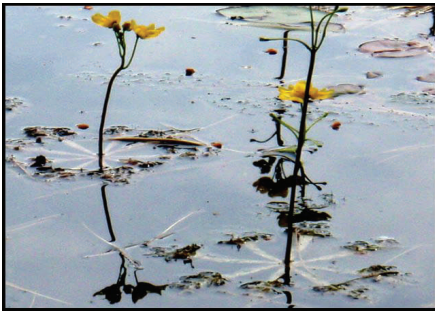




FACT SHEET

Office of Water Resources / August 2010

Freshwater Aquatic Invasive Species in Rhode Island Inflated Bladderwort



Inflated bladderwort



Inflated bladderwort float



Dense stand of inflated bladderwort

Species Description and General Information

Inflated bladderwort (*Utricularia inflata*) is a large, floating, carnivorous plant, also known as swollen bladderwort or large floating bladderwort. Plants are typically found in the quiet waters of freshwater lakes and ponds. It can be easily confused with native floating bladderwort (*Utricularia radiata*). Both bladderworts are floating plants with no true roots or leaves. Flexible structures called stolons are the main "vines" or "stems" of the plant and split into many branches with tiny, filament-like leaf structures. Hundreds of small round sacs are produced along the leaf structures. Each sac serves to trap prey (such as tiny zooplankton) that the plant breaks down for nutrients. Plants produce a characteristic spoke-like whorl of spongy structures at the water's surface to support flowers, often called a "float". A stalk emerges from the center of the float and supports several yellow, snapdragon-like flowers. Although inflated bladderwort shares these characteristics with native floating bladderwort, the former tends to be much larger. Features of the floats and flowers can also be used to differentiate the two as shown in Table 1. Inflated bladderwort is spread primarily through fragmentation.

Table 1

Characteristic	<i>U. inflata</i>	<i>U. radiata</i>
Shape of spokes	Tapers at both ends	Thick and cylindrical
Number of spokes	6-8	4-7
Length of spokes	3-8 cm	1-4 cm
Number of flowers	5-15 (usually 9-12)	3-4

Why is Inflated Bladderwort Considered an Invasive Species?

Inflated Bladderwort can tolerate a much larger range of habitats than other carnivorous species and can quickly displace native aquatic plants. Studies on populations in New York's Adirondack Mountains report that an introduction can alter the natural nutrient cycles and the normal balance of chemicals in sediments that sustain native plants. It can also form dense mats that can become a nuisance for recreational activities and shade out native species – specifically, submergent plants.

How Did Inflated Bladderwort Become Established in Rhode Island?

Inflated Bladderwort is native to the southeastern coastal plains of the United States. It is now reported in Washington, northern New York, southeastern Massachusetts and Rhode Island. It is possible that Inflated Bladderwort was introduced by humans — on watercraft or discarded from water gardens. Plant fragments also may be transported on migratory waterfowl from areas where inflated bladderwort is native.

What Methods Can Be Used to Control Inflated Bladderwort?

Depending on the level of infestation, there are several physical approaches available for inflated bladderwort control. Hand pulling may be effective to completely remove small patches. By law, the manual removal of aquatic vegetation is restricted to that area adjacent to, but no more than fifteen feet from existing or permitted docks, beaches or swimming areas under RI Fresh Water Wetlands Regulations (Rule 6.02). Manual plant removal outside of this area or control of larger patches via mechanical cutting or harvesting requires a DEM wetlands permit (or special permission from the Water Quality and Wetlands Restoration Team; see contact info below). Please note that because the plant can reproduce by fragmentation, physical control activities may unintentionally promote the spread of the plant if plants or plant fragments are not completely removed.

Chemical control may be effective for large populations. The DEM Division of Agriculture licenses the applicators that can apply the regulated herbicides to treat target invasive plants. Each herbicide treatment requires a specific permit from the Division of Agriculture. The most appropriate means of selecting a specific treatment plan is to consult a lake manager or licensed herbicide applicator, who can recommend treatment options and estimate the associated costs. A more detailed survey of the entire water body will likely be needed to assess the severity of the infestation and develop the most effective and cost efficient long-term management plan.

Please Help Prevent the Spread of Inflated Bladderwort in Rhode Island!

Learn to identify invasive plant species and be on the lookout for new plants in your lake. It is much easier to manage a small patch of invasive plants than an entire lake covered with plants, so early detection is key! Identification resources are available on the RIDEM website at <http://www.dem.ri.gov/programs/benviron/water/quality/surfwq/aisindex.htm>.

RIDEM also encourages the use of clean boat hygiene practices. Boats (trailers and motors too) should be inspected for plant fragments before launching in the water and after boats have been hauled out of the water. See posted reminders at state boat ramps.

For more information also see:

- Guide to Understanding Freshwater Aquatic Plants, RIDEM
<http://www.dem.ri.gov/programs/benviron/water/quality/surfwq/pdfs/aquapInt.pdf>
- Aquatic Invasive Species in Rhode Island
<http://www.dem.ri.gov/programs/benviron/water/quality/surfwq/aisindex.htm>
- RI DEM Herbicide permit application
<http://www.dem.ri.gov/programs/bnatres/agricult/pesticide.htm>
- RI DEM Water Quality and Wetland Restoration Team
<http://www.dem.ri.gov/programs/benviron/water/wetlands/pdfs/wqwrteam.pdf>
- RI DEM Wetlands permit application
<http://www.dem.ri.gov/programs/benviron/water/permits/fresh/index.htm>
- The URI Watershed Watch Program
www.uri.edu/ce/wq/ww
- The Rhode Island Natural History Survey
<http://www.rinhs.org/>

