Ionaspis lacustris

COMMON NAME
Rusty brook lichen

FAMILY
Hymeneliaceae

AUTHORITY
Ionaspis lacustris (With.) Lutzoni

FLORA CATEGORY
Lichen – Native

ENDEMIC TAXON
No

ENDEMIC GENUS
No

ENDEMIC FAMILY
No

STRUCTURAL CLASS
Lichens - Crustose

CURRENT CONSERVATION STATUS
2018 | Data Deficient | Qualifiers: SO

BRIEF DESCRIPTION
Characterised by the saxicolous habit; the subimmersed, mosaic-forming creamish white to rust-red thallus; the pinkish to orange, aspicilioid apothecia; and globose to broadly ellipsoidal ascospores, 13–20 × 6–11 µm.

DISTRIBUTION
South Island: Otago (Mt Cargill); Southland (Crombie Stream Waitutu Forest). **Campbell Island**.
Known also from Great Britain, Europe, Scandinavia, North and South America and Australia.

HABITAT
On hard, siliceous rocks in stream beds, often ±immersed or inundated; often forming an extensive zone of mosaics with aquatic species of *Anisomeridium*, *Porina*, *Staurothele*, *Strigula* and *Verrucaria*.

DETAILED DESCRIPTION
Thallus 0.1–0.4 mm thick, smooth, ±even, continuous to cracked (noticeably around apothecia), pale whitish cream or greenish to deep rust-red, effuse or forming mosaics and then delimited by red-brown prothalline lines. **Apothecia** 0.15–0.4(–0.6) mm diam., often crowded, ± immersed, or with a slightly raised proper exciple, rounded to subirregular, pale-pink to bright-orange when wet, becoming pale-orange to red-brown on storage. Proper exciple ±colourless, the upper and outer parts pale-brown to red-brown. Epithecium pale-orange to dark red-brown, inspersed with minute granules, not dissolving in K. Hymenium 90–105 µm tall. **Ascospores** broadly ellipsoidal to ±globose, 13–20 × 6–11 µm. Pycnidia 50–80 µm diam., red-brown. Conidia 4.5–6.5 × 1 µm.

SUBSTRATE
Saxicolous

ETYMOLOGY
lacustris: From the Latin lacus ‘lake’, meaning growing beside a lake

The genus *Ionaspis* is included in the family Hymeneliaceae (Eriksson *et al.* 2004; Pennycook & Galloway 2004; Eriksson 2005) and comprises some 10 taxa of freshwater, aquatic lichens found mainly in temperate, boreal–hemiboreal and/or arctic-alpine environments of the Northern Hemisphere. Species occur submerged in small creeks or streams or on riverbank boulders and stones, in the spray zone of waterfalls, on the rocky shores of lakes, or on small boulders of siliceous rocks in forest.
The genus and its separation from the related genera of *Hymenelia*, *Eiglera* and *Aspicilia* is discussed by Lutzoni & Brodo (1995), who recognised three distinct species groupings within *Ionaspis*. These are: the *Ionaspis suaveolens* group, the *I. odora* group and the *I. lacustris* group. One species, *I. lacustris*, is known from New Zealand. This species is frequently infected by lichenicolous fungi, and colonies are often infected by more than one species.

ATTRIBUTION

Fact sheet prepared by Melissa Hutchison (4 September 2021). Brief description, Distribution, Habitat, Features, and Extra information sections copied from Galloway (2007).

REFERENCES AND FURTHER READING

Eriksson O.E. (Ed.) 2005: Outline of Ascomycota – 2005: *Myconet 11*: 1-113.
Eriksson O.E., Baral H.-O., Currah R.S., Hansen K., Kurtzman C.P., Rambold G. & Laessøe T. 2004: Outline of Ascomycota – 2004. *Myconet 10*: 1-99.
Galloway D.J. 2007: *Flora of New Zealand: Lichens, including lichen-forming and lichenicolous fungi.* 2nd edition. Lincoln, Manaaki Whenua Press. 2261 pp.
Lutzoni F.M. & Brodo I.M. 1995: A generic redelimitation of the *Ionaspis-Hymenelia* complex (lichenized Ascomycotina). *Systematic Botany 20*: 224-258.
Pennycook S.R. & Galloway D.J. 2004: Checklist of New Zealand "Fungi". *In*: McKenzie, E.H.C. (Ed.) Introduction to fungi of New Zealand. *Fungi of New Zealand/Ngā Harore o Aoteroa* Volume 1. *Fungal Diversity Research Series 14*: 401-488.

MORE INFORMATION

https://www.nzpcn.org.nz/flora/species/ionaspis-lacustris/