

Tmesipteris sigmatifolia

COMMON NAME

fossil fern, fork fern

SYNONYMS

Tmesipteris tannensis var. *elongata* Sahn

FAMILY

Psilotaceae

AUTHORITY

Tmesipteris sigmatifolia Chinnock

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

No

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Ferns

NVS CODE

TMESIG

CHROMOSOME NUMBER

2n = 208

CURRENT CONSERVATION STATUS

2017 | Not Threatened | Qualifiers: SO

PREVIOUS CONSERVATION STATUSES

2012 | Not Threatened

2009 | Not Threatened

2004 | Sparse

DISTRIBUTION

Indigenous. North Island (from Te Pahi south to about Thames in the east and near Wanganui in the west), South Island (from Nelson, North-west Nelson and Westland). Present also in New Caledonia.

HABITAT

Coastal and lowland forest. Usually epiphytic on tree fern trunks but also found growing terrestrially in deep leaf litter. In the northern part of its range it grows mostly within kauri (*Agathis australis* (D.Don.) Lindl.) forest.

DETAILED DESCRIPTION

Plants usually epiphytic sometimes terrestrial. **Rhizomes** far-creeping, buried within host bark or tissue, or buried within leaf litter, branched, lacking roots. **Aerial stems** pendulous, 60–280 mm long, undivided. **Lamina** spirally arranged, 10–20 mm long, bright green to dark green, distinctly sigmoid or narrow-oblong, coriaceous, apices blunt, midrib distinct, prolonged beyond lamina as a fine mucro. **Sporangia (synangia)** yellow-green, confined to the base of the upper side of the lamina, somewhat inconspicuous, unequal, testiculate with rounded apices, usually confined to upper portion of stem.



Tmesipteris sigmatifolia. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.



On ponga (*Cyathea dealbata*), Riverhead. Photographer: Jeremy R. Rolfe, Date taken: 16/05/2008, Licence: CC BY.

SIMILAR TAXA

Distinguished from the other New Zealand species by the sigmoid (sigma-shaped), mucronate, leaf-like lamina and small, rather inconspicuous, unequally sized, testiculate pairs of sporangia.

PROPAGATION TECHNIQUE

Difficult—should not be removed from the wild

THREATS

A naturally uncommon and biologically sparse species. It is never common at any particular site and is often known from only a few specimens over wide parts of its range. It would be fair to say that it is undercollected and so in part our knowledge of this species is inadequate. Nevertheless it does not seem to be threatened, partly because it requires mature forest, much of which is already protected over large parts of its known range.

ETYMOLOGY

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

WHERE TO BUY

Not commercially available

ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange (June 2009). Description adapted from Chinnock (1975).

REFERENCES AND FURTHER READING

Chinnock R.J. 1975. The New Zealand Species of *Tmesipteris* (Psilotaceae). *New Zealand Journal of Botany* 13(4): 743–768. <https://doi.org/10.1080/0028825X.1975.10430356>.

NZPCN FACT SHEET CITATION

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

MORE INFORMATION

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