Psilotum nudum

COMMON NAMES
whisk fern, skeleton fork fern

BIOSTATUS
Native

CURRENT CONSERVATION STATUS
2023 | Not Threatened | Qualifiers: SO
Jump to previous conservation statuses

CATEGORY
Vascular

STRUCTURAL CLASS
Ferns

FLOWER COLOURS
No flowers

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 of 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.



North Cape. Photographer: Jeremy R. Rolfe, Date taken: 24/02/2011, Licence: CC BY.

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.



Psilotum nudum. Photographer: John Barkla, Licence: CC BY.

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 monatane. 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).

GENUS
Psilotum

FAMILY
Psilotaceae

AUTHORITY
Psilotum nudum (L.) P. Beauv.

ENDEMIC TAXON
No

ENDEMIC GENUS
No

ENDEMIC FAMILY
No

FLOWERING
Not applicable—spore producing

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

NVS CODE
PSINUD

CHROMOSOME NUMBER
2n = 208

PREVIOUS CONSERVATION STATUSES
2017 | Not Threatened | Qualifiers: SO
2012 | Not Threatened
2009 | Not Threatened
2004 | Not Threatened
Jump to current conservation status

REGIONAL CONSERVATION STATUSES
Auckland: 2025 | Regionally Not Threatened | Qualifiers: DPS, DPT Help
Current regional threat status assessments prepared according to Crisp et al. (2025) are displayed when available. The Auckland conservation status information is sourced from the "Conservation status of vascular plant species in Tāmaki Makaurau / Auckland" Simpkins E et al. (2025) report.
Northland: 2026 | Regionally At Risk – Regionally Naturally Uncommon Help
Current regional threat status assessments prepared according to Crisp et al. (2025) are displayed when available. The Northland conservation status information is sourced from the "Conservation status of indigenous vascular plants in Northland | Taitokerau" Ford et al. 2026 report.

REFERENCES AND FURTHER READING
Chinnock RJ. 1998. Psilotaceae. *Flora of Australia 48, Ferns Gymnosperms and allied groups*: 47–53. ABRS/CSIRO Victoria, Australia.

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

MORE INFORMATION

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

PDF DATE

25 August 2026