

WINTER-GREEN PLANTS

More than 100 winter-green plants are listed for Ohio. If that's hard to believe, just take a look at your lawn when the snow has melted enough to see the ground. If you have allowed any wildness to remain there at all, you will probably find a few green plants, even in the coldest part of winter.

Unfortunately for those interested in pursuing this topic further, there are very few resources to draw upon. The few published guides to winter plants concentrate on identifying dead stalks, not green leaves. You can, of course, go out into the field and try to identify what you find, but most keys rely on flowers which are, of course, not available in the winter.

The only real help I found was an old article in the Ohio Journal of Science (November, 1956) entitled, "Key to the Winter-green Herbaceous Flowering Plants of Central and Southern Ohio." It might take some detective work to find a copy, but if you do, you will

be ready to tackle the interesting world of winter plants. 🌿

Tim Snyder

West Central Ohio Preserve Manager

continued cover story

CLEAR FORK GORGE

north through the preserve and the white pines in this area lie on a west-facing slope above the stream. Some of the pines are more than three feet in diameter. The canopy of this area prevents sunlight from reaching the ground and there is little ground vegetation evident.

In May, the rare large round-leaved orchid can be found in the west end of the preserve, but you will have to look hard to find it. The two large green leaves at the base of the plant are often covered by pine needles and the flowers are not very showy. A sizeable number have been located within the preserve and in other areas of the Clear Fork Gorge.

If you are looking to get away from Mohican's heavily-traveled trails, I encourage you to hike the preserve trail. To access the trail, park at the Fire Tower parking lot at the Mohican State Forest. Walk across the road and look for a blue trail marker with the Division of Natural Areas and Preserves' logo on it. Follow the posted blue trail markers through the state forest and it will bring you to the nature preserve's boundaries.

At the east end of the preserve, a bulletin board greets you at the beginning of the trail. It will take about 20 minutes to hike the trail, although I highly recommend taking time to stop and enjoy the natural features of the preserve. As always, please stay on the trail and follow posted regulations to help protect the site for future visitors.

Additional information on this and other preserves in the state may be obtained by contacting the Division of Natural Areas and Preserves at (614) 265-6453 or by checking the website at: www.dnr.state.oh.us 🌿

Greg Seymour

East Central Ohio Preserve Manager

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.

PRESERVING NATURE TODAY FOR THE NEEDS OF TOMORROW

The mission of the Division of Natural Areas and Preserves is to administer a system of natural areas and scenic rivers by identifying, inventorying, protecting and managing the best remaining examples of Ohio's natural diversity for the benefit of present and future generations. The division conducts and promotes research and educational programs designed to further the preservation of significant biological and geological features.

Visit our Web site at: www.dnr.state.oh.us



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DIVISION OF NATURAL AREAS AND PRESERVES

Natural Ohio

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

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STATE NATURE PRESERVE SPOTLIGHT

CLEAR FORK GORGE

SURROUNDED BY THE SCENIC MOHICAN MEMORIAL STATE FOREST AND THE POPULAR MOHICAN STATE PARK, THIS 29-ACRE PRESERVE IS LOCATED ON THE STEEP SOUTH BANK OF THE MOHICAN RIVER IN ASHLAND COUNTY.

Clear Fork Gorge is home to a geologically significant river valley and an untouched tract of white pine-hemlock forest. Recognizing its uniqueness, the National Park Service designated Clear Fork Gorge as a National Natural Landmark in 1970. It was dedicated as a state nature preserve in January 1990.

Once only accessible by written permit, the preserve was opened to the public in 1996 and a loop trail established in 1997. The trail traverses the steep slope above the Mohican River.

The gorge is an example of stream reversal and tells a unique glacial and geologic story. Thousands of years ago the gorge area was a divide between two watersheds. The Wisconsin glaciation occurred about 15,000 years ago, and a wall of ice blocked the river to the west of the divide. As time passed, a huge lake was formed in front of the ice dam created by the glacier.

Eventually, the water was able to flow over the divide and began the process of eroding the Clear Fork Gorge, which continues to this day. The gorge area displays an hourglass shape from the air. This shape helps us understand the erosion that continues to occur.

Clear Fork Gorge's 8-acre tract of white pines and hemlocks has some of the oldest white pines in the state. The steep slopes of the Clear Fork Gorge served to discourage logging in the area.

The preserve lies on the north-facing slope of the gorge. The 29 acres encompasses almost the entire slope, from the riverbed to the ridge top. The slopes are extremely steep and the depth of the gorge is about 300 feet.

Consider visiting one of Ohio's lesser known preserves...

I once hiked from the riverbed to the ridge top in a straight line up the slopes because I wanted to see what was growing on the slope and familiarize myself with the preserve. It was hard to make it up the slope and my legs ached for three days.

Soils, temperature, moisture, sunlight and other factors are all different on this side of the gorge. The slope is cooler and does not receive much sunlight. The large white pines and hemlocks lie on the upper reaches of the slopes within the preserve, and the area has a few oak trees and very little understory vegetation.

The difference between the adjacent state forest area and the preserve is most striking on the west end of the preserve. A small creek valley runs

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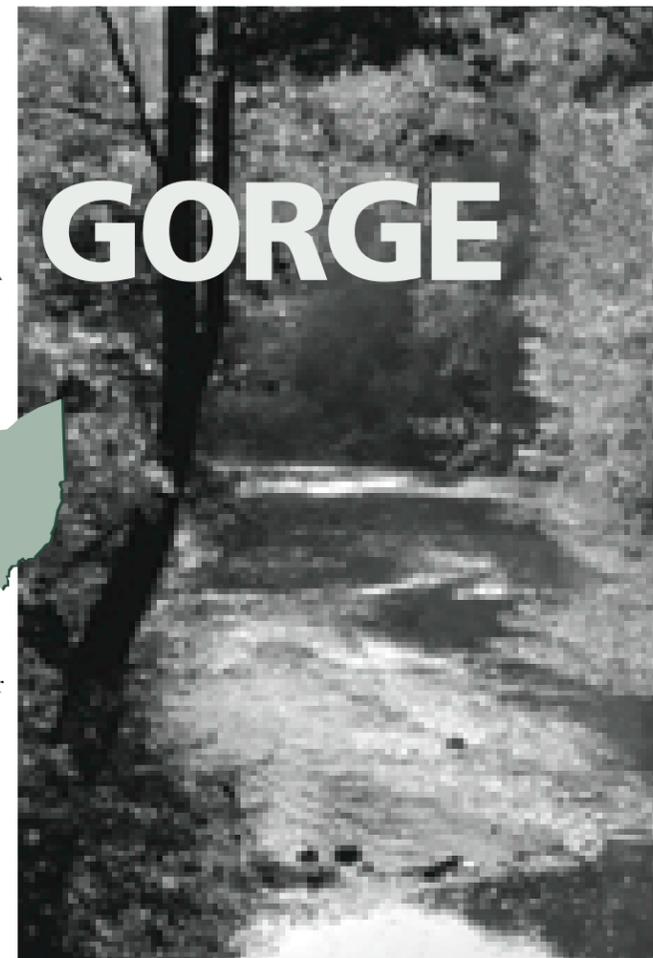




Photo by Phil Zito

THE FIRST SIGN OF SPRING

outnumber vultures. Legend has it the vultures first appeared at Hinckley on this date in 1819, attracted by carcasses from a large hunt, and have been returning ever since.

Ohio is actually home to two species of vultures. The most commonly seen vulture is the turkey vulture (*Cathartes aura*). One of the largest birds in Ohio, the turkey vulture is easily identified by its prominent "V"-shaped (dihedral) profile in flight, caused by the bird holding its wings above the horizontal plane. Also noticeable is the light gray feathers extending the entire length of its wings, and the red head of the adults. When flying, the turkey vulture will soar for extended distances without flapping its wings.

Black vultures (*Coragyps atratus*) are much less common and restricted to the southern part of Ohio. They differ from turkey vultures by their smaller size, flat flight profile, black heads and its white feathers which are restricted to the tips of its wings. Flight involves more flapping with shorter glides.

While turkey vultures normally feed on carrion, black vultures occasionally feed on small animals. Black vultures do appear to be expanding northward however, with an increasing number of sightings from the central and northern parts of the state. So be on the lookout for them away from southern Ohio.

Both species of vultures have many common traits. Featherless heads allow them to feed on rotting corpses while maintaining cleanliness and preventing bacterial growth. Their role as scavengers help "clean up" the environment.

As for the song of the vulture, don't expect one. They do not have a voice box and are silent except for occasional grunts and hisses. Nest building is kept to a minimum; eggs are usually laid on rock ledges, in tree cavities or in hollow logs. If you do stumble across a nest, approach with caution.

A defense mechanism employed by the birds involves regurgitating food in the direction of perceived predators, and given their diets, that would not be a pleasant experience.

During the mid-morning and late afternoon hours, it is common to see flocks of vultures circling in the sky. People often erroneously believe this behavior indicates a dead or dying animal on the ground on which the vultures are about to feed. What is actually happening is that the birds have just left or are returning to a roost. They slowly gain altitude by flying in a spiral course until reaching a thermal and then head off in various directions, catching a free ride on the air currents.

When you see these fascinating birds soaring in the sky on a late winter's afternoon, be assured that the days of shoveling snow and scraping ice off car windows will soon be replaced with spring wildflowers. 🌱

Phil Zito

Southeastern Ohio Preserve Manager

A GUIDE TO OHIO'S KOKOSING AND MOHICAN RIVERS PRESERVES VOICES OF HISTORY

The Kokosing River, which has a rich tradition of historic and symbolic significance for Kenyon College, became Ohio's eleventh state scenic river in 1997. *Life Along the Kokosing*, an award-winning historical tour guide for the corridors of Ohio's Kokosing and Mohican rivers, is the culmination of a year's research and interviews conducted by Kenyon College students. The 34-page booklet and audio recording, which features 13 points of interest along the two rivers, is part of a statewide effort to maintain the quality and historical significance of Ohio's waterways.



RIVER TOUR 2000 HIGHLIGHTS VALUE OF SANDUSKY RIVER

Northwestern Ohio is blessed with an abundance of rich natural resources, including the Sandusky River, which was designated as a scenic river in 1970. Not just a scenic waterway, the Sandusky provides a variety of recreational opportunities, including fishing, canoeing and bird watching.

The Sandusky River boasts the largest inland eagle population on any Ohio river and is the only river with all six species of the redhorse sucker, two of which are listed as endangered. Four major northwestern communities rely

on the Sandusky River for drinking water.

Recognizing the river's importance to the local area, State Representative Rex Damschroder, the Division of Natural Areas and Preserves, and the Sandusky River Watershed Coalition hosted the first Sandusky River Tour last July.

Damschroder, whose 89th House District includes the Sandusky River Watershed, initiated the tour to raise awareness about the significance of this northwestern state scenic river. According to an article in the Toledo Blade, Representative Damschroder said, "Over the last year, we've had so many river issues. I thought it would be nice to take a canoe out. For me, it's important to see the issues firsthand."

More than 30 people participated in the river activities, which included a canoe float from the Heck's Bridge access, part of the Howard Collier Scenic River Area, to the St. John's Dam area. The group was given demonstrations of the Division of

Wildlife's electroshocking activities at the impounded area above the dam, while below the dam, the Ohio Smallmouth Bass Alliance used the opportunity to catch a variety of aquatic species in the free flowing waters of the Sandusky.

"Events like the Sandusky Scenic River Tour are important in developing meaningful partnerships and discussing the opportunities and issues facing Ohio's water resources," said Stu Lewis, chief of the Division of Natural Areas and Preserves.

After the waterway tour, more than 70 attendees, including local officials, residents and representatives of municipal agencies, learned more about the critical issues facing the Sandusky Scenic River during round-table discussions. Key river issues included: highlighting the environmental and health concerns of the 1999 Kirby tire fire, which produced run-off that negatively affected the river, and the old Tiffin Landfill; the pros and cons of repairing or removing the St. John's Dam; and the river as a source of raw water supply, affected by sediment load and agricultural runoff.

"The opportunity for public participation is a good thing because it gives people a chance to look at the river," said Tiffin City Administrator Wayne Stephens.

Last summer's was the first in a series of annual tours planned for the Sandusky River region. Sandusky River Tour 2001 will feature the Sandusky County area and the Division of Natural Areas and Preserves hopes to build on the success of last year's event.

About 65 miles of the Sandusky River holds the state scenic designation and the division maintains three access sites. The Sandusky River is one of 11 Ohio rivers currently designated as scenic, wild or recreational. 🌱



Kenyon College's Rural Life Center is run by Professor of Sociology, Howard Sacks. Sacks established the "Life Along the Kokosing" project to research, docu-

ment and preserve the local culture along the river corridors. Sacks says the guide will create a permanent record to educate, entertain and benefit the citizens of Knox County.

"As Knox County grows larger and becomes more diverse, the river continues to serve as a unifying symbol of our community. Nearly everyone relates to the Kokosing in some way—

through work, recreation or appreciation of its beauty," explains Sacks.

The guide features historical and contemporary illustrations, as well as a brief description for each site. Accompanied by a map and a recording, it offers a series of programs devoted to each location. The materials may be used for a self-guided tour of the Kokosing and Mohican or simply for an imaginative trip along the rivers.

Life Along the Kokosing is available for \$12 by contacting Sacks at the Rural Life Center at (740) 427-5850 or email: rurallife@kenyon.edu. 🌱

Shawn Presley
News Director, Kenyon College

SHAWNEE STATE FOREST OHIO'S "LITTLE SMOKIES"

THERE AREN'T MANY PLACES ONE CAN GO IN OHIO AND TRULY GET A SENSE OF BEING IN A WILDERNESS AREA, BUT SHAWNEE STATE FOREST IS SUCH A PLACE.



Shawnee State Forest represents the best of Ohio's biodiversity. The diversity of flora and fauna in Shawnee illustrates why Ohio has some of the richest forestland in the world.

Located just north of the Ohio River near Portsmouth, Shawnee sprawls over much of western Scioto County and part of eastern Adams County. Land acquisition began in 1922, with an inaugural purchase of 5,000 acres. Named for its early inhabitants, Shawnee is the largest of Ohio's 20 state forests, at more than 63,000 acres.

In 1922, Shawnee State Forest looked quite different. The area, like much of southern Ohio, had been subjected to large-scale land clearing and logging, leaving a mostly barren landscape. Grazing animals also added to erosion problems, which contributed to silting of creeks and streams, causing numerous washes and gullies on the hillsides. Many forest-dwelling animals and plants were displaced and some never recovered.

Today, thanks to the efforts of ODNR's Division of Forestry, Shawnee State Forest provides an opportunity to experience what the unglaciated hills of southern Ohio looked like when the Shawnees roamed the land. Dry razorback ridges covered with hickory and several oak species offer majestic overviews of vast forest, and glimpses of the distant Ohio River and neighboring Kentucky. Deep dark coves, like Dead Man's Hollow, are carpeted with trees requiring moisture conditions, like yellow poplar, beech and sugar maple. The Shawnee has been dubbed "Ohio's Little Smokies," due to its resemblance to the Great Smoky Mountains National Park in North Carolina and Tennessee.

Shawnee State Forest is truly a botanical paradise—perhaps the most ecologically significant region in the state. Its plant diversity is overwhelming. If it's the rarities of the plant world you seek, this is the spot. At last count, nine endangered, 16 threatened and 19 potentially threatened species have been documented. New discoveries are made on a regular basis.

Recently, creeping aster (*Aster surculosus*) was rediscovered in the forest. This diminutive, blue-flowered species is southern in distribution, and had only been collected once before in Ohio, also in Shawnee Forest in 1954.

Why is Shawnee such a treasure trove of rarities? There is more than one answer.

First, the sheer size and largely unfragmented nature of the forest is necessary for certain species to survive and flourish. The importance of large forest ecosystems might be best evidenced and most obviously by the multitudes of interior forest birds.

The diversity and numbers of noteworthy breeding avifauna will enchant birders. Species elusive in other areas occur here commonly, and dozens of territorial males can be heard singing in season. Significant species include: wood thrush, yellow-throated, pine, cerulean, black-and-white, worm-eating, and hooded warblers; Louisiana waterthrush, ovenbird, and scarlet and summer tanagers.

Secondly, the geographical location of Shawnee Forest is important in influencing the complement of species present. Many southern plants reach the northern limits of their range in this part of Ohio, like the creeping aster. While the aster and a number of others are rare in Ohio and only found in this area, they become common in Kentucky, West Virginia and points south.

Umbrella magnolia



The third factor affecting plant distribution is the presence of the Ohio and Scioto River systems.

Rivers are vital conduits for plant migration and these streams play a major role. Many plant species moved northward from the Mississippi Valley up the Ohio River, reaching the northern and eastern limits of their ranges in southern Ohio.

Rare southern specialties include passion-flower (*Passiflora incarnata*), mistletoe (*Phoradendron serotinum*), and cross-vine (*Bignonia capreolata*). Meteorologically, the Ohio River valley has a slight moderating effect on winter temperatures, remaining warm enough that half-hardy southern species can survive the winters.

Finally, perhaps the most significant factor dictating the presence of rare plants in Shawnee Forest is another river. The ancient Teays River originated in what is now North Carolina and flowed northwest, entering Ohio in Scioto County. It then extended northwest, exiting Ohio near Grand Lake St. Marys.

Glaciers of the Pleistocene Ice Age obliterated the Teays about two million years ago. Many Appalachian plants may have migrated north along the Teays and established populations well to the north of their current

distributional centers, some of which persist today. Some of these Appalachian migrants are found in Shawnee, and often their populations are the only occurrences north of the Ohio River. These outlier populations are termed "disjunct" and Shawnee harbors many disjunct species.

One distinctive Appalachian species in Shawnee is the umbrella magnolia (*Magnolia tripetala*), a small tree with enormous leaves. Magnolias grow along small creeks and their jumbo foliage creates a jungle-like feeling. Another woody Appalachian plant is the wild azalea of the genus *Rhododendron*. Shawnee harbors two varieties of the species *Rhododendron nudiflorum*—Northern rose azalea (*R. nudiflorum* var. *roseum*) and pinxter-flower (*R. nudiflorum* var. *nudiflorum*). While not as common as further south, they can be frequent enough to add spectacular color to the late spring landscape.

Most exciting are the true disjuncts—species that are far removed from the closest populations. Shawnee has amazing examples of these vegetative renegades. Perhaps showiest is the early stoneroot (*Collinsonia verticillata*). Sizeable populations of this May-blooming mint occur in the forest, which might remind one of its common relative, the widespread richweed (*Collinsonia canadensis*). The Shawnee early stoneroot sites are several hundred miles north of the nearest known populations.

A case of incidental preservation of a rare disjunct occurred adjacent to Shawnee State Forest, at Raven Rock State Nature Preserve. The Division of Natural Areas and Preserves acquired this site in 1995 because of its significance as a geological feature. Raven Rock is a spectacular sandstone promontory overlooking the Ohio River valley and the summit offers a commanding vista ranging over several miles.

In May 1998, while making the arduous hike to the summit, I rediscovered small-flowered scorpion-weed (*Phacelia dubia*), a plant not found in Ohio since 1904. Small-flowered scorpion-weed is a tiny annual with clusters of delicate, china-blue flowers, and attractive pinnately divided leaves. Growing in colonies, it forms a carpet-like mist of pale azure when at peak bloom. A written permit from the division is required to visit this preserve.



Hooded Warbler

Shawnee State Forest represents the best of Ohio's biodiversity. The diversity of flora and fauna in Shawnee illustrates why Ohio has some of the richest forestland in the world. More than 950 species of native vascular plants have been found there including over 70 trees. More than 110 species of breeding birds have also been recorded.

The Scioto River drainage also has some of the most diverse aquatic fauna in the state, including some species also found in the Big and Little Darby National and State Scenic Rivers. The Shawnee is large enough that the occasional black bear is seen, and it is possible that bobcats still find refuge.

So, for a taste of the Great Smoky Mountains without leaving Ohio, visit our "Little Smokies"—Shawnee State Forest. For maps and information, contact the Ohio Division of Forestry at (614) 265-6694. 🌿

Jim McCormac
Botanist

Invasive Plant Alert #8

Glossy and Common Buckthorn

Rhamnus frangula and
R. cathartica

Description: Both of these buckthorns are tall shrubs or small trees that grow up to 20 feet tall. The smooth, gray to brown bark is distinctively spotted. Glossy buckthorn has shiny leaves with smooth edges. It has solitary red to purple berry-like fruits. Common buckthorn has black fruits and dull green smooth leaves. Both species are abundant seed producers.



Glossy Buckthorn

Habitat: Glossy buckthorn typically invades wetlands including swamps, bogs, fens, and wet meadows, but it also occurs in upland habitats, such as woodland edges, old fields, and road-

sides. Common buckthorn is primarily an invader of upland sites including open woods, woodland edges, prairies, and open fields. Both species are capable of growing in full sun as well as heavily shaded areas.

Distribution: Glossy buckthorn and common buckthorn were introduced to North America from Eurasia as ornamental shrubs for fencerows and wildlife habitat and are still used in landscaping. These species are distributed throughout the northeast and north central U.S. and are frequent in central and northern Ohio.

Problem: Both glossy and common buckthorn have a wide habitat tolerance, rapid growth rates, and extensive root systems. Both species produce abundant flowers and fruits throughout the growing season. Seeds are widely dispersed by birds. Once established, these species aggressively invade natural areas and form dense thickets displacing native species. They leaf out very early in the growing season and keep their leaves late into the fall helping to shade out native trees, shrubs, and wildflowers. Glossy buckthorn is the most invasive non-native plant in wetland preserves in the state, impacting sites such as Cranberry Bog, Prairie Road Fen,



Common Buckthorn

Irwin Prairie, Jackson Bog, and Myersville Fen State Nature Preserves.

Management: Cutting and treating stumps in the spring or fall with a systemic herbicide such as Garlon 4 mixed with Penevator basal oil is the best method of control. Basal bark application of Garlon 4 and Penevator is also effective. In dense thickets, herbicide such as Garlon 3A, Roundup, or Accord may be applied to the foliage by spraying or hand-wicking. Buckthorns are very difficult to control due to vigorous resprouting and a large seedbank.

Native Alternatives: lance-leaved buckthorn (*Rhamnus lanceolata*), or Carolina buckthorn (*R. caroliniana*), winterberry (*Ilex verticillata*), dogwoods (*Cornus racemosa*, *C. amomum* and *C. sericea*), and white cedar (*Thuja occidentalis*). ♻️

Jennifer Windus
Research and Monitoring
Administrator

WINTER-GREEN PLANTS

So, it shouldn't come as a surprise that some of these winter-green plants are very common, even nuisances.

IT'S ALWAYS NICE TO SEE A LITTLE GREEN IN THE MIDDLE OF WINTER.

In Ohio, that usually means hemlocks, pines and cedars. However, a surprising number of herbaceous (non-woody) plants also sport some green during the cold months. Because they are smaller than trees and often covered by fallen leaves, these plants sometimes grow unnoticed. Or maybe they are unfamiliar to us because we don't often visit the winter woods and fields.

For plants, remaining green in the winter has definite benefits. Most importantly, green plants can continue photosynthesis when the temperature is not too low, increasing their supply of food. This gives them a head start in the spring.

One of the most easily recognized winter-green plants falls into this latter category. Garlic mustard is a non-native invader that has taken over many second-growth woodlots.

Unfortunately, it can be found in many of our state nature preserves such as Clifton Gorge and Hueston Woods. It is a biennial that sprouts a low rosette of vaguely kidney-shaped leaves the first year. In favorable situations (which for garlic mustard is almost anywhere), these rosettes literally carpet the ground, making it very difficult for anything else to sprout. The rosettes remain vivid green through the winter. In their second spring, they send up tall flower stalks which eventually produce thousands of tiny seeds in narrow pods,

and the process begins all over again.

A number of non-native weeds follow the same procedure. Wide-leaved common plantain and the narrow-leaved English plantain can remain green through the winter, as can field garlic, white yarrow and red clover.

But aliens are not the only plants that use a winter-green strategy. In the hemlock-hardwood forests of eastern Ohio, look for the downy rattlesnake plantain's small rosettes of dark-green leaves veined with white. Sweet cicely and aniseroor are among the more common wintergreen plants found in woodlands. Look for golden alexander leaves in more open areas and wild columbine in calcareous, rocky places. Some asters, violets, black-eyed susans, and goldenrods also maintain green leaves at ground level through the winter.

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Common plantain

English plantain

Garlic mustard

EVENTS Calendar

April - May - June 2001

State Nature Preserve Areas

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



- | | | |
|--|---|--|
| C Central
Jeff Johnson
(614) 265-6458 | NEL Northeast
Lakeshore
John McFadden
(440) 632-3010 | SC South Central
Mark Howes
(740) 653-2541 |
| EC East Central
Greg Seymour
(740) 763-4411 | NESR Northeast
Scenic Rivers
Steve Roloson
(330) 527-4184 | SWSR Southwest
Scenic Rivers
Don Rostofer
(513) 934-0751 |
| N Northern
Gary Obermiller
(440) 839-1561 | NW Northwest
(419) 445-1775 | W Western
Herb Leen
(937) 663-4197 |
| NC North Central
Eddie Reed
(419) 981-6319 | S Southern/Southwest
Martin McAllister
(937) 544-9750 | WC West Central
Tim Snyder
(937) 964-8794 |
| NE Northeast
Emliss 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

APRIL

SC SATURDAY, APRIL 7, 10 A.M.
Waterfalls of Conkle's Hollow
(Conkle's Hollow)

Waterfalls come in all sizes at Conkle's Hollow. Observe such waterfalls as "Grotto Falls," "Diagonal Falls" and "Dead Snag Falls." See the impact of water in nature.

SE SUNDAY, APRIL 8, 1:30 P.M.
Wildflowers of Lake Katharine
(Lake Katharine)

As Spring marches on so does a colorful parade of wildflowers at Lake Katharine. Three guided walks throughout the Spring will allow the visitor to see almost all Spring wildflowers as they bloom along the beautiful trails of Lake Katharine.

NE SATURDAY, APRIL 14, 2 P.M.
Spring Bog Walk (Kent Bog)

Join us on this walk back in time and across the miles as we relive the close of the ice age. Boardwalk is wheelchair accessible.

NE SATURDAY, APRIL 19, 11 A.M.
Wetland Spring (Tinkers Creek)

Life awakens pond side and in the marshes as the days lengthen. Boots or old sneakers advised. 2 hours.

N SATURDAY, APRIL 21, 10 A.M.
Riverside Wildflowers
(Augusta-Anne Olsen)

Join us on a hike along the Vermilion River in Huron County as we identify the abundance of Spring wildflowers. Boots a must. 2 hours.

WC SUNDAY, APRIL 22, 2 P.M.
A Wildflower Spectacle (Clifton Gorge)

The spectacular wildflower display for which Clifton Gorge is famous should be in full bloom. This hike explores the most colorful inhabitants of the gorge. Meet at the Bear's Den. 1½ hours.

NE SATURDAY, APRIL 28, 10 A.M.
Wildflower Romp (Eagle Creek)

Over 60 species in bloom on this discovery hike through the preserve. Bring a sack lunch. 3 to 4 hours.

SC SATURDAY, APRIL 28, 10 A.M.
Wildflowers of the Gorge (Conkles Hollow)

Join us as we discover the dozens of Spring wildflower species to be found carpeting the forest floor. 2 hours.

W SATURDAY, APRIL 28, 10 A.M.
Wildflower Hike (Gross Woods)

Come and join us as we view a striking wildflower display in one of our old growth forests. We'll discover such beauties as wild geranium, several species of violets and trilliums among many others.

JUNE

NE SATURDAY, JUNE 2, 11 A.M.
Life in a Sweet Bog (Jackson Bog)

Discover the fen and its strange assemblage of unique organisms as we return to the ice age. 1 to 2 hours.

SC SATURDAY, JUNE 9, 9 A.M.
Spectacular Rim Walk (Conkle's Hollow)

The ecology of the Rim Trail is most unusual and diverse. This 2½ mile hike focuses on the habitat, plant communities and the scenic beauty of the rim. 3 hours.

SE SATURDAY, JUNE 9
Big Leaf Magnolias of Lake Katharine
(Lake Katharine)

Jackson County is the northern most limit for this southern species with beautiful white flowers. Join the preserve manager for an off-trail hike deep into the preserve to see these wonderful trees in bloom, registration required.

NE SATURDAY, JUNE 9, 2 P.M.
Summer Bog Walks (Kent Bog)

Every other Saturday throughout the summer months, learn about the ice ages on this walk through this place that time forgot and the ages could not improve upon.

SC WEDNESDAY, JUNE 20, 10 A.M.
Summer Trees and Shrubs ID Walk
(Conkle's Hollow)

Witch hazel, spicebush, muscledwood and devil's walking stick are but a few of trees and shrubs to be identified on this hike. 2 hours.

EC SATURDAY, JUNE 23, 10 A.M. TO 4 P.M.
2001 Annual Cranberry Bog
Open House (Cranberry Bog)

This special open house is for those who wish to visit Cranberry Bog. Reservations will be required this year. Reservations can be made by calling (614) 265-6453 after June 1.

NE SATURDAY, JUNE 23, 2 P.M.
Summer Bog Walks (Kent Bog)
See June 9.

WC SUNDAY, JUNE 24, 2 P.M.
In Search of the Titanic (Clifton Gorge)

We won't find the fabled ship, but we will explore the bottom of a sea that was ancient long before the Atlantic Ocean in which the Titanic rests was even a glimmer. Meet at the Bear's Den.

MAY

W SATURDAY, APRIL 28, 2 P.M.
Wildflower Hike (Baker Woods)

Take this opportunity to enjoy the wildflower display in this old growth forest, which is not open to the public without an access permit.

W SUNDAY, APRIL 29, 10 A.M.
Wildflower Hike (Davey Woods)

As one of our finer old growth forests, Davey Woods offers a lovely wildflower display. Join us as we identify and view some of nature's wonders.

SE SUNDAY, APRIL 29, 1:30 P.M.
Wildflowers of Lake Katharine
(Lake Katharine) See April 8.

NE SATURDAY, MAY 5, 8 A.M.
Good Morning Birdwalk (Eagle Creek)
Bring your binoculars and join us as we tally our colorful friends and identify them by song and sight. 2 hours.

SC SATURDAY, MAY 5, 9 A.M. - 2:30 P.M.
Christmas Rocks Annual Spring Hike
(Christmas Rocks)

Join us as we spend the day hiking along wooded trails and scenic ridges observing the geology and flora in this wonderful preserve. RESERVATION ONLY - limited to 20. This is a popular program and fills up quickly.

NE WEDNESDAY, MAY 9, 9 P.M.
Spring Stargazer (Eagle Creek)

The constellations of late spring and deep space objects are the focus of this adventure in the heavens. 2 hours.

N SATURDAY, MAY 12, 10 A.M. TO 3 P.M.
Lakeside Daisy Open House (Lakeside Daisy)

Staff will be on site to provide information on the Lakeside Daisy as well as other interesting flora that can be found here.

SE SUNDAY, MAY 13, 1:30 P.M.
Wildflowers of Lake Katharine
(Lake Katharine) See April 8.

SE SUNDAY, MAY 13, 7 P.M.
Beavers of Lake Katharine (Lake Katharine)

What has a flat tail, big front teeth and webbed feet? That's right, a beaver! We'll use Lake Katharine's canoes to explore the water world of the beaver. Participation limited, registration required.

WC SATURDAY, MAY 26, 12 P.M. TO 4 P.M.
American Warriors (Clifton Gorge)

The life of a soldier isn't easy, but warriors have always figured out how to make the best of things. This "Living History" encampment will show how they did so in times past.

