

## CLIMACIACEAE

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**Climaciaceae** Kindb., *Gen. Eur. N. Amer. Bryin.* 2: 358 (1897).

Type: *Climacium* F.Weber & D.Mohr.

Dioicous. Plants usually with a stout creeping primary stem and erect dendroid secondary stems that are more branched towards the apex. Leaves plicate; costa single, failing below the apex. Laminal cells smooth, elongate, rhomboidal to linear, usually porose towards the leaf base.

Perichaetial leaves elongate. Calyptra cucullate. Seta elongate, twisted. Capsules erect to arcuate. Peristome double; teeth papillose or not.

This family of two genera is particularly well known in the Northern Hemisphere. One species of *Climacium* occurs in Australia.

### References

Beever, J., Allison, K.W. & Child, J. (1992), *Mosses of New Zealand*, 2nd edn 214 (1992).

Cave, L. (2005), *Climacium dendroides* (Hedw.) Web. et Mohr in Tasmania, *Australas. Bryol. Newsl.* 50: 5–6.

Meagher, D.A. (2005), New and interesting bryophyte records from New South Wales, Queensland and Victoria, *Australas. Bryol. Newsl.* 50: 6–9.

## CLIMACIUM

*Climacium* F.Weber & D.Mohr, *Naturh. Reise Schwed.* 96 (1804); from the Greek *klimax* (a staircase), in reference to the inner peristome, part of which was thought to resemble a ladder.

Type: *C. dendroides* (Hedw.) F.Weber & D.Mohr

Plants with a creeping primary stem. Secondary stems erect, dendroid, pale brown. Rhizoids smooth, on the primary and lower secondary stems. Stem leaves appressed, broadly ovate, rounded at the apex; branch leaves erect to spreading, unaltered when dry, oblong to ovate-lanceolate, unistratose; apex acute to obtuse.

Sporogones arising from the secondary stems in branch axils. Capsules erect, oblong-cylindrical; operculum rostrate. Spores globose.

A genus of c. four species, one of which occurs in south-eastern Australia.

***Climacium dendroides*** (Hedw.) F.Weber & D.Mohr, *Naturh. Reise Schwed.* 96 (1804)

*Leskea dendroides* Hedw., *Sp. Musc. Frond.* 228 (1801). T: Europe; *n.v.*

Illustrations: W.R.Buck, D.H.Vitt & W.M.Malcolm, *Key to the Genera of Australian Mosses* 50 (2002); L.Cave, *op. cit.* 6, fig. 1; B.Malcolm, N.Malcolm, J.Shevock & D.Norris, *California Mosses* 227 (2009).

Plants pale green to yellow-green. Secondary stems to 6 cm tall; branches crowded towards the apex, usually 10–20 mm long. Stem leaves ovate, concave,  $\pm$ plicate, apiculate, 2–3 mm

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long, 1.5–2.1 mm wide; margin smooth to serrulate, occasionally serrate; costa well defined, but thinning distally and failing just below apex. Median laminal cells fusiform, smooth, with walls of medium thickness,  $31\text{--}60 \times 4\text{--}6 \mu\text{m}$ ; lower cells to  $80 \mu\text{m}$  long, with walls that are often pitted; cells in the alar region rectangular to subquadrate,  $\pm$ hyaline, thin-walled. Branch leaves ovate to oblong, plicate, 2.0–2.8 mm long, 0.9–1.4 mm wide; apex acute to obtuse; margin serrulate to serrate, with the serration more noticeable towards the apex; costa and laminal cells as in stem leaves.

Sporogones not known in Australian material.

Occurs in boggy habitats in montane to alpine eastern Vic.; also known from one coastal locality in southern Tas. Very common in North America and, especially, in northern Europe, less so in Central and East Asia; also in southern New Zealand.

Vic.: Dargo High Plains, *H.Streimann 53176* [*Musci Australas. Exs. 295*] (CANB); near Tawonga Huts, Bogong High Plains, March 2004, *D.A.Meagher* (MEL, MELU; *n.v.*). Tas.: Arthur Hwy, Oakwood, Tasman Penin., *L.Cave 408* (CHR, HO; *n.v.*).