



FACT SHEET

Office of Water Resources / June 2009

Aquatic Invasive Species in Rhode Island: Fanwort



Size of fanwort relative to a penny



Fanwort flower



Dense stand of fanwort

Species Description/General Information

Fanwort (*Cabomba caroliniana*) is a submerged aquatic plant that can be identified by its underwater leaves, which are divided into fine branches giving them a feathery fan-like appearance. Leaves are opposite along stems that extend from short rhizomes rooted to the substrate. Fanwort flowers from May to September. Flowers emerge from the water on stalks that extend from the tips of the stems. Flower buds on the stalks are surrounded by floating leaves that are small, linear and entire, differing from underwater leaves. Flowers range in color from white to pale yellow. *C. caroliniana* prefers shallow waters (less than 3 meters) but can survive in depths up to 10 meters. Plants thrive in eutrophic environments with a low pH and silty substrate. Alkaline environments, high calcium levels (not common to RI) and hard substrates impede plant growth and reduce vigor. Plants can withstand relatively high levels of turbidity. Fanwort produces seeds but is spread primarily through fragmentation, whereby plant fragments break off and settle in new locations.

Why is Fanwort Considered a Nuisance Species?

Fanwort is a competitive and aggressive plant that, once introduced, has the potential to displace native species. Dense stands of fanwort can interfere with recreational activities such as swimming, paddling and fishing. Heavy infestations can lower the aesthetic quality of the water body and devalue waterfront properties. When dense stands of fanwort die off, the subsequent decomposition can lower oxygen levels creating the potential for fish kills.

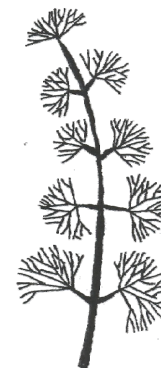
How Did Fanwort Become Established in Rhode Island?

Fanwort is native to the southeastern United States and parts of South America. It was likely introduced into natural water bodies in New England as an aquarium plant and was first observed in Rhode Island in 1936. Because plants can reproduce through fragmentation, boats, motors, fishing gear and other equipment used in infested waters and not properly cleaned can harbor viable plants and spread fanwort into un-infested

water bodies. According to USGS, plant fragments that are kept moist can survive 6 to 8 weeks. Therefore, it is extremely important to clean and remove all plant materials from motors, boats, trailers and other field gear each time they are taken out of a water body!

What Methods Can Be Used to Control Fanwort?

Depending on the level of infestation, there are several physical approaches available for fanwort 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 (see below). Please note that because the plant can reproduce by fragmentation, physical control activities may unintentionally promote the spread of the plant if plants are not completely removed. The placement of benthic barriers to compress and shade out small patches of fanwort may also provide effective control but is less feasible for larger infestations.



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 Aquatic Invasive Species 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 cove covered with plants so early detection is key! The University of Rhode Island Watershed Watch Program, in cooperation with the Rhode Island Natural History Survey (RINHS) and DEM, has hosted training workshops for volunteers interested in learning how to survey and identify plants, including invasives, in lakes. For information on the anticipated availability of AIS training, contact the URI Watershed Watch Program or RINHS (see below).

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/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/>

