Pannaria minutiphylla

SYNONYMS
Psoroma sphinctrinum var. microphyllizans, Known as Pannaria microphyllizans senso Galloway 2007

FAMILY
Pannariaceae

AUTHORITY
Pannaria minutiphylla Elvebakk

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FLORA CATEGORY
Lichen – Native

ENDEMIC TAXON
No

ENDEMIC GENUS
No

ENDEMIC FAMILY
No

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STRUCTURAL CLASS
Lichens - Foliose

CURRENT CONSERVATION STATUS
2018 | Not Threatened | Qualifiers: SO

BRIEF DESCRIPTION
Thallus foliose, lobes irregularly to subdichotomously branched, discrete in peripheral parts, imbricate to centrally coalescing, up to 10 mm long, flattened to weakly concave; margins entire, narrowly recurved and thickened; upper surface pale greyish green when fresh and dry, salad-green when fresh and moist, gradually turning chestnut brown after storage, glabrous and glossy.

DISTRIBUTION
Common throughout the **North** and **South Islands** (currently recorded from 13 of New Zealand's 16 provinces). Also in the **Auckland Islands** and **Campbell Island**.
Australia: common in Victoria and Tasmania.

HABITAT
Common on trunks of a range of phorophytes including: *Aristotelia serrata*, *Atherosperma moschatum**, *Berberis**, *Cassinia*, *Coprosma*, *Dracophyllum*, *Eucryphia**, *Freycinetia*, *Fuchsia excorticata*, *Fuscospora*, *Halocarpus bidwillii*, *Hedycarya arborea*, *Kunzea ericoides*, *Leionema nudum*, *Leptospermum*, *Libocedrus plumosa*, *Melaleuca**, *Metrosideros*, *Olearia*, *Phyllocladus*, *Pittosporum*, *Podocarpus* (three species), *Prumnopitys ferruginea* and *P. taxifolia*, *Pseudopanax*, *Pseudowintera colorata*, *Salix**, *Tasmannia lanceolata**, and *Weinmannia*. Occasionally found on rocks or on leaves of *Beilschmiedia tawa*, *Knightia excelsa*, *Libocedrus plumosa* and *Hymenophyllum* sp. Has an altitudinal range from sea level to 1880 m near Arthurs Pass (on *Phyllocladus*) in New Zealand.

DETAILED DESCRIPTION

Thallus foliose, forming rosettes 3–15 cm diam., closely attached to the substratum unless growing over bryophytes or other uneven substrata. **Lobes** irregularly to subdichotomously branched, discrete in peripheral parts, imbricate to centrally coalescing, 07– 12 mm wide and up to 10 mm long, 80–140 mm thick, flattened to weakly concave; margins entire, narrowly recurved and thickened; upper surface pale greyish green when fresh and dry, salad-green when fresh and moist, gradually turning chestnut brown after storage, glabrous and glossy. **Upper cortex** 25–40 mm thick, with the upper third developing brown pigmentation after storage and almost sclerenchymatous near the surface, paraplectenchymatous below, with cell lumina globose to irregularly ellipsoidal, 8–15 mm long, and walls 15–30 mm thick. Phyllidia common, 02–03 mm tall, mostly developed along margins, rounded and constricted at base, subhorizontal or semi-erect, upper side corticate, ecorticate on the lower side, sometimes forming coralloid masses and then less conspicuously dorsiventral. Photobiont layer c. 20 mm thick, composed of globose to subglobose cells 5–15 mm diam., comparable to Myrmecia. Medulla 50–60 mm thick, mostly white, dark brown in lower part. Lower cortex lacking. Rhizines common, brown, simple to sparingly branched. Hypothallus felt-like, brown, sometimes forming blackish prothallus to 3 mm wide, particularly when growing on smooth bark or directly on evergreen leaves. **Cephalodia** common, laminal on upper surface, globose to subglobose when young, becoming irregularly pulvinate, and finally placodioid-nodulose and to 2 mm diam., occasionally also developed on the hypothallus and the lower surface. Epicortex as in the green-algal thallus, but with lumina 5–10 mm diam. Cyanobiont Nostoc, with cells greyish green, subglobose to irregularly ellipsoidal, 30–45 µm 4–7 mm diam., arranged within indistinct spherical glomeruli, 20–35 mm diam., lacking visible chain structures. **Apothecia** absent, sparse or common, laminal, substipitate, 1–3 mm diam.; disc rufous-brown, plane to weakly concave, often with concentric depressions and granular deposits; thalline margin crenate-striate, often with phyllidia; epithecium pale brown, 10–15 mm tall: hymenium colourless, intensely IKI+ blue, 90–100 mm thick; hypothecium pale brown, c. 80 mm thick, IKI–; paraphyses simple to weakly branched, septate, with slightly swollen apices; asci clavate, 8-spored, 70–90 µm15 mm, lacking internal IKI+ amyloid structures. Proper ascospores hyaline, non-septate, regularly elongate-ellipsoid, distally obtuse, 65–90 µm 15–21 mm; perispores. long-ellipsoidal, 65–90 µm 16–22 mm, distinctly verruculose when immature, with a few simply developed verrucae when mature, and with apical, pulvinate extensions present in most spores.
Chemistry: TLC: vicanicin (major), and 3–4 unidentified terpenoids (trace), 4- O0 -methylvicanicin in a single sample. HPLC: vicanicin (major), norvicanicin occasionally in trace amounts.

SIMILAR TAXA

Separated from *Pannaria pulverulacea* by the lack of soredia.

SUBSTRATE

Corticolous, foliicolous, or occasionally saxicolous or on man-made substrata.

ATTRIBUTION

Fact sheet prepared by Marley Ford (17 May 2021). Information in the Brief description, Distribution, Habitat, Features, and Similar taxa sections copied from Elvebakk (2013).

REFERENCES AND FURTHER READING

Elvebakk A. 2013: *Pannaria minutiphylla* and *P. pulverulacea,* two new and common, austral species, previously interpreted as *Pannaria microphyllizans* (Nyl.) PM Jørg. *The Lichenologist 45*(1): 9-20.
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/pannaria-minutiphylla/