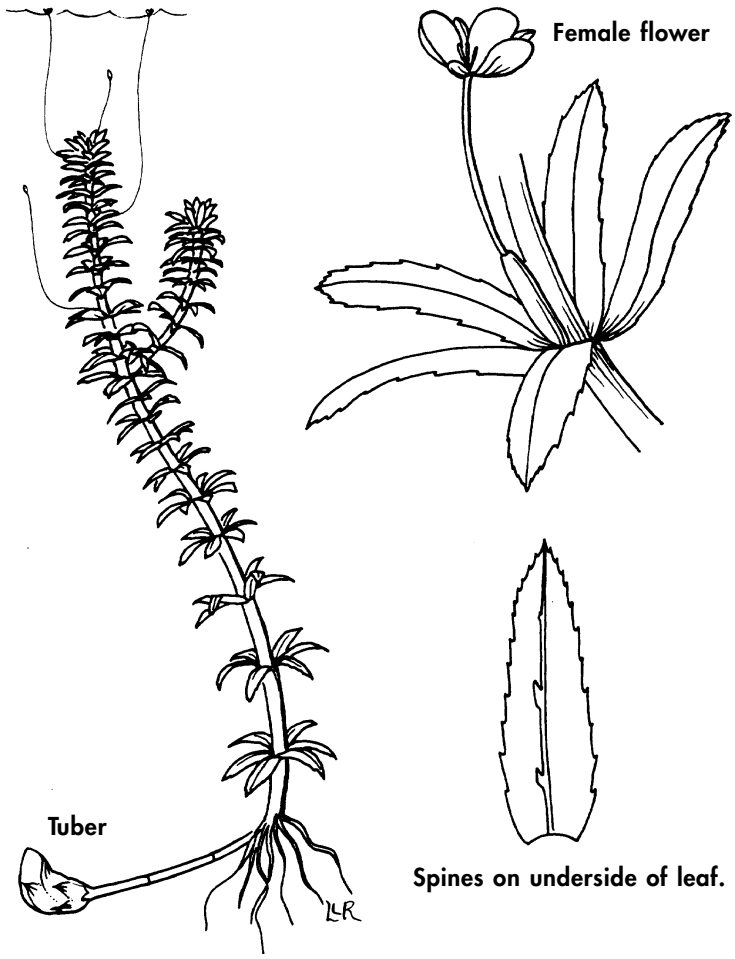
Vermont Invasive Exotic Plant Fact Sheet

Hydrilla

Hydrilla verticillata (L.f.) Royle

Frog's bit Family

Description: Hydrilla is a submersed perennial aquatic plant with heavily branching, erect stems. It is rooted to the bottom, but broken stem pieces may be seen drifting in the water. In deep water, stems may reach 30 feet or more in length. Leaves occur in whorls of three to eight and join directly to the stem. Leaf margins are visibly toothed, and the underside of the leaf may have one or more spines. Single, small white flowers are produced on stalks that reach the water surface. Hydrilla produces small (up to one-half-inch long), potato-like tubers at the end of underground stems. The tubers can be found from two to 12 inches below sediment level and are off-white to yellow. Spread of hydrilla occurs readily through stem fragmentation and the production of tubers.



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Habitat: Hydrilla can be found in lakes, ponds, reservoirs, rivers, canals, and drainage ditches. Hydrilla is tolerant of a wide range of environmental conditions, which is why it competes so successfully with other aquatic plants. It has low light requirements and thrives in both high or low-nutrient waters. It can survive in both temperate and tropical regions.

Threats: Due to its ability to spread rapidly and completely clog waterways, hydrilla poses significant threats to the aquatic ecosystem and recreational resources. Hydrilla can reduce plant diversity by outcompeting native aquatic plants.

Threats continued: Dense infestations of hydrilla can affect water quality and impede water flow, which can result in flooding and damage to shorelines and structures. Thick mats of hydrilla make swimming and other recreational activities difficult, if not impossible.

This fact sheet is one in a series on invasive exotic plants in Vermont and is a cooperative project between the Departments of Environmental Conservation and Fish & Wildlife, of the Vermont Agency of Natural Resources, and The Nature Conservancy of Vermont. Spring 1998

Hydrilla

Frog's bit Family (*Hydrocharitaceae*)

Distribution: Hydrilla is native to Australia, Asia, and central Africa. It is an introduced exotic in Europe and the United States. The U.S. introduction occurred in the early 1950s by an aquarium fish and plant dealer who released several hydrilla plants from Sri Lanka into a canal near Tampa, Florida. By 1996, more than 100,000 acres of public water in Florida were infested with hydrilla. Other states in the U.S. where hydrilla occurs are Georgia, Alabama, Mississippi, North Carolina, South Carolina, Virginia, Maryland, Delaware, Louisiana, Texas, Arizona, California, Washington, and Connecticut. Hydrilla has not yet been found in Vermont. Accidental introduction could potentially occur through the aquarium or nursery/aquatic gardening trade.

Control: Hydrilla is one of the most difficult aquatic plants to control. Many methods have been employed to try to manage or eradicate this plant over the years. The most widely used means to control large infestations of hydrilla is the use of the aquatic herbicide fluridone. The herbivorous Asian fish known as the grass carp has also been used, particularly in the South. Two leaf-mining flies, one from Australia and one from India, have been introduced as biological control agents. A tuber-feeding weevil from India and Pakistan is also being tried. Other efforts have included dredging, mechanical harvesting, suction harvesting, and drawdown followed by dredging or fumigation for tuber removal. In spite of all these efforts and the expenditure of tens of millions of dollars, hydrilla continues to be a significant problem in many areas in the U.S.

References:

Hydrilla: A continuing problem in Florida waters. K.A. Langeland. Cooperative Extension Service/Institute of Food and Agricultural Sciences. University of Florida, Gainesville. Circular No. 884. September, 1990.

Phenological studies to improve hydrilla management. John D. Madsen and C.S. Owens. Aquatic Plant Control Research Program. U.S. Army Corps of Engineers Waterways Experiment Station. Vol. A-96-2. May, 1996.

For more information about Vermont's invasive exotic plant species or if you would like to know how you can help, please contact:

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