

European Frog-bit

(*Hydrocharis morsus-ranae*)

European frog-bit is an invasive aquatic plant native to Europe and parts of Asia and Africa. In 1932 the plant was brought from Europe to the Central Experimental Farm in Ottawa for possible commercial use as an ornamental plant. In 1939 it was found in the Rideau Canal. Since then it has spread to several rivers, Lake Ontario, Lake Erie and other inland waters.



Thick floating mats of european frog-bit.
Photo: Michigan Sea Grant

European frog-bit grows rapidly and forms dense, floating mats. It can be found in slow-moving waters such as sheltered inlets, ponds, slow-running rivers and ditches. Large areas of frog-bit that die in the fall and decompose may lead to reduced oxygen levels in the water that can affect aquatic life. New plants can grow from stem fragments, seeds and winter buds known as turions that can be spread to new waters by boats and wildlife.

Range

Outside its native range, European frog-bit is found in the Rideau and Ottawa river systems, the St. Lawrence River, Lake Ontario, Lake Erie, the Kawartha Lakes, and other lakes and rivers in southcentral and southwestern Ontario. The plant has also been introduced to some American states, including New York, Vermont, Michigan and Washington.

Impacts of European Frog-bit

- The fast-growing plant forms thick mats that reduce biodiversity by crowding out native plants and preventing sunlight from reaching submerged plants.
- When a large colony of the plant dies and decomposes it removes oxygen from the water, which can affect fish communities and other aquatic life.
- Dense masses of European frog-bit can hinder swimmers and boaters, prevent other recreational uses of waterways, and clog drainage canals and streams.



Emergent flowers.
Photo: Wasyl Bakowsky, MNR

Masthead photo: Wasyl Bakowsky, MNR



European frog-bit line drawing.

Illustration courtesy of: IFAS Centre for Aquatic Plants, University of Florida, Gainesville, 1990

How to Identify European Frog-bit

- The plant can float free or put down roots up to 50 centimetres long in shallow water.
- It produces a single white flower up to two centimetres wide with three rounded petals and a yellow centre.
- Leaves are 2.5 to five centimetres wide – about the size of a Canadian one-dollar coin – and round to heart-shaped. They form a rosette up to six centimetres wide.
- The leaf bottom is purple-red with a spongy coating along the middle vein of the leaf that allows it to float on the water.

European frog-bit looks similar to other native aquatic plants, including North American frog-bit (*Limnobium spongia*), watershield (*Brasenia schreberi*), and white water lily (*Nymphaea odorata*). North American frog-bit leaves have a spongy coating covering the entire bottom of the leaf. Watershield leaves do not form a rosette and the leaves and stems under water have a slimy coating. Mature white water lily leaves are round and much larger – 15 to 30 centimetres across.



Round or heart-shaped leaves form a rosette.

Photo: OFAH

What You Can Do

- Learn how to identify European frog-bit and how to prevent accidentally spreading this plant with your watercraft.
- Avoid infested areas or reduce your speed when travelling near European frog-bit infestations. Boat wake can dislodge plants and allow them to spread to new areas.
- Inspect your boat, trailer and equipment after each use. Remove all plants, animals and mud before moving to a new waterbody.
- Avoid planting European frog-bit in your aquarium or water garden. Aquarium hobbyists and water gardeners should only use native or non-invasive plants. Ask your retailer for advice on plants that are not invasive.
- Never release unwanted aquarium plants or pets. Return or donate unwanted plants to a garden centre or pet store, or put them in the garbage.
- If you've seen European frog-bit or another invasive species in the wild, please contact the toll-free Invading Species Hotline at 1-800-563-7711, or visit www.invadingspecies.com to report a sighting.

Other Resources:

www.invasivespeciescentre.ca
www.ontarioinvasiveplants.ca
ontario.ca/invasivespecies
www.invadingspecies.com

For More Information:

Please contact the Invading Species Hotline at 1-800-563-7711.

This fact sheet may be reproduced for non-commercial purposes.

© Queen's Printer for Ontario, 2012

Cette publication est également disponible en français.