

Fissidens angustifolius Sull., *Proc. Amer. Acad. Arts* 5: 275 ('1861') [1862]

Type: Cuba, wet places on the ground in dense woods, *C. Wright* (Sullivant, *Musci Cubensis* 18); holo: FH; iso: BM, NY.

non Fissidens angustifolius Schimp. ex E.S.Salmon, *Ann. Bot. (London)* 13: 125 (1899).

Illustrations: R.A.Pursell, *Fl. Neotropica Monogr.* 101: 222, fig. 123A–K (2007).

Plants light to dark green, 2–8 mm long, 1.3–2.0 mm wide with leaves. **Stems** unbranched; in section with a small central strand; axillary hyaline nodules present; rhizoids basal and axillary. **Leaves** up to 15 pairs, ±crispate when dry, loosely imbricate, palmate, linear-lanceolate to lanceolate, 1.00–1.25 mm long, 0.15–0.30 mm wide; **margins** entire, serrulate at the apex; **limbate** on all laminae; **limbidium** distinct, confluent distally or ending just below the apex, the cells uni- or bistratose; **apex** acute. **Vaginant laminae** reaching 1/2 the leaf length, fully closed, its apex acute; **dorsal lamina** narrowed to the insertion, not decurrent. **Lamina cells** ±obscure, firm-walled, conspicuously mammillose to unipapillose, irregularly hexagonal, 8–15 µm long; patches of the juxtacostal cells in the proximal half of the vaginant laminae smooth, enlarged, oblong, pellucid; **costa** of *bryoides*-type, short-excurrent or percurrent.

Monoicous (rhizautoicous). **Perigonia** terminal on stems equal in length to perichaetial stems. **Perichaetia** terminal. **Setae** yellow, darkening with age, smooth, 3–8 mm long. **Capsules** erect to inclined, symmetrical, 0.4–1.0 mm long; **exothecial cells** quadrate, collenchymatous. **Operculum** conical, long-rostrate, c. 0.5 mm long. **Peristome** of *scariosus*-type. **Calyptra** cucullate, smooth, c. 0.6 mm long. **Spores** finely papillose, 10–13 µm diam.

[Images](#)

In Australia, known from only a few localities in north-eastern Qld.

A pantropical species, it is widespread in Central America, the Caribbean, Peru, Bolivia, Paraguay, Brazil, northern Argentina; also in Africa, southern India, China, Fiji, Samoa and New Caledonia. Grows on soil, limestone rocks and boulders, and on decaying logs.

Selected specimens examined: Qld: Mt Omega, from St. Helens Gap, S of Calen, *D.H.Norris 39184* (MO); O'Keefes Ck, 26 km S of Cooktown, *H.Streimann 30911* (CANB 8909945); Quarantine Bay, Cooktown, *I.G.Stone 19224* (MEL 2265512, as *F. biformis*); Helenvale, S of Cooktown, beyond Lion's Den Hotel, *I.G.Stone 19240* (MEL 2245334, as *F. biformis*).

Pursell (pers. comm., 2 Aug. 2013) stated "*Fissidens angustifolius* Sull. – *Norris 39184*. I am of the opinion that this collection probably represents a new species. I have not made any comparison of the leaf width nor lamina cell size, but the extent of the large hyaline cells in the vaginant laminae is impressive." At the present time and given the inherent variability of some taxa, there seems little justification for considering this collection as unique.

Fissidens angustifolius is very similar to *F. biformis* Mitt. The lamina cells are of similar size, as is the leaf shape and size, and both have the costa percurrent to short-excurrent, and the limbidium present on all laminae and reaching to the leaf apex. However, while best seen in section, the lamina cells of *F. angustifolius* are strongly mammillose to unipapillose, while those of *F. biformis* are smooth. *Fissidens zollingeri* Mont., differs in having the costa ending some distance below the apex; it appears to be a commonly associated species.

Pursell (2007) noted that two packets of Wright's Cuban collections (Sullivant, *Musci Cubensis* 18) in S, and one packet in NY, contain only *F. zollingeri* Mont., which is also present in the Australian collections.

[Bibliography](#)