

## Eurasian Watermilfoil



*Myriophyllum spicatum*  
L.

### Alternate Names

Spike watermilfoil, spiked watermilfoil

### Synonyms

*Myriophyllum spicatum* L. var. *spicatum* in part [H&C]



University of Florida photo  
by Alison Fox

*Eurasian watermilfoil.*

### Description

Eurasian watermilfoil is a submersed aquatic plant, with stems 3 feet long or more. Leaves are whorled, highly dissected, and composed of 28–48 thread-like divisions. Spikes emerge above the water, and flowers are borne in the axis of bracts. Fruits are  $\frac{1}{16}$ – $\frac{1}{8}$  of an inch long.

### Similar Species

Northern watermilfoil (*M. sibiricum* Fern.), a closely related native species, is often mistaken for Eurasian watermilfoil. It can be distinguished from Eurasian watermilfoil by its leaves, which have only 12–24 thread-like segments rather than 28–48 (Royer and Dickinson 1999). Eurasian watermilfoil is distinguished from another native species, whorlleaf watermilfoil (*M. verticillatum* L.), by the presence of 4 rather than five leaves per whorl. Also, whorlleaf watermilfoil has leaves that exceed the length of the internodes.



XID Services photo by Richard Old

*A segment of Eurasian watermilfoil.*

### Ecological Impact

Eurasian watermilfoil forms dense canopies that often shade out native vegetation. Unlike northern watermilfoil, which remains upright and completely submersed, Eurasian watermilfoil grows over the surface of the water, forming dense mats with interlacing leaves on the surface that block most light penetration into the water. Mono-specific stands of Eurasian watermilfoil offer poor habitat for waterfowl, fish, and other wildlife. The dense mats of vegetation slow water flow, which can increase sedimentation by allowing suspended sediment to precipitate and can provide good breeding conditions for mosquitoes. Eurasian watermilfoil stands can alter water quality by raising pH, decreasing dissolved oxygen, and increasing water temperature.



XID Services photo by Richard Old

*The feathery leaves of Eurasian watermilfoil.*

### Biology and Invasive Potential

Eurasian watermilfoil reproduces by seed and fragmentation. It thrives in areas that have been subjected to various kinds of natural and anthropogenic disturbances. Fragments may be moved long distances in flowing water. Eurasian watermilfoil is spread from lake to lake on boats, trailers, and floatplanes. Germination requirements are unknown. Eurasian watermilfoil is an extremely adaptable plant, capable of tolerating a variety of environmental conditions. It can grow in still to moderately flowing water and rooted in water depths from 1–10 meters. It can survive under ice and tolerate pH levels ranging from 5.4 to 11.0. 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). Eurasian watermilfoil is listed as a noxious weed in 11 states.

### Distribution and Abundance

Typical habitat for Eurasian watermilfoil includes fresh to salty water of ponds, lakes, slow-moving streams, reservoirs, estuaries, and canals. Eurasian watermilfoil is native to Europe, Asia, and northern Africa. It now occurs in North and South America, Australia, Greenland, and southern Africa. It had been found in 32 of the United States and the Canadian provinces of British Columbia, Ontario, and Quebec (Jacono and Richerson 2004). Eurasian watermilfoil was reported to occur in Alaska by Hultén (1968), although as of early 2005, its presence is being investigated.

### Management

Once Eurasian watermilfoil becomes well established within a waterbody, it is very difficult or impossible to remove. In smaller waterbodies, there has been some limited success with the use of an aquatic herbicide. Other control methods include harvesting, use of an aquatic rototiller-like device, installation of bottom barriers, and hand-pulling by divers.

### Notes

Eurasian watermilfoil could be spread from one lake to another in Alaska by sticking to floatplanes and boats, especially floatplane rudders and outboard motors. It was accidentally introduced into the United States in the late 1800s, probably as an escaped aquarium species or from ballast water.



Photo by Patrick Vandaele

*An infestation of Eurasian watermilfoil.*