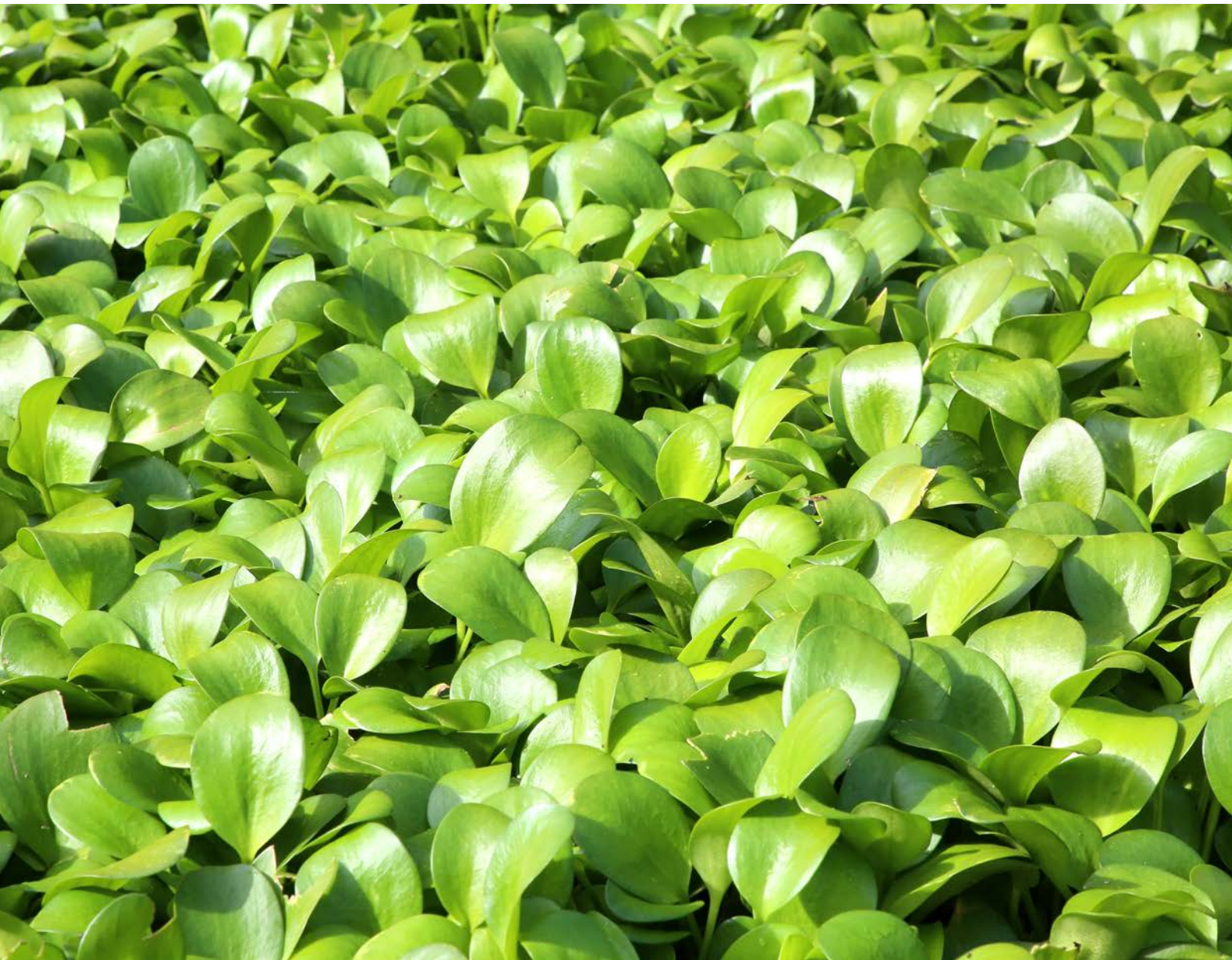


# Amazon frogbit

*Limnobium laevigatum*



A native to Central and South America, Amazon frogbit is a perennial fast-growing, floating aquatic plant, reminiscent of a large duckweed (*Lemna minor*). Leaves generally float on the water surface but can become emergent when the plant is crowded. Mature plants are similar to water hyacinth in their habit and can reach considerable height above the water surface.

It can often be found in fishponds, aquariums and water features. This invasive aquatic plant invades and smothers

waterways. It can form large dense mats of runners and adult plants can develop very quickly. It can also block waterways and irrigation channels limiting recreational activities.

Similar to other floating aquatic invasive plants, dense mats cause serious impacts on aquatic ecosystems as they block all gas exchange and light penetration, alter the water chemistry and thereby rendering aquatic ecosystems unsuitable for most other aquatic species.



**Queensland**  
Government



## Description

Amazon frogbit is a perennial floating aquatic plant that can grow up to 50 cm high. The plant has several growth forms, with juveniles resembling duckweed, the leaves are floating level on the water surface. In mature plants, the leaves start to emerge from the water surface and develop long stems (petiole).

The leaves are bright green and up to 4 cm wide and area arranged in basal rosettes. New plants are generated along runners (stolons) that emerge from the mother plant. The leaves have thick spongy tissue towards the base that provide buoyancy, therefore the common name sponge plant overseas.

Flowers are white to pale yellow, male or female, up to 13 mm wide. The flowers emerge upright, and subsequent fruit develop on the underside of the plant, in the water.

Each fruit is about 4–13 mm long, 2–5 mm wide and contain up to 100 highly viable seeds, which are less than 1 mm in diameter and are spherical with a rough surface. Fruit are retained on the plant but split when mature, releasing seeds that mostly sink.

## Methods of spread

Amazon frogbit dispersal is by seeds and stem fragments. Floating rosettes produce runners (stolons), the ends of which grow into juvenile plants.

It can also be spread by the careless dumping of unwanted plants into urban drains leading into waterways. Young plants can easily and quickly be carried along by water. Humans can unintentionally transport small plants attached to watercraft or recreational gear.

## Habitat and distribution

Amazon frogbit prefers tropical to subtropical climates. It may become naturalised in dams, lakes and freshwater wetlands throughout Queensland.

The first occurrence in the Queensland environment was detected in March 2011, with the establishment of the plant in a Redlands waterway adjoining an urban area.

As this plant has been sold as an aquarium plant for some time, it may be likely that encounters in waterways near urban areas throughout Queensland are a result of escapes or releases from aquariums or from garden water features.

The plant is now widespread in Brisbane, the Gold Coast and Sunshine Coast waterways and a infestation occurs in the Baron River catchment of North Queensland.

## Control

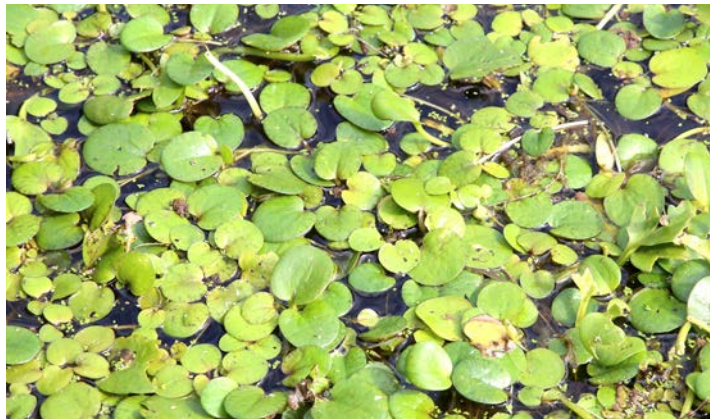
The best approach is to combine herbicide and physical control methods. The control methods should suit the specific plant and particular situation. The herbicide provides excellent control as the plant is highly sensitive to it.

## Herbicide control

The Australian Pesticide and Veterinary Medicines Authority (APVMA) has recently registered an herbicide for the control of Amazon frogbit in Queensland. A summary of the uses of this herbicide is listed in Table 1.

## More information

For more information contact your local government or visit [biosecurity.qld.gov.au](http://biosecurity.qld.gov.au).



**Table 1. Herbicides for the control of Amazon frogbit**

Situation	Herbicide	Rate	Comments
<b>A. Water bodies deeper than 0.5 m with estimated water volume greater than 37.5 m<sup>3</sup>, with no physical barriers to restrict water circulation</b>			
Control of floating invasive plants in enclosed water bodies and margins of larger open aquatic systems	CLIPPER herbicide (Flumioxazin, 15 g/tablet)	<b>Direct tablet application</b> <b>High concentration</b> Apply one tablet for every 37.5 m <sup>3</sup> of water to achieve active 400 parts per billion	Refer to general instructions and application on the product label to determine the appropriate application type. The choice of dose will depend on the pH of the water and the density of the target plant.
		<b>Low concentration</b> Apply 1 tablet for every 75 m <sup>3</sup> of water to achieve active 200 parts per billion	Most of the times the low concentration will be sufficient for good control as the plant is very sensitive to the active.
		<b>Surface spray</b> Including foliar application, spot spraying and clean-up sprays to control survivors from previous applications  <b>High concentration</b> One tablet in 50 L of spray solution plus approved aquatic adjuvant/surfactant @ 0.5–1% v/v; apply 12–15 L of spray solution per 100 m <sup>2</sup> (360–450 g a.i. per ha)  <b>Low concentration</b> One tablet in 100 L of spray solution plus approved aquatic adjuvant/surfactant @ 0.5–1% v/v; apply 12–15 L of spray solution per 100 m <sup>2</sup> (180–225 g a.i. per ha)	Refer to general instructions and application on the product label to determine the appropriate application type.  The choice of dose will depend on the density of the target plant. Most of the times the low concentration will be sufficient for good control as the plant is very sensitive to the active.  Nemo aquatic surfactant or ProForce Manta Ray surfactant can be used with Clipper aquatic herbicide.
<b>B. Water bodies less than 0.5 m deep, or with estimated water volume less than 37.5 m<sup>3</sup>, with barriers to water circulation where direct tablet application is not practical</b>			
Control of floating invasive plants where direct tablet application is not practical	CLIPPER herbicide (Flumioxazin, 15 g/tablet)	Injection of spray solution 200–400 parts per billion	Refer to general instructions and application on the product label to determine the appropriate application type.

**Read the label carefully before use. Always use the herbicide in accordance with the directions on the label.**

