



ONAPA NEWS

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VOLUME 3 ISSUE 1

WINTER — 2016

By Tim Snyder

"We are dedicated to promoting, protecting, and improving Ohio natural areas and preserves for educational, charitable, and scientific purposes."

2015 ONAPA in Review

The Ohio Natural Areas & Preserves Association (ONAPA), an all-volunteer, non-profit organization, made significant advancements this past year which we would like to share with you. We will continue to build upon these achievements as the organization, with your help, continues to grow and prosper.

One of the most, if not the most important role of ONAPA, is to provide assistance with habitat management in nature preserves, especially the control and removal of invasive species which pose an extremely serious threat to the biological integrity of all nature preserves. Under the direction of Jennifer Windus and Tim Snyder (Resource Protection Committee co-chairs) in cooperation with Jeff Johnson, administrator of the Natural Areas Program for the Ohio Department of Natural Resources (ODNR), ONAPA volunteers completed 11 day-long stewardship projects in several state nature preserves throughout the year. An additional project to remove woody species at Brinkhaven

Barrens Nature Preserve, owned and managed by the Killbuck Watershed Land Trust, was conducted in October. ONAPA Secretary Dick Moseley, who lives near Morris Woods State Nature Preserve, mowed and kept the preserve trails there in good shape throughout the summer. ONAPA President, Guy Denny along with Jan Kennedy devoted countless hours controlling invasive species at Daughmer State Nature Preserve during the growing season. As we are able to recruit more volunteers, we intend to expand our stewardship efforts accordingly.

The Preserve Monitoring Program under the direction of Jan Kennedy completed another successful year. As ONAPA members visit various state nature preserves, they are encouraged to download the preserve



State Rep. Mark Romanchuck, Cheryl Harner, Guy Denny and State Rep. David Hall.

monitoring form from our website and fill it out, noting problems and observations made during their visit. That information is then sent to Jeff Johnson who, in turn, forwards the monitoring reports to the responsible preserve managers. There are more preserves and fewer preserve managers now than at any time in the history of the program. Consequently, the Preserve Monitoring Program is a great way of providing an extra set of eyes to help the preserve managers know what is going on in the preserves when they are not able to be there.



Guy Denny at ONAPA 2015 Michigan tour.

While it is not difficult for preserve monitors to recognize and report vandalism, needed facility repairs, trails blocked by falling trees, flooding and other obvious problems, few

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2015 ONAPA Year In Review

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volunteers have the expertise to identify invasive species which might be present. To address that situation, ONAPA provided our first invasive species training session for volunteers last spring at Gorman Nature Center in Richland County. Additional training sessions will be scheduled during the coming year.

ONAPA volunteers also partnered with other organizations. For the last three years, ONAPA volunteers have assisted the U.S. Fish & Wildlife Service with monitoring populations of the federally threatened Eastern prairie fringed orchid in Ohio. During this same period, ONAPA volunteers also assisted the U.S. Fish & Wildlife Service with efforts to establish new populations of the federally threatened Lakeside Daisy, moving plants and seeds from the active LaFarge Quarry on Marblehead Peninsula to abandoned quarries in the state park on Kelleys Island where they will receive permanent protection. ONAPA volunteers also worked with



ONAPA Stewardship at Lake Katherine.

Columbus Audubon's Service in the Preserves Program, the Ohio Heritage Garden at the Governor's Residence, and the Sawmill Wetlands "Think Spring Event in Columbus" where they helped plant a prairie patch.

In 2011, ONAPA Volunteers assumed responsibility for the year-around maintenance of the ODNR State Fair Prairie Display in order to free up Natural Areas staff. This prairie garden requires year-around maintenance to look its best during the state fair, and continues to be an on-going work project for ONAPA.

Significant donations from several key donors during this past year allowed ONAPA to provide funding for some key projects. ONAPA formed a partnership with the Ohio Invasive Plants Council (OIPC) to help fund research by college graduate students on invasive plants. OIPC had a well-designed small grants program in place, but with limited funding available. The ONAPA board approved joining forces with OIPC by providing \$3,000 for the grants program. The Cincinnati Wildflower



ONAPA Stewardship Project on the new tract at Chaparral Prairie.

Preservation Society, an organizational member of ONAPA, gave an additional \$1,000 to OIPC for this program.

ONAPA was also able to donate \$3,000 to the Arc of Appalachia, a non-profit land trust, to help acquire 60 acres of high quality prairie contiguous to Chaparral Prairie State Nature Preserve. The 60 acres will be managed by ODNR as part of Chaparral State Nature Preserve. ONAPA and the Cincinnati Wildflower Preservation Society each donated \$500 to



ONAPA display.

ODNR for a detailed botanical inventory of Travertine Fen State Nature Preserve in southwestern Ohio which was completed this field season. ONAPA also made financial donations to help sponsor the Ohio Botanical Symposium in March, The Biggest Week in American Birding in May, the Midwest Native Plant Society Meeting in July, the 2015 Flora-Quest event at Malabar Farm State Park in August, and the Cleveland Museum of Natural History's 12th Annual Conservation Symposium in September. The ONAPA informational display was present at each of these events and helped inform the public about the goals of our organization.

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2015—ONAPA Year in Review

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This past September, ONAPA held its very first legislative reception to acquaint and familiarize Ohio legislators with ONAPA and the work we do. The event was held in Columbus and had a very good turnout. We were especially pleased that Senate President Keith Faber, Senate Majority Whip Larry Obhof, and senators Bob Patterson, and Frank LaRose were among those in attendance. The event was co-hosted by former ODNr directors Joe Sommer and Fran Buchholzer who are also members of ONAPA.

As part of our legislative outreach, ONAPA joined forces with Flora-Quest at Malabar Farm to jointly recognize State Representative David Hall (House District 70) and State Representative Mark Romanchuk (House District 2) for their support of conservation efforts that both Flora-Quest and ONAPA support.

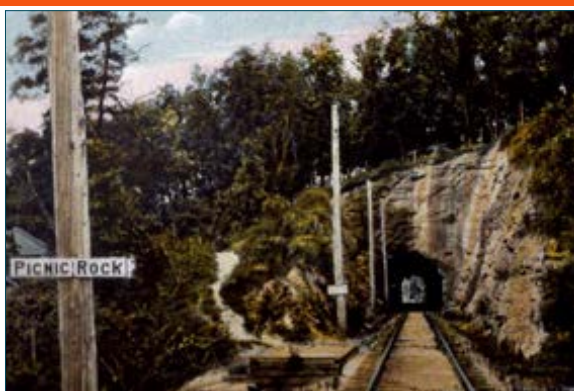
In early July, ONAPA offered its first out-of-state field trip for members—a 3-day excursion to the Upper Peninsula of Michigan to study the ecology of bogs and fens within the boreal forest. Rounding out the year was our third annual banquet and meeting held at the Dawes Arboretum in Newark, Ohio. Outstanding photographer and naturalist, Ian Adams was the keynote speaker for this very successful event. The Dawes Arboretum, an organizational member of ONAPA, was an excellent host for this banquet which more than 80 people attended. Last, but not least, during the past year ONAPA volunteers published 4 newsletters, maintained an active website, presented numerous programs across the state, and conducted 14 natural history field trips for our members. It was an active and successful year, and with your help, 2016 will be even better.

Guy Denny with Dick Mosely

Blackhand Gorge State Nature Preserve

Standing in the parking lot at Blackhand Gorge State Nature Preserve, you are on the original site of the village of Toboso. Most of the community was moved to higher ground south of the school along Toboso Road during the construction of Dillon Dam because the area would be flooded whenever the reservoir reaches maximum capacity during major storm events. The U. S. Army Corps of Engineers built the dam on the Licking River to help prevent flooding downstream within the watershed of the Muskingum River. Construction began in 1946, but a shortage of funds and the outbreak of the Korean War halted work until 1958 when construction began again. The project was eventually completed in June of 1961. The original village of Toboso is listed on the 1866 Licking County atlas, but it may actually have been built when the railroad was constructed in the 1850's.

The preserve was acquired from Marie and Lilian Hickey on July 18, 1973. They sold 565.42 acres for \$166,813.00 which was \$295.00/acre. On January 1, 1982, they donated another 186.84 acres to the preserve. Their holdings of 752.26 acres represents 79% of the 957-acre preserve. This natural area was dedicated as an Interpretive Preserve on September 20, 1975 and was the ninth area acquired with natural area funds. It has a variety of habitats including a buttonbush swamp, upland forests of oak, hickory, Virginia pine, and mountain laurel, and riverine forests and floodplain. Yellow birch, sweet birch, and eastern hemlock are found in the moist environs of the gorge. Historically, this is the location where the Black Hand Sandstone was first named and described. Other significant historical features include a glass-sand quarry, towpath remnants and a canal lock of the Ohio & Erie Canal, an old Central Ohio Railroad right-of-way, and a tunnel of the Columbus, Newark and Zanesville Electric Railway.



Blackhand Gorge Tunnel.

As you leave the parking lot, you will be walking on the bikeway which is 4.2 miles long and passes through the Licking River narrows. This right-of-way was originally built in 1850 by the Central Ohio Railroad and was completed a year later. Trains began running on it in 1851 and provided much needed transportation for crops and goods produced locally. In 1865, the Central Ohio Railroad became part of the Baltimore & Ohio Railroad, which used this right-of-way until construction of Dillon Reservoir began. Like Toboso, the railroad was moved to higher ground to avoid potential flooding.

In building the railroad, the Central Ohio Railroad had to make a cut 64 feet high, 30 feet wide and 700 feet long through a massive outcrop of sandstone. Known as the "Deep Cut," this large slot took nearly a year and 1200 kegs of black powder to complete. It was finished in the winter of 1851. Just before you enter the "Deep Cut," there is an observation area to view the site of the Black Hand petroglyph on the sandstone outcrop across the river. Early settlers described the hand to be twice

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Blackhand Gorge State Nature Preserve

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Blackhand Rock.

the size of a human hand and very distinctive. The petroglyph had spread fingers, and one elongated finger was believed to have marked the way to Flint Ridge. The hand was destroyed in 1828 when the cliff face where it was located was blasted away during construction of the Ohio & Erie Canal towpath through the Narrows of the Licking River below the outcrop. The Black Hand Sandstone and

Conglomerate is a member of the Cuyahoga formation of the lower Mississippian period strata. Bedding plains suggest deposition in shallow waters often associated with a delta. Sediment came from the Acadian Highlands and was deposited between the highlands and the Cincinnati Arch. The conglomerate has quartz pebbles that vary in size from ¼ inch to 2 inches. New evidence indicates that this deposition took place as fill in a braided stream setting in an incised valley. The sandstone is gray to light buff in color and is usually quarried for building stone. The gray form of the stone is free of iron and is easily crushed into a good grade of glass-sand. It generally does not contain fossils and outcrops vary from 20 to 70 feet in height. The depth of this formation can reach 200 feet and is present from the Mohican area in Richland and Ashland Counties in the north to the Hocking Hills and Ohio River in the south.

Down the trail from the "Deep Cut" is a quarry that was started in 1890 by Edward H. Everett Company of Newark. The quarry produced high quality glass-sand which was used chiefly to produce amber and green bottles for beer by the American Bottle Company of Newark. At its peak, the quarry produced 300 tons of glass-sand daily. It operated until 1920. Mr. Everett was known as the "Bottle King" of Central Ohio and his company produced one million bottles per year until prohibition shut down his business in 1920.

As you return to the parking area and cross the Toboso Road Bridge to the other side of the river, you will find a trail on your left just past the bridge. This trail will take you to Lock #16, one of the locks along this section of the Ohio & Erie Canal. Construction of the canal began on July 4, 1825, when Governor DeWitt Clinton of New York and Governor Jeremiah Morrow of Ohio turned over the first shovel of dirt at Licking

Summit south of Newark in present day Heath. The Dover to Newark canal section, of which this lock was a part, was completed in 1830 and began operation that year. The canal system operated from 1827 to 1861 when the growing system of railroads provided a faster way to get products to market than canal boats which operated at 3 miles per hour.

As you leave Lock #16 and walk further down the trail, you will be walking on the historic right-of-way of an electric railway. The Columbus, Buckeye Lake and Newark (CBL&N) Traction Company, which began operation in 1902 originally ran from Columbus to Newark. In 1904, the Columbus, Newark and Zanesville (CN&Z) Electric Railway built a 30-mile section of track from Newark to Zanesville which passed through Blackhand Gorge. It acquired the CBL&N Traction Company in 1906 and in 1907 became a part of the Ohio Electric Railway. In 1918, it regained its independence and went back to being the CN&Z Electric Railway, which operated until 1929. Electric trolleys ran from Columbus to Granville, Newark and Zanesville, providing access to the gorge. Many visitors would come on weekends to enjoy a picnic at this Licking County scenic area. When the interurban railway ceased operating, the right-of-way became township road 364 which was used for many years until vacated when Dillon Reservoir was constructed.

During construction of the Newark to Zanesville section, the CN&Z Electric Railway had to build a tunnel through a massive sandstone outcrop along the Licking River. This 337' long tunnel provided a direct route south along the river to Zanesville. A hike through the tunnel on a hot, humid summer day provides a refreshing respite.

After passing through the tunnel, you will see a trail to the top of the hill beyond the intervening ravine. This trail takes you up to "Council Rock" which affords a spectacular view of the Licking River Narrows. It is believed that the local Native Americans used this site to work the flint that was harvested at Flint Ridge before traveling up or down river through the gorge.

Blackhand Gorge is not only a significant natural history site, but also an important human history site worthy of preservation. Every form of transportation is represented in its history with the exception of aircraft: walking, canoes, canal boats, railroads, electric trolleys, horse and wagons, automobiles and now bicycles. The gorge has seen it all and now you can enjoy its history and natural beauty because it has been preserved for all to see.

Blackhand Gorge State Nature Preserve is located eight miles east of Newark and is reached from Newark via S. R. 16 east to S.R. 146 south, and then right on Toboso Road (C. R. 273) to the preserve parking lot.

Dick Moseley

(Editor's Note: This article was written in response to requests by participants in the Black Hand State Nature Preserve field trip led by Dick Moseley at last year's annual meeting.)

Winter's Evergreen Junipers



Cedar glade, Chaparral SNP.
Photo by Tim Snyder.

Evergreen trees always add a very special touch to an otherwise bleak winter landscape, especially when accented against a covering of freshly fallen snow. The most common and widespread evergreen tree native to Ohio is the Eastern Red-cedar (*Juniperus virginiana*), or Juniper as it is also known. In spite of its common name, “Red-cedar” is not a cedar at all, but rather a juniper and a member of the Cypress Family (*Cupressaceae*), not to be confused with the more familiar pine

trees within the Pine Family (*Pinaceae*).

Red-cedar occurs in just about every county in our state, readily invading abandoned fields, pastures in open pure stands and along roadsides especially on calcareous soils. It is the most widespread conifer, or cone bearing tree, in North America, being found from Maine and South Dakota southward to Texas and northern Florida. It is tolerant of a wide variety of soil types and soil moistures, but needs full sunlight and does not compete well against taller deciduous trees situated on better soils. Eastern Red Cedar is the most drought tolerant conifer in the east. It also tolerates salt, and is fire resistant which enables it to successfully compete on sites with poor, dry soils where most other species of trees struggle. It occurs on suitable habitat such as bluffs and wooded slopes throughout the Tallgrass Prairie Region.

Eastern Red-cedar is an early successional species that will quickly colonize open habitat having a substrate of lime-rich or calcareous soil, especially in southwestern Ohio and in northern Ohio along Lake Erie where limestone reaches the surface. It is a slow-growing, small to medium sized tree that has been known to live for 200 to 350 years. The genus name *Juniperus* means “forever young.” It comes from the Latin, name *Juniperus*, which was given to the European juniper. The specific epithet *virginiana* means “of Virginia” where the first specimen was collected in the Virginia Colony in the mid-1700s. It bears two kinds of evergreen leaves, both often occurring on the same tree. The more common are mostly square, scale-like, dark green needles pressed close to the twig and gentle to the touch. Young trees and the vigorous new growth on older trees have sharp, awl-shaped blue-green needles that are very prickly and distinctly uncomfortable to touch.

In spring, small inconspicuous male (staminate) and female (pistillate) flowers appear, typically on separate trees (dioecious), but sometimes together on the same tree (monoecious). By autumn, the female flowers are replaced by light blue, berry-like cones which usually contain one or two brown seeds. The waxy scales of the cone are fused together to form what appears to be a fleshy berry, but it is a true cone. These highly aromatic “berries” are prized by many species of rodents as well as more than 50 species of birds, especially cedar waxwings, which readily spread the seeds around the countryside. Some fruits are produced every year, with very abundant seed crops occurring about every third year. A tea made from the “berries” and fresh young leaves was reportedly used by several North American Indian tribes to treat the symptoms of coughs, colds and flu. The young, fresh twigs were listed in the U.S. Pharmacopoeia for their diuretic properties from 1820 to 1894. These fruits also have historically been used to flavor gin. Alcohol is distilled over juniper “berries” to develop the characteristic flavor. The name gin reportedly comes from the French word *genievre* meaning “juniper berry.”



Closeup of juniper berries. Photo by Tim Snyder.

Eastern Red-cedar found me long before I discovered it. In the 1950's, pet hamsters were new on the scene and quite the rage. Every kid in the neighborhood had to have a pet hamster, and my sister and I were no exceptions. After having been bitten on more than one occasion upon disturbing a sleeping hamster, I decided what I liked best about hamsters was their smell. Well, not so much their smell, but the fragrance of the cedar chips or shavings everyone used at the time as bedding in the cage. I had no idea where cedar chips originated, and it really didn't matter to me at that age. I just enjoyed their delightful fragrance which, in turn, was imparted to my hamster's fur. Nowadays, we know that the volatile oil in cedar chips that makes them so aromatic is not good for pets. Perhaps that is what made my hamsters so grouchy. And then there were the lead pencils with soft wood that many students, myself included, enjoyed crunching with our teeth, especially when trying to figure out the answer to a tough test question. It wasn't until many years later that I realized that both cedar chips and the

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Winter's Evergreen Junipers

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tasty wood from which pencils were made came from the Eastern Red-cedar tree.

The wood from this tree has been favored ever since Colonial days because it is so easily worked and lightweight, but somewhat strong. Its highly aromatic heartwood is pinkish-red to reddish-brown and surrounded by an outer layer of nearly white sapwood. The fragrant cedar oil contained within the heartwood is an effective deterrent to moths, which is why red-cedar is used in the construction of moth-proof chests and closets in addition to its use as cedar shavings for animal bedding. Cedar oil distilled from both the heartwood and the leaves has been used in making perfumes and medicines. This oil is a compound of cedar camphor or cedrol. The wood is also very durable in contact with soil and therefore makes great fence posts. French colonists named this tree, *Baton Rouge* meaning "red stick" in reference to its thin, red-tinged, fibrous peeling bark and especially the red heartwood. Reportedly, the state capital of Louisiana, Baton Rouge, was so named because of the abundance of Eastern Red-cedars growing in the vicinity of the

city as well as throughout much of Louisiana. Today, at least 29 cultivars have been developed from the native red-cedar and are used extensively in landscaping.

Eastern Red-cedar is very susceptible to cedar apple rust. This fungus forms conspicuous ball-shaped, reddish-brown galls on cedar twigs. It is also susceptible to bagworm infestations. The cocoons of evergreen bagworm moths can adorn the twigs like grotesque little Christmas tree ornaments or hanging cones.

Openings known as cedar glades are a very special habitat that typically support a diversity of rare plants, often prairie plants, as well as special animals such as prairie warblers, blue grosbeaks, and olive or juniper hairstreak butterflies. In winter, northern saw-whet owls often seek out red-cedars in which to roost. Adams Lake Prairie, Chaparral Prairie, Lakeside Daisy Preserve, and Caesar Creek Gorge state nature preserves contain excellent examples of such cedar glades. Whether accenting our winter landscape or flourishing mid-season in open glades, the Eastern Red-cedar is one of our most interesting and notably abundant conifers.



Thank you for your support! Newest members & donors

- | | |
|-------------------------------|-------------------------------|
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2016 Stewardship Project Schedule

(Visit onapa.org for details)

- March 5 Milford Center Prairie
- March 23 Boch Hollow (new parcel)
- April 6 Olsen Preserve
- April 23 Lake Katharine
- April 27 Collier Preserve
- June 15 Chaparral Prairie
- June 18 Daughmer Savanna

Deadline for Spring 2016 issue—March 1

Did you know...

Did you know that in spite of their appearance, blue jay feathers contain no blue pigment? In the January/February issue of **Bird Watcher's Digest** published right here in Ohio (birdwatchersdigest.com), Diane Porter has a very informative, in-depth article about blue jays. In her article, Porter

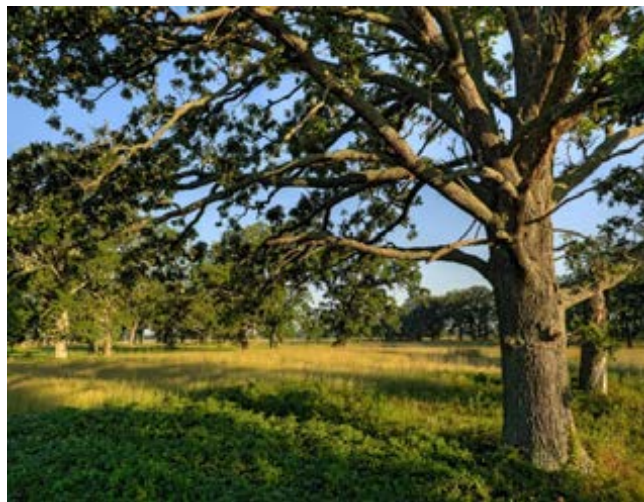


Blue jay. Guy Denny.

feathers, microscopic bubble-like nanostructures on the barbs of the feathers filter out all color except blue. The remaining blue light reflects off a deeper layer of black pigment, which intensifies the blueness, resulting in what our eyes pick up as the blue jay's vibrant blue colors. Next time you find a molted blue jay's feather, hold it up against the light so that rather than reflecting off

the feather, the light streams through the feather to your eye. The feather will not appear blue, but rather gray. of the structure of the feathers. When light strikes the

2016 Field Trip Schedule (Visit onapa.org for details)



Daughmer Savanna SNP. Ian Adams.

April 2, 2016 Little Rocky Hollow (Mosses for beginners, with Barb Andreas)

April 30, 2016—Prairie Road Fen and Gallagher Fen (Joint field trip with CWPS to see 2 high-quality prairie fens with Dan Boone)

May 7, 2016—Blackhand Gorge (Field Trip with Bill Weaver)

May 14, 2016—Kitty Todd SNP (Joint field trip with OWA to visit high-quality Oak Openings TNC preserve with Ray Stewart)

May 28, 2016—Daughmer Savanna SNP (Visit this high-quality oak savanna with Warren Oxley)

May 31, 2016—Heritage Garden at the Governor's Residence (Tour the regions of Ohio represented at the Heritage Garden with Hope Taft)

June 4, 2016—Kroll Woods (Joint field trip with OWA with Ray Stewart)

July 16, 2016—Smith & Bigelow Cemeteries

& Milford Center Prairie SNPs (Joint field trip with CWPS to see remnant tall grass prairies in the Darby Plains with Dave Kuehner)

For information on membership in ONAPA, please visit the ONAPA webpage at www.ONAPA.org.

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To submit inquiries, comments or questions, or information on your nature-related event for inclusion in the ONAPA calendar, e-mail us at info@onapa.org

Deadline for submissions to the Spring—2016 Issue of ONAPA News is March 1st



Lock 16. of Erie Canal in Blackhand Gorge. See story on page 3



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