

Radula javanica

COMMON NAME

Liverwort

SYNONYMS

None

FAMILY

Radulaceae

AUTHORITY

Radula javanica Gottsche Lindenb. et Nees

FLORA CATEGORY

Non-vascular – Native

STRUCTURAL CLASS

Liverworts

CURRENT CONSERVATION STATUS

2009 | Range Restricted | Qualifiers: DP, SO

DISTRIBUTION

Indigenous. Kermadec Islands (Raoul Island). Widespread in northern Australia, western Oceania and Indonesia

DETAILED DESCRIPTION

Plants forming patches of loosely intertwined bright green to dark green stems on tree trunks and rocks. Shoots 2000 micrometre wide, 40-50 mm long, irregularly branched, thecal branching common, distinguished from athermal branches by the presence of two small leaf like appendages at their base. Stems up to 120 micrometre diameter, cortical cells undifferentiated, of about 16 cell rows, medullary and cortical cells of similar size, medullary of c.20 cells, internal walls with strong irregular faintly concave trigones, sometimes confluent, medial walls also thickened, cells with irregular outline. strong brown pigment present in all walls, free external wall evenly thickened, to a slightly greater degree than internal walls. Lobes ovoid, rarely slightly falcate, contiguous to weakly imbricate, interior margin reaching opposite stem margin, weakly ampliate at stem insertion, insertion hooked, reaching stem mid-line, dorsal leaf free strip absent, stem obscured in dorsal view. Lobules c.one fifth lobe area, keel straight, reflexed at outer extremity, carinal region rounded, slightly inflated near the base of the lobule, attached to the stem for slightly more than half its interior length, free exterior margin distinctly concave, turning the apex away from the stem, antical margin smoothly rounded its entire length, running directly into the ampliate base, interior free margin never exceeding opposite stem margin. Lobules not imbricated, not obscuring stem in ventral view. One slime papillae present at the lobule apex, another two present near the base of the free interior margin. Insertion longitudinal, hooked apically, not attaining ventral stem midline, ventral leaf free strip 1-2 cell rows wide. Lobe cells isodiametric to hexagonal, thin walled with very faint trigones 18.3-28.9 x 14.5-21.7 micrometre. Lobule cells as for the lobe, though slightly elongated. Cell surfaces smooth. Oil bodies not seen. Rhizoids with brown pigmented walls. Leaves infrequently caducous on all axes, breaking off above lobe join, premeristematic outgrowths rarely seen on the antical margins of lobe still attached to the plants. Fertile material not seen in New Zealand.

FRUITING

Has not yet been observed in the wild

THREATS

Known from very few gatherings but unlikely to be threatened. The bryophyte flora of Raoul Island has scarcely been studied by a trained bryologist. Plenty of habitat exists for this species there and there are no known human-induced threats

SUBSTRATE

On basalt lava, breccia and tuff and also on tree trunks. Throughout its world range this species is mostly found on tree trunks in cloud forest.



TAXANOMIC NOTES

Radula javanica as circumscribed for the New Zealand Botanic Region now includes the Raoul Island endemic *Radula erigens* (described as *R. cordiloba* subsp. *erigens* by Renner (2005) and then elevated to species rank as *R. erigens* (Renner et al 2013)) and also *R. multiflora*.

ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange (18 August 2007). Description adapted from Renner (2005).

REFERENCES AND FURTHER READING

Renner, M.A.M. 2005: Additions to the *Radula* (Radulaceae: Hepaticae) Floras of New Zealand and Tasmania. *Journal of the Hattori Botanical Laboratory* 97: 39-79.

Renner, M.A.M.; Söderstöm, L; Hagborg, A.; von Konrat, M. 2013: Notes on early land plants today. 29. A new combination in *Radula* (Radulaceae, Marchantiophyta). *Phytotaxa* 81: 12-14

NZPCN FACT SHEET CITATION

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MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/radula-javanica/>