

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

2012 | Not Threatened

PREVIOUS CONSERVATION STATUSES

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, South and Stewart Islands from the Central Volcanic Plateau and Kaingaroa Plain south but in the North Island patchy. 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



Mt Ruapehu, January. Photographer: John Smith-Dodsworth



Mt Ruapehu, April. Photographer: John Smith-Dodsworth

FEATURES

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

Quinn, C.J. 1982. Taxonomy of *Dacrydium* Sol. ex Lamb. emend. de Laub. (Podocarpaceae). *Australian Journal of Botany* 30: 311-320.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309.

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

NZPCN FACT SHEET CITATION

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MORE INFORMATION

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