



Ohio Invasive Plants Council

Newsletter • Spring 2022



PRESIDENT'S CORNER

Spring is in the air! It is time to start looking for invasive, herbaceous plants to control and get excited about native, spring wildflowers. After the rollercoaster winter weather we had, we should all be ready for spring. It is also encouraging that we may be able to return to in-person events.

The new section on our website which expands on our alternatives brochure by offering more suggestions for alternatives to invasives should be posted soon. Sometimes when you remove invasive species, native species will re-establish from dormant plants or the seedbank. If the invasives have been established for many years, you may have to re-plant (plants or seeds) with native species. We have completed a new, up-to-date OIPC display to be used at events around the state. We showcased it at a recent event with the Franklin County Master Gardeners' *Day of Education* on March 19th in Columbus and it was well-received.

We hope to have the 2022 Annual Meeting in-person this fall. We also hope to resume our workshops this year, so let us know if you may be interested in hosting one for us. We have decided to postpone our next research conference until the spring of 2023 to give us more time for planning and in hopes that it can be safely held in-person somewhere in central Ohio.

As some of you may know, Yahoo discontinued their listserv service. OIPC had an active listserv of over 300 participants, but we have recently set up another listserv with Google Groups, oipc@googlegroups.com. We welcome people to join this group and make it larger!

There are many opportunities to help control invasive plants in natural areas in our state, such as; participation in the Ohio Natural Areas & Preserves Association's Stewardship Projects. See the ONAPA website at www.onapa.org for information on 2022 projects. Many local metro parks and park districts, state and federal agencies may also have opportunities for volunteers to help control invasive plants. Each of us can address invasive plant challenges on a local level.

Help us spread the word about invasive plants and visit our website at www.oipc.info frequently! We added some new materials to the website, including a featured invasive plant, or potentially invasive plant, every few months. If you need a plant identified or are looking for more information on invasive plants, just contact us through our website and we will respond as soon as possible. If you would like to recommend a plant to be assessed for invasiveness by the OIPC Assessment Team, let us know and we can add it to the list for evaluation. Finally, if you would like to contribute an article to our newsletter about invasive plants, let us know as we are always looking for new material.

Jennifer L. Windus, OIPC President

MORE PLANTS PROPOSED TO BE ADDED TO THE ODA INVASIVE PLANT LIST

As you may know, "to protect native plant species and thwart the growth of invasive plant[s]," the Ohio Department of Agriculture (ODA) implemented an "invasive plant species" rule in January 2018 (OAC 901:5.30.01). The rule forbids selling, propagating, distributing, importing, or otherwise intentionally causing the dissemination of

listed species (exceptions can be granted, for education or research, e.g.). The initial 2018 rule named 38 plant species as invasive and, depending on how you count borderline things, 15 or 16 of those could be considered wetland or facultative. Of the listed wetland species, most were present—often common and widespread—within Ohio. Only two were essentially preventative as not yet present. The list is malleable and can be relatively rapidly amended by a five-person advisory appointed by the ODA. There is expectation of scientific assessment before a species is listed.

As early as September of that year, the Ohio Invasive Plants Council (OIPC) approached the Ohio Aquatic Invasive Species Committee (OAISC) to discuss some aquatic/wetland plant species as potentially invasive to the state. Jennifer Windus, OIPC; John Navarro, Ohio Department of Natural Resources, Division of Wildlife; Anthony Sasson, Midwest Biodiversity Institute; Earl Chilton, Capital University and Texas Parks and Wildlife (ret.); and myself, Ohio State University Extension and OAISC, began meeting with the intent to compile and submit a list to be considered for listing by the ODA’s invasive plants rule. We made the recommendation. At that stage, our list essentially amounted to expert opinion at best, and no action was taken in the absence of scientific assessments. And then COVID...

In the interim, Earl modified an existing multi-metric weed risk assessment tool (Pheloung et al. 1999) for Ohio and applied it to 18 wetland plants. Our small group met to review Earl’s assessments in fall 2021. Earl presented those assessments to the ODA’s five-person advisory in December 2021. To my surprise, the advisory recommended all 18 proposed species be advanced for public comment and potential listing. Public comment was open through January 14, 2022.

In February, I wrote to ask Daniel Kenny, ODA Plant Health Chief, regarding the status of the proposed listings. He replied, “The rule package is with the Common Sense Initiative for review at this point. We put responses together from the public comments that they received. Once they give the all clear, it will go to Joint Committee on Agency Rule Review. No real timeline at this point, just a waiting game.” I don’t know what the nature of public comment was,

but a couple species are common ornamentals. So now we wait...

Where the default status of plants on the initial 2018 list was present within Ohio (with the exception of two), the default status of the newly proposed is not yet present in Ohio. There are several exceptions, however, listed as footnotes below. The list:

- African oxygen weed (*Lagarosiphon major*)
- Anchored water hyacinth (*Eichhornia azurea*)
- Arrowhead (*Sagittaria sagittifolia*) 1
- Arrow-leaf false pickerelweed (*Monochoria hastate*)
- Asian marshweed (*Limnophila sessiliflora*)
- Brittle waternymph (*Najas minor*) 1,3
- Common salvinia (*Salvinia minima*)
- Crack willow (*Salix fragilis*) 1,4
- Duck lettuce (*Ottelia alismoides*)
- European water-clover (*Marsilea quadrifolia*) 4
- Giant salvinia, (*Salvinia molesta*)
- Heart-shape false pickerelweed (*Monochoria vaginalis*)
- Indian swampweed (*Hygrophila polysperma*)
- Pinnate mosquitofern (*Azolla pinnata*) 1
- Simple bur-reed (*Sparganium erectum*) 1
- Water lettuce (*Pistia stratiotes*) 2,4
- Water soldier (*Stratiotes aloides*)
- Yellow flag iris (*Iris pseudacorus*) 1,2,3

1. Potential competitor with native congeners.
2. Commonly sold as an ornamental.
3. Common in Ohio.
4. Uncommon in Ohio.



European water-clover is one of the proposed new aquatic species additions to the ODA invasive plant rule. Photo by Chris Evans, University of Illinois, Bugwood.org.

Eugene Braig, Program Director, Aquatic Ecosystems Extension, The Ohio State University, School of Environment and Natural Resources

OHIO'S WETLANDS: DEATH BY A THOUSAND CUTS

Recent reports have concluded that Ohio has lost more than 90% of its wetlands across the state, second only to California. Some may be familiar with the draining of the Great Black Swamp that once covered large parts of northwest Ohio, but smaller wetlands in every part of the state have also been degraded, drained, or otherwise destroyed. We often contend with the consequences of these losses without realizing the critical roles these habitats once served our own communities. Wetlands not only provide habitat for multitudes of floral and faunal species, but they are most valuable for the services they provide to the water cycle. Different types of wetlands occur across Ohio depending on their position on the landscape and the kind of water flowing into them. However, in varying degrees, they all moderate flooding, recharge the water table, sustain streams and rivers, and even sequester carbon.

Many Ohioans recognize the need for restoring these natural features, but they may not identify opportunities to contribute to improvements on their own property or in their own communities. We often regard “wet spots” in our yards with disdain preferring to drain these areas to prevent mosquitoes or to mow them during drier parts of the year. All too often, we only make problems worse by creating conditions that may harbor mosquitoes anyway. In a personal conversation with a mosquito researcher at Johns Hopkins, I learned the one thing that we know for certain about mosquitoes is that “rain plus seven days equals more mosquitoes”. Mosquitoes can become a very big problem in a very short amount of time given the right circumstances, such as a warm stagnant pool in your yard. Our unfortunate perspective of “wet spots” on our property and around our communities has led to generational mismanagement of these important resources. Collectively, the loss of these areas as healthy wetland habitats amounts to a death by a thousand cuts for water quality. In the same respect, restoration of these areas could contribute significant improvement by healing these many

wounds and reviving streams and vital natural processes.

While a rational fear of mosquitoes may be justified, our common approach to wetlands has come at a substantial ecological cost. It is well understood that poorly managed wetlands contribute to the degradation of water quality downstream and within the water table, reduce habitat for wildlife, exacerbate flooding and erosion, and provide diminished ecological services overall. These areas are also very susceptible to invasive plant species such as reed canary grass (*Phalaris arundinacea*), common reed (*Phragmites australis*), purple loosestrife (*Lythrum salicaria*), and narrow-leaved cattail (*Typha angustifolia*) to name a few of our most aggressive non-native plant species. However, properly managed wetlands can host a vigorous population of wetland plants and animals that not only limit mosquito reproduction but can provide a robust defense against emerged adults. Many aquatic insects are carnivorous including the dragonfly. Healthy populations of aquatic insects and invertebrate larvae will feed on mosquito larvae in the water and many aggressively prey upon flying mosquitoes once they have all emerged thereby reducing the threat they pose.

Restoring a wetland may seem complicated to someone unfamiliar with the various aspects of wetland ecology, however several fundamental principles are the key to understanding a reasonable approach. Saturated ground and shallow depressions (“wet spots”), drainage ditches and pond edges are among the most common types of wetland features found across Ohio. Each type of wetland shares several traits in common, but most importantly is the presence of saturated soil for at least 30 days during the growing season. Therefore, if an area is commonly saturated or has open water present for part of the year, it is likely a candidate for restoration. Historic wetlands, those that once existed but are now disturbed, will likely have a viable seed bank ready to reestablish wetland vegetation once disturbances are reversed. Newer

wetlands are those most recently created by some excavation or landscape modification. These areas may require a little more effort but may recover expeditiously once remediation occurs.

Wetland areas may exhibit some wetland vegetation due to prolonged saturation which can include invasive plants species. Increasing water levels or prolonging the period of saturation by blocking or removing drainage, will often help revert areas to more natural wetland biodiversity and restore wetland processes. One important aspect of all vegetation to bear in mind is that most plants will not tolerate prolonged saturation and prefer drier conditions. Wetland vegetation is simply more tolerant of saturated conditions and will benefit from reduced

competition by upland species. A recent project in southern Ohio is an excellent example of a very simple restoration effort. A small, healthy spring-fed wetland was drained by an 8-inch plastic pipe diverting



8-inch pipe draining source water for wetland and vernal pool complex.

water to a nearby stream depriving nearly an acre of pre-existing wetland habitat. After the pipe was removed, water was permitted to flow into the adjacent depressions increasing water levels and saturation period. The result was a 10-fold expansion of the wetland and vernal pool complex. Invasive plant species had previously gained dominance in



Restored vernal pool complex.

the dewatered parts of the wetland but were replaced by higher quality wetland plants within a couple of seasons. Aquatic life also rebounded quite rapidly with wood frog eggs observed in the third season.



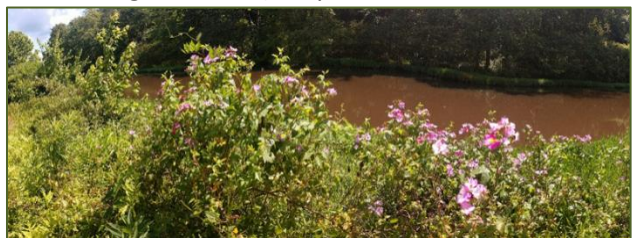
Wood frog egg masses in restored wetlands.

Efforts to improve wetland conditions should focus on preventing rapid runoff of surface water, increasing saturation/inundation periods, allowing native wetland vegetation to establish, and maintaining low- or no-maintenance buffers around the wetland. These practical steps are important for maintaining cooler water temperatures, reducing erosion, increasing biodiversity, and expanding opportunities for wildlife within the watershed. Some other simple restoration projects that have met with success include eliminating mowing of wet sites to allow wetland vegetation to return, widening the unmaintained buffer around ponds and lakes to



Wetland vegetation reestablishing across wet area after mowing ceased.

filter runoff and provide critical physical habitat for wildlife, and creating rain gardens as a replacement for drainage ditches (a topic for another article, for



Reduced pond edge maintenance yields significantly improved habitat.

sure). One does not need a comprehensive understanding of wetland ecology to make significant improvements within your watershed. Simply observing the landscape for opportunities to reverse disturbances may go a long way to healing our waters. Of course, there is professional assistance available throughout our state that can help you plan and implement a wetland restoration project.

Gary Conley, OIPC Vice President & GreenReach Native Plant and Seed Nursery. Photos by author.

OIPC AWARDS RESEARCH GRANT

OIPC congratulates this year's OIPC research grant recipients! Abby Hay, M.S candidate, and Dr. David Gorchof of Miami University, received support for their project entitled "Individual and interactive effects of white-tailed deer and invasive shrubs on native tree seedlings in early-successional forests." This project examines native tree regeneration in an early successional forest by examining the interactive effects of invasive shrubs and deer herbivory on the establishment of fast-growing underplanted native trees.

OIPC greatly appreciates the work of all applicants, who took the time in this difficult year to write proposals about invasive plant concerns in Ohio. We appreciate the work of the review panel, which included reviewers representing land management and academia.

We encourage students, academics, land managers to apply during the 2022 grant cycle, which will be due in late fall. We especially encourage applications for projects that focus on OIPC's research questions, www.oipc.info/help-answer-researchquestions, or focus directly on invasive plant management.

Emily Rauschert, OIPC Research Chair & Cleveland State University

NEW HOMEOWNER FIGHTS INVASIVES!

My partner and I lucked out when we found our home - an acre of land in a city with half of the lot wooded! It borders a running trail and the Little Cuyahoga River. The slope to the river is steep, which is why, I suspect, half of the property is still wooded. All of the changes this land has seen in its life through human impact in a city has left scars on the land - namely in the form of many invasive species.

Logan and I are very outdoorsy people and couldn't wait to get our hands into making our outdoor space somewhere we wanted to spend our time and also to make it healthier for wildlife. I have spent time working in careers and volunteering in invasive species removal so I understood what we were taking on removing invasive species.

Our half acre of woods was not a healthy woods. The predominantly hickory overstory was not full enough to prevent a half acre of Japanese knotweed from developing. The middle canopy was composed of nonnative honeysuckle shrubs, common buckthorn, and tree-of-heaven. The understory was made of baby versions of all of the other species listed before as well as garlic mustard, a nonnative *Pachysandra*, and oriental bittersweet. The gang was really all here! I waited for signs of good native species to fight for and was delighted to find bloodroot and a single fern pop up. So I began our fight against the invasives.



Though I always prefer physical or mechanical removal over chemical methods, the species present on our property were significant enough that I would need both chemical and physical methods to remove them. In fact, some of these species needed significant chemical warfare to truly remove. I used a solution containing triclopyr as the main active ingredient. When managing invasive species chemically, it is extremely important to purchase the appropriate chemicals, dilute to the correct amount, and wear the appropriate safety gear. For the first year I used a backpack sprayer for chemical application. Invasive populations were reduced in year one and I was able to purchase a smaller handheld sprayer to use for most of my chemical application during year two. I don't want my story to discourage anyone from treating invasives. I hope most properties do not have invasive species problems as bad as our property did, so intense use of chemicals and supplies may not be needed!



Before and after photo of one of the areas where understory invasives were removed.

Timing of applications of herbicides is also extremely important. I hand pulled the garlic mustard and Pachysandra prior to applying chemicals when they were present in the spring. I was sure to remove the entire plant - if you leave any part of the plant in the ground it will regrow. I applied herbicide treatments in late summer for the last two years. You would

want to check timing for your target species. I applied foliar applications to the Japanese knotweed, honeysuckle, common buckthorn, tree-of-heaven, and oriental bittersweet. I did not visit the area for 3 months, then went in and used a chainsaw to remove the large shrubs and applied herbicide to the stumps to prevent stump re-sprouting. For the tree-of-heaven, you have to be careful not to allow it to send out shoots so I drilled into its stems and applied herbicide into the holes.

In addition to chemical management, I have spent a lot of time hand pulling the new sprouts of invasive plants. It has been two years and it will take more years to manage these species, but I can say we have gone down from 0.5 acres of Japanese knotweed to 0.2 acres and the other species are under control. Care for a natural area will always involve monitoring, even after the invasive species are gone. The seedbank contains more invasive species to manage, but hopefully natives as well will now have the space to thrive. There is a peace in working hard to restore an area for wildlife and to see changes happen. The second year, much more bloodroot popped up naturally out of the seedbank!



My favorite part is adding natives back into the landscape. In the areas where I feel invasives are under control I have planted native shrubs such as elderberry, witch hazel, and spicebush. Native

wildflowers have also been added - New England aster, goldenrods, and blue lobelia. Last spring we sowed a portion of our yard with a native partial shade seed mix. It takes time for certain species to germinate, so the first few years after planting wildflower seeds don't expect to see much. They say after 3 or 4 years, seed mixes can take off, so we are more hopeful for this season! It is also exciting to see what comes out of the seedbank - we have seen a lot of wingstem. I also collect native seed from the wild and plant it in my yard.



My advice to other homeowners would be - it's absolutely worth it to remove invasive plants and plant native plants or see native plants return out of the seedbank. If I can be successful at fighting a significant invasive problem on my property, you can remove invasive species at your home too and it will likely be easier than my experience. It's certainly worth it to see our native pollinators enjoying the wildflowers. Don't give up on your fight and check out your local native plant sales for some inspiration of what your landscape could look like with wonderful native plants instead of invasive ones!

Erin Mundorf, homeowner and ONAPA volunteer. All photos by author.

ARE YOU REMOVING INVASIVE PLANTS AND REPLACING THEM WITH NATIVES?

OIPC is looking for short articles to add to our newsletter about your experience. We want to share your story to help inspire others to redesign their landscape or remove invasives from their surrounding natural area so that they can also experience the value of removing invasives and replacing them with natives. Please contact us through our website if you are interested.

FLOWERING RUSH, A PRETTY PINK FLOWER IN DISGUISE

If you have ever noticed large areas of pale pink flowers growing in the Lake Erie coastal marshes in the summer, you have most likely seen flowering rush or grass rush, *Butomus umbellatus*. This “pretty” flowering plant is actually not a rush, although it resembles a large sedge. It is in its own family, *Butomaceae*. It grows 1-4 feet in height and has long, triangular leaves that often twist near the top. The flowers all occur at the top of the flowering stem, in an umbrella pattern or umbel, thus the



Leslie J. Mehrhoff, University of Connecticut,

species name, *umbellatus*. The flowers have 3 pink petals, 3 pink sepals, and red anthers. This invasive wetland plant reproduces by seeds, rhizomes, and small bulbs or bulbils which develop along the rhizomes. Small buds or bulblets can form in the flower clusters as well which help to spread the plant. Unless it is flowering, it can easily be confused with other wetland plants such as sedges, bulrushes, and bur-reed species.



Jennifer Andreas, Washington State University, Bugwood.org.

Flowering rush is native to Europe and Western Asia. The first discovery in North America was in the St. Lawrence River in 1897. The species was unintentionally introduced into the United States' Great Lakes through the discharge of contaminated cargo ship ballast water. The species was commonly imported and sold in the water garden trade.

Some populations (triploid) are infertile and spread primarily by rhizomes and bulbils. Others are fertile (diploid) and spread by viable seeds. Some states such as Minnesota have very few fertile populations. Although it typically grows as an emergent aquatic perennial, the species can also grow submerged in up to 10 feet of water without flowering.

Flowering rush has proven to be difficult to control in most states. It is found in most of the northern states in the US, as well as Canada. Multiple management techniques may be used to control populations including herbicide application, flooding, digging, and manual cutting. Because of the waxy leaf coating which limits herbicide uptake, repeated applications are usually required for effectiveness. Some success has been achieved using imazapyr (i.e., Habitat) herbicide, although multiple treatments are usually necessary. Ohio

Division of Wildlife's wildlife area managers often control it in the Lake Erie marshes, such as Magee Marsh, Mallard Club, and Pickerel Creek Wildlife Areas. Flowering rush is currently not widespread in Ohio, occurring mostly in counties along Lake Erie. It prefers slow-moving shallow waters such as lake edges, marshes, riparian zones, and other wetlands.

At Winous Point Marsh Conservancy, near Sandusky, managers are using many of the techniques mentioned above to control flowering rush. John Simpson, the Executive Director expressed that their ability to manipulate water levels is a critical component of their control efforts. Water levels are lowered to allow for ATV broadcast herbicide applications. After the plants are knocked back with herbicide, the area is then flooded with 12 inches or more of water to prevent regrowth. Herbicide is included in all of their successful flowering rush treatment sites. Typically a unit is dewatered in early spring and herbicide application occurs before the flowering rush flowers or at latest once it goes to flower. They have found that spraying after flowering rush goes to seed prepares a perfect seedbed for those seeds the next year. Simpson said that they almost always spray with glyphosate, following label directions, and often include in the mix some 2,4-D or similar broadleaf herbicide and an appropriate surfactant. Their experience has been that the added 2,4-D makes a big difference in observed results. In most cases, flowering rush invades mudflats and areas of shallow water (shorebird habitat) so return to those impacted habitats are the end goals. They don't usually have the goal of replacing flowering rush with native vegetation, though in some cases have seen moist-soil annuals germinate nicely in the mudflats after flowering rush removal.

At Winous Point Marsh, they have experimented with other control options, some more successful than others. They have had some success with applying herbicide selectively from backpack sprayers in standing water, but this is very labor intensive and probably not an option if you have infestations that are tens of acres. They have had poor results with discing and tilling pre or post herbicide treatment. This practice just spreads the root stock and prepares a good seed bed for the flowering rush that is in the seedbank. Applying a

cover crop of millet or agricultural seeds seems to aid control each season, especially in areas where the flowering rush was dense.

If you are not familiar with this invasive wetland plant, it is one to vigilantly watch for. It can take over wetlands quickly and is hard to control once established. It is easily overlooked until it flowers. It has been sold and used in water gardens. It has been on the Ohio Department of Agriculture's (ODA) invasive plant list since January 2018, so if you find it for sale, you should report it to ODA.

Jennifer L. Windus, OIPC President (with input from John Simpson, Executive Director, Winous Point March Conservancy)

LOOKING FORWARD TO SEEING YOU SOON!

OIPC plans to resume some of its in-person activities this year. We are planning at least one invasive plant workshop in southwest Ohio and hope to have our Annual Meeting this fall. Both events are in the planning stage. More information will be posted on the website and listserv in the next few months.

2 EASY WAYS TO SUPPORT OIPC!



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Visit: [KrogerCommunityRewards.com](https://www.kroger.com/community-rewards) sign in or create a new account. Select OIPC and click on "enroll." The codes for OIPC are:
#23916 Cincinnati Region (includes Dayton and Lima)
#47319 Great Lakes / Columbus region (rest of Ohio)



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OIPC is an eligible non-profit in the charitable program AmazonSmile! Amazon's foundation donates 0.5% of qualifying purchases to an organization you select. Use this address to go directly to the page that benefits OIPC; smile.amazon.com/OIPC or start at smile.amazon.com and you will be prompted to select a charity. There is no cost to you since Amazon makes the donation on your behalf. Save the link and use it every time you shop with Amazon!

The Ohio Invasive Plants Council coordinates statewide efforts and direction to address the threats of invasive species to Ohio's ecosystems and economy by providing leadership and promoting stewardship, education, research, and information exchange.



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