

Fissidens berteroi

COMMON NAME

Moss

SYNONYMS

Conomitrium berteroi Mont.; *Conomitrium muelleri* Hampe; *Fissidens muelleri* (Hampe) Mitt.

FAMILY

Fissidentaceae

AUTHORITY

Fissidens berteroi (Mont.) Müll.Hal.

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: RR, TO

PREVIOUS CONSERVATION STATUS

2004 | Threatened – Nationally Endangered

DISTRIBUTION

Indigenous. North, South and Chatham Islands - current records only from Kaipara (Tinopai), Auckland, Wairarapa (Masterton, Lake Wairarapa), Wellington and Chatham Islands (Rekohu and Rangiauria). Also in Australia and South America. Some very large populations have been discovered in Auckland City (2007, 2008) and Masterton (2007)



Fissidens berteroi plants, Eel Tank, Kelly Tarlton's, Okahu Bay, Auckland. Photographer: Peter J. de Lange, Date taken: 10/09/2006, Licence: CC BY-NC.



Fissidens berteroi plants on submerged log, Eel Tank, Kelly Tarlton's, Okahu Bay, Auckland. Photographer: Peter J. de Lange, Date taken: 10/09/2006, Licence: CC BY-NC.

DETAILED DESCRIPTION

Plants very large for the genus, on rock, wood, or concrete, submerged in flowing water, bright green; shoots soft, flexuous, forming tufts or mats, to 10 cm long, 10 mm wide, frequently branched; rhizoids at stem base, occasionally in leaf axils, and in one gathering copious on the distal part of the leaf lamina and there subtending plantlets; stems without central strand, axillary hyaline nodules weakly differentiated; leaves in many pairs, patent, distant, flaccid, shrunken when dry, 5-9 mm long, 0.5-0.9 mm wide; leaf apex acuminate; vaginant lamina 2/5-1/2 of leaf length, joined to near leaf margin; dorsal lamina 25- 35 cells wide opposite junction of vaginant lamina, failing before insertion; nerve green, indistinct, failing 15-40 cells before leaf apex, 45-60 microns wide at junction of vaginant lamina, tapering from there to nerve apex, in cross-section all cells thin-walled; leaf margins entire with occasional serrations, especially near leaf apex, unbordered except sometimes a very weak border on margin of lower third of vaginant lamina; laminae unistratose, cells of apical and dorsal lamina 5-6 sided in face view, thin-walled, smooth, increasing greatly in size from margin to nerve, (10-) 15-18(-22) x 9-12 microns in mid-lamina; cells of vaginant lamina similar. Paroicous. Perichaetia and perigonia adjacent in leaf axils, on very short shoots, with reduced leaves; setae 0.8-1.5 mm long; capsule cupulate, urn 0.8 mm long, exothecial cells c. 80 around perimeter; operculum with a very short, blunt, slightly oblique beak, less than 1/2 the length of the urn; peristome teeth short, 200-245 microns long, 50-70 microns wide at base, scarcely covering capsule mouth when moist, irregularly bifid for 2/3 or more of their length, some lacunate to near base, lamellae finely papillose on dorsal surface of tooth, variably so on ventral, prongs with oblique ridges, tips truncate or tapering; spores (16-)18-22(-25) microns, papillose; calyptra cucullate.

FRUITING

Fruits may be present throughout the year.

PROPAGATION TECHNIQUE

Difficult - should not be removed from the wild

THREATS

Extremely vulnerable to changes in water levels, aeration and quality. Several populations have gone extinct over the last 100 years possibly due to change in water quality, pollution levels and competition from weeds. However, despite this species large size it is easily overlooked and recent finds on the Chatham Islands suggest that it may yet prove to be more common than currently believed.

SUBSTRATE

Saxicolous and corticolous, aquatic moss. Mostly found on rock (both gravel and rock faces), also on concrete and submerged logs

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 2009. Description based on Beever (1995).

REFERENCES AND FURTHER READING

Beever, J.E. 1995: Studies of *Fissidens* (Bryophyta: Musci) in New Zealand : *F. strictus* Hook.f. et Wils. and *F. berteroi* (Mont.) C.Muell. *New Zealand Journal of Botany* 33: 291-299.

NZPCN FACT SHEET CITATION

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MORE INFORMATION

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