

Fissidens integerrimus

COMMON NAME

Moss

SYNONYMS

Fissidens tasmanicus Broth, ex Rodw.; *Fissidens hunteri* Willis

FAMILY

Fissidentaceae

AUTHORITY

Fissidens integerrimus Mitt.

FLORA CATEGORY

Non-vascular – Native

ENDEMIC TAXON

No

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Mosses

CURRENT CONSERVATION STATUS

2009 | Threatened – Nationally Vulnerable | Qualifiers: DP, RR, TO

PREVIOUS CONSERVATION STATUS

2004 | Threatened – Nationally Endangered

DISTRIBUTION

Indigenous. Australia and New Zealand. In New Zealand known only from the North Island (at four sites (Puketi Forest, near Kerikeri, and from two locations in the Waitakere Ranges) and the Chatham Islands (Rangiauria (Pitt Island)).

HABITAT

Aquatic. Saxicolous on base rich rocks such as basalt and gabbro. Confined to lowland streams in forest or formerly forested areas.



Waitakere Range (specimen collected by Jessica Beever). Photographer: Jeremy R. Rolfe, Licence: CC BY.



Photographed dry. Waitakere Range (specimen collected by Jessica Beever). Photographer: Jeremy R. Rolfe, Licence: CC BY.

DETAILED DESCRIPTION

Plants medium sized for the genus, saxicolous, rheophytic, dark green; all but youngest leaves usually encrusted with diatoms and detritus; shoots forming dense smooth mats of parallel prostrate stems in fast flowing water, more sparsely gregarious with more or less erect stems in slower moving water, falcate, 5-15 mm long, up to 2 mm wide, frequently branched; shoot branches readily detached; rhizoids at base of shoots and base of shoot branches, occasionally in leaf axils; stems with central strand, small axillary hyaline nodules differentiated, uniseriate axillary hairs present; leaves in 10-45 pairs, when moist slightly falcate, when dry little altered, mid-stem leaves slightly overlapping to distant, oblong lanceolate, 1.25- 2 mm long, 0.25-0.35 mm wide; leaf apex obtuse to acute; vaginant lamina 1/2-2/3 of leaf length, junction only along nerve or up to mid-way across lamina; dorsal lamina narrow, reaching to stem; nerve curved below, bent at apex of vaginant lamina, failing before leaf apex, surface cells with small lumina in cross-section, deuter cells exposed on the adaxial face; leaf margins serrulate; intramarginal border usually well developed in proximal half of vaginant lamina but sometimes very weak or absent, distal half of vaginant lamina unbordered; laminae unistratose; cells of apical and dorsal laminae quadrate to hexagonal, thick-walled (8-) 11-16(-20) microns long, clear, smooth, those in 1-4 marginal rows smaller than those nearer the nerve. Apparently dioicous or cladautoicous; female inflorescences terminal on main and axillary stems; perichaetial leaves narrower than vegetative leaves; archegonia 300-350 microns long; setae 2.5-3.5 mm long; capsule inclined, symmetrical, urn 0.4-0.6 mm long, exothecial cells quadrate to short rectangular, numbering about 30 around perimeter at midcapsule; operculum rostrate with an erect beak, equaling the length of the urn; peristome teeth 50-60 microns wide at base, bifurcate from below mid-tooth, lamellae ornamented with closely packed smooth ridges bearing intramural papilla-like thickenings in basal part of tooth, smooth at the zone of bifurcation, filaments spirally thickened; spores 13-20 microns; calyptra slightly scabrous above, mitriform, not completely covering operculum.

FRUITING

Fruit may be found throughout the year

THREATS

Extremely vulnerable to changes in water levels, aeration and quality. Also susceptible to trampling as a result of the recreational activity known as canyoning, aquatic weed invasion, deforestation and subsequent increased light levels and siltation.

SUBSTRATE

Saxicolous aquatic moss growing on basalt and andesite rock, in well aerated, fast flowing streams within forest

ETYMOLOGY

fissidens: From the Latin fissio 'fission' and dens 'tooth, prong' meaning split tooth and referring to shape of the lamina.

ATTRIBUTION

Fact Sheet Prepared for NZPCN by: P.J. de Lange August 2007. Description adapted from Beaver & Stone (1992).

REFERENCES AND FURTHER READING

Beever, J.E.; Stone, I.G. 1992: Studies of *Fissidens* (Bryophyta: Musci) in New Zealand: *F. taxifolius* Hedw. and *F. integerrimus* Mitt. *New Zealand Journal of Botany* 30: 237-246.

NZPCN FACT SHEET CITATION

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<https://www.nzpcn.org.nz/flora/species/fissidens-integerrimus/> (Date website was queried)

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/fissidens-integerrimus/>