



1. Water stargrass totally covering the water surface. 2. Creeping underwater stems with roots. 3. Star-like nature of submerged leaves. 4. Close-up of leaves and blue flowers.



AQUATIC

Water stargrass (*Heteranthera zosterifolia*)

Introduced

Not Declared

Water stargrass is grown as an aquarium plant in Australia and other parts of the world. This native of South America (i.e. southern Brazil, Bolivia, Paraguay, Uruguay and northern Argentina) was recently recorded becoming established outside cultivation for the first time in Australia.

Distribution

Water stargrass is a relatively popular aquarium plant, but is usually cultivated in tropical aquaria because it prefers warmer water temperatures. The first and only known occurrence of it becoming established outside cultivation in Australia was in December 2011, when a single infestation was recorded in the Port Macquarie district on the north coast of NSW.

This species does not have much of a history as a weed overseas, but it has been recorded as a weed of rice crops in Indonesia.

Description

A long-lived plant capable of growing underwater (i.e. entirely submersed) or above the water surface. Young plants usually begin life underwater and form a basal rosette of narrow leaves. When viewed from above, these plants are star-shaped and grass-like in appearance, hence the common name "stargrass". Plants are usually rooted in mud and often form very long running stems with widely spaced leaves when growing underwater; but the stems break easily and may sometimes also be found floating near the water surface. Stems that emerge above the water surface are usually shorter with much more densely clustered leaves. Submerged leaves are stalkless and relatively narrow (i.e. up to 5cm long and 7 mm wide) with pointed tips, while floating or emergent leaves are quite different. They are normally narrowly oval in shape (about 4 cm long) with rounded tips and borne on stalks up to 8 cm long.

The small flowers are borne at or above the water surface, and are usually produced in pairs. These flowers have six bluish petals, which are long and narrow in shape and sometimes have darker purple markings at the base. They also have three stamens with yellow anthers and a hairy style ending in a tiny stigma. The fruit is a small capsule containing numerous tiny seeds.

Quick Facts

- > A long-lived aquatic plant that forms very dense mats in shallow water
- > Stems regularly produce roots at their joints
- > Underwater leaves are stalkless and often form a star-shaped rosette
- > Leaves borne above water are narrowly oval in shape
- > Small blue flowers borne in pairs

Habitat

In its native range, Water stargrass usually grows in shallow still freshwater; in wetlands or in marshy areas. It may be found in similar habitats in Australia, and might also invade slow-moving waterways, drainage ditches, rice crops and other damp sites.





1. Habit of growth above the water surface. 2. Dense infestation of Water stargrass in urban drain.

Reproduction and Dispersal

Plants can reproduce by seed or by pieces of stem that will readily take root when conditions are suitable. They are most likely to be initially spread by the dumping of aquarium waste in wetlands and waterways. Once present in natural areas, seeds or stem segments can be spread downstream during floods or inadvertently transported to new areas by people (i.e. on vehicles, boats or shoes).

Why is it an Emerging Threat?

Like its close relative Kidneyleaf mud-plantain (*Heteranthera reniformis*), Water stargrass has shown the capacity to form dense mats of vegetation in wetlands. If left uncontrolled, it may eventually replace native species, decrease water quality and restrict water movement in such areas.

Control Methods

Individual plants or small infestations can be removed manually, taking care to ensure that no stem and root material remains in the soil. Once collected, all plant material should be removed from the site and disposed of in a sanitary manner. Prevent further spread of the weed to other areas by avoiding fragmentation of stem material.

When larger infestations are present, or where access is more difficult, the use of herbicides may be necessary. While there are no herbicides currently registered for the control of Water stargrass within Australia, the control of environmental weeds such as *Heteranthera zosterifolia* is currently allowed in Queensland via off-label permit 11463 (<http://permits.apvma.gov.au/PERI1463.PDF>). Under this permit, the use of aquatically registered formulations of Glyphosate (e.g. Round-up Biactive and Weedmaster Duo) is permitted for the spot spraying of weeds in aquatic and wetland areas. For control within other state boundaries, see the relevant permits or government legislation.

Look a-likes

Water stargrass is closely related to another emerging weed known as Kidneyleaf mud-plantain (*Heteranthera reniformis*). However, Kidneyleaf mud-plantain has larger kidney-shaped leaves while the leaves of Water stargrass are small and relatively narrow. The flowers of Kidneyleaf mud-plantain are also usually white or pale blue, while those of Water stargrass are always bluish in colour.



Top. Habit of Kidneyleaf mud-plantain.

Bottom. Close-up of kidney-shaped leaves.

The control methods referred to in Weed Watch™ 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 utilisation 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, Technigro does not invite reliance upon it, nor accept responsibility for any loss or damage caused by actions based on it.

This information has been developed with the assistance of Dr Sheldon Navie. Photographs are courtesy of Ben White, Port Macquarie-Hastings Council and Dr Sheldon Navie.

© Technigro Australia Pty Ltd 2012

Your Provider of Vegetation Management Solutions

Post: PO Box 2020, Nerang BC, QLD, 4210

T: 1800 678 611 technigro.com.au