



The Door County Invasive Species Team

Empowering Door County citizens and local municipalities with the education, tools, and skills to tackle invasive species.

The 2021 field season is almost here!

The Global Economic Cost of Invasive Species is at least \$1.28 Trillion

A recent study in the scientific journal Nature suggests the global economic cost of invasive species has been at least \$1.28 trillion over the last 50 years, and is likely an underestimation. “This trillion-dollar bill doesn’t show any sign of slowing down, with a consistent three-fold increase per decade” author Christophe Diagne of the Université Paris-Saclay said in a statement. “The global costs of invasive alien species are so massive that we spent months verifying our models and this overall estimate, to ensure we were not exaggerating.”



Photo Credit: CTV News

This acceleration of invasive species impacts can be partly explained by the increase in pathways these species are introduced, such as increasing global trade and transportation, and by the simplification of ecological systems for agriculture and infrastructure making systems more vulnerable to invasive species.

The paper divided costs into two categories: “damage” costs and “management” costs. Damage costs were defined as negative impacts to infrastructure, loss of product, and/or negative impacts to human health. Management costs were defined as the cost to control the invasive species.

“For decades, researchers have been evaluating the significant impacts of invasive species, but the problem isn’t well known by the public and policy makers,” says Boris Leroy, a biogeographer at the French National Museum of Natural History in Paris. “By estimating the global cost, we hoped to raise awareness of the issue and identify the most costly species.” The study identified globally the costliest invasive species were mosquitos, followed by rats and cats.

In the Great Lakes along the Canada-U.S. border, another \$408.6 million in costs have accrued from zebra and quagga mussels.

References:

- Diagne, C., Leroy, B., Vaissière, A., Gozlan, R., Roiz, D., Jarić, I., . . . Courchamp, F. (2021, March 31). High and rising economic costs of biological invasions worldwide. Retrieved April 02, 2021, from <https://www.nature.com/articles/s41586-021-03405-6>
- Gross, S. (2021, March 31). There’s a Trillion Dollar Invasions Threat to the Global Economy. Retrieved April 02, 2021, from <https://www.bloomberg.com/news/articles/2021-03-31/there-s-a-trillion-dollar-invasions-threat-to-the-global-economy>
- Yun, T. (2021, April 01). Invasive Species Have Cost the World at Least 1.62 Trillion Since 1970: Study. Retrieved April 02, 2021, from https://www.ctvnews.ca/climate-and-environment/invasive-species-have-cost-the-world-at-least-1-62-trillion-since-1970-study-1.5371296?fbclid=IwAR361jFtaO7TJhbbOdgTnVP-SmLZe5SiEJxeEeNITBL4qzzO8pysuya6_BY

Make sure to check us out on Facebook on the Door County Invasive Species (DCIST) page and at our website <https://doorinvasives.org> for events, news, and more!

Invasive Species Workshops and Volunteer Opportunities

Kick-off Event – National Estuarine Research Reserve in Green Bay April 12th 4-5pm, April 15th 7-8 pm



This virtual event is an opportunity to learn more about the initiative, meet project partners, and hear how the NERR fits within UW-Green Bay's Eco-U history and future. The National Estuarine Research Reserve System (NERR) is a national network of 29 sites across the coastal United States, including the Great Lakes, designed to protect and study estuaries and their coastal wetlands.

For the Green Bay NERR, the UW-Green Bay is leading the designation process. At the local level, a Green Bay NERR will offer a coordinating force to manage, restore, and protect the Green Bay ecosystem, with a programmatic focus on four sectors: research, education, stewardship, and training.

Register here:

https://uwgreenbay.ca1.qualtrics.com/jfe/form/SV_9zacp0tJcWfBO50

Spotted Lanternfly Monitoring- Why, When, and How April 14th, 6-7 pm

Join WIFDN to learn about ID and impacts of invasive spotted lanternfly. Then learn how you can help monitor for this highly damaging insect that has not yet been found in Wisconsin!

Register here:

<https://uwmadison.zoom.us/meeting/register/tJ0rfu2orTkjE91YKMFUFqNhN9f62PAGOhrv>



Photo Credit: Lawrence Barringer, Bugwood.org

Emerald Ash Borer Deregulation and Programs Going Forward - NAISMA April 21st, 1:00 pm



This webinar will focus on the changes that invasive species managers should know about stemming from the January 2021 federal deregulation of emerald ash borer (EAB). Herb Bolton, USDA APHIS, will share information about the federal EAB Program and will explain what was in place prior to deregulation, and what actions and programs will continue now that the deregulation has been completed. Leigh Greenwood, The Nature Conservancy, will describe how states and other organizations are imposing local regulations, shifting management, and adapting their prevention efforts in response to deregulation. Leigh will also explain the Don't Move Firewood outreach program and will share the resources available to managers to spread the word and prevent the spread of invasive species in firewood.

For more information:

https://us02web.zoom.us/webinar/register/WN_LsZfAGrISlie6evdhgO4_w

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Invasive Species Workshops and Volunteer Opportunities

Emerald Ash Borer Monitoring with the Wasp Watchers Project

April 28, 6-7 pm



Photo Credit: Bryan Sidelinger

Join WIFDN to learn how you can help monitor for invasive emerald ash borer and its relatives by searching your local baseball field (or other packed sandy area). We'll talk about the invasive insects you can help find and what wasps have to do with it all.

Register here:

<https://uwmadison.zoom.us/meeting/register/tJEvcOmhpjsHtxWI-TK3tldNulO2KNeAOyIT>

Habitattitude Exotic Pet Surrender Event - La Crosse

May 15th, 11 am-3 pm



Description: Do you have an exotic pet that you are no longer able to care for? If so, bring your pet to the Habitattitude Exotic Pet Surrender Event on May 15th between 12 PM and 3 PM at Hampton Inn & Suites La Crosse Downtown, 511 3rd Street N., La Crosse, Wisconsin, 54601. Area organizations will be accepting fish, invertebrates, reptiles, pet birds, small mammals, and plants --no questions asked.

For More Information Contact JOHN P MOYLES at 1(920) 419-8839 or adoptions@jraar.org

Register Here:

<https://www.facebook.com/events/1310389209325915>

Want to stay up to date on all activities?

Check out our newest addition to the DCIST website, the DCIST calendar! The calendar provides up to date events going on pertaining to natural resource events. If you have an event you would like to add to the calendar let us know! The website also provides information on control options, identification information, and so much more!

Check out our calendar at: <https://doorinvasives.org/calendar>



DCIST relies on volunteers to help collect data on where invasive plants and animals are found in Door County.

If you're interested in helping, we can provide training on the use of handheld GPS units or you can also use the GLEDN app to report findings via your smartphone. Contact DCIST at dcist1@gmail.com for more information or learn how to download and use the app at <https://fyi.uwex.edu/wifdn/>.

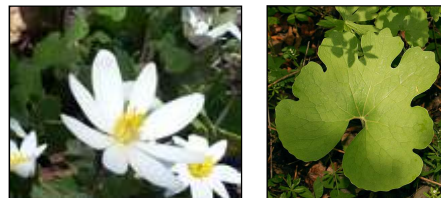
Keep an eye out for our May newsletter and keep up to date on our DCIST website at <https://doorinvasives.org>. We will be posting any and all additional training opportunities & educational materials as we receive them.

Native Species Highlights

Wisconsin Spring Flowers

Spring in Wisconsin is a beautiful time to see ephemeral species, and stunning spring flowers. Ephemeral species have a limited time to prosper and blossom before the trees leaf out, earning them the name “ephemeral”, meaning lasting a short time. Ephemerals and spring flowering native plants provide pollinators with an early source of nectar. Native species like these support our native ecology. Please help our native species by controlling invasive species and whenever possible landscape with native species.

Blood root (*Sanguinaria canadensis*): This ephemeral grows in undisturbed woodlands, in flood plains, and on slopes near streams and waterways. When cut this plant exudes a reddish sap living up to its common name “blood root”.



Spring beauty (*Claytonia virginica*): This ephemeral can grow in a variety of habitats including lawns, woodlands, savannahs and pastures, but is most commonly found in woodland settings.

Hepatica (*Hepatica nobilis*): This ephemeral flower can be pink, blue or white. It is found most commonly in woodland settings.



Shadbush/serviceberry (*Amelanchier spp.*): There are several species of serviceberry native to Door County, including roundleaf serviceberry (*A. sanguinea*), inland serviceberry (*A. interior*), common serviceberry (*A. arborea*), and Allegheny serviceberry (*A. laevis*). These white flowering shrubs bloom late April into May and provide small edible berries in June/July earning this shrub it’s other common name “Juneberry”.

Yellow trout lily (*Erythronium americanum*): This ephemeral grows most commonly in woodland settings. There are also white trout lilies (*Erythronium albidum*) that grow in Wisconsin.



****Bloodroot photo credits:** left-Minnesota Wildflowers/right-Wisconsin DNR, **Spring beauty Photo credits:** left-Illinois, Wildflowers/right-Mt. Cuba Center, **Hepatica photo credits:** left & right-Wisconsin Master Gardener Program UW-Extension, **Shadbush/serviceberry photo credits:** left- G.A. Cooper/right- Danny Barron, **Trout lily photo credits:** left-Lady Bird Johnson Wildflower Center/right-Minnesota Wildflowers.

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A Stinky Invader!

Invasive Plant Profile: Garlic Mustard (*Alliaria petiolata*) An invader of Door county

Garlic mustard (*Alliaria petiolata*) is an herbaceous biennial, meaning it has a two-year life cycle, when crushed the plant smells like garlic earning its name “garlic mustard.” Garlic mustard was introduced by early European settlers, they brought the plant over to use as an herb and for medicinal purposes. In current times, the rise of the “if you can’t beat it, then eat it” movement has resulted in some people going back to eating this invasive species, most commonly as pesto sauce.

Characteristics of garlic mustard, such as its high seed production (one plant can produce up to 8,000 seeds), early seasonal growth, allelopathic qualities (the ability for it to modify soil components), and ability to tolerate a variety of open and wooded habitats, wetlands, old fields, and disturbed areas allows the plant several advantage over Wisconsin’s native plants. Impacts of garlic mustard invasions include negative impacts to wildlife food sources, loss of wildlife habitat, altering soil characteristics to prohibit other plant species from growing, and loss of native species.

During the first year of growth garlic mustard forms a rosette (leaves that grow in a circular arrangement close to the ground) of round, scalloped-margined leaves that stay semi-evergreen through the winter. During the second and final year of its life cycle, plants sends up a flower stem with triangular toothed leaves that has tiny four-petaled white flowers. The plant dies after producing long narrow seedpods. Second year garlic mustard plants may be 3 to 4 ft tall, while first year plants are a low growing ground cover.

Mechanical methods such as hand-pulling can be effective on small populations/plants if care is taken to remove as much of the root system as possible. Controlled burns can be effective to control populations as well. For more dense or established populations, chemical control in the form of foliar treatment may be most effective. Recent studies suggest competitive plantings after control efforts have proven successful in suppressing existing seed banks. For more information please visit UW – Extension Renz Weed Lab’s Garlic Mustard information page at

<https://cdn.shopify.com/s/files/1/0145/8808/4272/files/A3924-07.pdf>.

Garlic mustard is listed as a Restricted species under NR-40. Restricted species are those that are already present throughout the state of Wisconsin and are not likely to be eradicated even though they are likely to cause significant environmental and economic harm or harm to human health. The NR 40 Rule makes it illegal to transport, transfer, or introduce invasive species listed as restricted in Wisconsin. If you suspect you have garlic mustard on your property, contact DCIST for identification or for more information on what you can do to halt invasion of exotic plants on your land. **Remember if you find invasive species in Door County, be sure to report it to DCIST or use the GLEDN app!**



*1st year garlic mustard rosette
photo taken by Kelly Kearns*



*2nd year garlic mustard flowers
photo taken by Wisconsin DNR*



*2nd year garlic mustard with seed
pods photo taken by Elizabeth J.
Czarapata*



The Door County Invasive Species Team – Samantha Koyen, Coordinator

DCIST Message Line: 920-746-5955; Email: dcist1@gmail.com

Check out our new website at <https://doorinvasives.org>