

# Thamnolia vermicularis var. vermicularis

## COMMON NAME

Whiteworm lichen

## SYNONYMS

*Cerania vermicularis*, *Lichen subuliformis*, *Lichen vermicularis*, *Thamnolia subuliformis*, *Thamnolia vermicularis* var. *subuliformis*

## FAMILY

Icmadophilaceae

## AUTHORITY

*Thamnolia vermicularis* (Sw.) Ach. ex Schaer. var. *vermicularis*

## FLORA CATEGORY

Lichen – Native

## ENDEMIC TAXON

No

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Lichens - Fruticose

## CURRENT CONSERVATION STATUS

2018 | Not Threatened | Qualifiers: SO

## BRIEF DESCRIPTION

Characterised by the terricolous habit; the straggling, unattached thallus of white, prostrate, terete, hollow, worm-like stems, that are simple or forked, 1-4 cm long.

## DISTRIBUTION

**North Island:** Gisborne (Raukumara Ranges), Wellington (Kaimanawa Mountains, Ruahine Ranges, Tararua Ranges). **South Island:** Nelson (Lake Cobb, Lookout Range, Mt Arthur, St Arnaud Ranges), Marlborough (Mt Stokes, Rachel Range, Island Saddle, Mt Fyffe), Canterbury (Temple Basin, Craigieburn Ranges, Torlesse Range, Sebastopol), Otago (Rock & Pillar Range), Southland (Fiordland). **Stewart Island:** (Mt Anglem).

Most richly developed in the mountains of eastern South Island, from the Torlesse Range to Maungatua.

Cosmopolitan.

## HABITAT

On soil, among mosses, or grass in alpine or subalpine grassland, herbfield and fellfield, both east and west of the Main Divide. Also found in drylands.



Spider Lakes, Heron Basin. Photographer: Melissa Hutchison, Date taken: 30/11/2016, Licence: CC BY-NC.



Luxmore Hut, Kepler Track, Fiordland. Photographer: Melissa Hutchison, Date taken: 04/10/2020, Licence: CC BY-NC.

## DETAILED DESCRIPTION

**Thallus** of straggling, prostrate, terete, hollow, worm-like stems, that are simple or forked, 1-4 cm long. **Surface** smooth, matt, white or greyish-white, becoming pinkish on storage.

**Chemistry:** Two chemodemes present: (1) Medulla K+ yellow, C-, KC-, Pd+ orange, UV-; containing thamnolic acid. (2) Medulla K- or pale-yellowish, C-, KC-, Pd+ yellowish, cortex UV+ golden-yellow; medulla UV+ blue-white; containing baeomycesic and squamatic acids. Thamnolic acid (UV-) chemodemes have a tendency to turn pinkish on long storage in the herbarium, while the UV+ chemodeme does not.

Several lichenicolous fungi occur on *Thamnolia vermicularis* and in the past these infections were often mistaken for ascomata. The following lichenicolous fungi are known as parasymbionts of *Thamnolia*: *\*Cercidospora thamnoliicola* Ihlen (Ihlen 1995), *\*Polycoccum vermicularium* (Linds.) D.Hawksw., *\*Stigmidium frigidum* (Sacc.) Alstrup & D.Hawksw., *\*Thamnogalla cromiei* (Mudd.) D. Hawksw.

## SIMILAR TAXA

The infertile stalks (podetia) of some species of *Cladonia* look similar, but they tend to be attached, erect and straight, whereas *Thamnolia* stems are pure white, prostrate, and often straggling or entangled.

## SUBSTRATE

Terricolous

The UV- chemodeme is more common in the Southern Hemisphere than it is in the Northern Hemisphere (Satô 1965: 324). In New Zealand it has an altitudinal range from 287 m (Conroy's Gully near Alexandra) to 3000 m (Mt Aspiring) and is most richly developed in the mountains of eastern South Island, from the Torlesse Range to the Blue Mountains. In this latter locality, exceptionally well-developed thalli occur reaching 12-15 cm in length. The UV+ chemodeme is much rarer in New Zealand (Satô 1965: 324) ranging from the St Arnaud Ranges to Mt Anglem on Stewart Island. This chemodeme is much more common in the Northern Hemisphere than it is in the Southern Hemisphere (Satô 1965), though in arctic North America both chemodemes appear to be equally distributed (Thomson 1984; Brodo *et al.* 2001).

## ATTRIBUTION

Fact sheet prepared by Melissa Hutchison (5 September 2021). Brief description, Distribution, Habitat, Features, and Extra information sections copied from Galloway (1985, 2007).

## REFERENCES AND FURTHER READING

- Brodo I.M., Sharnoff S.D. & Sharnoff, S. 2001: *Lichens of North America*. New Haven & London, Yale University Press. 795 pp.
- Galloway D.J. 1985: *Flora of New Zealand: Lichens*. Wellington: PD Hasselberg, Government Printer. 662 pp.
- Galloway D.J. 2007: *Flora of New Zealand: Lichens, including lichen-forming and lichenicolous fungi*. 2nd edition. Lincoln, Manaaki Whenua Press. 2261 pp.
- Satô M. 1965: Mixture ratio of the lichen genus *Thamnolia* in New Zealand. *Bryologist* 68: 320-324.
- Thomson J.W. 1984: *American Arctic lichens 1. The macrolichens*. New York, Columbia University Press. 504 pp.

## MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/thamnolia-vermicularis-var-vermicularis/>