

Tmesipteris sigmatifolia

COMMON NAME

fossil fern, fork fern

SYNONYMS

Tmesipteris tannensis var. *elongata* Sahni

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

2012 | Not Threatened

PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Sparse

DISTRIBUTION

Indigenous. North and South Islands. In the North Island recorded from Te Pahi south to about Thames in the east and near Wanganui in the west. In the South Island recorded 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.

FEATURES

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



On ponga (*Cyathea dealbata*), Riverhead. Photographer: Jeremy Rolfe

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.

FLOWERING

Not applicable - spore producing

FLOWER COLOURS

No flowers

FRUITING

Not applicable - spore producing

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: 743-768

NZPCN FACT SHEET CITATION

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

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

MORE INFORMATION

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