

Frullania apiculata var. apiculata

COMMON NAME

Liverwort

FAMILY

Frullaniaceae

AUTHORITY

Frullania apiculata (Gottsche, Lindenb. et Nees) Gottsche, Lindenb. et

Nees var. *apiculata*

FLORA CATEGORY

Non-vascular – Native

ENDEMIC TAXON

No

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Liverworts

CURRENT CONSERVATION STATUS

2009 | Data Deficient | Qualifiers: OL, SO

DISTRIBUTION

Indigenous. New Zealand: Kermadec Islands (Raoul Island only). Also Tropical Africa (including Cameroon, Ghana); Madagascar; Tropical Asia (including Myanmar, Sri Lanka, Indonesia, Laos, Malaysia, Philippines, and Vietnam); Papua New Guinea, Australia, and widely distributed throughout the islands of the Pacific, including Hawaii

HABITAT

Corticolous in “wet forest” on the canopy branches of Kermadec pohutukawa (*Metrosideros kermadecensis*) and other trees such as hutu (*Ascarina lucida* var. *lanceolata*) and Kermadec nettle tree (*Pouzolzia australis*)



DETAILED DESCRIPTION

Corticolous, plants olive-brown to reddish-brown, small to medium (600–1000 µm wide), forming a loose mat, creeping over, or intermingled with other hepaticae, occasionally closely adnate to substrate. Main stem to 30 mm long, 75–150 µm in diameter, to 11 cells wide; c.30 cortical cells + 60 medullary cells, cortical cells smaller than the medullary cells, cell walls firm, lumen irregularly shaped; outer 1–3 rows usually heavily thickened and pigmented red-brown. Branching Frullania-type, pinnate to bipinnate (occasionally tripinnate), 2–4mm long, obliquely spreading. Initial branching appendages vary, the first branch underleaf (BUL1) with three distinct segments, the ventral lamina divided 0.25 its length into two subequally sized lobes, the third dorsal segment saccate, sulcate, rarely explanate; the first branch leaf (BL1) either reduced in size, elobulate, with leaves characteristic of the main stem starting at BL3, or with two distinct segments, a strap-shaped dorsal segment + 1 saccate ventral segment (+ a stylus). Leaves of main stem variable: distant, contiguous, or densely imbricate; concave apices weakly to strongly incurved, apices minutely apiculate to 40 µm long; dorsal margin extending beyond the farther edge of the stem toward truncate or rarely rounded bases; surface smooth; margins entire. Lobules ± remote, to 150 µm, subparallel to obliquely spreading, cylindrical, ± uniformly inflated, slightly dorsiventrally appressed near mouth margin, 120–350 × 60–140 µm, rarely 1–2× as long as wide, lobule margins ± parallel. apex obtuse. Stylus filiform to narrowly foliaceous, 60–80 µm long. Underleaves of leading stems flat, obovate-cuneate to rarely suborbicular, bilobed (cut 0.3–0.4 of length), sinus narrowly acute V-shaped, lobes subtriangular, apices acute (rarely acuminate). Secondary branch lobules slightly smaller otherwise similar. Lobe median cells variable ranging from weakly to strongly thickened, pale yellow to subhyaline walls, with or without heavily pigmented, red-brown, secondary thickening, the trigones ± indistinct, confluent, subtriangular occasionally with intermediate thickenings on longer walls, cell cavities to 25.0 × 12.5 µm, lobe basal cell walls thin, large, occasionally confluent, trigones subnodulose often with conspicuous intermediate thickening, basal cells several, larger than surrounding cells, cell cavities to 55 × 30 µm wide; lobe marginal cells subhyaline, irregular in shape, weakly to strongly thickened, cavities 6–10 × 5–8 µm. Underleaf median cells irregular in shape, trigones subhyaline, nodulose, confluent occasionally distinctly convex. Lobule median cell walls sinuous, trigones confluent with nodulose intermediate thickening, cavities often c.2× long as wide, to 17 × 9 µm. Asexual reproduction, none recorded. Sexual structures not seen in Raoul Island specimens.

FRUITING

Not seen in Raoul Island specimens

THREATS

Known only from a few chance gatherings made from the fallen branches of canopy trees growing within the “wet” forest type of Raoul Island. Possibly widespread on Raoul as this type of habitat is common, and Frullania species are notoriously difficult to identify in the field.

ATTRIBUTION

Fact Sheet Prepared for NZPCN by: P.J. de Lange (29 December 2011). Description modified from von Konrat & Braggins (2001).

REFERENCES AND FURTHER READING

von Konrat, M. and Braggins, J. E. (2001). Notes on Five *Frullania* Species from Australia, including Typification, Synonyms, and New Localities. *The Journal of the Hattori Botanical Laboratory* 91: 229–263.

NZPCN FACT SHEET CITATION

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<https://www.nzpcn.org.nz/flora/species/frullania-apiculata-var-apiculata/> (Date website was queried)

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/frullania-apiculata-var-apiculata/>