



# ONAPA NEWS

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

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## Ohio's Natural Arches—An Unexpected Geological Treasure

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Miller Sanctuary State Nature Preserve. Photo by Timothy A. Snyder

The Ohio Department of Natural Resources Division of Natural Areas and Preserves is justly celebrated for protecting rare plants and threatened ecosystems. Less well known is the Division's legislated mandate to protect Ohio's outstanding geological features, which is why places like Clifton Gorge and Conkles Hollow are part of the state nature preserve system. One geological feature that most people might not even be aware exists in the state is the natural arch (also commonly called "natural bridge"). Ohio has more than 80 natural arches, and several of them are within protected nature preserves.

A natural arch is defined as "...a rock exposure with a hole completely

through it, created by the natural removal of some of the rock to leave an intact rock frame around the hole." A natural bridge is a natural arch that crosses a valley of erosion; in other words, a stream flows or did flow beneath it. Ohio's state nature preserves contain examples of both. Rockbridge in Hocking County, 92 feet long, is our longest natural bridge (but not our biggest arch; that honor goes to Rockhouse in Hocking Hills State Park). This impressive arch formed when a small stream widened a crevice behind the edge of a cliff and dropped into the alcove below. It can be accessed from U.S. Route 33 1 ½ miles southeast of the town of Rockbridge. A moderately strenuous hike leads from

*(Continued on page 3)*

## Another Partnership: ONAPA Assists OIPC and FoCH in Summit County

A unique partnership began earlier this year when Jennifer Windus and our three Stewardship Assistants began mapping high-quality natural areas and invasive plants at the Richfield Heritage Preserve (RHP) in Summit County. The Ohio Invasive Plants Council (OIPC), for which Jennifer is currently President, had already been helping the Friends of Crowell Hilaka (FoCH) for the past year with an evaluation of invasive plant distribution on their 336-acre preserve, which is owned by the citizens of Richfield and managed by the Richfield Joint Recreational District (RJRD) park board.

Crowell Hilaka was a former Girl Scout camp for 80 years. Previously the southern portion of the property was the estate of inventor James Kirby, who purchased the property from the pioneer Oviatt family who once lived off the land. Later, Kirby purchased the Neil family fruit farm on the northern half of the property. All the land is now RHP, a public park.

FoCH Vice President, Beth Sanderson (also an ONAPA member and stewardship volunteer) requested assistance from OIPC early in 2017 regarding the extensive amount of invasive plants on the preserve, particularly on the north end. Jennifer partnered with Heather Stehle, Executive Director of Crane Hollow, Inc., and together they formed the RHP Invasive Species Task Force, in cooperation with FoCH. This task force includes Eddie Dengg (ONAPA Board member), Dr. Emily Rauschert (Cleveland State University & OIPC Board member), Dr. Randy Mitchell (University of Akron), as well as several FoCH Board members. The task force met several times in the spring and developed an outline for the RHP Invasive Species Management Plan.

Two objectives of the management plan are to identify high-quality natural areas in the preserve and map invasive plants in the high-quality natural areas, where removal will be focused. Since there is an overwhelming amount of invasive plants on the property, the goal of the management plan is to focus on removal of invasive plants in the best areas first, then on the lower quality areas in the northern portion. ONAPA spent several days



**Brad Von Blon, Jennifer Windus, Beth Sanderson, Brad Small, & Valerie Sasak**

this summer mapping six (6) high-quality natural areas, mostly located in the southern end of the preserve, and then mapping invasive plants, with their relative abundance, in these 6 areas. Brad Small, one of the ONAPA stewardship assistants, developed a map in Google Earth that shows the high-quality areas and the worst invasive plant infestations. At least two FoCH volunteers, who are also ONAPA members and stewardship volunteers, helped with the mapping. This important information will be used to complete the Invasive Species Management Plan for FoCH and RJRD in the next few months. This is a great example of how partnerships can work together to accomplish seemingly overwhelming tasks, particularly when the partners depend on volunteers to complete the tedious work of removing invasive plants. ONAPA partnered with OIPC, Crane Hollow, FoCH, and the RJRD for this effort!

*~ Jennifer Windus,  
ONAPA Vice-President &  
Stewardship Coordinator*

*For more information about the Richfield Heritage Preserve:  
Explore Ohio's Hidden Treasure, Richfield Heritage reserve,  
formally known as Crowell Hilaka!  
[www.friendsofcrowellhilaka.org](http://www.friendsofcrowellhilaka.org)*

### Fall Newsletter Delayed

We are indeed sorry your last Newsletter was late in getting to you in a timely manner. We attempted to use non-profit bulk mail for the first time to save money. Unfortunately our mailing service had multiple issues regarding address verification, 9 digit zip code, and correct bulk mailing imprint as well as other issues such as delivery falling behind all the political mail during this time. Hopefully we have ironed out all of the issues of this mailing and similar events should not affect future mailings of the ONAPA Newsletter.

### Thank You for Your Support! Newest Members & Donors

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11/7/18

## Ohio's Natural Arches—An Unexpected Geological Treasure

(Continued from page 1)

the parking lot to the natural bridge.

Ladd Natural Bridge Preserve in Washington County protects an equally impressive arch that formed when a small stream enlarged a vertical crevice behind a cliff face. At 12 feet wide and 5 feet thick, the 40 foot long arch has the massive look of a constructed bridge. Early in the last century, the Ladd family allowed paying visitors to drive across the bridge - an adventure fit only for those stout-of-heart daredevils unfazed by the 50 foot drop to the valley below.

Raven Rock Arch in Scioto County is smaller (15 feet long), but equally interesting. It formed when atmospheric weathering enlarged a bowl-shaped hollow on the underside of a protruding ledge. This arch's location 500 feet above the Ohio River gives it one of the most scenic locations of any of Ohio's arches. It also insures that visitors will have a strenuous climb to reach it.

Miller Nature Sanctuary in Highland County protects a short section of the northern wall of Rocky Fork Gorge. Included within its boundaries are two readily-visible natural arches. Miller Natural Bridge, like most of Ohio's natural bridges, formed when an enlarging vertical crevice met a deepening alcove. The Bridge Trail offers views of it from both above and below. Miller Arch, readily visible from the Falls Trail, evidently resulted when weathering removed fractured dolomite from a buttress of bedrock extending from the cliff.



**Raven Rock Arch, Scioto County**  
Photo by Timothy A. Snyder

Cave, the alcove behind it reaches an impressive 124 feet into the hill. It is just one of several alcoves or "recess caves" found in this small preserve, two of which have joined to form Surprise Arch which takes a bit of sleuthing to see.



**Rockbridge, Hocking County**  
Photo by Timothy A. Snyder

The arches described here are publicly accessible. Ladd, Raven Rock and Saltpetre Cave require a free access permit which can be obtained from the Division of Natural Areas & Preserves (<http://naturepreserves.ohiodnr.gov/permits>). Detailed information on 83 Ohio Natural Arches is available in *Rainbows of Rock, Tables of Stone: The Natural Arches and Pillars of Ohio*, available from McDonald & Woodward Publishing ([mwpubco.com](http://mwpubco.com)). The Ohio Geological Survey ([www.OhioGeology.com](http://www.OhioGeology.com)) offers a free brochure on Ohio's natural arches which lists those that are publicly accessible.



**Ladd Natural Bridge State Nature Preserve,**  
Washington County  
Photo by Timothy A. Snyder

~ Timothy A. Snyder  
ONAPA Director

## WOW! We've Been Busy in 2018



On Tuesday, January 9th, nine ONAPA volunteers and two DNAP employees, Rick Gardner and Charlotte McCurdy, worked on the bog mat at **Bonnett Pond Bog SNP** clearing shrubs. This was a follow-up project to the one last November as we could not access the bog mat unless the water was frozen. It was a beautiful, sunny day and all 11 people had a great time cutting and treating woody species, including poison sumac! It was exciting to see large cranberry, round-leaved sundew, and other bog plants, even in the snow. The sphagnum bog mat has been encroached upon by highbush blueberry, poison sumac, winterberry holly, and other native woody species, so it was an excellent opportunity to work on the bog mat when the water is frozen. Although there is still more to clear, we got a lot accomplished and look forward to seeing the results later this year. It was another successful stewardship project and a great start to the year!

On January 24th, 6 ONAPA volunteers assisted DNAP with a hemlock wooly adelgid (HWA) survey at **Sheick Hollow SNP** in Hocking County. We learned about HWA and fortunately did not find any at Sheick Hollow yet.



On February 27th, 4 ONAPA volunteers assisted Division of Wildlife and USFWS staff by cutting and treating woody species at **Meilke Road Savanna Wildlife Area** in Lucas County. This also continues our work here to open the savanna understory to improve habitat for rare plants and butterflies.

On March 14th, 4 ONAPA volunteers assisted the Cleveland Museum of Natural History and DNAP by cutting and treating large bush honeysuckles along the edge of the marsh at **Mentor Marsh SNP** in Lake County. This area will be used for access to the marsh and possibly for an observation deck in the future.



On Thursday, April 5th, 13 ONAPA volunteers and 2 DNAP staff worked together at **Rhododendron Cove SNP** to pull garlic mustard. This continued work that ONAPA helped with last year to remove garlic mustard that is competing with the native spring wildflowers on the slopes below the rhododendron.



On Wednesday, April 25th, 10 ONAPA volunteers and preserve manager Josh Deemer searched for garlic mustard at **Lake Katharine SNP**. We walked for more than 3 hours in areas we had pulled garlic mustard last year and pulled only one bagful. While the volunteers were disappointed not to pull more, Josh was excited that there was less to pull! Maybe our work in the past is paying off or maybe garlic mustard is just down this year. Either way we had a good time, enjoyed the spring wildflowers, and Josh took us to a beautiful waterfall after our garlic mustard survey.

On Tuesday, May 8th, 14 ONAPA volunteers and preserve manager Ryan Schroeder scouted various parts of **Lawrence Woods SNP**, searching for garlic mustard and pulling it when found. We spent about 3 hours searching for garlic mustard and fortunately did not find a lot in the interior, although larger patches were found in the younger woods and along the edges of the woods. We also went on a hike with Ryan along the boardwalk loop, looking at spring wildflowers and birds, pulling any garlic mustard along the way. We saw the rare heart-leaved plantain (*Plantago cordata*) in bloom along the boardwalk. It was a beautiful day in Lawrence Woods!



## WOW! We've Been Busy in 2018 cont'd



It was a beautiful day at **Sheldon Marsh SNP** on Wednesday, May 23rd. Fifteen (15) ONAPA volunteers and 4 DNAP staff worked together to pull garlic mustard in the woods, where there were scattered plants almost going to seed already. We pulled enough to make a large impressive pile (shown in the photo). We also got to hike out to the large American chestnut tree and beach area, so it was a successful day. The wildflowers were spectacular too.

On Tuesday, June 5th, 14 ONAPA volunteers worked with preserve manager Michelle Comer at **Clifton Gorge SNP** to remove invasive woody shrubs, as well as some garlic mustard and Dame's rocket. The group worked on the scientific side of the preserve where there are a number of rare plants, so it is particularly important to remove the invading woody shrubs there. The group got a lot of work accomplished and was fortunate to avoid thunderstorms in the area.



On Saturday, June 23rd, 10 ONAPA volunteers and Crawford County Park District Director, Bill Fisher, worked at **Daughmer Savanna SNP** to control common teasel and other invasive plants in the savanna. We were happy to see the results of the spring burn as the grasses and other prairie species responded well. The savanna is looking great and many species are blooming!

On Saturday, July 7th, 11 ONAPA volunteers and 2 DNAP staff, including preserve manager Charlotte McCurdy, worked at **Jackson Bog SNP** for about 4 hours to remove purple loosestrife and woody invasive species in the fen meadows along the boardwalk. We pulled 7 large bags of purple loosestrife and worked in most of the fen meadows to cut and treat (with herbicide) invading woody species, such as common and glossy buckthorn, privet, and autumn-olive. There is plenty more to do in these meadows, but we made great progress!



On Tuesday, July 24th, 10 adventuresome ONAPA volunteers worked on a hot day with 3 DNAP staff, including preserve manager Ryan Schroeder, at **Springville Marsh SNP** to control narrow-leaved cattail and woody shrubs invading the sedge meadows along the boardwalk. Hand-wicking cattails is a tedious job, yet effective at selectively controlling cattails. Woody shrubs such as dogwoods in the meadows were cut and treated with herbicide. This important habitat management helps to maintain the native plant diversity in the remnant sedge meadows.



ONAPA volunteers worked with preserve manager Charlotte McCurdy on August 30th and September 13th to remove woody species in the northern fen meadow at **Myersville Fen SNP**, south of Akron. Glossy buckthorn and other woody species are taking over the fen meadows at the preserve. It is critical to cut and treat the woody stems, as well as haul the cut stems out of the meadow to allow more sunlight to reach the herbaceous fen plants. Working in the fen meadow in the hot, humid weather was challenging, plus the volunteers were careful to avoid the poison sumac!

## WOW! We've Been Busy in 2018



On Wednesday, September 19th, 6 ONAPA stewardship volunteers worked with 3 DNAP staff and approximately 20 Kent State University local flora students at **Kent Bog SNP** to remove invasive woody plants in the bog community. This included pulling invasive glossy buckthorn seedlings, as well as cutting and treating larger buckthorns and red maples invading the bog. While the bog is dominated by woody vegetation now, including highbush blueberry, tamarack, winterberry, leatherleaf, and other typical woody bog species, it is important to remove other invasives to maintain the native bog vegetation. A few small

meadows remain with rare species, such as small cranberry and tawny cotton grass.

ONAPA had a good day at **Gallagher Fen SNP** on October 9th conducting stewardship in the east fen and on the hillside. Five ONAPA volunteers worked with 3 DNAP staff to cut and treat invading woody plants on the hillside and the east fen meadow. It was rewarding to remove thickets of glossy buckthorn and privet along the edge of the east fen, opening former sedge meadow habitat.



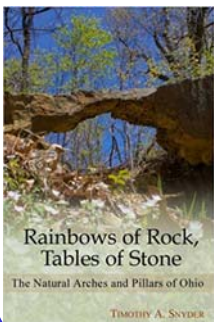
On Saturday, October 20th, ONAPA partnered with the **Killbuck Watershed Land Trust (KWLT)** to assist them with habitat management at Brinkhaven Oak Barrens in Holmes County. ONAPA has been helping KWLT for several years to restore the two oak barrens by controlling woody species invasion. Eight ONAPA volunteers worked with 8 KWLT volunteers in the south barrens, cutting and treating sumac, hazelnut, and other woody species. The cut stems were treated with herbicide to prevent re-sprouting. ONAPA volunteers will continue to work with Randy Carmel, KWLT president, this fall to cut and treat sumac as it expanded greatly this

summer due to the wet weather.



On November 8th, eleven (11) ONAPA volunteers worked with 2 DNAP staff and 2 USFWS staff to cut and treat woody species at the **Medway prairie fringed orchid site** near Dayton. ONAPA has been helping to restore the open fen meadow here for several years and we are making great progress. Volunteers cut and hauled primarily dogwoods and willows, then the cut stems were treated with herbicide to prevent re-sprouting. Let's hope for a good response from the orchids next year!

On Wednesday, November 14th, 10 ONAPA volunteers and 3 DNAP staff worked together at **Karlo Fen SNP** to remove invading woody species in the fen meadow. This small fen, a remnant of a much larger wetland complex, harbors several rare plants which require open fen meadow habitat. The group cut and treated glossy buckthorn, some willows, dogwoods, autumn-olive, and multiflora rose to maintain the open meadow. Volunteers were careful to avoid poison sumac in this meadow. The preserve is managed by Summit County Metro Parks, however ONAPA and DNAP assist with the ecological management.



### *Rainbows of Rock, Tables of Stone: The Natural Arches and Pillars of Ohio* by Timothy A. Snyder

The heart of the book is the identification, description, and interpretation of some 86 arches and 18 pillars known to occur in the state. Background information about the bedrock geology of Ohio, the methods of measuring and describing natural arches and pillars, the processes by which these features can be formed, and the ways that they are eventually removed from the landscape provide interesting and valuable context for better understanding the creation, destruction, and study of these unusual elements of the geological landscape. The names and locations of publicly accessible arches and pillars are given. *Rainbows of Rock, Tables of Stone* is the most extensive statewide review of natural arches and pillars known, and it will almost certainly become a model that will inspire and influence similar compilations for other states.

Available on Amazon & McDonald and Woodward Publishing [www.mwpubco.com/titles/rainbowsofrock.htm](http://www.mwpubco.com/titles/rainbowsofrock.htm)

## A Third Season of ONAPA Stewardship Assistants – Another Success

As the season of stewardship draws to a close, we reflect on all that we have experienced these past six months. Valerie Sasak, Brad Von Blon, and I, Brad Small, are the three latest additions to the ONAPA stewardship assistantship program. We are unhappy to see our time with ONAPA come to an end so swiftly. Yet, we are grateful to have gained this experience, met many different like-minded individuals in the process, and partnered with organizations that share the same goals as ONAPA. Here I report information on the work we completed this season and relay some of the thoughts the stewardship assistants have.

Over the course of the season, the three of us travelled to visit 37 state nature preserves. Not to mention those locations that were not counted among the state nature preserves, such as other natural areas. These natural areas were located in 28 counties throughout the state. Between the three of us, we succeeded in putting in over 800 hours of work on behalf of ONAPA. We took part in 20 different stewardship projects across the state, performing various types of invasive plant control. We also attended several workshops through diverse organizations during the year including: Ohio Invasive Plant Council's (OIPC) invasive plant workshops, Ohio Prescribed Fire Council's (OPFC) annual meeting, Division of Forestry's prescribed fire manager training, and The Dawes Arboretum for botany sessions with Dr. David Brandenburg.

Out of everything we did this year, there were notable projects and trips that stand out in our memories. The ongoing efforts to restore and preserve populations



Prescribed burn at Guy Denny's prairie.  
Photo by Brad Von Blon.



Field trip to Irwin Prairie at ONAPA Annual Meeting. Photo by Brad Von Blon.



Eastern prairie fringed orchid  
Photo by Brad Von Blon.

of Lakeside Daisy was one of these projects. Multiple times this year we made the trip to Lakeside-Marblehead in order to be a part of this incredible conservation effort. Trips to survey for Eastern prairie fringed orchid were always rewarding and challenging. Very early in the season, we were able to participate in prescribed burns at Honey Run Highlands and Daughmer Savannah – what a rare treat! The rare plant surveys we took part in yielded some intriguing moments as well. The plants we surveyed comprised of royal catchfly, red baneberry, Canby's mountain-lover, Northern monkshood, and prairie valerian. I am all but certain that Brad Von Blon managed to capture these majesties with his tireless camera work.

Finally, I would like to expound on the value this program has for aspiring recent college graduates. Without a doubt, the stewardship assistantship served its intended purpose as a springboard into the field of ecology, preserve management, and the like. The combination of being exposed to the wide-ranging natural habitats of Ohio and those who are already involved in these types of careers has opened many doors. The countless organizations, groups and individuals we have interacted with through this program have granted us many possibilities and potential interests, making it difficult to choose a direction to proceed from here. The three of us truly appreciate the opportunity that ONAPA has afforded us and we come out of this experience feeling as though our work helped make the world a little bit better.

~ Brad Small  
Stewardship Assistant

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Stay tuned for more information on our website and our eNews about upcoming winter stewardship projects in January-March! Our regular stewardship projects will return in late April, but we will be scheduling 2 projects each month during the winter to accomplish more habitat management in natural areas. We expect to be going to Brinkhaven Barrens, Killbuck Marsh WA, Mallard Club WA, and Meilke Road Savanna WA, to mention a few.



### Ohio Natural Areas & Preserves Association

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