

GLYPHOTHECIUM

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Glyphothecium Hampe, *Linnaea* 30: 637 (1860); from the Greek *glypho* (to carve or engrave) and *theke* (a case or container), in reference to the strongly furrowed capsules.

Type: *G. sciuroides* (Hook.) Hampe

Dioicous. Plants forming dense erect or loose pendent turfs. Secondary stems simple to very sparingly branched; paraphyllia present. Leaves crowded, ovate; base concave; apex long-acuminate; margin serrate at the apex, entire below, recurved at the base; costa very short and double or absent. Laminal cells linear, thick-walled, conspicuously pitted; alar cells quadrate to rectangular, thick-walled and pitted, forming a conspicuous patch. Gemmae in upper leaf axils, clavate.

Capsules erect, ovoid to cylindrical, deeply furrowed; stomata superficial (in *G. sciuroides*); annulus not differentiated (in *G. sciuroides*). Peristome: exostome teeth on outer side with the base densely horizontally striate; tips smooth to papillose; endostome with a high basal membrane; processes rudimentary; cilia absent. Spores globose, papillose.

Glyphothecium includes two species that are found in southern South America, Australasia, Malesia and in SE Asia as far west as Sri Lanka (Hattaway, 1981). Only *G. sciuroides* occurs in Australia.

References

Enroth, J. (1991), Bryophyte flora of the Huon Peninsula, Papua New Guinea. XLI. Ptychomniaceae (Musci), *Acta Bot. Fenn.* 143: 35–41.

Hattaway, R.A. (1981), Commentary on the genus *Glyphothecium* (Ptychomniaceae), *Bryologist* 84: 344–347.

Glyphothecium sciuroides (Hook.) Hampe, *Linnaea* 30: 637 (1860)

Leskea sciuroides Hook., *Musci Exot.* 2: 175 (1819); *Neckera glyphotheca* Müll.Hal., *Syn. Musc. Frond.* 2: 669 (1851), *nom. illeg.* incl. spec. prior.; *Cladomnion sciuroides* (Hook.) Wilson, in J.D.Hooker, *Fl. Nov.-Zel.* 2: 100 (1854). T: “Van Diemen’s Land” [Tas.], *D.R.Brown s.n.*; holo: BM.

Glyphothecium muellerianum Hampe, *Linnaea* 30: 637 (1860); *Cladomnion muellerianum* (Hampe) A.Jaeger, *Ber. Thätigk. St. Gallischen Naturwiss. Ges.* 1875–76: 226 (1877) [Ad. 2: 130]; *Garovaglia muelleriana* (Hampe) Mitt., *Trans. & Proc. Roy. Soc. Victoria* 19: 81 (1882), *nom. nud.* (in synonym.). T: Tarwin River, Vic., Apr. 1854, *F.Mueller*; holo: BM.

Cladomnion tasmanicum Müll.Hal. ex M.Fleisch., *Hedwigia* 36: 109 (1897). T: Mount Wellington, Tas., coll. unknown; holo: FH n.v., *fide* J.Enroth, *Acta Bot. Fenn.* 143: 39 (1991).

Illustrations: J.Enroth, *Acta Bot. Fenn.* 143: 37, fig. 1c–f (1991); D.Meagher & B.Fuhrer, *A Field Guide to the Mosses and Allied Plants of Southern Australia* 59 (2003).

Plants 1–10 cm long, bright green or olive-green above, yellow to golden below. Stems orange-brown; paraphyllia abundant, foliose, lanceolate. Leaves crowded, ovate, 1.8–2.3 mm long, concave, plicate at the base, long-acuminate; margin serrulate to serrate at the apex, entire below, widely recurved at the base; costa double, very short. Laminal cells 40–48 µm

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long; apical cells shorter; alar cells quadrate to rectangular, thick-walled and pitted, forming a conspicuous rectangular patch along the leaf margin.

Seta 4–6 mm long, red-brown. Operculum conico-rostrate, slightly oblique. Peristome: exostome pale yellow, narrowly triangular, outer side lacking transparent median furrows, densely horizontally striate in the basal 33–50%; tips smooth to sparsely papillose. Spores 12.7–15.0 μm diam. $n = 7$, *vide* H.P.Ramsay, *Austral. J. Bot.* 22: 321 (1974).

Occurs in N.S.W., A.C.T., Vic. and Tas., mainly in rainforest at altitudes of 150–1300 m, primarily epiphytic on *Nothofagus cunninghamii*, occasionally on *Eucalyptus regnans*, *Atherosperma moschatum* and *Acacia* spp. Also in Sri Lanka, Taiwan, Malesia, New Zealand and Chile.

N.S.W.: track to Wrights Lookout, New England Natl Park, 72 km E of Armidale, *H.Streimann* 47885 (CANB). A.C.T.: Cascade Trail, Tidbinbilla Nature Reserve, 25 km SW of Canberra, *H.Streimann* 5228 (CANB). Vic.: Cumberland Scenic Reserve, Yarra Ranges Natl Park, *N.Klazenga* 5865 (MEL); Whitehouse Ck, Yarra Ranges Natl Park, *A.McLean* 16 (MEL). Tas.: Sandspit R., 8.5 km WNW of Cape Bernier, *A.Moscal* 16837 (HO).

Diagnostic characters include the dense, overlapping leaves and the distinctive alar region that ascends the leaf margin as a conspicuous band.