Radula splendida

COMMON NAMES
liverwort

BIOSTATUS
Native – Endemic taxon

CURRENT CONSERVATION STATUS
2020 | At Risk – Naturally Uncommon | Qualifiers: DP, Sp
Jump to previous conservation statuses

CATEGORY
Non-vascular

STRUCTURAL CLASS
Liverworts

Mount Ruapehu. Photographer: Jeremy R. Rolfe, Date taken: 23/11/2013, Licence: CC BY.

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DETAILED DESCRIPTION

Yellow-green plants, forming loose mats on tree trunks. Shoot systems trimorphic, normal axes 875–1300 µm × 12–17 mm, giving rise to lateral indeterminate microphyllous and amentulose branches. Microphyllous branch stature variable, leaves may be of consistent stature along shoots, or vary from smaller to large, may branch or be unbranched. Shoots rarely giving rise to full sized branches. Subfloral innovations producing gynoecia after a short distance. Fertile regions of female shoot systems forming fans at the bottom of flat, tidy mats. Stems 65–105 µm diameter, with 14–20 rows of medullar cells, and 14–17 rows of cortical cells. Leaf lobes ovate, obliquely spreading, concave, outer portion deflexed, 470–760 × 420–600 µm, margins entire, weakly imbricate, loosely interlocking over the dorsal stem surface, and mostly obscuring it, the interior lobe margin straight for most of its length, rarely with a small triangular tooth at antical end of straight margin with a single marginal papilla at the tooth apex, in lobes without teeth papilla situated on lobe margin. Lobules typically 1/4 to 1/3 lobe area, leaf lobules 387–500 × 210–300 µm, keel strongly arched, turning through nearly 90o, mostly straight along outer keel margin, giving lobule a bucket-like appearance, with a shallow notch between the top of the keel and the lobe outline. 1 papilla present at lobule apex, and 1 papilla on lobule margin above the top of the stem insertion. Lobule antical margin S-shaped, curved near stem insertion then straight before hooking upwards to an obtuse lobule apex. Free exterior lobule margin recurved, folded back over toward the lobule carinal region. Leaf lobe cells 16–20 × 11–14 µm, thin walled with pronounced triangular to nodular trigones, medial thickenings absent. Cells of lobe margin smaller than those of leaf middle, 9–13 × 8–10 µm, cell surface bulging but not mamillose or papillose. Oil-bodies one per cell, botryoidal, light brown, ovoidal, broadly ellipsoidal to subspherical, 11–14 × 5.5–8.0 µm (1-2 smaller oil-bodies may be present in marginal cells). Cells of lobule rhizoid field with up to 7 spherical oil-bodies per cell. Stem cortical cells have 2-4 spherical, botryoidal oil-bodies. Asexual reproduction by cladia, amentulose branches dislocating anywhere along their length. Asexual reproduction also by abbreviated cladia where newly initiated microphyllous axes bearing 3-4 leaves dislocate from the point of initiation. Dioicous. Antheridia produced on short spicate lateral branches, that then continue vegetative growth as amentulose or microphyllous shoots. Antheridial bracts in 5–6 pairs, isolobous, carinal regions prominent within lobules. Lobes and lobules 320–350 × 260–310 µm wide, keel arched, free exterior margin curved, apex obtuse, antical margin gently arched its entire length except above stem insertion where curvature increases, lobule surface flat, without obvious carinal region. Gynoecia terminal on full sized axes, subtended by 1 pair of female bracts above 2 full sized subfloral innovations that are again fertile. Female bracts subequal in stature, lobes to 900 × 400 µm, lobules rectangular, 2/3 lobe area. Perianths 1600–1800 µm long, parallel sided, in upper 2/3, truncate, 400–500 µm wide at mouth. Perianth walls unistratose in upper 3/4. Thickness of perianth walls increases toward perianth base, which is bistratose for 5–8 tiers of cells. Calyptral wall unistratose throughout. Calyptra and perianth walls not fused. Sporophyte capsule subspherical, valves 315–350 × 135–155 µm, widest above middle. Cells in outer layer subquadrate in upper part of valve, quadrate to short rectangular, in mid valve, increasing gradually in length toward the valve base, where short rectangular. Spores 37–50 µm diameter, echinate, barbed. Elaters bispiral, up to 400 × 7 µm.

DISTRIBUTION

?Endemic. North and South Island - known from six sites from the Kaimai Range south to Fiordland.

HABITAT

Corticolous on trees in montane forest

THREATS

As a newly recognised and cryptic species of liverwort it is very likely this species is more overlooked than threatened. The naming authors have wisely suggested that the species is a naturally uncommon, sparsely distributed and poorly known species (see Renner etal. 2010). An assessment that seems logical based on available information.

GENUS

Radula

FAMILY

Radulaceae

AUTHORITY

Radula splendida M.A.M.Renner et N.Devos

SYNONYMS
None (first described 2010)

ENDEMIC TAXON
Yes

ENDEMIC GENUS
No

ENDEMIC FAMILY
No

NVS CODE
RADSPL

PREVIOUS CONSERVATION STATUS
2009 | At Risk – Naturally Uncommon | Qualifiers: DP, Sp
Jump to current conservation status

REFERENCES AND FURTHER READING
Renner, M.A.M.; Devos, N.; Shay, A.J. 2010: *Radula splendida* sp. nov. (Radulaceae, Marchantiophyta(, a polymorphic species from New Zealand. *Nova Hedwigia 90*: 105-122

ATTRIBUTION
Fact Sheet prepared by P.J. de Lange (30 November 2010). Description based on Renner et al. (2010)

MORE INFORMATION
https://www.nzpcn.org.nz/flora/species/radula-splendida/

PDF DATE
25 May 2026