

# Gleichenia dicarpa

## COMMON NAMES

tangle fern, swamp umbrella fern

## BIOSTATUS

Native – Endemic taxon

## CURRENT CONSERVATION STATUS

2023 | Not Threatened | Qualifiers: SO

[Jump to previous conservation statuses](#)

## CATEGORY

Vascular

## STRUCTURAL CLASS

Ferns

## FLOWER COLOURS

No flowers

## DETAILED DESCRIPTION

**Rhizome** 1.5–3.0 mm diameter, at first bearing brown lanceolate ciliate scales. **Fron**ds of 1–4 tiers of branches, 0.1–2.0 m or more long; lower tiers often branching, usually more than 150 mm wide. **Stipes** scattered along rhizomes, 0.6–0.95 m long, often bearing brown lanceolate ciliate scales; rachis bearing weak brown to white often matted stellate hairs and ciliate scales. **Pinnules** glabrous above or with scattered hairs along costa, with sparse or dense whitish to ferruginous scales along costa below; ultimate segments 0.8–1.5 mm long, 0.8–2.0 mm wide, more or less round, obtuse, flat or slightly convex above, pouched below; undersurface white, rarely green. **Sori** of 2 sporangia only. (Description adapted from Chinnock & Bell (1998)).

## SIMILAR TAXA

Often confused with *Gleichenia microphylla*, which is a taller plant, with ultimate segments flattened, and distinctly triangular, which are abaxially green (never white), and which bear 2–4 sporangia. *Gleichenia alpina* is very similar to *G. dicarpa* from which it differs by its consistently smaller fronds (rarely > 60 mm wide), and rounded rather than lanceolate scales. Recently it has been shown that *G. alpina* is present in New Zealand, though its exact distribution is still unclear (Perrie *et al.* 2007; Perrie *et al.* 2012). *Gleichenia inclusora* differs from *G. dicarpa* (with which it often grows) by the sori which are embedded up to  $\frac{3}{4}$  of their depth into the undersides of the fronds, and also by the glossy rather than mostly dull upper frond surface.

## DISTRIBUTION

Indigenous. New Zealand. North Island, South Island, Stewart Island/Rakiura, Chathams Islands. Also Australia, New Caledonia, Philippines, Borneo and Malaysia.

## HABITAT

Coastal to subalpine in poorly draining soils, clay pans and pakihi and peat bogs. In lowland peat bogs often forming dense, almost impenetrable masses hence the common name “tangle fern”.

## GENUS

Gleichenia



Gleichenia dicarpa at Torehape. Photographer: Wayne Bennett, Licence: CC BY-NC.



Each sorus consists of two sporangia. Hokitika. Photographer: Jeremy R. Rolfe, Date taken: 10/10/2013, Licence: CC BY.

## FAMILY

Gleicheniaceae

## AUTHORITY

*Gleichenia dicarpa* R. Br.

## SYNONYMS

*Gleichenia circinnata* Sw.; *Gleichenia dicarpa* var. *hecostophylla* (A.Cunn.) G.Schneid.; *Gleichenia semi-vestita* var. *hecostophylla* (A.Cunn.) Hook.f.; *Gleicheniastrum hecostophyllum* var. *majus* (T.Moore) Nakai; *Gleichenia circinnata* var. *hecostophylla* (A.Cunn.) Hook.f.; *Gleichenia dicarpa* var. *major* T.Moore; *Gleicheniastrum hecostophyllum* (A.Cunn.) Nakai; *Mertensia dicarpa* (R.Br.) Poir.; *Platyzoma dicarpum* (R.Br.) Desv.; *Calymella dicarpa* (R.Br.) C.Presl; *Calymella major* Nakai; *Gleichenia hecostophylla* A.Cunn.

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## FLOWERING

Not applicable—spore producing

## FRUITING

Not applicable—spore producing

## LIFE CYCLE AND DISPERSAL

Minute spores are wind dispersed (Thorsen *et al.* 2009).

## PROPAGATION TECHNIQUE

Fickle. Probably best left alone. Transplants have sometimes been successfully grown in shaded conditions with plants planted in an acid, poorly drained soil. But results vary and plants tend to resent any root disturbance.

## WETLAND PLANT INDICATOR STATUS RATING

FACW: Facultative Wetland

Usually is a hydrophyte but occasionally found in uplands (non-wetlands).

## ETYMOLOGY

**gleichenia:** After the German naturalist and plant physiologist Wilhelm Friedrich (Baron) von Gleichen (1717-1783)

**dicarpa:** Two seeded; from the greek di and karpos; paired spore clusters

## NVS CODE

GLEDIC

## CHROMOSOME NUMBER

2n = 40

## 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

The regional threat classification system leverages off the national assessments in the NZTCS, providing information relevant for the regional context. Auckland conservation status information is sourced from the [“Conservation status of vascular plant species in Tāmaki Makaurau / Auckland”](#) Simpkins E et al. (2025) report.

Otago: 2025 | Regionally Data Deficient Help

The regional threat classification system leverages off the national assessments in the NZTCS, providing information relevant for the regional context. Otago conservation status information is sourced from the [“Conservation Status of Indigenous Vascular Plants in Otago, 2025”](#) Jarvie S et al. (2025) report.

## REFERENCES AND FURTHER READING

Chinnock RJ, Bell GH. 1998. Gleicheniaceae. *Flora of Australia 48, Ferns Gymnosperms and allied groups*: 148–162. ABRS/CSIRO Victoria, Australia.

Perrie LR, Shephard LD, Brownsey PJ. 2012. *Gleichenia inclusisora*, a new and uncommon tangle fern from New Zealand. *New Zealand Journal of Botany 50(4)*: 401–410. <https://doi.org/10.1080/0028825X.2012.724015>.

Thorsen MJ, Dickinson KJM, Seddon PJ. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics 11*: 285–309. <https://doi.org/10.1016/j.ppees.2009.06.001>.

## ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange (15 March 2011). Description adapted from Chinnock & Bell (1998).

## MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/gleichenia-dicarpa/>

## PDF DATE

25 May 2026