

# Psoroma inflatum

## FAMILY

Pannariaceae

## AUTHORITY

Elvebakk

## FLORA CATEGORY

Lichen – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Lichens - Squamulose

## CURRENT CONSERVATION STATUS

Not Evaluated

## BRIEF DESCRIPTION

The inflated, glossy thallus is characteristic for this species.

## DISTRIBUTION

**South Island:** Canterbury (Craigieburn Range), Otago (Kakanui Range, Old Man Range).

## HABITAT

An alpine species. Locally common on moss in rock crevices of small outcrops in subalpine scrub. Known from a handful of specimens in the Southern Alps.



Growing amongst moss on rock, Castle Hill Canterbury. Photographer: Marley Ford, Date taken: 21/02/2020, Licence: CC BY.



Growing amongst moss on rock, Castle Hill Canterbury. Photographer: Marley Ford, Date taken: 21/02/2020, Licence: CC BY.

## DETAILED DESCRIPTION

**Thallus** squamulose, tripartite, terricolous, often on bryophytes and lichens, forming patches 3–10 cm wide on an indistinct hypothallus. **Chlorobiont** squamules 0.5–3 mm wide, irregularly branched, forming coralloid patches of weakly ascending to erect lobes 0.3–0.6 mm thick, without a dorsiventral morphology and anatomy; upper surface glossy, brown, glabrous, except for a distinct white tomentum on the lower, less exposed side. **Cortex** 60–100 µm thick, upper part brown and sclerenchymatic, lower part pale and paraplectenchymatic, lumina mostly elongate, arranged perpendicularly to the upper surface, 4–8 × 2–4 µm, walls 3–4 µm thick, less pigmented and thinner on the less exposed side, where lumina are more elongated, up to 12 µm long and often arranged in a labyrinth-like pattern. Chlorobiont layer 80–150 µm thick, below the cortex, of **Trebouxia** cells, globose to irregularly subglobose, 8–20 µm diam.; chloroplasts angular. **Medulla** centrally positioned, 50–150 µm thick, but poorly defined due to transitions towards the surrounding chlorobiont layer. **Cyanobiont** *Nostoc*, in globose to weakly coralloid, greyish **cephalodia**, 0.1–0.3 mm wide, situated between chlorobiont squamules, common. *Nostoc* cells greyish green, irregularly subglobose to ellipsoid, often angular, with uneven surfaces, 4–6 × 2–3 µm, organized within small glomeruli and without visible chain structures. **Apothecia** common, substipitate, 3–7 mm wide, discs reddish brown, strongly cupulate; thalline excipulum 0.3–1 mm broad, crenate and swollen, of few and large, inrolled lobes 0.3–1 mm wide, occasionally with inflated additional irregular outgrowths, glabrous on the lower side, except for a very thin, partial white tomentum at the bases. **Epithecium** brown, c. 15 µm thick; hymenium pale, 100–120 µm, IKI+ blue; hypothecium brownish, 60–80 µm, algal layer continuous below the hypothecium. **Paraphyses** simple, septate, c. 2.5 µm wide, and strongly adglutinated in the epithecium. **Asci** clavate, c. 80 × 15 µm, with 8 spores, internally with IKI+ blue structures, seen as tube-like in low IKI concentrations. **Ascospores** regularly ellipsoid to weakly citriform or ovoid, 17–23 × 8–11 µm, perispores 20–30 × 10–13 µm, regularly verrucose, apically mostly with verrucose or nodulose extensions, sometimes triangular and pointed, c. 3 µm long, rarely acuminate and c. 8 µm long. **Pycnidia** not observed.

**Chemistry:** brown melanins, lacking TLC-detectable compounds.

## SIMILAR TAXA

Similar to *Psoroma hypnorum*, but squamules are inflated and strongly glossy, ascending, without dorsiventral morphological and anatomical structures, except for white tomentum on the less exposed side; apothecia are cupulate with large, swollen inrolled lobes of the thalline excipuli with scattered irregular outgrowths, and ascospores mostly longer and narrower.

## SUBSTRATE

Terricolous

## ATTRIBUTION

Fact sheet prepared by Marley Ford (3 April 2021). Brief description, Distribution, Habitat, Features and Similar taxa sections copied from Elvebakk (2021).

## REFERENCES AND FURTHER READING

Elvebakk, A. 2021: *Psoroma inflatum*, a new alpine lichen from New Zealand. *Australasian Lichenology* 89: 49–53.

## MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/psoroma-inflatum/>