



MAINE INVASIVE PLANTS

Brazilian Waterweed

Egeria densa
(Frogs-Bit Family)

Threats to Native Habitats

Brazilian waterweed forms dense monotypic stands that crowd out native aquatic plants and degrade wildlife habitat. The dense growth that is typical of this plant can limit surface water use for activities such as fishing, swimming and boating. It can also cause increased sedimentation and can affect water quality. Its dense growth retards water flow, which may interfere with irrigation projects and hydroelectric utilities. It easily spreads by fragments and can colonize large areas in a relatively short period of time. Because it is a popular aquarium plant, this ability to invade new areas via the dispersal of stem fragments makes the dumping of aquariums into aquatic natural areas a particular concern. It is considered a noxious weed in some states.

Description

Brazilian waterweed is a submerged aquatic perennial plant with a trailing growth habit. At first glance it looks like an enlarged version of our native waterweeds (*Elodea canadensis* and *E. nuttallii*). The basic structure of the plant is a stem with whorls of four to six small leaves. Leaves vary from one-half to one-and-a-half inches in length and are sessile (lacking a stem). Brazilian waterweed leaves are noticeably longer and wider than our native waterweeds. Unlike our native waterweeds, which have a smooth leaf margin, Brazilian waterweed has tiny fine teeth along its leaf margins. Plants produce three-quarter-inch wide white flowers that are elevated about an inch above the water. All North American populations of Brazilian waterweed reproduce vegetatively as no seeds and/or female flowers have ever been observed on populations found here. Vegetative reproduction is achieved by lateral buds arising from numerous specialized nodal regions on the stems. Only fragments containing specialized nodes can develop into new plants. Brazilian waterweed fragments easily, which promotes the sprouting of new plants.



Brazilian waterweed (photo by Amy Smagula, courtesy of the NH Department of Environmental Services)

Habitat

Brazilian waterweed grows in water up to 20 feet deep and often occurs in warm freshwater ponds, lakes and reservoirs as well as in slow-flowing streams and sloughs.

Distribution

This invader is originally from South America and, with the unintended help of aquarium enthusiasts, has invaded most continents. In the United States, the plant is present in the Pacific Northwest, California, Utah, Illinois, Nebraska, Kansas, Texas, the Southeast, and in the East from New England to Florida. As of 2002 it has not been documented in Maine. Brazilian waterweed was considered a desirable aquarium plant because it is a good

“oxygenator.” It was probably transmitted into natural areas by people pouring the contents of their aquariums into nearby lakes and streams.

Prevention and Control

The best way to control this species or any aquatic invader is to prevent it from being introduced in the first place. Anyone engaged in activities in Maine’s waters should be aware of the potential for spread of invasive plants and take steps to prevent their introduction. Your actions can make a difference. Simple things you can do include inspecting boats, motors and trailers at the boat ramp before launching them, and again after you haul them out. Prevent plant material from getting into bait buckets and live wells, and from getting tangled up in anchor ropes or fishing gear. Plants cleaned from boats and gear should be disposed of in a trash receptacle or away from water on dry land.

Once established, invasive aquatic plants are extremely difficult to eradicate. Control has been attempted with water level manipulations, mechanical control and herbicides. In most cases these plants have survived attempts at control. Biological controls for invasive aquatics are still being researched and may help limit growth of some species in the future. Note that the use of herbicide in Maine waters is strictly regulated. Only licensed professionals with a permit from the Department of Environmental Protection may carry out herbicide treatments in Maine’s waters. Hand pulling of invasive aquatic plants also requires a permit. Also note that in Maine it is illegal to possess, import, cultivate, distribute or transport *Egeria densa* (Department of Environmental Protection, Chapter 722 – *An Act to Prevent the Spread of Invasive Aquatic Plants*). If you think you have found an invasive aquatic plant contact ME DEP (1-800-452-1942) or the Maine Natural Areas Program (1-207-287-8041).

References:

Mehrhoff, L.J., J.A. Silander, Jr., S. A. Leicht and E. Mosher, *Egeria densa*, “Catalogue of Species.” *IPANE: Invasive Plant Atlas of New England*. Storrs, CT: Department of Ecology and Evolutionary Biology, University of Connecticut, 2003. <http://webapps.lib.uconn.edu/ipane/browsing.cfm?descriptionid=17> (accessed May 2003).

Gleason, H.A. and A. Cronquist. *Manual of Vascular Plants of Northeastern United States and Adjacent Canada, Second Edition*. New York: New York Botanical Garden, 1991.

The Nature Conservancy of Vermont, the Vermont Department of Environmental Conservation, and the Vermont Department of Fish and Wildlife. “Brazilian elodea, *Egeria densa* Planch.” *Vermont Invasive Exotic Plant Fact Sheet*, 1998. <http://www.anr.state.vt.us/dec/waterq/ans/objects/befs.pdf> (accessed May 2003).

Washington State Department of Ecology Water Quality Program. “Technical Information about *Egeria Densa* (Brazilian Elodea).” <http://www.ecy.wa.gov/programs/wq/plants/weds/aqua002.html> (accessed May 2003).

For more information or for a more extensive list of references on invasive species contact:

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