Alsophila kermadecensis

COMMON NAMES
Kermadec tree fern

BIOSTATUS
Native – Endemic taxon

CURRENT CONSERVATION STATUS
2023 | At Risk – Naturally Uncommon | Qualifiers: IE, OL
Jump to previous conservation statuses

CATEGORY
Vascular

STRUCTURAL CLASS
Ferns

SIMPLIFIED DESCRIPTION
Tall tree fern with green-stalked soft leaves to 4 m long inhabiting Raoul Island in the Kermadec Islands. Trunk to 20 m tall, slender, old leaves fall off whole. Leaf stems covered in small star-tipped scales and pointed scales (lens needed). Sporangia arranged in small half capsules underneath fronds.

DETAILED DESCRIPTION
Gracile tree fern up to 20 m tall. **Trunk** slender, often curved, covered with diamond-shaped stipe scars. **Stipes** slender, copiously invested in woolly hairs and pale brown to brown scales lacking marginal spines. **Fronds** arching from crown, up to 4 × 2 m, 3-pinnate; dead fronds falling. **Primary pinnae** up to 400 mm long, dark green to yellow-green above, subcoriaceous to membranous, undersides paler, bearing numerous scales; scale apices terminated by single or stellate spines. **Indusia** cucullate.

Raoul island, crater rim. Photographer: Bec Stanley, Licence: CC BY-SA.

SIMILAR TAXA
On Raoul Island this species is sympatric with *Alsophila milnei*, from which it is easily distinguished by its taller, more slender trunk which lacks a persistent skirt of dead frond and bears numerous rhomboid stipe scars; by the soft rather than coriaceous, raching rather than horizontal fronds, and hood-shaped rather than cup-shaped indusia. The scales on the underside of the pinnae in *A. kermadecensis* are not curled and are terminated by a single or stellate spine. *Alsophila kermadecensis* is very closely related to *A. cunninghamii*, which is common in New Zealand proper and Australia. From that species *Alsophila kermadecensis* is best distinguished by its clean trunks which lack persistent stipe bases, less divided fronds and by the absence of stellate hairs on the frond undersides.

Adult noted on road from Moumoukai Track to Accommodation House (Kermadec Islands, northern Kermadec Islands group, Raoul Island Fishing Rock to Boat Cove Road). Photographer: Peter J de Lange, Date taken: 08/05/2009, Licence: CC BY.

DISTRIBUTION
Endemic. Kermadec Islands, Raoul Island only

HABITAT
Confined to the higher parts of Raoul Island where it is a locally conspicuous component of ravine, gully, gorge and cliff forest in the wetter part of the island.

THREATS
Not Threatened. Listed because it is a narrow range naturally confined to Raoul Island. In the past it had been regarded as highly threatened but in recent years numerous plants of all different age classes have been found.

GENUS
Alsophila

FAMILY
Cyatheaceae

AUTHORITY
Alsophila kermadecensis (W.R.B.Oliv.) R.M.Tryon

SYNONYMS
Cyathea kermadecensis W.R.B. Oliv.;

ENDEMIC TAXON
Yes

ENDEMIC GENUS
No

ENDEMIC FAMILY
No

PROPAGATION TECHNIQUE
Easily grown from spores. Young plants are very cold sensitive and will not tolerant any frost, wind or drought. They are best planted in a warm, sheltered, permanently damp site. Once established this species is very fast growing.

CULTIVATION
Occasionally available from specialist native and general plant nurseries.

ETYMOLOGY
kermadecensis: From the Kermadec Islands

NVS CODE
CYAKER

CHROMOSOME NUMBER
2n = 138

PREVIOUS CONSERVATION STATUSES
2017 | At Risk – Naturally Uncommon | Qualifiers: IE, OL
2012 | At Risk – Naturally Uncommon | Qualifiers: IE, OL
2009 | At Risk – Naturally Uncommon | Qualifiers: RC, IE, SO
2004 | Range Restricted
Jump to current conservation status

REFERENCES AND FURTHER READING
Brownsey PJ, Smith-Dodsworth JC. 2000. New Zealand Ferns and Allied Plants. David Bateman, Auckland, NZ. 168 p.

ATTRIBUTION
Fact sheet prepared for NZPCN by P.J. de Lange July 2009. Description adapted from Brownsey & Smith-Dodsworth (2000).

MORE INFORMATION
https://www.nzpcn.org.nz/flora/species/alsophila-kermadecensis/

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08 June 2026