



Natural Ohio

Bob Taft, Governor • Sam Speck, Director • Stu Lewis, Chief

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slender blazingstar

Record Number of Rare Plant Species Found in 2000

ATTRIBUTE IT TO KEEN-EYED OHIO BOTANISTS OR A NEAR-PERFECT GROWING SEASON.

But whatever the reason, what a difference a year makes. An unusually large number of rare native plants were spotted in Ohio last year.

"It was a spectacular year for Ohio botany," said Stu Lewis, chief of the Division of Natural Areas and Preserves (DNAP). "It's been one of the best years ever for finding rare plant species in Ohio—at least since we've been keeping records."

In a typical year, Ohio might record the discovery of one native plant species new to the state. During 2000, no less than four new species—all previously unknown in the state—were verified.

Additionally, another five species thought to have died out more than 20 years ago were rediscovered. These finds were especially encouraging because the discoveries indicate habitats necessary for the plants to survive still exist in Ohio, Lewis noted. The following are only highlights of the numerous botanical finds of 2000.

Gary Haase of The Nature Conservancy (TNC) spotted the spring-blooming Missouri rock-cress (*Arabis missouriensis*) at TNC's Kitty Todd Preserve in Lucas County. TNC's Richard Gardner and Jennifer Hillmer braved 3 feet of water in a Portage County glacial lake and were rewarded with Robbins' spikerush (*Eleocharis robbinsii*). This inconspicuous species usually grows far north of Ohio.

Gardner and Adams County resident Barb Lund discovered several populations of villous panic-grass (*Panicum villosissimum*) in Adams County. Dave Minney of TNC and DNAP botanist Jim McCormac independently discovered even more sites for this southern species in Jackson County. These finds are the first verified records of this grass in Ohio.

Another new species, cuspidate dodder (*Cuscuta cuspidata*), was located in Paulding County by Marshal Moser of Lima and McCormac. Dodders are parasitic vines related to morning glories.

Lund and Kentucky botanist Dan Boone rediscovered creeping aster (*Aster sulculosus*) in the Shawnee State Forest in Scioto County. This late-blooming blue aster was last seen in the area in 1954.

Thought to be extirpated because it was last collected in Adams County in 1957, bigtree plum (*Prunus mexicana*) was found growing in Adams County by TNC's Rich McCarty. Adams County was also the location where McCarty discovered collared dodder (*Cuscuta indecora*). This species is new to Ohio's flora. It is considerably disjunct from the nearest sites in western Kentucky.

Imagine the thrill of John Pogacnik's discovery of bearberry (*Arctostaphylos uva-ursi*) growing on a sandy beach in Ashtabula County. This low, creeping

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The Joy of Wildflowers

WHAT ATTRACTS YOU TO A NATURE PRESERVE? Big trees, birds, ferns and even sedges all have their devotees. But no doubt, the greatest draw is their spectacular displays of wildflowers. From huge, obvious species like Joe-Pye-weed to the tiny harbinger-of-spring— wildflowers come in all sizes, shapes and colors.

While many people are satisfied to simply enjoy the beauty of these plants, others want to learn all they can about them. You'll find learning flower identification, their role in the ecosystem, distribution and whether

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photo by Phil Zito

beebalm

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shrub of the north hadn't been seen in Ohio since 1939.

Likewise, McCormac was elated by his Franklin County find of Gattinger's foxglove (*Agalinis gattingeri*). The only previous Ohio record of this pink-flowered species of dry openings was in 1929 in Delaware County.

Tim Walters of Swanton discovered long-bearded hawkweed (*Hieracium longipilum*) in Fulton County. This western member of the aster family hadn't been seen in the state since 1979.



bearberry

Eric Hart of the Ohio Environmental Protection Agency (OEPA) reported a vigorous population of slender blazing-star (*Liatris cylindracea*) in grassy openings on a dry ridge top in Meigs County. Hart and Allison Cusick, the division's chief botanist, also found angle-pod (*Matelea obliqua*), a climbing milkweed, in a nearby ravine.

The lovely prairie violet (*Viola pedatifida*) was discovered on a dry hillside in Madison County by another DNAP botanist, Greg Schneider, and Bob Harter, now retired from the Ohio Department of Natural Resources. Gardner, Steve McKee of Mansfield and Jim Bissell of the Cleveland Museum of Natural History found little prickly sedge (*Carex echinata*) at the museum's Singer Lake Preserve in Summit County. Bissell also found the endangered two-seeded sedge (*Carex disperma*) in Portage County.

Another OEPA staffer, John Mack, discovered a new population of the endangered sharp-glumed manna-grass (*Glyceria acutiflora*) in Portage County. Another rare grass, Lindheimer's panic-grass (*Panicum lindheimeri*), was found by McCormac and Dave Minney in Jackson County. This is its second Ohio population.

Together, Lund and Gardner also discovered several sites of warty panic-grass (*Panicum verrucosum*) in Adams County. This species was rediscovered in 1997, after a 62-year absence. Gardner also found wild pea (*Lathyrus venosus*) in Adams County. It is only the second known extant site in the state for this endangered species.

Other exciting finds included several new populations of the nodding rattlesnake-root (*Prenanthes crepidinea*) in Hamilton and Warren counties by Boone and Marjie Becus of Loveland, as well as Minney's discovery of low spearwort (*Ranunculus pusillus*) in Jackson County.

But most exciting, in terms of quantity and quality, must have been the discovery of pale umbrella-sedge (*Cyperus acuminatus*), found growing in Butler County. McCormac, working with DNAP's Heather Buckles, found thousands of these plants in the Gilmore Ponds Preserve.

Ohio botanists worked with Dr. Tony Reznicek, a nationally-renowned botanist at the University of Michigan, to verify the more difficult identifications. Reznicek said Ohio's record year was a singular achievement that he did not see duplicated in other Midwestern states.

McCormac, who participated in many of this year's finds, believes ideal growing conditions in Ohio last year may have been a factor in the resurgence of species. However, Reznicek thinks climate has little to do with the botanical bonanza.

"This year's discoveries mean Ohio's botanists are pretty darn good," said Reznicek. "Finding unusual plants requires good field work."

According to Cusick, one of the primary reasons for all the rarities in Ohio is the state's geographic location in the Midwest. Influences from the north, south, east and west all converge on Ohio, providing a wealth of different habitats.

Plants may be rare for a number of reasons: the plant might be obscure or hard to spot; the habitat may be difficult to access; the plant may be native to a habitat type that has been largely destroyed; or the plant might be rarely found anywhere in the United States.

An informal network of professional and amateur botanists, including several division employees, made most of this year's notable discoveries. The division works with volunteer botanists, documenting the nature and location of each find for the division's Natural Heritage Database.

According to Chief Lewis, the division's rare and endangered plant program could not operate effectively without the help of these dedicated naturalists. He said they've honed their skills in one of the most floristically diverse states in the Midwest.

"When all of us band together in the name of botany, we can accomplish wonderful achievements," said Cusick. He and his fellow botanists hope the state's rare plant species flourish in 2001.

Interested in seeing Ohio's updated rare plant list? Log on to www.dnr.state.oh.us/odnr/dnap/heritage/rare_plant_links/html. T

- **Allison Cusick, botanist,**
Jim McCormac, botanist and
Jane Beathard,
ODNR Communications

Almost Ready to Move In



When you visit Clifton Gorge State Nature Preserve in Greene County, Stage's Pond State Nature Preserve in Pickaway County or Chaparral Prairie State Nature Preserve in Adams County, you'll notice that not only are the birds busy building, but so is the Division of Natural Areas and Preserves. The division's new buildings will serve as much-needed maintenance facilities, and the building at Stage's Pond will also house visitor facilities. The buildings, funded through the state's NatureWorks program, are expected to be completed in time for the division's busy 2001 summer season.

Invasive Plant Alert #9

Reed Canary Grass

Phalaris arundinacea

Description: This large, coarse grass reaches from 2 to 9 feet tall. The hairless stems gradually taper to flat and rough leaf blades 3 to 10 inches long. The flowers occur in dense clusters and are green to purple, changing to beige and becoming more open over time. This plant spreads aggressively, by seed and by a thick system of underground stems called rhizomes. There may be native populations of reed canary grass in Ohio, but the strains are difficult to distinguish.

Habitat: Reed canary grass grows in wetlands, such as marshes, wet prairies, wet meadows, fens and stream banks. This grass quickly dominates areas of wet, exposed soils. It can also grow in areas of standing water by producing special roots that spring from the submerged portion of the stem. Although reed canary grass can be found growing on dry soils in upland sites and under partial shade, it does best in full sun and moist soils.

Distribution: The non-native strain of reed canary grass came to Ohio from Europe and Asia in the early 1800s. Reed canary grass is widespread throughout the state, particularly in the northeast region.

Problem: Reed canary grass aggressively displaces native vegetation. This grass produces little in the form of shelter and food for wildlife, although it has been used for bank stabilization, erosion control in wetlands and waterways, and as a crop for grazing animals. Seeds are easily dispersed by waterways, animals and people. Reed canary grass is a problem at many of the division's wetland preserves, including Springfield/Gallagher Fen, Liberty/Owens Fen, Pymatuning Creek Wetlands and Myersville Fen where the division uses herbicides to control it.

Management: A combination of burning or mowing with systemic herbicides, such as Accord or Glypro, is the best method of control. Grass-specific herbicides, such as Fusilade, are recommended in areas where native plants grow and there is no standing water.



Native Alternatives: Reed canary grass is not generally planted, however consider using prairie cord grass (*Spartina pectinata*), Canada bluejoint (*Calamagrostis canadensis*), Indian grass (*Sorghastrum nutans*) and switch-grass (*Panicum virgatum*). T

- Jennifer L. Windus,
Research & Monitoring Section

ACROSS THE ARCH

IN 1793, WEARY MEN POLED THEIR SUPPLY-LADEN BOATS NORTH INTO THE WILDERNESS OF OHIO'S MIAMI COUNTY. Up the Great Miami River they toiled, to the mouth of the Stillwater, then up that river to a stream, the Maumee River, their guides assured them led west toward the great fortified camp General "Mad" Anthony Wayne was building on its banks.

Two American armies had been defeated by a confederation of Indian tribes, and now Wayne had been given command of a third to "chastise" the natives. The supplies these men were ferrying to Wayne were crucial to his success, but it began to look doubtful they would ever reach him. The high, forested slopes of the river valleys gave way on this narrow creek to precipitous walls of stone. A short distance upstream, they reached a final obstacle: a 10-foot high cascade across the entire width of the river.

No doubt there was a great deal of colorful language shot toward the hapless guide as the men unloaded the boats for the tiring portage around the falls. They could not know—nor would they have cared—that the challenges of their journey stemmed from following a river that cut across the geological grain of Ohio.

The gray dolomite cliffs above the stream, now called Greenville Creek, are an expression of the Cincinnati Arch, one of the largest geologic features in the state. The arch is an anticline, a folded arch of stratified rock from whose central axis the strata slope downward in opposite directions.

On the geologic map, it appears as an elongated bulls-eye stretching from Canada to Alabama with rings of progressively younger rocks surrounding the oldest rock at the center. If there was ever any height to this arch, it has long since vanished, for the whole thing has been nearly flattened by erosion.

Rivers played, and still play, a major role in eroding the arch. A whole system of streams left their courses deeply grooved in its rocks. But then came the Ice Age. Advancing glaciers filled the old valleys with gravel and left behind a landscape with new rivers finding their own way toward the sea. In some

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(ODNR Division of Geological Survey) Cincinnati Arch

A Gift From the Heart

Augusta-Anne Olsen State Nature Preserve



Because of the generosity of one woman with great foresight, as well as a big heart, the preserve will remain as a protected fragment of Ohio's past.

the Olsen family—generosity which has translated into tangible improvements like new preserve trails.

Augusta-Anne Olsen, or Gussie as many know her, grew up in southern Maryland. Her grandfather was a country doctor and farmer. Her father attended Georgetown Law School and eventually became a judge in Washington, D.C. Olsen inherited her strong feelings about her family's farm from her father. At the heart of Olsen's fond memories of her family's land is a large holly tree and dense patches of club moss, or crowsfoot as they called it.

"Every Christmas we would gather holly and crowsfoot to make wreathes and decorate the mantle of our home," remembered Olsen. "But then the Great Depression struck, war broke out and housing was needed near the naval installations. The family farm was destroyed, including that large holly tree."

The loss of the family farm and woodlot impacted Olsen tremendously. She later married Bill Olsen, a midshipman at Annapolis when World War II began. The Olsens eventually moved to Ohio. Bill's business travels between Elyria and Bellevue allowed Gussie to search for property between the two cities.

Olsen found a 140-acre farm along the Vermilion River. During one of her hiking adventures at the farm, she discovered a large patch of crowsfoot growing along the river. Olsen knew then it was home; she and her husband purchased the farm in the early 1970s.

In 1985, never forgetting the loss of her family farm and its subsequent destruction, Olsen donated 83 acres to the Division of Natural Areas and Preserves to ensure that her Ohio farm would not experience the same fate as her childhood home. Later in 1996, the division purchased an additional 47 acres of the farm.

Today, the Olsen State Nature Preserve features ridge top oaks and maples towering above a mixed floodplain forest and the Vermilion River. Four trails along the river provide outdoor enthusiasts with more than three miles of hiking and a chance to take in all that the preserve offers.

It was a perfect day to enjoy the bright hues of spring wildflowers. As I made my way into the valley, I noticed the leaves were just beginning to emerge, and the sun's warmth on my face was invigorating. The river was up and running, and the quiet lull of water flowing was therapeutic. As I wandered deeper into the forest, I was suddenly taken by the brilliant colors growing in what had been a drab landscape during the winter months. Wildflowers. Spring flowers so dense, I couldn't take a step without walking on them, even in the middle of the trail.

This is the scene that greets me every spring, as winter finally loosens its grip on northern Ohio and I find time to enjoy the wildflowers and new growth at Augusta-Anne Olsen State Nature Preserve. Located in Huron County, it's just a short drive from Wakeman.

Formerly named the Vermilion River Preserve, today it bears the name of Augusta-Anne Olsen, who, with her husband, has been instrumental in protecting the significance of this scenic natural area. The preserve was dedicated last year in a ceremony that also recognized the years of generosity by





The half-mile Spring Trail offers great diversity and a wide variety of spring wildflowers in April and May including twinleaf, bluebells, sessile trillium, large-flowered trillium, drooping trillium, ginger, bloodroot, marsh marigold, hepatica, wild hyacinth, golden saxifrage, dwarf ginseng and showy orchis. Both the River Loop Trail and the River Trail also offer excellent wildflower viewing, as well as American chestnut trees. The

Sassafras Trail features one of the largest sassafras trees in the state, as well as spectacular views high above the river on a ridge of serviceberry and witch-hazel.

The Vermilion River, which runs in a huge bend around the preserve, has created many small plant communities with different exposures offering a great deal of diversity in a relatively small area. Birding along the river is outstanding in the springtime. Bald eagles, pileated woodpeckers, scarlet tanagers and many species of wood warblers can be spotted in the preserve. The floodplain also offers many vernal, or seasonal, pools of water, teeming with breeding amphibians, such as dusky, redback and small-mouth salamanders.

Although this preserve isn't home to any rare plants, the value of the preserve quickly becomes apparent to visitors. The river corridor along the Vermilion is as it was—intact and unblemished by modern times. Because of the generosity of one woman with great foresight, as well as a big heart, the preserve will remain as a protected fragment of Ohio's past.

Open to the public, this preserve features some trail improvements, such as boardwalks and bridges. For more information, please check our web site at www.dnr.state.oh.us/odnr/dnap or call (419) 433-4919. T

- Gary Obermiller
North Regional
Preserve Manager

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they are rare or not can be fun to know.

Wildflowers can be found almost anywhere, but some places are better than others. A good place to start is the *Directory of Ohio's State Nature Preserves*, which is available from the division or your local field office. It will guide you to some great places to start your quest for wildflowers.

A good field guide is an absolute necessity. Some people have used guides for years without realizing there is a section of text in the front of their books. This text generally describes families and defines terms used throughout the rest of the book. Audubon and Peterson publish good guides, but my favorite is Newcomb's because of the "key" system used for identification. If you can place a species in a family, it will be much easier to identify out in the field.



jack-in-the-pulpit

photo by Phil Zito

You have your guide. Now, you're ready to begin identifying wildflowers. This may come as a great surprise, but color is one of the least important characteristics to look for when determining flower types. I often have conversations with visitors to Lake Katharine that sound like this: "I was walking the trails and saw a yellow flower, do you know what it was?"

My response, "How many petals did it have? What shape were the leaves? How were the leaves arranged on the stem? Was the stem hairy or smooth?"

Correct flower identification involves all of these elements.

Keep a list of the wildflowers you've seen. It will be a good field tool as you begin learning your way around wildflowers. Even experienced wildflower enthusiasts will have a guidebook with handwritten notes detailing when and where they've seen certain species. Also, don't forget to write the date on your list. After a few years, you'll start to have a good sense of whether spring is a week early, two weeks late or right on time.

Don't think just because you've visited a preserve once, you've seen all the wildflowers it offers. Many wildflowers, especially the early bloomers, are short lived and don't bloom at the same time. My suggestion—visit a site in late March to look for early flowers like skunk cabbage and harbinger of spring, and then return every two weeks through mid-May. Follow it with monthly trips through October and you'll have really experienced most of the wildflowers in a given area.

Another way to get to know Ohio's wildflowers is to take in one of the many programs conducted at nature preserves across the state. Not only will these programs help you identify wildflowers, but you'll learn some of the less obvious species found along the trail. A preserve manager can be an excellent source of natural history and folklore—information not found in a field guide.

Some of Ohio's best preserves to see spring wildflowers are Whipple (Adams County), Shallenberger (Fairfield County), Augusta-Anne Olsen (Huron County), Gross Woods (Shelby County) and Howard Collier Scenic River Area (Seneca County). Summer wildflowers abound at Desonier (Athens County), Adams Lake Prairie (Adams County) and in Smith and Bigelow cemeteries (Madison County).

Spring's here... what are you waiting for? Grab your field guides and experience the true joy of Ohio's wildflowers. T

- Phil Zito,
Southeastern Ohio
Preserve Manager

Stream Quality Monitoring—A Great Volunteer Opportunity



THERE I WAS, BARELY OUT OF COLLEGE AND CASTING ABOUT FOR A WAY TO HELP THE ENVIRONMENT. In the summer of 1987, I picked up a brochure from the Ohio Department of Natural Resources (ODNR). I wasn't big on government agencies, but hey, I wanted to volunteer and I had a phone number.

My call was answered by John Kopec, who didn't put me on hold and didn't pass me off. He explained how the Division of Natural Areas and Preserves was just one of many ODNR divisions, and yes, there were many possibilities for getting involved... even for someone who specialized in graphic design and painting.

That's how it began. Two weeks later Mr. Kopec met me on the banks of the Sandusky River and introduced me to the "seines" and "aquatic insect larvae" of the division's Stream Quality Monitoring (SQM) Project.

As an artist, I was amazed by the wildly-abstract multimedia possibilities of

these creatures. John chose to utilize my talents by recruiting me to illustrate an updated macroinvertebrate identification sheet for the SQM kits. Before we left the Sandusky River that day, he gave me a kit so I could begin monitoring on my own. I haven't been the same since, and neither has my car.

In fact, my first date with my husband in 1988 was monitoring sites on the Sandusky River as the Northwest Ohio SQM Coordinator. After the '88 SQM season ended, I continued to volunteer for the division.

Once again employed by the division, I've come full circle. But, as an SQM volunteer, I was always made to feel that my efforts were valued. I offered my time, and in return, I received a great deal of educational experience, resume material and free canoe trips.

Ohio's Scenic Rivers Program has changed over the years, but it continues to depend upon the commitment of its SQM volunteers. SQM volunteering is easy, fun and doesn't take a large commitment of time. Volunteers range

from individuals to teachers and their entire classrooms.

Following a short training period, individuals and groups are provided simple equipment and assigned to one or more stream stations. Volunteers, working in teams of two or more, examine small riffle areas of stream bottoms and use fine mesh nets, or seines, to collect macroinvertebrates.

Volunteers are taught how to identify and then release collected organisms. Volunteers also record the monitoring information on stream assessment forms. This information helps the division determine the health of the monitored streams.

To learn more about the Stream Quality Monitoring Project, please contact Beth Wilson at (614) 265-6459. T

*- Anne Coburn-Griffis
Northwest Ohio SQM Coordinator*

Scenic River & Stream Quality Monitoring (SQM) Calendar

Be ready to get your feet wet and have fun.

TUESDAY, JULY 19
Stillwater State Scenic River SQM. Aullwood Farm (Montgomery Co.), 5-7 p.m. Become a SQM volunteer. Reservations required. Call (513) 934-0751.

WEDNESDAY, JULY 20
Greenville Creek State Scenic River SQM. Bear's Mill Access (Darke Co.), 5-7 p.m. Become a SQM volunteer. Reservations required. Call (513) 934-0751.

THURSDAY, JULY 21
Little Miami State & National Scenic River SQM. Carl Rahe Access (Warren Co.), 1-3 p.m. Become a SQM volunteer. Reservations required. Call (513) 934-0751.

SATURDAY, JULY 28
Sandusky State Scenic River SQM Workshop. Indian Mill (Wyandot Co.), 10-11:30 a.m. Become a SQM volunteer. Reservations required. Call (419) 981-6319.

SATURDAY, JULY 28
Sandusky State Scenic River SQM Workshop. Wolf Creek Park (Sandusky Co.), 12:30-2 p.m. See above listing.

SUNDAY, JULY 29
Maumee State Scenic River SQM Workshop. Providence Metropark (Lucas Co.), dam entrance, 10-11:30 a.m. See July 28 listing.

SATURDAY, AUGUST 4
Sandusky River Watershed Festival. Festival will feature live music, canoe tours, SQM demonstrations and children's exhibits. For more information, call (800) 775-9767.

SATURDAY, AUGUST 11
Sandusky River Clean Sweep. (Crawford, Wyandot, Seneca and Sandusky counties.) Volunteers and sponsors needed for this four-county one-day river cleanup. For more details, call (800) 775-9767.

SATURDAY, AUGUST 18
Maumee State Scenic River SQM Workshop. Antwerp City Park (Paulding Co.), 10-11:30 a.m. See July 28 listing.

SATURDAY, AUGUST 18
Maumee State Scenic River SQM Workshop. Independence Dam State Park (Defiance Co.), 2-3:30 p.m. See July 28 listing.

TUESDAY, AUGUST 23
Little Miami State & National Scenic River SQM. Carl Rahe Access (Warren Co.), 5-7 p.m. See July 21 listing.

WEDNESDAY, AUGUST 24
Stillwater State Scenic River SQM. Aullwood Farm (Montgomery Co.), 5-7 p.m. See July 19 listing.

THURSDAY, AUGUST 25
Greenville Creek State Scenic River SQM. Bear's Mill Access (Darke Co.), 1-3 p.m. See July 20 listing.

SATURDAY, SEPTEMBER 15
Sandusky State Scenic River SQM Workshop. Wolf Creek Park (Sandusky Co.), 10-11:30 a.m. See July 28 listing.

SATURDAY, SEPTEMBER 15
Sandusky State Scenic River SQM Workshop. Indian Mill (Wyandot Co.), 1-2:30 p.m. See July 28 listing.

SATURDAY, SEPTEMBER 16
Maumee State Scenic River SQM Workshop. Weir Rapids, near Waterville (Lucas Co.), 2-3:30 p.m. See July 28 listing.

TUESDAY, SEPTEMBER 20
Greenville Creek State Scenic River SQM. Bear's Mill Access (Darke Co.), 5-7 p.m. See July 20 listing.

WEDNESDAY, SEPTEMBER 21
Little Miami State & National Scenic River SQM. Glenn Thompson Reserve (Greene Co.), 1-3 p.m. See July 21 listing.

THURSDAY, SEPTEMBER 22
Stillwater State Scenic River SQM. Aullwood Farms (Montgomery Co.), 1-3 p.m. See July 19 listing.

EVENTS *Calendar*

2001 Annual Cranberry Bog Open House

SATURDAY, JUNE 23
10 a.m. to 4 p.m.

This special open house is for those who wish to visit one of Ohio's most unique areas—Cranberry Bog State Nature Preserve. Open only once a year, this floating bog, located on Buckeye Lake in Licking County, is home to northern pitcher plant and sphagnum moss which enables this bog community to stay afloat. Reservations are required for this year's tour.

Reservations can be made by calling (614) 265-6453 after June 1.

JULY

WC, SATURDAY, JULY 7, 10 A.M.
Legends & Tales of Clifton Gorge (Clifton Gorge, Bear's Den)

This perennial favorite takes visitors into the realm of American tall tales and equally fascinating history.

NE, SATURDAY, JULY 7, 2 P.M.
Summer Bog Trek (Kent Bog)
Take a trip back in time to the close of the ice age, when all of northern Ohio looked like this remnant of long ago.

WC, SATURDAY, JULY 7, 2 P.M.
Fen Walk (Prairie Road Fen)
This hour-long walk through one of Ohio's best prairie fens will showcase some of the unusual flowers and plants growing here. Meet at the Buck Creek State Park office.

SC, WEDNESDAY, JULY 11, 10 A.M.
The Black Hand Sandstone of the Hocking Hills (Conkle's Hollow)
What is a float block? Honeycomb weathering? What accounts for the overhangs and rock shelters found in the Hocking Hills? Join us as we explore the interesting world of the Black Hand. 1+ hours.

C, SATURDAY, JULY 21, 10 A.M.
Tour of the Darby Plains (Smith Cemetery)
See the prairie in full bloom. We will visit three sites and discuss the local history and prairie ecosystem of the Darby Plains. 2+ hours.

SE, SATURDAY, JULY 21, 10 A.M.
Ferns of Lake Katharine (Lake Katharine)
Do you know the difference between a stipe and a stem? This is a great opportunity to learn about these leafy plants.

NE, SATURDAY, JULY 21, 2 P.M.
Summer Bog Trek (Kent Bog)
See NE July 7 listing.

SE, SATURDAY, JULY 21, 7:30 P.M.
An Evening with Castor Canadensis (Lake Katharine)
What has large front teeth, a flat tail and webbed feet? That's right, a beaver! We'll use Lake Katharine's canoes to explore the watery world of the beaver. Participation is limited and reservations required.

SC, TUESDAY, JULY 31, 9 A.M.
Early Morning Walk to the Bridge (Rockbridge)
Join this informative hike to Ohio's largest natural bridge. Spanning 100 feet, it is truly a majestic geological feature. 2+ hours.

AUGUST

S, SATURDAY, AUGUST 4, 10 A.M.
Tour of Chaparral Prairie (Chaparral Prairie)
This annual guided hike is scheduled to coincide with the peak blooming of the prairie's wildflowers.

NE, SATURDAY, AUGUST 4, 2 P.M.
Summer Bog Trek (Kent Bog)
See NE July 7 listing.

SC, WEDNESDAY, AUGUST 8, 9 A.M.
Early Riser Rim Walk (Conkle's Hollow)
Gnarly old pines, hardy mountain laurel, unusual rock formations and spectacular vistas make this a hike to remember. Beat the heat and join us for this early hike. 2+ hours.

NE, WEDNESDAY, AUGUST 8, 9 P.M.
Summer Heavens (Eagle Creek)
The "Summer Triangle" is at the center of a spectacular night sky which may include an early meteor shower of "shooting stars."

SE, SATURDAY, AUGUST 11, 10 A.M.
What is a Compass Plant? (Compass Plant)
There is only one site in Ohio where this fascinating prairie species occurs naturally. Join us for a look at the compass plant and the unusual situation it grows in.

NE, SATURDAY, AUGUST 11, 11 A.M.
Summer Fen Foray (Jackson Bog)
Visit this boreal jewel at the height of blooming season. Insect repellent recommended.

C, SATURDAY, AUGUST 11, 8 P.M.
Catch a Falling Star (Stage's Pond)
Come out and enjoy the summer evening while watching the annual Perseid meteor shower. Telescopes will be provided for viewing the night sky wonders. 3+ hours.

SC, SATURDAY, AUGUST 18, 9 A.M.
A Natural History Walk (Shallenberger)
The stillness of a summer morning, sunlight poking through the canopy of leaves and the quiet trails of this nature preserve are great ingredients for a memorable hike. 2 hours.

NE, SATURDAY, AUGUST 18, 2 P.M.
Summer Bog Trek (Kent Bog)
See NE July 7 listing.

NE, SATURDAY, AUGUST 25, 11 A.M.
Late Summer Wildflowers (Tinkers Creek)
The fields around Seven Ponds are a riot of late summer color. Bring along a field guide and insect repellent.

SEPTEMBER

SE, FRIDAY, SEPTEMBER 7, 7 P.M.
An Evening with Castor Canadensis (Lake Katharine) See SE July 21 listing.

NE, SATURDAY, SEPTEMBER 8, 10 A.M.
Late Bloomers (Eagle Creek)
The fields of the preserve blaze as goldenrod and asters mark summer's end. Field guides and insect repellent recommended.

SC, SATURDAY, SEPTEMBER 8, 10 A.M.
Late Summer Hike to the Bridge (Rockbridge)
The fields are alive with color, the air suggests autumn is approaching and the sight of the 100-ft. natural bridge is awe-inspiring. 2+ hours.

C, SATURDAY, SEPTEMBER 15, 10 A.M.
Ice-Age Reminders (Stage's Pond)
Step back in time during this morning hike as we discuss the glacial history of the area and answer the question "What is a kettle lake?" 1+ hours.

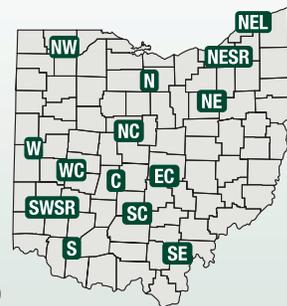
WC, SUNDAY, SEPTEMBER 16, 2 P.M.
Fall Flowers (Clifton George, Bear's Den)
Spring is not the only flowering season nature gives us, by autumn, her late bloomers are ready to show off. 1+ hours.

S, SATURDAY, SEPTEMBER 22, 10 A.M.
Tour of Raven Rock (Raven Rock)
Explore the interesting geology and history behind this well-known local landmark. This is a strenuous hike. Registration required.

SW, SATURDAY, SEPTEMBER 29, 10 A.M.
Tour of Caesar Creek Gorge (Caesar Creek Gorge)
Who was Caesar? What drew him here? Join us for a guided hike to explore these and other questions about this interesting preserve.

State Nature Preserve Areas

The letter code before each program refers to the region of Ohio where the program will be held.



C Central Mark Howes * (614) 265-6453	NEL Northeast Lakeshore (440) 632-3010	SC South Central Jeff Johnson * (614) 265-6453
EC East Central Greg Seymour (740) 763-4411	NESR Northeast Scenic Rivers Steve Roloson (330) 527-4184	SWSR Southwest Scenic Rivers Don Rostofer * (614) 265-6453
N Northern John McFadden (419) 433-4919	NW Northwest (419) 445-1775	W Western Herb Leen (937) 663-4197
NC North Central Eddie Reed (419) 981-6319	S Southern/Southwest SW Martin McAllister (937) 544-9750	WC West Central Tim Snyder * (614) 265-6453
NE Northeast Emmiss Ricks, (330) 527-5118	SE Southeast Phil Zito (740) 286-2487	

Please call the manager or the division for more information at (614) 265-6453
*New office phone numbers to be assigned.



continued from page 3

places, these streams found the valleys of the old ones and re-excavated them. In others, they established courses that cut across buried valley and highland alike.

Such is the case with Greenville Creek State Scenic River near its mouth on the state scenic Stillwater River. Shunted southward from the gravel-filled bedrock valley of a pre-Ice Age stream by the ridge of a glacial moraine, it is forced to flow across resistant Silurian bedrock brought to the surface by the gentle slope of rock on the east side of the Cincinnati Arch. In cutting its way down through this rock to the level of Stillwater River, the creek has entrenched itself in a cliff-lined gorge marked at its head by the cascade of Greenville Falls.

These falls, once cursed as an obstacle, are now the centerpiece of Greenville Falls State Nature Preserve located on the Stillwater-Greenville

Creek State Scenic River. Cool groundwater seeping through the dolomite cliffs supports a growth of shrubby cinquefoil and other plants more common in the cool north. Delicate blue harebells nod in shaded recesses. Plants of the dry prairie, such as gray-headed coneflower and butterflyweed, grace the thin soil along the cliff edges. A spring, bursting from the side of the cliff, has left behind a natural stone arch.

Geology may have created a problem for General Anthony Wayne's eighteenth century boatmen, but for us today, it has created a delight. For more information about Greenville Falls State Scenic River Preserve, contact (937) 663-0102. T

- *Tim Snyder*
West Central Ohio District
Preserve Manager

We want to hear from you!

Spring is a time of renewal and change.

In that spirit, the division is using a new software program for the newsletter's mailing list and has purged its database. If your mailing label needs to be corrected or you are receiving duplicates, please contact the division. For reference, please have the number above the name on your mailing label when you contact us.

If you'd like to be added to the *Natural Ohio* newsletter, please forward your name and mailing address to: DNAP, 1889 Fountain Square Ct., F-1, Columbus, OH 43224, call (614) 265-6453 or email dnap@dnr.state.oh.us.

The division is committed to producing an informative and educational newsletter. As always, we'd love to hear any ideas or suggestions you have for upcoming issues. Please contact the editor by calling (614) 265-6520 or email heidi.evans@dnr.state.oh.us.

PRESERVING NATURE TODAY FOR THE NEEDS OF TOMORROW

The Division of Natural Areas and Preserves' Mission Statement
Administer a system of nature preserves and scenic rivers by identifying and protecting Ohio's significant natural features.

Vision Statement
Leading Ohio in the stewardship of its natural heritage.

This newsletter is a free public service made possible through your contributions to the Natural Areas Income Tax Checkoff Program. If you are receiving duplicate newsletters, please contact (614) 265-6453.

Visit our website at: www.dnr.state.oh.us



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