



Ohio Invasive Plants Council

Newsletter • Winter 2021



PRESIDENT'S CORNER

Happy New Year! May the coming year be better for all of us! We hope you have a good winter and continue working on invasive plant control, especially woody species.

Many of the invasive woody plants can be effectively treated with herbicide in above freezing temperatures. It is a great reason to get outside!

The OIPC Board completed its revised 5-year strategic plan for 2020-2024; it is now posted on the website. The revisions to the Assessment Protocol are also posted on the website, as well as the recently assessed plants from 2019. Plants that were recently determined to be invasive include burning bush.

We continue to work on a new section for our website that expands on our alternatives brochure by offering more suggestions for alternatives to invasives when replacing them in landscaping or habitat restoration (see article in this issue). We hope to have this new page on our website in the next few months. We are still working on a new, up-to-date OIPC display to be used at events around the state when we can safely attend them again.

The Board has decided to postpone our Annual Meeting until late summer or early fall in 2021 as the Board did not feel it was worth planning a virtual meeting. We feel these meetings are important for networking which is difficult to do on virtual meetings. We are hopeful that the COVID situation will be in a better place by then so we can get together with partners. If possible, we will plan a workshop or two before then.

As some of you may know, Yahoo discontinued their listserv service in mid-December. OIPC has an active listserv of over 300 participants, and a new listserv has been set up using Google Groups: oipc@googlegroups.com. We welcome people to join this group!

There are many opportunities to help control invasive plants in natural areas, one way is to participate in the Ohio Natural Areas & Preserves Association's Stewardship Projects. See the ONAPA website at www.onapa.org for information on 2021 winter projects. These projects will be limited to small groups of 10 people or less during the COVID-19 pandemic. Many local metro parks and park districts, state and federal agencies around the state may also have opportunities for volunteers to help control invasive plants. Each of us can help address invasive plant challenges on a local level, even during the coronavirus pandemic.

Help us spread the word about invasive plants and visit our website at www.oipc.info frequently! We are adding some new materials to the website including a featured invasive plant, or potentially invasive plant, each month. If you need a plant identified or are looking for more information on invasive plants contact us through our website; 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 it can be added 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 Board President

AUTUMN OLIVE: A WIDESPREAD INVASIVE SHRUB

Autumn olive, *Eleagnus umbellata*, is an invasive shrub that can easily reach a height of 20 feet and can be as wide as it is tall. The plant is identified by its grayish green foliage on the top of the leaves and silvery scales underneath that gives the plant a shimmering look. The leaves are alternately arranged and the stems are brown and somewhat



Autumn olive leaves showing top of leaves and the silvery scales underneath. Photo by James H. Miller, USDA Forest Service, Bugwood.org

speckled. Autumn olive shrubs form vase-shaped mounded plants. This shrub blooms in May or June and has flowers that are half inch, fragrant bell-shaped and creamy or yellow. The fruits are silvery mixed with brown, turning red in September. The fruits are abundant and because they are attractive to birds, the seeds are spread great distances from the parent plants. In a few short years this plant can



Autumn Olive flowers are fragrant and attractive to pollinators. This creates competition that can reduce the pollinator occurrence on native plants. Photo by Chris Evans, University of Illinois, Bugwood.org.

overtake an area and make an impenetrable wall of foliage. Deer and other wildlife can run through the vase-shaped openings but unless you have a machete or a brush hog it's a tough go for humans. At times this plant can develop sharp spines adding another obstacle when trying to control it. Autumn olive prefers full sun but will grow along woodland edges.

Autumn Olive is tolerant of salt and a wide variety of soil conditions. The plant was introduced in the 1830s but the autumn olive explosion began in the 1940s and lasted through the 1970s during which time local soil and water conservation districts released and promoted a variety called "Cardinal". The plant was highlighted for its abundant, desirable fruit and use for wildlife habitat and food. It was also promoted as a good plant for soil erosion and for planting in disturbed sites with poor soils. The benefits of the plant were quickly outweighed by its invasive quality and uncontrollable spread. Some



Autumn olive was widely promoted as a good plant for wildlife because of its high berry production. Like many invasive plant berries, they are less nutritious than native plants. Photo by Pennsylvania Department of Conservation and Natural Resources-Forestry, Bugwood.org.

publications describe this plant as becoming a noxious weed with time; birds spread it everywhere. They were correct. This species also has some unwelcome cousins- Russian olive, cherry olive and others. These plants can easily cross-pollinate forming hybrids that are just as aggressive as autumn olive.

Like all invasive plants, it is best to manage autumn olive when the invasion is new. Once dense thickets

form the plant is difficult to control. Mowing can be utilized to keep shrubs from setting seed but mowing alone will not diminish the population. To eliminate autumn olive from a landscape cut-stump, basal, or foliar treatments of herbicide must be utilized. *Eleagnus umbellata* has no real landscape value for small properties or large tracts of land. I have seen this species take over grassland areas in public hunting grounds and, in a few short years, making hunting difficult. Getting rid of the plant when it is small can save some real maintenance problems in the future.

Mark Shelton, OIPC Board & Willoway Nurseries Inc.

MORE ALTERNATIVES TO USE IN LANDSCAPING & HABITAT RESTORATION

When OIPC produced the brochure, "*Alternatives for Invasive Plants in Ohio: A Guide for Landscaping and Habitat Restoration*" about three years ago, it was very well received. We have already had a second printing as we distributed the first printing to interested partners and used them in workshops in the first two years. The brochure focuses on 15 invasive plants with 3-4 alternatives identified for each invasive (it can be downloaded from our website). In addition to the brochure being popular, people asked for more alternatives. When recommending alternatives, there are many factors to consider such as similar structure, color of flowers and foliage, habitat, and longevity. When OIPC chooses alternatives, we try to recommend species native to Ohio, or at least to the Midwest, and avoid state and Federal listed rare plants (for conservation reasons).

Alternatives to invasive plants have been recommended by other Invasive Plant Councils as well as botanical gardens and arboreta, so there are many resources to use. For example, the Midwest Invasive Plant Network (MIPN) has a free mobile app, *Landscape Alternatives for Invasive Plants of the Midwest*, and a brochure which is available as a PDF on their website. The Cincinnati Zoo & Botanical Garden has extensive information on their website regarding recommended native plants. The new book recently published by Kent State University

Press, *Problem Plants of Ohio*, which covers over 100 problematic plants, also recommends native alternatives.

As a result of increased interest in this topic, OIPC along with The Dawes Arboretum is working to expand our recommendations with a new page on our website. We expect to add at least 7 more invasive plants and add more alternatives, potentially 5-10 species for each plant. We plan to include photos of some of the alternatives. Most of the alternatives should be readily available in Ohio nurseries, but some may be more difficult to find, thus we hope to generate interest in making them more available in the nursery trade.

In this newsletter issue we highlight the invasive shrub, autumn-olive, which has been planted for years for wildlife habitat and strip-mine reclamation. Now many land managers and private landowners are removing it extensively and may need good native alternatives as replacements. In our brochure we list the following alternatives:

- Native dogwoods, such as *Cornus amomum* & *Cornus racemosa*
- American hophornbeam, *Ostrya virginiana*.

For the new website page, our committee has already identified the following alternatives as additions:

- Black chokeberry, *Aronia melanocarpa*
- American hazelnut, *Corylus americana*
- Serviceberry, *Amelanchier* spp.
- Elderberry, *Sambucus canadensis* (cultivars are available)
- Common witch-hazel, *Hamamelis virginiana*

Depending on the habitat where autumn-olive is growing, one may be looking for a hardy, small tree or shrub with spring-blooming flowers. Some of the preferred characteristics may include a fast-growing, dense, long-lived shrub. One or more of the above alternatives may be a good replacement. From our experience, autumn-olive is rarely planted for landscaping.

We hope people will find the new website page useful in both landscaping and habitat restoration

efforts. We welcome feedback and hope to roll it out soon!

Jennifer L. Windus, OIPC Board President

TREE OF HEAVEN IMPACT ON HONEYSUCKLE REMOVAL EFFORTS

Greenacres Foundation is a non-profit organization located near Cincinnati, Ohio, established by Louis and Louise Nippert in 1988. The nearly 600-acre property has public field trips that provide opportunity to study plant and animal life and develop an appreciation of nature. Preservation of the woodlands and farmland is integral to the mission. Active removal of Amur bush honeysuckle, *Lonicera maackii*, and other invasive plant species began in 2016 and continues today. In 2020, two experiences with honeysuckle removal efforts resulted in rapid Tree of Heaven spread.

Tree of Heaven (*Ailanthus altissima*) was introduced to North America in the late 1700s as an ornamental, fast growing, and shade-providing species. This invasive tree can reproduce through seed dispersal of as many as 300,000 seeds per female tree and root shoots that can sprout up to 100 feet away from the parent tree. The young plants outcompete native species and can produce chemicals that may inhibit the growth of nearby plants. This tree was listed as invasive by the Ohio Invasive Plants Council in 2014. Tree of Heaven is found throughout Greenacres' woodlands and may have been planted for landscape purposes when the property was a private estate.

In our first case, several of the Foundation's educators hand-removed honeysuckle near the nature trails, unaware that adult tree of heaven were also growing there. Removal occurred in spring 2020 and by late summer, the Tree of Heaven root shoots were established.

Our second case was not a complete surprise. Part of our honeysuckle eradication efforts include experimenting with different removal methods. In fall 2019, we used a Fecon Bull Hog forestry mulcher to mechanically remove honeysuckle, multiflora rose and privet from a section of the woods. This portion



This photo shows the dense understory of Tree of Heaven that emerged by late summer after hand removal of Amur bush honeysuckle earlier in the spring of the same year. Photo by Jennifer Mansfield.

of the woods had a population of adult Tree of Heaven, and we suspected root shoots would emerge. Over the course of several months, Tree of Heaven saplings quickly established themselves. A 10 x 50 m plot had one Tree of Heaven in May and by August the same plot had 64 saplings. We will continue to collect data on sapling survival and density to document the invasion.

Greenacres is now investigating the most effective way to remove Tree of Heaven from our property. We are sharing this information with homeowners and land managers to build awareness of how this tree may impact other invasive plant removal efforts. Sometimes we are so focused on the understory that we forget to look up. You can learn more about Greenacres and our research initiatives by visiting green-acres.org.

Jennifer Mansfield, Research Associate at Greenacres Foundation

THE SPOTTED LANTERNFLY: A NEW INVASIVE INSECT IN OHIO

One of the newest invasive species on the horizon is the spotted lanternfly, *Lycorma delicatula*. First detected in Pennsylvania in 2014, the spotted lanternfly has moved steadily through human



Adult spotted lanternfly has a pinkish appearance when sitting with wings closed because of the bright red rear wings underneath the forewings. Photo by Lawrence Barringer, Pennsylvania Department of Agriculture, Bugwood.org

commerce and trade. The lanternfly was first identified in the state of Ohio in October 2020 at Mingo Junction south of Steubenville near a railroad junction. The Ohio Department of Agriculture was able to capture live adults and confirm that the lanternfly has invaded Ohio. Hitching rides on trains, trucks and automobiles has accelerated the invader's spread throughout the eastern United States.

The spotted lanternfly is not a fly, but is a type of planthopper. The adult spotted lanternfly prefers to feed on another invasive species, Tree of Heaven, *Ailanthus altissima*. The nymphs feed on many native species such as oak, walnut, poplar, pine and grapevines. Damage caused by the lanternfly in both the nymph and adult stage is through sucking sap from stems and leaves.

One of the greatest impacts that this new invader could have is on orchards and vineyards throughout Ohio. It has been detected on many fruit bearing species including plums, cherries, apples, peaches,

and grapes. The spotted lanternfly has a one-year life cycle. Adults lay eggs in fall and nymphs emerge in spring. The nymphs go through four instars and then



The adult lanternfly lays eggs in clusters in the fall and the egg mass is covered in an excreted substance that looks like mud. Photo by Emelie Swackhamer, Penn State University, Bugwood.org.

adults emerge in July. During the first three instars, the nymphs are black with pronounced white spots. The fourth instar is black and red with white spots.



The spotted lanternfly nymph has 4 instars. The first three instars are black with white spots and the fourth instar is bright red and black with white spots. The nymphs feed on a wide variety of native plants. Photo by Lawrence Barringer, Pennsylvania Department of Agriculture, Bugwood.org.

The adult is easy to identify and there are no native look-a-likes. It is 1" long and ½" wide at rest. The forewings are light brown and spotted with black speckles while the rear wings are a brilliant scarlet with black speckles. Because the adults prefer Tree of Heaven as a food source, this presents another good reason to remove this invasive tree from our landscape while also keeping a lookout for any signs of the spotted lanternfly.

For more information and additional photos to aid in identification, go to the Ohio Department of Agriculture website at agri.ohio.gov.

David Listerman, *OIPC Board & Listerman & Associates, Inc.*

A RESTORATION JOURNEY IN A SMALL CORNER OF OHIO'S OAK OPENINGS

Northwest of Whitehouse, Ohio is a 7-acre patch of ground nicknamed Badger Barrens. Part of Metroparks Toledo's Oak Openings Preserve, this open, sandy area is prized for its rare ability to support a plant community that includes many state endangered species and has the potential to host regional rarities like the nesting Lark Sparrow and the eponymous American Badger. I came to know this property through a Green Ribbon Initiative CWMA program called "Adopt A Natural Area". When I first walked the property with LaRae Sprow from Metroparks and my fellow volunteers Susan Muenzer and Paige Koosed, we talked about how this ground was part of a farm before it was added to Oak Openings Preserve. I couldn't help but think about how frustrating it must have been to try to raise row crops on this thick layer of sand. I wondered what would cause someone to choose this place to farm and what was the history of Badger Barrens?

Prior to European invasion, the Oak Openings area was used by the Ottawa tribe of Native Americans. Primarily hunter gatherers, they also raised crops. The sites used for agriculture were typically along

lakes, rivers, and streams. There were several villages near Badger Barrens along Swan Creek. Women would tend the crops while the men would range away from the villages to hunt and trade. A great deal of their travel was by canoe, but they also used a series of trails. In this area the trails were typically located on old glacial beach ridges. Such a trail was known to have passed very near Badger Barrens.

The importance of fire was understood by native peoples. The Pristine Myth held by early European settlers that Native Americans lived lightly on a land covered with virgin forest has now been largely replaced. Many now argue that native peoples practiced an advanced form of agroforestry using controlled burns. These fires recycled organic matter improving soils for agriculture, increased nut and berry production, and opened areas for grass cover used by grazing animals that could then be hunted. Hunting and traveling were both facilitated by easier access once ground litter was burned and dense stands of trees were limited.



Wild Lupine, *Lupinus perennis*, has been reintroduced to Badger Barrens. Metroparks collects and propagates over 200 species of local genotype seed that is used for restoration projects in the Oak Openings Region. Photo by Craig Nilsson.

Another clue to the flora of Badger Barrens before European settlement is found in the work of Lawrence Brewer and John Vankat. Building on earlier studies of the vegetation of the Oak Openings at the time of Euro-American settlement, they used surveyors' notes from 1817-1832 to create a map of

vegetation types present during that time. The surveyors had been specially charged with using trees as bearing points and markers. Brewer and Vankat used this data to calculate tree densities which allowed them to divide the Oak Openings into five vegetation types. Their map shows Badger Barrens as Oak Savanna, having a tree density of 14 trees/ha. This density is 85% less than an Oak Woodland. Brewer and Vankat also note that Native Americans were still in the Oak Openings during the time of surveying and that their influence was seen in the prevalence of Oak Savannas maintained by fire.

The landscape around Badger Barrens changed quickly once the Ottawa were removed and white settlement advanced. Because of its open nature and access to water, the section containing Badger Barrens was settled in 1834. Trees were felled to make way for the plow. Fire was suppressed because of the threat to homes and fields. Vast drainage systems of hand dug ditches and field tile were laboriously installed, turning some of the mesic sandy soils around Whitehouse and Neapolis into rich, productive farmland. Not for lack of trying, the dry sandy soils around Badger Barrens proved inadequate to support field crops. Land no longer plowed quickly became early succession forest. The Great Depression hastened this process.

Oak Openings Preserve was established in 1931 as the second in a series of Toledo Metroparks. In 1951 the Park Board approved the purchase of the parcel that included Badger Barrens. Aerial photographs from the time show a house and several farm buildings. About a third of the property shows the forest returning. The balance of the land, including all of Badger Barrens, shows open ground, crossed by ditches, with large patches of open sand in the planted fields.

Metroparks continues to add property to Oak Openings Preserve which is now over 4,000 acres. Land management has evolved with that growth. Pine trees are not native to the Oak Openings Region in Ohio but they were planted in many of the “nonproductive” barrens during the Great Depression by the CCC to give employment and income from the sale of lumber. Those pines are being removed to reveal the rare natural heritage of

the region and fire is once again being used as a tool to keep the savannas more open and reduce unwanted vegetation.



Paige and Susan take a break during one of our invasive plant removal work days at Badger Barrens. Photo by Craig Nilsson.

During our invasive removal workdays, we remove autumn olive, pine saplings, black locust saplings, mullein, and hairy vetch. When able, we pull the unwanted plants. In the sandy soils of the Oak Openings, even woody plants can be effectively pulled if they are not too large. If pulling is not an option, we either grub it out or cut it and apply an herbicide treatment to the stump. On one of our workdays, a pair of folks rode north on Jeffers Road on horseback. They stopped to talk and remarked that they were related to the folks who had sold the land to Metroparks. They recalled that their family was sad to have had to sell but that the farm just wasn't productive. I wish I had talked with them more but the horses were restless and there were pines to pull!

Craig Nilsson, Metroparks Toledo Volunteer

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