

# Water Soldier

*Stratiotes aloides*



## What is it and Why is it a Problem?

Water Soldier is an invasive perennial aquatic plant that forms dense mats in shallow areas (up to 6 m deep) of lakes, ponds and rivers. It outcompetes native vegetation, interferes with fish and other wildlife habitat, reduces biodiversity, and also disturbs recreational activities such as swimming (the serrated leaves can cut you), boating and fishing. It is even known to alter the water chemistry in areas where it lives, thus posing a threat to phytoplankton and other aquatic organisms. Lastly, it can clog infrastructure such as intake pipes, canals, locks and hydroelectric facilities and must frequently be cleaned from these structures in infested areas.



## What Does it Look Like?

- Looks similar to the household Aloe Vera or Spider plants
- Plant is submerged under the water and may be rooted in the mud but becomes buoyant with its leaves sticking out of the water during the summer
- Leaves are bright green, skinny, long (up to 40 cm), pointed with sharp spines, and arranged in a circular arrangement
- Flowers rarely appear in Ontario but when they do they are white with three petals



## How Can it be Managed?

### Prevention

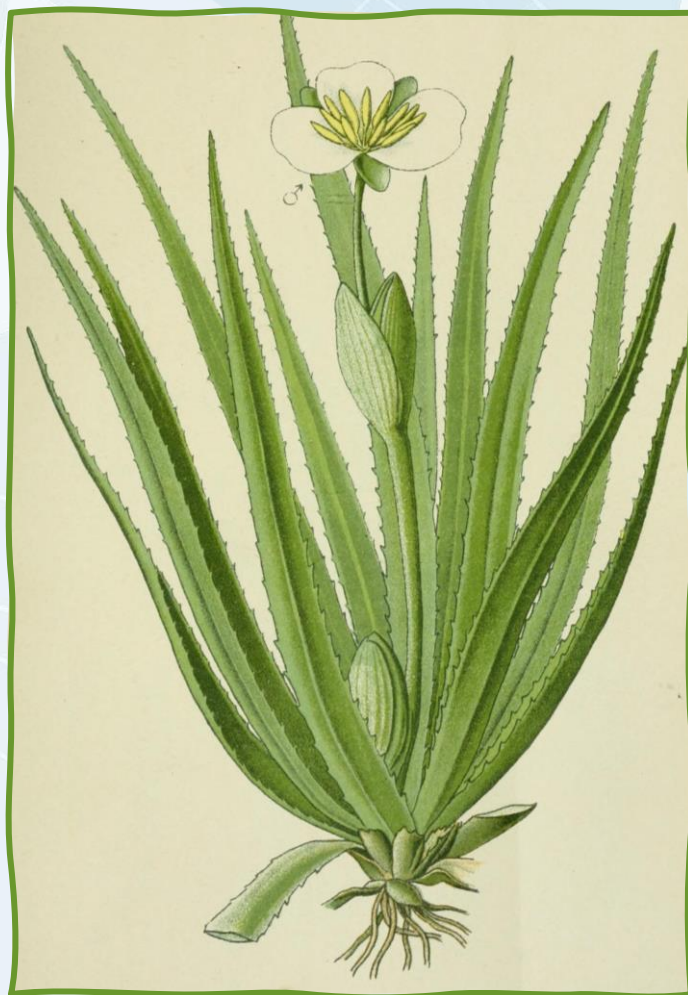
- Report sightings of any invasive species online through [EDDMapS Ontario](#), a web-based mapping system which also has an app, or through the [Invasive Species in Ontario](#) project on [iNaturalist.org](#).
- Learn how to identify it so you can avoid accidentally spreading it with your fishing gear and equipment - pay particular attention to the Trent-Severn Waterway where it is found. Inspect your boat, trailer and fishing gear before leaving a fishing spot and before heading to a new fishing spot to remove any mud and plant fragments. Refer to the [OMNRF's Boater's Action Plan](#) for more information on cleaning your boat and gear.
- Avoid boating near known Water Soldier infestations and reduce your speed. Propellers can cut off pieces of the plant and spread them to new areas.
- Do not buy, sell or plant Water Soldier for watergarden use - it is illegal to do so in Ontario. Water Soldier can look similar to



native Bur-reeds, Arrowheads, or Eel-grass but it has distinctive serrated leaf edges - ensure you know the difference between the native look-alikes and non-native Water Soldier, and only plant native plants in your garden. You can refer to the [Grow me instead: Guide to Planting Native Plants in Southern Ontario](#) to determine what native aquatic plants to use. Oftentimes invasive aquatic plants end up reaching water bodies when people dispose of their unwanted aquarium or water garden plants. The correct way to dispose of unwanted aquatic plants is to donate them or throw them in the garbage. They can also be composted or mulched 30 m or more away from a watercourse on land.

### Removal

Hand pulling is recommended in the early summer to remove small plants or small groupings of plants (less than 25 square metres in size). It is important that the entire patch is removed at once to avoid the plant spreading more. Refer to OMNRF's [Prevention and Response Plan for Water Soldier \(\*Stratiotes aloides\*\) in Ontario](#) for a full description on how to manage Water Soldier. Ensure that you are following [Ontario's In-water Work Timing Window Guidelines](#) prior to undertaking any in-water work - there are certain time periods where in-water work is prohibited in order to protect fish species. Also, make sure you contact your local MNR office to determine if you are authorized to conduct such work on your lake - a permit may be required. Ensure you follow [OMNRF's rules](#) regarding removing invasive aquatic plants.



## References

[Great Lakes Nonindigenous Species Information System](#), produced by the National Oceanic and Atmospheric Administration

[Grow Me Instead \(Southern Ontario\) Brochure](#), produced by the Ontario Invasive Plant Council

[Invasive Aquatic Plant Species: A Quick Reference Guide](#), produced by Ontario's Invading Species Awareness Program and Ontario Federation of Anglers and Hunters

[Ontario Invading Species Awareness Program](#), developed by the Ontario Ministry of Natural Resources and Forestry (MNRF), and the Ontario Federation of Anglers and Hunters (OFAH).

[Prevention and Response Plan for Water Soldier \(Stratiotes aloides\) in Ontario](#), produced by the Ontario Ministry of Natural Resources and Forestry