

Tmesipteris horomaka

COMMON NAMES

Banks Peninsula fork fern

BIOSTATUS

Native

CATEGORY

Vascular

STRUCTURAL CLASS

Ferns

DETAILED DESCRIPTION

Epiphytic or rarely terrestrial plants. **Aerial stems** pendulous, 70–510 mm long, not known to branch within the leafy part of the stem. **Leaves** spirally arranged, narrowly oblong to narrowly ovate, linear to falcate(-sigmoid), 10–25 × 2.5–6.5 mm; apex emarginate, truncate or cuspidate, with mucro 1–2 mm long. **Synangia** 2.5–6 × 1–2 mm, rounded to slightly biconic, with the lower surface of the sporangia appressed along all or most of their length to the subtending leaf margin, and points where present projecting laterally. **Spores** 71–83 × 35–39 µm. (Description adapted from Perrie et al. (2010)).

SIMILAR TAXA

Tmesipteris horomaka is distinguished from *T. elongata* by its emarginate to truncate leaf apices and from *T. tannensis* by its more rounded synangia that do not project upwards from their subtending leaf. *Tmesipteris horomaka* is also distinguished from both these species by its octoploid chromosome number and generally larger spore size.

DISTRIBUTION

Endemic. New Zealand: South Island (Banks Peninsula).

HABITAT

An epiphyte mostly found on the trunks of the tree ferns ponga (*Alsophila tricolor*), Smith's tree fern (*A. smithii*) and wheki (*Dicksonia squarrosa*) within enclosed forest. It has also been collected once within the rich peaty soil produced by a species of harakeke/flax (*Phormium* sp.) growing on a cliff face.

CURRENT CONSERVATION STATUS

2023 | Threatened – Nationally Endangered | Qualifiers: DPR, RR

THREATS

Initially known from 11 sites and an estimated c. 75 plants, based on the eight populations visited by Perrie et al. (2010), led to *Tmesipteris horomaka* being assessed as Threatened – Nationally Critical. However, better knowledge of the population size, resulted in the conservation status being revised to Threatened – Nationally Endangered in the 2017 assessment (de Lange et al. 2018). The population is presumed to be stable.

DETAILED TAXONOMY

FAMILY

Psilotaceae



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AUTHORITY

Tmesipteris horomaka Perrie, Brownsey, et Lovis

SYNONYMS

None (first described in 2010)

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

ECOLOGY

PROPAGATION TECHNIQUE

Difficult—should not be removed from the wild.

OTHER INFORMATION

ETYMOLOGY

tmesipteris: From the Greek *tmesis* (cutting) and *pteris* (fern), alluding to the forked appendages on fertile fronds

CHROMOSOME NUMBER

$2n = c.416$

PREVIOUS CONSERVATION STATUSES

2017 | Threatened – Nationally Endangered | Qualifiers: RR

2012 | Threatened – Nationally Critical | Qualifiers: RR

2009 | Threatened – Nationally Critical | Qualifiers: DP, OL

2004 | Threatened – Nationally Critical

REFERENCING AND CITATIONS

REFERENCES AND FURTHER READING

de Lange PJ, Rolfe JR, Barkla JW, Courtney SP, Champion PD, Perrie LR, Beadel SM, Ford KA, Breitwieser I, Schonberger I, Hindmarsh-Walls R, Heenan PB, Ladley K. 2018. Conservation status of New Zealand indigenous vascular plants, 2017. *New Zealand Threat Classification Series 22*. Department of Conservation, Wellington, NZ. 82 p. <https://www.doc.govt.nz/globalassets/documents/science-and-technical/nztcs22entire.pdf>

Perrie LR, Brownsey PJ, Lovis JD. 2010. *Tmesipteris horomaka*, a new octoploid species from Banks Peninsula. *New Zealand Journal of Botany 48(1)*: 15–29. <https://doi.org/10.1080/00288251003640010>.

Townsend AJ, de Lange PJ, Norton DA, Molloy J, Miskelly C, Duffy C. 2008. New Zealand Threat Classification manual. Department of Conservation, Wellington, NZ. 35 p. <https://www.doc.govt.nz/globalassets/documents/science-and-technical/sap244.pdf>

ATTRIBUTION

Fact sheet prepared for the NZPCN by P.J. de Lange (5 May 2010).

NZPCN FACT SHEET CITATION

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<https://www.nzpcn.org.nz/flora/species/tmesipteris-horomaka/> (Date website was queried)

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/tmesipteris-horomaka/>

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