

Limnocharis

Limnocharis flava



Limnocharis is considered to be a major weed in many countries. This perennial aquatic plant colonises shallow wetlands and margins of deeper waterways. It can quickly grow to dominate native aquatic plants and affects the ecology of stream banks by displacing native flora and fauna.

Limnocharis can change the hydrology of water bodies by reducing the width of channels, thereby restricting water flow and creating silt traps. It can also restrict human and livestock access to water and provide favourable breeding areas for disease vectors like mosquitoes.

In Asia, limnocharis hinders agricultural production by infesting irrigation channels, drainage ditches and rice paddies. These rice paddies are rendered useless and are often abandoned as a result. Limnocharis infestations pose serious threats to agriculture and biodiversity in northern Australia.

Limnocharis (*Limnocharis flava*) is a perennial aquatic weed. It can grow to a height of 1 metre, has pale green leaves and small yellow cup-shaped flowers. In northern Australia it has the potential to invade wetlands, rivers, dams and cane drains, displacing native aquatic plants and animals.



Queensland Government

Declaration details

Limnocharis is a declared Class 1 pest plant under Land Protection (*Pest and Stock Route Management*) Act 2002.

All landholders are required by law to keep their land free of Class 1 pests. It is a serious offence to introduce, keep or sell Class 1 pests without a permit.

Description and general information

Limnocharis is an anchored, aquatic, erect clump-forming herb that is generally found growing in saturated, fertile and muddy conditions.

Leaves and stems

Limnocharis can reach 1 m in height. The pale green, velvety leaves are up to 28 cm long and 20 cm wide with 11–15 parallel veins. The leaf blade shape varies with age; it is fairly narrow when young then becomes more oval as the plant ages. The triangular stem is a key identification feature (most aquatic plant stems are round) and can be up to 85 cm long.

Flowers and seeds

The yellow, cup-shaped flowers are borne on triangular stalks. Each stalk produces 2–15 flowers. The spherical capsules produced after flowering split into 12–18 crescent-shaped pieces called follicles, which may contain up to 115 small brown seeds.



Limnocharis flava flower



Cross-section of the triangular stem



Fruit and fruit segments containing seed (photograph courtesy of P Zborowski)

Life cycle

Limnocharis can reproduce vegetatively and by seed. Mature fruit can be produced in as little as 46 days. Seeds contained in the mature fruit capsules or the individual follicles are buoyant and can be distributed by running water.

To reproduce vegetatively, the ageing fruit capsule bends towards the water, allowing the seeds to escape. The empty capsule can then develop into a vegetative plantlet that either establishes beside the parent plant or floats away to establish elsewhere.

Habitat and distribution

Limnocharis is found growing in saturated, fertile and muddy conditions. It grows as a perennial plant in areas with sufficient moisture, but can act as an annual plant where moisture is seasonal. As a tropical species, *limnocharis* is frost-sensitive.

The native range of *limnocharis* extends from Mexico to Bolivia, Paraguay and northern Argentina. From its native range, *limnocharis* has moved into parts of south-east Asia, Africa and the South Pacific.

Limnocharis was first identified in Australia in 2001. At present, infestations are found only in northern Queensland. However, there is potential for it to establish in northern regions of Western Australia and the Northern Territory and the northern and coastal regions of Queensland and New South Wales.

Methods of spread

A change in hydrology, (e.g. flooding), is the most effective method of spread. While many fruiting capsules disintegrate fairly quickly in the water some remain intact for a number of days, allowing the seed to be dispersed from the parent plant.

It is possible for seed to be spread via mud stuck to vehicles, machinery, footwear, water birds and animals.

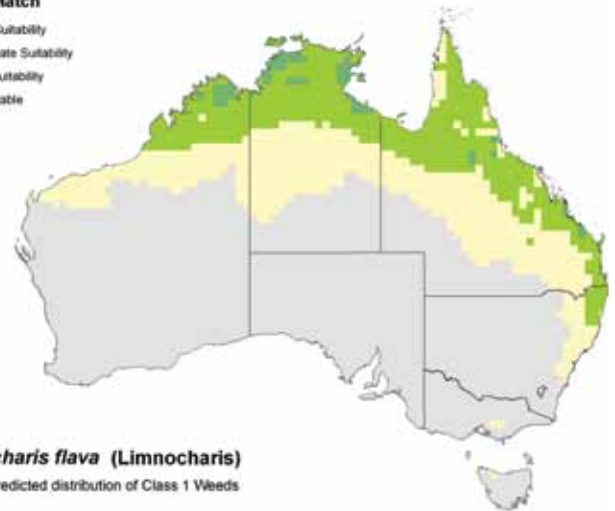
There have also been records of trade between gardeners for use in water features.

Current status

In North Queensland, populations of *Limnocharis flava* have been detected between Mossman in the north, Atherton in the west and Townsville in the south.

Since 2001, *limnocharis* has been the target of a national cost-shared eradication program, managed by Biosecurity Queensland (Department of Employment, Economic Development and Innovation, DEEDI) with financial support from other states and the federal government.

Climate Match



***Limnocharis flava* (*Limnocharis*)**
Climate Predicted distribution of Class 1 Weeds

Potential distribution of *limnocharis* in Australia

Control

There are no chemicals registered to specifically control *limnocharis*. All suspected infestations should be reported to Biosecurity Queensland who will develop a site-specific eradication program with the landholder.



A *limnocharis*-infested waterway



Small, yellow cup-shaped flower

Further information

Further information is available from your local government office, or by contacting Biosecurity Queensland (call 13 25 23 or visit our website at www.biosecurity.qld.gov.au).

Fact sheets are available from Department of Employment, Economic Development and Innovation (DEEDI) service centres and our Customer Service Centre (telephone 13 25 23). Check our website at www.biosecurity.qld.gov.au to ensure you have the latest version of this fact sheet. The control methods referred to in this fact sheet 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, DEEDI does not invite reliance upon it, nor accept responsibility for any loss or damage caused by actions based on it.