

# Sphaeropteris medullaris

## COMMON NAMES

mamaku, black tree fern

## BIOSTATUS

Native

## CURRENT CONSERVATION STATUS

2023 | Not Threatened | Qualifiers: SO

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## CATEGORY

Vascular

## STRUCTURAL CLASS

Ferns

## SIMPLIFIED DESCRIPTION

Large tree fern with black-stalked leaves to 5 m long. Trunk with obvious scars from old leaves, to 20 m tall. Leaf stems covered in small scales that have a spiny edge (lens needed). Sporangia arranged in small round capsules underneath leaves.

## FLOWER COLOURS

No flowers

## DETAILED DESCRIPTION

Tree fern up to 20 m tall. **Trunk** black covered with hexagonal stipe bases. **Stipes** thick, black, harsh to touch, covered in black scales. **Scales** with marginal spines. **Fronds** up to 5 m long, arching upwards from crown, 3-pinnate, leathery, dead fronds falling (except in very young plants). **Longest primary pinnae** 0.4–1 m long, undersurfaces bearing scales with marginal spines. Indusia completely covering sori at maturity, splitting irregularly.

## SIMILAR TAXA

Easily recognised by trunk with its distinctive hexagonal stipe scars and by the scales which possess marginal spines.

## DISTRIBUTION

Indigenous. New Zealand: Manawatāwhi / Three Kings Islands, North Island, South Island (uncommon in the drier eastern portion, and apparently absent from Canterbury and Otago), Stewart Island/Rakiura, Chatham Islands (Chatham Island (Rēkohu), Pitt Island (Rangiauria)). Also Pacific Islands from Fiji to Picairn.

## HABITAT

Common in lowland forest throughout the North Island. Primarily in wetter coastal areas of the South Island.

## GENUS

Sphaeropteris

## FAMILY

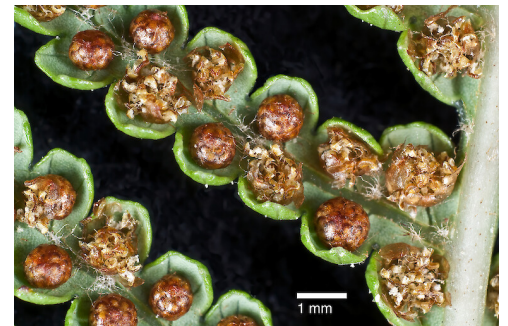
Cyatheaceae

## AUTHORITY

*Sphaeropteris medullaris* (G.Forst.) Bernh.



*Cyathea medullaris*. Photographer: Wayne Bennett, Licence: CC BY-NC.



Sori. Stokes Valley, Lower Hutt. Photographer: Jeremy R. Rolfe, Date taken: 14/01/2012, Licence: CC BY.

## SYNONYMS

*Cyathea medullaris* (G. Forst.) Sw.; *Cyathea medullaris* var. *polyneuron* (Colenso) C.Chr.; *Cyathea medullaris* var. *integra* Hook.; *Cyathea polyneuron* Colenso; *Polypodium medullare* G.Forst.;

## ENDEMIC TAXON

No

## 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

Can be grown from fresh spores (but slow). Young plants transplant easily and freshly felled trunks will usually resprout if planted and carefully watered. Easy, once established in a variety of conditions. Should not be removed from the wild unless with landowner permission.

## WETLAND PLANT INDICATOR STATUS RATING

FACW: Facultative Wetland

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

## CULTIVATION

Commonly cultivated. Not as freely available from nurseries as other tree ferns because it is slow from spores and sporelings are notorious for failing following transplants.

## ETYMOLOGY

**medullaris:** Pithy (trunk)

## NVS CODE

SPHMED

## CHROMOSOME NUMBER

2n = 138

## PREVIOUS CONSERVATION STATUSES

2017 | Not Threatened

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 Threatened – Regionally Critical | Qualifiers: Sp 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

- Brownsey PJ, Smith-Dodsworth JC. 2000. New Zealand Ferns and Allied Plants. David Bateman, Auckland, NZ. 168 p.
- Esler, W.R. 1976. Succession of fronds of mamaku (*cyathea medullaris*). *Wellington Botanical Society Bulletin* 39: 41–43.
- 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 March 2004. Description adapted from Brownsey & Smith-Dodsworth (2000).

## MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/sphaeropteris-medullaris/>

## PDF DATE

08 June 2026