

**Fissidens leptocladus** Müll.Hal. ex Rodway, *Pap. & Proc. Roy. Soc. Tasmania* 1912: 136 (1913)

*Fissidens leptocladus* Müll.Hal., *Gen. Musc. Frond.* 59 (1901); *F. rigidiusculus* Broth. var. *leptocladus* (Müll.Hal. ex Rodway) Broth., *Proc. Linn. Soc. New South Wales* 41: 578 (1916). Type: Guy Fawkes Rivulet, base of Mt Wellington, Tas., 6 Sept. 1890, *W.A.Weymouth* 385; lecto: HO, *vide* I.G.Stone, *J. Bryol.* 16: 262 (1990); isolecto: CANB, L, NY; on face of rock on bank of Guy Fawkes Rivulet, Tas., 1 Jan. 1897, *W.A.Weymouth* 2157; para: HO; Guy Fawkes Rivulet, Tas., on damp bank, 3 Sept. 1906, *W.A.Weymouth* 2281; para: HO.

*Fissidens amblyothalloides* Broth. & Watts, *Proc. Linn. Soc. New South Wales* 40: 366 (1915). Type: gully, south of King's [property], Lord Howe Is., *W.W.Watts* 153; syn: H-BR; *loc. id.*, *W.W.Watts* 145, 157, 163, 178; syn: H-BR, NSW.

*Fissidens rigidiusculus* Broth., *Proc. Linn. Soc. New South Wales* 41: 577 (1916), *nom. illeg.* Type: Fitzroy Falls, Moss Vale, N.S.W., *W.Forsyth* 669; iso: NSW(?) *n.v.*

*Fissidens pachyneuron* Dixon, *Notes Roy. Bot. Gard. Edinburgh* 20: 93 (1950). Type: Richmond R., N.S.W., *W.W.Watts* 2949; holo: BM; iso: NSW.

*Fissidens leptocladus* var. *cheesemani* Dixon, *Bull. New Zealand Inst.* 3: 101 (1923). Type: *sine loc.*, New Zealand, 1882, *Cheeseman*; *n.v.*

*Fissidens patulifolius* Dixon, *Proc. Roy. Soc. Queensland* 53: 23 (1941). Type: Tully R., above Tully Falls, Qld, *H.Flecker* 6302; holo: BM; iso: CANB, *syn. nov.*

*Fissidens microblastus* Broth., *Proc. Linn. Soc. New South Wales* 24: 632 (1900), *nom. nud.*; *F. montecolli* Watts ex W.W.Watts & T.Whitelegge, *Proc. Linn. Soc. New South Wales* Suppl. 27: 26 (1902), *nom. nud.* Based on: *Montecollum*, Brunswick R., N.S.W., 17 Sept. 1897, *W.W.Watts* 1489; BM, H-BR, NSW.

Illustrations: G.A.M.Scott & I.G.Stone, *Mosses of Southern Australia* 85, pl. 7; 87, pl. 8; 89, pl. 9 (1976); D.G.Catcheside, *Mosses of South Australia* 71, fig. 12 (1980); J.Beever, B.Malcolm & N.Malcolm, *The Moss Genus Fissidens in New Zealand: an illustrated key* 38 (2002); H.Streimann, *The Mosses of Norfolk Island* 81, fig. 35 (2002).

**Plants** densely gregarious, yellow-green to dark green. **Stems** 5–20 mm tall, simple or occasionally branched. **Leaves** in numerous pairs, linear-lanceolate, lanceolate or oblong-ovate,  $\pm$ falcate when moist, patent, often  $\pm$ undulate, strongly falcate-decurved or secund when dry, often crisped, 1.00–1.75 mm long, 0.25–0.45 mm wide, 2–7 times longer than wide; **margins** smooth; **apex** acute to narrowly acuminate; **laminae** unistratose; **vaginant laminae** reaching  $1/2$ – $2/3$  leaf length, closed; **dorsal lamina** reaching the leaf base or short-decurrent, occasionally bistratose at the base; **limbidium** throughout, except at the leaf apex, rarely confluent with the costa, the cells thick-walled, prosenchymatous, unistratose, narrow, usually widening at the vaginant laminae; **lamina cells** small, firm-walled, concave, dark, quadrate to hexagonal, c. 5–9  $\mu$ m wide; **costa** of *bryooides*-type, subpercurrent to occasionally percurrent.

**Dioicous.** **Male plants** short, the leaves in 3–7 pairs. **Perigonia** terminal. **Perichaetia** terminal; **perichaetial leaves** to 2 mm long, longer and narrower than vegetative leaves; **limbidium** proximally on vaginant laminae sometimes with an outer row of  $\pm$ quadrate cells. **Setae** straw-coloured to orange-brown, to 6 mm long. **Capsules** inclined,  $\pm$ symmetrical, oblong-ovate, c. 0.5 mm long, the apophysis  $\pm$ swollen. **Operculum** c. 0.5 mm long, obliquely rostrate, c. half the length of the theca. **Peristome** of *bryooides*-type; teeth c. 30–35  $\mu$ m wide at the base. **Calyptra** cucullate, smooth. **Spores** 10–14  $\mu$ m diam.

### [Images](#)

Widespread in all States and Territories, as well as Lord Howe Island and Norfolk Island; grows on damp soil or rock in shaded places, occasionally in basalt or limestone caves.

Also in Chile, New Zealand, the Auckland Islands and Campbell Island.

*Selected specimens examined:* W.A.: Nancys Peak, Porongorup Ra., *D.G.Catcheside* 74.266 (AD, PERTH). N.T.: Mt Riddock, Harts Ra., *J.H.Willis* (MEL 1024239). S.A.: Hindmarsh Valley Falls, *D.G.Catcheside* 54.327 (AD). Qld: Dalrymple Gap, Cardwell, *I.G.Stone* 19127A (MEL); Lake Eacham Natl Park, *I.G.Stone* 25517 (MEL); Hippy Tower, Chillagoe, *M.Godwin* C2487 (AD). N.S.W.: Emigrant Ck, *W.W.Watts* 3612

(NSW); Warrambungle Mtns, *I.G.Stone 4135 p.p.* (MEL). **[Add A.C.T. record]** Vic.: Byaduk Caves, *D.G.Catcheside 77.180* (AD). Tas.: Truganini Track, near Hobart, *I.G.Stone 25325* (MEL); Julius River Reserve, S of Smithton, *I.G.Stone 25286, 25287, 25288* (MEL).

*Fissidens leptocladus* is very variable in the size and shape of its leaves, and it is also tolerant of a wide range of light intensities. Nomenclatural confusion and implications were discussed by Stone (1990c).

*Fissidens patulifolius* has dioicous plants 5–20 mm tall. The leaves are broadly oblong-ovate, 1.0–1.3 mm long, 0.5–0.6 mm wide and 2–2.5 times longer than wide. The leaf apices are obtuse, apiculate, and the suture of the vaginant laminae is usually markedly truncate. The limbidium of the perichaetial leaves is scarcely widened proximally in the vaginant laminae. The capsules are oval, tapered to the neck,  $\pm$ symmetrical and slightly inclined, and the operculum is conical-rostrate with a thick, erect beak 0.3–0.4 mm long.

*Fissidens patulifolius* was originally considered endemic to north-eastern and central Queensland, where it was an uncommon moss growing close to streams. There seems little justification for retaining this as a separate taxon, even as a variety. Consequently, *F. patulifolius* is here reduced to synonymy of *F. leptocladus*.

#### [Bibliography](#)