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
2017 | Not Threatened | Qualifiers: SO

PREVIOUS CONSERVATION STATUSES
2012 | Not Threatened
2009 | Not Threatened
2004 | Not Threatened

At Whangapoua harbour. November. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.

Whangapoua harbour. November. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.

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.

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.

WETLAND PLANT INDICATOR STATUS RATING
OBL: Obligate Wetland
Almost always is a hydrophyte, rarely in uplands (non-wetlands).

DETAILED DESCRIPTION
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 pneumatopores. 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 attentuate, margins entire though often slighlty 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 seriaceous 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 seriaceous 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 cla din 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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