Lejeunea exilis

COMMON NAME
liverwort

SYNONYMS
Jungermannia exilis Reinw., Blume et Nees; Jungermannia cucullata var. beta exilis (Reinw., Blume et Nees) Nees; Lejeunea cucullata var. beta exilis (Reinw., Blume et Nees) Gottsche, Lindenberg et Nees; Eulejeunea cucullata var. beta exilis (Reinw., Blume et Nees) Schiffn.; Microlejeunea exilis (Reinw., Blume et Nees) Bischler Bonner et H.A.Mill.; Microlejeunea lancistipula Steph.; Lejeunea lancistipula (Steph.) H.A.Mill., Bonner et Bischler; Microlejeunea subacuta Horik.; Drepanolejeunea subacuta (Horik.) H.A.Mill., Bonner et Bischler; Byssolejeunea abnormis Herzog; Lejeunea abnormis (Herzog) R.M.Schust.; Lejeunea abnormis (Gottsche) Steph.; Lejeunea byssiformis Grolle et Mizut.; Microlejeunea abnormis (Herzog) Inoue et H.A.Mill.

FAMILY
Lejeuneaceae

AUTHORITY
Lejeunea exilis (Reinw., Blume et Nees) Grolle

FLORA CATEGORY
Non-vascular – Native

ENDEMIC TAXON
No

ENDEMIC GENUS
No

ENDEMIC FAMILY
No

STRUCTURAL CLASS
Liverworts

CURRENT CONSERVATION STATUS
2009 | At Risk – Naturally Uncommon | Qualifiers: OL, SO

DISTRIBUTION
Indigenous. Kermadec Islands Group, Raoul Island. Otherwise throughout the paleotropics including China, Japan, Taiwan, Phillipines, Malaysia, Indonesia, Papua New Guinea, Australia, Norfolk Island and throughout Oceania, including the Caroline Islands

HABITAT
Lejeunea exilis is a widespread species occupying a range of habitats from damp andesitic breccia seepages and ravine walls, lignum, bark as well as branchlets and foliage, most especially those of the indigenous palm Rhopalostylis baueri and fern Hymenophyllum demissum.

DETAILED DESCRIPTION

Forming diffuse patches of thread-like shoots, either pure or admixed within other bryophytes, mid-green when fresh, fading to pale yellow-brown in herbaria. Shoots to 10mm long and 220-400 microns wide. Sparingly and irregularly branched. Shoot system monomorphic, lateral branches same stature as parent branch. Stems without secondary thickening on external cell walls, cortical cells in 7 rows with weak triangular trigones at cell angles, medulla cells in 3-5 rows, smaller than cortical cells, with weak triangular trigones at cell angles. Dorsal leaf-free strip present, one cell row wide, Branching Lejeunea-type, collar low basal ring, persistent. Leaves dimorphic. Normal leaf lobes parabolic 200-250 × 150-200 microns, obliquely-patent, remote, margins straight to slightly curved, entire, apex acute. Surface of lobe cells with ine granular ornamentation. Reduced leaf lobes lanceolate. Vitta and ocelli absent. Stem visible between lobes in dorsal view. Lobules on normal leaves large relative to lobe size, c. 2/3 the lobe area, broadly ovate, inflated, keel curved in interior half then straight, antical margin straight, not obscured in ventral view, first lobule tooth unicellular, cell curved outward to point away from shoot apex, lobule arch U-shaped, of three cells, lobule second tooth obsolete, lobule papilla attached to lobule margin at base of first lobule tooth. Lobules on reduced leaves two to five cells only. Underleaves small, widely remote, 0.5-2.0× wider than the stem, broadest toward apex of lobes, variable, large underleaves deeply bifid, with divergent lobes one to two cells wide at base and two to three cell tiers high, sinus gaping, smaller underleaves unlobed, lanceolate. Underleaf insertion transverse across two ventral cortical cell rows in bifid underleaves, and a single ventral cortical cell in lanceolate underleaves. Asexual reproduction by ribbon-like gemmae produced from leaf lobe margins. Dioicous (?). Gynoecia terminal on shoots, subtended by a single Radula-type subfloral innovation bearing Lejeuneoid innovation sequence. Gynoecial bracts in one pair, sub symmetrical lobes ovate, acute, lobules oblong bearing two prominent teeth, bract underleaf oblong, bifid, margins of lobes denticulate or smooth, fused with bract lobules on both sides. Males, perianths and sporophytes not seen in Raoul Island material.

FLOWERING

Not seen in Raoul Island Material

FRUITING

Not seen in Raoul Island Material

THREATS

Not Threatened. Within the New Zealand Botanical Region (sensu de Lange & Rolfe 2010) Lejeunea exilis is only known from Raoul Island, the largest of the Kermadec Islands group. On that island it is abundant and under no obvious threat. Lejeunea exilis is treated as Naturally Uncommon only because within the New Zealand Botanical Region it is confined to Raoul Island.

SUBSTRATE

Folicolous, corticolous and saxicolous in coastal, lowland and lower montane forest.

ETYMOLOGY

exilis: Thin

ATTRIBUTION

Fact Sheet Prepared for NZPCN by: P.J. de Lange (9 October 2011).

REFERENCES AND FURTHER READING

de Lange, P.J.; Rolfe, J.R. 2010: New Zealand Indigenous Vascular Plant Checklist. Wellington, New Zealand Plant Conservation Network. 164pp.
Renner, M.A.M.; de Lange, P.J. 2011. Additions to the Lejeuneaceae Flora of New Zealand: New Species from the Kermadec Islands and Range Extensions of New Zealand species into the South Pacific. New Zealand Journal of Botany 49: 421–433.

NZPCN FACT SHEET CITATION

Please cite as: de Lange, P.J. (Year at time of access): Lejeunea exilis Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. https://www.nzpcn.org.nz/flora/species/lejeunea-exilis/ (Date website was queried)

MORE INFORMATION

https://www.nzpcn.org.nz/flora/species/lejeunea-exilis/