**Fissidens berteroi**

**Common Name(s):**
Moss

**Current Threat Status (2009):**
Nationally Vulnerable

**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)

**Features**: 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, flacid, shrunk 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, 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; seta 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 heap, 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.

**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.

*Attribution:

**References and further reading:**

**For more information, visit:**