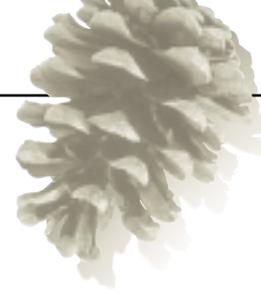


Natural Ohio

Division of Natural Areas and Preserves

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Ohio Gains Another State Nature Preserve in 2005

SIXTY ACRES IN STARK COUNTY FEATURING A LANDSCAPE SHAPED BY AN ICE AGE GLACIER HAVE BEEN DEDICATED AS OHIO'S 130TH STATE NATURE PRESERVE. OWNED BY THE WILDERNESS CENTER, LASH'S BOG STATE NATURE PRESERVE HARBORS A NUMBER OF RARE AND ENDANGERED SPECIES WITHIN ITS KETTLE-HOLE BOG HABITAT.

"Lash's Bog is a fine example of a sphagnum bog plant community, and it is a wonderful addition to Ohio's state nature preserve system," said Chief Tom Linkous of the Division of Natural Areas and Preserves.

Lash's Bog was formed more than 14,000 years ago at the end of the last ice age when a large block of ice, buried by sediment, melted. Over the years, in this water-filled depression, dead and decaying vegetation formed a thick layer of peat. During that time, a floating mat of sphagnum moss covered the area, creating the bog. A number of

northern species can be found here including pitcher plant (*Sarracenia purpurea*) and leather-leaf (*Chamaedaphne calyculata*).

One of the southernmost acidic bogs in Ohio, Lash's Bog provides the acid-rich and nutrient-poor conditions needed to support a rare assemblage of plants. Locally known as Brewster's Bog, the preserve harbors seven rare plant species. Potentially threatened species include Howe's sedge (*Carex atlantica var. capillacea*) and threatened species include few-seeded sedge (*Carex oligosperma*).

In addition to state-listed species, a number of other plants native to an acidic bog include chokeberry (*Aronia melanocarpa*), large cranberry (*Vaccinium macrocarpon*), poison sumac (*Toxicodendron vernix*) and another carnivorous plant, round-leaved sundew (*Drosera rotundifolia*).

(continued on page 2)

New Southern Ohio Wildflower Pilgrimage

Many Ohioans say they are looking for a deeper connection to nature. What better way to rediscover our connection to our land than by encouraging Ohioans to celebrate one of their greatest treasures—spring wildflowers.

If you're seeking the beauty of spring wildflowers or wish to find your connection to nature, join the 1st Annual Southern Ohio Wildflower Pilgrimage, April 21-23.

Nothing quite compares to the verdant beauty of an Appalachian forest in

(continued on page 6)



columbine at Miller Nature Sanctuary

IN THIS ISSUE

from the chief.....	2
red snow.....	3
preserve spotlight	4
natural areas discovery series	5
botanical symposium	6
the glacial forest	7

From the Chief

WETLANDS ARE UNIQUE HABITATS WHERE OPEN WATER HABITATS TRANSITION TO DRY LAND. IT IS PRECISELY THIS CHARACTERISTIC WHICH MAKES THEM SO UNIQUE AND VARIABLE. OHIO IS BLESSED WITH A VARIETY OF WETLANDS—BOTH FROM THE PERSPECTIVE OF A TECHNICAL CLASSIFICATION SYSTEM, SUCH AS THAT USED BY THE U.S. FISH AND WILDLIFE SERVICE, AND FROM AN ECOLOGICAL PERSPECTIVE.

The Division of Natural Areas and Preserves protects several special wetland types. These include wetlands that persist in Ohio's landscape from post glacial times several thousand years ago. Glacial bogs, kettle lakes and fens are among

Champaign and Clark counties. One of the best remaining fens is Cedar Bog, owned by the Ohio Historical Society and the division. Based on its alkaline groundwater driven hydrology, Cedar Bog is actually a fen. A star attraction, the spectacular showy ladies slipper, may be seen from the boardwalk trail in June.

There are a number of bogs and kettle lakes in the state's northeast counties. Tom S. Cooperrider-Kent Bog is a fine example of a late successional stage bog. Among the unique plants here is one of the southernmost stand of tamarack in the continental United States.

Nearby, Triangle Lake Bog features many distinctive species, including the carnivorous sundew, bladderwort

these unique wetlands with their relict plant communities and rare species. Bogs and fens are characterized by plants adapted to the specific water chemistry and even the microclimates within these water driven systems.

Fens are characteristically alkaline systems with upwelling groundwater providing the wet conditions that select for plants adapted to both wetland conditions and highly alkaline, low nutrient water. The Mad River valley once had many fens along its course in Logan,

and pitcher plant. These plants trap insects and other small invertebrates to supplement the limited nutrients available in the bog's acid waters.

The flora of these special wetlands is part of their uniqueness. For a special experience, hike these areas in winter and discover the quiet solitude and snowy beauty that awaits the hardy hiker. 🌿


Tom Linkous, Chief

Ohio gains (continued from page 1)

The bog, located in the extreme southeast corner of Stark County in the Sugar Creek watershed, also provides a perfect home for one of Ohio's rarest turtles—the spotted turtle, which is also a state listed species.

The dedicated portion of Lash's Bog is surrounded by buffer land, including wooded and agricultural areas which have been planted with hardwood seedlings to help maintain the water quality.

The Wilderness Center, a regional land trust, purchased this special site in 2001 using Water Resource Restoration Sponsorship Program funding and private donations. With more than 3,500 members, the center employs 14 full- and part-time staff and is active in Stark, Tuscarawas, Holmes and Wayne counties.

As part of the dedication process, The Wilderness Center, working with the Division of Natural Areas and Preserves, will be following a management plan to ensure and protect the site's biodiversity.

"Our primary goal for the management of Lash's Bog is to perpetuate its unique ecological features," explained Nathan Moyer, land stewardship director for The Wilderness Center. "The bog terrain provides a challenge for the management of exotic species, particularly in areas with rare and threatened species."

Restoration work will be conducted in the wetland areas to reduce populations of reed canary grass, a stubborn wetland invasive. Also, removing early growth of invasive buckthorn bushes will promote the growth and regeneration of some of the significant native species including small cranberry, tawny cotton-grass and a few of the rare sedges.

Currently, Lash's Bog is open by permit only, but future plans may include opening the site to public visitation.

**To learn more, visit
www.wildernesscenter.org or
call (877) 359-5235.** 🌿

Join the Nationwide Fight Against Invasive Weeds!

Do you know about the challenges of invasive plants? It's a nationwide problem plaguing our best natural areas. More than a dozen species, such as purple loosestrife, reed canary grass and bush honeysuckle, are impacting landscapes across the country, including Ohio.

The seventh annual National Invasive Weed Awareness Week (NIWAW) begins February 26. Organized by the Invasive Weeds Awareness Coalition, this event brings people and organizations from across the country together in an effort to increase public awareness and support and funding for invasives management.

You can join people all over the U.S. in the fight against invasive plants!

- Familiarize yourself with the invasive plants in your area.
- Spread the word about the threats these plants pose to native plant communities, recreation and the scenery many of us take for granted.
- Remove invasives from your property and be careful not to spread them to other communities.

To learn more about invasives, visit our website at

www.ohiodnr.com/dnap

Or, to learn more about National Invasive Weed Awareness Week, visit

www.nawma.org/niwaw/niwaw_index.htm.

Melissa Moser
Ecologist
Natural Heritage Program

The Case of the Mysterious Red Snow

During the past few winters, I've noticed that the snow in some of my southwest Ohio state nature preserves has a reddish hue. Last winter I pointed out the red snow to one of my seasonal employees. It only took a minute for him to realize what I'd already discovered—our snow was yet another victim of non-native invasive plants.

The seeds and berries of our common “enemy” mix with the snow to cause the red tint, which can be seen throughout winter. The berries come from bush honeysuckle (*Lonicera maackii*), an invasive shrubby species.

Like my other co-workers, I'm determined to continue the invasives battle in southwestern Ohio. Besides my seasonal employees, I've been joined by property owners, researchers and volunteers—it's a battle that takes many hands to win.

Bush honeysuckle doesn't just threaten the snow-covered landscape, it causes a lot of environmental, economic and aesthetic damage in many natural areas across the state. It grows so thick it crowds other native wildflowers and shrubs, leaving behind a landscape with little diversity. As native plants and shrubs disappear, the wildlife dependent on native species disappear as well.

Birders, photographers and hikers—have you lost a beautiful area you've come to love over the years? Where did it go? It's still there, but the bush honeysuckle has covered the ground once home to a variety of beautiful spring blooms.

Fishermen—have you ever snagged your line during a cast in the thick brush along the Little Miami State Scenic River? Odds are, you snagged your line on bush honeysuckle.



Eradicating this destructive shrub is critical to plant community and habitat protection.

Our website, www.ohiodnr.com/dnap, has a large section devoted to invasive, non-native plants.

You can join us in the fight. Make a donation to the Ohio Division of Natural Areas and Preserves. Donations from the Ohio Income Tax Checkoff fund support a variety of ecomanagement activities, including invasive species management.

Consider volunteering at your favorite state nature preserve or local park. Volunteers are often recruited for invasive management activities, such as pulling garlic mustard or cutting back bush honeysuckle.

No matter where you live, you can help make a difference as we continue to face the challenges of invasive species in Ohio.

Shannon Hoffer
Preserve Manager
Southwest District

Cedar Bog

State Nature Preserve

VISITING CEDAR BOG NATURE PRESERVE IS LIKE STEPPING BACK INTO OHIO'S PREHISTORIC PAST. THOUSANDS OF YEARS AGO, MASTODONS AND OTHER PREHISTORIC PLANTS AND ANIMALS CALLED CEDAR BOG HOME.

Today, the preserve remains the state's largest and best example of a boreal and prairie fen complex. Because its plant communities trace their heritage to the Ice Age, the preserve is home to many rarities. Cedar Bog is actually a fen, which is a specialized wetland community.

Cedar Bog was formed as the last of Ohio's great glaciers melted, clearing the land and filling depressions with earth and limestone gravel. This accumulated debris created two long moraines, or ridges, with a deep valley between them that now contains Cedar Bog.

A constant flow of cool, sweet water fed the area creating shallow wetlands populated with sedges and other wetland plants. Gradually shrubs and trees produced a landscape like the one seen today along the east branch of Cedar Run, which runs through the fen.

Although the landscape surrounding the fen has dried, the same cool, sweet water continues to flow up through the underground water, providing the specialized conditions necessary for fen plants to survive. The constant flow also affects Cedar Run. Regardless of season, the stream displays practically no seasonal fluctuation in temperature or volume.

Located in southern Champaign County, Cedar Bog is just a sliver of its original size. Before European settlement, the fen probably covered 7,000 acres. By 1910 the area had shrunk to 600 acres. The area continued to be impacted by agricultural and development pressures.

The state of Ohio purchased about 100 acres of wetland and forest in 1942, and later, in 1971 another 100 acres were purchased. Today, the Ohio Historical Society and the Division of Natural Areas and Preserves own 450 acres, including the 20-acre fen complex.

White cedar (*Arbor vitae*) is one of the bog's most interesting species. Although it's found in only 11 Ohio counties, there is no other county that offers the unique habitat of Cedar Bog. Another tree, swamp or dwarf birch, reaches its southernmost limit here.

Despite its small size, Cedar Bog's fen acres provide critical habitat for a variety of rare animals and plants. Brook trout thrive in Cedar Run, one of the few Ohio streams cold enough to support the fish. The spotted turtle and Eastern massasauga rattlesnake can also be found there. Unusual butterflies, such as silvery checkerspot and swamp metal mark, are common here. And bird lovers will enjoy spotting the more than 100 species found here.

Ohio Historical Society (OHS) site manager Dan Reese described the nearly mile long boardwalk as a walk back in time. "The boardwalk guides visitors to a place where mastodons and giant beavers once fed, and many of Ohio's Indian cultures once lived and hunted."

Native flower enthusiasts have much to see at Cedar Bog—from April to October you'll find the preserve is alive with color. Skunk cabbages start the blooming season off in late February, and it doesn't end until the purple blooms of the New England asters are gone in early October.

Pick a spring month and you'll be treated to trilliums and marsh marigolds, or pick a summer month and see a variety of prairie species, such as blazing star, shrubby cinquefoil, prairie dock, Kalm's lobelia and compass plant.

Ohio is home to a small variety of orchids, some of which call Cedar Bog home. Spring brings the yellow and showy lady's-slipper orchids while summer brings the brightly colored grass-pink orchids. Not an orchid, but another showstopper is the late full-flowering fringed gentian.

Cedar Bog serves as an outdoor natural laboratory. Students of all ages are able to examine rare and unusual plants and animals in their natural surroundings.

"I can provide a variety of both on- and off-site educational programs tailored to students from early elementary to college level, as well as travel for slide shows and presentations," said Reese.

The site is open year-round, but visitors are asked to leave the OHS admission fee in the blue box at the parking lot kiosk. Group tours of any size may be arranged by contacting Reese directly.

To learn more, visit www.ohiohistory.org, www.cedarbog.org or call 1-800-860-0147.

In Memorium

In March 2005, Cedar Bog State Nature Preserve lost its best supporter, when Terry Jaworski, Cedar Bog site manager passed away suddenly. The Cedar Bog visitors encounter today is a true testament to his commitment and love for the site and all of its natural inhabitants.



“Terry was a true renaissance man—interested and knowledgeable in a wide assortment of areas. He was especially rich in his depth of knowledge of the plants and geology of Cedar Bog. Terry was eager to share in enthusiastic and interesting ways his knowledge of Cedar Bog. Terry will be deeply missed,” wrote Bob Glotzhober, OHS Natural History curator and former president of the division’s Natural Areas Advisory Council.

The Division of Natural Areas and Preserves adds its name to the list of friends Terry left behind.

Discover Ohio’s Special Places

Natural Areas Discovery Series returns

The Division of Natural Areas and Preserves invites you to participate in the 2006 Natural Areas Discovery Series. Beginning in April and ending in October, this annual series features scheduled hikes, canoe floats, demonstrations and other special programs.

The Chorus of Spring

Learn more about Ohio’s frogs and toads on **Thursday, April 6** at 7 p.m. in Lucas County. The program begins with a slide show at the Secor Metropark’s Center for Photography building and then moves to Irwin Prairie State Nature Preserve for an evening walk. Reserve your spot by calling Lucas County Metroparks at **(419) 407-9701**.

Rails & Snipes Watch

The **Wednesday, April 26** program begins at 7 p.m. at the Secor Metropark’s Center for Photography building for an adult bird study. Participants will then proceed to Irwin Prairie State Nature Preserve for an evening trek through the preserve. Call **(419) 407-9701** for reservations.

Birding along Ohio’s North Coast

Well-known for its migratory birds, Sheldon Marsh State Nature Preserve will host two birdwatching hikes on **Saturday, April 29** at 8 and 10:30 a.m. Bring your binoculars so you won’t miss the colorful neotropical warblers, shorebirds and many waterfowl to be found there. For more information about this Erie County event, call **(419) 433-4919**.



The Best of Birds and Blooms

Whether you love the colors of spring wildflowers or spotting birds in flight, you’ll have your choice of outdoor fun at Eagle Creek State Nature Preserve on **Saturday, May 6** in Portage County. Join an early morning bird hike at 8 a.m. or try one of the two wildflower hikes at 10 a.m. and noon. For more information, call **(330) 527-5118**.

Rare Wildflowers on Display

The bright yellow blooms of Ohio’s rarest wildflower, the Lakeside daisy, will greet visitors at the annual Open House on **Saturday, May 13**, from 9 a.m. to 4 p.m. at Lakeside Daisy State Nature Preserve in Ottawa County. For more information, call **(419) 433-4919**.

Checkout the next newsletter for more events in this year’s Natural Areas Discovery Series.

For the complete listing, log on to www.ohiodnr.com/dnap.

Ohio's First Lady, Hope Taft to open 6th Annual Ohio Botanical Symposium

Botanists, naturalists and anyone interested in learning more about Ohio's native plants are invited to the 6th Annual Ohio Botanical Symposium in Columbus on **March 31**. The day-long event features opening remarks by Ohio's First Lady, Hope Taft, as well as a full slate of well-known speakers.

This year's keynote speaker is Michigan botanist and author, Fred Case. He has written *Orchids of the Western Great Lakes Region* and co-authored the book, *Trilliums*. He will speak about the great diversity and interesting ecology of trilliums at this year's symposium.

Nancy Henry, director of Highlands Nature Sanctuary, will be discussing her organization's preservation efforts,

accomplishments and the challenges of protecting the biological diversity found in southwest Ohio.

Another speaker, Dr. John Freudenstein, professor at The Ohio State University, will be leading an interesting segment on why scientific names are changing for so many plant species.

Vernal pools will be the subject of a talk by Dr. Deni Porej of The Nature Conservancy. He will cover the plant and animal diversity of these small but important ecosystems found throughout Ohio, including your own backyard.

Botanist and manager of the division's Natural Heritage Program, Greg Schneider will present the 2005 Best

Plant Finds presentation. Another botanist, Jennifer Windus from ODNR's Division of Wildlife, will discuss her work on botanical inventory at wildlife areas, particularly the many rare species found at Resthaven Wildlife Area.

The symposium is being held at the Ohio Department of Transportation's auditorium, located in Columbus. The event, which runs from 8 a.m. until 4 p.m., is \$12.

To request registration materials, please contact Rick Gardner at **(614) 265-6419** or email **rick.gardner@dnr.state.oh.us**.

Pilgrimage

(continued from page 1)

springtime. The Arc of Appalachia, a 90-mile crescent of land encompassing five Ohio counties, will be the natural setting for this new event. The area borders the western flank of the lower Scioto River, where the densest forest canopies in the state can be found.

The Arc begins on the Ohio River near Portsmouth and curves around the leading front of the Appalachian foothills to its terminus in Chillicothe. This region is renowned for having the highest botanical and zoological diversity in the state. All three of Ohio's primary bedrocks appear in this region—limestone, shale and sandstone, along with the soils and forest associations that characterize them. Some of the most spectacular spring wildflowers can be found growing there.

The region features a number of state nature preserves including Miller Nature Sanctuary and Davis Memorial. The Arc also includes Highlands Nature Sanctuary's 2,500-acre preserve system and its newest acquisition, 7 Caves Nature Preserve, as well as The Nature Conservancy's 13,000-acre Edge of Appalachia Preserve.

The Pilgrimage will feature a dozen all-day field trips to a variety of local nature preserves and natural areas. A number of these sites, such as Miller, are not generally open to the public without a written permit. Guided hikes will be led by experienced botanists and naturalists, including staff from the Division of Natural Areas and Preserves.

Most field trips will be limited to 15 people, and will range from easy walking to moderate and strenuous hiking. For those who like an evening

walk, candlelight tours at 7 Caves Nature Preserve will also be offered.

The event is being sponsored by Highlands Nature Sanctuary, Division of Natural Areas and Preserves, The Nature Conservancy, Cincinnati Zoo & Botanical Garden, Cincinnati Museum Center, Ross County Park District, Shawnee State Park and State Forest and Southern State Community College.

Pre-registration is required. For a detailed description of field trips, costs and registration details, please visit **www.highlandssanctuary.org/wildflower/pilgrimage.htm**. Or call Highlands Nature Sanctuary at **(937) 365-1935**.

Nancy Henry
Director
Highlands Nature Sanctuary

The Glacial Forest

ABOUT THIS TIME OF WINTER, MOST OF US ARE READY FOR AN INFUSION OF SPRING COLOR, SO CAN YOU IMAGINE WHAT OHIO LOOKED LIKE DURING THE ICE AGE?

At the maximum extent of the glacier, two-thirds of the state would have been a rolling plain of dirty ice, but what about the part that lay beyond the glacial border? The popular picture is of a barren landscape of rock and water with a scattering of scrubby growth. In truth, glacial Ohio may well have looked much like pre-settlement Ohio—covered with trees.

There are, of course, no written accounts or photographs of Ohio's Ice Age, but enough clues remain to give us an idea as to what we would have seen had we been here at that time. Most important are the records of vegetation change preserved in kettle lakes and bogs. Open water acts as a trap for pollen, which is produced in vast quantities in accumulating silt and organic debris. As layer builds upon layer, a record of the pollen in the air above the pond is created over time.

Pollen is very resistant to decay and can be identified to genus and, in some cases, species. By driving a hollow tube into the bottom of a natural pond, researchers are able to bring up a core of the sediment accumulated there. This is cut into sections and the pollen

in each section is identified. The type of pollen and percentage of each type tells us which plants grew around the pond at a given time and how common they were. The results from the lowest section of the core represent the earliest plant community in the area; those from the highest represent the most recent community.

As you would suspect, such work is tedious and time consuming, and the conditions required to protect the pollen record exist in only a few ponds. As a result, the locales of such studies are widely scattered across the Midwest. Even so, it is possible to derive a fairly detailed picture of the landscape in front of the glacier.

Contrary to the commonly accepted view, there was probably little if any tundra in Ohio. There may have been a narrow band of open ground right in front of the glacier where disturbance from falling rocks, water and cold wind from its melting front was the greatest. Here plants, which adapted to these tundra-like conditions, may have eked out a precarious existence, but they would have been hard pressed by the boreal forest which rapidly invaded ground newly opened by the retreating ice.

This boreal forest would have looked much like the transitional forest found today in Canada where spruce trees mingle with oaks and other species of

the deciduous forest. Tamarack, white cedar and other glacial "relics" found in Ohio today would also have been part of this forest.

To the south, hickory, beech, tuliptree, walnut and hazel entered the landscape, most likely on sheltered, south-facing slopes. Their presence indicates that the ancestors of the trees found by the pioneers might not have had to migrate from the deep south or the high Appalachian Mountains as has been supposed.

The pollen record also indicates that there were scattered openings among the trees where prairie plants probably survived. In the warm, dry climate after the ice disappeared, they gave rise to the extensive prairies whose remnants the Division of Natural Areas and Preserves works so hard to protect today.

All in all, the glacial landscape of Ohio was not so grim and barren a place as we have become accustomed to imagining. But then, the large number of mastodon remains found in the state should have warned us that it was so. These were large animals requiring a lot of food. They would have been hard-pressed to survive on a diet of skimpy little tundra plants. 🌿

Tim Snyder

Retired Preserve Manager

Help Us Protect Ohio's Special Places

It's easy to support the protection of Ohio's natural heritage through the Natural Areas Checkoff Program. Taxpayers may donate any portion of their Ohio state income tax refund to support natural area acquisitions, education programs, scientific research and protection of threatened and endangered species.

Please use Line 28 on your state income tax form (or line 19 on Ohio 1040EZ) to donate to the preservation of Ohio's nature preserves, scenic rivers and endangered species.

Your generous donation helps protect high-quality scenic rivers, significant native plant communities, such as bogs, prairies and old growth forests, and numerous rare plant and animal species.

Direct donations may also be made by sending a check made payable to:

Checkoff Special Account

Division of Natural Areas & Preserves
2045 Morse Road, Bldg. F-1
Columbus, OH 43229

Won't you join us? Together, we can make a big difference! 🌱



Preserving Nature Today for the Needs of Tomorrow

Mission Statement:

Administer a system of nature preserves and scenic rivers by identifying and protecting Ohio's significant natural features.

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Ohio Department of Natural Resources
Division of Natural Areas and Preserves
2045 Morse Road, Bldg. F-1
Columbus, OH 43229-6693
(614) 265-6453

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