



FACT SHEET

Office of Water Resources

September 2010

Freshwater Aquatic Invasive Species in Rhode Island

Yellow Floating Heart



Plants cover the surface of the lake



Showy flowers of yellow floating heart



Yellow floating heart forms a mat of stems



Floating leaves shade out native species

Species Description and General Information

Yellow floating heart (*Nymphoides peltata*) is a perennial floating plant that can carpet the water surface with long stems and heart-shaped leaves. It has stout, branching stems up to 0.1 inch thick. Leaves are usually opposite and unequal along the stem. The floating, heart-shaped leaves usually measure 2-6 inches wide. The showy yellow flowers occur on long stalks and rise a few inches above the water, flowering June to September. There may be one to several flowers on each stalk. The flowers have five fringed petals, and measure 1-1.5 inches in diameter when fully open. The seeds are contained in capsules and are flat and oval in shape. Yellow floating heart prefers the still waters found in lakes and ponds, and is often found rooted in the mud.

Why is Yellow Floating Heart Considered a Nuisance Species?

Yellow floating heart can form dense, monotypic floating mats over large areas of water. These mats limit the amount of light available to other aquatic plants, allowing it to quickly displace native species. Dense mats also impede recreation such as boating, fishing and swimming. Plants can also form large stands that block waterways and canals, creating problems for infrastructure and industry.

How Did Yellow Floating Heart Become Established in Rhode Island?

Yellow Floating Heart is native to Europe and parts of Asia and was first reported in the United States in 1882 in Winchester, MA. DEM first confirmed the presence of yellow floating heart in Rhode Island in 2010. Yellow floating heart was likely introduced as an ornamental plant in water gardens that escaped or was discarded into local water bodies. Once introduced, yellow floating heart disperses by seeds, rhizomes and through fragmentation, whereby plant fragments break off and settle in new locations. Seeds and fragments attached to waterfowl, or fragments attached to boats, motors and trailers may spread the plant to other water bodies.

What Methods Can Be Used to Control Yellow Floating Heart?

Yellow Floating Heart can spread rapidly. Thus, early detection and rapid response to infestations is important. Prevention is key: education, monitoring of the current population, and watercraft inspection are necessary to stop the spread of Yellow Floating Heart to other Rhode Island waterbodies. Hand pulling may be effective for small populations. By law, the manual removal of submerged 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 the RI Fresh Water Wetlands Regulations (Rule 6.02). Manual plant removal outside this area or physical 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).

Chemical control may be effective for large populations but has not been used for yellow floating heart in Rhode Island. The DEM Division of Agriculture licenses the applicators that can apply the regulated herbicides to treat invasive plants. Each herbicide treatment requires a specific permit from the Division of Agriculture to ensure proper use. The most appropriate means of selecting a specific treatment plan is to consult a lake manager or licensed herbicide applicator, who can provide targeted treatment options and estimate 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 Yellow Floating Heart 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:

- Invasive Plant Atlas of New England, University of Connecticut
<http://nbii-nin.ciesin.columbia.edu/ipane/>
- Guide to Understanding Freshwater Aquatic Plants, RIDEM
<http://www.dem.ri.gov/programs/benviron/water/quality/surfwq/pdfs/aquaplnt.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/>

