

# Gleichenia alpina

## COMMON NAME

alpine tangle fern

## SYNONYMS

*Mertensia alpina* (R.Br.) Poir.; *Platyzoma alpinum* (R.Br.) Desv.; *Calymella alpina* (R.Br.) C.Presl, *Gleichenia dicarpa* var. *alpina* (R.Br.) Hook.f.

## FAMILY

Gleicheniaceae

## AUTHORITY

*Gleichenia alpina* R.Br.

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

No

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Ferns

## NVS CODE

GLEALP

## CURRENT CONSERVATION STATUS

2017 | Not Threatened | Qualifiers: SO

## PREVIOUS CONSERVATION STATUSES

2012 | Not Threatened | Qualifiers: SO

2009 | Not Threatened

2004 | Not Threatened

## DISTRIBUTION

Indigenous. New Zealand: North Island, South Island. Exact distribution still unclear but plants matching *G. alpina* are known from the Central Volcanic Plateau, Takaka, and Denniston Plateau, and plants sharing the same haplotype as limited sampling of Tasmanian *G. alpina* are known from Mt Somers (Perrie *et al.* 2007). Currently the status of *G. alpina* in New Zealand requires further study as some reduced forms of *G. dicarpa* can be easily confused with it.

## HABITAT

Lowland to alpine. In peat bogs, on the margins of tarns and in poor drained fellfield.

## WETLAND PLANT INDICATOR STATUS RATING

FACW: Facultative Wetland

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



Unfurling young frond; Whakapapa, Tongariro NP. Photographer: Colin C. Ogle, Date taken: 20/12/2016, Licence: CC BY-NC.



Unfurling young frond; Whakapapa, Tongariro NP. Photographer: Colin C. Ogle, Date taken: 20/12/2016, Licence: CC BY-NC.

## DETAILED DESCRIPTION

**Rhizome** 0.8–2.0 diameter, at first with scattered appressed dark brown rounded prominently ciliate scales. **Fron**ds of 1–8 tiers of branches, 100–220–(420) mm long, rarely more than 0.6 m wide, at first completely covered with red-brown scales, glabrescent; lower tiers often branched 1–3×. **Stipes** clustered along rhizomes, 40–420 mm long, initially bearing dark brown scales with long white matted ciliate margins, glabrescent, smooth; rachis and undersurfaces of upper branches with persistent, red-brown scales with paler ciliate margins, completely obscuring undersurface of pinnules. **Pinnules** with brown hairs along costae on upper side, with dense reddish scales at first completely obscuring the undersurface; ultimate segments 0.7–1.0 mm long, 0.6–1.1 mm wide, round, obtuse, strongly convex above, puched below; undersurface usually white. **Sori** of 2 sporangia.

## SIMILAR TAXA

*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).

## FLOWERING

Not applicable—spore producing

## FRUITING

Not applicable—spore producing

## PROPAGATION TECHNIQUE

Fickle. Probably best left alone. Transplants have been successfully grown when planted into a half peat and pumice mix within pots kept partially immersed in water. 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)

**alpina**: From the Latin alpes 'the Alps', refers to plants growing in mountainous areas

## Where To Buy

Not commercially available

## 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, G.H. 1998. Gleicheniaceae. *Flora of Australia 48, Ferns Gymnosperms and allied groups*: 148–162. ABRS/CSIRO Victoria, Australia.

de Lange PJ, Rolfe JR. 2010. New Zealand indigenous vascular plant checklist. New Zealand Plant Conservation Network, Wellington, NZ. 131 p.

Perrie LR, Bayly MJ, Lehnebach CA, Brownsey PJ. 2007. Molecular phylogenetics and molecular dating of the New Zealand Gleicheniaceae. *Brittonia* 59(2): 129–141.

[https://doi.org/10.1663/0007-196X\(2007\)59\[129:MPAMDO\]2.0.CO;2](https://doi.org/10.1663/0007-196X(2007)59[129:MPAMDO]2.0.CO;2)

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>.

## NZPCN FACT SHEET CITATION

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## MORE INFORMATION

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