

**Fissidens inaequiretis** I.G.Stone, *J. Bryol.* 15: 738 (1989)

Type: Fernleigh, road to Pearces Creek, Richmond R., N.S.W., 5 Aug. 1896, *W.W.Watts 851*; holo: NSW; iso: H-BR *n.v.*

Illustrations: I.G.Stone, *op. cit.* 741, fig. 2; 742, fig. 3 (1989).

**Plants** gregarious, pale green, to 6 mm tall (with leaves). **Stems** pale yellowish green to brown, to 3 mm tall, soft; axillary nodules not clearly defined; axillary hairs narrow, the filaments to 6 cells long; in section lacking a central strand; rhizoids basal, sometimes axillary, reddish, smooth. **Leaves** in 4–10 pairs, erecto-patent, linear or linear-lanceolate, 0.5–2.0 mm long, 0.15–0.30 mm wide; **apex** acute to acuminate; **vaginant laminae** to 1/2 leaf length, unequal, narrowed above, joining between the margin and costa or at the costa, limbate; **limbidium** of 1–4 rows of cells, unistratose, intramarginal in lower 2/3; **dorsal lamina** tapered to the base, the proximal cells especially large; **margins** serrate or weakly serrate to crenulate by projecting cells, except on lower part of vaginant and dorsal laminae where the margin is almost entire; **costa** of *bryoides*-type, strong, subpercurrent to barely excurrent.

**Dioicous. Male plants** very variable in size, the stems 0.4–1.5 mm tall, with 4–9 pairs of leaves; limbidium intramarginal; **perigonia** terminal; antheridia c. 150–170  $\mu\text{m}$  long. **Perichaetia** terminal; **perichaetial leaves** similar to vegetative leaves but longer, vaginant laminae mostly less than 1/2 leaf length, usually joining on the costa, limbate in lower half, but the intramarginal border less well developed than in perigonal leaves. **Setae** terminal, 4–9 mm long, smooth, pale golden, flexuose. **Capsules** mostly erect, symmetrical, elliptic; theca 0.5–0.9 mm long, 0.3–0.5 mm wide; **exothecial cells** quadrate to short-rectangular, c.  $35 \times 20$ – $35 \mu\text{m}$ ; lateral walls thicker than transverse walls. **Operculum** rostrate, c. 3/4 the length of the theca. **Peristome teeth** 30–50  $\mu\text{m}$  wide at the base, divided above into 2 slender spirally thickened and roughly papillose arms; dorsal lamellae of basal part finely papillose, with inconspicuous horizontal ridges. **Calyptra** conical, shortly split at the base or entire, 0.5–0.6 mm long, slightly roughened with cells mostly prorate, just covering the beak of the operculum. **Spores** globose, 8–12  $\mu\text{m}$  diam., faintly papillose.

[Images](#)

Known only from the type locality in north-eastern N.S.W.; endemic.

*Fissidens inaequiretis* is characterised by its lax linear leaves with serrate margins, large thin-walled lamina cells (except for the marginal band), and an intramarginal limbidium in the lower part of the vaginant laminae.

Stone (1989) stated: “The type specimen was annotated by W.W.Watts as ‘*F. dealbatus* H.F. & W., det Brotherus’. There are two packets inside, one containing *F. pungens* (= *F. curvatus* var. *curvatus*) and other mosses, the second a mixture of mostly *F. pungens* with the new species *F. inaequiretis*, and it is possible that the duplicate sent to Brotherus had different components.”

*Fissidens inaequiretis* resembles *F. lagunensis* E.B.Bartram from the Philippines, but the latter lacks the intramarginal limbidium of the vaginant laminae, it has narrower marginal bands of short cells (1 or 2 rows, not 4), and the inner cells are larger (c. 20  $\mu\text{m}$  wide) and more regular. Iwatsuki & Suzuki (1977) placed *F. lagunensis* into the synonymy of *F. bogoriensis* M.Fleisch. However, *F. bogoriensis* has larger cells, a narrower costa, it lacks the small serrated marginal row of laminal cells, and is partly bordered with 1 or 2 rows of very narrow elongated cells, although this latter feature may be absent or obscure on smaller plants. Whether or not these taxa are conspecific remains to be determined.

*Fissidens inaequiretis* also bears some resemblance to *F. pellucidus*, in which the marginal cells are smaller than those within, and there is often an intramarginal band of longer cells in the proximal part of the vaginant laminae. It differs in having a small central strand in the stem section, leaf shape, the pronounced shoulders of the perichaetial leaves, and the absence of large lax cells in all laminae.

[Bibliography](#)