

## WEYMOUTHIA

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*Weymouthia* Broth., in H.G.A.Engler & K.A.E.Prantl, *Nat. Pflanzenfam.* I, 3: 811 (1906); in honour of William Anderson Weymouth (1842–1932), a prominent Tasmanian botanist.

Lecto: *W. mollis* (Hedw.) Broth.

*Lembophyllum* Lindb. sect. *Pseudo-weymouthia* Broth., in H.G.A.Engler & K.A.E.Prantl, *Nat. Pflanzenfam.* I, 3: 867 (1907). T: *L. cochlearifolium* (Schwägr.) Lindb. [= *W. cochlearifolia* (Schwägr.) Dixon]

Plants growing in wefts or pendants. Primary axis creeping, almost exclusively monopodially branched, with secondary axes ascending and/or pendent; central strand present in creeping and ascending axes, mostly absent in hanging stems and branches; all axes terete-foliate. Leaves patent to appressed, suborbicular to oblong, cochleate to canoe-shaped; apex rounded; in pendent parts often with secondary stem leaves longer than branch leaves; margin entire throughout to serrulate or crenulate at the apex; costa lacking or short and double. Mid-laminal cells linear, pitted; cells towards the leaf apex not or shallowly pitted or strongly pitted, only cells at extreme apex conspicuously shortened and isodiametric; alar cells irregularly subquadrate, irregularly incrassate, forming ±rounded patches.

Perichaetial leaves straight. Capsules short-exserted and erect to long-exserted and horizontal, ellipsoidal; operculum conical to rostrate.

*Weymouthia*, a genus of two species, occurs in southern South America, New Zealand and south-eastern Australia and Lord Howe Island. It is characterised by (i) its monopodial, non-stipitate, often pendent growth form; (ii) the slight dimorphy between stem and branch leaves; and (iii) the straight perichaetial leaves. In contrast to other genera in Lembophyllaceae, secondary stems appear unable to arch back to the substratum and then root and form a new creeping stem. Laminal cell length, the only distinguishing character listed by Buck *et al.* (2002), is not reliable for separating *Weymouthia* from *Lembophyllum*.

*Weymouthia* has traditionally been placed in the Meteoriaceae, mainly due to the pendent growth form and the peristome of *W. mollis* being a reduced hypnobryaceous structure. Streimann (1991) accepted *W. mollis* in the Meteoriaceae, but excluded *W. cochlearifolia*. Buck (1994) finally transferred the whole genus to the Lembophyllaceae, where *W. cochlearifolia* had previously been classified as part of *Lembophyllum*.

### References

- Buck, W.R. (1994), A new attempt at understanding the Meteoriaceae, *J. Hattori Bot. Lab.* 75: 51–72.
- Buck, W.R., Vitt, D.H. & Malcolm, W.M. (2002), *Key to the Genera of Australian Mosses*. Flora of Australia Supplementary Series No. 14. ABRIS, Canberra.
- Streimann, H. (1991), Taxonomic studies on Australian Meteoriaceae (Musci). 2: The genera *Aerobryopsis*, *Barbella*, *Floribundaria*, *Meteoriopsis*, *Meteorium* and *Weymouthia*, *J. Hattori Bot. Lab.* 69: 277–312.
- Streimann, H. (2002), *Weymouthia cochlearifolia* (Schwägr.) Dix. (Lembophyllaceae-Musci) in Australia, and some notes on *W. mollis* (Hedw.) Broth., *J. Hattori Bot. Lab.* 91: 289–294.
- Tangney, R.S. (1997), A generic revision of the Lembophyllaceae, *J. Hattori Bot. Lab.* 81: 123–153.

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## Key

- Leaves broadly ovate, less than 2 times as long as wide; upper laminal cells strongly pitted .....**1. W. cochlearifolia**  
Leaves oblong, more than 2 times as long as wide; upper laminal cells not or shallowly pitted.....**2. W. mollis**

### **1. Weymouthia cochlearifolia** (Schwägr.) Dixon, *Bull. New Zealand Inst.* 3: 255 (1927)

*Hypnum cochlearifolium* Schwägr., *Sp. Musc. Frond. Suppl.* 1, 2: 221 (1816); *Isoetecium cochlearifolium* (Schwägr.) Mitt., *Hooker's J. Bot. Kew Gard. Misc.* 8: 264 (1856); *Stereodon cochlearifolius* (Schwägr.) Mitt., *J. Proc. Linn. Soc.* 4: 88 (1859); *Coelidium cochlearifolium* (Schwägr.) Reichenow, *Reise Novara, Pilze, Leber-Laubm.* 1(3): 191 (1870); *Porotrichum cochlearifolium* (Schwägr.) Mitt., *Trans. & Proc. Roy. Soc. Victoria* 19: 84 (1882); *Lembophyllum cochlearifolium* (Schwägr.) Lindb., *Index Bryol.* 718 (1897). T: "Nova Hollandia" [Australia], J.-J.H. de Labillardière; not located.

*Neckera billardiæ* Hampe, *Linnaea* 30: 637 (1860); *Pilotrichella billardiæ* (Hampe) A.Jaeger, *Ber. Thätigk. St. Gallischen Naturwiss. Ges.* 1875–76: 259 (1877); *Weymouthia billardiæ* (Hampe) Broth., in H.G.A.Engler & K.A.E.Prantl, *Nat. Pflanzenfam.* I, 3: 812 (1906); *Weymouthia cochlearifolia* var. *billardiæ* (Hampe) Dixon, *Bull. New Zealand Inst.* 3: 255 (1927). T: Apollo Bay, Vic., *F.Mueller s.n.*; holo: BM-Hampe; iso: MEL 32257.

Illustrations: J.Beever, K.W.Allison & J.Child, *Mosses of New Zealand*, 2nd edn 119, fig. 58 (1992); D.Meagher & B.Führer, *A Field Guide to the Mosses and Allied Plants of Southern Australia* 87 (2003).

Plants robust or occasionally slender, growing in wefts or pendants. Primary axis creeping; secondary axes ascending and/or pendent; central strand present in creeping and ascending axes, present or absent in hanging stems and branches; branch tips often flagellate or flagelliform. Leaves imbricate, patent, deeply concave, broadly ovate, 1.4–2.0 mm long, 1.5–2.6 mm wide, cochleate, wrinkled when dry; base  $\pm$ cordate; apex rounded, narrowly channeled; branch leaves in pendent axes often shorter and more widely spreading than secondary stem leaves. Mid-laminal cells linear,  $45\text{--}85 \times 5\text{--}8 \mu\text{m}$ , slightly vermiculate, with incassate pitted walls; upper laminal cells thick-walled and strongly pitted.

Capsules short-exserted and erect to long-exserted and horizontal; operculum blunt to apiculate.

Occurs in Vic. and Tas., in wet forest at altitudes up to 650 m; usually hanging from tree or treelet stems and branches, or on tree bases and logs. Also in New Zealand and southern South America.

Vic.: Euchre Creek Nature Drive, 6 km from Club Terrace, *N.Klazenga 5190* (MEL); Turton Track, 2 km W of Tanybryn, Otway S.F., *A.W.Thies 15000* (MEL); junction of Paradise Rd and Paradise Track, Wombat S.F., 20 km SSE of Daylesford, *H.Streimann 39021* (CANB). Tas.: Lyell Hwy, Franklin-Gordon River Wilderness Nature Walk, *N.Klazenga 5812* (HO, MEL); junction of Florentine Rd and Whytes Rd, 8 km W of Maydena, *J.A.Curnow 4464* (CANB, HO).

Australian specimens of *W. cochlearifolia* have often been misinterpreted, and the species has been confused mainly with *Lembophyllum clandestinum*. Even the revised circumscription of Australian *W. cochlearifolia* prepared by Streimann (2002) incorporated misidentified specimens of *L. clandestinum* and at least two other species. Differences with *L. clandestinum* and *Campylochaete arbuscula*, which with *W. cochlearifolia* is most likely to be confused, are discussed under those species.

This species was reported from Lord Howe Island by Streimann (2002), but the specimen cited belongs to *Campylochaete excavata*.

### **2. Weymouthia mollis** (Hedw.) Broth., in H.G.A.Engler & K.A.E.Prantl, *Nat. Pflanzenfam.* I, 3: 812 (1906)

*Leskea mollis* Hedw., *Sp. Musc. Frond.* 234 (1801); *Neckera mollis* (Hedw.) Müll.Hal., *Syn. Musc. Frond.* 2: 131 (1850); *Meteorium molle* (Hedw.) Wilson, in J.D.Hooker, *Fl. Nov.-Zel.* 2: 100 (1854); *Isoetecium molle* (Hedw.) Mitt., *Hooker's J. Bot. Kew Gard. Misc.* 8: 263 (1856); *Stereodon mollis* (Hedw.) Mitt., *J. Proc. Linn. Soc.* 4: 88 (1859); *Pilotrichella mollis* (Hedw.) A.Jaeger, *Ber. Thätigk. St. Gallischen Naturwiss. Ges.* 1875–76: 260 (1877). T: Nova Seelandia, [New Zealand], *J.Banks*; holo: G n.v.; iso: BM.

*Pilotrichella weymouthii* Müll.Hal., *Hedwigia* 41: 130 (1902). T: Gally Back Mtn, Nelson, Tas., W.A.Weymouth [in Herb. O.Burchard]; holo: not located.

Illustrations: H.Streimann, *J. Hattori Bot. Lab.* 69: 307, figs 137–146 (1991); D.Meagher & B.Fuhrer, *A Field Guide to the Mosses and Allied Plants of Southern Australia* 87 (2003).

Plants slender, growing in pendants. Primary stem creeping, eventually often pendent, the branching almost exclusively monopodial; secondary stems irregularly pinnately branched; central strand present in creeping axes, absent in pendent axes and branches. Leaves appressed to erecto-patent, oblong, 1.20–1.85 mm long, 0.55–0.90 mm wide; stem leaves often longer and more widely spreading than branch leaves, shallowly concave, smooth, slightly wrinkled when dry; apex obtuse, canaliculate; margin entire to slightly crenulate throughout or serrulate at apex. Mid-laminal cells linear,  $50\text{--}85 \times 5\text{--}6 \mu\text{m}$ , shallowly pitted; upper laminal cells not or weakly pitted.

Capsules short-exserted, erect; operculum rostrate. Peristome with a lower endostome basal membrane up to c. 25% of the endostome height; cilia lacking or rudimentary.

Occurs in N.S.W., Vic. and Tas.; hanging from tree trunks and branches in wet forest at altitudes up to 650 (–1000) m. Also in Lord Howe Island, New Zealand and southern South America.

N.S.W.: Blue Mtns, *coll. unknown* (MEL 32272). Vic.: Morris Track, Otway S.F., *N.Klazenga* 5959 (MEL); Tarra River Falls, Tarra-Bulga Natl Park, 29 km S of Traralgon, *H.Streimann* 51602 (CANB; MEL). Tas.: c. 5 km from mouth of Wanderer R., *A.M.Moscal* 10069 (CANB, HO, MEL); Bird R., on Kellys Basin Rd, 18 km S of Crotty, 4.5 km ENE of Pillinger, *J.R.Croft* 10292 (CANB, HO).

*Weymouthia mollis* is characterised by its invariably pendent growth form and slender appearance. Some specimens, especially in Tas., have a leaf shape that is intermediate between *W. mollis* and *W. cochlearifolia*. Moreover, the branch leaves of some specimens can have upper laminal cells that are markedly pitted, although never as strongly as in *W. cochlearifolia*. The latter is a much more robust species with larger leaves.