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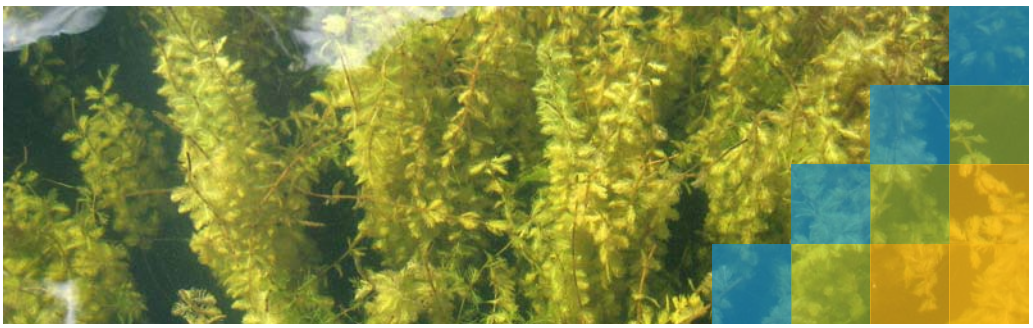

Eurasian Milfoil

April / 2010

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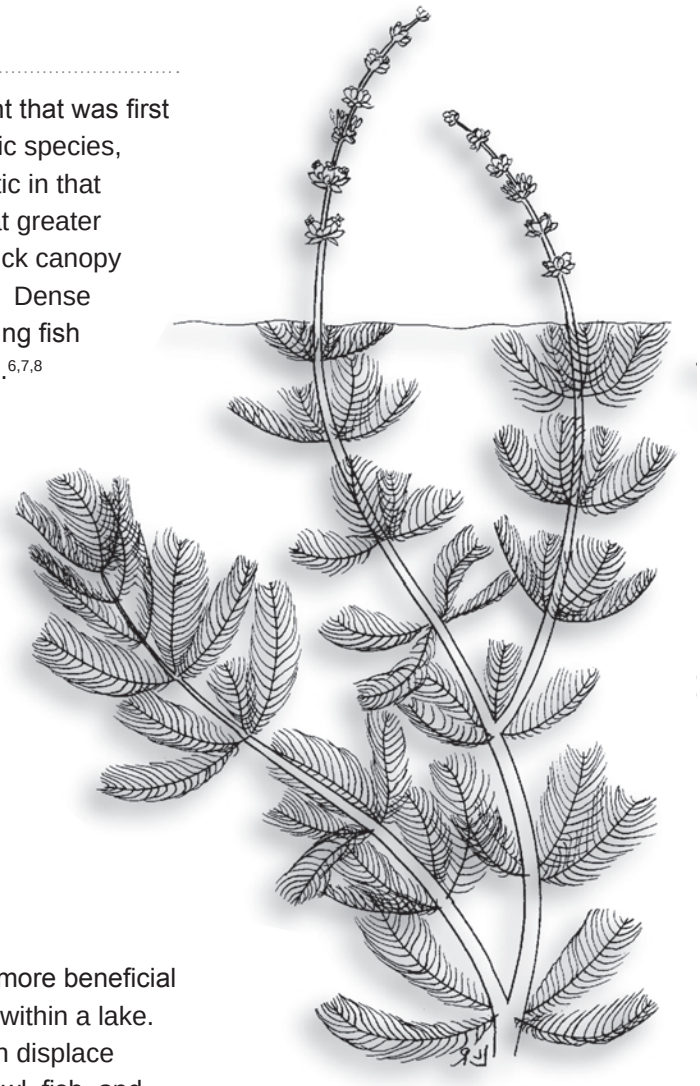
Progressive AE

Eurasian milfoil (*Myriophyllum spicatum*) is an invasive aquatic plant that was first introduced to the United States in the 1940s.[1] Although it is an exotic species, it is currently widespread in Michigan.[2] Eurasian milfoil is problematic in that it becomes established early in the growing season and can grow at greater depths than many native plants.[3,4] Eurasian milfoil often forms a thick canopy at the lake surface that can seriously hinder recreational activity.[3,4,5] Dense stands of Eurasian milfoil can adversely impact fisheries by degrading fish habitat, impairing feeding, and disrupting predator-prey interactions.[6,7,8] Eurasian milfoil can spread rapidly by "vegetative propagation" whereby small pieces break off, take root, and grow into new plants.[3,4,5] Once introduced into a lake, Eurasian milfoil may out-compete and displace more desirable plants and become the dominant species.[3,4,5,9]

Getsinger et al.[8] described problems associated with Eurasian milfoil as follows:

> Problems associated with this species include its aggressive displacement of native vegetation, and alteration of fish and wildlife habitat by formation of impenetrable mats with dense upper canopies that reduce light and decrease water flow. These significant changes in habitat quality quickly affect fish, wildlife, and other aquatic organisms.

Over time, Eurasian watermilfoil will out-compete or eliminate more beneficial native aquatic plants, severely reducing natural plant diversity within a lake. Eurasian watermilfoil is rarely used for food by wildlife, and can displace many aquatic plants that are valuable food sources for waterfowl, fish, and insects. Dense stands of Eurasian watermilfoil provide habitat for mosquitoes and may increase populations of some species of these insects.



Eurasian milfoil. Aquatic plant line drawing is the copyright property of the University of Florida Center for Aquatic Plants (Gainesville). Used with permission.

(Getsinger et al.[8], continued)

Fish populations may initially experience a favorable increase when Eurasian watermilfoil first invades a site. However, the abundant and aggressive growth of this weed will counteract any short-term benefits. Its typically dense growth habit make Eurasian watermilfoil beds poor spawning areas for fish and may lead to populations of small-sized specimens. Loss of oxygen and light caused by the dense mats can also affect the characteristics of fish populations. At high densities, Eurasian watermilfoil's foliage supports a lower abundance and diversity of invertebrates to serve as fish food. While dense cover does allow high survival rates of young fish, larger predator fish lose foraging space and are less efficient at obtaining their prey. Thus dense Eurasian watermilfoil stands are reported to reduce expansion and vigor of warm-water fisheries.

The growth and senescence of dense Eurasian watermilfoil colonies also reduce water quality and water circulation, and cause lower levels of dissolved oxygen.

Eurasian milfoil is not the only type of milfoil found in Michigan. There are several native milfoil species that also grow here, such as northern milfoil (*Myriophyllum sibiricum*). These native species closely resemble Eurasian milfoil and are often mistaken for it. However, the native milfoils rarely form dense, impenetrable plant beds like Eurasian milfoil.

Recent research indicates that Eurasian milfoil has begun to hybridize with native milfoil species. Moody and Les[10] documented that invasive milfoil hybrids are widely dispersed across the northern portion of the United States and appear to be widespread in Michigan.[11] There is concern that these hybrid milfoils may grow more aggressively, and exhibit increased tolerance to herbicidal and biological control measures.[10] Studies are underway to address these concerns and to better document the impact of hybrid milfoil.

Millions of dollars are spent annually in Michigan to control Eurasian milfoil.

Eurasian milfoil canopy.

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Tony Groves, Pam Tyning, and Paul Hausler have nearly 70 years of combined experience working as lake management consultants with Progressive AE in Grand Rapids, Michigan. Tony, Pam, and Paul created MichiganLakeInfo.com, a website for those interested in Michigan's inland lakes. On the site you can find this article and information on topics such as lake water quality, watershed management, aquatic plants, lake levels, lake improvement boards and more.