

Xanthoparmelia semiviridis

COMMON NAME

Resurrection lichen

SYNONYMS

Chondropsis semiviridis, Parmeliopsis semiviridis

FAMILY

Parmeliaceae

AUTHORITY

Xanthoparmelia semiviridis (F.Muell. ex Nyl.) O.Blanco, A.Crespo, Elix, D.Hawksw. & Lumbsch

FLORA CATEGORY

Lichen – Native

ENDEMIC TAXON

No

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Lichens - Foliose

CURRENT CONSERVATION STATUS

2018 | At Risk – Declining | Qualifiers: EF, SO

BRIEF DESCRIPTION

Characterised by its vagant, unattached habit, with no rhizines on the lower surface. When dry, it rolls up into a convex ball up to 30-mm diam. Within minutes of wetting it unrolls, changing into a dichotomously branched, foliose form. In its dry state, large numbers of *X. semiviridis* thalli often accumulate in windrows, along fences, alongside roadside gravel verges, and among small shrubs, grasses and other debris.

DISTRIBUTION

South Island: E of the Main Divide. On soil (and freely windblown), in dry inland basins of Marlborough (Molesworth), Canterbury (Balmoral, Mackenzie Country) and Central Otago, occasionally close to the coast in the suburbs of Christchurch (in grassland rough on Shirley golf course!), and very recently in alpine scree garden in the Dunedin Botanic Gardens, though the small population developed here has not survived the rapid growth of alpine plantings on the scree.

Also in arid and semi-arid deserts in microphytic soil crusts of SE Australia.

HABITAT

Dryland grassland. It occurs on bare, arid soils in lowland (rarely), montane and subalpine grasslands heavily grazed by sheep and/or rabbits, and is often associated with *Rumex acetosella* and *Thymus vulgaris* in these depleted habitats.

DETAILED DESCRIPTION

Thallus unattached, small-foliose, dichotomously branching, dorsiventral when wet, rounded into a ball when dry.

Upper surface smooth, yellow-green (usnic acid). **Lower surface** pale yellow, smooth or wrinkled, lacking any organs of attachment. **Apothecia** rare, sessile, laminal. **Ascospores** colourless, simple, 8 per ascus.

Chemistry: Cortex K–, UV–; medulla K+ pale brown, C–, Pd+ orange-red; containing usnic acid, fumarprotocetraric acid, succinprotocetraric acid and protocetraric acid (tr.).



Butchers Creek, Alexandra. Photographer: Melissa Hutchison, Date taken: 18/07/2021, Licence: CC BY-NC.



Canterbury Clay Target Club, West Melton, Christchurch. Photographer: Melissa Hutchison, Date taken: 03/07/2020, Licence: CC BY-NC.

SIMILAR TAXA

Xanthoparmelia sorediata grows in the same habitats but is much rarer and more scattered. *Xanthoparmelia sorediata* is distinguished from *X. semiviridis* by its deeper, duller colour and the presence of soralia.

LIFE CYCLE

In a recent study using a field-based wind tunnel Eldridge & Leys (1999) showed that continual bombardment of *X. semiviridis* thalli against both the soil surface and physical objects (fallen branches debris etc.) resulted in the breakdown of thalli into small, detached apical fragments that were easily moved by wind. They hypothesise that thallus fragments are likely to move with much higher frequencies than larger, intact thalli, and thereby provide a means of dispersal to new areas.

THREATS

Habitat loss and modification of the dryland habitats it occupies. Agricultural intensification (e.g. irrigation, fertilisation) and weed invasion.

SUBSTRATE

Vagrant (unattached, on the ground)

ETYMOLOGY

semiviridis: From the Latin semi- 'half' or 'partially' and 'viridis 'green'

ATTRIBUTION

Fact sheet prepared by Melissa Hutchison (30 June 2020). Brief description, Distribution, Habitat, Features, Similar Taxa and Life cycle sections copied from Galloway (2007).

REFERENCES AND FURTHER READING

Eldridge D.J. and Leys J.F. 1999: Wind dispersal of the vagant lichen *Chondropsis semiviridis* in semi-arid eastern Australia. *Australian Journal of Botany* 47: 157–164.

Galloway D.J. 2007: *Flora of New Zealand: Lichens, including lichen-forming and lichenicolous fungi*. 2nd edition. Lincoln, Manaaki Whenua Press. 2261 pp.

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/xanthoparmelia-semiviridis/>