

AMAZON FROGBIT

Limnobium laevigatum



***Limnobium laevigatum*, commonly referred to as Amazon frogbit, is a floating aquatic plant that has been distributed for use in private ponds and aquariums, being promoted as an easy-to-maintain plant. However, when allowed to enter waterways Amazon frogbit is a highly invasive species with a rapid growth rate and high reproduction potential. This species has the potential to result in significant environmental and economic costs. Amazon frogbit was initially discovered in Western Australian waterways in 2013 in Liege St. Wetlands (City of Canning) and in 2014 it was discovered in Bannister Creek (City of Canning). In subsequent years there have been outbreaks in Ballanup Drain (City of Armadale), Yangebup Lake (City of Cockburn), Baileys Drain (City of Armadale), Bayswater Brook (City of Bayswater), South Belmont Main Drain (City of Belmont), Little Rush Lake (City of Cockburn), Noble Falls (City of Swan) and Rockingham Central Main Drain (City of Rockingham). Each infestation has been an isolated incident thought to be resulting from residents inappropriately disposing of their aquarium into the stormwater network or directly into the waterway.**

THREAT

Amazon frogbit poses a real threat to Western Australian freshwater environments as it reproduces prolifically through both seed and vegetative division. A single leaf will grow roots and develop a new plant. Each plant can produce multiple seed pods with each pod containing 20–30 seeds that germinate readily and are viable for at least three years. The plant and seeds are easily transported in flowing water. It is known to form dense mats across waterways with up to 2000–2500 plants per square metre. These dense mats congest drains and waterways, displace native vegetation and greatly impact water quality and habitat for native wildlife.

CONTROL METHODS

Prevention and early detection are key to managing Amazon frogbit. Inappropriate disposal of aquarium and pond water into the stormwater network or directly into waterways is thought to be the cause of each outbreak.

Where an infestation is found the first step in control is to map the extent of the infestation and identify its initial source point. It is very important to understand the extent of the infestation because if even one leaf remains it has the potential to reinfest the site. Mesh barriers or booms should be installed to contain the current infestation with additional barriers installed downstream of the known infestation. Barriers will need to consider water flow, taking care not to create obstructions that will impede water and create flooding or erosion. An assessment of the plant

FACTS

Family: Hydrocharitaceae

Genus: *Limnobium* **Species:** *laevigatum*

Common names: Amazon or Smooth Frogbit, South American Spongeplant

Native distribution: Central and South America

Height: 50cm **Width:** 1-8cm

Distinguishing features: Each leaf has a lime green smooth surface with the underside having a distinctly bloated appearance when juvenile which decreases in the adult form. This sponge like bulge is formed by enlarged cells in the centre of the leaf, which enable the plant to float.



Amazon frogbit (*Limnobium laevigatum*) is being listed as a declared pest in Western Australia and will be placed on the Western Australian Organism List.

maturity is required, looking for the development of flowers and specifically seed pods, found at the base of the plant. If flowers and/or seed pods are discovered removal of the biomass is critical to prevent any potential seed dispersal. This may be mechanical or manual depending on the site. The plant biomass requires careful disposal and equipment needs to be thoroughly washed to prevent accidental spread to new areas. If Amazon frogbit is found amongst vegetation, the native plants should be trimmed and any weeds should be removed entirely to enable access for treatment and visual inspections.

If the plant is juvenile and not flowering, chemical applications may be considered for the initial control. Please note however, chemical applications alone will not be sufficient for control; thorough visual inspections and hand removal is required to ensure all plant material is removed.

Follow up is crucial for effective management. Once the initial biomass is removed regular site visits are required to thoroughly map and remove any plants. Ongoing mapping will aid in identifying any re-infestation points or potential germination from a seed bed. Monitoring should be undertaken weekly during the early stages of control, monthly once the surveys result in only a few plants being found per visit and monitoring is required during the following summer to ensure a leaf was not missed or germination hasn't occurred.

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Distinctly enlarged bulge under the leaf of a juvenile plant



Within densely packed adult plants the underside bulge is not so distinct, but cells are enlarged



Flowers



Seed Pod

HOW CAN VOLUNTEERS ASSIST?

Volunteers can play a helpful role in early identification and even prevention of the spread of Amazon frogbit. If you see a new plant you do not recognise, getting it properly identified before controlling it is important as it is easy to mis-identify plants. Volunteers can also play a role in working with the land manager to actively hand remove infestations and can notify SERCUL if any shops are found to be selling Amazon frogbit.

For more information contact SERCUL:
P | 9458 5664 W | www.sercul.org.au


SERCUL
South East Regional Centre for Urban Landcare