**Biological monitoring is a proven way to determine the quality of our rivers and streams.** Developed in 1983 by the Division of Natural Areas and Preserves’ Scenic Rivers Program, the Ohio Stream Quality Monitoring (SQM) Project relies on volunteers to compile information on the quality of the state’s scenic rivers and streams.

Biological assessment is an excellent, simple and cost-effective method of testing a stream’s health, as opposed to chemical analysis which can be complicated, costly and subject to many variables.

Macroinvertebrates are highly effective barometers of a river’s health. Monitoring macroinvertebrates is the basis of the Ohio SQM Project. These small aquatic animals have varying tolerances for pollution.

Lacking a backbone, these small organisms live among the rocks and cobbles of a riverbed, and yet they are visible to the naked eye. Macroinvertebrates include aquatic insects, clams, snails, crayfish and aquatic worms. By monitoring the presence, quantity and diversity of macroinvertebrates, the division is able to observe firsthand any changes occurring in the river.

Tiffany Frost is Central Ohio’s stream quality monitoring coordinator and organizes monitoring activities on the Kokosing, Mohican and Olentangy state scenic rivers. She’s been with the division since 2005, but her experiences with stream monitoring go back to her teens.

“I volunteered with my Dad at Battelle Darby Metropark and spent many summer days wading out into the Big and Little Darby creeks seining for macros, darters, minnows and more,” said Frost. “I love my job with the division—there’s nothing quite like sharing with students the importance of understanding the delicate ecosystem of a river.”

(continued on page 2)
Maurer begins tenure as division chief

There’s a new face around the Division of Natural Areas and Preserves—Steven D. Maurer became chief of the division on April 9. A consummate public servant, Chief Maurer has served at all levels of government. He has been a director for both a state and federal agency, and he served local Shelby County residents during his tenure as mayor of Botkins and state legislator early in his career.

“Protecting Ohio’s most fragile lands and water habitats is a priority of the Department of Natural Resources,” said Director Sean Logan. “Steven’s previous administrative experience, coupled with his knowledge of the state’s natural landscape, makes him uniquely qualified for this job.”

Maurer’s resume is varied, but his strong public administration skills have benefited Ohioans for more than 20 years. Most notably, Chief Maurer served as director of the Ohio Department of Agriculture from 1986 to 1991 and was a member of the Ohio Senate in the early 1980s.

Maurer has also served as Ohio’s director of the U.S. Department of Agriculture’s Farm Service Agency (1993-2001) and more recently, he was interim director of the Ohio Farmer’s Union. He has taught German and built pipe organs.

“I have always been interested in Ohio’s natural resources and I appreciate the work done by the Division of Natural Areas and Preserves to protect our natural treasures for future generations,” said Maurer. “I look forward to learning more about the division’s critical programs, as well as finding opportunities to enhance the important work being done by division staff.”

As state director of the federal Farm Service Agency, Maurer initiated the Lake Erie Conservation Reserve Enhancement Program (CREP), a voluntary program encouraging farmers in 27 northwest Ohio counties to plant trees and buffer strips along lake tributaries in order to reduce soil erosion.

“I have a great appreciation for the foresight of landowners to preserve Ohio’s landscape. If not, much of what the division protects today would be gone,” explained Maurer.

“Ohio’s landscape has changed dramatically since statehood. Conserving our natural heritage for future generations is a duty and challenge for all Ohioans. I’m honored by the trust placed in me by Director Logan and Governor Strickland to be part of this shared responsibility.”

Over the years, Maurer has been the recipient of numerous awards and honorary designations for his work on environmental and agricultural issues from agencies such as the National Future Farmers of America, Buckeye Chapter of National Agri-Marketing Association and the Ohio Council of Cooperatives. He holds a bachelor’s degree from The Ohio State University.

Chief Maurer lives in Bexley with his wife Amy, and their three daughters, Jennifer, Annelise and Sylvia.

(continued from page 1)

The Northern two-lined salamander is a small, yellow and black creature belonging to the lungless salamander family. Instead of breathing air through lungs, this salamander obtains oxygen directly through its skin, which must stay moist at all times. Its lives in small headwater streams lined with flat rocks for hiding.

Growing up with a small wooded stream behind my house, I witnessed all three life stages of this salamander. I found clusters of two-lined salamander eggs attached to the undersides of rocks. Its eggs hatch into immature larvae—gilled brownish creatures that live in the stream. After two to three years, the larvae lose their gills, turn into adults and live under rocks next to the stream. Two species of the two-lined salamander have been found in Ohio.

Salamanders are not confined to woodland habitats. The red salamander, a striking reddish colored creature with small black spots, may be found in calcareous wetlands called fens. While constructing a boardwalk at Jackson Bog State Nature Preserve in Stark County, I saw several of these spectacular creatures. Other wetland dwelling salamanders include the spring salamander and the Northern dusky salamander.

Cliffs and caves also provide excellent habitat for salamanders. The state endangered green salamander dwells on calcareous cliffs in several of Ohio’s southernmost counties. The aptly named cave and longtail salamanders are also known to live in caves. Because they provide constant moisture, caves are ideal habitat for a salamander.

Unlike lungless salamanders, mole salamanders possess lungs and breathe air. They are fossorial, meaning they spend virtually their entire lives underground. When the warm rains of spring arrive, an amazing thing happens. Many species, such as the tiger, spotted, smallmouth and blue-spotted salamanders, instinctually migrate to vernal, or temporary, spring pools. Sometimes thousands congregate in these pools.

(continued on page 5)
Best Plant Finds of 2006

Although not as “fruitful” as in years past, 2006 was still a year of exciting field discoveries. A new flowering plant was found for Ohio—actually found in 2005, the find was confirmed last year.

Gerald Scott, botanist for the U.S. Forest Service, made the first ever collection of Carex complanata from a beaver dam in Lawrence County. Renowned sedge expert Dr. Anton Reznicek, of the University of Michigan, verified the specimen. This is the most northern locality for this species; the closest populations occur in southern Kentucky.

Staff from the division’s Natural Heritage Program, funded by a U.S. Fish & Wildlife Service grant, surveyed several creeks in Pike and Scioto counties for the federally threatened Virginia spiraea (Spiraea virginiana). Thanks to the keen eyes of Martin McAllister, Southern Region manager, and Heritage Botanist Rick Gardner, a new population of this species was found along Scioto Brush Creek in Scioto County, upstream from previously known locations. It is the first new population found in 14 years.

Additionally, McAllister and Gardner found several new populations of the globally rare Tennessee pondweed (Potamogeton tennessensis) in Pike County’s Sunfish Creek.

Brian Gara, a fern enthusiast, found the second site for Appalachian filmy fern (Trichomanes boschianum) at Crane Hollow State Nature Preserve along with Jeff Johnson, district preserve manager, and Crane Hollow’s biologist Gary Coover. It was known historically from a different spot in the preserve.

Jim McCormac, Division of Wildlife, has an eye for Olney’s threesquare (Schoenoplectus americanus). He located a third population of this endangered bulrush on North Bass Island while leading a tour. Mostly found along the Atlantic coast, this plant is very rare in the great lakes. McCormac also found a new population of the endangered Viola tripartita var. glaberrima while exploring Shawnee State Forest. This species has only been found there.

Another Shawnee State Forest find was the endangered bigtree plum (Prunus mexicana) found at two new sites by Brian Riley, a forester with the Ohio Division of Forestry.

Adams County resident John Howard has made some great local discoveries. In 2006, he found camphorweed (Pluchea camphorata), one of Ohio’s strongest scented flora. Howard found it on land owned by General Electric. Before his discovery, it was only known from a single site in Washington County.

The Nature Conservancy’s Dave Minney found the third site for the endangered wild pea (Lathyrus venosus) in Lawrence County. All three sites are small populations.

Hamilton County botanist Marjie Becus found a new population of the endangered Silene nivea at a wildlife area in Butler County. Dan Boone, also from Hamilton County, found another site in Clermont County. This species has been disappearing from Ohio in recent years.

Michael Liptak, a biologist with Enviroscience, collected a specimen of inland rush (Juncus interior) from a shallow depression in Auglaize County.

Toledo Metroparks Resource Manager John Jaeger found a new population of the threatened variegated scouring-rush (Equisetum variegatum) along with botanist Tim Walters with Mannick and Smith, and Metroparks co-workers Ruta Klavines and Kim High. The group found the plant at a newly acquired property in Lucas County. Steve Smith, also from Toledo Metroparks, found a new site for the endangered prairie gentian (Gentiana puberulenta). Prairie gentian is a real Ohio rarity — less than a dozen known plants exist.

The University of Akron’s Warren Stoutamire, orchid expert, found a new site for the Eastern fringed orchid (Platanthera leucophaea) near a known site in Holmes County. Another rare orchid, the threatened three-birds orchid (Triphora trianthophora), was found in Shelby County for the first time by Chris Thompson from the Miami County Park District.

This past year, moss and lichen experts from around the world visited southern Ohio for several days. They made some exciting discoveries including several new species for Ohio – Heteroderma pseudospeciosa, Parmotrema gardneri, (continued on page 7)
"Upon the warming winds travels the soft overture of a deafening symphony which is Spring."

Anonymous

This writer so eloquently describes the changes in the environment during the spring season as the bleak canvas of winter transforms into a masterpiece of sights, sounds and smells. New discoveries await around every bend in the trail and old ones are reawakened. For those desiring a trip of discovery—Eagle Creek State Nature Preserve will satisfy your explorative spirit.

Located in the northeast corner of Portage County, this 473-acre state nature preserve features nearly 5 miles of trail. The 2.5-mile Beaver Run trail takes the visitor on a trip across very wet lowland woods. These woods offer pristine habitat for a variety of amphibians, such as spring peepers, red backed salamanders and wood frogs. The wood frog is the first frog to awaken from winter slumber.

Eagle Creek, home to wood ducks, mallards and the cackling kingfisher.

The terminus of Beaver Run trail converges with the 3/4-mile Beech Ridge trail. Slightly elevated above the rest of the preserve, this trail is built on glacial till. It gives a completely different view of the land below, as well as a variety of plants and animals to observe. Wild turkey and white-tailed deer are often spotted.

Upon the ridge, the soils are well-drained, which influences the type of vegetation growing there. You’ll see red oaks with their silver streaked bark, shagbark hickory, white ash and the deeply orange furrowed bark of chestnut oak.

Don’t miss the stunning white flowers of the serviceberry in bloom. It is a component of the forest’s understory and is one of the first woody trees to bloom. Folklore surrounds this bush’s name. During early colonization of North America, the blooming of the serviceberry would beckon folks to church after a long winter hiatus. Its berries provide early forage for passing wildlife.

Choose the 1.5-mile Club Moss trail and take a closer look at Ohio’s geologic history when you traverse across the peat bog, a remnant of the last Ice Age. In these acidic waters, rare plants, which generally grow much farther north, may be found flourishing. You’ll see large cranberry, sphagnum moss and the insectivorous sundew plant just to name a few.

As the trail’s name suggests, clubmoss is found in great patches along the trail. A close relative of the fern, it is also called ground pine. Like the serviceberry, it too is steeped in historical tradition. Clubmoss’ spores are flammable; when harvested and dried they were used as an early flash powder for photographers and their cameras.

As you leave Eagle Creek, don’t forget to stop at the observation deck located on the banks of the beaver pond. You’ll see many types of waterfowl lounging between the reeds of cattails and rush on a return trip from southern wintering grounds.

Shake off the heavy coat of Old Man Winter and visit Eagle Creek State Nature Preserve where you’ll discover the beauty of an Ohio spring.

Adam Wohlever
Northwest Lakeshore District
Preserve Manager
Kent Bog Celebrates Two Decades of Preservation

Twenty years ago, 42 acres in Portage County were dedicated as Kent Bog State Nature Preserve. To recognize the importance of protecting this glacial remnant, the Friends of Kent Bog hosted an anniversary celebration in late February.

The event drew more than 80 local residents, as well as members of the Stark family who originally owned the land before it was sold to the state of Ohio in 1985. To add to the festivities, Mayor John Fender from the city of Kent proclaimed February 27, 2007 as Kent Bog Day.

With the foresight of the Stark family, botanists such as Dr. Tom S. Cooperrider, and staff from the Division of Natural Areas and Preserves, Kent Bog has withstood the test of time. Naturalists know the story of Kent Bog goes back thousands of years to the Pleistocene Era. However, the anniversary event celebrated the history behind the dedication of this special place.

Harry and Olive Stark purchased the land in 1944 with an intent to farm the tillable portion, unaware that a glacial gem rested within their property’s borders. Although the land was treasured by the family, it was years until the Starks understood its significance. Many members of the family gathered for the 20th anniversary; they shared fond memories and family tales with the audience.

Now a resident of Florida, granddaughter Pam McAlister Groomes fondly recalled her childhood days spent on the property. Groomes shared her grandfather’s love of the land and his desire to see it protected from development or peat mining.

Dr. Cooperrider, emeritus professor of biological sciences at Kent State University, recalled his discovery of the bog in July 1961. Today, the preserve bears his name in its official title. Until he documented his sighting, the site had gone undetected by botanists and geologists alike.

Kent Bog slipped back into anonymity until Guy Denny, former chief of the Division of Natural Areas and Preserves, came upon the property. Denny was also onhand to address the audience and he recounted the excitement he felt when he first saw the large stand of tamarack trees in all their autumn glory.

The acquisition of Kent Bog State Nature Preserve holds further significance to the division because it was the first site to be purchased with donations to the Ohio Natural Areas Income Tax Checkoff Fund.

Northeast District Preserve Manager Charlotte McCurdy concluded the evening by discussing current management issues, such as site maintenance, public education and the steps being taken by the division to protect the rare bog vegetation occuring there.

To learn more about this special place, visit www.ohiodnr.com. To learn more about the Friends of Kent Bog, please contact Gordon Vars at (330) 678-0006.
Frost said her volunteers, both student and adult alike, gain a better appreciation for river habitat when they are holding it in their hand. In addition to individual volunteers, she regularly trains teachers and their students in the art of seining for macroinvertebrates—basically learning to use a specialized net to catch the critters, count them and release them back into the stream.

“Stream quality monitoring programs involve citizens with their community and allows them to take responsibility for their river environment and its future,” said Frost.

Volunteers are vital to the success of this critical monitoring program. With the help of thousands of volunteers, the Ohio SQM Project maintains data on 22 state scenic river segments. With the addition of the Mohican State Scenic River, the division will be adding two new segments to the project.

Volunteers commit their time to the Ohio SQM Project for a number of reasons—most cite river preservation as their main intent. We asked a few central Ohio SQM participants to tell us why they volunteer – their answers follow.

An avid fly fisherman, Chuck Richardson has always had an interest in maintaining the quality of the Olentangy State Scenic River. He began volunteering four years ago after reading about the program.

“(I volunteer because of) the feeling of satisfaction I get from participating in an effort to protect a natural resource treasure, plus the enjoyment I derive from the river environment.”

As a retired science teacher, Bill Dudrow has maintained an interest in the environment—he’s been a volunteer at a Franklin County metropark for 13 years.

“I realize that my role is a very small part of the big picture, but if enough people do their little part, it can make a difference. One thing (monitoring) has done is to establish a base to compare future numbers against. Any monitor might, at any time, expose a sudden source of contamination which could be corrected.”

A passionate outdoorsman, Dick Miller has many natural pursuits including fly fishing, birdwatching and SQM monitoring.

“I believe in site indicators and they are a true litmus test of what is really going on in the environment. If we can supply real data that biologists can use...we could have some sort of impact to riparian science... then what we do is truly important.”

Husband and wife monitoring team, Bill and Joan Heiser, are frequent paddlers on the Kokosing State Scenic River. Retired in 2003, the Heisers also enjoy the chance volunteering gives them to meet others with similar interests.

“Few things in our natural environment are as important as the water quality of our rivers and streams. Having an opportunity to get involved in a project that will impact the water quality is appealing to us.”

Mike Hall, who has volunteered for years, is a high school biology teacher dedicated to the preservation of the Big and Little Darby State Scenic River stream system.

“There is nothing like this field experience—it turns kids onto science. You learn about the biology of the stream ecosystem, the impact people have... and students get a sense of ownership in participating in monitoring. High school students especially need to learn to give back to their community. This helps them see what they do is important.”

Biological monitoring is best done during warm weather months, usually April through October. Each of Ohio’s four stream quality monitoring coordinators offer free workshops for new volunteers. To learn more, contact one of the Ohio SQM coordinators listed in the box below or visit www.ohiodnr.com/dnap.

(Ohio SQM Project, continued from page 1)

Check Out Stream Quality Monitoring

Spend more time outside—become a stream quality monitoring (SQM) volunteer for the Ohio Scenic Rivers Program. It’s easy to volunteer and training is free.

To learn when the next upcoming workshop is in your area, contact your nearest Ohio SQM coordinator.

Central Ohio
Tiffany Frost
(614) 265-6422
tiffany.taylor@dnr.state.oh.us

Northeast Ohio
Billie Jaegers
(330) 527-4184
billie@config.com

Northwest Ohio
Anne Coburn-Griffis
(419) 981-6319
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Southwest Ohio
Bob Welch
(513) 934-0751
gwelch@who.rr.com

www.ohiodnr.com/dnap
Physcia plumilior and Usnea endochrysea. Ohio lichenologist Don Flenniken found a population of a previously extirpated lichen, Cetraria olivetorum, at Chaparral Prairie State Nature Preserve. Ray Showman, another Ohio lichenologist, found the second population of the endangered Carolina shield lichen (Canoparmelia caroliniana) in Gallia County.

Dr. Barbara Andreas of Kent State University, along with Gardner, found new populations of the previously extirpated Allen’s fern moss (Thuidium allenii) and the endangered long tail moss (Anomodon viticulosus) at Whipple State Nature Preserve in Adams County. Andreas, Showman and Gardner found a new population of the previously extirpated common silver moss (Anomobryum filiforme) in Shawnee State Forest.

Of course Ohio’s best finds list wouldn’t be complete without a find from Dr. Jim Bissell, a renowned botanist with the Cleveland Museum of Natural History. This past year, working with his Northeast Ohio Naturalists group, he found a new population of the endangered Bicknell’s cranesbill (Geranium bicknelli) along Conneaut Creek in Ashtabula County. This is the second population in northeast Ohio.

Congratulations to all the botanists who added to our knowledge of Ohio’s rare plants. The division’s Natural Heritage Program sincerely appreciates all the time spent in the field by our keen-eyed volunteers. Keep searching because there’s always another plant to be discovered!

Rick Gardner
Natural Heritage Botanist

Discover the Sandusky River

In 1970, the Sandusky State Scenic River was the second to join Ohio’s Scenic Rivers Program. One of Ohio’s longest rivers within the Lake Erie watershed, the Sandusky flows 130 miles from its source in Crawford County to the Muddy Creek and Sandusky bays. The river is “L” shaped, flowing to the west before heading north.

The Sandusky State Scenic River offers several public access sites which are open for canoeing, fishing and hunting. Wyandot County’s Indian Mill is located in Crane Township at river mile 76.4. This 6-acre site is located across the river from the Indian Mill Museum. Managed cooperatively by the Wyandot County Commissioners, the site features a picnic area.

Seneca County boasts three access sites for river enthusiasts. Hecks Bridge is located adjacent to the 301-acre Howard Collier State Nature Preserve. This area was the first scenic river property to be purchased in Ohio. Located in Seneca Township at river mile 54.3, it features a 1.5 mile hiking trail and public hunting area.

The St. John’s Bridge at river mile 50.2, also in Seneca Township, features a 1-acre access area which was the site of the St. John’s Dam. Two years after removing the aged dam which impounded nearly 9 miles of river, the stream has fully recovered and boasts diverse aquatic habitat.

The third access area in Seneca County is the newest public river access site. The Abbott’s Bridge area, located in Pleasant Township at river mile 32.1, opened in late 2006. More than 32 acres of river land protects the stream corridor while offering a concrete canoe ramp for easy access. The property adjoins Steyer Nature Preserve which is managed by the Seneca County Park District. Two tracts of the preserve were purchased using $65,000 in matching funds from the Scenic Rivers License Plate Fund.

In Sandusky County, Wolf Creek Park features a concrete canoe ramp, picnic areas, camping, restrooms and drinking water. Located in Ballville Township at river mile 23.2, it is owned by the Division of Natural Areas and Preserves but is managed by the Sandusky County Park District. This 90-acre scenic river property was the first scenic river land to be developed and opened to the public.

To learn more about the beauty of the Sandusky River, visit our website at www.ohiodnr.com/dnap or contact Robert Vargo, Northwest Ohio scenic river manager at (419) 981-6319.
Upcoming Natural Areas Discovery Programs

Kokosing Scenic River Day, Knox County
Kenyon College’s Brown Family Environmental Center

June 16, 12 to 4 p.m.

Great for the whole family, this event features displays, stream activities, aquatic critters and other river-related festivities. For more information and directions, contact (614) 265-6814.

Sandusky Scenic River Day, Wyandot County

June 30, 9 a.m. to 2 p.m.

Take a canoe trip along the lovely Sandusky State Scenic River. Open to the public, this free canoe float will begin at Indian Mill and end at Parker Covered Bridge. We’ll break for lunch (bring your own) and then return to Indian Mill for stream quality monitoring demonstrations. Pre-registration is required by calling (419) 981-6319. Personal floatation devices are available for adults, but participants under 18 must bring their own.

Kent Bog and Triangle Lake Bog, Portage County

Tale of Two Bogs
August 18, 10 a.m. to 2 p.m.

Visit two jewels of the Ice Age representing two different eras of plant community succession—an open water lake and a mature bog meadow. Both harbor unusual plant communities including carnivorous plants, tamaracks, rare northern shrubs and sedges.

After the 10 a.m. hike at Kent Bog, we’ll travel to Triangle Lake Bog around noon. After lunch (bring water and sack lunch), a guided tour of Triangle Lake Bog will begin.

Meet at Kent Bog State Nature Preserve’s parking lot, located on Meloy Rd, just west of S.R. 43, south of Kent. For more information, contact (330) 527-5118.

www.ohiodnr.com/dnap

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Ted Strickland, Governor
Sean Logan, Director
Steven D. Maurer, Chief

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

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