

**Fissidens altisetus** Dixon, in H.N.Dixon & W.Greenwood, *Proc. Linn. Soc. New South Wales* 55: 271 (1930)

T: Lautoka, Fiji, on mountain track in dense shade, *W.Greenwood* 211; holo: BM.

Illustration: H.N.Dixon & W.Greenwood, *op. cit.* pl. 8, fig. 6a–d.

Rhizautoicous. Plants bud-like, 0.5–1.0 mm tall; protonema persistent. Stems 0.1–0.2 mm long. Leaves 2- or 3-jugate (vegetative and perichaetial), narrowly lanceolate, widest below, 0.25–1.00 mm long, 0.10–0.18 mm wide; apex acuminate; costa 20–30  $\mu$ m wide, often excurrent; cusp to 130  $\mu$ m long. Vaginant laminae half to three-quarters the leaf length, partly open to open. Dorsal lamina narrowly tapering, failing or reaching the base; margin entire or bluntly toothed; laminal cells oblong to irregularly 5- or 6-sided, 20–40  $\times$  10–12  $\mu$ m wide, increasing in size from margin to costa, larger basally in vaginant lamina, 25–70  $\times$  10–15  $\mu$ m.

Perigonia gemmiform. Calyptra mitriform, c. 0.35 mm long, smooth or  $\pm$ rough. Seta 1.8–5.0 mm long; vaginula 0.25–0.30 mm long, exposed. Capsules slightly asymmetrical; theca 0.30–0.45 mm long; operculum rostrate, equal. Spores 8–10  $\mu$ m diam.

Occurs in north-eastern Qld, on crumbling rock in deep shade in lowland rainforest, always mixed with other species and often overlooked. Also in Fiji and, probably, other Pacific islands.

Qld: Helenvale, 25 km S of Cooktown, *I.G.Stone* 19241, 19232, *A.G.Stone*, *A.Thorsborne* & *M.Thorsborne* (MEL).

Although included in the synonymy of *F. bogoriensis* M.Fleisch. by Iwatsuki & Suzuki (1989), I prefer to maintain *F. altisetus* as a distinct species. All plants are fertile, scattered on a persistent, flat protonema, each virtually a minute perichaetium or perigonium, and very similar in general habit to *Nanobryum thorsbornei*. In both *F. bogoriensis* and *F. lagunensis* fruiting plants are all more than 3-jugate, the smallest plants all sterile.