



ONAPA NEWS

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Ohio natural areas and preserves.

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Christmas Rocks State Nature Preserve

Christmas Rocks is one of the outstanding geological features of the unglaciated hill country south of Lancaster but is not as well-known as many of the other parks and preserves in the Hocking Hills. This preserve nestled in the foothills of



Christmas Rocks State Nature Preserve
Photo by Dick Moseley

Fairfield County is a 554 acre area that has spectacular rock formations made of the Black Hand sandstone. The preserve derives its name from the massive sandstone blocks that had slumped away from the ridge of the parent Black Hand sandstone bedrock. According to Mark Howes, the preserve's first manager, these rocks soon became known as "Christ's Rocks." In reference to the Biblical account of the earth being "torn asunder" following Christ's crucifixion. He also noted that pioneer women dug evergreen ferns off of the rocks to provide greenery to decorate their dreary log cabins around Christmas. These ferns became known as Christmas Ferns and through a combination of the names the formation became known as Christmas Rocks.

The original 208 acre site was dedicated on December 4, 1973 and became Ohio's 10th State Nature Preserve. The preserve is also known as the Charles R. Goslin Nature Sanctuary in honor of the renowned Lancaster outdoor writer, historian and naturalist of the time. An additional 207 acres were added to

the preserve on January 9, 1995 when the Ohio Department of Rehabilitation & Correction dedicated the south side of Oil Mill Hollow Valley. This property was part of the Southeastern Ohio Correctional Training Center—now known as the Southeastern Correctional Complex—and is

administered by the Ohio Department of Rehabilitation and Correction. The dedication of this site was significant since the joint cooperation of these two state agencies resulted in the protection of over a mile of the Arney Run watershed through the preserve.

A well-known geological feature in the



Christmas Fern (*Polystichum acrostichoides*)

preserve is a sandstone cliff known as Jacob's Ladder. This 90 foot Black Hand sandstone exposure juts out 310 feet above the Arney Run Valley and offers one an outstanding vista of the surrounding Appalachian foothills of Ohio. The view is

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Wind Power Dilemma

The pursuit of “green energy” sources represent a critical step toward energy independence for America, yet every newly emerging energy source has its drawbacks and challenges, and wind energy produced by giant wind turbines with their massive whirling blades are no exception. For those of us who have seen wind farms comprised of hundreds of individual wind turbines, the massive wind driven blades at first appear to be rotating slowly, but that is simply an optical illusion just like watching a jumbo jet airliner taking off and appearing to be moving slowly when, in fact, it is moving at a very high rate of speed just to gain altitude.

In the September 23, 2016 issue of OHIO OUTDOOR NEWS, both Mike Moore, Editor and outdoor writer and advisor to the ONAPA board Steve Pollick, in separate articles, each write about serious concerns with wind power that may not be so ecologically friendly if poorly sited. **(It is well worth subscribing to Ohio Outdoor News by calling (800) 535-5191.)** Airborne birds and bats are no match for the fast whirling blades of wind turbines mounted at the top of 300 plus foot-tall towers. Waterfowl, songbirds, shorebirds, bats and even hawks and eagles swept into the path of the rotating blades are killed instantly.

Developer Blue Creek Wind Farm LLC, of Portland, Oregon operates a 150-unit windfarm in Van Wert and Paulding counties Ohio. In a meeting with the Black Swamp Bird Observatory, a bird conservation organization based in Northwestern Ohio, Blue Creek admitted that 40 and 41 species of birds, respectively – some of them rare, plus extensive numbers of bats – were killed in 2012 and 2013 alone. However, they would not disclose the total numbers of birds and bats killed. The mission of the Black Swamp Bird Observatory (BSBO) is “Teaming Research with Education to Promote Bird Conservation.” In 2014, BSBO petitioned ODNR and the Ohio Power Siting Board to release information they had about how many birds and bats were being killed at the Blue Creek facility. That triggered the wind company’s



current lawsuit against the two state agencies. Blue Creek Wind Farm asked the Franklin County Common Pleas Court to prevent publication of bird and bat kills at its 150-unit windfarm in Van Wert and Paulding counties, arguing **the kills are a protected “trade secret.”** One has to wonder why the developer has gone to such extremes to keep the public from knowing just how many birds and bats are killed annually by their wind turbines. A recent draft by the U.S. Fish & Wildlife Service, entitled “Midwest Wind Energy Multi-Species Habitat Conservation Plan,” showed nearly 7,000 bats, including some federally endangered Indiana bats, have been killed in some 16 wind projects in Ohio, Indiana, Illinois, and Missouri since 2005.

A 325 foot tall, 900 kilowatt wind turbine has been erected on an industrial park next to Camp Perry in Ottawa County adjacent to Lake Erie within site of an eagle nest. It was placed without public scrutiny since the Ohio Power Siting Board’s authority extends only to turbines greater than 5 megawatts. Now the Ohio National Guard is

planning a 198 foot tall, 600 kilowatt, \$1.5 million wind turbine at its Camp Perry Base. BSBO has concerns the Camp Perry project may pave the way for utility-scale wind energy development on the Erie lakeshore amid Ohio’s bald eagle heartland and the entire western lakeshore that encompasses a globally significant migration stopover for millions of neotropical songbirds, waterfowl, raptors and other birds totaling some 300 different species. Birders come from all over America and beyond to view the spring and fall migrations here, infusing the local economy with millions of dollars every year as do Lake Erie waterfowl hunters.

BSBO and its national partner, the Washington, D.C. based American Birding Conservancy, support renewable energy. However, the siting of wind turbines needs to take into consideration not only the best locations from the standpoint of available consistent winds, but also upon critically wildlife habitat. Windfarms have great promise, but if not properly placed can be devastating to wildlife and local economies benefiting from those wildlife resources. As Pollick points out in his article, The Ohio

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Winterberry Holly

“Deck the halls with boughs of holly,” is a common refrain in song during the yuletide season. The holly referred to in verse is American Holly (*Ilex opaca*), although originally in England, it was English holly (*Ilex aquifolium*) which is very similar in appearance. With the colonization of the New World, colonists continued the Old World yuletide decoration tradition substituting American holly which tends to be a southeastern North American species that also ranges up the East Coast to Massachusetts where the colonists first encountered American holly.

Although in the central portion of its range, American holly doesn't get any closer to Ohio than Northern

Kentucky, it is nevertheless considered native to Ohio based on two single, disjunct records; a single tree in Lawrence County and another in Scioto County. However, there are numerous modern records from throughout Ohio of trees that have escaped from cultivation. There are two other species in the genus *Ilex* native

to Ohio, mountain holly (*Ilex mucronata*), a rare shrub found in Ohio only around the tall shrub zone margins of sphagnum peat bogs, and the more widespread winterberry holly (*Ilex verticillata*), also a shrub that occurs around the margins of bogs as well as in generally wet, acidic sites such as open swamps and around lakes and in ditches. For the purposes of this article, we are going to take a closer look at winterberry holly the prettiest of the deciduous hollies since it too is utilized in holiday decorations as well as in landscaping. This species is native primarily to eastern North America and southeast Canada. Occurring throughout much of Ohio, it is the most common species of *Ilex* native to our state. The name “Ilex” is the ancient Latin name coming from the holly-oak (*Quercus ilex*) native to the Mediterranean region. *Verticillata* means “whorled” in reference to the clusters of sessile fruits occurring somewhat in a whorled arrangement along the branches of this shrub that typically grows 3 to 12 feet tall.



Winterberry Holly

While American Holly is a tree with leathery, evergreen, spine-tipped leaves, winterberry, also known as black alder, is a tall shrub with deciduous leaves. However, both support numerous, showy, colorful bright red berries which makes them attractive in cultivation as well as in the making of Christmas wreaths and other holiday decorations. In early autumn, the leaves of winterberry turn color and fall leaving behind a strikingly colorful array of scarlet red berries hugging the bare stems. These bright red berries, botanically known as drupes, remain on the branches well into winter, hence the origin of the name “winterberry.” These pea-sized

fruits not only remain in winter, but sometimes into early spring as well, assuming they are not eaten sooner by birds which are the main disseminators of the seeds.

Several showy cultivars of winterberry holly have been developed for the nursery trade. However, like all species of holly, if you want to have your plants produce the beautiful red berries, you will need

a mix of both male and female plants. Hollies tend to be dioecious with male (staminate) and female (pistillate) flowers borne on different plants. More precisely, hollies are polygamo-dioecious which means they are mostly dioecious, but with a few perfect flowers (pistils and stamens in the same flower) present. The small somewhat inconspicuous axillary flowers are greenish-white and bloom from June to July. Usually, the presence of one male winterberry is sufficient for pollinating 6 or more female plants.

Early winter is a good time to visit Kent Bog State Nature Preserve situated just south of Kent Ohio in order to see both mountain holly and the very colorful winterberry holly, both of which grow along the boardwalk within this preserve. Winterberry Holly also occurs along the boardwalk at Triangle Lake State Nature Preserve situated south of Ravenna Ohio.

~ Guy Denny

Sawmill Wetlands at Risk

Several years ago, a developer constructing a large development just east of Columbus, which in part destroyed a wetland, was required by the U. S. Corps of Engineers to mitigate the loss of that wetland by acquiring and permanently protecting a higher quality wetland in accordance with the Nation's no net loss of wetlands policy. The mitigation site acquired in 1996 known as Sawmill Wetlands is by Ohio EPA standards a very high quality 17.85 acre wetland located within the Interstate 270 loop around Columbus. It is surrounded by very high-priced real estate Dublin-area developments. As part of the protection in perpetuity deal, this wetland was transferred to the ODNR Division of Wildlife as "a natural area to be used by the public for the observation of flora and fauna." The Division constructed a boardwalk and fenced it off and named it the Sawmill State Wildlife Education Area. It is the last remaining "wild area" in an otherwise heavily populated, highly developed commercial area which makes it ideal as an outdoor educational facility for all Ohioans to enjoy. In recent years the Friends of Sawmill Wetlands was established to partner with the Division of Wildlife to enhance the wildlife value of the site and provide public educational tours. The Friends of Sawmill Wetlands have been very actively engaged with the public and it has been a great partnership up until recently.

Unbeknownst to the Friends of Sawmill Wetlands, on April 12, 2012, a former Chief of the Division of Wildlife initiated a contract with another developer, JDS So Cal, Ltd., to transfer Sawmill Wetlands to that developer in exchange for 43.33 acres along the bank of the Olentangy River adjacent to Highbanks Metro Park in Delaware County. The developer reportedly planned to build a hotel or assisted-living facility on the wetland. What is incredibly unbelievable, even absurd, is that the contract, as drawn up by ODNR, stated that if the state defaulted on the contract, the Sawmill Wetlands would be given to the developer at no cost; public lands probably worth over a million dollars. Another questionable provision in the contract was that ODNR agreed to work with the developer to obtain a release of the "public use" restriction on the Sawmill property. In December 2012 during a meeting between the parties to the agreement, according to court documents presented, the ODNR Assistant Director expressed concern about the viability of the project



Sawmill State Wildlife Education Area recently locked up by ODNR. Access is now by permit only.

and stated to JDS representatives that ODNR could back out of the land swap contract. Subsequently, the decision was made by ODNR to default on the contract. Although JDS was in negotiation to purchase the replacement property in Delaware County, JDS never purchased that property knowing that ODNR was defaulting on the contract. Columbus and Franklin County Metro Parks purchased the property instead. Consequently, JDS sued ODNR on December 16, 2014.

On September 2, 2016, Franklin County Common Pleas Judge Christopher Brown summary judgement findings determined ODNR breached its

obligations under the contract and therefore must give Sawmill Wetlands for nothing to the developer since it breached the contract it had with him. Judge Brown ordered ODNR to deliver the deed and all rights and interest in Sawmill Wetlands to the developer no later than thirty days from the effective date of his entry. Since then Ohio Attorney General Mike DeWine has appealed Judge Brown's decision. The battle to save Sawmill Wetlands is not over yet. But one has to wonder, "What in the heck were top administrators in ODNR thinking when they agreed to the absurd provisions of this contract." Or, for that matter, just trying to divest themselves of this prime



Students exploring Sawmill's vernal pools. Photo courtesy Friends of Sawmill Wetlands.

educational natural area in the first place on the basis that as a result of development around the Sawmill Property, ODNR determined "there is very limited utility for the Property to serve its originally intended purposes."

Wind Power Dilemma

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Legislature and the courts need to revisit wind power with a more discerning eye toward wildlife conservation. The Ohio Power Siting Board and ODNR should be directed by lawmakers to seriously weigh the impact on our wildlife resources rather than just the self-serving desires of lobbyists representing developers. The U.S. Fish & Wildlife Service currently recommends that no wind turbines be constructed within three miles of the Great lakes' shorelines, while The Nature Conservancy recommends five miles. Yet, a newly released radar study suggests the minimum should be extended back even farther, perhaps as far as 10 miles. According to Pollick, one projection shows the Ohio Power Siting Board may be considering more than 3,700 additional wind turbines in the west-north-west wind corridor by 2030. Waterfowl hunters and birdwatchers take note, the impact on our wildlife resources may be devastating beyond imagination.

Ohio Wildlife Legacy Stamp

Buying an Ohio Wildlife Legacy Stamp allows wildlife enthusiasts the opportunity to directly impact the future of Ohio's native animals. For \$15 you'll receive a collectible stamp, window cling, and commemorative card.



Stamp proceeds support:

- ◆ habitat restoration, land purchases and conservation easements
- ◆ keeping common species common
- ◆ endangered & threatened native species
- ◆ educational products for students and wildlife enthusiasts
- ◆ wildlife and habitat research projects

Purchase info: <http://wildlife.ohiodnr.gov/about-contacts/support-ohios-wildlife/ohio-wildlife-legacy-stamp>



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It's time to re-enroll for the new year of Kroger Community Rewards. Those of you supporting ONAPA will need to re-enroll now in order to continue contributing to us through the May 1st 2016 to April 30th 2017 year. Follow the information to re-enroll at www.onapa.org under SUPPORT ONAPA/KROGER COMMUNITY REWARDS

Christmas Rocks State Nature Preserve

(Continued from page 1)

especially glorious when fall color is at its peak in late October. Another feature enjoyed by the visitor is the Mink Hollow Covered Bridge which was built in 1887 over Arney Run. The covered bridge at the west end of the preserve is now protected as a small county park.

The 4.5 mile trail system affords the visitor the opportunity to enjoy not only the massive rock formations but also the flora typical of the unglaciated plateau region of southeastern Ohio. The area is primarily a mixed hardwood forest community of chestnut oak, Virginia pine, mountain laurel and other members of the heath family (notably deerberry and low blueberry) on the dry thin soils along the ridge tops. Other species found here include sourwood, scarlet oak, pitch pine and serviceberry. On the south-facing slopes, visitors will walk through an oak-hickory forest association that features several species of oaks and hickories as well as tuliptree and beech in wetter sites once in the Oil Mill Hollow Valley, along with Sycamore, birch, maples and spicebush which

dominate the richer glacial soils.

Christmas Rocks is a wonderful preserve to see wildflowers in the spring. Orchids like the pink lady's-slipper, showy orchis, and rattlesnake plantain as well as the large-flowered trillium, drooping trillium, trailing arbutus, spotted wintergreen, mountain laurel and other common spring flora can be found along the preserve's hiking trails. A variety of ferns carpet the floor of the forest and rock formations including the Christmas fern, New York fern, as well as the rock polypody, mountain spleenwort, and Bradley's spleenwort which are typical Appalachian Plateau species.

The preserve is located at 2360 Meister Road SW, Lancaster, Ohio. For more information and directions to Christmas Rocks State Nature Preserve go to the Natural Areas & Preserves website at naturepreserves.ohiodnr.gov/findapreserve.

~ Dick Moseley

Stewardship in Action



Myersville Fen

Despite the heat and humidity, 5 ONAPA volunteers and 3 DNAP staff worked at Myersville Fen State Nature Preserve on August 10th to control invading woody species in the fen meadows. These species included glossy buckthorn, alder, and ninebark, as well as some hairy willow-herb. The small fen meadows contain many rare and unusual plants which require open meadows, so the encroaching woody species threaten to shade them out. The woody species were cut and treated with herbicide, while the hairy willow-herb was pulled out and removed from the meadows.



Jackson Bog Invasive Control

On Saturday, August 20th, 8 ONAPA volunteers and 3 DNAP staff worked together to remove invasive plants from several fen meadows at Jackson Bog (actually a fen). Despite the heat and humidity, the crew accomplished a lot by removing and treating purple loosestrife, narrow-leaved cattail, glossy and common buckthorn, privet, Asian bittersweet, and small-flowered willow-herb. The project included a short tour to see some of the unusual fen plants, led by preserve manager, Adam Wohlever.



Gallagher Fen

On Wednesday, August 24th, 9 ONAPA volunteers and 3 DNAP staff worked together at Gallagher Fen to remove woody species on the west hillside above one of the fen meadows. This hillside has many prairie and savanna plants, but the woody species have encroached significantly in recent years. The group cut and treated autumn-olive, oaks, bush honeysuckle, and Asian bittersweet on the hillside. The Asian bittersweet was particularly challenging to remove! After lunch, former preserve manager (for west-central Ohio), Tim Snyder (now one of ONAPA's stewardship project coordinators) gave an

excellent tour of the west fen about its geology, history, and fen ecology.



Springville Marsh State Nature Preserve

Despite serious heat and humidity, 4 ONAPA volunteers and 2 DNAP staff worked at Springville Marsh on September 7th to control invading plants in the sedge meadows. We cut and treated narrow-leaved cattail, dogwoods, and willows, and even cut down a red maple tree. There is plenty more to do to maintain the sedge meadows at this wetland preserve, so we may schedule another day on a cooler day this fall!



Prairie Road Fen State Nature Preserve

A great partnership project between ONAPA, DNAP, Army Corps of Engineers (COE), and Beaver Creek Wetlands occurred on September 20th at Prairie Road Fen in Clark County. With at least 19 people, including 7 from the COE, 5 from DNAP, 1 from Beaver Creek Wetlands, and 6 ONAPA volunteers, we worked together for several hours on another hot day to cut and treat many stems of glossy buckthorn in the fen meadows of this high-quality prairie fen. The site is owned by the COE, so it was wonderful to have COE staff working with DNAP staff and ONAPA volunteers to make progress on removing this very invasive,

non-native shrub in the meadows. The project included a short hike with former preserve manager, Tim Snyder to interpret the significant geologic, ecological, and botanical features of the preserve.

Stewardship in Action



Kent Bog State Nature Preserve

On Wednesday, October 5th, 21 people including 2 DNAP staff, 13 ONAPA volunteers, and 6 Student Conservation Association (SCA) staff worked at Kent Bog to remove glossy buckthorn seedlings and saplings that were invading the bog. Many small buckthorns are present in the understory of the bog, beneath the highbush blueberry shrubs and tamarack trees. To minimize herbicide use in the sensitive bog mat, the most effective method to remove the small buckthorns is hand-pulling. SCA staff cut and treated the larger buckthorns to eliminate fruit production. SCA is funded by a GLRI (Great Lakes Restoration Initiative) grant for the Crooked River CWMA (Cooperative Weed Management

Area) and has been working on invasive plant control in several natural areas in NE Ohio. We were happy to have their assistance. After lunch, preserve manager Adam Wohlever led a short interpretive hike along the boardwalk so participants could see many of the unique bog plants. Former preserve manager, Emliss Ricks also attended and helped which was a very welcome surprise!



Brinkhaven Oak Barrens

Fourteen (14) volunteers from ONAPA and the Killbuck Watershed Land Trust (KWLT) worked tirelessly together on Saturday, October 15th to begin restoration in the north barrens at Brinkhaven Oak Barrens in Holmes County. There were 6 people from ONAPA and 8 people from the KWLT, including 7 members of Don Beam's family. Don Beam dedicated many years of his life to acquiring, protecting, and managing this amazing site, leaving us all a legacy when he passed away unexpectedly in January 2013. The north barren was getting very overgrown, so we used chainsaws and loppers to cut out sumac, hawthorns, aspen, and cherry, then treated the cut stems with herbicide to

prevent re-sprouting. This restoration should improve habitat for the prairie grasses and forbs in this opening.



Campbell Preserve

Five (5) ONAPA volunteers and 3 DNAP staff worked together on Wednesday, October 19th at Campbell Preserve in the Oak Openings to control a number of invasive plants. While Campbell Preserve hosts over 40 state-listed rare plants, there are many invasive plants threatening this unique combination of sand dune and wet sedge meadow habitats. The crew cut and treated oriental bittersweet, multiflora rose, autumn-olive, black alder, glossy and common buckthorn. After lunch, the group went on a short hike and were able to see a few of the rare plants found at this preserve, such as fringed gentian and soapwort gentian in flower. It was a beautiful fall day and we had a sense of

accomplishment controlling so many invasives!

Prairie Seed Collecting Event

On Saturday September 24th, approximately 50 individuals from across the state gathered in Knox County at Denny's Prairie for the fourth annual ONAPA prairie seed collecting event. The purpose of this event, in addition to teaching participants about prairie plants, was to help ONAPA members and perspective members learn how to establish their own patch of native tallgrass prairie.

After an orientation session covering how to recognize the seeds of numerous prairie species, how to collect and process the seeds, and how to prepare the ground and plant those seeds, participants were turned loose to collect all the seeds they wanted and to take home with them. On hand to answer questions and help individuals with seed collecting was ONAPA President Guy Denny,



Guy Denny giving an orientation.
Photo by Mary Ann Webster

Vice President Jennifer Windus, Secretary Dick Moseley, and board member Jim Mason. ONAPA volunteer Gary Kubicki manned the ONAPA display. The weather was perfect for collecting seeds and all enjoyed the event.

Opossum *Didelphis marsupialis*

Opossums, with their thin naked ears and long, virtually naked tails, seem out of place rambling through the snow during one of Ohio's mild winter days. Actually, opossums are historically an animal of warmer climates in the deep south of North America where they are much better adapted and more at home. They even range as far south as Central and South America. However, since the turn of the century, opossums have been expanding their range northward all the way now to southern Ontario. However, winter can take a toll on them. Both their tail and ears are subject to frost bite in northern latitudes and in many cases, when subjected to severe frost bite, they actually can lose the tips of their tails as well as the margins of their ears.

Although often maligned as dimwitted scavengers, opossums are extremely

fascinating and adaptable animals. Opossums are omnivorous and opportunistic. They will eat just about anything, from carrion and insects to fruits and garbage. They will even feast on road kills of their own kind. Their ancestry dates back to at least the age of the dinosaurs some 50-70 million years ago. Although good climbers thanks to their monkey-like prehensile tails and opposable toes on their hind feet that act like thumbs for holding on to branches, at ground level opossums are not fleet of foot. While on the ground they waddle at a relatively slow pace which makes them very vulnerable to predators. Opossums are not typically aggressive, even though they have a set of 50 teeth, more teeth than any other land animal in North America. Their first defense is to run, but when overtaken, they often fall over and feign death. Hence, the origin of the term "playing possum." Actually, this is not an act. Opossum brains are small and simple in structure. A cat of approximately the same size will have a brain five times larger. Excessive fear can cause the opossum's nervous system to overload and go into a temporary nervous shock resulting in an involuntary paralysis upon which they fall over on their side, eyes closed, lips drawn back with tongue protruding and dripping saliva. They may also defecate a very foul-smelling substance from their anal glands. All of these defense mechanisms can discourage a predator; part of a survival strategy for the species.

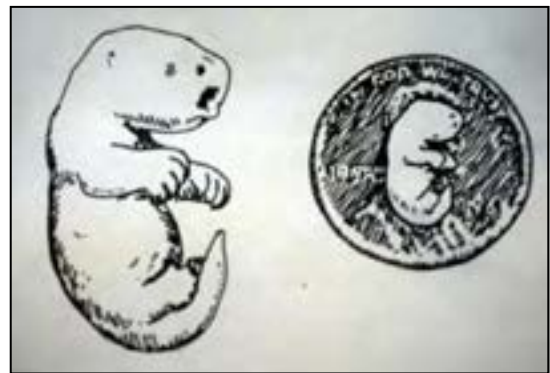


Opossum (*Didelphis marsupialis*)

While most people are familiar with marsupials or pouched animals like the kangaroos of Australia, few may realize that opossums are also marsupials, the only marsupial native to North America. Female opossums have a fur lined pouch on their bellies. The young are born only 13 days after breeding. They emerge as virtual under developed embryos with well-developed mouths and front legs. At birth, each is only about the size of a honey bee.

The average litter of 16 will easily fit into a tablespoon. Their clawed strong forelimbs are essential for pulling themselves through their mother's coarse hair along the treacherous three inch journey from the womb to the safety of her pouch. Only about half will make it to the pouch. Those that do quickly attach to one of the 13 nipples which then swell in the baby's mouth holding it secure for the next 10 weeks while they

develop and grow. By the 10th week, the youngsters will have grown to about the size of a mouse and are able to leave the pouch for short excursions clinging to their mother's back. After the 16th week, they will drop off and set out on their own. There are usually two broods each year which adds to the opossum's survival rate as a species since in the wild few opossums survive beyond two years. Most are killed



At birth, each opossum is only about the size of a honey bee.

by cars as they cross highways at night or caught feeding on road kills in the middle of a highway.

~ Guy Denny

ONAPA's 2016 Stewardship Assistant— Brett Allarding

Ever since I was a little girl I have had a passion for the outdoors; not just for the animals and the flowers, but the places as well. I loved visiting different parks and seeing what was unique about each one. When I went to college, I decided to make this passion into a career by choosing a degree in environmental biology. Throughout those years, I worked in a paleontology lab studying fossils from Africa and studying abroad in Edinburgh, Scotland. Here I was able to study environmental sustainability and also worked as a volunteer ranger on the side of a volcano (dormant, of course) where I removed invasive species from the park. I received my degree in environmental biology at Ohio University in December 2015 and went to work part-time for the Columbus and Franklin County Metro Parks soon after.

In May of 2016, my advisor at Ohio University told me about a unique job position available with an organization called ONAPA. I interviewed with Jennifer Windus soon after and signed my six-month contract on June 15, 2016. Since that day, I have been on 29 different ONAPA trips that include 10 stewardship projects, Ohio Invasive Plant Council Workshops, prairie fringed orchid surveys with the USFWS, preserve monitoring studies, and working at the State Fair DNAP Prairie. All of this adds up to 256 hours of work at 2 state parks, 2 wildlife areas, 21 state nature preserves; and of course, 289 species of plants!



Eastern Prairie Fringed Orchid

Up until October 27th, my favorite preserve was Clifton Gorge, the scenery was beautiful and we accomplished so much on that stewardship project despite the heat and humidity. However, on October 27th while completing preserve monitoring reports with Jennifer Windus and Jeff Johnson, I discovered a stray kitten in Fowler Woods (needless to say, I took her home and the rest was history). I believe one of our biggest stewardship accomplishments was at Brinkhaven Oak Barrens in Holmes County. I visited this site a couple months back and the opening we looked at was full of sumac and hawthorn that was easily 10 feet tall. After a long, hard day of work with volunteers (and a lot of chainsaws), we got a large portion of that opening cleared in October – it is ready for the return of prairie species next year.



Brett Allarding

On all the trips I have gone on to learn plant species, I usually take a picture for reference that I later print at home. Looking at those pictures, I have tried to select a few of my favorites (which is a hard process when there are so many to choose from); however, there are a few that stand out. These include the Federally threatened Eastern prairie fringed orchid (seen in a few sites in Northern Ohio), common dodder (Springville Marsh), round-leaved sundew (Prairie Road Fen), swamp thistle (Gallagher Fen), fringed gentian (Campbell), and wand lily (Prairie Road Fen). Visiting these sites and seeing all of the unique species at each place is why I chose a career in this field and I am so thankful that ONAPA has given me the opportunity to pursue this passion.

~ Brett Allarding

NOTE:

The ONAPA Board began the Stewardship Assistant program this year to provide opportunities to a recent college graduate to gain more experience in natural areas management, preserve monitoring, and rare plant surveys, as well as providing ONAPA with assistance specifically with our stewardship projects. Brett has been a perfect fit for this first contract as she has a part-time job and can accomplish ONAPA projects during her other free time. Her education and experience make her well suited to this position, so she is accomplishing a lot for ONAPA, USFWS, and DNAP while adding to her skill set and potential job opportunities.

Wintercreeper

Wintercreeper (*Euonymus fortunei*) is an evergreen trailing shrub or climbing vine from Asia that is easily propagated and widely used as a groundcover by landscapers. In "The Woody Plants of Ohio", published in 1961, E. Lucy Braun noted that the plant had escaped from cultivation in Ohio. Wintercreeper can form a dense ground cover in forests, where it is a serious threat to native plant abundance and diversity. The vine climbs trees where it flowers and then produces seeds. Birds eat the seeds and disperse them into natural areas through their feces. Wintercreeper can also spread into natural areas by creeping in from surrounding residential and commercial properties where it was planted. It was determined to be 'Invasive' by the Ohio Invasive Plant Council's Assessment Team in 2016 (www.oipc.info).



Wintercreeper planted as groundcover in Cincinnati.
Photo by D. Conover

Over the past few years, natural areas in southwestern Ohio have experienced an explosive increase in wintercreeper. In some areas, deer eat large amounts of the plant, especially in the winter. This helps to slow its spread, but does not prevent it from resprouting. It is becoming widespread in natural areas throughout the state, particularly where they are near residential areas. While partial control of wintercreeper can be achieved by physical removal of runners, dense mats require herbicide treatment. Because wintercreeper is

evergreen, we tested whether foliar application of herbicides on mild days in late winter, before

native plants leaf out, controlled the spread of winter-creeper in natural areas. Wintercreeper can be difficult to control due to its waxy leaves, so it is



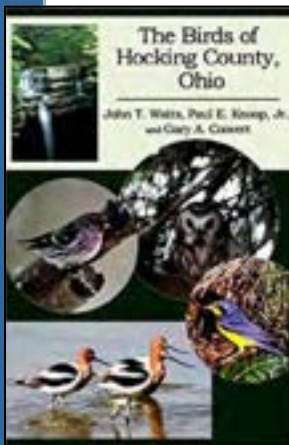
Invasives in forest gap resulting from cutting down ash trees in a wooded nature preserve in Cincinnati.
Photo by D. Conover.

important to use the appropriate herbicide at a time of year when damage to native plants will be minimized.

We tested this method in two different wooded natural areas in Hamilton County, Ohio, with two different herbicides: glyphosate [2% glyphosate solution with an added surfactant (79.9 ml Honcho Plus and 14.8 ml dishwashing liquid) per 3.8 L water] and triclopyr [2.5% triclopyr solution with an added nonionic surfactant (156 ml Garlon 4 Ultra and 74 ml RRSI NIS surfactant (Red River Specialties Inc.) per 3.8 L of water)] (Conover, Geiger and Sisson 2016). Glyphosate is a non-selective herbicide that may kill or harm any plant it contacts. Triclopyr is selective, affecting only broadleaf plants. To kill wintercreeper with foliar spraying, most of the leaves must be treated. After the snow melted in early March 2015, at temperatures above 10° C (50° F), we sprayed wintercreeper using a fine spray so little ran onto the ground, but most of the leaves were covered. We minimized herbicide exposure of the buds, bark or roots of saplings of native trees and shrubs.

It was confirmed that wintercreeper is susceptible to winter foliar spraying with glyphosate because it

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The Birds of Hocking County Ohio

By John T Watts, Paul E. Knoop Jr., Gary A. Covert

Hocking County is one of the natural jewels of Ohio, favored as it is with impressive geological and biological diversity, and within that setting occurs one of the most diverse and accessible populations of birds to be found in the state. The Birds of Hocking County, Ohio provides an overview of the natural environments of the county and reviews the history of bird studies there and changes that have occurred in the bird life as the environment of the region has changed. A summary chapter identifies and describes the prime birding sites within the county, most of which are accessible to the public. Available on www.amazon.com.

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Wintercreeper cont'd

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failed to sprout normally with the return of warm weather in spring. It displayed very slow, distorted growth, and eventually most of the leaves died. Glyphosate did not kill the dormant native plants; many native plants were observed growing in the sprayed areas a few weeks after spraying. Foliar spraying with glyphosate may be required again during one or more subsequent winters to totally eliminate wintercreeper from a natural area. Foliar treatment with triclopyr killed an estimated 95% of the winter creeper, and also did not kill the dormant native plants.

We also performed a separate cut-stump treatment on wintercreeper vines climbing up trees. We sawed vines off at close to ground level and a few inches above the first cut. We removed the cut section and immediately treated the cut stump with herbicide, especially the area just inside the bark around the entire circumference. This can be done in the winter (preferably above 0° C (32° F)) or at other times of the year, with the exception of early spring, when rising sap may prevent the uptake of herbicide. For cut-stump treatment, we used a solution containing 20.5% glyphosate and 7.5% surfactant (1:1 Drexal

Imitator Plus and water). The cut-stump treatment was effective; it killed roots and prevented resprouting. Upper portions of the vines stayed green for a while, but eventually died.

Wintercreeper can be a significant problem in natural areas and nature preserves, covering the ground and other vegetation, as well as climbing into tree canopies. Manual control is very labor-intensive, while herbicide application must be done at the appropriate time of year to minimize damage to native vegetation. This research documents three (3) methods of effective herbicide control which can be used carefully and selectively in Ohio's natural areas.

Reference:

Conover, D. G., D. R. Geiger and T. Sisson 2016. Dormant season foliar spraying slows the spread of winter creeper, English ivy, and lesser periwinkle in wooded natural areas. *Ecological Restoration* 34:19-21.

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 Jennifer Windus, ONAPA Vice-president (only minor revisions to Denis's original article for OIPC)



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