



# The Door County Invasive Species Team

*as managed by the Door County Soil and Water Conservation Department, empowers citizens with the education, tools and skills necessary to control invasive species.*

## Invasive Species Workshops, News and Volunteer Opportunities

### “The Importance of Early Detection”

#### Workshop on imminent invaders & the technology to fight them

**Friday, May 2<sup>nd</sup> from 2:00-4:00pm**

**Bailey’s Harbor Town Hall**

You know Garlic Mustard, and Phragmites is old news. But what about some of the early detection invasive species that haven’t yet reached Northern Wisconsin, or occur in very small patches in Door County? Prevention and eradication of satellite populations are the easiest to control and the least costly. Join The Ridges Sanctuary and the Door County Invasive Species Team as they host Anthony Summers, Weed Scientist with the University of Wisconsin Extension, and learn to identify early detection invasive plants. Anthony will give a hands-on workshop demonstrating the latest online resources, like the Great Lakes Early Detection Network (GLEDN), and provide instruction on techno-tools like mapping invasive species establishment using your smartphone. This workshop is for the unyielding hikers and explorers, natural area stewards and volunteer botanists. Advanced registration is not required for the workshop (just drop in). If you have further questions, please contact The Ridges at (920) 839-2802 or DCIST at (920) 746-5955.



*Infestation of Chinese yam, a species not yet found in Wisconsin, but widespread in southern portions of Illinois and Indiana.*



#### Garlic Mustard Pull – Bay Shore Drive

On the morning of **Wednesday April 9<sup>th</sup>** the Door County Land Trust will be working at properties along Bay Shore Drive in the Township of Egg Harbor to control garlic mustard. For more information, please contact Bobbie Webster at [bwebster@doorcountylandtrust.org](mailto:bwebster@doorcountylandtrust.org) or (920) 746-1359.

*Look for DCIST’s informational booth and visit with natural resources professionals at the following events:*

#### Gibraltar Schools Earth Day Fair

April 23<sup>rd</sup> from 1-4pm

Door County Auditorium Fireside Room



#### Sustainable Living Fair

April 26<sup>th</sup> from 10am-4pm

Martin Park, Sturgeon Bay

<http://sites.google.com/site/sustaindoor/>

## Upcoming Volunteer Opportunities, cont.

### Garlic Mustard Pull: Part Two – Bay Shore Drive

On the morning of Friday April 18th the DCIST & Door County Land Trust will be working at properties along Bay Shore Drive in the Township of Egg Harbor to control garlic mustard. For more information, please contact Kari Hagenow at (920) 743-8695 ext. 306 or [dcist1@gmail.com](mailto:dcist1@gmail.com).



### Door Stewardship Alliance Workdays

**April 8, 15, 22, and 29**

Spend a morning outdoors with The Door Stewardship Alliance (DSA), made up of Door County Land Trust and The Nature Conservancy volunteers. The DSA crew meets every Tuesday morning from 9:00-12:00pm, alternating between preserves managed by the Land Trust and The Nature Conservancy. To get weekly email updates with details of where they'll be working next, contact Bobbie Webster ([bwebster@doorcountylantrust.org](mailto:bwebster@doorcountylantrust.org)) or Kari Hagenow ([khagenow@tnc.org](mailto:khagenow@tnc.org)).



### Door County Festival of Nature celebrates stewardship!

Registration is now open for the Door County Festival of Nature taking place May 22-24th with its home base at The Ridges Sanctuary in Bailey's Harbor. This year, the Festival celebrates the 25th anniversary of the Knowles-Nelson Stewardship Program. Seasoned trip leaders will guide participants through some of the most pristine and unique natural areas in the county, many of which have been protected with Stewardship grant funds. A number of these leaders are members of DCIST's partner organizations and offer ideal opportunities to learn about Door County's diverse resources and natural heritage – the same resources DCIST strives to protect through our invasive species work.

You can register online or print a registration booklet at

<http://www.ridgessanctuary.org/programs/featured/2014-door-county-festival-of-nature/>



### The Rushes on Kangaroo Lake – 2014 Invasive Species Workdays

**April 29 & 30, May 1 (Primarily tree planting with some invasives control on trails)**

**May 27, 28 & 29 (Japanese barberry control)**

**October 21, 22 & 23 (Primarily work on invasives, some trail maintenance)**

Those interested in volunteering can pick 1, 2, or 3 of the days to help. The hours will be approximately 9:00 A.M. to 5:00 P.M. the first and second days, and 9:00 A.M. to noon on the third day. The Rushes will provide lunch on the second day and snacks & drinks after work on the first and second days.



If you can help, please contact JC Pfeiffer ([Pfeiffer@hbc.com](mailto:Pfeiffer@hbc.com), 507-452-4048) or the Rushes Front Desk ASAP so arrangements can be made.



## Door County front-and-center in YouTube video highlighting Phragmites Control Project

Visit <https://www.youtube.com/watch?v=qQL5c-dRchk> to watch South Lake Michigan Drive landowner Dave Debenham and Jodi Milske of the Door County Land Trust talk about the Wisconsin DNR's Phragmites Control project that wrapped up in 2013. The presence of Phragmites resulted in the degradation and loss of some of Wisconsin's coastal wetlands, Great Lakes dunes, and beaches along the shores of Green Bay and Lake Michigan. To combat this loss in 2010, as part of the Great Lakes Restoration Initiative, the Environmental Protection Agency awarded the Wisconsin DNR over \$800,000 to conduct control work along the shores of six counties.

### Promising news for those plagued by exotic mussels in our waterways!



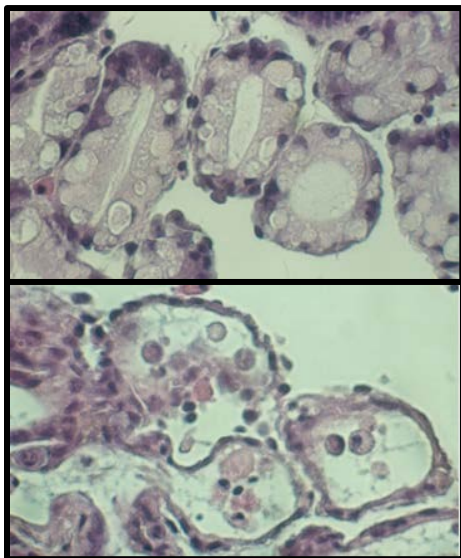
A cluster of invasive zebra mussels attached to a native freshwater mussel from Lake Carlos in Minnesota. Credit D. P. Molloy/University at Albany via *The New York Times*.

A February 24<sup>th</sup> *New York Times* article titled "Science Takes on a Silent Invader" gives us hope that there may be an alternative for coping with the invasive Zebra and Quagga besides learning to live with them. Since their arrival in the Great Lakes in the 1980s via the ballast water of trans-Atlantic cargo ships, these two mussels have now spread to hundreds of lakes and rivers and have done vast economic and ecological damage. Zebra and quagga mussels disrupt ecosystems by devouring phytoplankton, the foundation for the aquatic food web, and clog water intakes and pipes of cities, towns, power plants, and factories.

The good news is that Daniel P. Molloy, an emeritus biologist at the New York State Museum in Albany who has long been a pioneer in the development of environmentally safe control agents, has discovered a bacterium that kills mussels but appears to have little or no effect on other organisms. New York State awarded a license to Marrone Bio Innovations, a company in Davis, California to develop of commercial formulation of the bacterium. The product, Zequanox, has been undergoing tests for several years with promising results – killing more than 90% of mussels in test tanks containing water from Lake Carlos in Minnesota. A control group of native freshwater mussels from Black River in Wisconsin were unharmed by the bacterium.

The federal Environmental Protection Agency is now evaluating the open-water uses for Zequanox. The project took Dr. Molloy and his team 20 years of work, four years alone that were spent testing more than 700 bacterial strains. His lab received more than \$4 million in grants from the state, the National Science Foundation, the environmental program New York Sea Grant, electrical power utilities and other sources. The winning bacterial strain, called *Pseudomonas fluorescens* strain CL145A, was collected in river mud and hosts a toxin in its dead cells that destroy the digestive system of the mussels. You can view the full article here:

<http://www.nytimes.com/2014/02/25/science/science-takes-on-a-silent-invader.html? r=0>.



Normal structure of zebra mussel digestive system (top) and necrotic structure after exposure to *P. fluorescens* CL145A. Photos courtesy of the New York State Museum via the U.S. Geological Survey.

## High deer numbers and Invasives: A deadly combination for native plants



*Effects of deer overabundance on seedlings and understory vegetation visible below browse line.*

Two studies were recently published that examined the impact of deer overabundance and its association with invasive plant spread. Biologists at Cornell University explored the effects that large numbers of deer have on the growth of forests. In Ithaca, New York, where Cornell scientists set up deer enclosure experiments, they found that in areas of heavy browse, native woody plants were not seeding and instead non-native seed of non-woody species increased. Meanwhile, researchers at the University of Pittsburg found that large deer numbers lead to increases in garlic mustard and reductions in native plants like Trilliums. Both studies concluded that overgrazing of native plants by deer leads to more open space for invasive plants, which are often unpalatable by deer. These studies can be found at <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0091155> & <http://www.pnas.org/content/early/2014/03/05/1310121111.abstract?sid=72c64ed5-1d86-40fc-b38e-6f4f5e2b98de>.

### Statewide Round-up

#### UW-Extension launches Wisconsin First Detector Network

Many invasive species go undetected until they have reached a level where eradication is difficult, so to address this issue UW-Extension weed scientists have developed Wisconsin's First Detector Network (WIFDN). The goal is to educate citizen scientists about invasive species biology, ecology, and identification and develop networks that increase awareness and knowledge of invasives species locations across the landscape. Their first training session is currently taking place, but you can still get involved! Visit <http://fyi.uwex.edu/wifdn> for more information.

#### Asian carp eggs found near Lynxville, Wisconsin

Asian carp eggs were recently identified in samples collected by U.S. Geological Survey scientists in 2013 from the Upper Mississippi River as far north as Lynxville, Wisconsin. This is an important discovery, as this is the farthest north in the Mississippi that spawning has been recorded – more than 250 river miles upstream of previously known reproductive populations in the river. The samples were taken as a part of a larger research project designed to identify Asian carp spawning habitats. The eggs were identified as either bighead or silver carp.



#### Invasive Species BMPs for Wetlands now available

The guidance document "Best Management Practices for Preventing the Spread of Invasive Species in Wetlands" is now available at <http://dnr.wi.gov/topic/wetlands/invasives.html>. The document was developed to provide information and educate users on a wide range of practices to effectively reduce the impact or spread of invasive species in wetlands.

**Reminder: It is not recommended to prune, wound, or harvest oaks during the high risk period for the oak wilt disease from April 15<sup>th</sup> through July 15<sup>th</sup>. Insects that carry the fungus are active during this time.**



## April Plant Profile: Forget-me-nots

As spring sets in and summer draws closer, keep an eye out for forget-me-nots as you're out walking, hiking, or biking. Two types of these blue intruders, separated by their habitat preference, are spreading within Door County's natural areas. Aquatic forget-me-not (*Myosotis scorpioides*, bottom photograph) is a creeping perennial plant that favors wetlands, bogs, swamps, marshes, lakes, streams and ponds. Woodland forget-me-not (*Myosotis sylvaticum*, top) is a short-lived creeping perennial that favors forests, forest openings, and roadsides. Both species have the potential to quickly crowd out native vegetation, reduce the number of native herbs including ephemeral wildflowers, and form large monocultures. Woodland and aquatic forget-me-nots found in our natural environments are often escapees of gardens and water gardens or ponds, respectively. Both are difficult to control because of their mechanisms for spreading – through stolons (horizontal stems that spread along soil surface while generating roots and shoots) and prolific seed production.

Forget-me-nots can be identified by their inflorescence of small, five-petaled, blue flowers with yellow centers. Flowers will bloom from May through September and may also be less commonly found in shades of pink or white. The leaves of forget-me-nots are alternate and attach directly to the stem. Leaves range from oblong to lance-shaped and have a prominent central vein. The aquatic and woodland species can be separated by the presence of spreading, hooked sepal hairs on the woodland forget-me-not (shown in center).

Small populations or individual plants can be pulled or dug before seed set, taking care to remove as much of the root system as possible. It is yet unknown how long the seeds will remain viable in the soil though, so annual follow-up is important. There is also little information about the effectiveness of chemical treatments on *Myosotis* species.

In Wisconsin, both aquatic and woodland forget-me-nots are proposed for listing as 'restricted' in the current revisions to Wisconsin's Invasive Species Rule. 'Restricted' means the plant is widely established across the state and that high environmental and/or economic impacts from the species are evident.

