Orthotrichum aucklandicum

COMMON NAMES
moss

BIOSTATUS
Native – Endemic taxon

CURRENT CONSERVATION STATUS
2025 | At Risk – Uncommon | Qualifiers: DPS, DPT, IE
Jump to previous conservation statuses

CATEGORY
Non-vascular

STRUCTURAL CLASS
Mosses

DETAILED DESCRIPTION
Plants in small, blackish cushions, the tips often yellow-green to light-green. Stems erect, mostly 2-4× branched, rarely simple or once branched, c.3-12 mm high. Leaves loosely-erect and twisted, sometimes incurved when dry, loosely-erect and straight to erect-spreading when moist, 2.8-3.9 mm long, tri- or bistratose above, ligulate-lanceolate to narrowly ligulate from an ovate base, obtuse or sometimes acute; margins plane, often tristratose or quadristratose; costa ending just below the apex, in cross-section consisting of uniform stereids with no guide cells, in the upper portion of the leaf usually covered on the ventral side with larger cells, on the dorsal side usually not covered by lamina cells or if covered these often partially stereid in appearance; upper cells irregularly rounded to irregularly hexagonal, smooth; basal cells rectangular to elongate-rectangular, slightly nodose to costa, shorter towards margins. Autoicous, Perigonia often at ends of separate branches. Setae 0.5-1.1 mm long; capsules 0.8-1.2 mm long, ± 0.7 mm wide, oblong when dry, ovate to ovate-oblong when wet, gradually narrowed to the seta, immersed, the mouth positioned within the upper 2/3 of the leaf, usually constricted beneath the mouth when old and dry, smooth; exothecial cells rectangular, extremely thick-walled on the tangential side; stomates immersed in the lower ½ of the capsule; subsidiary cells strongly differentiated and completely covering the stomates; Peristome diplolepideous, single; exostome teeth 16, papillose, spreading-recurved when dry; endostome segments none; preperistome well-developed, sometimes up to ½ length of the exostome. Calyptrae conic, mitrate, strongly plicate, naked or with 1-2 multicellular hairs, with small papillae near apex. Spores multicellular, 40-70 µm, irregularly spherical to cubic-rectangular.

DISTRIBUTION
Endemic. New Zealand: Auckland Islands, Auckland Island only.

SUBSTRATE DETAILS
Saxicolous on cliff faces and rock ledges between 25 m and 365 m above sea level. Unlike other species in the genus M. aucklandica avoids sites subjected to salt spray.

THREATS
Not Threatened. Listed because it is a local endemic confined to the Auckland Islands.

GENUS
Orthotrichum

FAMILY
Orthotrichaceae

AUTHORITY
Orthotrichum aucklandicum (Vitt) Goffinet

SYNONYMS
Muelleriella aucklandica Vitt

ENDEMIC TAXON
Yes

ENDEMIC GENUS
No

ENDEMIC FAMILY
No

FRUITING
Fruits have been observed in December

PREVIOUS CONSERVATION STATUSES
2014 | At Risk – Naturally Uncommon | Qualifiers: IE
2010 | At Risk – Naturally Uncommon | Qualifiers: IE
2005 | Range Restricted | Qualifiers: OL
Jump to current conservation status

REFERENCES AND FURTHER READING
Goffinet, B.; Shaw, A.J.; Cox, C.J.; Wickett, N.J.; Boles, S.B.. 2004: Phylogenetic inferences in the Orthotrichoideae (Orthotrichaceae, Bryophyta) based on variation in four loci from all genomes. *In*: Molecular Systematics of bryophytes. 98 ed. Phylogenetic inferences in the Orthotrichoideae (Orthotrichaceae, Bryophyta) based on variation in four loci from all genomes 270-289.
Vitt, D. H. 1976. A monograph of the genus *Muelleriella* Dusén. *Journal of the Hattori Botanical Laboratory 40*: 91-113.

ATTRIBUTION
Fact Sheet Prepared for NZPCN by: P.J. de Lange (5 October 2007). Description adapted from Vitt (1976 - as Muelleriella)

MORE INFORMATION
https://www.nzpcn.org.nz/flora/species/orthotrichum-aucklandicum/

PDF DATE
25 August 2026