

Halocarpus bidwillii

COMMON NAME

bog pine

SYNONYMS

Dacrydium bidwillii Kirk

FAMILY

Podocarpaceae

AUTHORITY

Halocarpus bidwillii (Kirk) Quinn

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

Yes

ENDEMIC GENUS

Yes

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Trees & Shrubs - Gymnosperms

NVS CODE

HALBID

CHROMOSOME NUMBER

2n = 18

CURRENT CONSERVATION STATUS

2017 | Not Threatened | Qualifiers: DP

PREVIOUS CONSERVATION STATUSES

2012 | Not Threatened

2009 | Not Threatened

2004 | Not Threatened

BRIEF DESCRIPTION

Much-branched, shrubs or small trees. Foliage distinctly dimorphic (less obvious in adults but usually evident in shaded foliage and on basal branches). Branchlets initially 4-angled, slender (thread-like), leaves bronze-green, yellow-green (often red-tinged). Fruits comprising a dark dark brown, black-brown to dark purple-brown seed sitting within a fleshy, waxy white cup.

DISTRIBUTION

Endemic. New Zealand: North Island (from the Central Volcanic Plateau and Kaingaroa Plain south but distribution patchy), South Island and Stewart Island/Rakiura. Records of *Halocarpus bidwillii* from Te Moehau (Colville, Coromandel Peninsula) are referable to *H. biformis*.

HABITAT

Lowland to subalpine (strictly montane to alpine in the North Island). A shrub or small tree of wetland margins, bogs, poorly draining heathland, frost-flats, river beds and also dry, stony ground and tussock grassland. *Halocarpus bidwillii* can be locally dominant.

WETLAND PLANT INDICATOR STATUS RATING

FAC: Facultative

Commonly occurs as either a hydrophyte or non-hydrophyte (non-wetlands).



Mt Ruapehu, January. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.



Mt Ruapehu, April. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.

DETAILED DESCRIPTION

Dioecious, spreading or erect, much-branched shrub or small tree up to 4.8 m tall. **Trunk** 0.3–0.4 m d.b.h, usually multiple, rarely solitary, sometimes spreading. **Bark** firm, flaking in irregular shards, exposed surface grey, usually covered in lichens, undersides red to red-brown. **Branches** spreading, bases sometimes layering on contact with soil (in extreme examples give rise to a ring of clonal shrubs surrounding 'parent'); branchlets initially tetragonous, becoming ± terete with age, 1.2–2.0 mm diameter. **Foliage** dimorphic; juveniles linear, coriaceous, rigid, apetiolate, spreading,; lamina 5.0–10.0 × 1.0–1.5 mm, bronze green to yellow-green, sometimes tinged red, obtuse to subacute, midvein distinct; adults leaves closely imbricate, coriaceous; lamina 1–2 mm long, obtuse to subacute. **Male strobili** solitary, terminal and sessile, 2.8–4.6 mm long; apiculus obtuse. **Female cones** sessile, terminal, each surrounded by leaf-like, elongated bracts (1–5 of which are fertile), and terminating in a central sterile appendage. **Carpidia** solitary or paired, subterminal, larger than associated bracts. **Epimatium** adnate to base of carpidium; dorsiventrally compressed and striated, initially green, maturing dark-brown to black with the region around the micropyle swelling to form a fleshy, waxy-white (very rarely yellowish), persistent aril collar at the proximal end of the carpidium; the aril cupular to v-shaped under seed. **Seed** glabrous, smooth, 3.0–4.5 mm long (including aril), dark brown, black-brown to dark purple-brown, glossy, ovate-oblong, compressed.

SIMILAR TAXA

Easily recognised when fruiting by the waxy white (very rarely yellowish) arils subtending the seed. Vegetatively it is distinguished from the other *Halocarpus* by the smaller much-branched shrub to small tree growth habit, weakly keeled leaves (prominently so in *H. biformis*), and more slender, initially tetragonous, branchlets. The seeds of *Halocarpus bidwillii* are distinguished from *H. biformis* (with which it most often confused) by the ventral and dorsal surfaces usually prominently longitudinally grooved (sometimes only on the ventral surface) (see Webb & Simpson 2001).

FLOWERING

October–December

FLOWER COLOURS

No flowers

FRUITING

February–June

LIFE CYCLE

Arrilate seeds are dispersed by frugivory (Thorsen et al., 2009).

PROPAGATION TECHNIQUE

Easily grown from seed. Can be struck from semi-hardwood and hardwood cuttings—but often fickle. best grown in an open site in a well drained but moist soil. Dislikes drought and humidity.

THREATS

Not Threatened—though uncommon and in decline within some parts of its North Island, eastern and southern South Island range.

ETYMOLOGY

halocarpus: From the Greek hals 'sea', 'salty' and karpos 'fruit'

bidwillii: Named after the botanist - John Carne Bidwill (born 1815 and died 16 March 1853)

ATTRIBUTION

Fact Sheet prepared for NZPCN by P.J. de Lange 12 November 2014: Description adapted from Allan (1961), Quinn (1982), Webb & Simpson (2001) and fresh and dried specimens.

REFERENCES AND FURTHER READING

- Allan HH. 1961. Flora of New Zealand, Volume I. Indigenous Tracheophyta: Psilopsida, Lycopsidea, Filicopsida, Gymnospermae, Dicotyledones. Government Printer, Wellington, NZ. 1085 p.
- Quinn CJ. 1982. Taxonomy of *Dacrydium* Sol. ex Lamb. emend. de Laub. (Podocarpaceae). *Australian Journal of Botany* 30(3): 311–320. <https://doi.org/10.1071/BT9820311>.
- Thorsen MJ, Dickinson KJM, Seddon PJ. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285–309. <https://doi.org/10.1016/j.ppees.2009.06.001>.
- Webb CJ, Simpson MJA. 2001. Seeds of New Zealand Gymnosperms and Dicotyledons. Manuka Press, Christchurch. 428 p.

NZPCN FACT SHEET CITATION

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MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/halocarpus-bidwillii/>