

EURASIAN WATERMILFOIL

Myriophyllum spicatum

Eurasian watermilfoil is a feathery submerged aquatic plant that was once commonly sold as an aquarium plant. It quickly forms thick, damaging mats that are causing harm in shallow areas of rivers and lakes throughout North America.

(Below) photo courtesy of Alison Fox, University of Florida, Bugwood.org.



SPECIES DESCRIPTION

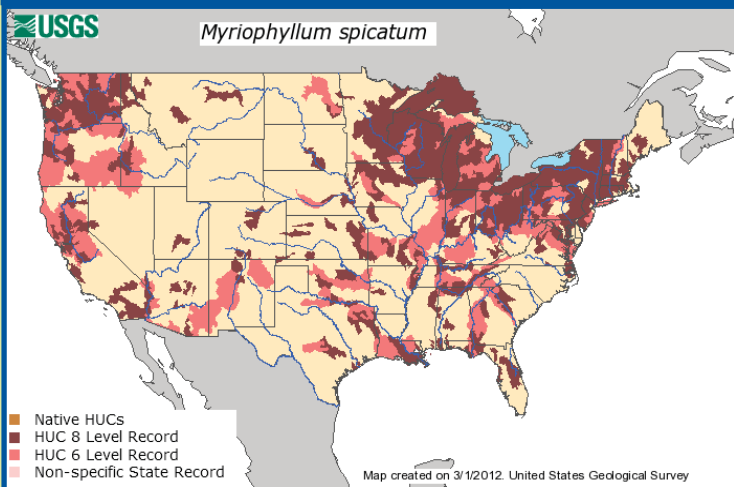
Eurasian watermilfoil has small (<2 cm long) feathery leaves that are arranged in whorls of 3-6 (four leaves per whorl is common) around slender stems. The plant grows underwater from roots attached firmly in the sediment. Tiny pink flowers grow on shoots that rise above the water's surface. In Pennsylvania, these plants usually die back to the roots during the winter. Eurasian watermilfoil may be confused with bladderworts, hornworts, mermaid weeds, and other leafy milfoils.

NATIVE & INTRODUCED RANGES

Eurasian watermilfoil is native to Europe, Asia, and northern Africa. It was first discovered in the eastern United States in the 1940s, but may have arrived as early as the late 1800s. Since its introduction, it has spread across inland lakes and streams, clinging to boats and waterfowl. The history of its spread in the United States is not well documented because it bears such a close resemblance to native species of watermilfoil; however, it is now known to be established in nearly every U.S. state, and at least three Canadian provinces. In Pennsylvania, Eurasian watermilfoil is common in lakes, ponds, and rivers in all regions of the Commonwealth.

BIOLOGY & SPREAD

Eurasian watermilfoil does not rely on seeds for reproduction because they germinate poorly under natural conditions. Instead, it reproduces by fragmentation, which is when plant fragments break off and float via water currents, allowing



it to disperse long distances. It can also cross land to new waters when these fragments, which can stay alive for weeks if kept moist, hitchhike on boats, boat trailers, motors, and fishing equipment.



EURASIAN WATERMILFOIL

EURASIAN WATERMILFOIL

(Below) photo courtesy of Leslie J. Mehrhoff, University of Connecticut, Bugwood.org.



(Right) photo courtesy of Richard Old, XID Services, Inc., Bugwood.org.



HABITAT

Eurasian watermilfoil is an extremely adaptable plant that is able to thrive in a variety of conditions. It is generally found in water less than 20 ft (6 m), and mats form in waters less than 15 ft (4.5 m). It grows in still to flowing waters, and tolerates a wide temperature range, even surviving under ice.

IMPACTS

Threat to Biodiversity

The rapid growth rate of Eurasian watermilfoil allows it to form dense mats across the water's surface. These mats shade out native plants growing beneath. The reduction in native plant growth results in monotypic stands of watermilfoil that provide only a single habitat and food source for other organisms. In addition, lower numbers of nutrient rich native plants impact the composition of aquatic invertebrates, and may impair the ability of some fish species to spawn. Thick mats of milfoil can also slow the flow of moving water, decreasing the amount of oxygen available to fish and other organisms.

Economic Costs

Dense mats of Eurasian watermilfoil choke waterways and interfere with recreational activities such as swimming, fishing, and waterfowl hunting. They can also interfere with boating, as plant fragments become wrapped around propellers. Heavy infestations can obstruct industrial and power generation intakes and harm the economy by reducing local property values.

PREVENTION & CONTROL

The physical or chemical removal of Eurasian watermilfoil mats can be expensive and is usually only a temporary measure. Even the smallest plant fragment can colonize an uninfested area, making permanent removal extremely difficult. Preventing the spread of Eurasian watermilfoil to new areas is the best way to prevent further ecological impacts. Learn how to identify Eurasian watermilfoil from native milfoil species. Always remove any visible mud, plants, and debris from boats, trailers, and equipment before leaving a water body. Eliminate water from all equipment before transporting. Clean gear and equipment with either hot water (140°F/60°C), or salt water; OR let boats and equipment dry thoroughly for at least five days before

References:

Wisconsin Department of Natural Resources. 2008. Eurasian Watermilfoil. Factsheet. <<http://dnr.wi.gov/invasives/fact/milfoil.htm>>.

Rhoads, A.F., & Block, T. A. 2000. Eurasian Watermilfoil (*Myriophyllum spicatum* L.). Morris Arboretum of the University of Pennsylvania fact sheet. <<http://www.paflora.org/Myriophyllum%20spicatum.pdf>>.

State of Washington Department of Ecology. Non-native invasive freshwater plants – Eurasian Watermilfoil. <<http://www.ecy.wa.gov/programs/wq/plants/weeds/milfoil.html>>.


Sea Grant
Pennsylvania
www.paseagrant.org

Extension • Education • Research

Pennsylvania Sea Grant is a partnership of
The Pennsylvania State University,
The Commonwealth of Pennsylvania,
and NOAA.

Penn State is an affirmative action, equal
opportunity university.

 **pennsylvania**
DEPARTMENT OF ENVIRONMENTAL PROTECTION
COASTAL RESOURCES MANAGEMENT PROGRAM



**Great Lakes
RESTORATION**

Funded in part by PA DEP Coastal Resources
Management Program, The U.S. Fish and Wildlife
Service, and the Great Lakes Restoration Initiative