 \times 10\text{--}15 \mu\text{m}$. Archegonia brown, c. 1 mm long; paraphyses clear, c. 0.5 mm long, with cells $50\text{--}60 \mu\text{m}$ long. Calyptra mitrate, hairy, fringed at the base. Seta c. 10 mm long. Capsules 1.0–1.5 mm long, oblong-cylindrical; operculum subulate-rostrate, as long as the capsule. Peristome: exostome teeth linear-lanceolate, c. $300 \mu\text{m}$ long, c. $100 \mu\text{m}$ wide at the base, very closely articulated; median line narrow; inner side distinctly lamellose; cilia linear. Spores $15\text{--}25 \mu\text{m}$ diam.

Rare on bark in lowland rainforest in north-eastern Qld. Also in New Guinea, New Caledonia, Vanuatu and French Polynesia.

Qld: Daintree R., *Pentzcke* (NY); Little Mulgrave R. off Gillies Hwy, near Cairns, *R.G.Robbins 3889* (L); Babinda, *W.W.Watts Q325* (H).

A few fertile plants were collected in July.

Excluded name

Chaetomitrium entodontoides Broth. & Watts, *Proc. Linn. Soc. New South Wales* 43: 562 (1918)

T: Frenchmans Ck, Cairns District, Qld, *W.W.Watts 352*; holo: H; iso: NSW.

This is possibly a species of *Glossadelphus* (Hypnaceae).