

# 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/>