



ONAPA NEWS

Dedicated to promoting, protecting, and improving Ohio natural areas and preserves.

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Caesar Creek State Nature Preserve

The growing concern for natural area preservation led to the initiation of a statewide survey by the Ohio Biological Survey which enlisted Dr. J. Arthur Herrick of Kent State University to visit and compile a list of unique natural areas still existing in the state. This project began in December of 1958 and continued until 1965. Dr. Herrick's work resulted in a report produced by the Ohio Biological Survey which was entitled "The Natural Areas Project-



May apples at Caesar Creek State Nature Preserve
Photo by Ian Adams

A Summary of Data to Date" in 1965. This publication listed 212 sites worthy of consideration for preservation and Dr. Herrick personally visited 112 of these sites during the project. Caesar Creek Gorge was listed as one of these sites because of its limestone gorge with Ordovician fossils.

The urgency of acquiring the gorge as a nature preserve was due to the construction of Caesar Creek Reservoir. Although this project was authorized in the Flood Control Act of 1938, the dam construction by the U. S. Army Corps of Engineers wasn't started until 1971. Upon completion in 1978, the Corps leased the lands around the reservoir to the State of Ohio which established Caesar Creek State Park. The park has 7,941 acres and includes 2,830 acres of water for recreation.

The protection of the gorge below the Reservoir as a preserve began in 1971 while the dam was being constructed. The Division of Wildlife was interested in seeing that the area below the dam was saved for tailwater fishing and the Natural Areas Program wanted to preserve the two mile section of the river below the dam to save this special natural area and its fossils from development. ODNR was able to obtain a Land & Water Conservation Fund Grant from the U.S. Bureau of Outdoor Recreation on October 17, 1972 for this project. The total federal grant for this

project amounted to \$153,344 to match state funding on a 50/50 basis as required by law.

The object of this project was to preserve the visual corridor of the stream from the dam to the Little Miami State & National Scenic River and involved the acquisition of all or parts of 19 properties along the stream. The first property was purchased on January 25, 1972 and the last property was purchased on July 30, 1976. An addition of 27.5 acres of land that was originally purchased as part of the Caesar Creek Scenic River site was transferred to Caesar Creek Gorge Nature Preserve on January 28, 2010 resulting in a total of 488.34 acres for this preserve.

An interesting fact is that during the initial four year period of acquisition of the preserve, the value of the land appraisals rose from \$406/acre with one of the first purchases in 1972 to \$1,695/acre by the end of the project. The Caesar Creek

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Forsythia of the Woodlands

Just as the vibrant yellow blooms of the Forsythia adorn our yards in early spring, well before the leaves appear on this familiar ornamental shrub, so too in our Ohio woodlands, a similar but less spectacular floral display is taking place announcing the end of winter and welcoming in spring; the blooming of Spicebush (*Lindera benzoin*). Spicebush is a common woodland shrub typically occupying moist, rich soils throughout Ohio. It blooms around the same time as forsythia in early April and just like forsythia, its flowers make an appearance well before its leaves. It tends to be mostly dioecious with male and female flowers borne on separate plants. The numerous compact clusters of tiny, yet attractive, spicy-scented, yellow flowers emerge from along the length of the branchlets tending to outline them.

Spicebush has a reputed medicinal value as well as a source of herbal tea. The prime medicinal use of spicebush by Native Americans as well as settlers, has been to reduce fever. Its specific epithet “*benzoin*” is an old name for some members of the Laurel Family (*Lauraceae*) to which it belongs. Benzoin of the drug trade is a balsamic resin used in medicine and perfumes as well as an incense and is derived from Asiatic trees in the genus *Styrax*. Spicebush is not a source of benzoin, yet when the leaves, twigs, and fruits are scratched, all are fragrant with a conspicuous and distinctive spicy aroma from which this species gets its common name. An aromatic

tea can be made by steeping the young leaves, twigs and bark for about 15 minutes.

By August, the flowers are replaced by bright, shiny, red, berry-like drupes, as they are called. During the

Revolutionary War, dried ground spicebush berries were used as a substitute for allspice which had previously been imported from England. During the Civil War, the northern blockade of the South prevented southerners from importing tea. In the place of foreign teas, southerners used tea made from spicebush.

The fruits are especially colorful in contrast to spicebush leaves that turn yellow in autumn. The fruits may remain after the leaves have fallen, that is, if they are not eaten. The fruits are not sweet but rather pungent because they are high in a fat known as lipid. Lacking sugary carbohydrates, they are not appealing to mammals. However, long-distance migrant birds such as thrushes and catbirds relish them. Since there are no fattening sugars in these fruits, only lipid, migrants don't pick up additional weight which would make their long journey that much more

difficult. Instead, lipid is an ideal food for migrating birds since it has roughly twice the energy per unit of weight as a sugar-laden carbohydrate fruit. Migrants can store a lot of fuel with relatively little weight gain. Spicebush is easy to identify simply by smelling a crushed leaf or broken twig.

~ Guy Denny



Spicebush (*Lindera benzoin*) fruit



Spicebush (*Lindera benzoin*) flower

Ohio Botanical Symposium, March 24, 2017

Villa Milano Banquet and Conference Center, Columbus, Ohio

The flora of Great Lakes alvars; geology and flora of a meteorite crater in southwest Ohio; the status of our eastern deciduous forest; medicinal plants; lady's-slipper orchids; lichens and best plant discoveries will be highlighted at the 2017 Ohio Botanical Symposium on Friday, March 24. The event also features a media show and displays from a number private and public conservation organizations, as well as vendors offering conservation-related items for purchase. More than 400 botanical enthusiasts attend this every-other year event. Registration is open at <http://naturepreserves.ohiodnr.gov/obs>.



GARLIC MUSTARD: A Premier Woodland Invader

Many ONAPA members probably know what garlic mustard is and how invasive it can be in Ohio's woodlands. Some ONAPA members may have participated in a stewardship project to help remove it from a state nature preserve. This spring we have 5 stewardship projects scheduled to pull garlic mustard at preserves with good spring wildflower displays – Christmas Rocks, Rhododendron Cove, Miller Preserve, Lake Katharine, and Collier Preserve. Preserve managers are working hard to maintain the best spring wildflowers we have in the preserves and we can help! We can also help by spreading the word to others about garlic mustard and its threats to native woodland plants.



Garlic mustard

Garlic mustard (*Alliaria petiolata*) is a biennial herb that emits a garlic-like odor from crushed leaves. In the first year, a rosette of kidney-shaped leaves hug the ground and remain green throughout the winter. Sharply-toothed, triangular leaves form on the 2-4' tall stems during the second year. White flowers with four petals bloom in clusters at the end of the stem from late April to mid-June. The fruit is a long, green capsule that turns brown as the seeds mature. As the plant dies, the long, brown seed capsules split and release hundreds of seeds.

Garlic mustard was introduced from Europe for herbal and medicinal purposes. In 1868, it was first recorded in Long Island, New York. It now has been recorded from nearly every county in Ohio. Garlic mustard prefers some shade in mesic upland and floodplain forests, savannas, pastures, lawns, and along fencerows and roadsides. It invades forest edges and progresses into the interior along streams and trails. In woodlands, garlic mustard reduces the growth of wildflowers in the early spring before the canopy leafs out. It produces large quantities of seeds that can remain viable for up to 10 years. Seeds are dispersed by water or transported by animals and humans.

Garlic mustard can be controlled by several different methods, some of which are more effective than others. Hand-pulling is effective in smaller infestations. Care must be taken to ensure that the entire plant, including the root system, is removed and all plant materials are bagged and taken off-site. The plant can continue to mature and produce seeds even after it has been pulled. Cutting stems when flowering can be effective in larger populations. The stems should be cut low to ensure that flowering is hampered. Control in the spring, targeting first-year rosettes and second-year plants before they flower, is generally most effective. Removing only second-year plants will likely increase the survival and growth of rosettes, and is unlikely to control a population significantly. In large populations, using a low concentration of a

systemic water-based herbicide such as Roundup, Glypro, or AquaNeat, combined with a surfactant, to spray the leaves is very effective. This treatment can be conducted even in winter (to kill overwintering rosettes), as long as the temperature is at least 50 degrees F and the area remains dry for 8 hours. Extreme care must be taken not to apply the herbicide on desirable plants as these products are non-selective. Herbicide application to the first-year rosettes in the late fall, winter, and early spring will minimize impacts to non-target species while they are dormant. Depending on the density of the infestation and its distribution, you may want to use a combination of these techniques.

Be on the lookout for this intrusive, non-native plant which threatens the native plant diversity of our woods. It is best to control it early when the plant numbers are low, before it gets a stronghold in your woods. We hope to see you this spring on an ONAPA stewardship project to help eliminate it.

~ Jennifer Windus

Stewardship in Action for 2017

You can find project details at <http://www.onapa.org/stewardship-projects.html>
In order to properly prepare, we ask that you preregister for projects.

DAY	DATE	RAIN DATE	PRESERVE	COUNTY	REGION	PROJECT TYPE
Wed	29th March	30th March	Rhododendron Cove	Fairfield	SE	Garlic mustard control
Thurs	6th April	7th April	Christmas Rocks	Fairfield	SE	Garlic mustard control
Tues	25th April	27th April	Lake Katharine	Jackson	S	Garlic mustard control
Wed	3rd May	4th May	Miller Preserve	Highland	S	Garlic mustard control
Thurs	17th May	18th May	Collier Preserve	Seneca	NW	Garlic mustard control
Sat	3rd June	None	Blackhand Gorge	Licking	E	Volunteer field training
Sat	10th June	17th June	Daughmer Savannah	Crawford	NW	Teasel & other invasive control
Wed	21st June	22nd June	Clifton Gorge	Greene	W	Woody invasives on Scientific side
Sat	8th July	None	Daughmer Savannah	Crawford	NW	Teasel & other invasive control
Sat	22nd July	16th August	Jackson Bog	Stark	E	Woody invasives, cattail, loosestrife
Wed	9th August	10th August	Myersville Fen	Summit	E	Woody invasives, willow-herb
Wed	23rd August	24th August	Gott Fen	Portage	NE	Woody invasives
Wed	30th August	31st August	Karlo Fen	Summit	NE	Woody invasives
Sat	9th September	16th September	Gallagher Fen	Clark	W	Woody invasives on hillside & fen
Wed	20th September	21st September	Springville Marsh	Seneca	NW	Cattail, woody invasives
Wed	27th September	28th September	Kent Bog	Portage	NE	Buckthorn, other woody invasives
Wed	11th October	12th October	Meilke Rd Savanna WA	Lucas	NW	Woody species sprouts in savanna
Sat	21st October	1st November	Brinkhaven Barrens	Holmes	NE	Invasive woody species
Wed	25th October	26th October	Kiser Lake Wetlands	Champaign	W	Invasive woody species
Wed	8th November	9th November	Medway PFO site	Clark	CEN	Invasive woody species
Sat	18th November	29th November	Bonnett Pond Bog	Holmes	E	Invasive woody species



New OIPC Brochure Available Now !

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

This exciting new OIPC brochure on alternatives to invasive plants is now available from the Ohio Invasive Plants Council. The brochure was completed with funding from The Columbus Foundation in cooperation with The Dawes Arboretum and the Ohio Nursery & Landscape Association. The brochure includes information about 15 invasive plants and recommends 3-4 alternatives for each species for use in landscaping and habitat restoration. See the OIPC website at www.oipc.info for more information.

Member Field Trips for 2017: April to June

ONAPA members must preregister for each field trip.

Field trip details and registration can be found at <http://www.onapa.org/onapa-field-trips.html>

Saturday, April 8, 2017, 10 a.m.

Moss and Liverwort Identification

Conkles Hollow State Nature Preserve

Leader: Dr. Barbara Andreas.

Limited to the first 20 participants.

Meet at the Conkles Hollow State Nature Preserve Parking lot 24858 Big Pine Road, Rockbridge, Ohio at 10:00 a.m. We will carpool a short distance to Crane Hollow State Nature Preserve.

Saturday, April 22, 2017. 10 a.m.

An In-depth Look at the Woodland Wildflowers of Knox County

Fredericktown, Ohio

Leader: Guy Denny, retired DNAP Chief & ONAPA president

Meet at Guy Denny's Fredericktown, Ohio residence 6021 Mt. Gilead Road Fredericktown, Ohio.

Limited to the first 20 registrants.

Wednesday, April 26, 2017, 10 a.m.

An In-depth Look at the Woodland Wildflowers of Knox County

Fredericktown, Ohio

(A weekday repeat of the above program.)

Leader: Guy Denny, retired DNAP Chief & ONAPA president

Meet at Guy Denny's Fredericktown, Ohio residence 6021 Mt. Gilead Road Fredericktown, Ohio.

Limited to the first 20 registrants.

Sunday, April 30, 2017, 8 a.m.

Early Spring Birding in the Hocking Hills

Clear Creek Metro Park

Leaders: Naturalists John Watts and Marcey Shafer.

Meet at Clear Creek Metro Park's Creekside Meadows Parking lot. After the tour at Clear Creek, John will take ONAPA members to Lake Logan State Park to search for other migrating species. Many rarities show up at Lake Logan this time of year.

Saturday, May 6, 2017, 10 a.m.

Explore the Spring Wildflowers of Shawnee State Forest

Leader: Adams County Field Naturalist, Dave Kuehner.

Meet at the Shawnee State Park Lodge parking lot.

Tuesday, May 16, 2017, 10 a.m.

Visit Kelleys Island to explore the Lakeside Daisy Recovery Effort

Leader: Lakeside Daisy expert and ONAPA Vice President Jennifer Windus.

Meet at the Resthaven Wildlife Area prairie parking lot. We will first visit the site of the small white lady slippers which should be in bloom, and then head for the Kelleys Island Ferry in Marblehead to catch the ferry to Kelleys Island.

Saturday, May 27, 2017, 10 a.m.

Ferns and Wildflowers of Salt Fork State Park

Leader: Naturalist and Director of the Gorman Nature Center, Jason Larson. Meet at the main Salt Fork State Park office parking lot.

Monday, June 12, 2017, 10 a.m. (Rain date of Wednesday June 14th)

Dragonflies and Damselflies of Northeastern Ohio

Singer Lake & Jackson Bog

Leaders: Judy Semroc and Larry Rosche two of the foremost experts on identifying odonates in Ohio. We will meet at Singer Lake in Summit County.

Limited to the first 16 registrants.



Income Tax Checkoff Program Helps Protect Ohio's Natural Resources



As you begin to sort through your receipts and deductions in anticipation of the April 15 tax filing deadline, you have the opportunity to donate a portion or all of their state income tax refund to support Ohio's wildlife and Ohio State Nature Preserves. These tax donations support programs that restore our endangered and threatened wildlife and help protect the beautiful natural areas at our Ohio State Nature Preserves.

Caesar Creek State Nature Preserve (cont'd)

(Continued from page 1)

Gorge Natural Area was dedicated as a State Nature Preserve on January 2, 1975. It was the third preserve to be purchased with natural area land acquisition funds.

This preserve's prime feature is the deeply incised gorge which was formed by glacial meltwater cutting down through the Ordovician strata of limestone and shale creating cliff walls which rise nearly 180 feet above Caesar Creek. The preserve has a diversity of habitats including successional fields, forests of beech, maple, oak and hickory and floodplains of sycamore, cottonwood, and willow with rich herbaceous flora. A variety of prairie species including prairie-dock, gray-headed coneflower and prairie grasses are also found on the shallow soils of the cliffs along the gorge. In addition, several unusual species are known to inhabit this preserve as well and include sweet Indian-plantain, heavy sedge, large summer bluets, glade mallow and Carolina willow.

The Ordovician limestone contains a variety of fossil marine animals that lived about 438 million years ago including brachiopods, pelecypods, horn corals, crinoid stems, gastropods, cephalopods, bryozoans, and occasionally trilobites. The latter are considered rare and vary in size from less than inch (*Flexicalymene meeki*) to as large as 2 feet long (*Isotelus maximus*). Generally you will find them rolled up with their tail shield fitting snugly against the head or unfortunately, in fragments especially with the larger species. In 1985, *Isotelus maximus* was designated as the official State Fossil of Ohio.

Caesar Creek Gorge Nature Preserve is located 3 miles north of Oregonia on Corwin Road on the east side of the Little Miami River. The upper end of the gorge can also be reached via the roadway to the dam in Caesar Creek State Park. Facilities include parking lots and restrooms at both ends of the gorge and 2.3 miles of hiking trails on the preserve. Plan to visit this beautiful preserve this year!

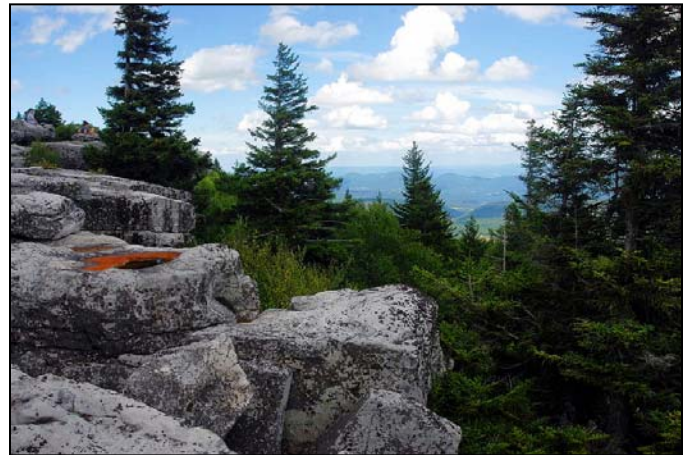
~ Dick Moseley

ONAPA Out-of-State Field Trip 2017

The destination for the 2017 out-of-state ONAPA naturalist lead field trip will be West Virginia. On Wednesday, June 28, 2017, participants will meet at the Seneca Rocks Visitor Center in the Monongahela National Forest and from there proceed to Dolly Sods Recreation Area where we will spend the rest of the day exploring this fascinating ecological region. The 17,371 acre Dolly Sods Wilderness is part of the National Wilderness Preservation System. The Dolly Sods Wilderness contains much of the Red Creek drainage and contains bogs and heath eco-types more typical to southern Canada. That evening, participants will return to their lodging sites in Elkins, West Virginia, or the Canaan Valley State Park Lodge or elsewhere.

On Thursday, June 29th, we will meet at the Cranberry Visitor Center and explore the Cranberry Glades Botanical Area. This 750 acre botanical area contains four peat bogs whose unique plant and animal life, including orchids and carnivorous plants, is similar to wetlands found in Canada. A half mile loop boardwalk with interpretive signs, provides visitor access. We will be departing for home the next day on Friday, June 30th.

As was the case for our 2015 ONAPA out-of-state field trip to the Upper Peninsula of Michigan, participants will be responsible for providing their own transportation, meals and lodging. ONAPA board members will lead the field trips. **Participation will be limited to the first 30 individuals who sign up on the ONAPA website.** Once signed up for the field trip, participants will be notified as to whether or not they made the cutoff, and if so, they will be provided with more detail information. Registration for this trip will open soon.



Dolly Sods Wilderness in the Monongahela National Forest

Thank You for Your Support! Newest Members & Donors

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Tecumseh Land Trust

Terry & Lori Totman
Turkey Run Heritage Farm
Howard L. Ulman
Gene A. Wimmer

As of 01/01/2017

Notice to Members: Help us to keep our ONAPA membership records up to date by notifying our secretary, Dick Moseley of any changes in your home address, e-mail address, or phone number by emailing info@onapa.org. Your cooperation on this matter is most appreciated. Thank You!

Dr. James Bissell Receives Award



A long time asset at the Cleveland Museum of Natural History (CMNH), Jim Bissell has earned the nick-name: the Undeveloper. Key properties hosting abundant native plant life have been protected from development, thanks to Dr. Bissell's efforts. From the CMNH website, "When Bissell became the Natural Areas Coordinator in 1976, he began adding to the Museum's portfolio of eight properties. Today there are more than 50 natural areas under Museum protection, harboring the finest examples of rare habitats in the region, and the state."

Jim serves both on the ONAPA board and scientific committee. He is one of the best known botanists in the State of Ohio, and has contributed significantly to Ohio's rare plant database. He has documented many species that were thought to be extirpated or never before recorded from our state.

Dr. Bissell was honored with a plaque by ONAPA and Flora-Quest to recognize the many acres of land that have been conserved due to his efforts. We thank Jim for his continuing efforts on behalf of Ohio's natural areas and the rare plants within.

~ Cheryl Harner

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Did You Know . . .



Skunk cabbage (*Symplocarpus foetidus*)

generated by the plant not only enables the plant to access direct sunlight by melting snow cover while at the same time protecting the flower head from extreme cold weather, but also seems to intensify its odor and therefore helps attract pollinators.

The earliest of all our native Ohio wildflowers to bloom is Skunk Cabbage (*Symplocarpus foetidus*). It almost always has mature flowers in February and is usually finished blooming by the time the more showy woodland wildflowers are at their peak. The previous year's large leaves, often 1-2 feet long and 1 foot wide, manufacture enough food which is then stored in the roots when the plant goes dormant in autumn, to allow this species to get a "jump start" on blooming. The flower heads are actually formed underground in autumn and then begin to slightly emerge through the ground prior to the start of winter. In late winter, as growth accelerates with the lengthening days, the heat generated by cellular respiration from its rapid growth is sufficient to enable the skunk cabbage to actually melt the snow and ice from around it. Temperature within the flower head have been recorded to be 27 degrees Fahrenheit warmer than the surrounding air. Apparently the heat

~ Guy Denny



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