

## NZ Myrtaceae Key - Online edition

# *Metrosideros excelsa* Sol. ex Gaertn.

### Common Names

New Zealand Christmas tree, pōhutukawa

### Origin

New Zealand endemic.

### Cultivation

Easily propagated from fresh seed. Widely planted in New Zealand, especially in northern lowland areas, with more than 40 named cultivars that have been available in the nursery trade. Popular cultivars include *Metrosideros excelsa* 'Aurea', with yellow (instead of red) flowers; 'Maori Princess', with a rather open growth habit and purplish-red flowers; 'Variegata', with leaves variegated with green centres and grey-green and yellow margins; and 'Vibrance', a medium-sized tree with vibrant orange-red flowers.

### Distribution

Coastal northern New Zealand. Three Kings Islands and North Island from Te Pahi to about northern Taranaki in the west and to about Mahia Peninsula in the east. Mostly a coastal species, but also occurring apparently naturally around the Rotorua Lakes and Lake Taupo. Exact southern limits are now uncertain as it has been widely planted by both Māori and early European settlers. Pōhutukawa is now naturalised in the southern North Island and northern South Island as well as the Chatham Islands. In some of these areas it is an aggressive weed.

### Distinguishing Features

- Large tree.
- Reddish aerial roots.
- Lower surface of leaves mostly velvety.
- Leaf tips not notched.
- Flowers mainly crimson (but grey-white, pink, orange, apricot and yellow flowers have been recorded).
- Flower stalks stout.
- Flower-cluster stalks, flower stalks, base of flowers and outer surface of sepals all with long, copious hairs.
- Stamens 30–40 mm long.
- Calyx tube as wide as fruit.

### Habit

Trees up to 21 m tall with large canopies, often multi-trunked from base, branches spreading, and often bearing reddish aerial roots.

### Bark and Stem/Trunk

Bark firm, difficult to detach, grey to grey-brown, slightly corky. Branchlets rounded, very hairy, becoming hairless with age. Reddish aerial roots frequent.

### Leaves

Leaves arranged in opposite pairs, each pair being at right angles to the pair below, leathery, elliptic to ovate-oblong, 25–100(–120) mm long, (15–)30–50(–60) mm wide, upper surface dark green and glossy, paler below (mainly due to thick layer of grey-white hairs), leaf surface flat, not puckered, upper surface at first hairy, becoming hairless with age, lower surface mostly velvety, midrib raised, oil glands not readily visible on either surface; margins entire but slightly rolled under (revolute), tips pointed rather abruptly or rounded, not notched; leaf stalks 5–12 mm long, hairy.

### Flowers

Flowers in rounded terminal clusters, cluster-branchlets often 3-flowered, or flowers solitary on cluster axis. Flowers  $\pm$  8–12 mm in diam., mature flower stalks absent to  $\pm$  2 mm long, stout ( $\pm$  2 mm wide), petals 5; sepals 5, tips free, persistent, stalks and base of flowers and outer surface of sepals all with long, copious hairs; stamens mainly crimson (but grey-white, pink, orange, apricot and yellow flowers have been recorded), filaments 30–40 mm long, much longer than petals. Main flowering period: late spring to early summer.

### Fruit

Fruit dry, densely hairy,  $\pm$  7–8 mm wide, capsule dome raised above the calyx tube, calyx tube as wide as fruit, seeds released through open valves.

### Similar Species

Of the New Zealand indigenous species, *M. excelsa* is most similar to *M. kermadecensis*, but differs in that leaves are larger (up to 120 mm long and up to 60 mm wide, as opposed to up to 50 mm long and up to 30 mm wide) and stamens are longer (filaments up to 30–40 mm long, as opposed to 10–23 mm long).

*Metrosideros excelsa* has some similarities with *M. robusta* but differs in that adult trees possess leaves mostly velvety below as opposed to hairless below; leaves without notched tips as opposed to notched leaf tips; midrib raised as opposed to not raised; flower cluster

stalks, individual flower stalks, base of flowers and outer surface of sepals all copiously hairy as opposed to flower cluster stalks, individual flower stalks, base of flowers and outer surface of sepals all with short hairs; mature flower stalks stout ( $\pm 2$  mm wide) as opposed to  $\pm 1$  mm wide.

Hybrids between *M. excelsa* and *M. robusta*, which occur naturally where their ranges overlap and also in cultivation, have characteristics between those of the parents, and may be confused with whichever parent they appear most similar to. For instance, a specimen with small leaf size, the leaf margin not rolled under, and without velvety hairs on the leaf underside, but similar in other ways to *M. excelsa*, would suggest a hybrid with *M. robusta*. *M. excelsa* also hybridises with *M. kermadecensis* and *M. umbellata*.

## Notes

*Metrosideros excelsa* is susceptible to myrtle rust (caused by *Austropuccinia psidii*). *Metrosideros excelsa* was given a conservation status of Threatened – Nationally Vulnerable in 2018. Nevertheless, this species is an aggressive coloniser which readily self-establishes outside its indigenous range. It is also listed as an Environmental Weed in New Zealand by the Department of Conservation. Naturalised in Australia, Europe, South Africa and USA.

*Metrosideros* is a genus of more than 50 species of trees, shrubs and vines, mostly found in the Pacific region. New Zealand is well represented by having 12 endemic species.

## External Links

- CitSciHub (*Metrosideros excelsa* 'Aurea')
- CitSciHub (species profile)
- Flora of New Zealand Online (species profile)
- Flora of New Zealand Online (weed profile)
- GBIF
- iNaturalist NZ
- NZPCN
- Plants of South Eastern New South Wales
- VicFlora: Flora of Victoria

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