



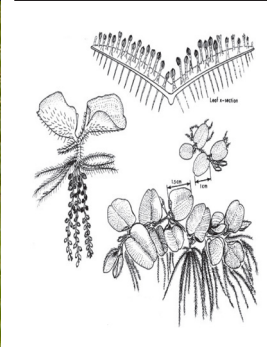


# Salvinia

## *Salvinia molesta*

HABIT	STEMS & BRANCHES	LEAVES	FLOWERS	REPRODUCTION
				
<p>Salvinia is a free-floating, perennial aquatic fern that forms mats over water surfaces.</p> <p>Individual plants range from 5 - 30cm in length.</p>	<p>It consists of many branched horizontal stems, 1 - 2mm in diameter, which float just below the water surface.</p>	<p>At each node, or joint, on the stem is a pair of floating, green, oval-shaped 'leaves' (fronds). A submerged brown modified frond, looks and functions like a root. The 'leaves' are covered in waxy stiff hairs that are shaped like egg beaters.</p>	<p>No flowers or true roots are produced.</p> <p>Biological control has been successful against Salvinia. A tiny weevil called <i>Cyrtobagous salviniae</i> was first introduced in 1981.</p> <p>The grubs of this weevil tunnel into the base of the plant, making it rot, then sink.</p>	<p>Fructing bodies containing sterile spores hang from the divided leaf.</p> <p>Reproduces only by vegetative pieces which are spread by floodwaters, boats, vehicles and animals.</p>

**Salvinia is declared a Class B (growth and spread to be controlled) and Class C (not to be introduced) weed in the Northern Territory and is a Weed of National Significance in Australia.** Salvinia is a declared weed in accordance with the *Weeds Management Act*.

### The problem

Salvinia is a free-floating aquatic fern that can grow rapidly to form a dense mat over the water surface, severely modifying aquatic habitat for fauna, including birds, fish and invertebrates. Light is excluded and oxygen levels are reduced, leading to water stagnation and pollution. The dense mat impedes water flow, restricts stock access and provides favourable conditions for the breeding of disease-carrying mosquitoes.

### Habitat and distribution

A native of Southern Brazil and Paraguay, salvinia is thought to have been first introduced to Australia by the aquarium trade and was reported as a weed in New South Wales dating back to 1952. Since its introduction, it has been widely planted as an ornamental and has subsequently been grown in garden ponds in many other places including Alice Springs. Salvinia is found in the Northern Territory, Western Australia, South Australia, Queensland and New South Wales. Its potential distribution includes water bodies in every Australian state and territory.

## **Preventing spread of salvinia**

Spread prevention is the most successful and cost effective way of managing weeds. Its stem fragments are spread by various means including water movement. The dumping of unwanted contents of ponds and aquaria is a major reason for the spread of salvinia.

## **Salvinia control**

Prevention and early intervention are the most cost-effective methods of control. Large infestations are sometimes gathered with mechanical harvesters and scoops, although the effectiveness of this method is limited by the ease with which the plants break into fragments. Plants deposited on the banks of water bodies can be moved away from the water's edge, and preferably burnt, to prevent reintroduction.

## **Chemical control**

Salvinia can be sprayed with various herbicides however results can be variable as upper leaf surfaces are largely non-wettable making absorption of herbicides difficult.

## **Non-chemical control**

Salvinia has been recognised as a target for biological control. The Salvinia weevil (*Cryptobagous salviniae*) has been released in Australia as a biological control agent and has been effective in tropical areas. The grubs of this weevil tunnel into the base of the plant, making it rot, then sink.

## **Follow up**

If done regularly and continuously, manual removal is a very effective follow-up measure to use after the bulk of an infestation has been removed by other methods.

## **Disclaimer**

In the Northern Territory, a registered product must only be used in situations consistent to those appearing on the label, unless authorised under a permit; and a person:

- must not have in their possession or use a chemical product unless the product is registered in Australia (exemptions apply)
- may use a registered product at a concentration, rate or frequency lower than that specified on the label unless this is specifically prohibited on the label. This does not apply to herbicide use occurring under an APVMA permit
- may use a registered product to control a pest not specified on the label provided the pest is in a situation that is on the label and use on that pest is not specifically prohibited on the label
- may also use a registered product using a method not specified on the label unless this is specifically prohibited on the label.

Users of agricultural (or veterinary) chemical products must always read the label and any permit, before using the product and strictly comply with the directions on the label and any conditions of any permit. Users are not absolved from compliance with the directions on the label or conditions of the permit by reason of any statement made in or omission from this publication.

## **Further information**

Weed Management Officers from the Weed Management Branch can provide advice on all aspects of weed management including control techniques, biological control, legislative responsibilities, policy advice, monitoring and reporting and regional planning.

For further information on weed management planning, integrated control, herbicide application techniques and monitoring please refer to the [NT Weed Management Handbook](#).