

Leptinella rotundata

SYNONYMS

Cotula dioica var. *rotundata* Cheeseman, *Cotula rotundata* (Cheeseman) D.G.Lloyd

FAMILY

Asteraceae

AUTHORITY

Leptinella rotundata (Cheeseman) D.G.Lloyd et C.Webb

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Herbs - Dicotyledonous composites

CHROMOSOME NUMBER

$2n = c.312$

CURRENT CONSERVATION STATUS

2017 | Threatened – Nationally Endangered | Qualifiers: DP, RR, Sp, St

PREVIOUS CONSERVATION STATUSES

2012 | Threatened – Nationally Vulnerable | Qualifiers: St

2009 | Threatened – Nationally Critical | Qualifiers: DP, Sp

2004 | Threatened – Nationally Vulnerable

DISTRIBUTION

Endemic. New Zealand: North Island (west coast from Scott's Point, Te Pahi south to the Waitakere Ranges).

This species should be looked for in any suitable cliffside habitat along the west coast of the northern North Island. In some respects it has a distribution similar to another west coast endemic *Veronica speciosa*, which has been recorded at three of the five known sites for *L. rotundata*. The species was rediscovered in the Waitakere Ranges in April 2010 some 113 years after it was first found there by Thomas Cheeseman and 104 years after it was described by him as new to science from those gatherings.

HABITAT

Coastal cliff faces and boulder falls. Occupies a very specific habitat, i.e. preferring the wind and salt-blasted margins of vegetated cliff faces, where other competing plants are held in check. Typically sparse and patchy in its distribution at any given site.



Maunganui Bluff (November). Photographer: John Smith-Dodsworth, Licence: CC BY-NC.



Close up of flower. Photographer: Shannel Courtney, Licence: CC BY-NC.

DETAILED DESCRIPTION

Creeping perennial herb forming diffuse patches. **Rhizomes** on soil surface, dark green or purple-green, sparsely covered in long, silky hairs; branches few, occurring at flowering nodes; leaves paired, spaced 10–30 mm apart; short shoots alternating on both sides of rhizome, these with 3–4 leaves. **Leaves** simple 10–50 × 5–15 mm, suborbicular, membranous, yellow-green, sometimes purple-brown pigmented toward leaf base, both surfaces sparsely covered in long silky hairs, veins not evident. **Leaf margins** crenate. **Flowers** monoecious, yellow-green, arising directly from rhizomes on stout, villous peduncles 20–60 mm long. **Capitula** 5–7 mm diam., hemispherical, with 6–12 phyllaries (bracts) in 1–2 subequal rows, broadly elliptic, green, villous, with a distinct, sometimes finely toothed brown pigmented margin. **Pistillate (female) florets** usually 0–5, sometimes up to 12 in 1 incomplete row. **Staminate (male) flowers** 40–90. **Achenes** (seeds) 1.9 x 1.1 mm, brown.

SIMILAR TAXA

Easily distinguished from other *Leptinella* species by the suborbicular leaves and high chromosome number. Lloyd (1972) indicates that the reproductive system, coupled with the high chromosome number and northern distribution, are unusual traits in Section *Elongata*, within which this species belongs, and infers from that that *L. rotundata* is potentially a relic species within this section.

FLOWERING

August–January (but sporadic flowering can occur at any time of the year)

FLOWER COLOURS

Brown, Green

FRUITING

October–April (but fruiting material can be found at any time of the year)

LIFE CYCLE

Papery cypselae are dispersed by wind and possibly attachment (Thorsen et al., 2009).

PROPAGATION TECHNIQUE

Very easily grown by division of established plants. In the wild female plants occur in isolation from “males” so seed set is minimal, and restriction to hermaphroditic flowers on “male” plants. For this reason most plants in cultivation are raised from division of larger individuals. In cultivation this species is often short-lived and benefits from regular division to keep plants vigorous.

THREATS

This species is threatened at all known locations by coastal erosion, weed invasion of its narrow cliff-top and boulder bank habitats, and by the seemingly natural separation of male and female plants. Thus in the wild, as far as is known, seed is rarely if ever formed. The separation of the sexes is not unique to this species in the genus, being also the case for *Leptinella dispersa* subsp. *rupestris* (D.G.Lloyd) D.G.Lloyd et C.Webb.

ETYMOLOGY

leptinella: From the Greek word leptos (meaning slender, thin or delicate), referring to the ovary

ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange (31 August 2006). Description from Lloyd (1972) - as *Cotula rotundata*.

REFERENCES AND FURTHER READING

Lloyd DG. 1972. A revision of the New Zealand, Subantarctic, and South American species of *Cotula*, section *Leptinella*. *New Zealand Journal of Botany* 10(2): 277–372. <https://doi.org/10.1080/0028825X.1972.10429156>.
Thorsen MJ, Dickinson KJM, Seddon PJ. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285–309. <https://doi.org/10.1016/j.ppees.2009.06.001>.

NZPCN FACT SHEET CITATION

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MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/leptinella-rotundata/>