

## FISSIDENS SUBG. ANEURON

*Fissidens* subg. *Aneuron* Kindb., *Gen. Eur. North Amer. Bryin.* 2: 165 (1897)

Lecto: *F. hyalinus* Hook.f. & Wilson

Dioicous or rhizautoicous. Plants terrestrial, minute, delicate. Stems simple, fleshy, lacking a central strand. Leaves few, shrivelled when dry, 2–6-jugate, ±elliptical; limbidium narrow, usually complete; apex acute; costa absent or incipient in T.S. Vaginant laminae narrow, scarcely reaching mid-leaf, open to almost closed; margin ±entire; laminal cells subhexagonal, large, thin-walled, chlorophyllose. Male plants smaller than female; antheridia terminal. Calyptra mitriform. Setae terminal, pale translucent yellowish, smooth. Capsules erect, symmetrical; operculum conical-rostrate or conical-rostellate. Peristome *scariosus*-type. Spores 9–14 µm diam.

Three species are known from Australia (Stone, 1986).

### References

Iwatsuki, Z. & Mohamed, M.A.H. (1987), The genus *Fissidens* in Peninsular Malaysia and Singapore (a preliminary study), *J. Hattori Bot. Lab.* 62: 339–360.

Stone, I.G. (1986), A comparison of the species of *Fissidens* subgenus *Aneuron* in Australia, *J. Bryol.* 14: 319–325.

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| 1  | Mid-laminal cells 20–30 µm wide; limbidium 1–3-stratose; peristome teeth 25–35 µm wide at the base...  | <b>F. splachnoides</b> |
| 1: | Mid-laminal cells 30–45 µm wide; limbidium 1–multistratose; peristome teeth 40–55 µm wide at the base  | 2                      |
| 2  | Limbidium 1–2-stratose; cells 7–10 µm wide; calyptra 0.35–0.40 mm long, covering the rostrum only; cells isodiametric, 30–40 µm wide, vesiculose; walls thin; exothelial cells quadrate in mid-capsule | <b>F. nymanii</b>      |
| 2: | Limbidium 2–multistratose; cells 3–7 µm wide; calyptra 0.5–0.8 mm long, covering the operculum, flared or split at the base; cells oblong, 15–20 µm wide; walls thick; exothelial cells oblong         | <b>F. dealbatus</b>    |

**Fissidens dealbatus** Hook.f. & Wilson, *Fl. Nov.-Zel.* 2: 63 (1854)

T: Bay of Islands, New Zealand, *J.D.Hooker W.318*; holotype: BM.

Illustrations: I.G.Stone, *J. Bryol.* 14: 322, fig. 3 (1986); J.Beever, B.Malcolm & N.Malcolm, *The Moss Genus Fissidens in New Zealand: an illustrated key* 28 (2002); D.Meagher & B.Fuhrer, *A Field Guide to the Mosses and Allied Plants of Southern Australia* 39 (2003).

Leaves 1.5–2.5 mm long, 0.4–0.5 mm wide; limbidium 1–3 cells wide, 2–multistratose; laminal cells 50–90 × 30–40 µm.

Calyptra covering the operculum, mitriform, flared at the base; median cells elongate, 30–80 µm long, 15–20 µm wide, thick-walled. Setae c. 2 mm long. Capsules 0.65–1.00 mm long, 0.3–0.6 mm wide; exothelial cells 20–40 µm long, c. 12.5 µm wide. Peristome teeth 40–55 µm wide at the base.

Occurs in W.A., Vic. and Tas.; on soil, usually in wet fern gullies. Also in New Caledonia, Vanuatu, Fiji, Samoa and New Zealand.

W.A.: 30 km from Port Gregory on Yeringa Springs road, *E.B.Best 2884* (PERTH; sterile). Vic.: Otway Ra., *M.Davis* (MEL 56883); Cement Ck, Warburton, *I.G.Stone 487* (MEL); Tarra Valley, South Gippsland, *I.G.Stone 9974* (MEL). Tas.: Stackhouse Falls, *W.Archer* (NY); Upper Browns R., *A.V.Ratkowsky H.210* (CANB, HO).

**Fissidens nymanii** M.Fleisch., *Musc. Fl. Buitenzorg* 1: 19 (1902)

T: "Tjibodas an sehr Feuchten Stellen an den Boschunger kleiner Wasserlaufe 1400 m", Java, [Indonesia], Mar. 1899, *E.Nyman*; holotype: FH.

Illustrations: M.Fleischer, *op. cit.* 19, fig. 1; H.C.Gangulee, *Mosses of Eastern India* 461, fig. 210 (1971); I.G.Stone, *op. cit.* 320, fig. 1 (1986).

Leaves 1.9–2.7 mm long, 0.45–0.50 mm wide; limbidium 1 or 2 cells wide, mostly unistratose; laminal cells 50–70 × 30–45 µm.

Calyptra short, covering the beak only, 0.35–0.40 mm high; median cells isodiametric, 30–40 µm wide, thin-walled, vesiculose. Setae c. 2 mm long. Capsules 0.35–0.60 mm long, 0.3–0.4 mm wide; exothecial cells quadrate, 22–30 µm wide. Peristome teeth 40–55 µm wide at the base.

Rare in north-eastern Qld, on soil banks in rainforest. Also in India, Nepal and Malesia.

Qld: Tully Gorge, near Ravenshoe, *I.G.Stone* 19870, 19875 (MEL).

*Fissidens nymanii* was reduced to synonymy with *F. hyalinus* Hook. & Wilson by Iwatsuki & Haji Mohamed (1987), but we prefer to maintain them as distinct species.

**Fissidens splachnoides** Broth., *Öfvers. Förh. Finska Vetensk.-Soc.* 35: 37 (1893)

*Conomitrium splachnoides* (Broth.) Müll.Hal., *Gen. Musc. Frond.* 74 (1901). T: Indooroopilly, Qld, *F.M.Bailey* 256; holotype: H-BR.

*Conomitrium amplirete* Müll.Hal., *Gen. Musc. Frond.* 73 (1901); *Fissidens ampliretis* (Müll.Hal.) Broth., in H.G.A.Engler & K.A.E.Prantl, *Nat. Pflanzenfam.* 1(3): 353 (1901). T: Balls Head Bay, Sydney, N.S.W., Sept. 1884, *T.Whitelegge*; holotype: H-BR; isotype: NSW.

Illustration: I.G.Stone, *op. cit.* 321, fig. 2 (1986).

Leaves 1.2–1.3 mm long, 0.2–0.4 mm wide; limbidium 1–3 cells wide, unistratose to tristratose; laminal cells 40–50 × 20–30 µm.

Calyptra usually barely covering the operculum, 0.35–0.50 mm long; median cells mostly 20–30 × 10–15 µm. Capsules 0.35–0.50 mm long, 0.30–0.45 mm wide; exothecial cells mostly quadrate, 20–30 µm wide. Peristome teeth 25–30 µm wide at the base.

Endemic to south-eastern Qld and eastern N.S.W.; usually on soil banks in rainforest.

Qld: Binna Burra, Lamington Natl Park, *D.G.Catcheside* 65.208 (AD, MEL); Joalah Natl Park, Mt Tamborine, *I.G.Stone* 20650 (MEL). N.S.W.: Ballina, *W.W.Watts* 853 (NSW); Cambewarra Mtn road, *W.W.Watts* 6315 (NSW).