

Libocedrus plumosa

COMMON NAME

Kawaka, NZ cedar

SYNONYMS

Tuja doniana Hook., *Libocedrus doniana* (Hook.) Endl.

FAMILY

Cupressaceae

AUTHORITY

Libocedrus plumosa (D.Don) Sarg.

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Gymnosperm Trees & Shrubs

NVS CODE

LIBPLU

CHROMOSOME NUMBER

2n = 22

CURRENT CONSERVATION STATUS

2018 | Not Threatened

PREVIOUS CONSERVATION STATUSES

2009 | At Risk – Naturally Uncommon

2004 | Sparse

DISTRIBUTION

Endemic. North and South Islands. In the North present from Te Pahi (Radar Bush) south to about the southern Kawhia Harbour (in the west) and near Gisborne (in the East), thence disjunct to north-west Nelson, where it grows locally around the Golden Bay area from about Puponga south to the Anatoro River.

HABITAT

Coastal to lowland mixed broadleaf/hardwood forest. Often found in association with kauri (*Agathis australis* (D.Don.) Lindl.). Often on ridge lines, spurs, or forming apparently even-aged cohorts in sites of former major disturbance, such as in or around stabilised slips, slumps, or areas of major wind throw damage. This species tends to colonise more fertile soils and soils overlying high fertility (base-rich) substrates.



At Mangatu, Kennedy bay, April. Photographer: John Smith-Dodsworth



Te Kauri Scenic Reserve. Photographer: Peter de Lange

FEATURES

Evergreen, monoecious tree up to 35 m tall, 2-3 m d.b.h. Bark thin, scaly, light-brown to greyish-brown, peeling readily in long irregular, inrolled strips. Branches spreading or ascending, branchlets numerous, spreading, arranged in dense sprays in tiers above each other, forming a pyramidal crown in young trees, becoming conical, rounded or irregular in older specimens. Foliage in flattened sprays except when cone-bearing, ultimate branches subopposite to alternate, 15-35 x 2-6 mm, leafy, flattened, long persistent. Leaves decussate, on lateral branchlets shortly decurrent, imbricate, dimorphic, rhombic 1-2 x 1 mm, apiculate to acute, appressed, partially covered at base by 2-6 x 1.5-2 mm, divergent, bilaterally flattened, slightly curved laterals with entire margins and free apices; leaves on older trees smaller and monomorphic. Male cones terminal, solitary, subglobose to ovoid, 3-5 mm, yellowish-green, maturing light brown. Female cones terminal subtended by weakly dimorphic leaves; comprising 2 decussate pairs of acute 4-6 mm long, spreading bracts subtended by 3-4 pairs of similar, gradually shorter leaves, the upper pair developing within one growing season to become thin, woody, and forming a cone 12-18 mm long. Seeds 2-4, ovoid, flattened, with an acute apex 3-5 mm long, brown, with a whitish hilum and 2 opposite, thin membranous wings of very unequal shape and size, the smaller a narrow strip less than 1 mm wide, the larger irregular oval-oblong, 6-8 x 3-4.5 mm, yellowish-brown.

SIMILAR TAXA

Libocedrus bidwillii is somewhat similar but within the range of *L. plumosa* it is confined to montane cloud forests (> 600 m.a.s.l.). It differs by the more or less quadrangular ultimate branchlets, nearly monomorphic leaves, and by the bracts subtending the cone bracts being less than or about 1/3 the size of the actual cone scales.

FLOWERING

July - September

FLOWER COLOURS

No flowers

FRUITING

July - June

PROPAGATION TECHNIQUE

Easily grown from fresh seed which germinates within 4-8 months of sowing. An attractive conifer that makes an excellent specimen tree. It does best in a free draining, moderately fertile and moist soil, though once established it can tolerate considerable drought. It is moderately cold hardy but dislikes severe frosts. This species does not like much competition from other broad-leaf trees and to do best it should be planted as solitary specimens or as a monospecific plantings (in a stand).

THREATS

A widespread and at times locally common, though generally naturally sparse species. Although it was logged when suitable trees were found, its general scarcity meant that logging has had little effect on its overall distribution and abundance. This species may even have benefited from past logging because it is at its most abundant in places that were once heavily logged, and/or burned. In fact field evidence suggests that *Libocedrus plumosa* needs regular disturbance to maintain itself.

ETYMOLOGY

libocedrus: Frankincense cedar

plumosa: Feathery

ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange 3 February 2006. Description adapted from Allan (1961), Webb & Simpson (2001) and Farjon (2005).

Conservation status updated 25 Oct 2019, following de Lange et al. (2017)

REFERENCES AND FURTHER READING

Allan, H.H. 1961: Flora of New Zealand. Vol. I, Wellington, Government Printer.

Peter J. de Lange, Jeremy R. Rolfe, John W. Barkla, Shannel P. Courtney, Paul D. Champion, Leon R. Perrie, Sarah M. Beadel, Kerry A. Ford, Ilse Breitwieser, Ines Schönberger, Rowan Hindmarsh-Walls, Peter B. Heenan and Kate Ladley (2017). Conservation status of New Zealand indigenous vascular plants. New Zealand Threat Classification Series 22. 82 p.

Farjon, A. 2005: A monograph of Cupressaceae and Sciadopitys. Royal Botanic Gardens, Kew. ISBN 1842460684.

Webb, C.J.; Simpson, M.J.A. 2001: Seeds of New Zealand Gymnosperms and Dicotyledons. Christchurch, Manuka Press.

CITATION

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MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/libocedrus-plumosa/>