Department of Agriculture and Fisheries
Biosecurity Queensland

Restricted invasive plant

Water mimosa

Neptunia oleracea or *Neptunia plena*

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 reduce fish activity, causing the death of native, submerged water plants and fish.

Queensland Government

Legal requirements

Water mimosa (*Neptunia oleacea* and *Neptunia plena*) are 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 without a permit.

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, prostarate 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 sentsive 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 pleana 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 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.

Found in various location in Queensland and Biosecurity Queensland in partnership with the relevant local government target it for eradication.

Control

All suspected sightings of water mimosa must be reported to Biosecurity Queensland, which 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.

Further information

Further information is available from your local government office, or by contacting Biosecurity Queensland on 13 25 23 or visit www.biosecurity.qld.gov.au.

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