

## ACANTHORRHYNCHIUM

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*Acanthorrhynchium* M.Fleisch., *Musc. Buitenzorg* 4: 1331 (1923); from the Greek *akanthos* (a spine) and *rhynchos* (a nose, bill or beak), in reference to the short conical operculum.

*Acanthodium* Mitt., *J. Linn. Soc., Bot.* 10: 182 (1868), *nom. illeg., non* Delile (1813).

Lecto: *Acanthorrhynchium papillatum* (Harv.) M.Fleisch.

*Taxithelium* subg. *Monostigma* Renault & Cardot, *Rev. Bryol.* 28: 111 (1901). Lecto: *T. papillatum* (Harv.) Broth. [= *A. papillatum* (Harv.) M.Fleisch.]

*Taxithelium* subg. *Oligostigma* Renault & Cardot, *Rev. Bryol.* 28: 111 (1901). Lecto: *T. serratum* Renault & Cardot [= *A. serratum* (Renauld & Cardot) M.Fleisch.]

Autoicous. Plants with slender elongate stems, closely pinnate or bipinnate, forming extensive mats. Branches erect, short, complanately foliate. Leaves ovate to ovate-lanceolate, concave, abruptly narrowed to a long filiform apex, ecostate; margin serrulate to the base, contracted to the insertion. Laminal cells short, firm-walled, unipapillose over the lumen on the abaxial surface; alar region with a basal row of 3 or 4 large inflated cells.

Perichaetia on the main stem with erect leaves narrowed to a coarsely serrate apex. Seta long, red, smooth. Capsule horizontal, asymmetrical, with a short conical operculum; annulus present; exothecial cells weakly collenchymatous. Peristome diplolepidous, double, alternate with 16 lanceolate exostome teeth, with a zig-zag median groove on the outer surface, cross-striolate below, striolate-papillose above, coarsely papillose at the apex, with projecting trabeculae on the inner surface; endostome with 16 keeled and very narrowly perforate segments, finely papillose, almost as long as the exostome teeth, arising from a high finely papillose basal membrane; cilia 1 or 2, well developed, nodulose and papillose. Spores medium-sized. Chromosome numbers not known.

A small genus of about seven species, *Acanthorrhynchium* occurs in Madagascar and on other islands in the western Indian Ocean, South and SE Asia, Malesia, Fiji and Samoa; one species is known from north-eastern Australia. Found on the forest floor, on roots, fallen logs and on tree trunks.

While unipapillose laminal cells might cause confusion with *Trichosteleum*, *Acanthorrhynchium* can be recognised by its comparatively short laminal cells, filamentous pseudoparaphyllia, a weakly differentiated leaf border, the presence of an annulus and the weakly collenchymatous exothecial cells. The exostome teeth are incurved between the endostome segments when dry, but the narrow apices are recurved.

### References

O'Shea, B.J. (1997), A revision of *Acanthorrhynchium* (Sematophyllaceae) in Africa, *Tropical Bryol.* 13: 125–130.

Ramsay, H.P., Schofield, W.B. & Tan, B.C. (2002), The family Sematophyllaceae (Bryopsida) in Australia. Part 1. Introduction, family data, key to genera and the genera *Wijkia*, *Acanthorrhynchium*, *Trismegistia* and *Sematophyllum*, *J. Hattori Bot. Lab.* 90: 1–50.

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Cite as: H.P.Ramsay, *Australian Mosses Online. 1. Sematophyllaceae: Acanthorrhynchium*. [http://www.anbg.gov.au/abrs/Mosses\\_Online/Semat\\_Acanthorrhynchium.pdf](http://www.anbg.gov.au/abrs/Mosses_Online/Semat_Acanthorrhynchium.pdf) (2012)

Tan, B.C., Koponen, T. & Norris, D.H. (2007), Bryophyte flora of the Huon Peninsula, Papua New Guinea LXX. Sematophyllaceae (Musci) 1. *Acanthorrhynchium*, *Acroporium*, *Clastobryophilum*, *Pseudopiloethecium*, *Radulina* and *Trichosteleum*, *Ann. Bot. Fennici* 44: Suppl. A: 35–78.

***Acanthorrhynchium papillatum*** (Harv.) M.Fleisch., *Musc. Buitenzorg* 4: 1331 (1923)

*Hypnum papillatum* Harv., in W.J.Hooker, *Icon. Pl.* 1: 23 (1836); *Trichosteleum papillatum* (Harv.) A.Jaeger, *Ber. Thätigk. St. Gallischen Naturwiss. Ges.* 1876–77: 417 (1878) [Ad. 2:483]; *Taxithelium papillatum* (Harv.) Broth., *Bot. Tidskr.* 24: 123 (1901). T: “Nepal” [but probably Burma or Penang (Malaysia), *vide* D.G.Long, *Bot. J. Linn. Soc.* 119: 1–33 (1995)] Wallich; *holo*: TCD.

Illustrations: E.B.Bartram, *Philipp. J. Sci.* 68: pl. 26, fig. 441 (1939); H.C.Gangulee *The Mosses of Eastern India and Adjacent Regions* 3: 1918, fig. 982 (1980); W.R.Buck, D.H.Vitt & W.M.Malcolm, *Key to the Genera of Australian Mosses* 15 (2002); B.J.O’Shea, *op. cit.* 121 fig. 1.

Plants dull, pale-green to yellowish-green. Stems to 10 cm long, creeping. Branches 3–5 mm long, widely spreading, erect to ascending. Branch leaves ovate-lanceolate, erecto-patent to spreading when moist, appressed with out-turned tips when dry, to 1.3 mm long and 0.4 mm wide; apex acuminate; margin serrulate to serrate throughout. Laminal cells oval-rhomboidal near the apex, 18–20 µm long, 4–5 µm wide; cells narrower towards the margins; basal alar cells 2 or 3, inflated, hyaline or pale yellow, the outermost cells largest, c. 50 × 46 µm; supra-alar cells few, irregular.

Inner perichaetial leaves c. 2.5 mm long. Seta 10–35 mm long. Capsule curved and gibbous on the back; urn c. 1.6 mm long; operculum rostrate, c. 0.5 mm long. Spores 22–25 µm diam.

A widespread Indo-Malesian rainforest species; also in East Africa and the Seychelles. Found in north-eastern Qld, usually growing on tree trunks or rotting logs, and on soil and base rock.

Qld: Josephine Falls, Mt Bartle Frere, *W.B.Schofield 79728 & M.I.Schofield* (NSW, UBC); Babinda Ck, foot of Mt Bellenden Ker, *G.E.Kantak & S.P.Churchill 912* (CANB); Cape Tribulation, *I.G.Stone 15917* (MEL); Davies Ck, SE of Mareeba, *W.A.Weber B32405* (CANB); Mosman Gorge, *B.O. van Zanten 68.965* (GRO, NSW).

This variable species is characterised by the complanate branches and small pointed leaves with strongly unipapillate cells. The long smooth setae bearing curved asymmetrical capsules with short conical opercula are also diagnostic.