

**Fissidens submarginatus** Bruch, in C.Krauss, *Flora* 29: 133 (1846)

Type: Natal, South Africa, C.Krauss; lecto: BM, *vide* Pursell (1994c); isolecto: PC (with label "Natal in sylvis prope Umlusir, Krauss, 1841").

*Fissidens intermedius* Müll.Hal., *Linnaea* 21: 181 (1848). Type: Surinam, *Kegel 501*; lecto: GOET, *vide* Florschütz (1964); isolecto: U (microscope slide only), *vide* Pursell, *Fl. Neotrop. Monogr.* 101: 160 (2007).

*Fissidens cambewarrae* Dixon, *Proc. Roy. Soc. Queensland* 53(2): 24 (1942). Type: Cogzell's Farm, near Tully River, Lower Tully, Qld, Sept. 1937, Miss E. Henry; holo: BM; iso: BRI.

Illustrations: P.Florschütz, *The Mosses of Suriname*. Part 1. *Fl. Suriname* 6(1): 53, fig. a-i (1964), as *F. intermedius*; A.J.Sharp, H.Crum & P.M.Eckel (eds), *The Moss Flora of Mexico* 1: 70, fig. 49a-e (1994), as *F. intermedius*; R.A.Pursell, *Fl. Neotrop. Monogr.* 101: 161, fig. 84A-M (2007).

**Plants** forming small tufts. **Stems** 5–8 mm long, branching from older portions, the gametophores arising from near the apex; in section with 1 or 2 rows of small thick-walled cells surrounding larger thin-walled cells and a central strand of small thin-walled cells. **Leaves** in 4–12 pairs, oblong-lanceolate, to c. 1.2 mm long and 0.4 mm wide; **apex** acute to obtuse, apiculate; **margins** serrulate; **vaginant laminae** reaching to 1/2–2/3 leaf length, partly open and joining c. mid-way or closer to margin; **limbidium** unistratose, 1–4-seriate, occasionally spurred, often slightly extending into the apical lamina, the cells elongate; **dorsal lamina** ending abruptly at or below the costa base, often intermittently bordered; **lamina cells** ±hexagonal, 7.5–10.0 µm wide, unipapillose, the papillae large and rough; **costa** *bryoides*-type, slightly flexuose, subpercurrent.

**Autoicous. Perigonia** gemmiform and basal or terminal on longer stems. **Perichaetia** terminal. **Setae** geniculate, 2–4 mm long, smooth or pustulate. **Capsules** ±symmetrical, erect to inclined; theca to c. 0.5 mm long, 0.27–0.35 mm wide; exothecial cells collenchymatous, c. 20 µm wide. **Operculum** conical-rostrate, to 0.6 mm long. **Peristome** of *scariosus*-type, divided to below the middle, finely papillose below, spirally thickened above. **Calyptra** cucullate, covering only the rostrum. **Spores** 9.0–12.5 µm diam.

[Images](#)

Rather common on damp, shaded soil in rainforest in north-eastern Qld; also in the coastal ranges of southern N.S.W.

Also known from Central America, tropical South America, southern Africa and the Hawaiian Islands.

*Selected specimens examined*: Qld: Wrights Ck, Lake Eacham Natl Park, I.G.Stone 25493 (MEL); South Johnstone R., I.G.Stone 18995 (MEL). N.S.W.: Cambewarra Mountain road, 22 May 1903, W.W.Watts 6373, 6374 (NSW).

Pursell & Hoe (1977) reported an incomplete limbidium on the dorsal lamina on a stem of the holotype. This is also occasionally seen in Australian material, at least on the larger leaves, especially of fertile plants, although it is easily overlooked.

Pursell (2007) included *F. intermedius* in the synonymy of *F. submarginatus*. Australian plants examined (as *F. intermedius*) do not differ appreciably from *F. submarginatus*, except that the stems have a comparatively weak central strand. Pursell (2007) also gave the spore diameter of *F. submarginatus* as 11–23 µm.

[Bibliography](#)