

Tmesipteris elongata

COMMON NAME

fork fern

SYNONYMS

Tmesipteris forsteri sensu A.Cunn. nom. inv., *Tmesipteris elongata* P.A. Dang. subsp. *elongata*, *Tmesipteris elongata* subsp. *robusta* Chinnock, *Tmesipteris lanceolata* M. Sykes, *Tmesipteris tannensis* var. *elongata* (P.A.Dang.) Domin, *Tmesipteris tugana* H.N.Barber

FAMILY

Psilotaceae

AUTHORITY

Tmesipteris elongata P.A. Dang.

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

No

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Ferns

NVS CODE

TMEELO

CHROMOSOME NUMBER

2n = 208

CURRENT CONSERVATION STATUS

2017 | Not Threatened | Qualifiers: SO

PREVIOUS CONSERVATION STATUSES

2012 | Not Threatened

2009 | Not Threatened

2004 | Not Threatened

DISTRIBUTION

Indigenous. New Zealand: North Island, South Island, Stewart Island/Rakiura, Chatham Islands (most common in the North Island). Also Australia.

HABITAT

Coastal to montane (but more common in lowland areas). Mostly epiphytic on a range of tree ferns (especially *Dicksonia*), trees and also emerging from the base of tank lilies (*Astelia* spp.). Less commonly found growing on cliff faces, amongst cracks and crevices in boulders and rock falls, or amongst mosses on the ground.

WETLAND PLANT INDICATOR STATUS RATING

UPL: Obligate Upland

Rarely is a hydrophyte, almost always in uplands (non-wetlands).



Dehiscent synangia. Silverstream, Upper Hutt.
Photographer: Jeremy R. Rolfe, Date taken:
11/10/2006, Licence: CC BY.



Waitakere Ranges. Photographer: Jeremy R.
Rolfe, Date taken: 07/12/1982, Licence: CC BY.

DETAILED DESCRIPTION

Rhizome brittle, dichotomously branched, 0.8–3.5 mm diameter, densely clad in dark brown rhizoids 1.0–1.5 mm long. **Aerial shoot** developing over one or many years and terminating in a small appendage 0.1–0.5× the size of the largest leaves or in small forms with predominantly distichously arranged leaves terminating in an appendage similar to the largest leaves developed; simple or dichotomously branched 1–2–(3) or more times, pendulous, 80–1180 mm long, ± quadrangular in cross-section; leaves spirally or distichously arranged, sporophylls spirally arranged. **Leaves** 1–5 per 10 mm of stem, sub-coriaceous, flexible, almost isobilateral with stomata distributed over one or both surfaces, surfaces dull mid-green; oblong, lanceolate, falcate to aristate, variable on the same plant; 10–42 mm long, (excluding mucro), 3–9 mm broad; mucro blunt 1–2 mm long. **Sporophylls** developed in regular or irregular zones or throughout most of the length except in the lowermost part, occasionally scattered amongst the leaves; slightly shorter than the leaves, 3–5 per 10 mm of shoot. **Synangium** 2–6 mm long, 1.0–2.5 mm high at point of attachment, greenish yellow to light brown at maturity, testiculate; lobes ± equal, ends obtuse; lying along the sporophyll axis; immature synangia when dried reflex at the ends and then ± lunate; deciduous at maturity. **Spores** pale yellow, often released in a mass.

SIMILAR TAXA

Tmesipteris elongata is easily recognised by the testiculate rather than biconic sporangia (synangia) which have rounded ends and by the long, tapering, lanceolate, falcate or oblong leaves without emarginate apices (cf. *Tmesipteris horomaka* (see Fact Sheet)). *Tmesipteris elongata* subsp. *robusta* described by Chinnock (1975) is usually now regarded as an extreme form of *T. elongata*.

FLOWERING

Not applicable—spore producing

FLOWER COLOURS

No flowers

FRUITING

Not applicable—spore producing

PROPAGATION TECHNIQUE

Difficult - should not be removed from the wild

ETYMOLOGY

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

WHERE TO BUY

Not commercially available

ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange (21 April 2011). 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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MORE INFORMATION

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