

Avicennia marina subsp. australasica

COMMON NAME

manawa, mangrove

SYNONYMS

Avicennia resinifera G.Forst.; *Avicennia marina* var. *resinifera* (G.Forst.) Bakh

FAMILY

Acanthaceae

AUTHORITY

Avicennia marina subsp. *australasica* (Walp.) J.Everett

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

No

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Trees & Shrubs - Dicotyledons

NVS CODE

AVIMSA

CHROMOSOME NUMBER

2n = c.64, 64, 96

CURRENT CONSERVATION STATUS

2012 | Not Threatened

PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Not Threatened

BRIEF DESCRIPTION

Small yellowish-green tree forming dense groves on coastal mudflats in the upper North Island. Leaves leathery, tapering to a pointed tip, paler below. Flowers inconspicuous. Fruit large, yellowish, leathery, falling from tree and floating on tide.

DISTRIBUTION

Indigenous. New Zealand: North Island from Parengarenga Harbour south to Kawhia and Ohiwa Harbours. Australia (Queensland, New South Wales, Victoria), Lord Howe Island. In New Zealand *Avicennia* has been deliberately and extremely irresponsibly naturalised at Tolaga Bay, Mohakatino River, and formerly in the Hutt River and Parapara Inlet (Golden Bay) - where it has since been eradicated.



At Whangapoua harbour. November.
Photographer: John Smith-Dodsworth



Whangapoua harbour. November.
Photographer: John Smith-Dodsworth

HABITAT

Strictly coastal. usually inhabiting tidal river banks and river flats, estuaries and shallow harbour entrances. An important vegetation type and key ecosystem of many northern North Island harbours and estuaries. Generally favoring mud or silt-rich substrates but also found on sand, especially along channels. *Avicennia* flourishes where silt and mud has accumulated and in some harbours, especially those abutting cities it has become a problem species. The increase of *Avicennia* is however a symptom of a more serious issue, that is the impact of increased sedimentation rates within harbours whose catchments have been seriously degraded and/or deforested. It should also be noted that the argument that *Avicennia* ecosystems in New Zealand are as productive as tropical mangal systems has yet to be demonstrated conclusively. In many places *Avicennia* has replaced the demonstrably more important and productive *Zostera* grass beds with potentially serious long-term consequences for our near shore fisheries.

FEATURES

Small tree or shrub or intertidal zones (usually estuaries and tidal river flats). Growth habit variable, if of tree form then reaching up to 12 m tall with a narrow to broad spreading canopy; if of shrub form then with plants wider than tall up to 2 m tall and 4 m across (usually reduced to a shrub within muddy ground as well as in the southern part of range). Roots spreading bearing numerous, erect pneumatophores. Bark on mature trees grey, furrowed; branches spreading, rather stout but brittle (snapping readily); branchlets ± finely pubescent, glabrate, tomentum greyish-brown, often absent in seedlings. Leaves opposite, coriaceous, on stout, narrowly winged petioles 5-10 mm long; lamina coriaceous, 50-120 × 20-50 mm, elliptic, elliptic-ovate, elliptic-ovate, ovate, oblanceolate to ± rhombic, apex acute to obtuse (rarely mucronate, then with mucro 2-8 mm long, this often caducous), base attenuate, margins entire though often slightly recurved; adaxially dark green, glossy, glabrous, abaxially lighter green to almost glaucescent, surface dull densely clad in caducous scurfy white to buff-coloured tomentum. Inflorescences usually axillary in upper leaf axils (very rarely terminal), in 3-8(-10)-flowered cymes borne on erect 4-angled pubescent peduncles 15-25 mm long. Flowers c.6-7 mm diameter, sessile or subsessile. Calyx deeply 5-lobed; calyx lobes 2.5-3.0 mm long, ovate, weakly keeled or not, adaxially sericeous hairy. Corolla ± rotate, corolla tube 1.0-1.2 mm long; lobes 4, spreading, 2.5-3.2, dark yellow or orange, ovate, adaxially glabrous, abaxially finely sericeous hairy. Stamens 4, inserted in corolla throat. Ovary 1-locular (imperfectly divided into 4); ovules 4; style 2-lobed. Fruit a 1-seeded capsule, 15-30 mm long, yellow-brown to light brown, circular or broadly ovate, ± compressed with an obtuse to subacute apex and rounded base, dehiscing into 2 valves, adaxial valve surface finely clad in short hairs and sessile spherical glands, smooth, coriaceous.

SIMILAR TAXA

None

FLOWERING

February - April

FLOWER COLOURS

Orange, Yellow

FRUITING

December - January

LIFE CYCLE

Florets are wind dispersed (Thorsen et al., 2009).

PROPAGATION TECHNIQUE

Easily grown from ripe fruit which is usually partially germinated when it falls from the tree. Can be grown in normally potting mix but does best immersed in soil within brackish water. *Avicennia* can be easily translocated and as such has been moved in New Zealand by people outside its natural range. Although it is frost tender, once established plants are capable of tolerating much heavy frosts than has been assumed in the literature (see comments by de Lange & de Lange 1994).

ETYMOLOGY

avicennia: Named in honour of the Persian physician Avicenna (980-1037)

marina: Marine

australasica: Of or from Australasia

WHERE TO BUY

Not commercially available.

ATTRIBUTION

Fact Sheet Prepared for NZPCN by: P.J. de Lange 29 August 2011. Description by P.J. de Lange with fruit characters modified from Webb & Simpson (2001).

REFERENCES AND FURTHER READING

de Lange, W.P.; de Lange, P.J. 1994: An appraisal of the factors controlling the latitudinal distribution of mangrove (*Avicennia marina* var. *resinifera*) in New Zealand. *Journal of Coastal Research* 10: 539-548.

Webb, C.J.; Simpson, M.J.A. 2011: *Seeds of New Zealand Gymnosperms and Dicotyledons*. Christchurch, Manuka Press.

Morrisey, D., Beard, C., Morrison, M., Craggs, R., Lowe, M. 2007. The New Zealand mangrove: review of the current state of knowledge. Auckland Regional Council. ARCTP 325. NIWA Research Project.

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* 2009 Vol. 11 No. 4 pp. 285-309

NZPCN FACT SHEET CITATION

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MORE INFORMATION

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