Pyrrosia serpens

BIOSTATUS
Native

CURRENT CONSERVATION STATUS
2023 | Threatened – Nationally Critical | Qualifiers: DPS, DPT, OL, SO

CATEGORY
Vascular

STRUCTURAL CLASS
Ferns

SIMPLIFIED DESCRIPTION
Creeping fern with simple, leathery, lanceolate to oblong fronds, with sori arranged in one row either side of frond midrib.

DETAILED DESCRIPTION
Low epiphytic fern. **Rhizomes** long-creeping, 1–1.5 mm diameter, densely scaly. **Rhizome scales** peltate, ovate, 2–2.8 mm long, 0.7–0.9 mm wide, appressed, dark brown centrally, becoming orange-brown and colourless on the margin; margins dentate to ciliate. **Fronds** undivided; the sterile narrowly elliptic, 90–110 mm long (including stipe), 9–15 mm wide; the fertile narrowly elliptic to narrowly ovate or narrowly oblong, 115–175 mm long (including stipe), 7–10 mm wide; apex acute to obtuse, margins entire, base attenuate to an indistinct stipe, dark green, coriaceous to succulent, scattered stellate hairs on adaxial surface, densely covered in mostly silver-coloured stellate hairs on abaxial surface. **Sori** slightly elongate, 3–5 mm long, sunken in the lamina and sometimes protuberant on adaxial surface, arranged in one row either side of midrib, not confluent, confined to distal part of lamina, exindusiate, paraphyses present as stellate hairs. (Description from Brownsey et al. (2021)).

SIMILAR TAXA
The fronds of *Pyrrosia serpens* are narrowly oblong whereas those of *P. elaeagnifolia* are broadly ovate or elliptic. The rhizome scales of *P. serpens* are appressed, ovate in outline, 2–2.8 mm long, slightly ciliate, and have a conspicuous dark centre, whereas those of *P. elaeagnifolia* are squarrose, narrowly ovate in outline, 2–7 mm long, entire, and concolorous. Critically, the arrangement of the sori differ. In *P. serpens*, they are large, arranged in one row either side of the midrib, often partly sunken into the lamina and somewhat protuberant on the adaxial surface, whereas in *P. elaeagnifolia* they are in 2–5 rows, superficial on the abaxial surface and not protuberant on the adaxial side.

DISTRIBUTION
Indigenous. New Zealand: northern Kermadec Islands (Dayrell Island, Herald Islets). Otherwise Fiji, Cook Islands, Society Islands, Austral Islands, Gambier Islands, Pitcairn Island, Henderson Island.

HABITAT
In the New Zealand Botanical Region known only from the Kermadec Islands from a single collection made from the basal trunk of *Metrosideros kermadecensis*.

Pyrrosia serpens. Abaxial from surface showing sori. Avarua, Rarotonga. Photographer: Peter J de Lange, Date taken: 27/09/2017, Licence: CC BY.

Growth habit of Pyrrosia serpens. This plant noted as an epiphyte on ‘utu (Barringtonia asiatica), Avarua, Rarotonga. Photographer: Peter J de Lange, Date taken: 27/09/2017, Licence: CC BY.

THREATS
Brownsey et al. (2021) reported the presence of this species in the New Zealand Botanical Region on the basis of one collection made from Dayrell Island, Herald Islets, northern Kermadec Islands group (de Lange & Blanchon 2021). That specimen was collected in 2011 and at the time it was not recognised as being distinct from *P. elaeagnifolia*. As very little is known about it, for now the species was assessed as 'Data Deficient' in the region. It may yet be present on the other Kermadec Islands though critical collecting of *Pyrrosia* in 2009 and 2011 failed to find further populations of this species.

GENUS
Pyrrosia

FAMILY
Polypodiaceae

AUTHORITY
Pyrrosia serpens (G.Forst.) Ching

ENDEMIC TAXON
No

ENDEMIC GENUS
No

ENDEMIC FAMILY
No

ETYMOLOGY
pyrrosia: Flame coloured; from the Greek purros; the colour of the hairs on its leaves
serpens: Derived from Latin 'serpens', present active participle of serpo ("crawl, creep").

NVS CODE
PYRSER

REFERENCES AND FURTHER READING
Brownsey PJ, Shepherd LD, de Lange PJ, Perrie LR. 2021. *Pyrrosia serpens* (G.Forst.) Ching, a new record for the fern flora of the Kermadec Islands. *New Zealand Journal of Botany 59(2)*: 229–243. https://doi.org/10.1080/0028825X.2020.1796716.
de Lange PJ, Blanchon DJ. 2021. The flora and vegetation of Dayrell Island, Herald Islets, northern Kermadec Island group. *Records of the Auckland Museum 55*: 37–52.

ATTRIBUTION
Fact Sheet prepared for NZPCN by P.J. de Lange (12 October 2022). Description based on Brownsey et al. (2021).

NZPCN FACT SHEET CITATION
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MORE INFORMATION
https://www.nzpcn.org.nz/flora/species/pyrrosia-serpens/

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25 May 2026