

Fissidens sufflatus I.G.Stone, *Mem. New York Bot. Gard.* 45: 627 (1987)

Type: Majuba Ck, Mt Bartle Frere, Qld, *I.G.Stone 18882*; holotype: MEL; isotype: MEL.

Illustrations: I.G.Stone, *op. cit.* 628, figs 1–19; 629, figs 20–38.

Plants loosely gregarious or scattered, usually prostrate, rather robust, 5–10 mm or more long, red-brown. **Stems** simple or with repeated subterminal innovations, yellowish green, becoming red-brown with age; in section with a central strand; conspicuous hyaline axillary nodules absent; axillary hairs common, 2 or 3 per axil; rhizoids long, red-brown, basal on stems. **Leaves** erecto-patent, not or loosely imbricate, in 6–24 pairs, lingulate, 0.5–2.5 mm long, 0.15–0.60 mm wide, with a swollen refractive border except at the apex and bases of vaginant and dorsal laminae; **apex** obtuse, abruptly apiculate, margins sometimes weakly denticulate; **vaginant laminae** reaching c. 1/2 leaf length, unequal, joining c. half way between margin and costa; **dorsal lamina** ending abruptly at the insertion, the base usually rounded; **margins** entire or slightly undulate, swollen throughout except in the apiculus and the base of dorsal and vaginant laminae, the border c. 1–3 cells wide, the cells with thick walls, unistratose but sometimes appearing bistratose in surface view; **lamina cells** rounded-hexagonal, 9–12 µm wide, markedly convex with outer walls strongly lenticular, firm-walled, marginal cells 15–18 µm wide, swollen, thick-walled, highly refractive; **costa** of *oblongifolius*-type, glossy, subpercurrent, bent at the top of the vaginant laminae.

Dioicous. Male plants similar in size to females, with similar subterminal buds and innovations, often with a succession of 2 or 3 perigonia each at the top of an innovation; **perigonial leaves** to 1.8 mm long, the apical lamina markedly contracted at junction with the greatly broadened vaginant laminae. **Female plants** often growing from old brown partly decayed plants; **perichaetia** terminal, often appearing lateral by repeated subterminal fertile innovations; **perichaetial leaves** slightly smaller than stem leaves, apiculus variable, sometimes large with denticulate margins; vaginant laminae unequal, joining near the costa, with larger cells. **Setae** 1–5 to a plant, occasionally 2 per perichaetium, c. 5–6 mm long, slender, pale reddish brown towards the base, tightly twisted below the capsule. **Capsules** inclined to horizontal; theca asymmetrical, 0.60–0.65 mm long, contracted below the mouth when dry; **exothecial cells** short-oblong, longitudinal walls usually thicker than horizontal walls, slightly thickened at corners. **Operculum** longer than the theca, long-rostrate, 0.80–0.85 mm long. **Peristome** of *similiretis*-type, deep red; teeth 70–80 µm wide at the base, erect, bifurcated above into 2 unequal long yellow filaments c. 130–150 µm long. **Calyptra** narrowly conical, smooth, with 2 or 3 short splits at the base, c. 1 mm long, covering the beak of the operculum. **Spores** green, ±smooth or very finely papillose, (9–) 11–14 (–15) µm diam.

[Images](#)

Endemic to north-eastern Qld. Grows on shaded, gritty soil and rocks in rainforest and often on undercut banks near streams.

Selected specimens examined: Qld: Josephine Falls, *I.G.Stone 23840* (MEL); Mt Bartle Frere, Majuba Ck, *I.G.Stone 18905* (MEL); Main Coast Ra., 18 km NNW of Mount Molloy, *H.Streimann 30333* (AD, CANB).

Fissidens sufflatus and *F. pseudopallidus* are similar morphologically, differing in leaf shape, the length of the vaginant laminae, cell size and, especially, in the margin of the vaginant laminae. This is swollen and thickened for 1 or 2 rows of cells in the former, but in *F. pseudopallidus* it is incrassate for 4–6 rows but not usually swollen, producing a broad pale border in surface view. The species also differ in the dimensions of the seta, theca and spores.

Fissidens javanicus Dozy & Molke., an Asian species, also has thickened leaf margins, resembling *F. sufflatus* in the swollen unistratose margin of the vaginant laminae. However, the apical and dorsal lamina margins of *F. javanicus* are bi- or tristratose, and it has large hyaline axillary nodules on the stem.

[Bibliography](#)