

## LEPTODON

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*Leptodon* D.Mohr, *Observ. Bot.* 27 (1803), *nom. cons.*; from the Greek *leptos* (slender, thin) and *odon* (a tooth), in reference to the distinctive exostome teeth.

Type: *L. smithii* (Hedw.) F.Weber & D.Mohr.

This genus of 1–3 species requires taxonomic revision. One species is known from Australia.

**Leptodon smithii** (Hedw.) F.Weber & D.Mohr, *Index Musc. Pl. Crypt.* [2] (1803)

*Hypnum smithii* Hedw., *Sp. Musc. Frond.* 264, pl. 68, figs 5–7 (1801); *Orthotrichum smithii* (Hedw.) Brid., *Musc. Recent.* 2(2): 33 (1801); *Pterogonium smithii* (Hedw.) Sm., *Fl. Brit.* 3: 1271 (1804); *Pilotrichum smithii* (Hedw.) P.Beauv., *Prodr.* 83 (1805); *Pterigynandrum smithii* (Hedw.) Lam. & DC., *Fl. Franç.*, 3rd edn, 2: 462 (1805); *Lasia smithii* (Hedw.) Brid., *Mant. Musc.* 133 (1819); *Neckera smithii* (Hedw.) Müll.Hal., *Syn. Musc. Frond.* 2: 118 (1850). T: “Crescit ad arborum truncos in silva Pisana, in Helvetia, Anglia prope Barham Downs; et teste Bridelio in Pyrenaeis orientalibus in silva de la Peine supra Vernex, in Galliae Departement de la Lozere, in Atlante, Promontorio bonae spei et in India orientali [...] Specimina hic picta Smithius misit”; *n.v.*

*Leptodon australis* Müll.Hal., *Hedwigia* 41: 132 (1902). T: Moss Vale, N.S.W., Nov. 1884, *T.Whitelegge*; iso: H-BR, LIV.

Illustrations: V.F.Brotherus, *op. cit.* 179, fig. 566; A.J.E.Smith, *The Moss Flora of Britain and Ireland* 505, fig. 244(1–3) (1978).

Dioicous. Plants medium-sized to rather robust, epilithic or epiphytic, pinnately to bipinnately branched; fronds usually strongly inrolled and branches circinate when dry, dark green, dull. Stem leaves erect and somewhat concave when dry, patent to spreading when wet, to c. 1.5 mm long and 1.0 mm wide, ovate; apex (broadly) obtuse to rounded; branch leaves similar but smaller; leaf margins narrowly recurved below, plane, somewhat incurved elsewhere, entire; costa single but often spurred or bifurcate above, c. 50–80  $\mu$ m wide near the leaf base, tapering above, mostly vanishing at 50–75% of the leaf length. Laminal cells moderately thick-walled and somewhat collenchymatous, smooth but becoming bulging when wet. Upper and median laminal cells arranged in variously interrupted rows,  $\pm$ isodiametric, rounded to oval or indistinctly hexagonal to rhomboid, c. 10–15  $\times$  8–10  $\mu$ m; basal juxtacostal and inner laminal cells longer; alar cells indistinct. Paraphyllia abundant on stems and branches, multiseriate and foliose to uniseriate and filiform, occasionally branched.

Gametoecia pseudolateral on stems and main branches. Post-fertilisation inner perichaetial leaves to c. 2.5 mm long, costate, sheathing, narrowed from a lanceolate or oblong base into a ligulate acumen at c. two-thirds of the leaf length; apex acute. Seta c. 1.5 mm long, almost enclosed by the perichaetial leaves. Capsules short-exserted, c. 1.5–2.0 mm long and 1.0 mm wide, erect, symmetrical, ovoid; apophysal stomata few, phaneropore, round-pored. Peristome: exostome teeth to c. 300  $\mu$ m long, somewhat irregularly lanceolate, often cracked above along the median line, densely spiculose-papillose throughout, yellowish grey; endostome rudimentary, consisting of a low basal membrane; operculum conical-rostrate. Spores c. 20–30  $\mu$ m diam., rather coarsely papillose. *n* = 11, *fide* H.Deguchi & K.Oginuma, *Lindbergia* 15: 88 (1990).

Occurs in south-eastern Qld, eastern N.S.W., A.C.T. and Vic.; mainly epilithic but also epiphytic on tree trunks, and frequently forming large colonies. Elsewhere with a broad but

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highly fragmented distribution, including North America, southern South America, western, central and Mediterranean Europe, eastern and southern Africa, E Asia and New Zealand.

Qld: Bunya Mountains Natl Park, SW of Kingaroy, *D.H.Norris* 35330 (H). N.S.W.: Dorrigo, 1947, *A.Burges* (LIV); Mt Tomah, Nov. 1898, *J.H.Maiden* (H-BR). A.C.T.: Booroomba Rocks 30 km SSW of Canberra, *H.Streimann* 9088 (H). Vic.: Mt Alexander, near Elphinstone, 9 Mar. 1969, *I.G.Stone* (MELU).

This species is readily distinguished by its strongly inrolled fronds (when dry), regularly pinnate to bipinnate branching, and abundant paraphyllia.