

# Tmesipteris horomaka

## COMMON NAME

Banks Peninsula fork fern

## SYNONYMS

None (first described in 2010)

## FAMILY

Psilotaceae

## AUTHORITY

Tmesipteris horomaka Perrie, Brownsey, et Lovis

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Ferns

## CHROMOSOME NUMBER

2n = c.416

## CURRENT CONSERVATION STATUS

2017 | Threatened – Nationally Endangered | Qualifiers: RR

## PREVIOUS CONSERVATION STATUSES

2012 | Threatened – Nationally Critical | Qualifiers: RR

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

2004 | Threatened – Nationally Critical

## 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.

## 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)).



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## 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.

## PROPAGATION TECHNIQUE

Difficult—should not be removed from the wild.

## 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.

## ETYMOLOGY

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

## WHERE TO BUY

Not commercially available.

*Tmesipteris horomaka*

## ATTRIBUTION

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

## 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>

## NZPCN FACT SHEET CITATION

Please cite as: de Lange, P.J. (Year at time of access): *Tmesipteris horomaka* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network.

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

## MORE INFORMATION

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