

# Tmesipteris sigmatifolia

## COMMON NAME

Fossil Fern, Fork Fern

## SYNONYMS

*Tmesipteris tannensis* var. *elongata* Sahnii

## 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 *Cyathea dealbata*, Riverhead. May 2008. 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

### **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/>