

# Gleichenia dicarpa

## COMMON NAME

tangle fern, swamp umbrella fern

## 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.

## FAMILY

Gleicheniaceae

## AUTHORITY

*Gleichenia dicarpa* R. Br.

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Ferns

## NVS CODE

GLEDIC

## CHROMOSOME NUMBER

2n = 40

## 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. 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”.

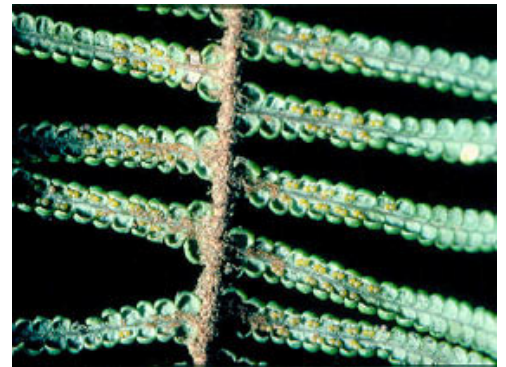
## WETLAND PLANT INDICATOR STATUS RATING

FACW: Facultative Wetland

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



Kennedy Bay, September. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.



At Kennedy Bay, September. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.

## 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 inclusisora* 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.

## FLOWERING

Not applicable—spore producing

## FLOWER COLOURS

No flowers

## FRUITING

Not applicable—spore producing

## LIFE CYCLE

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.

## 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

## ATTRIBUTION

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

## 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>.

## NZPCN FACT SHEET CITATION

Please cite as: de Lange, P.J. (Year at time of access): *Gleichenia dicarpa* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/gleichenia-dicarpa/> (Date website was queried)

## MORE INFORMATION

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