

**Fissidens bifrons** Schimp. ex Müll.Hal., *Bot. Zeitung (Berlin)* 17: 198 (1859)

T: Gronekloof, Cape of Good Hope, South Africa, *Breutel*; iso: BM.

*Fissidens bryoidioides* Broth., *Proc. Linn. Soc. New South Wales* 41: 576 (1916). T: Penshurst, N.S.W., *W.Forsyth 676*; holotype: H-BR; iso: MEL, NSW.

[*Fissidens splachnifolius* auct. non Hornsch.: D.G.Catcheside, *Mosses of South Australia* 76 (1980)]

Illustration: D.G.Catcheside, *loc. cit.* fig. 16, as *F. splachnifolius*.

Dioicous. Plants small, yellow-green; sterile shoots 2–10 mm tall, often growing from the base of a female plant. Leaves distant, 6–15-jugate, cultriform, 0.2–0.5 mm long, 0.1–0.2 mm wide; apex sharply recurved. Costa strong, bent abruptly at the terminus of vaginant laminae, subpercurrent to barely excurrent. Vaginant laminae 70–90% of the leaf length, open, elimbate except on large leaves; dorsal lamina elimbate, failing above the base to short-decurrent. Margin entire to serrulate. Laminal cells small, irregularly quadrate to polygonal, c. 8–10 µm wide; ±rectangular and up to c. 20 µm long at the base of vaginant laminae. Fertile plants 2–5 mm long; leaves cultriform or straight, to c. 1 mm long and 0.25–0.30 mm wide; perichaetial leaves to 1.5 mm long; costa percurrent to excurrent. Limbium of vaginant laminae broad below, narrowed above, often just extending onto the apical lamina.

Setae terminal, flexuose, 7–15 mm long. Capsule thecae curved, asymmetrical, c. 0.6 mm long; operculum conical, 0.30–0.35 mm long. Spores 12–17 µm diam.

Occurs in southern W.A., south-eastern S.A., eastern N.S.W., southern Vic. and on the west coast of Tas.; terrestrial and often growing in weedy places. Also in South Africa.

W.A.: Hovea Falls, Forrest Natl Park, *I.G.Stone 6202B* (MEL). S.A.: Bellevue Heights, near Adelaide, *D.G.Catcheside 75.78* (AD). N.S.W.: Penshurst, *W.Forsyth 679* (NSW). Vic.: Tallarook, *I.G.Stone 9318* (MEL). Tas.: W coast, road to Arthur Ck, *I.G.Stone 25275* (MEL).

*Fissidens bifrons* varies greatly in size depending on habitat. It often has delicate, flagelliferous innovations, consisting of alternating sequences of minute and very distantly set and larger cultriform leaves, arising from within the terminal perigonia, perichaetia or leaf axils.

Magill (1981) regarded *F. bifrons* as a synonym of *F. pygmaeus* Hornsch., but the latter has non-arcuate, ±symmetrical capsules, short setae (c. 3–5 mm long), larger spores and small vegetative leaves bordered on the vaginant laminae.