

Phyllocladus alpinus

COMMON NAME

mountain celery pine, mountain toatoa

SYNONYMS

Phyllocladus trichomanoides var. *alpina* (Hook.f.) Parl in DC.

FAMILY

Phyllocladaceae

AUTHORITY

Phyllocladus alpinus Hook.f.

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Trees & Shrubs - Gymnosperms

NVS CODE

PHYALP

CHROMOSOME NUMBER

2n = 18

CURRENT CONSERVATION STATUS

2017 | Not Threatened

PREVIOUS CONSERVATION STATUSES

2012 | Not Threatened

2009 | Not Threatened

2004 | Not Threatened

DISTRIBUTION

Endemic. New Zealand: North Island (from the Kaingaroa Plain, Whirinaki and Pureora (and frost flats nearby) south through the Central Volcanic Plateau, and main axial ranges) and South Island (throughout).

HABITAT

Mostly subalpine to low alpine but also present at times at lower elevations (200 m a.s.l. or less) on impoverished soils, especially in frost flats and other similar natural temperature inversion sites.

WETLAND PLANT INDICATOR STATUS RATING

FACU: Facultative Upland

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




Phyllocladus alpinus. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.



Phyllocladus alpinus. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.

DETAILED DESCRIPTION

Monoecious shrub or tree up to 6 m, trunk short, up to 400 mm diameter. **Phylloclades** alternate to subopposite, rachis short. **Leaves** of seedlings and juveniles up to 15 mm, narrow-linear, acute, deciduous, of older plants shorter. **Phylloclades of juvenile** plants up to 20 mm long, deeply divided, thin, with narrow-linear segments; those of adults thick, coriaceous, 10–25 mm, dark green to glaucous green above, glaucous below; shape various—narrow-rhomboid or spatulate, sparingly or much lobed, often elliptic to obovate, cuneate at base, apex subacute to broad-obtuse, margins crenate, leaf-denticles small. **Male strobili** 5–6 mm long in fascicles of 2–5, rarely solitary, apical, with pedicels 1–2 mm long; sporophylls with small variously shaped apiculi, sometimes erose. **Carpidia** densely clustered towards bases of phylloclades, or marginal, rarely solitary; receptacle of red, fleshy scales; mature heads c. 6–7 mm. diameter. **Seeds** nutlike, black. exserted, ovoid, compressed, c. 2.5 mm long, obtuse; cupule white, irregularly lobed, up to  the length of seed.

SIMILAR TAXA

Distinguished from the other named celery pines (tanekaha (*P. trichomanoides*) and toatoa (*P. toatoa*)) by the shrub to small tree-forming growth habit, and glaucous simple phylloclades. It differs from *P. aff. alpinus* (see Taxonomic Notes below) by the dark green glaucous rather than yellow phylloclades and shrub to small tree-forming growth habit. In some parts of its range it is sympatric with *P. aff. alpinus* (such as the Richmond Range, near Nelson)

FLOWERING

October–December

FLOWER COLOURS

No flowers

FRUITING

January–June

PROPAGATION TECHNIQUE

Easily grown from fresh seed and, with some difficulty, by hard wood cuttings. As a rule rather slow growing and suited for cultivation in warm climates. Often very slow growing though once established it forms a beautiful small tree. Some selection of wild forms is needed as leaf colours from dark green to plants that richly coloured blue-grey (this is retained in cultivation).

ETYMOLOGY

phyllocladus: Leaf branch, referring to the leaf-like stems

alpinus: From the Latin alpes 'the Alps', refers to plants growing in mountainous areas

TAXONOMIC NOTES

Allan (1961) adopted a very broad concept for *Phyllocladus alpinus* including within it a very distinct form with yellow phylloclades of lowland to montane forests and which (under certain conditions such as in the lowland forests of the west coast of the South Island) can form a large tree up to 15 m tall. This form is probably better treated as a distinct species and as such was the subject of considerable study by Dr Brian Molloy. This is the form that is found on Mt Moehau (where it has variously been called a hybrid or another new species (*P. "Moehau"* of some treatments) allied to *P. aff. alpinus*, but which it is now agreed is the same unnamed species) and which is also in cloud forest on the high points of the Coromandel Peninsula (Maunapaki, Table Mountain), Kaimai (Te Aroha, Ngatamahinerua), Raukumara and Te Urewera Ranges, as well as in isolated pockets in the Tararua Ranges. This form is also occasionally sympatric with *P. alpinus* in the Richmond Range. It is most common from Kahurangi National Park (Wakamarama Range) south to south Westland. The description and notes provided in this Fact Sheet does not include this entity.

ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange 1 August 2004. Description adapted from Allan (1961).

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

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