

Natural Ohio

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

Vol. 22 No. 3

Summer 2000

Newsletter Name

For many years, the Division of Natural Areas & Preserves has produced a quarterly newsletter. Recently, we decided that our newsletter needed a name other than "Newsletter." Division staff made suggestions and we voted on the proposed names. The newsletter will now be known as "Natural Ohio." The newsletter committee is also looking at possible changes in format. We plan to send out a survey to our readers in an upcoming issue to obtain additional input.

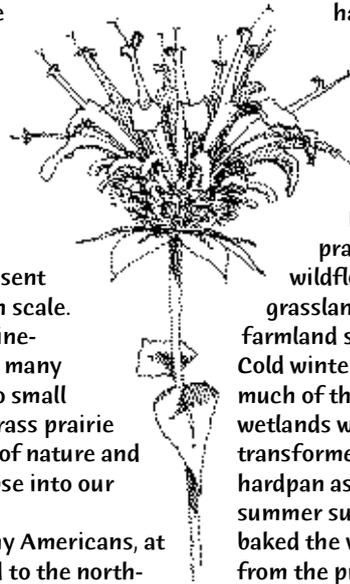
If you have comments/suggestions to make "Natural Ohio" a better newsletter, please send them to the Division in care of The Newsletter Committee or email them to the editor at: jennifer.windus@dnr.state.oh.us.

STATE NATURE PRESERVE SPOTLIGHT

Bigelow and Smith Cemeteries - Remnants of the Great Wild West of Ohio

What do the War of 1812, the frontier, cemeteries, and Ohio's natural areas have in common? Two of Ohio's smallest state nature preserves - Bigelow and Smith Cemetery State Nature Preserves! Located in northern Madison County, both areas are a mere half-acre in size each, but represent the Darby Plains on a mammoth scale. Growing between the rows of nineteenth-century tombstones are many species of plants making up two small remnants of the once vast tallgrass prairie lands of Ohio. It is this mixture of nature and man that allows visitors a glimpse into our past.

During the War of 1812, many Americans, at the urging of the British, moved to the north-eastern U.S. and Canada. As people migrated west to Ohio, much of the desired farmlands were taken. Initially, most pioneers by-passed the area known as the Darby Plains; Native Americans used the area mostly for hunting with only seasonal campsites. Eventually, however, the Darby Plains began to be settled as many people



had title to the land through Virginia Military lands which were payment to Revolutionary War soldiers instead of money.

West of Worthington, the vast forests covering much of eastern Ohio broke open to the Darby Plains covered with big bluestem, prairie cord grass and many species of wildflowers. Most settlers viewed these grasslands and bur oak savannas as poor farmland since only a few trees grew there. Cold winters were followed by wet springs when much of the area flooded. These seasonal wetlands were transformed into hardpan as the summer sun baked the water from the prairie sod.

Settlers also feared the fires that roared through the dry prairie grasses in fall and winter. They doused the fires, and large amounts of dead plant material accumulated

which, combined with spring floods and summer heat, made perfect mosquito habitat. Malaria stalked the Darby Plains after the Civil War, accounting for the death of many families. Both Bigelow and Smith Cemeteries were family plots, with the first burials interred around 1814. Many burials occurred between 1821 and 1823, a time known as the "sickly years".

The remnant plant communities at both cemeteries also represent a glimpse into the Wild West. Many of the tallgrass prairie grasses and forbs found here are more common west of Ohio and are relicts of much larger prairie areas which used to occur here. Neither cemetery has



Bigelow Cemetery

Those Crazy English Names

When is an oak not an oak? When it's a Jerusalem-oak! That peculiar English name belongs to *Chenopodium botrys*, an aromatic European annual of the Goose-foot Family, which is an occasional weed in Ohio. Jerusalem-oak also is called feather-geranium, although it is not a geranium, either.

Such mix-ups are characteristic of colloquial names in English and in other languages as well. This may cause confusion in understanding which species someone is talking or writing about. Water-willow is not a willow, but one of two unrelated Ohio species: *Decodon verticillata* in the primrose family or *Justicia americana* in the acanthus family. Many plants have more than one colloquial name. The spring-flowering trees of the genus *Amelanchier* are known as serviceberry, juneberry, shad-blow, and sarvis. Such inconsistency is why botanists adopted Latin, a "dead" language, as the scientific standard. Latin names are uniform worldwide.

Just for fun, take this quiz. Listed below are English names for 15 plant species. All are Ohio natives. Can you identify each one by a better-known English name? Check yourself against the answers on page 7. No peeking!

- 1) toothache tree
- 2) hogweed
- 3) polecat bush
- 4) duck-potato
- 5) hackmatack
- 6) white puccoon
- 7) checkerberry
- 8) hearts-bustin'-open-with-love
- 9) nerveroot
- 10) doghairs
- 11) knife-and-fork
- 12) pride-of-Ohio
- 13) devil's-tongue
- 14) white-hand-of-Moses
- 15) tangle-guts

Allison Cusick, Division Chief Botanist

About this Newsletter

If you are not currently receiving your own copy of the *Natural Ohio* in the mail, complete the postcard inserted in this newsletter and return to our office. 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 let us know.

OHIO CAVERNS

Newest State Natural Landmark - April 17, 2000

Rising above the plains of western Ohio is a geological mystery - the Bellefontaine Outlier. This 160 square mile section of hilly terrain in eastern Logan and northern Champaign counties contrasts sharply with the flat ground surrounding it. Although a jumble of glacially-deposited moraines accounts for some of the topography, it thins enough in places to show that the core of this outlier is solid rock. A 20 mile gap separates this knob of rock from rocks of equal age to the east, but what lies beneath it is as fascinating as what lies on top. Here is found one of Ohio's premier collection of caves. Although Ohio is not noted for an abundance of caves, especially when compared to neighboring Indiana and Kentucky, the caves we do have are interesting for their variety and uniqueness, and none so much so as those in the Bellefontaine Outlier.

One of the most accessible of these caves is Ohio Caverns, a commercial operation near West Liberty. At 1800 feet, it is one of the longest caves in the state. Although its passages are small, at most 50 feet in width and 25 feet in height, they are in places beautifully decorated. In most caves, the speleothems - stalactites, stalagmites, and flowstone formed by the deposition of calcium carbonate by ground water dripping from the rock - are colored by impurities and the walls of the cave are drab. Here, however the walls of Ohio Caverns are stained in muted colors by water seeping through the overlying shale, but the speleothems are pure white. Hundreds of soda straw stalactites hang down from the ceiling. Stalagmites rising from the floor may be the familiar stubby domes or tall pillars. Heavy stalactites may be attached to the ceiling by a thin neck of stone. In several places these have fallen and lodged against stalagmites to form what guides call "cactus plants." Waving ribbons of flowstone course down the walls. Most fascinating of all are the helectites, gravity-defying formations that twist and turn in every direction. There includes my favorite formation, the Town Pump, complete with feeder pipe, spout, and collar nut. Contrasting with these white formations are the dark, honey-

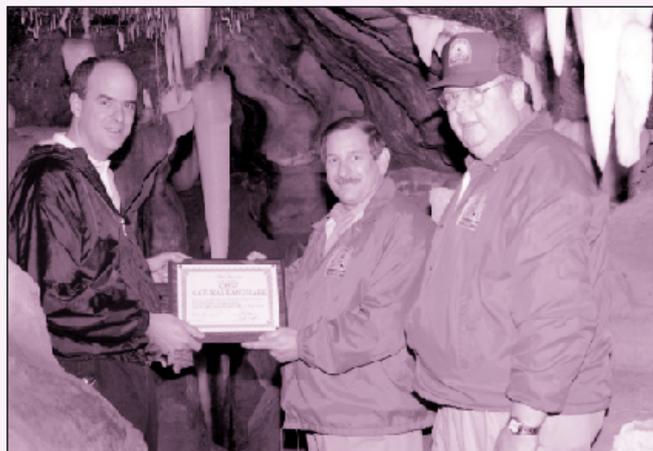
combed iron oxide stalagmites, often topped with pure white calcite. All of this geological extravagance culminates in the Crystal King, a pure white, perfectly formed carrot-shaped stalactite - at over four feet long, by far the largest formation in the cave, and one of the largest in Ohio.

Chief, Stuart Lewis, and Technical Services Administrator, Steve Goodwin, presented the owners of Ohio Caverns with an Ohio Natural Landmark certificate in April. Ohio Caverns is a privately held corporation and has been in operation since 1928.

Ohio Caverns is considered one of the most spectacular natural cave systems in the state. The cave system features an impressive array of stalactite and stalagmite cave formations. The operator of Ohio Caverns has done an excellent job of preserving the natural character of this magnificent cave system and has provided an opportunity for many generations of Ohioans to enjoy the natural beauty and splendors this cave has to offer.

The Ohio Natural Landmarks Program recognizes owners of significant natural features who have done an exceptionally fine job of preserving part of Ohio's natural heritage for future generations. Ohio Caverns is one of six cave systems in the state that are now recognized as Ohio Natural Landmarks. The Division of Natural Areas and Preserves administers the Ohio Natural Areas Landmark Program as well as the Cave Protection Act. The Cave Protection Act prohibits the sale or destruction of cave features and allows for the Chief of the Division of Natural Areas and Preserves to establish policies, plans, and a program for the protection of Ohio's significant cave resources. ♡

Tim Snyder, Preserve Manager and Steve Goodwin, Technical Services Administrator



Left to right; Eric Evans, Stuart Lewis, and Steve Goodwin

EVENTS *Calendar*

October - November - December 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
- SWSR** - (Southwest Scenic Rivers) - Don Rostofer, 513/934-0751
- W** - (Western) - Herb Leen, 937/663-4197
- WC** - (West Central) - Tim Snyder, 937/964-8794

October

SC, Saturday, October 7, 9:00 a.m. **Autumn on the Rim (Conkles Hollow)**

What a spectacular way to witness the colorful changes in the Hocking Hills! The breathtaking vistas on the Rim Trail will make this a memorable hike. 2+ hours.

NE, Saturday, October 7, 11:00 a.m.

Autumn 'Fen'Tasy (Jackson Bog)
Visit the fen in its most colorful season and search for the elusive fringed gentian.

WC, Sunday, October 8, 2:00 p.m. **Color Walk (Clifton Gorge)**

Warm days and cool nights usher in one of the most colorful events in the world-autumn in the deciduous forest. Come join us on a pleasant walk as we contemplate the grand cycles of nature.

N, Saturday, October 14, 10:00 a.m.

River Ramble (Augusta-Anne Olsen)
Enjoy the scenery and the sounds of the water on a fall hike along the Vermilion River. 2 hours.

SC, Saturday/Sunday, October 14 and 15, 10:00 a.m. - 4:00 p.m. each day

Fall Foliage Event (Conkles Hollow)
An attractive information tent, smiling naturalists along the trails, and a stop along the Rim Trail for bean soup and cornbread at a 1930's Forestry cabin and the striking fall colors of the Hocking Hills makes this a weekend to remember.

NW, Sunday, October 15, 2:00 p.m.

Fall Color Walk (Goll Woods)
Whispering north breezes begin to chill the air, bringing another fall season. Join us on this leisurely autumn stroll welcoming the season.



SWSR, Tuesday, October 17, 5:00-7:00 p.m.

Stream Quality
Monitoring on the Little Miami State and National Scenic River ((Mather's Mill-Scenic Rivers Office)
Discover stream life of the Little Miami State and National Scenic River while helping the Ohio Scenic Rivers Program check for recent changes in water quality and aquatic habitat. Be ready to get your feet wet and have fun! RESERVATIONS REQUIRED.

SWSR, Wednesday, October 18, 5:00-7:00 p.m.

Stream Quality Monitoring on the Stillwater State Scenic River (Brukner's Nature Center)
Discover stream life of the Stillwater State Scenic River while helping the Ohio Scenic Rivers Program check for recent changes in water quality and aquatic habitat. Be ready to get your feet wet and have fun! RESERVATION REQUIRED.

NE, Wednesday, October 18, 8:00 p.m.

Autumn Heavens (Eagle Creek)
Clear skies display spectacular stars. If cloudy (60%+) same time tomorrow night. Telescope available.

SWSR, Thursday, October 19, 5:00-7:00 p.m.

Stream Quality Monitoring on the Greenville Creek State Scenic River (Treaty of Greenville State Park)
Discover stream life of the Greenville Creek State Scenic River while helping the Ohio Scenic Rivers Program check for recent changes in water quality and aquatic habitat. Be ready to get your feet wet and have fun! RESERVATION REQUIRED.

SE, Sunday, October 22, 1:30 p.m. **Tree Hike (Lake Katharine)**

Learn how to identify the largest and oldest of Ohio's plants on this hike at the peak of the autumn colors.

November

NE, Saturday, November 4, 2:00 p.m.

Tamarack Gold (Kent Bog)
Witness the brilliance of the tamaracks as the needles prepare to drop.

NE, Wednesday, November 8, 4:00 p.m.

Waterfowl Waddle (Tinkers Creek)
Identify the migrants as they pass by on the wing or on the water. Binoculars provided. Dress for the cold weather.

SC, Saturday, November 18, 10:00 a.m.

November in the Gorge (Conkles Hollow)
The quiet solitude of a November morning provides the backdrop for an enjoyable walk in one of Ohio's most scenic natural areas. One mile hike on an easy trail. 1 1/2 hours.

SE, Sunday, November 19, 1:30 p.m.

Thanksgiving Hike (Lake Katharine)
Take a break before the holiday rush with a hike as autumn changes into winter.



December

NE, Wednesday, December 20, 7:00 p.m.

Solstice Solitude (Eagle Creek)
A brisk walk along Clubmoss Trail on the longest night of the year. Dress for the cold weather.

SE, Saturday, December 30, 1:30 p.m.

The Last Hike of 2000 (Lake Katharine)
Join us for the last hike of 2000 as we explore the wintery landscape of Lake Katharine.

INVASIVE PLANTS OF OHIO: FACT SHEETS NOW AVAILABLE

The Division of Natural Areas & Preserves in cooperation with the Ohio Chapter of The Nature Conservancy and the Columbus & Franklin County Metro Parks has completed 18 fact sheets covering 26 of the most invasive, non-native plants impacting Ohio's natural areas. They include information on identification, habitat, distribution, problem, and control techniques. These fact sheets are now available due to a generous grant from the Ohio EPA Environmental Education Fund. The fact sheets may be obtained together in one booklet or individually. The species covered are:

- Amur honeysuckle
- Morrow honeysuckle
- Tatarian honeysuckle
- Glossy buckthorn
- European buckthorn
- Garlic mustard
- Purple loosestrife
- Common reed grass
- Reed canary grass
- Autumn-olive
- Russian-olive
- Multiflora rose
- Japanese honeysuckle
- Asian bittersweet
- Japanese knotweed
- Narrow-leaved cattail & hybrid cattail
- Eurasian water-milfoil
- Smooth brome
- Canada thistle
- Common teasel
- Cut-leaved teasel
- White sweet-clover
- Yellow sweet-clover
- Tree-of-heaven
- Lesser naiad
- Curly pondweed

Contact Jennifer Windus at 614/265-6468 or jennifer.windus@dnr.state.oh.us to obtain one or more of these fact sheets.



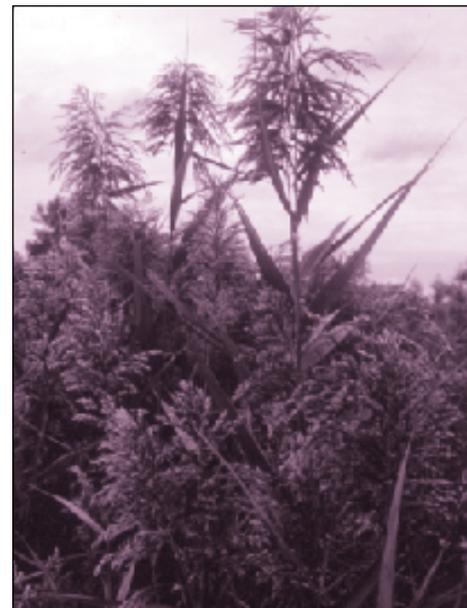
Invasive Plant Alert #6

COMMON REED GRASS *Phragmites australis*

Description: Common reed grass, or *Phragmites*, is a grass that reaches up to 15 feet in height. The leaves are smooth, stiff, and wide with coarse hollow stems. The big, plume-like flower head is grayish-purple when in fruit. Large quantities of seed are produced, however most of the seed may not be viable. Common reed grass spreads vegetatively, forming huge colonies by sprouting new shoots from underground and above ground stems (rhizomes).

Habitat: Common reed grass grows in open wetland habitats and ditches, primarily in northern Ohio. It occurs in still water areas of marshes, lake shores, and riverbanks. It is particularly frequent in disturbed or polluted soils along roadside ditches and dredged areas. It is tolerant of saline conditions and can form dense monocultures, as at Mentor Marsh State Nature Preserve. Some populations are not invasive and may be native. It is suspected that a non-native aggressive strain of common reed grass was introduced to North America in the early 20th century.

Management: Long-term management is necessary for control of this persistent plant. Once established, common reed grass is very difficult to completely eradicate. Cutting and/or treating stems and leaves with sys-



temic herbicides is generally most effective. Grass-specific herbicides are recommended in areas where native plants occur. Cutting, pulling, or mowing can be done in late July and should be repeated for several years. All cut shoots and rhizomes should be carefully removed to prevent re-sprouting.

Native Alternatives: Indian grass (*Sorghastrum nutans*), big bluestem (*Andropogon gerardii*), prairie cord grass (*Spartina pectinata*), and Canada bluejoint (*Calamagrostis canadensis*).¹

OPTIONS FOR LAND PROTECTION WITH DNAP

Protection Option #2: Sale or Purchase

In the last issue of the DNAP Newsletter, we presented information on donation of land to the Division. In this issue, we present another land protection option which is outright sale.

The Division of Natural Areas and Preserves purchases property that is of statewide or national ecological significance. Division botanists and zoologists regularly conduct site visits across the state inventorying locations where rare species or plant communities are known or expected. A list of sites worthy of protection is maintained by the Division. Based on available funds, the list is reviewed and potential projects are selected and pursued.

Once a property is identified, the landowner is contacted to discuss protection options. If the landowner is a willing seller, a project is initiated. A work order is submitted to the ODNR Division of Real

Estate and Land Management. Staff then conduct a title search, appraise the property, and make an offer. The state cannot pay more than fair market value as determined by appraisal(s). If the landowner agrees to a purchase price, an option is signed. A closing is scheduled as soon as the paperwork has been processed.

The Division recently acquired McCracken Fen in Logan County. This 90-acre site contains the largest unprotected fen in Ohio with 22 documented state-listed plant species. In the 1980s, this fen was mined for peat and marl products for approximately five years. The owners of McCracken Fen decided to sell the property to the State of Ohio when their plans for additional mining failed. The land was purchased for \$125,000 and was dedicated as McCracken Fen State Nature Preserve. The site is open to the public by written access permit.¹

Nancy Strayer,
Land Acquisition Administrator

For additional information on land protection options, please contact our Central Office at (614) 265-6453.

OHIO BIRD RECORDS COMMITTEE

Birding is one of the fastest growing outdoor recreational pursuits in the country, and a trip to any of Ohio's birding hotspots in the spring would certainly emphasize this claim. Legions of birders flock to places such as Sheldon Marsh State Nature Preserve on Lake Erie or Greenlawn Cemetery in Columbus to witness the spectacle of large numbers of northbound migrants such as tanagers, thrushes, warblers, and flycatchers. Because of the large numbers of birders afield in Ohio and throughout the continent, our knowledge of North American ornithology is very dependent on their contributions. Indeed, the science of field ornithology is noteworthy among scientific disciplines in that amateurs contribute the vast majority of data.

Many birders report their observations to journals such as *The Ohio Cardinal* and *Audubon Field Notes*, where they may be published and collectively form an overall picture of the bird life in a region. These reports are invaluable, as birds tend to be excellent barometers of changing environmental conditions, and the network of amateur birders are usually the first to pick up on shifts in bird populations. However, when reports are made of rare or out-of-range species that might change our thinking regarding a particular species' distribution, that record goes to the Ohio Bird Records Committee (OBRC).

At least 43 states have bird records committees which are responsible for scientifically validating sightings before they are published and become part of the permanent record. Since collecting of specimens generally no longer occurs, records reviewed by the OBRC consist of written documentation, photographs, videos, and audio recordings. The OBRC reviews between 50 and 60 records annually and accepts or rejects these reports solely on the validity of the evidence provided, in essence serving the scientific community as a form of peer review. Copies of all records submitted to the OBRC, regardless of their final disposition, are archived and made available to researchers upon request. The OBRC also develops and maintains the "official" list of Ohio birds, which currently stands at 406 species. This list appears in the "Birds of Ohio Field Checklist", produced by the Division of Natural Areas and Preserves in collaboration with the OBRC. An updated reprinting is scheduled for this year and copies will be available from the Division.

The Division of Natural Areas and Preserves



(DNAP) began sponsoring the OBRC in 1998, providing institutional stability and offering another level of support to Ohio's birding community. DNAP's Natural Heritage Database also benefits by gaining direct access to records of rare Ohio birds, such as Bewick's wren, common raven, and piping plover, all of which are on the OBRC's list of 110 review species. Of course, any bird that would be new to the state's avifauna is reviewed, such as the common ground dove photographed in Summit County last November, providing Ohio's 406th species.

Ten members, each serving a three-year term, comprise the OBRC, in addition to a non-rotating voting secretary. All of these members are recognized for their expertise in bird identification and an effort is made to provide regional representation from around Ohio. Current members are: Bob Conlon (Worthington), Dave Dister (Germantown), Rob Harlan (Parma Heights), Craig Holt (Streetsboro), Tom Kemp (Whitehouse), Dr. Bernie Master (Worthington), Kevin Metcalf (Chardon), Larry Rosche (Kent), Jay Stenger (Cincinnati), and Bill Whan (Columbus). The secretary is Jim McCormac, DNAP botanist.

Address requests for information to: Jim McCormac, ODNR-DNAP, 1889 Fountain Square, Columbus, OH 43224-1388 or e-mail: jim.mccormac@dnr.state.oh.us. Find OBRC on the Internet at: <http://aves.net/rarities>.

Jim McCormac, Division Botanist

2000-2001 RARE PLANT LIST NOW AVAILABLE

The new list of native plant species classified as endangered, threatened, potentially threatened, and presumed extirpated is now available. Starting in 1980, the Ohio rare plant list has been revised every two years. The revisions are based on records in the Division's Natural Heritage Data Base. In 1992, the Rare Plants Advisory Committee was formed to aid the Division in determining additions, deletions, and taxonomic revisions to the list. This committee is composed of noted botanists, taxonomists, and field surveyors representing major herbaria and conservation organi-

zations in Ohio and surrounding states. The 2000-2001 list contains a total of 643 taxa. A summary of the changes for each endangerment class: endangered (E), threatened (T), potentially threatened (P), presumed extirpated (X), and recently added species which have not yet been assigned an endangerment status (A) are shown in the table below. You can obtain a copy of the new list by contacting the Division or by visiting our web site and clicking on Heritage Information.

Pat Jones, Data Services Administrator

STATUS	TOTAL TAXA 1998-99	TAXA REMOVED	TAXA ADDED	TOTAL TAXA 2000-01
E	233	18	15	230
T	153	15	16	154
P	148	10	7	145
X	103	5	7	105
A	5	2	6	9
Totals:	642	50	51	643

Ohio's Conservation and Revitalization Fund

In the coming months Ohioans will be reading and hearing more about the Conservation and Revitalization Fund, a \$400 million bond issue proposed by Governor Taft with strong bipartisan support from state legislators. As proposed, the bond issue would provide resources to make community-directed investments for such things as:

- Preserving green space and farmland;
- Protecting rivers, lakes and water-supply resources through locally developed watershed plans and volunteer "adopt-a-stream" cleanup programs;
- Expanding outdoor recreational opportunities; and
- Stimulating economic development by cleaning up abandoned "brownfield" sites and revitalizing urban areas to create new, high-quality jobs and investment.

Ohioans will have an opportunity to vote on this bond issue proposal in November. Friends of our state nature preserves, natural areas and scenic rivers are encouraged to look and listen for information regarding this important issue so they may make an informed decision when they vote on November 7.

A 'FEN'-TASTIC GARDEN

Most folks scour the woodlands and fields in springtime to enjoy the beauty of wildflowers and then resign themselves to waiting another year to see this kind of colorful display again. They may be unaware that in some special places a veritable "garden-of-Eden" awaits them through the mid to late summer months. Flowers of every size and hue greet the eyes of those who would venture into one of our richest habitats, the wetlands that we call fens or 'sweet bogs.' These nutrient-rich, spring-fed oases, are overflowing with all kinds of flowers, from the great showy orchids to tiny sundews that grow in the sun-splashed meadows among tawny clumps of sedges and low-growing shrubs. Several of our state nature preserves in northeast Ohio, including Mantua Bog, Gott Fen, Jackson Bog, Myersville Fen, and Karlo Fen, boast these wildflower displays. Since these are fragile plant communities, most of these preserves are open by written permit only. However, Jackson Bog State Nature Preserve in northern Stark County, is open to the public without written permit.

Because the cold calcareous waters that flow across the fen retard the onset of the growing season, most of the blooming activity begins in late May and continues into the middle of October. Sometimes flowers are still blooming as late as November. Many of the denizens of the fen are rare species associated with prairies, the boreal north, and even the Atlantic coast. They grow well in the marl-rich peat of the wetlands' sun-filled meadows.

The show begins with the bright gold of marsh-marigolds popping up around seeps and springs in the upper reaches of the fen. Scattered among the marsh-marigolds are several of the early spring mustards including purple cress and bittercress. One of the early flowering shrubs, the northern rose azalea, can be found at Mantua Bog State Nature Preserve. The beautiful pink flowers at times completely cover the



Dragon's-mouth orchid

entire shrub in the middle of May. A member of the heath family, this azalea is one of the most spectacular of all our flowering shrubs, rivaling the displays of specially grown cultivars.

Because fens are generally free of extensive tree cover, a great variety of sun-loving plants grow in the mineral-rich black peats. Many of these plants are quite small and can

be found growing at the edge of the cold and highly alkaline seeps. Flowers of false asphodel and grass-of-Parnassus fill the meadows throughout the summer months, the former gracing the seeps in late June through July while the latter from July through the end of summer. Nearby can be found one of the daintiest and most attractive of all the flowers in the fen, Kalm's lobelia. The small pink to bluish-white blossoms are held on weak stems usually less than a foot tall.

In most of our fen preserves the dominant shrub of the meadow is the shrubby cinquefoil, a member of the genus *Potentilla*.

These shrubs are bedecked with dozens of bright yellow, five-petaled flowers throughout the summer months. A true boreal plant, shrubby cinquefoil is the state flower of Alaska, where it is called "tundra rose."

Fens also boast a wide variety of orchids from the spectacular showy lady's-slipper, with its white sepals and petals, rose-throated pouch, and yellow stamens, to the tiny, seldom seen *Arethusa*, or dragon's-mouth orchid, a fragile orchid found in only one site in all of



Gott Fen



Showy lady's-slipper

Ohio. Other orchids seen in our fen preserves include grass-pink, rose pogonia, purple fringed orchids, green wood orchids, and several species of ladies'-tresses. Most of these plants are rare in our state, most likely a result of habitat loss and their thoughtless removal by orchid collectors.

A number of rare and beautiful flowers of the lily family are found in and around the meadows during the mid-summer months. Two of the loveliest are white wand lily and bunchflower, their tall, pale spikes reaching skyward three to four feet. As the summer progresses, the number of flowers increases. By late summer, the fen is a riot of color with pink Joe-Pye-weed, bright purple ironweed, white mountain-mint, the sticky pink flowers of swamp thistle, and the bright yellow reflexed petals of sneezeweed. Some of the prairie species that can be seen include tall whorled rosinweed and big bluestem. One of the spectacular flowers of late summer is Canada burnet with its tall white spikes standing watch over the fen meadow.

Because of the lack of nutrient availability, some of the plants in the seeps turn to outside sources for nutrition. The pitcher-plant and round-leaved sundew, both insectivorous plants, take a portion of their food from insects trapped within their leaves. The large red flowers of the pitcher-plant are on stalks sometimes a foot or more in height, while the tiny white florets of the sundew are found on minuscule spikelets, one or two blooming at a time.

As autumn approaches, goldenrods and asters continue the brilliant display and in the meadows, the beautiful blue flowers of smaller fringed gentian greet the eye of those who visit during the time of cold nights and ever-shorter days. As the show closes for the year with the cold blasts of winter, the visitor has been able to enjoy a full six months of wildflowers in field and forest. 🌸

Emliss Ricks, Preserve
Manager

DAM DILEMMA or THOSE DARN DAMS

Prior to the European settlement of Ohio, rivers and streams flowed clear and relatively unobstructed. The only impediments to water flow were the naturally occurring beaver dams. The early settlers considered this moving water as an inexpensive and readily attainable source of power. They built mills along Ohio's watercourses and dams to provide a constant source of water to power them. Early dams were of wood, while later dams were of stone. The Great Flood of 1913 destroyed many dams in Ohio which then were rebuilt using concrete.

Dams forever alter naturally flowing rivers and streams, creating an area of impounded water upstream of the dam. This impounded water is basically a "lake" and no longer a free-flowing watercourse. Dams are barriers to the movement of aquatic species, to nutrient flow, and the transport of coarse grained sediments. Needless to say, the mix of aquatic species



Ballville Dam

changes with this conversion.

Many dams still provide useful benefits to society: flood control, public water supply, electricity generation, rural firefighting water supply, and recreation. Other dams have outlived their usefulness. These dams are usually in disrepair and pose hazards. Public safety and property damage are compromised if a dam breaches or breaks.

ODNR's Division of Water administers the state's dam safety program, which applies to both privately and publicly owned dams. There are 1800 dams in Ohio that meet the requirements of this dam safety program. Ohio has at least 5000 dams on inventory. There have been 39 documented cases of dam removal so far in Ohio. The reasons for dam removal are economical, safety, and environmental. The removal needs to be done methodically; concrete needs to be removed and



St. John Dam

disposed of properly at an approved upland site. Water has to be released slowly to limit downstream flooding and scouring of the river bottom so as to minimize property damage and in-stream habitat disturbance. Downstream structures, such as bridges, need to be protected. The accumulated sediment load trapped behind the dam needs to be analyzed for contaminants and removed. If all goes according to plan, a free-flowing stream reappears. Exposed river banks will revegetated, water quality will improve, and aquatic species will benefit. The Division of Natural Areas & Preserves' Scenic Rivers Program supports any dam removal on Ohio's designated Scenic Rivers. Scenic Rivers staff can provide advice on proper methods. Contact the nearest Scenic River Coordinator or the Division's central office at 614/265-6453. You may also want to check out American Rivers' interesting website on dam removal in the United States at: www.amrivers.org.

Robert A. Vargo, Northwest Ohio Scenic River Coordinator

Answers To Those Crazy English Plant Names (Quiz on page 2)

- (1) Prickly ash, *Zanthoxylum americanum*. Native Americans reportedly chewed the twigs of this common shrub to numb toothache pain.
- (2) Giant ragweed, *Ambrosia trifida*. The suoid name refers to ragweed's abundance in hog lots. The intelligent swine refuse to eat it.
- (3) Fragrant sumac, *Rhus aromatica*. Apparently some people find the odor of this attractive bush objectionable.
- (4) Common arrowhead, *Sagittaria latifolia*. The potato-like tubers of arrowheads are eaten by ducks, geese, and humans.
- (5) Tamarack, *Larix laricina*. New Englanders call this conifer by its Native American name.
- (6) Bloodroot, *Sanguinaria canadensis*. "Puccoon" actually refers to any plant used for dyeing. We usually restrict "puccoon" to members of the genus *Lithospermum*. The

red sap of the bloodroot makes a poor quality dye.

- (7) Partridge-berry, *Mitchellia repens*. The leaves of this common woodland species are flecked with green and white.
- (8) American strawberry-bush, *Euonymus americanus*. Our preferred name is dull compared to the colorful Appalachian folk name. Good populations of this threatened species grow in Lake Katharine State Nature Preserve.
- (9) Pink lady's-slipper, *Cypripedium acaule*. The roots of this orchid have been used by homeopaths in making sedatives for high-strung patients.
- (10) Slender spikerush, *Eleocharis tenuis*. Both common names refer to very slender culms or stalks of the plant. Another colloquial name is killcow, since this sedge is slightly poisonous to grazing animals.
- (11) Trailing clubmoss, *Lycopodium*

clavatum. The branched, spore-bearing "clubs" are the forks and the narrow, vegetative shoots are the knives.

- (12) Shooting-star, *Dodecatheon meadia*. The Ohio name was used for this species by John Riddell in his 1835 *Flora of the Western States*.
- (13) Prickly-pear cactus, *Opuntia humifusa*. The other name alludes to the tongue-shaped pads with spines and hairs that devilishly poke into the skin. A colloquial name is mother-in-law's-tongue.
- (14) Sourwood, *Oxydendron arboreum*. The branched flower clusters with tiny white blossoms look vaguely like a leprous human hand. Another English name is lily-of-the-valley tree.
- (15) Spring-beauty, *Claytonia virginica*. The narrow leaves formerly were gathered in the southern Appalachians for a spring salad which led to constipation.

Bigelow and Smith Cemeteries...

continued from page 1

ever been plowed. Thus, they contain a diversity of prairie plants typical of the Darby Plains before it was plowed, ditched, and tilled to make some of the most valuable agricultural land in the state. Now these cemeteries provide a glimpse of the original prairie flora as well as a final resting place for many of the first settlers to the region. Bigelow Cemetery was dedicated as a state nature preserve in 1978 by the Pike Township Trustees. The Darby Township Trustees dedicated Smith Cemetery in 1982.

The Division manages both remnant prairies to preserve the historic tombstones, perpetuate the prairie species, and control invasive non-native plants such as smooth brome. The prairies are most impressive from mid-July through August when the colorful, summer-blooming wildflowers and prairie grasses are at their peak. Bigelow Cemetery is known for its population of the spectacular royal catchfly, but also contains scurf-pea, bergamot, gray-headed coneflower, whorled rosinweed, and stiff goldenrod. Smith Cemetery has purple coneflower, prairie false indigo, stiff goldenrod,



whorled rosinweed, New Jersey tea, bergamot, Virginia mountain-mint, and gray-headed coneflower. Despite their small size, both preserves provide a glimpse of the once vast mosaic of oak savannas and tallgrass prairies of the Darby Plains.

Both preserves are located west of Plain City and south of State Route 161 in Madison County. For more information on visiting these prairie remnants, contact the Division at 614/265-6453 for a brochure. ♡

Ron Demmy, Preserve Manager
and Jennifer Windus, Research & Monitoring Administrator



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.

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).

Send your request with the self-addressed, stamped envelope to Directory Updates, ODNR/DNAP, 1889 Fountain Square, Bldg. F-1, Columbus, OH 43224-1388.

NOTE: The Directory is now available for \$10.00 plus shipping. \$3.00 for first class or \$1.75 for book rate.

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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