

Eurasian watermilfoil

Myriophyllum spicatum L.

Synonyms: None

Other common names: myriophylle en epi, spike watermilfoil, spiked watermilfoil

Family: Haloragaceae

Description

Eurasian watermilfoil is a submersed aquatic plant, with stems 3 feet tall or more. Leaves are whorled, highly dissected, composed of 28 to 48 thread-like divisions. Spikes emerge above the water; flowers are borne in the axis of bracts. Fruits are 2 to 3 mm long (DiTomaso and Healy 2003, Royer and Dickinson 1999).



Photo: Robert H. Mohlenbrock @ USDA-NRCS PLANTS Database / USDA NRCS. 1995. Northeast wetland flora: Field office guide to plant species. Northeast National Technical Center, Chester, PA.

Northern watermilfoil (*M. sibiricum* Fern.), a closely related species, is often mistaken for Eurasian watermilfoil. It is distinguished from Eurasian watermilfoil by its leaves, which have only 12 to 24 thread-like segments rather than 28 to 48 for Eurasian watermilfoil (Royer and Dickinson 1999).

Myriophyllum spicatum is distinguished from the native, *M. verticillatum* by having 4 rather than 5 leaves per whorl. Also, *M. verticillatum* has leaves that exceed the length of the internodes.

Ecological Impact

Impact on community composition, structure, and interactions: Eurasian watermilfoil forms dense canopies that often shade out native vegetation and reduces and displaces natural diversity. Monospecific stands of Eurasian watermilfoil offer poor habitat for waterfowl, fish, and other wildlife. Last, reduced water flow created by Eurasian watermilfoil stands provides good breeding grounds for mosquitoes

(DiTomaso and Healy 2003, Jacono and Richerson 2004).

Impact on ecosystem process: The dense mats of vegetation can increase sedimentation by slowing the water flow and allowing suspended sediment to precipitate. Dense Eurasian watermilfoil stands alter water quality by raising pH, decreasing dissolved oxygen under the mats, and increasing temperature.

Biology and Invasive Potential

Reproductive potential: Reproduction is by seeds, fragmentation, and winter buds. Young populations of Eurasian watermilfoil averaged 112 seeds per stalk. Despite the high seed production, it is thought that germination of seeds is not a significant factor in reproduction. Fragmentation and winter buds are believed to be more important in reproduction. Winter buds are tight leaf clusters borne near the end of the stem; they develop when water temperatures drop and daylength shortens. The buds break off and fall to the bottom, where they overwinter. In the spring, the buds grow and elongate to form new plants (Washington State Department of Ecology 2003).

Role of disturbance in establishment: The plant thrives in areas that have been subjected to various kinds of natural and manmade disturbance.

Potential for long-distance dispersal: Unknown. Fragments and winter buds may be moved long distances in flowing water.

Potential to be spread by human activity: It is spread from lake to lake on boat trailers.

Germination requirements: Unknown.

Growth requirements: Eurasian watermilfoil is an extremely adaptable plant; it is able to tolerate and thrive in a variety of environmental conditions. It grows in still to moderately flowing waters, root in water depths from 1 to 10 meters, and can survive under ice. It is able to tolerate pH from 5.4 to 11. Eurasian watermilfoil requires high light and can grow over a broad temperature range. It grows best on fine-textured, inorganic sediments and relatively poorly on highly organic sediments (Jacono and Richerson 2004).

Listing: *Myriophyllum spicatum* is a noxious weed in Colorado, Florida, Nevada, New Mexico, North

Carolina, Oregon, South Carolina, South Dakota, and Washington (USDA 2002).

Distribution and abundance

Typical habitat for Eurasian watermilfoil includes fresh to brackish water of fish ponds, lakes, slow-moving streams, reservoirs, estuaries, and canals.

Native and current distribution: Eurasian watermilfoil is native to Europe, Asia, and northern Africa. It now occurs in North and South America, Australia, Greenland, Central and South Africa. It has been found in 33 states of the United States, and the

Canadian provinces of British Columbia, Ontario, and Quebec (Jacono and Richerson 2004). This species is not known from Alaska.

Management

Once milfoil becomes well-established within a waterbody, it is very difficult or impossible to remove. In smaller waterbodies, there is some limited success using an aquatic herbicide. Other control methods include: harvesting, rotoation, installation of bottom barriers, and hand pulling by divers.

References:

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