

# Variable-leaved Watermilfoil

In October 2008, aquatic biologists at the Agency of Natural Resources confirmed the arrival of a new invasive aquatic plant in Vermont, *Myriophyllum heterophyllum* (variable-leaved watermilfoil). The plant was found in Halls Lake in Newbury located on the eastern side of the state. In September 2009, a second population was confirmed in Lake Champlain in the southern end of Missisquoi Bay. Variable-leaved watermilfoil is a freshwater rooted perennial plant not native to Vermont.

## What is the status of variable-leaved watermilfoil in Vermont?

Halls Lake: Staff at the Department of Environmental Conservation's Lakes and Ponds Management and Prevention Section deployed rapid response initiatives shortly after receiving genetic confirmation of the plant's identity. An underwater search of areas of the lake where variable-watermilfoil might grow was conducted. The survey results confirmed that variable-leaved watermilfoil appeared limited to one area of the lake. Using a curtain to contain any floating stem fragments, a crew removed 52 cubic feet of plants by hand over a five day period. All removed plants were composted.

Shortly after ice-out in April 2009, staff began making weekly visits to Halls Lake to continue the work initiated in 2008. To date, variable-leaved watermilfoil has been found and removed from 23 additional sites in the lake. Total amount of variable-leaved watermilfoil plants removed in 2009 from all 24 known sites is approximately 9 cubic feet. Variable-leaved watermilfoil appears contained in Halls Lake for now. Future surveillance and spread prevention measures are critical to prevent further spread of this aggressive plant in Halls Lake and to other waters in Vermont.



Variable-leaved watermilfoil (*Myriophyllum heterophyllum*)  
(VTDEC)

Missisquoi Bay, Lake Champlain: Based on preliminary searching completed in Missisquoi Bay by Lakes and Ponds Management and Prevention Section staff, variable-leaved watermilfoil appears to be widespread in a large wetland complex of the southern portion of the bay. More extensive searches are planned for the fall.

## How to identify variable-leaved watermilfoil

Many watermilfoils, native or not, can be difficult to distinguish from one another, especially in the absence of fruits or flowers. In addition to the non-native watermilfoils, variable-leaved and Eurasian (*Myriophyllum spicatum*), six native watermilfoils are known from the state. To identify variable-leaved watermilfoil, look for:

- Densely packed whorls of four to six underwater leaves around the stem
- Underwater leaves with 7 to 11 pairs of leaf segments per leaf
- On more mature plants, blade-like leaves with serrated edges appearing above the water's surface. Flowers develop at the base of these above-water leaves, forming an erect, stiff spike.
- Thick, robust, often reddish stems.

Note: All leafy watermilfoil plants should be suspect until a positive identification can be made. If you find a suspicious aquatic plant, contact [Ann Bove](#), Vermont Aquatic Invasive Species Program immediately.

### Why is variable-leaved watermilfoil a problem?

Variable-leaved watermilfoil can be difficult to control once a population is established in a waterbody. Like Eurasian watermilfoil which was confirmed in Vermont in 1962, variable-leaved watermilfoil is able to grow in a wide variety of environmental conditions, is aggressive and grows rapidly. Dense growth of variable-leaved watermilfoil crowds out beneficial native aquatic plants and can impair recreational uses including boating, fishing and swimming.

### How is variable-leaved watermilfoil spread?

Spread of this species occurs by stem pieces, roots and seeds. Plant parts can easily hitchhike on recreational equipment if not removed. Variable-leaved watermilfoil is also a popular aquarium trade species, which could be a possible vector for invasive aquatic plant spread. Under Vermont's Quarantine Rule, variable-leaved watermilfoil is a prohibited species. Department staff, in cooperation with the Agency of Agriculture, Food and Markets, inspects Vermont aquarium retailers annually. In 2008, officials found two retailers in southern Vermont selling variable-leaved watermilfoil.

### How can I help?

- Don't allow aquatic invasive plants or animals to hitchhike on your recreational equipment. Before moving between waterbodies:
  - Inspect boat, trailer, motor and other equipment for attached plant or animal material.
  - Remove all plant and animal material.
  - Discard removed material in a trash receptacle or on high, dry ground where there is no danger of them washing into any water body.
  - Drain all water from boat, boat engine, and other equipment.
  - Rinse all boat and trailer parts with tap water (preferably hot, high pressure).
  - Dry boat, trailer and equipment out of water and in sun for at least five days.
- Become a VIP - Vermont Invasive Patroller - and monitor local waterbodies for new introductions of invasive species. Attend a training session and learn how to identify and search for invasive aquatic plant and animals as well as learning about native aquatic plants and animals and their habitats.
- Dispose of unwanted aquarium plants and animals in the trash. Don't release any aquarium plants or animals into the wild.



*Variable-leaved watermilfoil (right) side by side with Eurasian watermilfoil (left). (VTDEC)*  
[Click image to see larger image \(pdf, 940 KB\)](#)



*Dense variable-leaved watermilfoil in a New York Lake (VTDEC)*