

Water mimosa

Neptunia oleracea and *Neptunia plena*



You must not grow, sell or give this plant away. There are alternative plants that can be used in food preparation.

Water mimosa poses an extreme threat to Queensland's waterways and wetlands. It establishes from small plant pieces in water and from seed. Under favourable conditions, water mimosa grows out from the banks to form floating rafts of dense interwoven stems. These can be dislodged by water movement (especially during floods) and are soon replaced by more water mimosa.

These floating rafts can restrict water flow in creeks, channels and drains. It can impede recreational water sports and boating access.

The rafts are so dense they can reduce water quality by preventing light penetration and reducing oxygenation of water. This creates favourable habitat for mosquitoes and reduces fish activity, causing the death of native, submerged water plants and fish.



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Legal requirements

Water mimosa (*Neptunia oleracea* and *Neptunia plena*) are category 2, 3, 4 and 5 restricted invasive plants under the *Biosecurity Act 2014*. The Act requires that all sightings of water mimosa plants must be reported to Biosecurity Queensland within 24 hours of the sighting. By law, everyone has a general biosecurity obligation (GBO) to take all reasonable and practical steps to minimise the risk of spread of water mimosa until they receive advice from an authorised officer. It must not be kept, moved, given away, sold, or released into the environment.

Description

Water mimosa is an aquatic floating perennial herb that attaches to the bank at the waters edge and sends down a taproot. Stems grow out over the water and form a spongy, fibrous covering between the nodes. Fibrous (adventitious) roots grow from the nodes. The rooted land form has smaller leaves and flowers, and has no spongy floating tissue.

Leaves are olive green and are arranged in opposite pairs along the stem. When disturbed or touched the leaflets close up. Water mimosa flowers are yellow, ball-shaped and grow from the base of the leaves.

Neptunia oleracea stems to 1.5 m long, prostrate at the waters edge, rarely branched, becoming detached from the primary root system, forming a spongy-fibrous indument between the nodes and producing fibrous adventitious roots at the nodes when growing in water.

Leaves have leaflets, 8–20 pairs per pinna. The leaflets are very sensitive to touch and close quickly. Flowers, yellow 30–50 per spike and each flower is 7–16 mm long, 0.5–1 mm broad. Seeds are oval and brown, 4–8 per legume. Each seed is , 4–5.1 mm long, 2.7–3.5 mm broad.

Neptunia plena stems to 2 m tall, erect to ascending (rarely prostrate) glabrous or forming a spongy-fibrous indument when in water. Leaves have leaflets 9–38 pairs per pinna, 4–14 (–18) mm long, 1–3 (–3.5) mm broad. Flowers are yellow, 30–60 per spike, 9–16 mm long, 1–1.6 mm broad. Seeds are oval and brown, 8–20 per legume. Each seed is 4–4.1 mm long, 2.2–2.3 mm wide.

Life cycle

Water mimosa can grow from seeds and from sections of stem that break free from the parent plant. Flowering begins in early summer.

Methods of spread

Because it is an Asian vegetable, water mimosa has been subject to sale and distribution through Asian communities and gardeners.

As water mimosa can form floating rafts of dense inter woven stems, these can be dislodged by water movement (especially during floods) and re-establish further downstream.

Habitat and distribution

Water mimosa takes root on the banks of watercourses and grows out over the water surface, forming floating rafts. Within its native range, water mimosa is a common floating plant in freshwater pools, swamps and canals at low altitudes of up to 300 m. When water levels fall during the dry season, the plants often perish. The plants prefer slow-moving water 30–80 cm deep, full sun and hot, humid conditions. Shade, brackish water and saline soil adversely affect plant growth.

Neptunia oleracea is accepted as being native to tropical Asia, Africa and South America. It grows wild and is cultivated as a vegetable throughout South-East Asia, particularly Thailand and Indo-China. *Neptunia plena* grows in the coastal regions of southern North America, Central America, northern South America and tropical Asia.

It has been found in various locations in Queensland. To prevent it escaping and damaging water courses, Biosecurity Queensland in partnership with the relevant local government target it for eradication.

Control

Managing water mimosa

The GBO requires a person to take reasonable and practical steps to minimise the risks posed by water mimosa. This fact sheet provides information and some options for controlling water mimosa.

In most cases the best management approach combines herbicide, mechanical and biological control methods with land management changes. It is essential to choose control methods that suit the specific plant and the particular situation.

All suspected sightings of water mimosa must be reported to Biosecurity Queensland, who will work with the relevant person to control the plant. Anyone finding suspected plants should immediately take steps to minimise the risk of water mimosa spreading.

Herbicide control

APVMA minor use permit PER80472 (expires 31/03/2024) allows for the use of certain herbicides by suitably trained employees of the department, local government and persons under their direction. The permit contains a number of conditions that must be adhered to.

Infestations requiring control should be reported to Biosecurity Queensland. See Table 1 for the treatment options in situations allowed by the permit.

More information

More information is available from your local government or call Biosecurity Queensland on 13 25 23 or visit biosecurity.qld.gov.au.

Table 1. Herbicides for the control of water mimosa

Situation	Herbicide	Rate	Comments
Aquatic situations in Queensland including all bodies of fresh or brackish water which may be flowing, non-flowing or transient and the margins of streams, lakes, dams, channels and drains	Metsulfuron-methyl 600 g/kg (e.g. Brush-off brush controller)	10 g product/100 L water	Note: Nufarm bonus adjuvant/ surfactant
	Glyphosate 360 g/L (e.g. Roundup biactive)	1–1.3 L product/100 L water	Refer to and apply in accordance with product label
	Other glyphosate formulations registered for use in aquatic situations	Apply at the equivalent rate or 3.6 to 4.7 g a.i./L Further information on calculating equivalent rates can be found on APVMA permit PER11463 (expires 30/04/2027)	Limited use near potable water sources/supply areas Do not use wetting agents, that are not approved for use in aquatic situations
	250 g/L amitrole and 220 g/L ammonium thiocyanate (e.g. Amitrole T herbicide)	2.2–4.5 L/100 L water	

Read the label carefully before use and always use the herbicide in accordance with the directions on the label.





Fact sheets are available from biosecurity.qld.gov.au. The control methods recommended should be used in accordance with the restrictions (federal and state legislation, and local government laws) directly or indirectly related to each control method. These restrictions may prevent the use of one or more of the methods referred to, depending on individual circumstances. While every care is taken to ensure the accuracy of this information, the department does not invite reliance upon it, nor accept responsibility for any loss or damage caused by actions based on it.

