

Cololejeunea grossepapillosa

COMMON NAME

Liverwort

FAMILY

Lejeuneaceae

AUTHORITY

Cololejeunea grossepapillosa (Horik.) N.Kitag.

FLORA CATEGORY

Non-vascular – Native

ENDEMIC TAXON

No

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Liverworts

CURRENT CONSERVATION STATUS

2009 | Data Deficient | Qualifiers: SO

DISTRIBUTION

Indigenous. New Zealand; South Island (Upper Buller River, Maruia and Springs Junction). Also southern and eastern Africa, including Burundi, Rwanda, Zaire, Ethiopia, Tanzania, Uganda, Malawi, Zimbabwe, Sulawesi and South Africa, also Indo-China, including Vietnam, southern China, Malaysia and Papua New Guinea.

HABITAT

In beech (*Nothofagus* spp.) forest. Muscicolous, inhabiting the inner leaf surfaces of the mosses *Weymouthia cochlearifolia* and *Lembophyllum divulsum*.

DETAILED DESCRIPTION

Plants tiny, shoots to 250 μm wide and 3mm long, forming diffuse bright green patches on the leaves and stems of large epiphytic mosses. Stems 20-25mm diameter, with five to six cortical and onemedulla cell row, all walls unthickened except for weak triangular trigones composed of primary wall at cell junctions, medulla cell three times as long as cortical cells. Branching sporadic, athecal. Leaves remote, dimorphic, with normal and reduced leaves intermixed without transitional forms, full-sized leaves with lobes ovate-rotund, 110-130 x 95-120 μm along axis perpendicular to length, apex rounded, rarely obtuse, subislobous, lobules on full sized leaves 0.8x lobe area carinal region broadly inflated, with concave lobes, leaves appearing more or less spherical. Lobe cells prominently papillose, papillae 10-16 μm high, cells isodiametric, 9-15 μm diameter, cell walls unthickened. Ocelli and vitta absent. Lobule first tooth moniliform, of two elongated cells, the lower cell fused with adjacent proximal lobule cell for 0.66 its interior length lobule papilla fused to lobule margin at junction between basal cell of first tooth and adjacent cell. Lobule second tooth unicellular, formed by an inflated, elongate cell orientated almost perpendicular to the first lobule tooth, cells of the lobule antical margin also elongate, to 4x long as wide. Carinal region cells smooth, keel cells papillose as for lobe cells. Lobule fused to stem via a single, inflated cell. Explanate lobules on reduced leaves rectangular, plane, without obvious teeth. Oil-bodies not known. Asexual reproduction by discoidal gemmae, comprised of 16 cells, with entire margins and no adhesive cells, produced haphazardly from lobe, keel and ventral cells of lobule. Initial phase of gemma development characterized by marked swelling of progenitor cell. Progenitor cell then either produces gemma, or alternatively a shoot primordium that gives rise to a vegetative shoot, whose origin is from the lobule or lobe surface. Sexuality, sexual reproductive structures and sporophyte unknown from New Zealand material.



FRUITING

Sporophytes and perianths not seen in New Zealand material

THREATS

Poorly known. *Cololejeunea grossepapillosa* was discovered by accident. As it is very small and yet is found on the leaves of two very common, widespread mosses it is more likely to be overlooked than it is likely to be actually threatened. On this basis Renner & Pocs (2011) recommend a threat status of "Data Deficient", qualified SO (Secure Overseas).

SUBSTRATE

Muscicolous on the inner leaves of mosses such as *Weymouthia cochlearifolia* and *Lembophyllum divulgum*.

ATTRIBUTION

Fact Sheet Prepared for NZPCN by: P.J. de Lange (11 October 2011). Description adapted from Renner & Pocs (2011).

REFERENCES AND FURTHER READING

Renner, M.A.M.; Pocs, T. 2011: *Cololejeunea grossepapillosa* (Lejeuneaceae: Jungermanniopsida), an inconspicuous species new for New Zealand. *New Zealand Journal of Botany* 49: 295-303.

NZPCN FACT SHEET CITATION

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<https://www.nzpcn.org.nz/flora/species/cololejeunea-grossepapillosa/> (Date website was queried)

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/cololejeunea-grossepapillosa/>