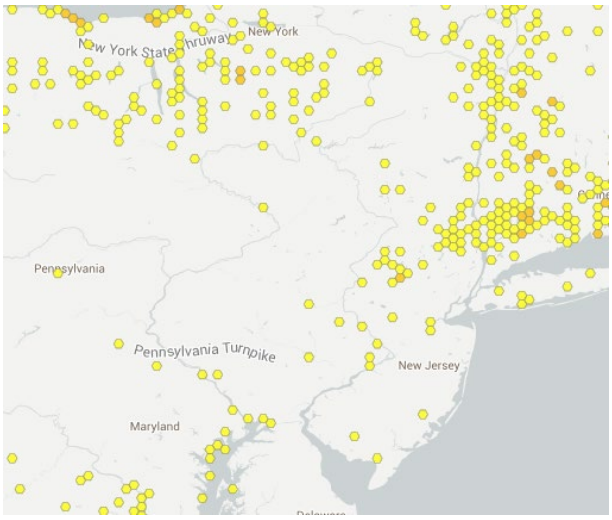
NJCOLA Coalition of Lake Associations

RUTGERS ENVIRONMENTAL STEWARDS

Aquatic Nuisance Series: Eurasian Watermilfoil

Eurasian watermilfoil (Myriophyllum spicatum) is an invasive aquatic perennial native to Europe and Asia. This plant can be confused with native watermilfoils. It is very common in the northeast and can reach nuisance levels quickly.



Distribution of Myriophyllum spicatum. Map from GBIF (2020).

Like many invasive species, Eurasian watermilfoil can spread quickly due to its rapid reproduction. While it can reproduce from germinated seeds, the plant will usually spread from its fragments, especially in the autumn when they can be carried by the waves, boaters, and even the wind. Once in your lake, it can dominate in as little as two years.

Description and Habitat

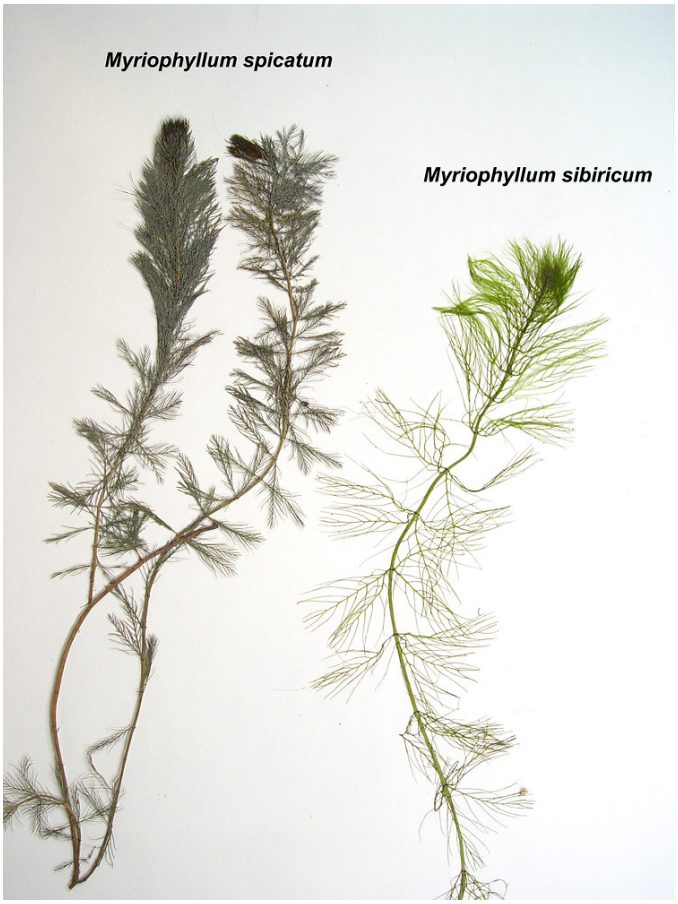
Eurasian watermilfoil can grow in water as deep as 20-30 feet and forms dense mats that can become tangled underwater. Flowering stems can be seen extending above the water's surface. The leaflets on the plants are denser and more numerous than native species. Because of this density, it provides poor habitat for fish when fully mature. Mosquito larvae, on the other hand, can thrive in a surface tangle of the plant.

Eurasian watermilfoil is very hardy. It can handle a wide range of temperature, pH, and salinity. It has been reported in almost every state, with many documented cases in New York state.

The plant's ability to live for several weeks outside of water makes it especially easy to introduce into a new waterbody. It can be attached to boats or fishing equipment and then get introduced into the next lake. Even driving along the road can spread viable fragments into lakes near the roadway.

Identification

Eurasian watermilfoil can easily be confused with native milfoils that also may have four deeply-dissected leaves per whorl. Eurasian watermilfoil typically has more than 14 leaflet pairs per leaf. In general, you will notice that it is thicker and bushier than native species. Bud (turion) production is lacking in the invasive plant whereas the native plants produce winter buds.

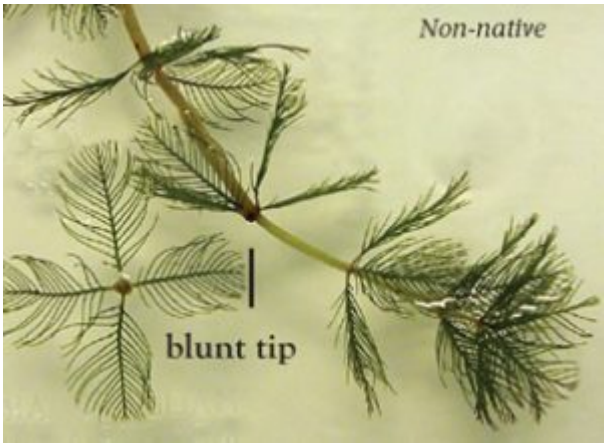


Source: USGS

Here is a summary of the differences between Eurasian watermilfoil and native Northern watermilfoil from the

Lake George Association. Please see their link in the Additional Resources section for more information.

Invasive Eurasian Watermilfoil



- Usually 12-21 leaflet pairs per leaf
- Delicate, feather-like leaves
- Leaflets are mostly the same length
- Leaves arranged in whorls (circles) of three to five around each stem
- Leaves are limp when out of water
- Stem is as thick or thicker than a pencil and is long and spaghetti-like

Native Northern Watermilfoil

- Usually 7-10 leaflet pairs per stem
- Rigid feather-like leaves form a Christmas tree shape
- Lower leaflets are usually quite long
- Leaves arranged in whorls (circles) of four to six around stem
- Leaves are usually rigid when out of water
- Stem is usually whitish, or whitish-green in color

Coontail (AKA Hornwort)

- Coontail is a free-floating aquatic plant without roots. It may be completely submersed or partially floating on the surface
- Leaf divisions have teeth along one margin
- Leaves are arranged in whorls of 5-12 at a node
- Whorls are more closely spaced at the end of the stem, giving it the coontail appearance

Management and Control

Prevention is always the best method of control, but once introduced, Eurasian milfoil can be controlled using a few methods. Small areas can be hand pulled, but for larger areas, this may spread the plant to other sections of the lake. Carp will eat it, but they typically eat other species first, so this should only be used in a lake that is dominated by Eurasian watermilfoil. Chemical options will work to control the population, but due to its prolific reproduction, complete eradication will be nearly impossible.

The milfoil weevil is used as a biological control, but more research needs to be done on this. Your lake management professional can help you determine the best course of action.

Additional Resources

https://www.dnr.state.mn.us/invasives/aquaticplants/milfoil/index.html

https://depts.washington.edu/oldenlab/wordpress/wp-content/uploads/2015/09/Myriophyllum_spicatum_Cunningham_2014.pdf

https://www.lakegeorgeassociation.org/wp-content/uploads/2017/04/nativeversusinvasivemilfoil.pdf

https://www.lakegeorgeassociation.org/wp-content/uploads/2017/04/MilfoilLook-a-Likes.pdf