

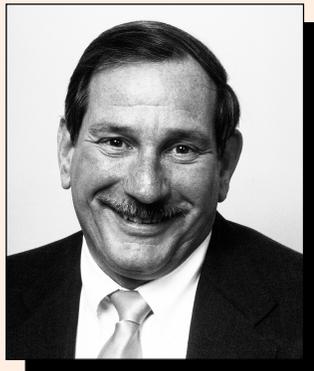


Newsletter

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

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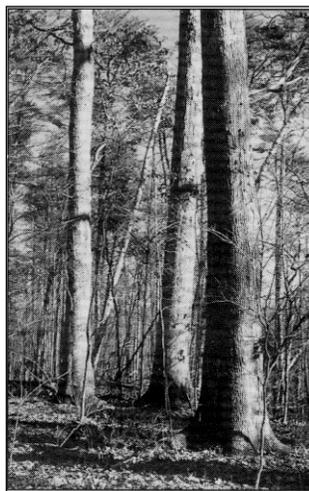
On February 14, Director Sam Speck officially appointed Stuart Lewis as the new Chief of the Division of Natural Areas & Preserves.

Stu has been serving in the capacity as Acting Chief of the Division since the retirement of former Division Chief Guy Denny this past April. Stu is a longtime veteran of the Department having started his career with ODNR in May of 1972. Stu was hired to oversee and develop the state's newly inaugurated Scenic Rivers Program. Having served as the administrator of the state's Scenic Rivers Program for 22 years, he was appointed to the position of Assistant Chief in 1994. Upon his recent appointment Chief, Lewis said "I wish to express my sincere thanks for the outpouring of support from the Division's staff. With the dedication and high level of expertise present within the staff, we will have an exciting and new direction as we move into the new millennium."

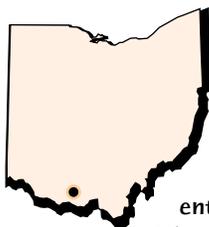
STATE NATURE PRESERVE SPOTLIGHT

DAVIS MEMORIAL STATE NATURE PRESERVE

I fully expected to search for hours and be unsuccessful. I was not even sure that what I was looking for actually existed and my search required me to visit an unfamiliar "habitat." Yet in less than half an hour, I held in my hand something tiny, but important. In a room full of storage boxes at the Frederick and Amy Geier Collections and Research Center (an affiliate of the Cincinnati Museum Center), I had found a tiny scrap of paper nearly 70 years old. On it was a hand-drawn map and a few words which proved to be critical in relocating a linear vegetation transect laid out by the late Dr. E. Lucy Braun in 1927. She published her research in 1928 as Ohio Biological Survey Bulletin 15 entitled: The Vegetation of the Mineral Springs Region of Adams County, Ohio. The area in which the transect was located had been designated a nature preserve in 1961 when the owner of the property, Davon, Inc. donated 88 acres to the Ohio Historical Society in honor of its former chairman of the board, Edwin H. Davis.



The area was set aside (presumably at the urging of Braun herself) in order to protect rare plants and geological formations. Now known as Davis Memorial State Nature Preserve, management of the area was transferred from the Ohio Historical Society to the Division of Natural Areas & Preserves in 1993. Davis Memorial sits astride the boundary of two physiographic regions: the Unglaciated Appalachian Plateau to the east and the Interior Low Plateau or "Bluegrass Region" to the west and south. Because of its geographic location and the resulting variety of exposed bedrock, Davis Memorial harbors a great diversity of plant life.



The low ridges are capped with Ohio Black Shale producing a soil somewhat acidic in nature. Some of these areas were farmed in the past. When abandoned early in the 20th century, these old fields were colonized by scrub pine (*Pinus virginiana*) which are now beginning to be replaced by hardwoods. Here one finds plants such as the tiny but beautiful bluets (*Hedyotis caerulea*) and the equally unobtrusive common cinquefoil (*Potentilla simplex*). Deerberry (*Vaccinium stamineum*) can be found in the understory beneath scarlet oak (*Quercus coccinea*) which often now dominates the canopy.

The slopes below the ridgetops are composed of dolomites producing an alkaline soil nearly 1000 times less acidic than those on the shales above. This contrast provides growing conditions favorable for many different species. In these areas, state endangered plant species such as Walter's violet (*Viola walteri*) can be found growing along the edge of the trail. Other endangered species such as limestone adder's-tongue fern (*Ophioglossum engelmannii*) and narrow-leaved



DNAP staff meticulously identify every plant along Braun's 1927 transect.



Limestone adder's-tongue



Martin McAllister (left), and John B. Patton.

Davis Memorial...

continued from previous page

bluecurls (*Trichostema dichotomum* var. *lineare*) are hidden in small pockets within the preserve. A species once thought to be extirpated from Ohio is dwarf hawthorn (*Crataegus uniflora*), which had been seen in this same area in 1927. It was rediscovered at Davis Memorial by Chief Botanist, Allison Cusick in 1994, bringing the total number of known rare species in the preserve to eighteen. The thin soil on these slopes also supports small, deceptively old trees. Specimens only eight inches in diameter have been found to be more than 150 years old! In the richer soil on the lower slopes and in the stream valleys, grow common yet beautiful spring wildflowers such as Greek valerian or Jacob's-ladder

(*Polemonium reptans*), large-flowered trillium (*Trillium grandiflorum*), and perfoliate bellwort (*Uvularia perfoliata*).

Two half-mile loop trails and a one-mile section of the Buckeye Trail meander through Davis Memorial, affording the hiker an opportunity to enjoy one of the most ecologically diverse nature preserves in southern Ohio. The preserve is open dawn to dusk each day. An interpretive brochure is available by contacting the Division. Plan a visit with your family soon or contact the preserve manager for a guided group tour at 937/544-9750.

Martin McAllister, Preserve Manager



Located south of the Appalachian Highway (State Route 32). From the junction of State Route 32 and State Route 41 south of Pebbles, follow State Route 32 approximately 1 mile east to Steam Furnace Road. Proceed south on Stem Furnace Road for .5 miles to Davis Memorial Road. Go left (east) on Davis Memorial Road for 2.5 miles until reaching the parking lot on the right. A trail system with bridges and a boardwalk is present. The preserve is owned by The Ohio Historical Society and managed by the Division.

PLANT ALERT #5

AUTUMN OLIVE/RUSSIAN OLIVE *Elaeagnus umbellata*/*E. angustifolia*

Description: Autumn olive and Russian olive are deciduous shrubs or small trees that grow up to 20 feet tall. The leaves on Autumn olive are small, oval, untoothed and dark green. It has small light yellow flowers, round juicy fruits that are reddish to pink in color and dotted with scales. Russian olive's leaves are narrower, longer, and dull green. It has yellow flowers and dry yellow fruits. The twigs of Russian olive are typically covered with thorns. Silver scales occur on the underside of the leaves of both species. These shrubs begin to flower and fruit annually after three years. One individual plant can produce eight pounds of fruit that are readily eaten and spread by birds.

Habitat: Autumn and Russian olive have nitrogen-fixing root nodules which allow them to adapt to many poor soil types. They are found in areas such as roadsides, pastures

and fields, grasslands and sparse woodlands.

Management: Stems may be cut and treated with a systemic herbicide. Resprouting will likely occur, so follow-up control is usually necessary. Young sprouts and seedlings can be hand-pulled in the early spring when the ground is moist enough to allow the entire plant, including the roots, to be removed. Both species resprout vigorously after cutting or burning. A combination of hand-pulling, digging and herbicide treatments is usually necessary to control these species over time.

Distribution: Autumn olive is native to China and Japan. It was introduced to the United States in 1830 and can be found distributed throughout the state. Russian olive is originally from Europe and Asia. It was in-



Autumn olive

In December of 1998, John B. Patton, president of Davon, Inc., donated two additional parcels of land to the Division of Natural Areas & Preserves, continuing the legacy his grandfather, Edwin H. Davis, began in 1960. These parcels total 34 acres and bring the total acreage of Davis Memorial to 122. One of these parcels protects a sinkhole and a portion of the drainage which feeds a small cave located on the original preserve. The protection of this drainage is critical to maintaining the fragile cave ecosystem. The second parcel contains two picturesque promontories of Pebbles dolomite known locally as Twin Rocks.

The Division greatly appreciates the generosity of Davon, Inc. and would like to thank Mr. Patton and the employees of Plum Run Stone Division for their assistance in protecting one of Ohio's very special places.



Davis Memorial dedication in 1961.

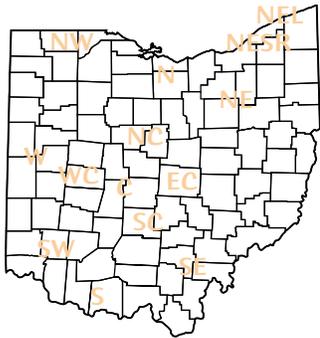
roduced to North America in the early 1900s and can be found throughout Ohio.

Native Alternatives: black haw (*Viburnum prunifolium*), dogwoods (*Cornus racemosa*, *C. amomum* and *C. sericea*), and serviceberry (*Amelanchier arborea* and *A. laevis*).

EVENTS *Calendar*

JULY - AUGUST - SEPTEMBER 2000

The letter code before each program refers to the region of Ohio where the program will be held. Below is a list of the letters and the corresponding manager's name. Please call the manager or the Division for more information on the programs or state nature preserves.



DIVISION - 614/265-6453

C - (Central) - Ron Demmy,
614/265-6463

EC - (East Central) - Greg Seymour,
740/763-4411

N - (Northern) - Gary Obermiller,
440/839-1561

NC - (North Central) - Eddie Reed,
419/981-6319

NE - (Northeast) - Emliss Ricks,
330/527-5118

NEL - (Northeast Lakeshore) - John
McFadden 440/632-3010

NESR - (Northeast Scenic Rivers) -
Steve Roloson, 330/527-4184

NW - (Northwest) - Bob Sanford,
419/445-1775

S - (Southern) - Martin McAllister,
937/544-9750

SE - (Southeast) - Phil Zito,
740/286-2487

SC - (South Central) - Mark Howes,
740/653-2541

SW - (Southwest) - Frank Skalski,
513/932-2347

W - (Western) - Herb Leen,
937/663-4197

WC - (West Central) - Tim Snyder,
937/964-8794

JULY

WC, Saturday, July 1, 10:00 a.m.

Legends & Tales of Clifton Gorge (Clifton Gorge - Bear's Den)

Everyone likes a good story, and Clifton Gorge is full of them. The gorge jumper, the love-lorn Indian maiden, the Wily politician and other characters of fact and fiction will be part of this two hour saunter along the cliffs lining the Little Miami River.

WC, Saturday, July 1, 2:00 p.m.

Fen Walk (Prairie Road Fen)

What better place to spend a hot summer afternoon than beside a cold, crystal-clear stream. The spring-fed waters of Prairie Road Fen support a number of rare plants and animals. Meet at the Buck Creek State Park office parking lot.

SE, Saturday, July 8, 10:00 a.m.

Ferns of Lake Katharine (Lake Katharine)

Don't know the difference between a pinna and a pinnule? Learn how to identify these leafy plants during this unusual workshop.

NE, Saturday, July 8, 2:00 p.m.

Summer Bog Walk (Kent Bog)

Travel back in time to the end of the Ice Age when Mastodons walked the landscape and Kent Bog was born.

SE, Saturday, July 8, 7:30 p.m.

Beavers of Lake Katharine (Lake Katharine)

What has big front teeth, webbed feet and a large flat tail? That's right, a beaver. We'll use Lake Katharine's canoes to explore the watery world of the beaver. Lodges, work sites and hopefully the beavers themselves will be seen. **RESERVATION REQUIRED.** Participation limited to 15.

SC, Wednesday, July 12, 10:00 a.m.

Geology-the Black Hand Sandstone of the Hocking Hills (Conkles Hollow)

What is a "float block"? "Honey-comb weathering"? What accounts for the overhangs and rock shelters found in the Hocking Hills? All this and more will be discussed as we explore the Black Hand Sandstone of Conkle's Hollow. 1 1/2 hours.

SC, Saturday, July 15, 9:00 a.m.

Little Rocky Hollow Tour (Little Rocky Hollow)

Little Rocky Hollow is one of the most rugged state nature preserves in Ohio. This hike is strenuous and lengthy. Limited to 12. 6 hours. **RESERVATIONS REQUIRED** and will be taken after May 1.

SC, Wednesday, July 19, 6:00 p.m.

Summer's Eve Rim Walk (Conkle's Hollow)

Hiking the 2.5 mile Rim Trail is special anytime but the coolness of the evening adds a nice touch. This trail is strenuous and in some places comes near steep cliffs. 2+ hours.

C, Saturday, July 22, 10:00 a.m.

Tour of the Darby Plains (Smith Cemetery)

We'll begin at Smith Cemetery and travel to Bigelow Cemetery and Milford Prairies. No restrooms available. Dress for the weather. 2 hours.

NE, Saturday, July 22, 2:00 p.m.

Summer Bog Walk (Kent Bog)

See July 8.

AUGUST

S, Saturday, August 5, 10:00 a.m.

Tour of Chaparral Prairie (Chaparral Prairie)

This annual guided hike leads visitors through the prairie at its peak blooming period.

NE, Saturday, August 5, 2:00 p.m.

Summer Bog Walk (Kent Bog)

See July 8.

NE, Wednesday, August 9, 9:00 p.m.

Summer Skies (Eagle Creek)

Discover the ever-changing heavens during this look at planets, stars and deep space phenomena. Telescope available. If cloudy (60%+) same time tomorrow night.



SC, Wednesday, August 9, 9:00 a.m.

Early Morning Walk to the Bridge (Rockbridge)

An interesting hike to Ohio's largest natural bridge. Spanning 100 feet, it is truly a majestic geological feature! 2+ hours.

SC, Saturday, August 12, 10:00 a.m.

Trees and Shrubs of Shallenberger (Shallenberger)

Shallenberger features a variety of trees and shrubs due to the variety of habitats found there. A good identification hike. 1 1/2 hours.

SC, Wednesday, August 16, 9:00 a.m.

Early Riser Rim Walk (Conkle's Hollow)

What a fascinating place! Gnarly old pines, hardy mountain laurel and hemlock shaded box canyons make this a hike to remember. Beat the heat and join us for this early hike. Strenuous. 2+ hours.

NE, Saturday, August 19, 2:00 p.m.

Summer Bog Walk (Kent Bog)

See July 8.

SC, Saturday, August 26, 10:00 a.m.

Historical Hollow Happenings (Conkle's Hollow)

The Hocking Hills region has experienced many cultural and natural changes over the last two centuries. Past history as well as some legends known to this area will be enjoyed on this walk. 1 1/2 hours.

SE, Saturday, August 26, 10:00 a.m.

Compass Plants (Compass Plant)

Where is the only site in Ohio where the compass plant grows? In the heart of Lawrence County.

SEPTEMBER

NE, Saturday, September 2, 11:00 a.m.

Late Summer Bliss (Tinkers Creek)

The plants and animals of late summer are the focus of this short hike along Seven Ponds Trail.

NE, Saturday, September 2, 2:00 p.m.

Summer Bog Walk (Kent Bog)

See July 8.

SE, Friday, September 8, 7:00 p.m.
Beavers of Lake Katharine (Lake Katharine)
See July 8.

N, Saturday, September 9, 10:00 a.m.

Coastweeks Event-Sheldon Marsh Beach Clean-Up (Sheldon Marsh)
Our annual beach clean-up in honor of "Coastweeks-Celebrating Ohio's North Coast." Join us as we hike the best protected beach on Lake Erie's south shore. Lunch provided following the clean-up. **REGISTRATION REQUIRED.**

NE, Saturday, September 9, 10:00 a.m.

Late Summer Bloomers (Eagle Creek)

The diversity of the season is seen on this late summer wildflower walk.

SC, Saturday, September 9, 10:00 a.m.
Ecology of the Gorge (Conkle's Hollow)



This walk gives visitors an overview of the many natural components of the beautiful gorge at Conkle's Hollow. A great way to learn the general ecology of the Hocking Hills. 2 hours.

NEL, Saturday, September 16, 10:00 a.m.

Dunes Beach Clean-up (Headlands Dunes)

Enjoy a late summer's morning along Lake Erie's south shore and at the same time help clean-up the beach at Headlands Dunes. Dress appropriately for the weather.

WC, Sunday, September 17, 2:00 p.m.

Fall Flower Spectacular (Clifton Gorge)

We often think of spring as flower season, but autumn has its own collection of spectacular wildflowers, several of which have made the leap into garden culture. This walk will introduce the colorful pleasures of fall.



Dedication Of Augusta-Anne Olsen State Nature Preserve May 20, 2000

On May 20, 2000 at 10:00 a.m., the Division of Natural Areas & Preserves will be holding a dedication ceremony for the Augusta-Anne Olsen State Nature Preserve in Huron County at 4934 West River Road in Wakeman, Ohio. The original 83 acres of oak and maple covered ridges towering above a mixed floodplain forest along the Vermilion River were donated to the Division in 1985 by Augusta-Anne and William H. Olsen. In 1998, the Division purchased the remaining 47 acres of their farm for buffer and better access. The Olsen Preserve, formerly known as Vermilion River Preserve, had been open to the public only by written permit due to poor accessibility, but with the additional purchase of land, the preserve was opened to the public without permit in the spring of 1999. Any off-trail use, collection, or research still requires a written permit from the Division. The 130-acre preserve now features over three miles of hiking trails, impressive hardwood ridges, a diverse floodplain forest, and spectacular spring wildflowers. All these features alongside the beautiful Vermilion River make this preserve a special place to visit and enjoy in any season. Please join us for this special dedication and impressive spring wildflower display!

OPTIONS FOR LAND PROTECTION WITH DNAP

As the Land Acquisition Administrator for the Division of Natural Areas & Preserves (DNAP), it is my job to assist landowners who want to protect their property in perpetuity and to encourage owners of significant natural areas in Ohio to protect their land in some fashion. Often, I receive telephone calls in which a landowner is considering options for preservation. Because the Division is not in the business of protecting "green space", we are not able to assist most landowners with protection. But for the tracts that are of statewide or national ecological significance containing rare species, habitat for rare species, and/or unique geological features, the Division offers several protection options.

Protection Option #1: Donation

If a parcel is determined to be of statewide ecological significance by DNAP, a landowner may decide to donate the land to the State of Ohio to be protected as a State Nature Preserve. Donation of land may appeal to individuals who want to declare the gift as a charitable contribution. The value of the land will be determined by appraisal and the appraisal used by the landowner's attorney or tax accountant to determine whether IRS standards have been met. The land may be donated with stipulations, for example, the landowner may want the site to honor the name of a family member or friend. Over the years, the Division has accepted donations of parcels across the state including most recently in 1999, when Mr. and Mrs. Richard Reitenbach donated 16.5 acres in east-central Ohio to be protected as Bonnett Pond Bog State Nature Preserve.

This article discusses one protection option; future articles in this series will consider other options. Other Divisions within the Department of Natural Resources also offer land protection options you may wish to consider. 🌿

Bonnett Pond Bog State Nature Preserve

Bonnett Pond Bog is the only reasonably intact bog remaining in Holmes County. Rare species at the site include little prickly sedge (*Carex echinata*), round-leaved sundew (*Drosera rotundifolia*), white beak-rush (*Rhynchospora alba*), and large cranberry (*Vaccinium macrocarpon*) which inhabit the sphagnum mat surrounding the small kettle lake. The shrub zone includes poison sumac (*Toxicodendron vernix*), winterberry (*Ilex verticillata*), and highbush blueberry (*Vaccinium corymbosum*), all plant species characteristic of bogs. Woodland covers the rest of the 16.5-acre site which has been legally dedicated as Bonnett Pond Bog State Nature Preserve. Due to the lack of visitor facilities, access to the site is limited to those requesting a written access permit from the Division.

The Division thanks the Reitenbachs for their generous donation to the citizens of the State of Ohio. Bonnett Pond Bog will now be protected and managed by the Division of Natural Areas & Preserves so that future generations will have the chance to experience this unique example of Ohio's glacial past.

Nancy Strayer,
Land Acquisition Administrator

If you have questions about protection options, please contact central office at 614/265-6453.

Calamus Swamp - A Glacial Relict

A basic ecological tenet has it that disturbance changes and often revitalizes habitats. Given great enough impacts, entirely new communities can be formed. Few disturbances have ever changed the face of Ohio like the last glacial advance some 12,000 years ago. This glacier, known as the Wisconsinan ice sheet, nearly leveled two-thirds of Ohio. Lumbering over all but the hill country of southeastern Ohio, giant waves of ice rearranged the topography. The climate gradually warmed and the massive cloak of ice retreated northward, leaving in its wake a new terrain. Stream courses flowed where none had existed before. Gravelly moraines, eskers, and kames now provided the elevational relief and perhaps most interesting to present day naturalists - glacial lakes were created.

These glacial lakes, or "kettle holes," as they are sometimes called, dot the landscape in west central, northeast, and northwest Ohio. They formed when massive blocks of ice were carved from the front wall of the retreating glacier and fell onto the wet earth, creating depressions of varying sizes and shapes. After the blocks melted, lakes of cool, clear water remained. The process of ecological succession quickly began and over time, many of these lakes developed into peat bogs. Plant associations in this type of glacial lake are based on a substrate of *Sphagnum* mosses and are colonized by species often associated with bogs, such as leatherleaf (*Chamaedaphne calyculata*) and tamarack (*Larix laricina*). Glacial lakes in central Ohio evolved towards a mixed emergent marsh plant community, quite different from the more acidic sphagnum bogs. Unfortunately, most of Ohio's kettle holes have disappeared from the landscape. The vast majority have succumbed not to development, drainage, farming, or other modern day activities of man, but to the relentless process of ecological succession.

Given enough time, these open water bodies slowly fill in with dead plant material and eventually disappear altogether. Today, many of Ohio's former natural lakes are carpeted with swamp forests and are virtually undetectable from ground level. However, with a bird's-eye view from high above, the former kettles can still be seen. For example, an airplane flight taken in winter over sections of Williams County in extreme northwest Ohio reveals a landscape liberally pockmarked with the circular outlines of glacial lakes, now grown over and obscured by a mantle of trees.

In central Ohio today, glacial lakes are an extremely rare commodity. In fact, only



one naturally vegetated and undisturbed kettle is known to survive in this region - Calamus Swamp. Located in Pickaway County about 1.5 miles west of the city of Circleville, Calamus Swamp has long been known to people interested in natural history. A Master's thesis from the 1930s describes the natural features of Pickaway County and notes similarities in vegetation between Calamus Swamp and the nearby Stage's Pond, now a State Nature Preserve. Unfortunately, the aquatic vegetation in Stage's Pond has been almost completely eliminated, a victim of excessive sedimentation and fertilizer runoff from surrounding lands. Consequently, Calamus Swamp serves as a time capsule offering evidence of the plant associations which occurred in central Ohio glacial lakes.

Today, a visit to Calamus Swamp reveals a lushly vegetated 19-acre kettle hole characterized by several distinct plant communities supporting a number of unusual plants and animals. The deepest areas are normally covered with several feet of water and support deepwater plants such as coontail (*Ceratophyllum demersum*) and spatterdock (*Nuphar advena*). Of botanical significance in this habitat are two species of carnivorous plants, humped bladderwort (*Utricularia gibba*), and common bladderwort (*U. vulgaris*). These free-floating aquatics have finely dissected underwater leaves possessing tiny bladders. These bladders have a hair-trigger trap door that allows them to snap open

and ingest tiny animals passing by. They are most spectacular in the summer months when their tiny yellow, violet-like flowers poke above the water's surface so thickly in places they resemble a fine golden mist. In other areas, dense thickets of swamp loosestrife (*Decodon verticillatus*) send out pendulous shoots of magenta flowers. The shoreline is ringed with a jungle of button-bush (*Cephalanthus occidentalis*), a wetland shrub that has ball-like white flower clusters resembling Christmas tree ornaments. Other places have thick stands of bur-reed (*Sparganium eurycarpum*) and river bulrush, (*Scirpus fluviatilis*) interspersed with brilliant purple Blue Flag (*Iris virginicus*). The wetland periphery is forested with a swamp woodland, typified by green ash (*Fraxinus pennsylvanicus*), American elm (*Ulmus americanus*) and silver maple (*Acer saccharinum*).

An interesting mystery is how this wetland came to be known as "Calamus Swamp". The name comes from the plant called sweet flag (*Acorus calamus*). However, there is no documented record of sweet flag here, nor is the habitat appropriate. Nevertheless, the site has carried this name for as long as anyone can remember. A likely explanation might be a case of mistaken identity with bur-reeds, which are common at the site. Vegetatively, the leaves of bur-reeds and sweet flag are quite similar and an early investigator probably made the misidentification that led to the name of this site. Along with diverse plant associa-

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Little Beaver Creek Stream Life Day

Discovering Little Beaver Creek's Stream Life Day held on September 12, 1999 was once again a great success. 1999 marked the sixth time since 1991 that Stream Life Day has been held. Initiated and organized by Steve Roloson, NE Ohio Scenic River Coordinator, this special event has proven to be one of the most popular scenic river programs. Over 300 people participated in this year's activities which included seining for aquatic macroinvertebrates, an electro-fishing demonstration, and a variety of conservation displays. The rugged beauty of Little Beaver Creek, a state designated Wild and Scenic river, in Beaver Creek State Park served as a great location for the event.

As the crowd gathered, they had an opportunity to view displays and talk with representatives from agencies and conservation organizations. An exceptional collection of wildlife mounts was displayed by Jim Kerr, a biology teacher at Beaver Local High School. Debbie Frawley of the Columbiana County SWCD promoted the recently received Section 319 grant which will be used to help acquire conservation easements along Little Beaver Creek. The Columbiana County Sportsman Federation provided informational materials. Three additional displays promoted Scenic Rivers and the Division of Natural Areas & Preserves.

To kick off the event, volunteers waded into a riffle area of Little Beaver Creek to turn over rocks and kick up the bottom while using fine mesh nets called seines to collect aquatic macroinvertebrates. These



were then brought ashore and participants helped pick crayfish, mayfly larvae, dobsonfly larvae and other macroinvertebrates from the seine. This sample found hundreds of macroinvertebrates with a high diversity of species resulting in an excellent stream assessment score which is typical for Little Beaver Creek. This is the type of sampling that over 50,000 Stream Quality Monitoring volunteers have done since 1982 on Ohio's Scenic Rivers. It was rewarding for

Scenic River staff to see the excitement of young and old alike as they learned for the first time about the wide variety of aquatic life that lives in a healthy river.

A fish sampling demonstration led by Roger Thoma, Fishery Biologist for the Ohio EPA, was the highlight of the day. He demonstrated the technique of electro-fishing in which an electric field is used to temporarily stun the fish which are then placed in a live well for later identification. Shallow water levels resulting from the drought of 1999 had concentrated fish populations in the narrowed riffles and remaining pool areas. Within 15 minutes, over 200 fish representing 21 different species were collected. The crowd listened intently as Mr. Thoma selected specimens from the live well and explained their characteristics and purpose in the river ecosystem. Examples of each species were placed into aquariums so everyone had an opportunity to closely observe the fish.

Significant interest was generated by Mr. Thoma's find of a 21" long hellbender, *Cryptobranchus alleganiensis*. Hellbenders are the largest amphibian found in Ohio, occasionally reaching 27" in length. These totally aquatic salamanders are quite harmless in spite of their formidable appearance. Hellbenders are endangered and remain in only five rivers in Ohio with Little Beaver Creek supporting the largest population. At the end of the event, these "stars of the show" were returned to their home in Little Beaver Creek.



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This year's event celebrated the 25th anniversary of Little Beaver Creek's designation as an Ohio Wild and Scenic river. On January 15, 1974, 20 miles of Little Beaver Creek was designated as Ohio's first Wild river and an additional 16 miles as Scenic river. Just two days later on January 17, 1974, the Grand River also received Wild and Scenic river designation. To date, only Little Beaver Creek and the Grand River have met the stringent criteria for wild river designation. These rivers are Ohio's finest remaining examples of natural river systems. 1999 is also the 25th anniversary of the designation of the Upper Cuyahoga Scenic River and the 20th anniversary of the Chagrin Scenic River designation.

Special events such as Stream Life Day are organized by regional Scenic River Coordinators to promote awareness of these linear natural areas called rivers which are too often taken for granted. It is important for government officials and landowners to realize how land use decisions they make impact river water quality and quantity and the habitat necessary to support a diversity of aquatic life. Scenic Rivers staff organize local river partnerships and work with Scenic River Advisory Councils, elected officials, agency representatives, park districts, landowners, and volunteers. Cooperation is essential to meet the diverse array of challenges facing Ohio's Scenic Rivers. To find out how you can help, contact your regional Scenic River Coordinator. 🍷

Steve Roloson,
Northeast Ohio Scenic River Coordinator



A STINKY SPRING WILDFLOWER

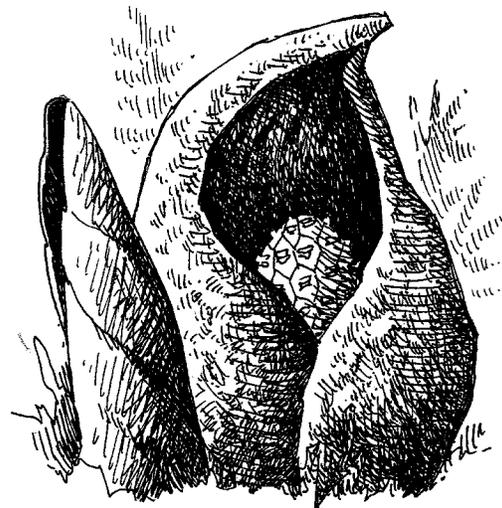
One of the more noticeable events of mid-spring is the explosive appearance of great patches of giant yellow-green leaves popping up in state nature preserves where the ground is wet. In early May, the large, luxuriant leaves of skunk cabbage (*Symplocarpus foetidus*) develop quickly and can completely cover extensive areas of swamp, streambank, and wet woodlands with a lush yellow-green, knee-high blanket of vegetation – albeit a rather rank and smelly one! Broken or bruised leaves emit a foul-smelling odor that some liken to musk and garlic. Closely related to Jack-in-the-pulpit, and a member of the Arum family, the skunk cabbage most likely originated in Asia and entered North America via a former land bridge across the Aleutians. It ranges from Canada to the mountains of Georgia in the east and extends westward to Iowa. Some of its more common names include skunkweed, polecat weed, fetid hellebore, Midas ears, swamp cabbage, and clumpfoot cabbage. This wetland denizen exhibits a characteristic typical of the Arum family: complex chemical compounds, including leaves laced with calcium oxylate which are acrid to the taste.

By looking closely at the base of the rosette of leaves in mid-May, the careful observer may spot a small “black blob” sticking up out of the mud. This is what remains of the flower that bloomed in the late winter and has all but rotted away. Skunk cabbages bloom from late January through mid-March, sometimes in the snow. The flower is striking in appearance. A leathery, purple-green hood called a spathe completely hides the spadix, a globe-like cluster of flowers within. The plant is remarkable in that it has its own oven, creating heat within the protective cover of the spathe and maintaining a temperature of seventy degrees Fahrenheit even when temperatures outside are well below freezing. This heat, a product of chemical activity associated with the maturation of the many tiny flowers, melts the snow away from the plants and attracts insects that are active during warm days in midwinter, mostly small flies and several species of beetles. Enticed by the heat and the fetid odor of seemingly rotting meat, these insects are responsible for pollinating the skunk cabbage long before other flowers are even up through the ground. Some believe that honeybees are also involved in the pollination of the flowers, using the warm sanctuaries as “heat stops” on their way to and from the hive.

Skunk cabbages can be quite long-lived plants: a colony of large plants may be centuries old! The three or four large, tentacle-like roots radiate from the leafstalks down-

ward and essentially act as an auger, constantly “screwing” the entire plant into the ground at the rate of a few millimeters a year. The roots can be two to three feet long. From viable seed to flowering plant generally requires seven to ten years of development.

Since skunk cabbage likes to have its “feet” wet, it is an excellent indicator of damp ground. Sometimes spring seeps on hillsides can be located by the presence of skunk cabbage and wet woods can be home to great expanses of its lush greenery.



Used by native Americans for everything from bronchial coughs to contraceptives, the roots were also dried and used in tattooing of the skin to prevent diseases. Herbalists tout skunk cabbage for the treatment of diabetes, asthma, whooping cough, and lockjaw. Some believe that skunk cabbage can be helpful in treating multiple sclerosis and Parkinson's disease.

Look for the attractive leaves along the trails at Eagle Creek and Tinkers Creek State Nature Preserves in Portage County and Jackson Bog State Nature Preserve in Stark County and consider that you may be staring at the oldest living thing around as well as certainly one of the strongest smelling in the entire preserve! 🍷

Emliss Ricks, Preserve Manager

About this Newsletter

If you are not currently receiving your own copy of the Newsletter in the mail, simply drop us a line or call (614) 265-6453 to be added to our mailing list. This newsletter is a free public service made possible through your contributions to the Natural Areas Income Tax Checkoff Program. Also, if you are receiving duplicate newsletters, please let us know.

Calamus Swamp...

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tions come diverse assemblages of animals, and Calamus Swamp is no exception.

Tiger salamanders, spectacular mole salamanders measuring up to eight inches in adult form, are found here as are at least five species of frogs. Many birds have been recorded, including Prothonotary warbler, least bittern, common moorhen, and many others. Dr. David Stansbery of The Ohio State University has studied Calamus Swamp since 1957, and he has recorded an incredible array of the smaller forms of animal life, including oddities like the Ohio fairy shrimp.

It is indeed fortunate that this remarkable wetland survives relatively undisturbed, particularly in light of the fact that most of our remaining glacial lakes have been degraded. The primary reason is the exemplary conservation ethic of its owner, Mrs. Ada Burke. Ada and her family have owned Calamus Swamp and much of the surrounding land for over 100 years, and have always recognized the swamp as an

unusual treasure worthy of protection. Because of their conscientious stewardship, the plants and animals of Calamus Swamp survive to this day.

In order to ensure that Calamus Swamp is protected for future generations to enjoy, Mrs. Burke recently donated Calamus Swamp and critical buffer areas to the Columbus Audubon Society (CAS). In turn, CAS is working with the Division of Natural Areas & Preserves to dedicate the site as a state nature preserve, thus safeguarding the wetland in perpetuity. Plans are underway to construct a boardwalk, observation blinds, and interpretive signage, thus allowing visitors access to the special features of Calamus Swamp. The goal is to have these in place by the end of 2000, at which time the area will open for public visitation. Once the site is more accessible, we encourage visitors to stop by and visit this fascinating relict of Ohio's glacial history. For more information, contact the Division at 614/265-6453. 🍂

Jim McCormac, Division Botanist

Directory Updates #2 Available

Since the Directory of State Nature Preserves was printed, the Division has added additional preserves. In order to provide you with current information, we will provide update pages for the Directory.

Update #1 (Summer 1998) included Lawrence Woods, Etawah Woods, North Pond, and North Shore Alvar. We are now announcing the availability of Update #2 which includes McCracken Fen, Myersville Fen, Aurora Sanctuary, Novak Sanctuary, White Pine Bog Forest, and Burton Wetlands.

Please supply a self-addressed 9x12 flat envelope with postage affixed (77¢ for Packet #1, 99¢ for Packet #2, or \$1.21 for both packets).

Please send your request with the self-addressed, stamped envelope to Directory Updates, ODNR/DNAP, 1889 Fountain Square, Bldg. F-1, Columbus, OH 43224-1331.

STATEWIDE INTERPRETIVE EVENTS

Lakeside Daisy State Nature Preserve Open House May 13

Crane Hollow State Nature Preserve Guided Tours May 20

Cranberry Bog State Nature Preserve Open House June 24

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/odnr/dnap/dnap.html



Ohio Department of Natural Resources

Division of Natural Areas & Preserves

1889 Fountain Square, Bldg. F-1

Columbus, Ohio 43224-1388

(614) 265-6453

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