

Extreme Summer Conditions Bring Mucho Milfoil, Weevils Lag Behind

News from the Portage County Eurasian Water Milfoil Studies
December 2005

The Portage County Eurasian Water Milfoil Studies were checking up on the milfoil weevils (*Euhrychiopsis lecontei*) in Springville Pond this summer to track the biological control of Eurasian water milfoil (EWM). After mapping the invasive milfoil in 2003 and surveying naturally-occurring populations of the milfoil weevils in 2004, the study found that the pond's average (1.65 weevils/stem) was well above the statewide average (0.65 weevils/stem). Populations that high can offer the pond a natural, non-toxic, economical control option.

The study developed management recommendations for the pond, which focused on supporting the native weevil population. The Village of Plover, who owns and operates the dam, opted to follow those recommendations. Details on 2004 study findings and recommendations are available at www.goldensandsrccd.org or in hardcopy from the County Conservationist at 715/346-1216. The 2005 study findings and recommendations will be available after January 1st, 2006.

To track the weevils' activity on the pond, on June 21, 2005, field personnel from Golden Sands Resource Conservation & Development Council, Inc. (RC&D), a non-profit organization working with Portage County on the studies, took random samples and made visual observations. At that time, personnel found many positive signs that weevils were active and having an impact on the milfoil.



In 2003 and 2004, this area at the east end of the pond was a solid weed mat of EWM, covered with a layer of algae. Weevil counts were an astronomical 4.43 weevils per stem. On June 21st, 2005, a photo shows the weevils had reduced the weed bed to several scattered stems. Most visible, were the unsightly blobs of algae at the water surface, which are not affected by weevils.



Eurasian water milfoil, an invasive, non-native aquatic plant. Inset: Milfoil weevil, a native predator of milfoils. Actual size is similar to a sesame seed. (Photo credit: Sallie Sheldon)

The heat is on... Late June brought the start of a record streak of sunny, hot and dry weather. The Stevens Point area saw **50 days** of temperatures at or above 80°F by Labor Day Weekend. In addition, drought stress and increased demands for water in the parched watershed brought on record low water levels to the Little Plover River, which feeds into the pond. This meant almost no fresh, cool water coming into the pond during the hottest, driest parts of the summer. The stagnant water conditions, coupled with the hot, sunny weather, created extreme conditions just *perfect* for rapid EWM growth.

In August, field personnel returned to the pond to map the EWM and survey the weevil populations and found that the dense EWM beds had increased from 2.1 total acres in 2003 to 3.5 acres in 2005.

Even more dramatic was the increased area colonized by sparse growth of EWM, from 0.7 acres in 2003 to 13.23 acres in 2005. This documented that new EWM growths had appeared in almost every area of the pond. Whether due to abnormal conditions or not, the alarmingly rapid weed and algae growth caused a great deal of concern among community members and landowners around the pond.

Weighing the options.... The Village of Plover hosted a meeting on November 29th, 2005, that gave landowners an opportunity to ask Deb Konkel, Aquatic Plant Specialist with the DNR, questions about options for controlling bothersome weeds and algae. Konkel stated the old copper sulfate treatments for algae have been found ineffective and potentially unsafe, and that the DNR does not recommend the use of copper sulfate anymore. The best approach, stated Konkel, is to address the root cause of algal blooms, which is excess nutrients in the water.

The question also raised about chemical treatments to the EWM beds, which has been done in the past. Konkel stated that chemical treatments would have only temporary effects on the EWM, as was the case with the past treatments. Further, because non-motorized recreation is not substantially impeded by the EWM growths, the risks associated with wide-scale chemical treatments outweigh the benefits to recreation, therefore, the DNR would not approve a permit for such treatments. Konkel still supported biological control as the safest, most long-term and cost-effective control method best suited for Springville Pond's situation.

Amy Thorstenson, Project Assistant with Golden Sands RC&D, was present at the meeting to discuss the potential for **boosting natural milfoil weevil populations** through a weevil-rearing project the Portage County EWM Studies were planning for 2006. Thorstenson stated that the weevils were likely to catch up to the EWM growth eventually, but that rearing extra weevils may speed that process. Such a project was done at Lake Thomas in 2005, with some visible success by the end of the summer. The rearing and stocking techniques have been refined for 2006, and Thorstenson stated that weevils could be reared for Springville Pond if a 50% cost-sharing grant from the DNR

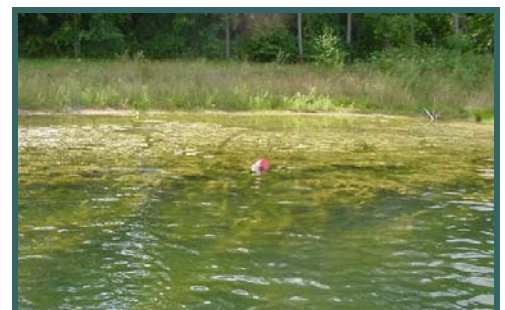
gets approved. Matching money would need to be earmarked for the other 50% of the expenses, which the Village of Plover opted to provide.



Photos taken on June 21st, 2005, show the difference between pink, healthy stems and black, weevil-damaged stems. Weevil damaged stems become friable and disintegrate.



Throughout the summer, weevils were captured from Lake Thomas and placed in aquariums to reproduce safe from predators. They were later returned to the lake at a marked stocking location.



Are milfoil weevils safe? Yes. The weevils are native to Wisconsin and feed on our native milfoils. When EWM enters a lake, the weevils happily feed on that type of milfoil as well.

Will this eradicate the Eurasian water milfoil? NO. The weevils will not ERADICATE the milfoil, but should keep it under better CONTROL, reducing the unsightly appearance of weed mats.

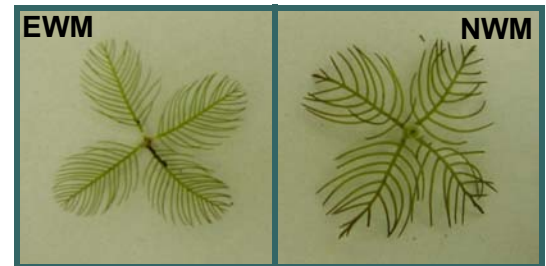
What can you do to help? Residents can help weevils succeed in two ways:

1. Practice “catch and release” of large predator fish that feed on pan fish. Pan fish feed on milfoil weevils and high populations of pan fish can be a critical stumbling block to increasing weevil numbers.
2. Provide winter hibernation habitat for weevils by avoiding mowing and raking within 35 feet (or 50 feet, if possible) of shore from Labor Day through Memorial Day. Weevils hibernate on shore under dead leaves and grasses. An undisturbed, natural shoreline is critical for weevils and beneficial for water quality. If you have a disturbed shoreline (sand, rock, mowed lawn, etc...) and would like to restore it to native vegetation, contact your County Conservationist, at 346-1216, for technical assistance.

What else can be done to control the EWM? A winter **water level drawdown**, carefully timed and planned with the assistance of the DNR, can help control the EWM in shallow areas without damaging wildlife populations. The 2005 surveys found the EWM beds concentrated in deeper waters, so this control tool would not be helpful at this time, but the Village, as managers of the dam, may be able to use this tool in the future.

What can I do if EWM is at nuisance levels around my dock? **Manual removal** (raking or hand-pulling) is also allowed, without a permit, to create an “access corridor” (up to 30-feet wide) to access open water. The law also allows unlimited manual removal of *non-native* plant species, such as EWM, so if you can distinguish these plants from natives, this is an option for control as well. (PLEASE NOTE the state statute requires that whatever vegetation is cut or pulled **must be removed from the waterbody!** This is to minimize reproduction via stem fragmentation AND reduces the amount of rotting plant material in the water that contributes excess nutrients and reduces dissolved oxygen levels.)

Optionally, a landowner may apply for an individual DNR permit to use herbicides to control aquatic vegetation and clear an “access corridor” (up to 30-feet wide). Permits will be evaluated for approval on a case-by-case basis. (Keep in mind that any bare areas are prone to invasion by exotic species, so it is wise to limit the size of your access corridor to only what is necessary.)



EWM is distinguished by its whorls of leaves with 12-21 pairs of leaflets. Compare the feather-like appearance of the EWM leaves to the Northern water milfoil, which have fewer pairs of leaflets. (Photo credit: WI DNR)

If you have additional questions about EWM, how it spreads or how it is controlled, please contact **Deb Konkkel**, Aquatic Plant Specialist with DNR, at (715) 839-2782.

For questions about the Portage County EWM Studies, please contact **Amy Thorstenson**, Project Assistant with Golden Sands Resource Conservation & Development, at (715) 346-1264.



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On November 29th, 2005, the Village of Plover and Landowners from Springville Pond met with Deb Konkel, DNR, and Amy Thorstenson, Golden Sands Resource Conservation & Development, about the Eurasian Water Milfoil (EWM) problem on Springville Pond.

After much discussion, the landowners and Village voted to participate in a weevil rearing project planned for 2006 as part of the Portage County Eurasian Water Milfoil Studies. The project will depend on approval of an Aquatic Invasive Species grant from the DNR.

Local support increases the chances of grant approval. Landowners are encouraged to **submit a letter of support** for the grant application by January 15th to Golden Sands RC&D, Attn: Amy, at the address above.



In 2005, a weevil rearing project for lake Thomas was made possible by an Aquatic Invasive Species grant from the DNR. The weevils were able to reduce the reproductive capability of EWM at the stocking site, and their impact should increase over time.