

Fissidens diversifolius Mitt., *J. Linn. Soc. Bot.* (Suppl.) 1: 140 (1859)

Type: Soane (Shone) R., North Bihar, India, moist mullahs, *J.D.Hooker 633*; lecto: NY; isolecto: S.

Illustrations: H.C.Gangulee, *Mosses of Eastern India* 2: 492, fig. 228 (1971); Z.Iwatsuki, *J. Hattori Bot. Lab.* 21: 244, fig. 4n-x (1959), as *F. doii* Sak.; Z.Iwatsuki, *J. Hattori Bot. Lab.* 48: 176, fig. 3 (1980); Z.Iwatsuki & T.Suzuki, *J. Hattori Bot. Lab.* 51: 463, pl. 17 (1982).

Plants small, pale green, brownish when old, 3–6 mm long, 1.6–2.3 mm wide with leaves. **Stems** lacking a central strand (in section). **Leaves** in 5–15 pairs, imbricate above, 1.2–1.5 mm long, 0.5–0.6 mm wide, ovate to ovate-lanceolate; **apex** ±acute; **margins** ±entire to minutely serrulate; **laminal cells** irregularly hexagonal, firm-walled, smooth, 7–10 µm wide, larger proximally in the vaginant laminae; **vaginant laminae** reaching 2/3–3/4 leaf length, c. half open, **limbidium** generally distinct, 2–4 cells wide, uni- to bistratose, rarely extending to the apical lamina; **dorsal lamina** narrowed to the insertion; **costa** of *bryoides*-type, ending just below the apex.

Autoicous or **dioicous**. **Perigonia** on short branches from the base of stems. **Perichaetia** terminal on stems; **perichaetial leaves** similar to stem leaves, slightly larger. **Setae** 3–6 mm long. **Capsules** erect, symmetrical; theca 0.7–0.9 mm long; **exothecial cells** quadrate, thin-walled, ±collenchymatous. **Operculum** conical to short-rostrate, 0.2–0.4 mm long. **Peristome** of *bryoides*-type. **Calyptra** campanulate, 0.7–0.8 mm long. **Spores** 22–32 µm diam., finely papillose.

Images

Apparently rare in Australia and so far known only from northern N.S.W. Collected from damp soil near a stream.

Also known from India, Myanmar (Burma), China and Japan.

Specimen examined: N.S.W.: Hickey Falls, 38 km S of Coonabarabran, *I.G.Stone 8408* (MEL).

This species is characterised by the light green plants that become brownish with age, ovate to ovate-lanceolate leaves, a limbidium on the vaginant laminae and only rarely extending to the apical lamina, and comparatively large spores. There is also some difference in the sizes of sterile and fertile shoots.

Bibliography