

Psilotum nudum

COMMON NAME

whisk fern, skeleton fork fern

FAMILY

Psilotaceae

AUTHORITY

Psilotum nudum (L.) P. Beauv.

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

No

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Ferns

NVS CODE

PSINUD

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: Kermadec Islands (Raoul Island), North Island (North Cape south to the southern shore of Lake Taupo and Tokaanu).

HABITAT

Coastal to montane. In the northern part of its range *Psilotum* is usually a local component of coastal forest where it grows on the forest floor, in rock piles and on cliff faces. It is also occasionally epiphytic on trees such as pōhutukawa (*Metrosideros excelsa*). On Raoul Island it is an abundant ground cover in the “dry” forest type on that island. In the North Island outside Northland and the Coromandel Peninsula, *Psilotum* becomes increasingly tied to geothermally active sites where it usually grows on cliff faces and warm soil around fumaroles. In the ignimbrite country north of Lake Taupo, and also along the western shore of Lake Taupo, *Psilotum* is at times a very common species growing in the joints of columnar ignimbrite. On the western shoreline of Lake Taupo in this type of habitat plants can grow very large, and they may grow right down into the flood-line where they are often associated with *Lindsaea viridis*. Around Auckland City *Psilotum* is a very common, though easily overlooked plant of stone walls (especially basalt or concrete retaining walls).



Moturua, Coromandel. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.



At Moturua, Coromandel. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.

DETAILED DESCRIPTION

Epiphytic or terrestrial plants. **Rhizome** branching, short- to long-creeping, usually clumped. **Aerial shoots** 50–100–200–(900) mm, dark green, green or yellow depending on growing conditions, erect, firm or sometimes flaccid in shaded situations, branched repeatedly in different planes in the upper part. **Branches** prominently ribbed 3–7×, subterete in cross-section, to 4.5 mm diameter; stomata restricted to furrows between ribs. **Sterile leaves** 1.0–2.5 mm long, pale yellow (translucent toward apices), restricted to ribs, subspiral, terete. **Synangia** 1.5–2.0 × 2.0–2.5 mm, yellow, globular, partitioned in 3 segments.

SIMILAR TAXA

A very distinctive species unlike to be confused with any other fern. *Psilotum* is easily recognised by the almost distinctive broom-like growth habit, with numerous twiggy, coralloid, whip-like branches usually bearing bright yellow, globular synangia (which are always partitioned in 3). *Psilotum* could be confused with species of broom (*Cytisus* and *Carmichaelia*) as these sometimes grow in habitats favoured by *Psilotum*. They may be distinguished from *Psilotum* by the presence of trifoliolate leaves, flowers and/or seed capsules, and if sterile by non-rhizomatous growth habit, and the presence of a distinct root system bearing rhizobium nodules.

FLOWERING

Not applicable—spore producing

FLOWER COLOURS

No flowers

FRUITING

Not applicable—spore producing

PROPAGATION TECHNIQUE

Easily grown from rooted pieces. Best grown in a well drained substrate, planted in full sun. Once established very hard and drought tolerant. *Psilotum* makes an excellent pot plant, a use to which it is often put overseas.

ETYMOLOGY

psilotum: From Greek psilos 'bare' or 'naked' referring to the apparent nakedness of the stems

nudum: Bare

WHERE TO BUY

Not commercially available.

ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange (7 May 2011). Description adapted from Chinnock (1998).

REFERENCES AND FURTHER READING

Chinnock RJ. 1998. Psilotaceae. *Flora of Australia 48, Ferns Gymnosperms and allied groups*: 47–53. ABRIS/CSIRO Victoria, Australia.

NZPCN FACT SHEET CITATION

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MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/psilotum-nudum/>