



Hydrilla

Hydrilla verticillata (Frogs Bit Family)

Threats to Native Habitats

Hydrilla is a highly aggressive invasive aquatic plant that can seriously degrade the ecology, recreational usage and water quality of freshwater systems. It has growth habits and reproductive strategies that allow for extremely rapid growth and expansion. Stems can grow up to an inch per day, creating dense mats that block sunlight from entering the water column. Under the right conditions, Hydrilla can occupy whole ponds. Its high-density growth can slow water movement and add considerably to the organic content of lake systems. It is capable of growing in a wide range of aquatic habitats and has spread rapidly through portions of the United States, interfering with water uses, displacing native aquatic plant communities and causing economic hardship. It is nearly impossible to remove this species from a water body once it is established.

Description

Hydrilla is a submerged aquatic perennial plant with a trailing growth habit. The basic structure of the plant is a stem with whorls of small leaves, from three to eight (usually five), at each node. Leaves are 1/16- to 1/8-inch wide, 1/2- to 3/4-inch long, and sessile (lacking a stalk). The leaves have small but visible sharp teeth on the margins and sometimes have spines or glands on the midvein on the lower surface. The teeth are deciduous and leave behind elevated projections. Plants are usually rooted to the lake bottom, though fragments can break loose and survive in a free-floating state. Stems can be quite long when the plant grows in deep water. Many horizontal aboveground stems (stolons) and underground stems (rhizomes) are also produced. Plants can reproduce either by seed or vegetatively. Vegetative reproduction occurs by fragmentation of the stem, or by the production of small tubers. Tubers can form in leaf axils or along underground shoots.



Hydrilla verticillata infestation (photos by Maine Department of Environmental Protection)

Habitat

Hydrilla is able to grow in a wide variety of ecological settings including both still and slow-flowing waters. It can handle a wide range of pH values, tolerates mild salinity, and is adapted to low light levels. It is able to grow in both low- and high-nutrient systems. Most of Maine's ponds, lakes, and rivers are vulnerable to infestation by this species. Only one node or whorl of leaves is necessary to start a new infestation.



Hydrilla verticillata

Distribution

Hydrilla was originally native to the warmer parts of Asia but now occurs throughout most of the world. In North America, it has been reported from 19 states, mostly in the south. More recently, it has been reported from Massachusetts, Connecticut and Maine (one location as of 2002).

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 to do include inspecting boats, motors, and trailers at the boat ramp before entering the water and again after the boat has been hauled 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 *Hydrilla verticillata* (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).

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

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