



Ohio Invasive Plants Council

Newsletter • April 2017



PRESIDENT'S CORNER

Hopefully, by the time you read this newsletter spring will have arrived. This winter has been mild in general, but it lingered into March with a vengeance. Invasive plants are already emerging and are ready for a quick response, so we should be prepared to take aim against garlic mustard and other early invasives.

The 2017 OIPC Annual Meeting was held on February 23rd at Highbanks Metro Park in Columbus. The agenda included presentations about four Cooperative Weed Management Areas in Ohio, The Nature Conservancy's efforts with invasive plant control, and OIPC accomplishments. The Highbanks Nature Center was filled to capacity with almost 100 attendees; we had to close registration early this year.

Two new Board members were elected: Dr. Emily Rauschert with Cleveland State University and Susan Schmidt, a Delaware County Master Gardener. We are pleased to welcome them to our Board! Shana Byrd with Dawes Arboretum and Michele Banker with the Marianist Environmental Education Center in Dayton were both re-elected to the Board.

OIPC, in cooperation with The Dawes Arboretum and the Ohio Nursery and Landscape Association, completed a new brochure which focuses on alternatives for 15 invasive plants. Visit the OIPC website for more information on how to obtain the brochure; a PDF is on the website too.

OIPC received six (6) small research grant proposals and will be funding three this year. We are excited to fund new research on invasive plants, particularly ones that address assessment team questions and management techniques. See Jean's article in this issue for more information on the recipients.

If you are looking for 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 more information, particularly on what was accomplished in 2016 on state nature preserves. The 2017 projects (20) are now planned.

As always, we look forward to working with any of our partners to plan educational efforts to improve awareness of the threats of invasive plants in Ohio. If you have any upcoming events where OIPC may participate by providing a speaker, please let us know (see our website to contact any of our Board members). If you would like to host an invasive plant workshop, let us know as we are looking for locations for 2017-2018. We are currently planning three workshops; see an article in this issue for more details.

Help us spread the word about invasive plants and visit our website at www.oipc.info frequently!

Jennifer L. Windus, OIPC President & ODNR (retired)

**OIPC'S AWARD OF RECOGNITION FOR 2017:
Bro. Don Geiger, SM, PhD**

Each year, the Ohio Invasive Plants Council selects a recipient for our Award of Recognition. The Award is intended to recognize a person who has made extraordinary contributions to education, management, control, or research related to the problem of invasive plant species in the state of Ohio. This year, the award was presented to Dr. Don Geiger, Professor Emeritus at The University of Dayton.



Brother Don spent his career teaching and conducting research in the biology department at the University of Dayton after receiving his doctorate in plant physiology from The Ohio State University in 1963. His work on phloem translocation of sugars in plants was supported by the National Science Foundation and the U.S. Department of Agriculture and provided the framework for his lab's subsequent study of the movement of glyphosate – the active ingredient in Roundup – through plants.

Later in his career, Don embraced the burgeoning practice of ecological restoration. He began by planting a tallgrass prairie on a sand and gravel borrow pit left after highway construction on Mount St. John property in Beavercreek, Ohio in 1986. The seeds of other restoration projects were also planted at that time. Not content to restore only the gravel pit, Don turned his attention to the second growth woodland that had grown up on the abandoned Marianist farm, where livestock had foraged and wetlands had been drained. The non-native invasive

shrub Amur honeysuckle soon found itself in Don's crosshairs.

A weekend warrior in the field working alongside fellow practitioners, his day job in the lab was tracking the mode of fall foliar glyphosate kill within his nemesis Amur honeysuckle. The treatment approach he developed has been utilized successfully among several of the local southwest Ohio metroparks and now well beyond.

His work in our community extends far beyond his "home property" of Mount St. John. He has contributed to habitat monitoring and management plans with many conservation groups including the Miami Conservancy, Greene County Parks, Miami County Parks, Beavercreek Wetlands Association, Hershner and Zimmerman Reserves of ONAPA and Fernald Environmental Management Project. He has also acted as Trustee and Advisor in the past for the Ohio Prairie Association, Beavercreek Wetlands Association, Rivers Institute at the University of Dayton and more.

Always a teaching brother at heart, Don draws anyone interested into his labor of love and caring for the environment. He founded the Marianist Environmental Education Center (MEEC) of Mount Saint John which continues his mission of "restoring connections between land and people". He has planted many seeds in both the land and people over the decades!



For his lifetime dedication to ecological restoration and invasive plant management, and his training and

inspiration of generations of students, colleagues, and volunteers, OIPC is pleased to give the Award of Recognition to Dr. Don Geiger.

NEW BROCHURE AVAILABLE NOW:

Alternatives for Invasive Plants in Ohio – A Guide for Landscaping and Habitat Restoration

The Ohio Invasive Plants Council (OIPC) partnered with Dawes Arboretum and the Ohio Nursery and Landscape Association (ONLA) to develop a new brochure which describes 15 invasive plants and provides suggestions of 3-4 alternatives to plant in their place. Both Dawes and ONLA provided guidance on the alternatives, to ensure they are acceptable, non-invasive choices that are available in the nursery market. Staff at Dawes also helped with the graphic design and layout of the brochure.

The recommended alternatives are good choices for replacing invasives in landscaping as well as adjacent natural habitat, such as woods, grasslands, and wetlands. As more landowners become interested in removing invasive plants from their landscaping and their property, they often seek advice about species that are appropriate replacement plants. This brochure will reach a wide audience of gardeners, landscapers, land managers and property owners. The full-color, 12-panel brochure is funded by a 2015 grant from The Dr. Thelma I. Schoonover Fund of The Columbus Foundation.



While we have a limited quantity of brochures, we want to make them available for any invasive plant workshops or presentations, suitable conferences and events, and other landscaping or gardening programs. We are partnering with interested nurseries to share them with employees. If you wish to obtain brochures, send your request to our website at www.oipc.info. The brochure can also be downloaded from our website as a PDF.

Jennifer L. Windus, OIPC President & ODNR (retired)

2017 INVASIVE PLANT WORKSHOPS

The Ohio Invasive Plants Council (OIPC) will be partnering with three organizations this year to offer invasive plant workshops. The first one will be on June 2nd from 12-3pm at Dawes Arboretum, south of Newark. This workshop will focus on the new OIPC brochure which highlights 15 invasive plants and provides 3-4 alternatives to replace each one. The workshop will review the 15 invasive plants and the alternatives, with samples of the invasives and potted alternative plants, some of which will be for sale. This workshop will help landowners replace invasive plants with excellent native or non-invasive plants. More details and registration will be available soon on the Dawes website at www.dawesarb.org.

OIPC will also partner with Columbus Recreation and Parks to offer a workshop at the Park of Roses on September 14th during the day. Details are being developed now and will be posted soon on the OIPC website. Registration will also be available on the OIPC website. This workshop will present programs on invasive plant identification and control. We will hike to view the plants.

The third workshop will be at Gorman Nature Center, south of Mansfield in Richland County. The date has not been set yet, but it will be announced on the website soon.

Jennifer L. Windus, OIPC President & ODNR (retired)

A NATIVE SOIL-BORNE FUNGUS SHOWS PROMISE IN CONTROLLING AILANTHUS (TREE OF HEAVEN)

Because the non-native *Ailanthus altissima* tree (commonly referred to as tree of heaven) is a prolific sprouter, it is very challenging to control by mechanical and chemical means. Cutting down a single tree can result in a proliferation of fast-growing sprouts. Herbicide treatments are costly and require follow-up monitoring and retreatment. However, an alternative control method for *Ailanthus* is being tested in Ohio.

Penn State University Forest Pathologist, Don Davis, and graduate students identified a *Verticillium* wilt causing fungus as a potential biological control agent of *Ailanthus*. In 2002, they isolated *Verticillium nonalfalfae* from dead and dying *Ailanthus* trees within forested areas of south-central PA. After much rigorous testing and numerous trials in Pennsylvania, this soil-borne fungus, *V. nonalfalfae*



Dead and dying *Ailanthus* trees in Pennsylvania as a result of infection with the *Verticillium* fungus. Photo by Don Davis, Penn State University

treatment was found to be very specific and pathogenic to *Ailanthus*. Stem inoculations (a hack-n-squirt) of *Ailanthus* seedlings with the isolate in the greenhouse and canopy trees in the field resulted in 100% mortality within 10-16 weeks. Stem inoculations of seedlings or canopy trees of the following tree species; northern red oak, chestnut oak, red maple, sugar maple, white ash and yellow-poplar did not induce wilt symptoms or mortality. Within forested areas of dead and dying *Ailanthus* trees, no non-*Ailanthus* trees exhibited any wilt

symptoms. Ongoing research continues in Ohio to test other woody species as well as crop plants. The current list of tested non-susceptible species currently exceeds 70. The testing of staghorn sumac and devil's walkingstick which have shown some limited susceptibility (<18% natural infection) are currently underway.



USDA FS Researchers inoculate an *Ailanthus* tree in Ohio with the *Verticillium* fungus. Photo by Gary Chauncey, Wayne National Forest.

Since the fungus is native to North America, we are not introducing a new exotic organism. Once introduced into a stand, the fungus can spread from tree to tree through root grafting and naturally build up, so not every *Ailanthus* stem in a stand needs to be treated! Since the fungus specifically kills *Ailanthus* and it can survive in the soil for many years, it has great potential as a biological herbicide. To date, the same fungus was found at multiple forest stands in Pennsylvania, Virginia and Ohio – an effort that required many informed sets of eyes out looking for large patches of wilting, dying and dead *Ailanthus*. I am always looking for new naturally occurring infestations in Ohio and adjoining states such as West Virginia, Indiana, and Kentucky. If you observe large areas of rapidly wilting and dying *Ailanthus* trees, please investigate further and contact me at jrebbeck@fs.fed.us.

A downloadable factsheet showing symptom development is available at http://www.nrs.fs.fed.us/units/sustainingforests/cal-resources/downloads/wilt_handout.pdf

Here is an outline of the symptoms to be looking for this summer:

Rapid or sudden wilting foliage throughout the entire tree showing symptoms followed by defoliation as leaves die.

1. Check for signs of **vascular discoloration** by peeling away the bark. Infected vascular tissue will be an orange-brown color compared with a white to cream color tissue in healthy vascular tissue.
2. Large distinct areas of declining, dying, and dead trees. It is uncommon to find isolated single infected or dead trees. Tree death is rapid. Areas increase over time as infection spreads; typically through root-to-root transmission from infected to healthy trees. The fungus can persist in the soil for many years, which is typical of other *Verticillium* species.

Dr. Joanne Rebeck, plant physiologist USDA Forest Service, Northern Research Station based in Delaware, Ohio.

A LANDSCAPING ALTERNATIVE:

The Cucumber Tree (*Magnolia acuminata*)



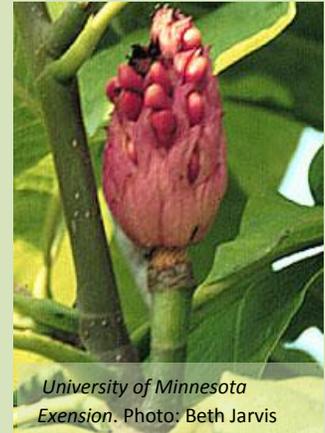
A favorite tree that I find underused in the landscape is *Magnolia acuminata*, commonly called the cucumber tree. It should not be confused with most magnolias grown in local landscapes that tend to be small trees or large shrubs. This

Ohio native magnolia is a large shade tree obtaining a height of 40-70' with some specimens growing to over a 100 feet tall.

A beautiful display of slightly-fragrant, greenish-yellow, tulip-like flowers (2-4" long) borne on the tips

of the branches appear in late April. Following a delightful flower display the cucumber magnolia produces a summer canopy of light green leaves almost tropical in appearance with the large leaves measuring 4-8" wide by 8-10" long.

Small, pinkish, cucumber-like fruit matures in September giving this tree its common name. Fall foliage turns to a bright yellow making this magnolia an all season tree.



Reviewed by some as intolerant to urban conditions, I have not found this to be accurate. I have seen the cucumber tree thriving in parking lots, commercial sites, residential yards and parks. The availability of this tree is much better than just a few years ago as nursery growers are seeing the many applications that this native shade tree can offer to the landscape industry. The most important aspect is to leave enough space for this stately magnolia to reach its full potential of splendor.

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

2017 OIPC RESEARCH GRANT AWARDS

The Ohio Invasive Plants Council was pleased to award three research grants this year. Thanks to all of the applicants, who wrote thoughtful proposals about important invasive plant issues in the state of Ohio. The student research projects funded will cover many important topics in invasive plant research, from the effects of invasive plants on native plant and animal communities to the role of hybridization in invasion.

OIPC was very pleased to receive six applications with important practical implications for OIPC research priorities. This year's awardees included

Kevin Lash, a student of David Gorchov at Miami University. Kevin's research is on "Effects on native tree seedlings of alternative removal methods of invasive Amur honeysuckle (*Lonicera maackii*)."

Meg Maloney, a student with Ryan McEwan at the University of Dayton, will be studying "Influence of the invasive shrub *Lonicera maackii* on headwater stream salamanders communities."

Kali Mattingly, working with Stephen Hovick at The Ohio State University, will be "Assessing the extent of hybridization between the invasive species *Lythrum salicaria* (purple loosestrife) and the horticultural species *L. virgatum*." Stay tuned for results of these student research projects, and more, at the next annual OIPC meeting!

We also thank the 2015 student research award winners, Eric B. Borth, Colin G. Cope, Jennifer E. Murphy, and Elizabeth J Roberson for their poster presentations at the OIPC Annual Meeting in February 2017 in Columbus. Kylie L. Martinod recently published her research with David L. Gorchov at Miami University. Kylie's paper in *AoB PLANTS* on "White-tailed deer browse on an invasive shrub with extended leaf phenology meets assumptions of an apparent competition hypothesis" reported heavy deer browse on Amur honeysuckle (*Lonicera maackii*), particularly in early spring, potentially increasing deer abundance and their impacts on native plants. This work was funded by an OIPC research award from the 2015 request for proposals. Congratulations to Kylie!

A special big thanks to The Columbus Foundation, the Ohio Natural Areas & Preserves Association (ONAPA), and the Cincinnati Wildflower Preservation Society (CWPS) for their generous support of the OIPC research grant program. The OIPC strongly encourages future grant applications from land managers and applications with an applied focus that address OIPC research priorities (<http://www.oipc.info/help-answer-research-questions.html>). Be on the lookout for a call for research proposals this fall 2017!

Jean H. Burns, OIPC Board and Case Western Reserve University

DRAFT INVASIVE PLANT RULE IN OHIO

As we discussed at our recent Annual Meeting on February 23rd, the Ohio Department of Agriculture (ODA) released a draft rule on invasive plant regulation in early January. This rule would implement the law passed in September 2014 to regulate the sale of invasive plants in Ohio (SB 192, Ohio Revised Code 901.50). The draft rule includes a list of 38 plants to be regulated, potential phase-out periods for some species, and the establishment of a 5-person Invasive Plant Advisory Committee. The advisory committee would meet annually to determine additional species to be added to the list. OIPC provided comments to ODA in late January and revisions to the draft rule are now in progress. Once the draft rule is filed in the very near future, an official 30-day public review period of the rule will begin, so we encourage everyone to watch for this announcement and to comment. OIPC is optimistic that ODA will be using the OIPC list of invasive plants, as determined by the Assessment Team using the Assessment Protocol, for a reference when listing plants.

Jennifer L. Windus, OIPC President & ODNR (retired)

2 EASY WAYS TO SUPPORT OIPC!



Kroger Community Rewards

Use your Kroger Plus card to help OIPC grow. For your continued support you must enroll annually so be sure to check if your enrollment has expired.

Visit KrogerCommunityRewards.com to sign in or create a new account. Select OIPC and click on "enroll". The codes for OIPC are:
#23916 Cincinnati Region (incl. Dayton and Lima)
#47319 Great Lakes / Columbus region (rest of Ohio)



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WELCOME! NEW OIPC BOARD MEMBERS

Two new Board members were elected at the OIPC Annual Meeting in February. We are pleased to welcome Emily Rauschert and Susan Schmidt. Michele Banker of Marianist Environmental Education Center and Shana Byrd of The Dawes Arboretum were re-elected.

Emily Rauschert is an Assistant Professor at Cleveland State University. She is a plant ecologist with a research focus on invasive plant population dynamics and plant community ecology. Her research focuses on lesser celandine, urban plant ecology, and goldenrods. After her PhD at Penn State, she did post doctoral work there in the College of Agriculture, and then was a Fulbright Scholar in Hungary, conducting invasive plant research. She works with some of her students to assess some invasive species for OIPC's Invasive Plant Assessment Protocol. She has worked with civil engineers and road managers on invasive plant issues.

Susan Schmidt is recently retired after being a Certified Registered Nurse Anesthetist for most of her nursing career of 43 years. She graduated from Grant Hospital School of Nursing and OSU

School of Allied Medicine. After retirement, she became an OSU Extension Master Gardener and has served on several Committees including Education, Community Gardens and Speaker's Bureau. She is also a volunteer at the Heritage Garden at the Governor's Residence. She lives on a farm in Delaware County and is very interested in gardening and pasture management.

The OIPC Board also sincerely thanks Nora Hiland and David Gorchov for their service on the Board, dedication to the OIPC mission, and their continued efforts to promote invasive plant control, education and research.

OIPC Board of Directors



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