

Fissidens adianthoides Hedw., *Sp. Musc. Frond.* 157 (1801)

Type: Europe; *n.v.*, *fide* R.A.Pursell, *Bryologist* 89: 39 (1986a).

Fissidens major Mitt., *J. Linn. Soc. Bot.* 21: 559 (1885). Type: Europe; *n.v.*

Illustrations: J.Beever, B.Malcolm & N.Malcolm, *The Moss Genus Fissidens in New Zealand: an illustrated key*. 12 (2002); A.J.E.Smith, *The Moss Flora of Britain and Ireland* 2nd edn, 257, figs 7–10 (2004).

Plants robust, 2–5 cm long, the shoots 5–6 mm wide, yellowish green to deep green. **Stems** densely tufted, branching occasionally, in section with a narrow central strand. **Leaves** close together on the stems, the bases slightly overlapping, patent, somewhat falcate when moist, the apices crisped and rolled up when dry, broadly lingulate to lingulate-lanceolate, 2.5–4.0 mm long, 0.8–1.3 mm wide; **apex** acute to obtuse and apiculate; **laminae** unistratose; **margins** crenulate below, sharply and irregularly dentate towards the apex; **vaginant laminae** up to 1/2–2/3 leaf length, half open; **dorsal lamina** rounded to the base, ending at the insertion or short-excurrent; **costa** of *taxifolius*-type, subpercurrent to percurrent, mostly ceasing 2–4 cells below the apex; **cells of apical and dorsal laminae** ±isodiametric, rounded-hexagonal, 12–18 µm wide, thick-walled, opaque, the 3 or 4 marginal rows more pellucid and thick-walled, forming a paler border.

Autoicous or ?**dioicous**. **Perigonia** axillary in clusters at about mid-stem. **Perichaetia** single in axils of leaves about mid-stem; **perichaetial leaves** reduced. **Setae** orange-brown, slender, sinuose, to 20 mm long. **Capsules** erect to horizontal, asymmetrical, 1.0–1.6 mm long; **exothecial cells** rectangular-hexagonal, thick-walled, 32–45 µm long, 11–25 µm wide, in c. 90–110 columns around the periphery at mid-capsule. **Operculum** to 1.5 mm long, curved-rostrate. **Peristome** of *taxifolius*-type; base of teeth 85–100 µm wide, the outer surface with low trabeculae and finely pitted lamellae; filaments slightly twisted, nodulose, with oblique striae between the nodules for most of their length. **Calyptra** smooth, cucullate. **Spores** 13–33 µm diam., very finely and obscurely papillose, appearing smooth.

[Images](#)

Occurs in Vic. and Tas.

Also in New Zealand, Chile, Tierra del Fuego, Argentina. A widespread circumpolar species in temperate regions, in Europe north to Svalbard, the Faeroes, Iceland, Japan, China, the Azores, Madeira and North America.

Selected specimens examined: Vic.: Surrey R., Cobboboonee State Forest, Gorae, *A.C.Beauglehole* 8171 (MEL 1059762). Tas.: Nile R., Lymington, *R.McLeod* 750 (HO 75550, MEL); Lake St. Clair, *L.Rodway* (HO 75548); Wild Dog Plains, Central Highlands, *A.Moscal* 22827 (HO 300469); Meander R., *A.Moscal* 12477 (HO 108167); Prosser R., East Coast, *A.Moscal* 19612 (HO 77849).

This is a large species of moist habitats, and it can also occur in water bodies. De Winton & Beever (2004) reported it from several lakes in New Zealand to a depth of 10 m.

When moist, the leaf tips are curved slightly towards the substratum and when dry the leaves are distinctly twisted and curled towards the ventral side of the shoots.

Sexuality of the Australian specimens is unclear as fertile material has not been found. Noguchi (1987) indicated the species is monoicous, while other authors, including Pursell (2007) and Beever *et al.* (2002), suggested dioicous, while Smith (2004) stated the species could be autoicous or dioicous.

Descriptive details of the sporophyte are from Smith (2004), Pursell (2007), and a British specimen [Hurstpierpoint, England, ex Hb. Mitten (HO 83670)]. The spores of the British specimen are 21–29 µm diam., and while appearing smooth they are actually very finely and obscurely papillose. The exothecial cells are very thick-walled and irregularly elongate-hexagonal to rhomboid or rectangular.

[Bibliography](#)