

Dicranopteris linearis

SYNONYMS

Gleichenia linearis (Burm. f.) C.B. Clarke; Polypodium lineare Bruman, Polypodium dichotomum Thunb., Mertensia dichotoma Willd.

FAMILY

Gleicheniaceae

AUTHORITY

Dicranopteris linearis (Burm.f.) Underw. var. linearis

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

No

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Ferns

NVS CODE

GLELIN

CHROMOSOME NUMBER

2n = c.160

CURRENT CONSERVATION STATUS

2017 | Threatened – Nationally Endangered | Qualifiers: RR, SO

PREVIOUS CONSERVATION STATUSES

2012 | At Risk – Naturally Uncommon | Qualifiers: RR, SO

2009 | At Risk – Naturally Uncommon | Qualifiers: SO

2004 | Range Restricted

DISTRIBUTION

Indigenous. New Zealand: North Island, where it grows on geothermally heated ground from Rotorua to Karapiti near Taupo. Widespread in tropics and subtropics.

HABITAT

In New Zealand confined to geothermally active sites where it grows on heated soils, sinter field, and around geysers, hot pools, and steam vents.

WETLAND PLANT INDICATOR STATUS RATING

FACU: Facultative Upland

Occasionally is a hydrophyte but usually occurs in uplands (non-wetlands).

DETAILED DESCRIPTION

Terrestrial fern. **Rhizomes** long-creeping, hairy. **Fronds** up to 0.3 m tall finely hairy with hairs irregularly branched; veins free. **Stipes** glaucous-brown to pale brown, persistent when dead, glabrous, terminated by a bud. **Rachises** of fronds in 1–2-tiers, forking 2–3 × at narrow angles with a bud terminating each fork, the ultimate branches pinnate, narrowly elliptic, 0.1–0.4 m long. **Pinnae** linear 10–40 × 2.5–5 mm, notched at apices, margins smooth, fused at base, pale green to yellow green to slightly glaucous green above, whitish to glaucous below. **Sori** in one row either side of midrib and well away from pinna margins, comprising 6–10 pairs of sporangia, indusia absent.



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



Craters of the Moon. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.

SIMILAR TAXA

Distinguished from the distinctly related New Zealand species of *Sticherus* C.Presl and *Gleichenia* J.E.Smith by its hairy rather than scaly rhizomes, pinnae confined to ultimate branches rather than on all rachis branches, irregularly branched lamina hairs, and by the sporangia in groups of 6–10 rather than in groups of 2, 2–4 or in rows either side of the midrib. It is the only species of the New Zealand representatives of the family Gleicheniaceae to be completely confined to geothermal sites.

PROPAGATION TECHNIQUE

Easy from rooted pieces. Once established grows quickly. Prefers a sunny site in damp soil. Frost and cold sensitive.

THREATS

Dicranopteris linearis is naturally confined to sites of geothermal activity within the Taupo Volcanic Zone. It is rather tolerant of extreme heat and able to withstand shading, and it has actively colonised newly created geothermal fields such as Karapiti. The population is considered to be stable now after significant historical decline. Its 2017 conservation status of Threatened – Nationally Endangered is based on the historical decline to what is now a very small area of occupancy. It is possible some smaller populations might be threatened by introduced weeds tolerant of heated soils but there is no hard evidence available to confirm this.

ETYMOLOGY

linearis: Linear (leaves)

WHERE TO BUY

Not commercially available.

TAXONOMIC NOTES

New Zealand plants appear to represent a distinct cytorace. This needs further investigation.

ATTRIBUTION

Fact sheet prepared by P.J. de Lange for NZPCN (1 June 2013)

NZPCN FACT SHEET CITATION

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MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/dicranopteris-linearis/>