



Eurasian Water Milfoil

Myriophyllum spicatum

Provincial Designation:
Prohibited Noxious



Overview:

Eurasian water milfoil is a submersed perennial, aquatic herb introduced from Eurasia and Africa. It forms large, floating mats that prevent light penetration into water bodies, thus out-shading native plants. In lakes or other aquatic areas where native aquatic plants are not well established, the Eurasian plant can quickly spread.

It reproduces rapidly through stem fragmentation and underground runners. Plant fragments can attach to boats, trailers, or animals and be moved from one body of water to another. A single segment of stem and leaves can form a new colony. It does produce seed, however germination rates are poor.

There are native water milfoils, and just like the Eurasian plant, all have submersed stems, feathery leaves, and tiny flowers produced above the water surface.

Habitat:

Eurasian water milfoil grows best in fertile, fine-textured, inorganic sediments. It prefers highly disturbed lake beds, or lakes receiving nitrogen and phosphorous-laden runoff. It is tolerant of many water pollutants.

Identification:

Stems: Stems are long, slender, branching, hairless, and become leafless towards the base. The plant usually grows between 1-4 m but can extend up to 10 m. Each floating node can take root if it comes into contact with mud. Stems are usually pale pink to red-dish brown.

Leaves: Leaves are grayish-green and occur in whorls of 3 or 4 around the stem with 12-21 pairs of fine, thin leaflets up to 35 mm long. Eurasian water milfoil has 12-21 pairs of leaflets while Northern water milfoil only has 5-9 pairs. When the leaves are taken out of the water they lose their stability and collapse around the stem, whereas Northern water milfoil leaves will hold a rigid shape.

Flowers: Small, yellow, 4 petals and 4 sepals produced on a spike 5-10 cm above the water surface. Flowers are alternate and attached directly to the stem.

Seeds: The fruit is a hard, segmented capsule containing 4 seeds.

Prevention:

Eurasian water milfoil is spread by primarily by boats and to a lesser extent, water birds. When leaving any water source, CLEAN, DRAIN and DRY all boats and trailers.

Control:

Cultivation: The British Columbia Ministry of Environment developed a barge mounted rototilling machine called a rotovator to remove Eurasian water milfoil roots. Underwater tiller blades churn up to 8 inches into the sediment and dislodge buoyant Eurasian water milfoil roots. Floating roots may then be collected from the water. Control with rotovation, generally extends 2 or more growing seasons.

Mechanical: A hand rake can be used for smaller areas, such as around docks and swimming areas. One raking per season should be done at the peak of growing. Otherwise multiple rakings are most effective. Be sure to remove all fragments.

Where manipulation of water levels is possible, milfoil can be 'drowned' or dehydrated, and at the right time of year frozen to death, by raising or lowering the water level.

Eurasian Watermilfoil (Continued)

Chemical: Diquat is registered for use on water milfoil. The use of herbicides in aquatic environments requires Alberta-specific applicator certification and permits. Always check product labels to ensure the herbicide is registered for use on the target plant in Canada by the Pest Management Regulatory Agency. Always read and follow label directions. Consult your local Agricultural Fieldman or Certified Pesticide Dis-penser for more information.

Biological: Insects, such as *Acentria ephemerella* and *Euhrychiopsis lecontei* are among those more recently investigated as possible biocontrols for *M. spicatum* (Johnson and Blossey, 2002). The natural host of the latter is the US-native northern water milfoil (*Myriophyllum sibiricum*), but the weevil has expanded its range to include *M. spicatum* (Roley & Newman, 2006), as well as the hybrid *M. spicatum x sibiricum*¹.

Although triploid grass carp will eat Eurasian water milfoil, it is not a highly palatable or preferred species. To achieve control of Eurasian water milfoil generally means the total removal of more palatable native aquatic species before the grass carp will consume Eurasian water milfoil. In situations where Eurasian water milfoil is the only aquatic plant species in the lake, this may be acceptable. However, generally grass carp are not recommended for Eurasian water milfoil control².



Tanya Rushcall, Government of Alberta



Tanya Rushcall, Government of Alberta

REFERENCES

- [1 <http://www.cabi.org/isc/?compid=5&dsid=34941&loadmodule=datasheet&page=481&site=144>](http://www.cabi.org/isc/?compid=5&dsid=34941&loadmodule=datasheet&page=481&site=144)
- [2 \[http://www1.agric.gov.ab.ca/\\\$Department/deptdocs.nsf/all/agdex3446\]\(http://www1.agric.gov.ab.ca/\$Department/deptdocs.nsf/all/agdex3446\)](http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/agdex3446)