

# EECONEWS



Focus on Non-Native Wildlife

Winter 2012

Volume XXXI

Issue 1

## Youth Scientists: Emerald Ash Borer Stewardship Project

*By Cindy Meyer, OSU Extension of Butler County*

Trees can often face threats of certain insect and disease pests. Normally the strong will survive and only those weakened by other pressures, usually abiotic or non-living, are the ones to falter. When invasive species come knocking, a different story unfolds. While native trees and shrubs evolve with native pests, everyone “gets along.” It is the exotic pests that have the potential to cause serious injury, and even death, sometime of an entire species, family, or multiple species. When an exotic pest is introduced, accidentally or on purpose, the host plant usually does not have any genetic resistance and there aren’t other pathogens and predators to help rage a battle against the exotic invader. With the case of emerald ash borer (EAB), scientists have predicted the elimination of the entire *Fraxinus* genera including five different species in Ohio alone and potentially threatening at least 44 arthropods that rely on the host for survival.



The damage caused by EAB is being felt across much of Ohio. Today 15 states and Canada have EAB infestations. With the impending spread to all parts of Ohio, educators have an unprecedented opportunity in our lifetime to expose students to a relevant, real-life environmental issue.

A group of scientists, educators, and outreach professionals, including Ohio State University Extension educators, OSU Signature Program “Why Trees Matter” team members, OSU OARDC researchers, Ohio Department of Agriculture, Ohio Department of Natural Resources – Project Learning Tree Program, USDA Forest Service researchers have come together to create a curriculum that can help educators teach about the importance of trees and EAB in their classroom.

Thanks to a grant through the Ohio EPA’s, Environmental Education Fund, over the next two years the Youth Scientist team will be providing teacher workshops to engage Ohio teachers on how to incorporate the Youth Scientist curriculum into their classroom. Along with the workshops, an online classroom will be developed as an arm of OSU Extension’s Why Trees Matter website, <http://treesmatter.osu.edu>. Classroom kits with materials and supplies will also be available to teachers using the curriculum.

The curriculum contains a month long unit (teachers are able to pick and choose parts) for Ohio students in grades 6-8 which focuses on STEM education. Within the unit, four, one-week mini-units exist including, ‘Why Trees Matter’, ‘Threats to Forests’, ‘Emerald Ash Borer’, and ‘Restoration’. The curriculum, aligned to state teaching standards, is set-up so that teachers can choose to teach all units or focus on one or two of the mini-units.

This is a great teachable moment for both traditional and non-traditional educators. Teaching youth about EAB will instill values and knowledge of forest health and urban tree health issues. The Youth Scientist project provides Ohio specific, natural resources based curriculum to engage youth through hands-on activities that allow them to participate in scientific research.

If interested in learning more about this Youth Scientist Project contact Cindy Meyer at [meyer.842@osu.edu](mailto:meyer.842@osu.edu) or 513-785-6654.

### SAVE THE DATE

#### ***Vernalpalooza***

Shawnee State Park

Feb 28- Mar 2

#### ***Wildlife Diversity Conf***

Columbus

March 7

#### ***EECO Annual Conference***

Shawnee State Park

April 26-29

#### ***OEEF Grant Submission***

July 15 Deadline

#### ***NAAEE Conference***

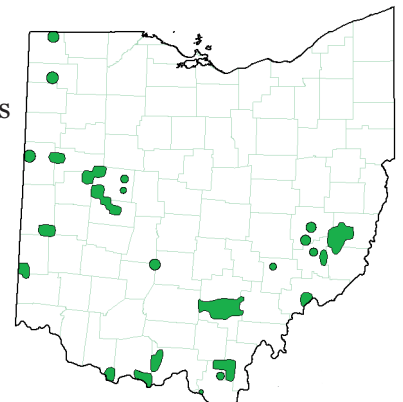
Oakland, California

Oct 10-13

# Going Hog-Wild in Ohio—the Feral Hog Problem

By Jen Dennison and Carolyn Caldwell, ODNR

There are wild pigs running amuck in the Buckeye State! What are they and why is this a problem? Feral hogs are members of the domestic swine family. These non-native animals are also known as free-ranging European wild boar, Russian wild boar, wild pigs, wild hogs, feral swine or razor backs. The only native pig-like animal in North America is the collared peccary, or javelina, which is found in the southwestern U.S. and Mexico. Feral non-native hogs were brought from Europe and Asia centuries ago and have been propagated and released throughout the continent through accidental escapes, free-range farming practices, and as part of establishing huntable populations. Most of these introductions have occurred in the southeastern U.S. Feral hogs were brought into Ohio and released onto private preserves to create hunting opportunities. Some of these animals have escaped confinement, while others might have been intentionally released. Feral hogs have quickly established populations in pockets around the state. Populations are rapidly expanding in Ohio because feral hogs have no natural predators and can reproduce year-round with up to seven piglets per litter.



*Distribution of feral swine in Ohio*

Feral hogs can cause significant impacts to natural habitats and native populations of wildlife. They cause substantial damage to agricultural crops and degrade wildlife habitat through their rooting habits. They can root up to a meter deep in some soils, but even shallow rooting can damage the plant life and soil structure. These omnivorous animals are highly opportunistic and will consume anything available, including berries, acorns, and crops, which directly compete with native wildlife. They also consume reptiles, amphibians, the eggs of ground-nesting birds, even their own piglets! Feral hogs are known carriers for numerous diseases and parasites. All of these diseases can infect domestic livestock, native wildlife, pets and, in some cases, people. At present, the two most significant diseases carried by feral hogs are swine brucellosis and pseudorabies. Swine brucellosis is transmittable to humans through handling infected tissues of feral hogs. Pseudorabies cannot be transmitted to humans. However, it can be fatal to dogs, cats, farm animals and smaller wild animals, including raccoons, skunks, foxes and opossums.



In addition to the impacts on the environment, feral hogs can have substantial economic impacts. For example, a large-scale disease outbreak of swine brucellosis would require substantial public funding to manage the problem, thereby diverting money from other wildlife management projects. In Missouri, state and federal agencies spend \$250,000 annually to control feral hogs on publicly-owned lands. In addition, Ohio could lose its “brucellosis-free” status, jeopardizing the state’s swine industry, which generates more than \$400 million dollars annually into the state’s economy and provides more than 10,000 jobs. Total damage caused by feral hogs in the United States is estimated to be approximately \$800 million annually. This estimate is probably conservative, because environmental damage costs attributed to feral hogs are not easily quantified, nor are the costs of potential disease outbreaks.

So what can be done? In 2008, an action plan was signed by ODNR, Ohio Department of Agriculture, and the United States Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services and Wildlife Services to identify and implement measures to reduce and eradicate feral hogs from Ohio. The agencies concluded that prohibiting the importation and severely restricting ownership of feral hogs, coupled with intense eradication efforts and liberal hunting regulations, are the best approaches to control this species in the wild. Ohio now has an open season on feral hogs, meaning that they can be hunted anytime throughout the year by licensed hunters and there is no limit on how many hogs can be taken. Each ODNR-Division of Wildlife District Office is tracking reports of feral hogs across the state. If you see or hear of feral hogs in your area, you can contact the Division of Wildlife at 1-800-Wildlife or by sending an email to [wild.info@dnr.state.oh.us](mailto:wild.info@dnr.state.oh.us) to report it. For more information on Ohio feral hog management, go to [www.wildohio.com](http://www.wildohio.com) and click on Hunting and Trapping to find the Wild Boar in Ohio link.

## New and Improved EECO Website

Visit the new and improved EECO website. We have great up-to-date info on events, professional development, awards, and current projects. Don't worry, you can still find it at the same place:

[www.eeco-online.org](http://www.eeco-online.org)



**Insert and funding for this newsletter is generously provided by Ohio Environmental Education Fund (OEEF)**

**For more information on these grants, Please contact:**

Ohio EPA Office of Environmental Education

Phone: 614/644-2873

Email: [oeef@epa.state.oh.us](mailto:oeef@epa.state.oh.us)

Website: [www.epa.ohio.gov/oeef](http://www.epa.ohio.gov/oeef)



**The next application deadline is July 15, 2012.**

**Information is posted at [www.epa.ohio.gov/oeef](http://www.epa.ohio.gov/oeef)**

## **Recent Grants for Adult Education**

### **Grand Lake St. Mary's Community Improvement Corporation, "Grand Again Watershed Campaign - Phase I (Residential)"**

\$49,900, Auglaize and Mercer Counties, Contact: Jared Ebbing, [jared.ebbing@mercercountyohio.org](mailto:jared.ebbing@mercercountyohio.org), 419-586-4209.

Supports a public awareness campaign designed to help make Grand Lake St. Marys "grand again" by increasing the level of watershed protection activities conducted by the 12,200 citizens (4,880 households) who reside in the watershed. Five categories of watershed protection will be promoted: green lawn and garden care, storm water management, maintenance of septic systems, sump pumps, and water softeners, safe disposal of pet waste, and safe disposal of pharmaceuticals and hazardous waste. Under the umbrella of uniform campaign design, each category will run for two months, launched with a targeted mailing to all watershed households, and reinforced with newspaper ads, billboard ads, signage, posters, online resources, and community outreach meetings collaboratively conducted with the Grand Again Campaign Team in the seven Grand Lake St. Mary's sub-watersheds.

### **Delaware Soil and Water Conservation District, "An Underground Worm's-Eye View of Soil Conservation"**

\$15,623. Statewide, Contact: Dona Rhea, [dona-rhea@delawareswcd.org](mailto:dona-rhea@delawareswcd.org), 740-368-1921.

This project replicates a three dimensional, room sized, inflatable soil tunnel exhibit to educate people about soil conservation. Guests enter beneath the giant tree's roots with oversized earthworms, grubs, and other soil critters, through a tunnel where they enter the underground world of soil and complete a scavenger hunt, challenging them to find life and knowledge. Educational panels adhered to the unit's interior, educate on soil conservation and its effects on nature and the world as a whole, while generating curiosity about the world below our feet. The exterior is designed into soil layers, showing soil's profiles and functions. The exhibit can be trailered for use at other locations around the state.

### **Erie Soil and Water Conservation District and Erie Solid Waste Management District, "Environmental Awareness"**

5,000, Erie County, Contact: Crystal Dymond, [cdymond@eriecounty.oh.gov](mailto:cdymond@eriecounty.oh.gov), 419-626-5211 or Lisa Beursken, [lbeursken@eriecounty.oh.gov](mailto:lbeursken@eriecounty.oh.gov), 419-433-7303.

The two agencies will create a series of educational banners and posters for exhibit at local fairs, festivals, and collection events, to educate residents about recycling, prevention of nutrient pollution, proper maintenance of septic systems, and the use natural areas, filter strips, riparian setbacks, rain barrels, and rain gardens for storm water retention.

### **Kenyon College – Brown Family Environmental Center, "Kokosing River Education Campaign"**

\$9,735, Knox County, Contact: Heather Doherty, [dohertyh@kenyon.edu](mailto:dohertyh@kenyon.edu), 740-427-5052.

This education campaign will focus on the State Scenic Kokosing River, including how different components of the river system contribute to its high quality and how residents can contribute to conservation and pollution prevention efforts. The project will include installation of interpretive signage, self-guided trail brochures, canoe floats, and public programs.

### **Upper Maumee Watershed Partnership, "Upper Maumee Watershed Education"**

\$5,000, Defiance and Paulding Counties, Contact: Nicole Grindley, [ngrindley@defiance-county.com](mailto:ngrindley@defiance-county.com), 419-782-8751. Provides an EnviroScape® tabletop watershed model and portable exhibit to educate residents about sedimentation and other threats to local water quality.

## Recent Grants for Adult Education

### **Toledo Metropolitan Area Council of Governments, “Watershed Awareness Using Interpretive Signs”**

\$5,000, Lucas County, Contact: Ann-Drea Ra Hensley, hensley@tmacog.org, 419-241-9155.

Residents and visitors will learn about specific watersheds and watershed projects using interpretive signs at strategic locations. A minimum of five signs will educate the public about over wide ditches, wetland restoration, sedimentation in streams, and dumping prevention. Signs will also describe actions that citizens can take to further protect watersheds. Planned locations include Harroun Park (Tenmile Creek watershed), Independence Park (Maumee River watershed), Pearson Metropark (North Wetland Mitigation Bank), the Olander Park System (Kimble and Palmer Ditches), and Springfield Township (Harvest Ditch). Signs will be designed by local schools/universities.

### **Ohio Department of Rehabilitation and Correction, “Green Prison Project”**

\$40,900, Fairfield County, Contact: Darryl Graves, Darryl.Graves@odrc.state.oh.us, 740-653-4324.

A Green Entrepreneurship program will provide training for 300 adult males incarcerated at the Southeastern Correctional Facility in Lancaster, to prepare them for work in renewable energy and other sustainability businesses upon their release. The program emphasizes business plan development, accounting, bookkeeping and financial literacy, business operations, legal and human resources, emphasizing a triple-bottom-line that focuses not only on profit, but also people and the planet. The project is modeled on a Texas program that significantly reduced recidivism. Sustainable Business Ventures and the Vera Institute of Justice are collaborating.

### **LBS Consultants, “Lead Safe Work Practices”**

\$47,490, Belmont, Harrison, Jefferson, and Monroe Counties, Contact: Lillian Blake Siebieda, lbsiebieda@comcast.net, 304-281-5845.

Only about 13% of contracting firms in the four target counties are certified to perform lead-safe renovation work, while 68% of the housing stock was built prior to 1978, with potential to lead expose workers and families. This project will provide 30 local training sessions with a goal to certify at least 125 firms in the USEPA/HUD Curriculum for Lead Safety for Renovation, Repair and Painting Initial Training Course EPA-740-R-09-002. It will also provide six training sessions in the EPA Lead Clearance Technician Initial Training, with the goal of having at least 75% of those attending become licensed by the Ohio Department of Health.

### **Carroll Soil and Water Conservation District, “Water Savers of Carroll County”**

\$3,039.24, Carroll County, Contact: Linda Yeager, linda.yeager@oh.nacdnet.net, 330-627-9852.

Provides training and supplies to support quarterly monitoring of streams in the Cold Spring Run and Indian Fork parts of the Upper Muskingum watershed, by adult volunteers and high school Future Farmers of America students.

### **Preservation Parks of Delaware County, “Gallant Woods Preserve Interpretive Gateway”**

\$5,000, Delaware County, Contact: Richard Niccum, rniccum@preservationparks.com, 740-524-8600, Ext. 3.

The Gallant Woods Preserve Interpretive Gateway will introduce visitors to the restoration efforts underway. Four interpretive panels will tell the story of how the Preserve has gone from private farm to a public park, focusing on the re-establishment of wetlands and vernal pools, and the plants and animals that depend on them for survival. The gateway and boardwalk are a field trip destination for several collaborating school districts.

### **Portage County Water Resources, “Educational Pamphlets for Area Residents”**

\$1,000, Portage County, Contact: Cindy Lee Hazelett, chazelett@portageco.com, 330-297-3685.

Provides pamphlets about drinking water and wastewater treatment, to support the ongoing education efforts related to the Source Water Protection Plans for the Brimfield and Shalersville Water Treatment Plants and pre-treatment requirements of the Streetsboro Wastewater Treatment Plant. Brochures Titles: “Let’s Learn About How Wastewater Treatment Works”, “Needed: Clean Water”, “About Water Emergencies”, and “Careers in the Water Industry”.

### **Little Beaver Creek Land Foundation, “Little Beaver Creek Rain Garden Demonstration Project”**

\$10,680, Columbiana County, Contact: Lisa Butch, lbutch@gmail.com, 330-420-9507.

This project will install two rain gardens, one in the northern part of the Little Beaver Creek watershed at Kent State University Salem Campus and one in the southern portion of the watershed at the Beaver Creek Wildlife Education Center. Tours and workshops at each site will teach the general public, township and municipal officials, and university students about rain gardens and other tools for managing storm water and protecting water quality.

## Recent Grants for K-12 Education

### **Mill Creek Restoration Project, “Green Careers and Urban Environments Program”**

\$46,400, Hamilton County, Audience: middle and high school, Contact: Lora Alberto, lora@millcreekrestoration.org; 513-731-8400.

Creates a network of 35 environmental professionals to mentor up to 500 Cincinnati 10th-12th grade students on environmental careers and green technologies, using guided tours of LEED-certified buildings, energy conservation and renewable energy projects, brownfields, waste water treatment plants, and environmental offices. Led by a landscape architect and storm water engineers, up to 500 6th-9th grade students will monitor land use and water quality in the Lick Run sub-basin of the Lower Mill Creek watershed, and help design urban stream restoration strategies in the South Fairmount neighborhood. Both groups of students will participate in service learning projects.

### **The Ohio State University Extension, Butler County, “Youth Scientist; Creating Environmental Stewards”**

\$46,585, Ashland, Clinton, Fayette, Morgan, Ottawa, Trumbull, and Van Wert counties, Audience: high school, Contact: Cindy Meyer, meyer.842@osu.edu, 513-785-6654.

Grant will provide eight workshops statewide, curriculum kits and a Website to introduce 200 high school teachers to a new curriculum on the emerald ash borer, an invasive insect predicted to eliminate five different species of trees in Ohio and the 44 arthropods that rely on these trees for survival. At least 3,000 students will learn about the health of Ohio forests and urban trees, using hands-on scientific research methods. Project Learning Tree-Ohio and the US Forest Service are collaborating.

### **Talawanda School District – Talawanda High School, “Healthy Water, Healthy People Project – Erik Sustainability Initiative”**

\$30,937, Butler County, Audience: high school, Contact: Jeffery F. Winslow, winslowj@talawanda.org, 513-273-3559.

Students will investigate the impact of agricultural chemicals on the watershed of the 100 acre Erik Outdoor Education Area at the newly constructed LEED Gold- certified Talawanda High School. Students will explore the stream, wetlands and woods on the property, measuring and monitoring the flow of agricultural chemicals through the wetlands to determine the effectiveness of the wetland ecosystem in mitigating these chemicals. Students will then make recommendations to the Board of Education regarding the future use of the agricultural land. Budget includes monitoring equipment and hand-held GPS units for the students to use, and certification of the teachers in Project WET’s secondary water monitoring curriculum, Healthy Water, Healthy People.

### **University of Findlay, Department of Biology, “Community Education LEADs to Grand Lake Rehabilitation”**

\$4,978.25, Auglaize, Hancock and Mercer Counties, Audience: Elementary and Undergraduate, Contact: Matt Hoostal, hoostal@findlay.edu, 419-423-4421

Provides plant materials, sampling supplies, lab equipment and transportation to bring 40 undergraduate students in ecology, botany, microbiology and environmental sampling and statistics classes together with approximately 75 local elementary students for Water Quality Days around Grand Lake St. Mary’s. Children’s activities will include identification of native and invasive plants, removal of invasive plants, shoreline revegetation with native species, and monitoring of bacteria and algal counts. The Grand Lake St. Mary’s Restoration Commission is collaborating.

### **Proctor Camp and Conference Center, “Madison County Hydro Hunt”**

\$5,000, Madison County. Audience: High School, Contact: Christine Tokarz, christinetokarz@gmail.com, 903-267-6372.

The Hydro Hunt project is intended to provide two high schools with the resources to design standards based, multi-sensory, interdisciplinary GPS scavenger hunt at the wetland sites located on school property.

High school teachers will receive training and tools associated with the GLOBE GPS and Hydrology Protocols. The Global Learning and Observations to Benefit the Environment (GLOBE) program is a worldwide hands-on, primary and secondary school-based science and education program designed in close partnership with NASA, NOAA and NSF to help students research the earth’s environmental dynamics. Students will use the GLOBE protocols to collect scientific data at their wetland area and create a set of standards-based, hands-on learning activities associated with various GPS (global positioning system) waypoints. This will serve as a GPS Hydro Hunt resource for the middle and elementary grades. Madison Plains High School, London High School, and the Madison Soil and Water Conservation District are collaborating.

## Recent Grants for K-12 Education

### **BrightPath Active Learning, LLC, “Outdoor Education for Kindergarten Enrichment”**

\$3,796, Franklin County, Audience: Early Childhood, Contact: Colleen Sharkey, colleen@brightpathactivelearning.com, 614-839-0780.

BrightPath Active Learning is a half-day program that uses outdoor education to provide enrichment for Kindergartners who are ready for more than the half-day classroom programs offered by many public and private schools. The grant will provide supplies for a stream study, gardening and worm composting activities during all four seasons.

### **Benjamin Logan School District, “The Mad River and the Trout Ecosystem”**

\$5,000, Logan County, Audience: Elementary, Middle and High School, Contact: Spencer Reames, reamess@benlogan.k12.oh.us, 937-592-1666.

Provides aquarium supplies and monitoring equipment to support study of water quality and the pristine trout habitat in the nearby headwaters of the Mad River. The project utilizes the Trout in the Classroom curriculum from Trout Unlimited. Students will raise trout in the classroom, for supervised release into the Mad River. Local experts and the ODNR Division of Wildlife are also collaborating.

### **COSI, “COSI On Wheels: Ecology”**

\$41,648, statewide, Audience: elementary, Contact: Sharon Tinianow, stinianow@cosi.org, 614-629-3146.

The grant will equip a COSI on Wheels program travelling to schools throughout Ohio, providing hands-on student activities on plant and animal life cycles, the interconnectedness of natural systems, and plant and animal adaptations to their habitats. Students will use their powers of observation to classify, compare, and contrast and will employ their critical thinking skills to draw conclusions about animals, their adaptations and their environments. Ohio State University Extension and the OSU College of Education and Human Ecology are collaborating.



## **45th Annual EECO Conference April 26-29, 2012 Shawnee State Park**



Keynote: Fred Shaw (Neeake), Shawnee storyteller

Field Trips: Serpent Mound; Underground Railroad sites; Raven Rock; Edge of Appalachia; Scioto Brush Creek; Ohio Brush Creek Canoe trip

Workshops: Project WET (new guide); PLT “Focus on Forests”; Global Sustainability: Engaging Lessons for Young Learners

Sessions: Ohio rivers and watersheds; Local geology, flora and fauna; Native peoples and populations; Reconnecting children with nature

Full conference registration: EECO member \$160; non-member \$200; student \$130

Online registration available soon at [www.eeco-online.org](http://www.eeco-online.org)

## **EECO Awards- Submit a Nomination**

Please help us to recognize the commitment to excellence in Environmental Education that is being accomplished by individuals and organizations in Ohio. EECO has nine awards that you can submit nominations for, including: **The Finlay Johnson Award**- given to an EECO member for making a significant or outstanding contribution to EECO

**The Christy Dixon Award**- given to a young professional who has contributed significantly to EE in Ohio.

**The Charley Harper Award**- given to an artist who has made a significant or outstanding contribution to EE in Ohio through various forms of art.

**Ohio Alliance for the Environment Award**- given to a business or industry that is dedicated to fostering a climate of cooperation for resolving environmental problems.

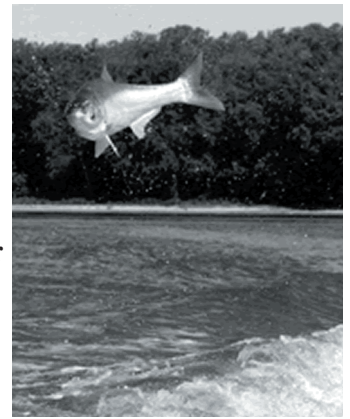
In addition, there are awards for outstanding organizations, publications, volunteers, formal educators, and non-formal educators.

Nominations forms and information can be found at [www.eeco-online.org](http://www.eeco-online.org). Nominations due March 5.

## Asian Carp—Boaters Beware!

*By Jen Dennison and John Navarro, ODNR: Division of Wildlife*

You've probably seen news stories about jumping fish or typed "jumping fish" into YouTube for video clips that make people laugh. But these fish are anything but funny. These invasive species are the Asian carp. Asian carp refers to a group of fish from China that includes silver and bighead carp. Both species are distinctive with low-set eyes and large upturned mouths. These nonnative fish were imported in the early 1970s to improve water quality by removing algae from aquaculture ponds in the Southern US. When flooding in the 1980's inundated these facilities, Asian carp began to race up the Mississippi River. They quickly made it upstream into Minnesota and into the Illinois River in Chicago. This brings them within striking distance of Lake Michigan and the rest of the Great Lakes.



Why is Asian carp such a successful invader? They are filter feeders, meaning they strain tiny animals and plants out of the water. Some Asian carp eat their weight in plankton daily. They can weigh anywhere from 30-110lbs. By eating plankton, these fish directly compete with native filter feeders such as mussels and fish, many of which are already federally endangered. This over-competition can disrupt the entire food web. Asian carp have shown the ability to dominate areas they invade. In fact, these fast growing fish can produce up to 1 million eggs annually. If they become established in the Great Lakes, they could crash this tremendously important natural resource.

What are the dangers of this invasion? It could devastate native fish populations which are important both recreationally and commercially. The Great Lakes fishing industry contributes over \$7 billion annually to the US economy. Asian carp are also known for leaping high out of the water when disturbed by watercraft. Boaters traveling at high speeds can actually be injured by leaping fish – imagine getting hit by a 100lb fish while traveling at 30mph!

So what is being done to fix this problem? Unfortunately, there are few options once an invasive species is established and spreading, particularly aquatic species. Rivers act like super highways. But there are opportunities to prevent Asian carp from moving into new watersheds. Watershed boundaries are natural boundaries to fish movement. But these barriers have been breached by humans. One of these breaches occurs south of Chicago. In 1889, the City of Chicago reversed the flow of the Chicago River to move sewage away from their drinking water supply. This created a direct connection between the Mississippi River basin and the Great Lakes basin. Fish are able to move freely between the two watersheds. The only thing that is keeping Asian carp from moving into Lake Michigan is an electrical barrier that repels fish. This is not an absolute prevention method and is only a temporary fix. A recent study by the Great Lakes Commission looked at the feasibility of permanently separating the basins to prevent invasive species movement. Hopefully prompt action will be taken to implement some of their recommendations.

However, there are other natural and manmade connections along the watershed boundary that Asian carp could use to get into the Great Lakes. Four of these connections are in Ohio. Two are part of the old canal system and are located at Grand Lake St Mary's and at the Ohio and Erie Canal at Long Lake in Akron. The other two connections are at low lying areas in northeast Ohio that when flooded make a connection between the two watersheds. The Division of Wildlife plans to monitor these areas for Asian carp using a newly developed sampling technique called environmental DNA (eDNA). This tool is right out of CSI and tests water for the presence of Asian carp DNA, so you do not need to sample for fish but you sample the water for what they leave behind, which allows you to efficiently and quickly detect fish in the area.

Aquatic invasives like Asian carp represent a real threat to native ecosystems. Public education and policy changes are vital to keeping our native ecosystems intact. For more information, contact the Ohio Division of Wildlife's Fish Management section: 1-800-WILDLIFE.

### **Wildlife Diversity Conference: The Good, The Bad, and The Ugly** **March 7, 2012, Aladdin Shrine Complex, Columbus, Ohio**

Attend presentations on how to interconnect wildlife, habitat and people to conserve our native wildlife. Our keynote speaker will cover the dynamics of wildlife diversity enthusiasts and enlighten us on our "customers".

- ✦ Beavers
- ✦ Freshwater Mussel Propagation and Restoration
- ✦ Terrestrial Crayfish
- ✦ Wetland Restoration from the Small Mammal Perspective
- ✦ Birds Using Lake Erie
- ✦ Aquatic Nuisance Species- Asian Carp, Lampreys
- ✦ Wildlife Orphans and Wildlife Rehabilitation

For information please call 1.800.WILDLIFE, or visit [www.ohiodnr.com/wildlife](http://www.ohiodnr.com/wildlife).

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The EECO Newsletter is published for members of the  
Environmental Education Council of Ohio,  
a non-profit organization

This newsletter is printed on recycled paper with soy inks  
The OEEF/EECO Partnership contributions and the dissemination of this  
newsletter are paid for by a grant from the  
Ohio Environmental Education Fund

For information about EECO's programs and services, please contact  
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