



FACT SHEET

Office of Water Resources / September 2009

Aquatic Invasive Species in Rhode Island: Brazilian Elodea



Brazilian elodea



Flower of Brazilian elodea



Brazilian elodea

Species Description/General Information

Brazilian elodea (*Egeria densa*) is a submerged aquatic plant found in freshwater environments. Leaves are bright green, linear and serrated (magnification may be necessary to view serrations). Leaves are arranged around the stem in whorls of 4 to 8, helping to distinguish the plant from native Rhode Island elodea species which have whorls of 3. Further, Brazilian elodea leaves are typically longer than those of native elodea, measuring 1-3cm. White flowers composed of three petals emerge from the water's surface in late summer to fall. Although flowers are produced, only males are found in the U.S. preventing seed production. Reproduction and dispersal occur exclusively through fragmentation. Double nodes along the stem cause branching and the formation of adventitious roots. Only plant fragments containing a double node can successfully regenerate.

Why is Brazilian Elodea Considered a Nuisance Species?

Brazilian elodea can form dense, monotypic stands that crowd out beneficial native plants. Dense stands can restrict water movement and trap sediment, resulting in water chemistry fluctuations that stress aquatic organisms. As plants grow to the surface they form thick mats of vegetation that can impede recreation such as swimming, boating and fishing, and devalue waterfront property.

How Did Brazilian Elodea Become Established in Rhode Island?

Due to its attractiveness and reputation as a good "oxygenator", *Egeria densa* is commonly used as an

aquarium plant and sold under the name anacharis. Initial introductions were likely the result of people pouring their aquaria into local water bodies. Because the plant can spread by fragmentation, boats, trailers and fishing equipment harboring plant fragments with double nodes may unintentionally spread Brazilian elodea within and between water bodies.

What Methods Can Be Used to Control Brazilian Elodea?

Because Brazilian elodea can reproduce through fragmentation, physical control is generally not recommended. Mechanical raking and cutting has the potential to unintentionally spread plant fragments and exacerbate the infestation. Physical control should be limited to hand pulling small patches and remove the entire plant. 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 requires a DEM wetlands permit (for more information, contact the Water Quality and Wetlands Restoration Team noted below).

Chemical control may be effective for large populations. 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 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 always be inspected for plant fragments before launching in the water and again 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/>

