Metrosideros kermadecensis

COMMON NAME
Kermadec pōhutukawa

SYNONYMS
Metrosideros polymorpha Hook.f. and Metrosideros villosa Kirk are heterotypic synonyms of M. polymorpha Gaudich., Metrosideros villosa Sm.

FAMILY
Myrtaceae

AUTHORITY
Metrosideros kermadecensis W.R.B.Oliv.

FLORA CATEGORY
Vascular – Native

ENDEMIC TAXON
Yes

ENDEMIC GENUS
No

ENDEMIC FAMILY
No

STRUCTURAL CLASS
Trees & Shrubs - Dicotyledons

NVS CODE
METKER

CHROMOSOME NUMBER
2n = 22

CURRENT CONSERVATION STATUS
2017 | Threatened – Nationally Critical | Qualifiers: DP, IE, OL

PREVIOUS CONSERVATION STATUSES
2012 | At Risk – Naturally Uncommon | Qualifiers: IE, OL
2009 | At Risk – Naturally Uncommon | Qualifiers: IE, OL
2004 | Range Restricted

BRIEF DESCRIPTION
Tree bearing leathery elliptical leaves that are white underneath and bearing scattered red bristly flowers inhabiting the Kermadec Islands (and planted in New Zealand). Leaves 2–5 cm long, widest at the middle. Flowers composed from many red filaments around a green glossy disk that is fuzzy white underneath.

Raoul Island. Photographer: Bec Stanley, Licence: CC BY-SA.

Metrosideros kermadecensis. Photographer: Gillian M. Crowcroft, Licence: All rights reserved.

DISTRIBUTION
Endemic. Kermadec Islands: Raoul, North and South Meyer Islands, Herald Islets (Napier, Nugent and Dayrell)

HABITAT
The dominant canopy tree on Raoul Island where it is found from the coastline to the highest peaks. Forms the main tree of both dry and wet forest types. It was supposedly also present on Macauley Island although there are no herbarium specimens known to substantiate this claim.

DETAILED DESCRIPTION

Multitrunked (rarely single) tree up to 20 m tall usually with a broadly spreading, domed canopy; trunk up to 3 m diameter, if more than one usually much smaller; trunk surface often covered in adventitious roots. **Bark** mostly firm, tessellated to platy, grey, grey-brown or whitish, often covered in sparse to dense growths of lichens, liverworts and mosses. **Branches** erect to spreading, sometimes scrambling across forest floor in which case often rooting freely where touching the ground. **Branchlets** terete, numerous toward branch ends. **Young branchlets, leaf undersides, inflorescence-axes, hypanthia, and sepals** densely clad in tomentum, tomentum initially white, maturing dirty grey. **Leaves**: petioles 5–7 mm long, terete to subterete, very coriaceous; lamina 20–50 × 10–30 mm, dull dark green above with appressed, greyish indumentum along the midrib, sometimes extending along the upper surface of the base of the leaf, orbicular, suborbicular, broadly ovate- to elliptic-oblong, apex obtuse to retuse, base obtuse to cuneately-narrowed, coriaceous, margins weakly to strongly recurved. **Inflorescence** complex, comprising 2 or more terminal compound corymbiform cymes each bearing numerous flowers; pedicels rigidly stout, 8–12 mm long. **Hypanthium** obconic to turbinate, sepals coriaceous to subcoriaceous, deltoid to triangular, gland-tipped; petals caducous, fleshy, scarlet, crimson to pink, 2.2–3.2 × 2.0–3.0, orbicular, suborbicular to oblong, glabrescent. **Stamens** numerous, filaments crimson, 10–23 mm long; anthers versatile, yellow, 1.0 × 0.2–0.4 mm. **Nectarial disc** initially green at anthesis, maturing red or red-green. **Ovary** 3-locular, adnate to hypanthium; capsules long-persistent, woody, 3-valved, 6.0–7.2 mm long, receptacle distinctly exserted, outer surface and inner sepals and hypanthial rim covered in appressed white to greyish-white tomentum. **Seeds** numerous, 2.5–4.5 mm long, yellow to pale orange, very narrowly elliptic to linear, 2–4-angled, body often twisted, laterally compressed, apex curved or hooked.

MANAAKI WHENUA ONLINE INTERACTIVE KEY

Key to the Myrtaceae of New Zealand

SIMILAR TAXA

Metrosideros kermadecensis is the only species of that genus found on the Kermadec Islands, so in the wild it is not likely to be confused with any other plant. In New Zealand it is commonly cultivated and sometimes sold as pōhutukawa (*Metrosideros excelsa*). From that species it differs by its smaller leaves (20–50 × 10–30 mm cf. 25–100 × 25–35 mm in *M. excelsa*), orbicular, suborbicular, broadly ovate- to elliptic-oblong (rather than elliptic to oblong, broadly-lanceolate, acute or obtuse). However, populations of *M. excelsa* on the Three Kings Islands approach *M. kermadecensis* in having smaller more consistently elliptic-oblong leaves. In cultivation *Metrosideros kermadecensis* seems to have no set flowering period with flowers seen throughout the year.

FLOWERING

Throughout the year

FLOWER COLOURS

Red/Pink

FRUITING

Throughout the year

PROPAGATION TECHNIQUE

Easy from fresh seed. Cuttings can be grown from water shoots. Hybridises with pōhutukawa (*Metrosideros excelsa*). Although cold sensitive it can be grown in most places provided there is adequate shelter. This species frequently has some flowers present throughout the year but it rarely has a major flowering event.

THREATS

Metrosideros kermadecensis is the dominant tree on Raoul Island and it is also prominent on the nearby Meyer Islands and Napier, Dayrell and Nugent in the Herald Islets. Prior to the arrival of myrtle rust (*Austropuccinia psidii*) in New Zealand, *M. kermadecensis* was assessed as At Risk – Naturally Uncommon because it is an island endemic which globally occupies a small area. Myrtle rust is an invasive fungus that threatens native myrtle species, so in 2017 the status of *M. kermadecensis* was reassessed as Threatened – Nationally Critical. Learn more at myrtlerust.org.nz.

ETYMOLOGY

metrosideros: Iron heart
kermadecensis: From the Kermadec Islands

WHERE TO BUY

Commonly sold in most garden centres in New Zealand, often—unfortunately—mislabelled as *Metrosideros excelsa*.

ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange (8 June 2009). Description adapted from Allan (1961) supplemented with data obtained from herbarium specimens, fresh material and observations made on Raoul Island.

REFERENCES AND FURTHER READING

Allan HH. 1961. Flora of New Zealand, Volume I. Indigenous Tracheophyta: Psilopsida, Lycopsida, Filicopsida, Gymnospermae, Dicotyledones. Government Printer, Wellington, NZ. 1085 p.

NZPCN FACT SHEET CITATION

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MORE INFORMATION

https://www.nzpcn.org.nz/flora/species/metrosideros-kermadecensis/