

Fissidens rupicola Paris & Broth., *Öfvers. Förh. Finska Vetensk.-Soc.* 48: 7 (1906)

T: "ad rupes praeruptorum amnis Carigou, alto 500–600 m" New Caledonia, *Le Rat*; holo: H-BR.

[*Fissidens consociatus* auct. non Thér.: I.G.Stone, *J. Bryol.* 16: 267 (1990)]

Illustration: Z.Iwatsuki, *J. Hattori Bot. Lab.* 52: 122, fig. 5 (1982).

Polyoicous. Plants 0.5–4.0 mm long and 1.0–1.3 mm wide; rhizoids short, tufted, basal. Stem with small central strand (T.S.) and thick-walled cortical cells, the outer 2 or 3 rows coloured. Leaves erectopate, 4–15-jugate, distant, narrow and short below, lanceolate above, 0.3–1.2 mm long and 0.14–0.30 mm wide, widest proximally; apex obtuse or bluntly acute, the apical cell usually indistinct. Costa usually subpercurrent. Vaginant laminae \pm extending to mid-leaf, joining submarginally; limbidium not reaching the apex, uniseriate to triseriate; cells clear, the outer cells \pm rectangular, the inner prosenchymatous. Dorsal lamina joined abruptly to the base. Laminal cells isodiametric 4–6 μ m wide, markedly conical-mamillose; margin serrulate.

Male branches similar to female, or the perigonia terminal within the perichaetium. Female shoots separate or occasionally axillary to the terminal perigonium, both of which can be deciduous. Perichaetial leaves to 1.3 mm long. Setae 2–3 mm long, \pm scabrous. Calyptra cucullate, 0.4–0.5 mm long, papillose. Capsule thecae c. 0.4 mm long; exothecial cells collenchymatous; operculum conical-rostrate, 0.4–0.5 mm long.

Rather common in north-eastern Qld; epiphytic or growing on rock. Also in India, Malesia, New Caledonia and Fiji.

Qld: Kirrama S.F., Cardwell, *I.G.Stone 15001B* p.p. (MEL); Downey Ck, W of Innisfail, *I.G.Stone 24725* (MEL); South Johnstone R., Palmerston [Wooroonooran] Natl Park, *I.G.Stone 19002* (MEL); Wrights Ck, Lake Eacham Natl Park, *I.G.Stone 25501* p.p. (MEL).

The Australian plants appear to match the type, except for variations in the inflorescence occurring when there is regrowth from old plants. Iwatsuki (*J. Hattori Bot. Lab.* 52: 113–126, 1982) described *F. rupicola* as rhizautoicous only, but the holotype has at least one separate male plant like the female. The plants are characteristically almost bare below, with sterile shoots \pm evenly foliate, the leaves are down-curved at the tips when dry and the costa does not usually ending in a large, clear apical cell as in *F. crenulatus* Mitt.