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 **February 2015**

National Invasive Species Awareness Week February 22nd – 28th, 2015

During the week of February 22nd, invasive species once again take a national stage through events aimed to raise awareness and identify solutions to invasive species issues at local, state, tribal, regional and national scales. Taking action both at local and nationwide levels is important – non-native plants, animals and pathogens can have detrimental impacts on human health, the environment, and the economy. While a number of the events are taking place in Washington DC, there are still ways that you can observe Invasive Species Awareness Month (NISAW) from the comfort of your own home:

- Do some research! Get on the internet and find out what's invasive in your area or the State. Detecting invaders early is crucial to stopping their spread – www.ipaw.org, www.misin.msu.edu/, and our DCIST webpage http://map.co.door.wi.us/swcd/invasive/ are great places to get started.
- Explore opportunities to get dirty and spend time outside volunteering with an invasive species eradication effort. While there are fewer hands-on work days in the winter, you can use this time to explore the organizations, parks, nature reserves, and local weed warriors in Door County that you can join in with once the weather warms up!
- Become a citizen scientist! Whether you are collecting scientific data to be used by local, state, or national agencies or actually helping remove invasive plants and animals, you will be able to see up close the impacts of invasive species while you contribute to worthy efforts. Check out Wisconsin citizen science opportunities at the Citizen-based Monitoring Network webpage (http://wiatri.net/CBM/) under "Who's Who" on the left.
- Plan your native garden. Determine what potential invasive species might be living in your landscaping and what native alternatives may be more appropriate. Unlike many non-native plants, native plants are hardy and less susceptible to local pests and diseases. Native plants also help conserve water, provide habitat for birds, butterflies and other wildlife, protect the soil, and save money on fertilizers and pesticides.
- Write a letter to your local representatives in government. Let your lawmakers know your opinions about the impact of invasive species on our natural heritage and ask for their support in funding mechanisms (like the Great Lakes Restoration Initiative) that help reduce that impact.

Preventing the spread of invasive species begins at the smallest level possible – the individual person. Whether it's thinking twice before moving firewood or cleaning your boots after hiking, each of us has the choice to make a difference during Invasive Species Awareness Week and all year long. For more information on NISAW visit www.nisaw.org or find the National Invasive Species Awareness Week page on Facebook.

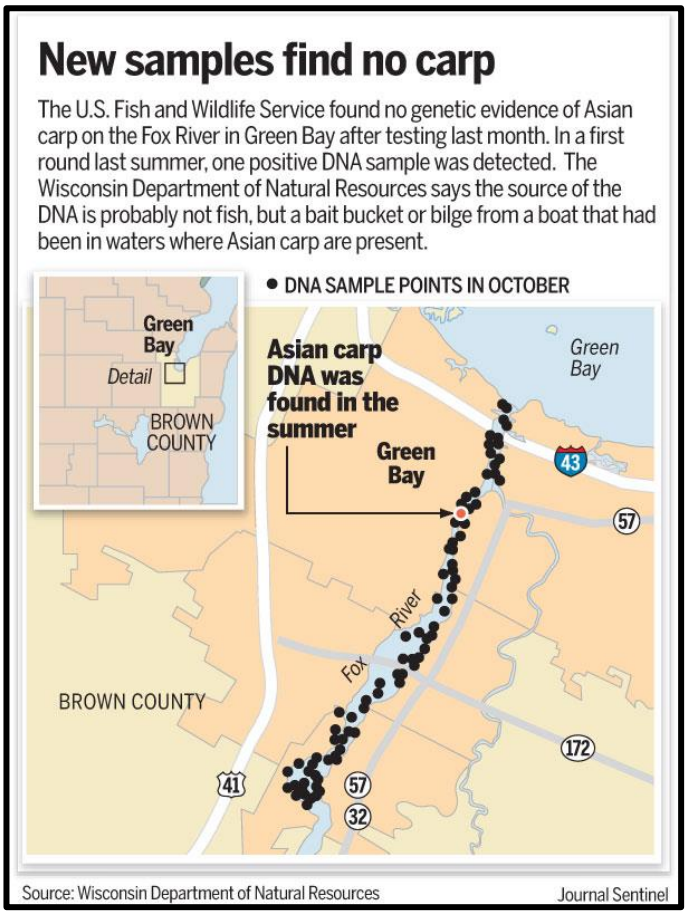
THANK YOU to the many hard-working individuals and generous donors that made 2014 another successful year of invasive species education and control for DCIST! More than 120 volunteers aided our efforts last year, amassing nearly 1,000 hours dedicated to invasive species in Door County. We could not achieve what we do without your support - thank you for caring for your County.

Wisconsin Takes Next Step in Regulation of Additional Invasive Species

In early December, Wisconsin's Natural Resources Board approved the proposed changes to Wisconsin's Invasive Species Rule (Chapter NR-40). The revisions add 75 organisms to the list of prohibited and restricted species in the state. Prohibited species may not be transported, transferred, possessed or introduced without a permit. Restricted species may be possessed, but may not be transported, transferred or introduced without a permit. All but one of the species proposed for addition to the Rule are plants, with 50 being terrestrial in nature and 23 aquatic. The revisions also down-list the Emerald Ash Borer from prohibited to a status of restricted in the state. A full description of the proposed changes can be found at http://dnr.wi.gov/topic/Invasives/classification.html. As of January 15th, the proposed changes are now in front of Wisconsin's Assembly and Senate for approval. If accepted, the revisions would then be passed on to the Governor's Office for approval and could take effect as soon as this summer. Once in effect, there would be a phase-out period for newly restricted species that may be in stock at local nurseries and other businesses. There would be no phase-out period for prohibited species.

Additions to WI's Invasive Species Rule include cultivars of Japanese Barberry, a common plant in landscaping that is often valued for the dark red color of its fall and winter foliage.

After Positive Hit, New Samples Find No Evidence of Carp in Fox River



In November, the Journal Sentinel Online reported on the results of continued testing for Asian Carp in the Fox River in Green Bay. In late October, it was announced that samples taken in the Fox during the summer months had produced a single positive sample for silver carp, a member of the group of exotic fish collectively referred to as Asian carp. The positive sample was one of 200 taken by the U.S. Fish and Wildlife Service in downtown Green Bay during surveys in June and July 2014. After this result was found, the U.S. Fish and Wildlife Service returned to the Fox on October 16th and 21st to collect an addition 200 samples for a second run of testing, which later found no genetic evidence of silver carp. The Wisconsin Department of Natural Resources believes this to be a good indication that there are no live silver carp in the River. Last summer 1,950 samples were collected in Wisconsin tributaries to Lake Michigan including the Milwaukee River. The sample collected in the Fox River was the only to come back positive and only the second positive sample taken in Wisconsin after a 2013 sample of silver carp was found near Potawatomi State Park where Sturgeon Bay opens to Green Bay. Subsequent testing in this area failed to turn up any new positives as well. In the Great Lakes, positive samples for Asian carp have also been found in the Kalamazoo River in Michigan and Lake Erie's Maumee Bay.

Study Unveils Continued Vulnerability of Great Lakes to Invaders

A recent study published in the Journal of Great Lakes Research finds the Great Lakes still vulnerable to continued and further ecological and economic disruptions from non-native species. As the world's most invaded freshwater system, over 180 non-native species have established in the Great Lakes basin within the past two centuries, but the worst of the invasions may not yet have occurred.

The study examined patterns of invasive species introduction in the basin over the past 50 years and hypothesized scenarios that could play out over the next 50 depending on regulations and the development of bi-national response mechanisms. Pathways of species introduction in the Great Lakes basin include shipping and live trade (e.g. released aquarium pets, bait fish), though the tightening of ballast water regulations has significantly reduced the input of non-native species from the shipping trade. The live trade industry may become a greater driver of change in the next 50 years and risk assessments are being called for on live trade pathways including the aquarium trade, the sale of live bait for angling, live fish imported for food markets, and organisms distributed by biological supply houses. Non-native species have been shown to be a driving force of ecological change within the basin, altering food webs, causing biodiversity declines and shifting productivity. More information on the study and the status of invasives species in the Great Lakes can be found at http://www.sciencedaily.com/releases/2015/01/150129113554.htm.

Great Lakes Invasives Enter the Digital Arena

This digitized hydrilla, an aquatic invasive, within the online collection. Below it is the color card and metric ruler that will be added to all specimens for accurate comparisons to be made between them.
Images: UW-Madison Herbarium

In a November article, the Great Lakes Echo (www.greatlakesecho.org) describes a collaborative project that will help fight freshwater invasive species with the aid of a $2.5 million dollar grant from the federal government. Researchers are using the funding to navigate through a historical collection of Great Lakes plants and animals that are largely hidden among museum storerooms and date back as far as 150 years ago. The result will be the digitization of approximately 1.7 million herbarium specimens of over 2,500 species. The digital collection, which will be available online, will focus on non-native species in the Great Lakes, but will include all species collected in North America.

This database will help citizens learn to identify invasive species by allowing them to view actual voucher samples and compare them to similar looking species. While the online database will be available to the public for viewing, it is the researchers that are most excited for it – they will be able to use the compiled data to look at where a particular invasive species first established and determine the rate and direction of its spread. Identifying these trends will aide in the future management of that species as well as others that have not yet established in the Great Lakes. A K-12 teachers' curriculum that uses the images to teach students about invasive species is also under development.

Twenty Universities are involved in the process, which is being led by Ken Cameron, the director of the Wisconsin State Herbarium. The digitized invasive species and their close cousins will be added to the national database called Integrated Digitized Biocollections, otherwise known as iDigbio (http://www.idigbio.org/).

February Plant Profile:
Starry Stonewort

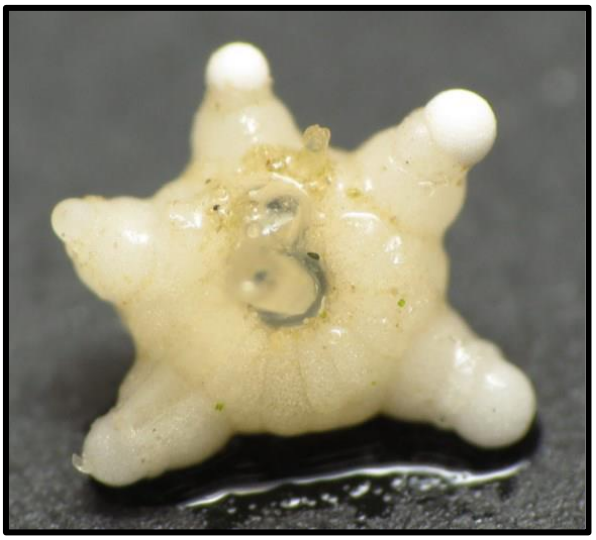
In late 2014, Starry Stonewort was found for the first time in Wisconsin – in Little Muskego Lake in Waukesha County.

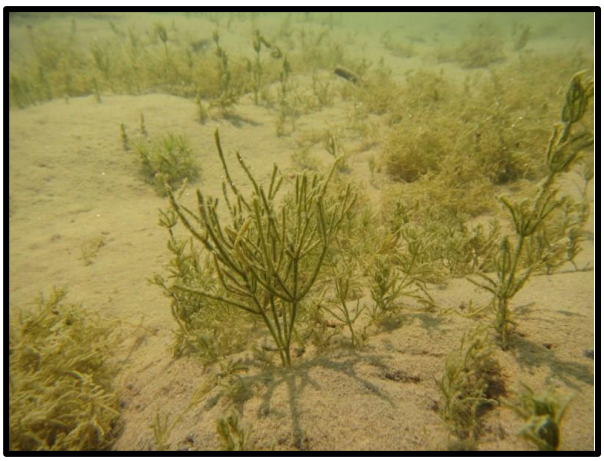
Starry stonewort (*Nitellopsis obtuse)*, native to Europe and Asia, is a submerged aquatic macrophyte (algae) known for growing in dense mats. A relatively new invader, it was first found in the Great Lakes in 1983 and starting in 2006 starry stonewort rapidly expanded across inland lakes in Michigan. In many infested lakes, this alga impedes navigation, limits growth of beneficial plants, and covers valuable fish habitat and spawning areas. Inland lakes infested with starry stonewort often develop very clear water as it prevents the re-suspension of particulate matter in the water column.

Starry stonewort is similar in appearance to a native species known as *Chara*. It has tiny, star-shaped, tan-colored reproductive structures called "bulbils" that are firm to the touch when compared to its soft branches. The presence of bulbils is one way to distinguish between starry stonewort from *Chara*. Starry stonewort has whorls of 4-6 long branchlets, with blunt tips. It is more robust than most members of its family, and can grow to over two meters tall. Starry stonewort's branches look and feel gelatinous, unlike *Chara*, which feels brittle and scaly. It typically grows in alkaline lakes with marl sediments, up to 9 meters deep.

Starry stonewort is typically an annual, but can behave as a perennial during mild winters. Because it lacks roots, it can be dislodged from the bottom without much difficulty. However, manual removal of starry stonewort is difficult and probably impractical on a large scale. Abundant bulbils on the rhizoids can dislodge if disturbed, and will sprout new individuals. Starry stonewort can also regrow from pieces of plants that are chopped off but not harvested. Manual removal efforts must emphasize careful removal of these bulbils and plant parts. Chemical treatments have been used with mixed success, but could also pose problems for other aquatic life.

Starry stonewort is one of six invasive algae and cynabacteria that are prohibited from introduction to Wisconsin under the State's Invasive Species rule (Chapter NR-40). Prohibited status means that the plant is not yet widely found in the state, but poses great environmental and/or economic impacts should it become established. Prohibited plants cannot be transported, transferred, possessed or introduced without a permit.





***Top**: Starry stonewort has whorls of long branchlets, each with a blunt tip. **Middle**: Star-shaped bulbils give the starry stonewort its name. **Bottom**: Starry stonewort (front, center), much more robust than the surrounding native muskgrasses (Chara spp.).*
Images: Golden Sands RC&D

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http://map.co.door.wi.us/swcd/invasive/default.htm