

Lejeunea schusteri

COMMON NAME

Liverwort

SYNONYMS

Rectolejeunea denudata R.M.Schust.

FAMILY

Lejeuneaceae

AUTHORITY

Lejeunea schusteri 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: DP, Sp

PREVIOUS CONSERVATION STATUS

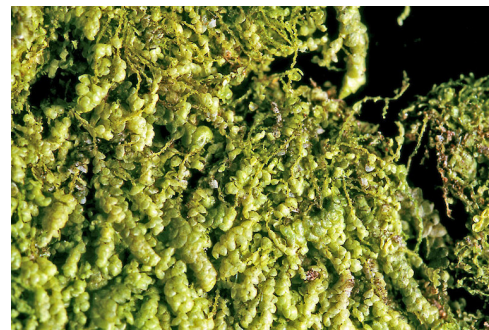
2004 | Data Deficient

DISTRIBUTION

Indigenous. New Zealand: Kermadec Islands (Raoul Island) North Island (Northland from Te Pahi (North Cape) to Campbell's Bay, also on the Poor Knights and Hen & Chickens Islands), also the Chatham Islands (Pitt Island). Recently (2010) found on Rarotonga (Cook Islands)

HABITAT

Corticolous and lignicolous on trees, especially houhere (*Hoheria populnea*, *H. equitum*), puriri (*Vitex lucens*), pohutukawa (*Metrosideros excelsa*), taraire (*Beilschmiedia tarairi*), and on the Chatham Islands lowland ribbon wood (*Plagianthus regius* subsp. *chathamicus*). Often found admixed with another thalloid liverwort *Metzgeria furcata*. Occasionally saxicolous (especially serpentinite). Usually in coastal forest.



Surville Cliffs. Oct 2009. Photographer: Peter J. de Lange, Licence: CC BY-NC.

DETAILED DESCRIPTION

Plants corticolous, sterile, forming flat, closely adnate patches, extensively denuded of leaves, yellow-green, small (leafy shoots 500–600 µm wide, on branches narrower and 350–450 µm broad), freely but irregularly branched, forming thin, pure patches. Branches all thecal, *Lejeunea* type. Stems weak, rather fragile 65–74 µm broad, formed of 7 rows of essentially leptodermous, slightly inflated, large cortical cells (ventral merophytes 2 cell-rows broad; cells in surface view c.15–18(–20) x 32–50 µm); medullary cells slightly smaller, leptodermous, in 3 rows. Leafy shoots with contiguous but hardly imbricate lobes; lobes flat to very weakly convex c.250–265 x 315–33 µm, ovate, moderately narrowed to the narrowly rounded apices; lobe margins entire, not crenulate. Leaves di- to rather polymorphic; most on main stems, with inflated lobules, but even main stem in part, branches in large part, with reduced, often few-celled or vestigial lobules; inflated lobules about 0.34–0.4 in length and under 0.25 area of lobes, strongly, diagnostically inflated and tumid in aspect; keel rather convex, the cells bounding it convex but not strongly inflated; cells of free margins involute, usually 4(–5) below apical tooth; apical tooth erect, rounded, abbreviated and never hooked; larger lobules c.110 x 125 µm from keel base to apex of apical tooth. Reduced lobules usually only 5–6-celled, with a blunt apical tooth usually formed by a single cell (+ ephemeral slime papilla). Underleaves ovate to subrotundate in outline, remote, small (to 105–115 x 115–135(–155) µm) the lobes erect, acute ending in a single not or slightly elongated cell; lobes usually 3–4 cells broad at the base; lateral margins convex but neither armed or angulate; rhizoid-initial field usually few-celled, obscure; sinus broadly V- to U-shaped, the base rounded; disc, to rhizoid-initials 2–3 cells high. Rhizoids usually lacking on mature shoots. Cells smooth, very weakly firm-walled or almost leptodermous, trigones vestigial or absent. Cells of lobe apices, marginally, rather small (11–15, 15–20 µm), in apices ranging into middle of leaf cells, variable, from 14–18 x 17–21 µm, up to 20–25 x 20–28 µm; in leaf base cells variable but much larger, leptodermous, 21–25 x 30–38 µm up to 25–28 x (35–)40–50 µm. Asexual reproduction via caducous leaves, resulting in the stems and branches mostly extensively denuded.

SIMILAR TAXA

Easily recognised by the stems and branches which are characteristically denuded of their leaves leaving the minute underleaves exposed

FRUITING

Fruiting material has yet to be seen

THREATS

Apparently a rather uncommon biologically sparse species (though being so small it is very easily overlooked). *Lejeunea schusteri* is currently known from < 10 gatherings, these often from degraded coastal forest remnants. However, there are some large populations known from secure sites such as on the serpentinite cliffs at North Cape. The recent discovery of the species on Raoul Island (2009) and Rarotonga (2010) suggests that this minute plant is probably quite widespread in Oceania and that diligent survey could be rewarding.

SUBSTRATE

Bark (usually trunks) and occasionally rock

ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange (20 October 2011). Description adapted from Schuster (2000).

REFERENCES AND FURTHER READING

Schuster, R.M. 2000: Studies on Lejeuneaceae, II. *Rectolejeunea* Evs. emend. Schust. (Lejeuneoideae). *Journal of the Hattori Botanical Laboratory* 89: 113–150.

NZPCN FACT SHEET CITATION

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

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/lejeunea-schusteri/>