

# Sophora microphylla

## COMMON NAME

kōwhai, weeping kōwhai, small-leaved kōwhai

## SYNONYMS

*Edwardsia microphylla* (Aiton) Salisb., *Edwardsia grandiflora* var. *microphylla* (Aiton) Hook.f.; *Sophora tetraptera* var. *microphylla* (Aiton) Hook.f.; *Sophora microphylla* Aiton var. *microphylla*; *Sophora microphylla* Aiton subsp. *microphylla*; *Sophora microphylla* Aiton subsp. *microphylla* var. *microphylla*

## FAMILY

Fabaceae

## AUTHORITY

*Sophora microphylla* Aiton

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Trees & Shrubs - Dicotyledons

## NVS CODE

SOPMIC

## CHROMOSOME NUMBER

2n = 18

## CURRENT CONSERVATION STATUS

2017 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2012 | Not Threatened

2009 | Not Threatened

2004 | Not Threatened

## BRIEF DESCRIPTION

A common kowhai tree bearing leaves 30–50mm long that have spaced equal-sized leaflets 4.5–12.5mm long and with bunches of drooping yellow flowers and dry ridged and knobby seed pods 50–200mm long containing hard yellow seeds. Juveniles with zig-zagging branches.

## DISTRIBUTION

Endemic. Throughout the main islands of New Zealand but scarce in parts of Northland.

## HABITAT

In the North Island, especially the northern half this is a species of mainly riparian forest. South of about Hamilton it can be found in a diverse range of habitats from coastal cliff faces and associated wetlands to inland grey scrub communities. Scarce to absent over large parts of the eastern North Island from about East Cape south to the northern Wairarapa.



Flowers, Nugget Point. Photographer: John Barkla, Licence: CC BY.



Flowers, Nugget Point. Photographer: John Barkla, Licence: CC BY.

## WETLAND PLANT INDICATOR STATUS RATING

FACU: Facultative Upland

Occasionally is a hydrophyte but usually occurs in uplands (non-wetlands).

## DETAILED DESCRIPTION

Tree up to 25 m tall, usually a single trunk. Branches weeping, and spreading. Juveniles divaricating and/or strongly flexuose, and interlacing. Leaves on seedlings sparsely to moderately leafy, 3-5.8 x 2.3-4.9 mm, broadly obovate to orbicular, glabrous to sparsely pubescent, distant, not crowded or overlapping. Adult leaves up to 150 mm long, imparipinnate, moderately to sparsely hairy, hairs, straight, appressed. Leaflets 30-50, not crowded or overlapping, distant, 4.5-12.5 x 2.3-5.7 mm, elliptic, broadly elliptic, obovate to ovate, sometimes orbicular, distal and proximal leaflets of similar size. Inflorescences racemose with up to 7 flowers. Calyx 5-11 x 7-10 mm, cupulate. Flowers yellow, keel petal blade 18-50 x 7-13 mm, wing petal blade 18-50 x 6-11 mm, standard petal blade 20-35 x 14-25 mm; petals with distinct claws 4-8 mm long. Fruit 50-200 mm long, 4-winged, brown, with up to 12 seeds. Seeds 5.5-8.5 x 4.-5.5 mm, oblong, elliptic to orbicular, yellow to light yellow-brown.

## SIMILAR TAXA

Can be distinguished from the other Kowhai species by the divaricating/filiculate juvenile and arborescent adult, leaves > 30 mm, leaflet pairs > 6, these sparsely to moderately hairy, with the distal and by the obvious petiolule.

## FLOWERING

(May-) August-October

## FLOWER COLOURS

Yellow

## FRUITING

October -May

## PROPAGATION TECHNIQUE

Easy from seed, provided the hard seed shell is nicked first with a knife or rubbed with sandpaper to expose the endosperm. Soaking seed treated this way overnight often helps speed up germination. Can be grown with difficulty from cuttings.

## THREATS

The main threat that faces all wild New Zealand kowhai species is the risk posed through planting for revegetation and horticultural purposes of hybrid material, foreign species, such as the Chilean Pelu (*S. cassioides*) and also of kowhai species outside their natural range. In many places *S. microphylla* occurs as isolated stands within otherwise cleared alluvial forest, and in this situations the loss of trees over time is inevitable. The species is genuinely uncommon in Northland, and in that area inadequately represented within reserves and other conservation land.

## ETYMOLOGY

**sophora:** After the Arabic name for a similar tree

**microphylla:** Small leaf

## WHERE TO BUY

Commonly available at most commercial nurseries. A popular native tree for larger gardens. However many plants sold by nurseries are hybrids with either *S. chathamica* or *S. tetraptera*.

## POISONOUS PLANT

All parts of the plant but especially the ripe yellow seed are poisonous. Because the seed are hard they will take a lot of chewing to cause harm, and also will need to be consumed in large quantities to effectively poison a human. If the seed are crushed before eating it is more likely that they will cause harm. The major toxin is Cytisine and symptoms of poisoning include nausea, vomiting, increased heart rate, twitching of muscles or loss of coordination. Onset of these symptoms may occur within one hour. In extreme cases symptoms include paralysis and respiratory failure. Click on this link for more information about [Poisonous native plants](#).

## ATTRIBUTION

Fact Sheet prepared for NZPCN by P.J. de Lange (31 July 2004). Description adapted from Heenan et al. (2001).

## REFERENCES AND FURTHER READING

Anonymous. 1944. Kowhai. *Wellington Botanical Society Bulletin* 9: 4-5

Duguid, F. 1971. Germination of kowhai at Hokio beach. *Wellington Botanical Society Bulletin* 37: 65-66.

Heenan, P.B.; de Lange, P. J.; Wilton, A. D. 2001: *Sophora* (Fabaceae) in New Zealand: taxonomy, distribution, and biogeography. *New Zealand Journal of Botany* 39: 17-53

## NZPCN FACT SHEET CITATION

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## MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/sophora-microphylla/>