


Naturally Kentucky


Fall 2005

Number 48



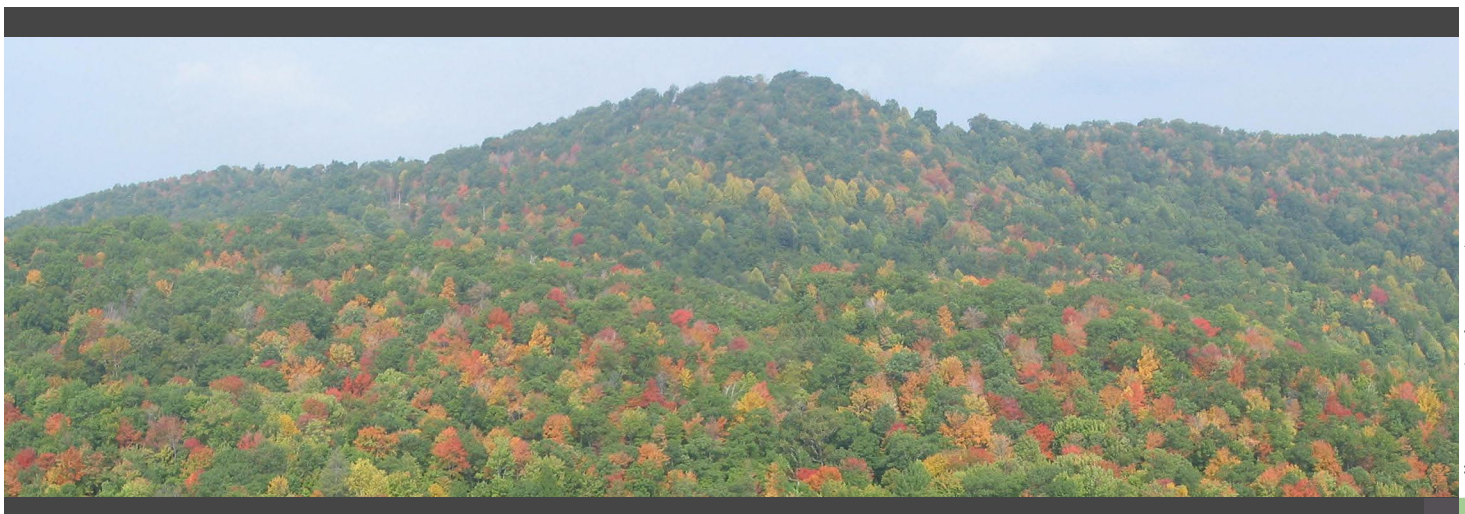
KSNPC Latest News: The League of Women Voters in Elizabethtown celebrated its latest educational project, "The Natural Wonders of Hardin County," on Sept. 13. Three Hardin County nature preserves are featured in a video for the county's schools. A copy was also provided to the Hardin County Museum so that visitors may learn more about the county's rich natural heritage.

 KSNPC's Aquatic Hot Spots and Priority Watersheds poster won the Poster Contest at the 2005 Kentucky GIS Conference in Bowling Green. Read more about the analysis and view the poster by visiting www.naturepreserves.ky.gov/inforesources/prwshds.htm.

 193.3 acres of land have been added to the state nature preserve system (175.2 acres at Obion Creek State Nature Preserve and 18.1 acres at Blanton Forest State Nature Preserve). In addition, seven sites owned by the Corps of Engineers surrounding Lake Cumberland were enrolled in the Natural Areas Registry Program. (Complete story on pages 4 and 8).

In This Edition:

Rare Plants and Rivers	2
KSNPC publishes Ph.D. Dissertation on Snakes of Kentucky	3
Ecological Treasure in the Purchase Area Added to State Nature Preserves System	4
Trespassers Punished After Breaking into Carpenter Cave	5
In the Spotlight: Kentucky's Rare Species and Communities	6
Land Protection Report	8
Heritage Branch Experiences Changes	9
Happy Trails to George Crabtree, Preserve Monitor	9
Director's Notes	10



Fall Mountains (Harlan County) ~ Marc Evans, KSNPC

RARE PLANTS AND RIVERS

By Deborah White, Botanist / Heritage Branch Manager

Between the drought in Kentucky and hurricanes, water is on everyone's mind and where better to focus this attention than rivers? Whether too much water or not enough, extreme conditions are common in rivers. Plants of every natural system have their own ecological burdens to bear. Drought is deadly to certain plants in barrens and glades since the lack of water creates extreme conditions in these thin-soiled systems. For instance, periodic dry spells help to eliminate woody plants that become established in these open natural communities but cannot withstand extreme dry conditions. River systems undergo tremendous stresses every year with changing water levels. A torrent that ripped at roots one month is a gently meandering stream the next. Rare plants that endure these conditions are some of the toughest species on the endangered plant list. So why are they declining?

Start with a true aquatic, a plant that actually lives underwater. Threadfoot (*Podostemum ceratophyllum*) anchors to rocks in rivers by producing a cement-like compound in its roots. It is known from the Red River (the eastern one), Rockcastle and Big South Fork rivers. Threadfoot looks a lot like a reddish algae because of its thin, long leaves, a shape that enables it to reduce the friction and stress of life in a river current. The plants flower quickly when water recedes and the plant is exposed to air. Within a couple days of pollination – the pollen apparently being blown by wind to the next flower – the fruit is already releasing mature seed. The seed is sticky and with luck finds a rock. This is all very precarious. If the water level doesn't go down or the pollen or seed isn't successful, then threadfoot doesn't reproduce that year. Threadfoot is not only sensitive to changes in river hydrology, but must have clean water and is an excellent indicator of good water quality. Because of its limited distribution in the state it is

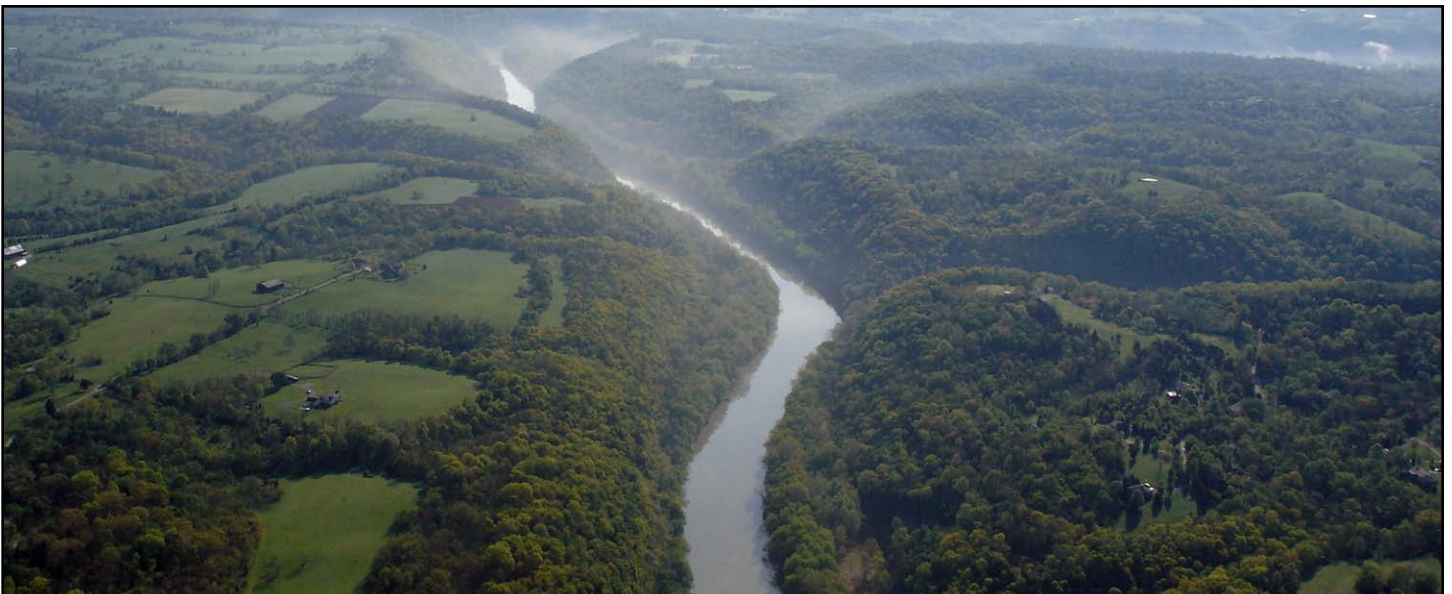
a species of special concern.

Other plants are not submerged but live on the river shoreline, their roots always in water. Goldenclub (*Orontium aquaticum*), which is considered threatened, has large, elliptic blue-green and silver leaves. Its flowers are borne on an erect candle-looking structure (spadix) with the "flame" holding the embedded flowers. The plant is so striking it is vulnerable to over-collection and also is vulnerable to changes in water levels and related stresses.



Goldenclub (*Orontium aquaticum*) ~ Kurt Emmanuele, TN Native Plant Society

The one group of riverine plants relies on the wide fluxes in water currents and volume to create rocky bars. These bars are made up of a combination of large boulders and cobble (little rocks), and others consist of a low rubble of rocks. Oddly, some of the flora of these river bars is dominated by plants known from prairie habitat, such as big bluestem and Indian grass, presumably because of the sandy soil deposits and extreme drought conditions once water



Kentucky River (Fayette County/ Madison County) ~ Brian Yahn, KSNPC



levels recede in the spring. Virginia spiraea (*Spiraea virginiana*), a federal and state-listed shrub, occurs on these bars and on river banks. Similar to some commercial spiraeas, the shrubs grow into large woody masses until a flood wipes them out. The shrub starts over from ground shoots, an important adaptation for a riverine species.



Virginia spiraea (*Spiraea virginiana*)
~ KSNPC Staff

Another plant federally listed and state-listed as endangered is Cumberland rosemary (*Conradina verticillata*), a low evergreen shrub in the mint family. It also is a target for plant collection. Its decline in Kentucky is hard to explain

because it is found along one of the most pristine rivers in the state, the Big South Fork. Other rare plants that occur on boulder cobble bars are Barbara's buttons (*Marshallia grandifolia*) and Rockcastle aster (*Eurybia saxicastellii*), both in the aster family. The aster is a somewhat newly described species to science, having just been described in 1989. Some of the threats to these plants include all-terrain vehicle use along rivers and their adjacent slopes. Once slopes are denuded of vegetation, the soils begin moving down slope, causing changes in the flora, including an open invitation to weeds.

There are more rare plants to talk about on the rivers – including those of the terraces, the flood plain above the river channel where Kentucky lady-slipper (*Cypripedium kentuckiense*) is found. The rare flora and fauna make rivers an especially important focus for conservation. Kentucky is third in the nation in numbers of fish and fourth in mussel species and has a national responsibility to protect these systems. While water is on our minds, it is not the only thing to be concerned about in Kentucky's rivers.

KSNPC PUBLISHES PH.D. DISSERTATION ON SNAKES OF KENTUCKY

Earlier this year, KSNPC staff biologist Brainard Palmer-Ball, Jr., arranged for the printing of 100 copies of the Ph.D. dissertation of the late Les E. Meade, *Kentucky Snakes: Their Identification, Variation and Distribution*. Dr. Meade was a long-time professor of biology at Morehead State University, where he began teaching in 1971. He was well-known for his contributions to regional herpetology, specifically snakes, which culminated in the completion of his dissertation in the early 2000s. KSNPC recognized the value of the work to regional herpetological study and began working with Dr. Meade three years ago to get his work published. Unfortunately, he passed away before the job was completed, but in late June 2005 the book came off the presses, and the 100 copies were distributed at cost within a couple of months.

Kentucky Snakes: Their Identification, Variation and Distribution will likely be reprinted in early 2006 as demand for the work indicated that several hundred more libraries, institutions and individuals were interested in obtaining a copy. The dissertation includes detailed accounts of all species and subspecies of snakes known to occur in Kentucky, along with county range maps and a complete listing of museum specimens and other reports of which the author was aware. The work also contains color images of all 42 forms of snakes that have been documented from the Commonwealth. Stay tuned for information on the reprinted edition next year.

KENTUCKY SNAKES

THEIR IDENTIFICATION, VARIATION AND DISTRIBUTION



Les E. Meade



ECOLOGICAL TREASURE IN THE PURCHASE AREA ADDED TO STATE NATURE PRESERVES SYSTEM

By Ron Scott, Land Protect Specialist

On October 13, the Commission and Murray State University proudly announced the dedication of Murphy's Pond as an addition to the Obion Creek State Nature Preserve in Hickman County. The 175.2-acre property, owned by the university since it was acquired with assistance from The Nature Conservancy in 1975, contains the highest quality bald cypress swamp remaining in Kentucky, as well as what is likely the highest concentration of cottonmouth snakes (*Agkistrodon piscivorus*) of any area in the state. Combined with the existing preserve property which it adjoins, the preserve now encompasses a 1,577-acre mosaic of upland slopes and wetland communities, including shrub swamp, marsh, and bottomland hardwood forest.

According to Don Dott, KSNPC director, "The Commission has long recognized Murphy's Pond as an incredibly important part of Kentucky's natural heritage, and we are delighted that the faculty and administration of Murray State, who have exercised careful stewardship of the area for the past 30 years, have demonstrated a commitment today to guaranteeing that this unique natural resource will be preserved for future generations to learn from and enjoy."

Dr. F. King Alexander, president of Murray State University, expressed similar sentiments regarding the collaboration. "The partnership that we have entered into today with the Kentucky State Nature Preserves Commission will not only help ensure that Murphy's Pond will continue to serve as a valuable living classroom and research facility but will also assure that the ecological integrity of the site will be forever protected," Alexander said.

"Murphy's Pond continues to offer our students and faculty a tremendous educational environment," Alexander continued. "This new designation as a state [nature] preserve grants many



Marc Evans and Beverly James on Murphy's Pond ~ Byron W. Brooks, KSNPC

protections for decades to come for future students."

Following the dedication ceremony, held in conjunction with the Commission's quarterly business meeting on the campus of Murray State, invited guests toured Murphy's Pond by canoe. KSNPC senior ecologist Marc Evans guided the group through the open water portion of Murphy's Pond, pointing out significant natural features along the way.

The university will continue to own the Murphy's Pond property, but this diverse wetlands complex will now receive the permanent legal protections afforded state nature preserves, along with expert land management assistance provided by the KSNPC staff. It will continue to serve as a valuable natural area for research and academic studies for Murray State, as well as others. To visit Murphy's Pond, contact the university. Access to the rest of Obion Creek SNP requires written permission from the Commission. For additional information on Murphy's Pond and the Obion Creek State Nature Preserve, contact Joyce Bender at (502) 573-2886 or by e-mail at Joyce.Bender@ky.gov.



Murphy's Pond ~ Greg Abernathy, KSNPC



TRESPASSERS PUNISHED AFTER BREAKING INTO CARPENTER CAVE

By Joyce Bender, Nature Preserves and Natural Areas Branch Manager

Trespassers got more than they bargained for during a late-night jaunt into Carpenter Cave in Allen County on Aug. 8. Landowner John Newman called the sheriff after the alarm in his home alerted him to trespassers in the cave located in the ravine below his house. Conservation officers Brett Zalla and Robert Olds from the Kentucky Department of Fish and Wildlife Resources responded to the call and went into the cave with Newman to catch the intruders.

Carpenter Cave is a maternity cave for the federally endangered gray bat. Newman and his wife, Jane, have been vigilant protectors of the bats and their cave. Population numbers for gray bats using the cave increased from 700 in the 1990s to 11,000 by 2001. Not content with posting signs indicating the cave's protected status, Newman, a retired electrical engineer, designed a warning system that plays a recording that tells intruders to vacate the cave. Another system he designed trips the alarm that sounds in his home. Both are activated by light. In case the technology is not enough, in June 2004, the Newmans donated a conservation easement on 14 acres to the Commission to ensure the cave is protected long beyond their ownership.

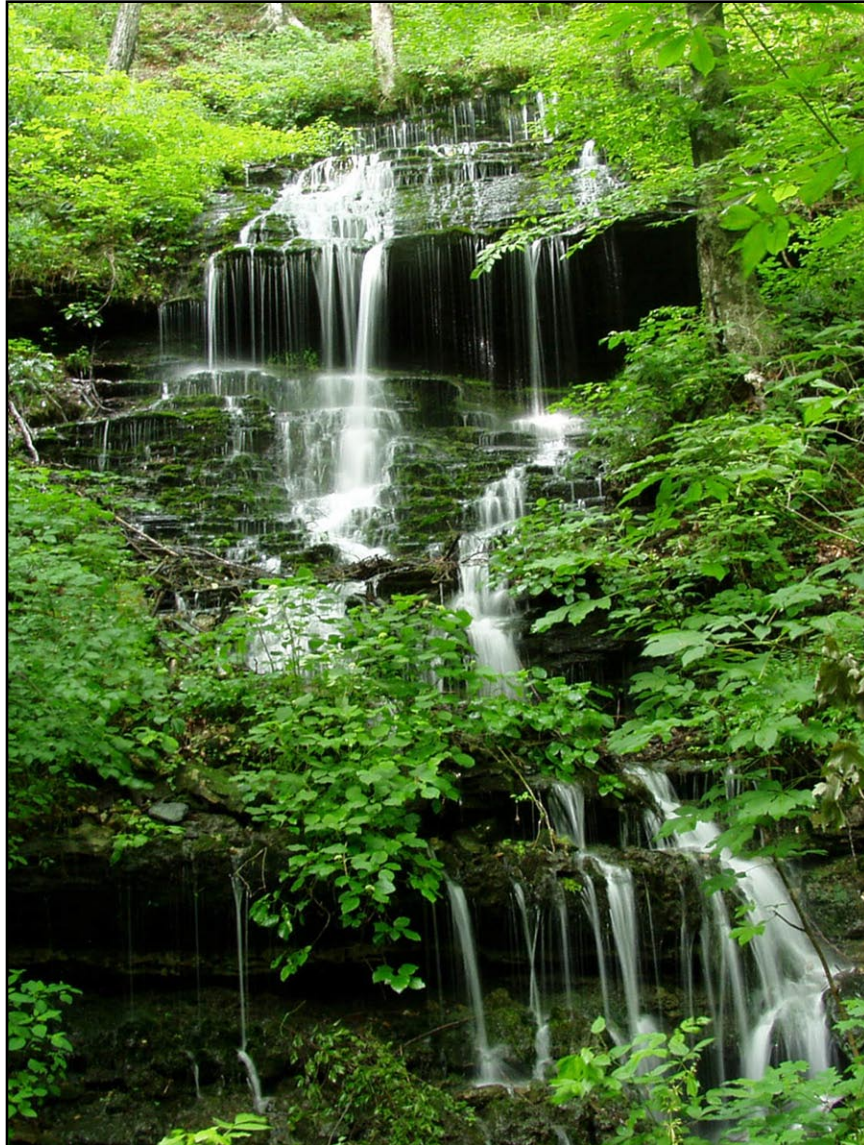
Four local men were arrested and charged with criminal mischief

and first degree criminal trespassing. They destroyed Mr. Newman's voice warning system and ripped signage from the ground. Fortunately, that was the extent of the damage. The defendants could have faced federal charges had there been proof of harm to any of the bats. The young gray bats were already capable of

flight when this illegal entry was made. Earlier in their lives, the intrusion could have been fatal for helpless young bats, which can be dropped when their mothers fly around in agitation after being disturbed. At the hearing, the defendants were ordered to pay the Newmans \$1,000 restitution for the alarm they destroyed. They were given three-month jail terms, probated for two years.

The Commission extends thanks to officers Zalla and Olds for their good work in catching the men. Getting to Carpenter Cave is not easy, especially in the dark. The cave's entrance is in a steep ravine along a cliff line and it is easy to lose one's footing. The officers risked injury to protect

an element of Kentucky's rich biodiversity that does not generate a lot of popular compassion. We appreciate the Newmans as well for their dedication to protecting the cave and its inhabitants and for the ingenious methods they have employed to help stack the deck a little more in the bats' favor.



Carpenter Cave ~ John Newman



IN THE SPOTLIGHT: KENTUCKY'S RARE SPECIES AND COMMUNITIES

Hybognathus hayi *Cypress Minnow*

KSNPC STATUS: Endangered

USFWS / NOAA STATUS: None

GENERAL DESCRIPTION: A 4-5 inch long silvery-sided minnow, one of more than 60 native minnow species in Kentucky.

HABITAT: Stream, oxbow lakes and wetlands.

RANGE: The Mississippi River valley from Illinois south, and Gulf coast tributaries from Florida to Texas.

REASON FOR PROTECTION STATUS: Wetland degradation and loss.



Photo by KSNPC Staff

Amphiagrion saucium *Eastern Red Damsel*

KSNPC STATUS: Endangered

USFWS / NOAA STATUS: None

GENERAL DESCRIPTION: Damselfly belonging to the family Coenagrionidae.

HABITAT: Spring-fed bogs or pond margins, sometimes with a deep peat layer, or seeps with a scattering of *Sphagnum* and algae over sand.

FLIGHT SEASON: May to September.

RANGE: Eastern Canada and United States.

REASON FOR PROTECTION STATUS: Habitat has been degraded and is limited in Kentucky; only two extant populations are known in the state.



Photo by Ellis Lauder milk, KSNPC

KEY TO KSNPC STATUS CATEGORIES:

ENDANGERED: A taxon in danger of extirpation and/or extinction throughout all or a significant part of its range in Kentucky.

THREATENED: A taxon likely to become endangered within the foreseeable future throughout all or a significant part of its range in Kentucky.

SPECIAL CONCERN: A taxon that should be monitored because (1) it exists in a limited geographic area in Kentucky, (2) it may become threatened or endangered due to modification or destruction of habitat, (3) certain characteristics or requirements make it especially vulnerable to specific pressures, (4) experienced researchers have identified other factors that may jeopardize it, or (5) it is thought to be rare or declining in Kentucky but insufficient information exists for assignment to the threatened or endangered status categories.

HISTORIC: A taxon documented from Kentucky but not observed reliably since 1980 but is not considered extinct or extirpated.



Calycanthus floridus *Eastern Sweetshrub*

KSNPC STATUS: Threatened

USFWS / NOAA STATUS: None

GENERAL DESCRIPTION: Perennial shrub with maroon flowers.

HABITAT: Moist (mesic) forests.

FLOWERING PERIOD: Early March to late June.

RANGE: Florida to Kentucky and Virginia. In Kentucky known only from three southeastern counties (McCreary, Wayne and Whitley).

REASON FOR PROTECTION STATUS: Narrow distribution in southeastern Kentucky, apparently at the periphery of its natural range.



Photo by John R. MacGregor

Appalachian Mesophytic Forest

KSNPC STATUS: None

GENERAL DESCRIPTION: The Appalachian mesophytic forest has the highest species diversity of any temperate deciduous forest type in the world. The canopy is very diverse, including over 25 species, with white basswood, sweet buckeye, and sugar maple being most characteristic of the community. The forest mid-story is often composed of numerous species, such as dogwood and magnolias. A diverse fern and herbaceous flora thrive throughout the understory.

RANGE: Central Appalachian Mountains in Kentucky. The mixed mesophytic forest is found throughout the Cumberland Plateau and mountains and infrequently within the Knobs and the Shawnee Hills physiographic region. This community occupies ravines, coves, protected slopes and bases of cliffs.

REASON FOR PROTECTION STATUS: High quality examples of this community are rare in Kentucky due primarily to logging, grazing and non-native and weedy species invasion.



Photo by Marc Evans, KSNPC

ADDITIONAL RESOURCES:

KSNPC Species and Community Information ~ www.naturepreserves.ky.gov/inforesources/SpeciesCommunityInfo.htm

NatureServe Explorer ~ www.natureserve.org/explorer/

USFWS Endangered Species Program ~ <http://endangered.fws.gov>

KEY TO USFWS / NOAA STATUS CATEGORIES:

(US) ENDANGERED SPECIES ACT OF 1973

ENDANGERED: "... any species ... in danger of extinction throughout all or a significant portion of its range ..." (USFWS 1992).

THREATENED: "... any species ... likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range" (USFWS 1992).

CANDIDATE: Taxa for which the USFWS has "... sufficient information on biological vulnerability and threats to support proposals to list them as endangered or threatened" (USFWS 1999).

SPECIES OF MANAGEMENT CONCERN: Species the USFWS believes are in need of conservation management.



LAND PROTECTION REPORT

By Ron Scott, Land Protection Specialist

The Oct. 13, 2005, quarterly meeting of the Kentucky State Nature Preserves Commission, held on the beautiful campus of Murray State University, was momentous in the sense that it marked the culmination of a multi-year effort to incorporate Murphy's Pond into the state nature preserves system (see story on page 4). Also at the meeting, the Commission added an 18.1-acre parcel of land to Blanton Forest State Nature Preserve in Harlan County. This key tract of land is bounded on three sides by the existing preserve and contains high quality forested habitat buffering the old-growth section of the preserve.

We are continuing to pursue several more new acquisitions, including efforts to protect important bat caves in Barren and Christian County through the outright purchase of property and the purchase of a conservation easement, respectively. Our Natural Areas Registry program is also continuing to grow, with the addition in September of seven sites along Lake Cumberland owned by the U.S. Army Corps of Engineers. The seven sites, which amount to about 178 combined acres, are strung along Lake Cumberland in parts of Pulaski, Russell and Wayne counties. By agreeing to have the sites registered as natural areas, the

Corps acknowledged their ecological significance and voluntarily committed itself to their protection. Enhanced protection of these sites will help ensure the persistence of vital habitat for the plants, but will also permit continued recreational use such as boating, hunting and bird watching for visitors. The Lake Cumberland sites include undisturbed limestone cliffs and natural seeps supporting populations of southern maidenhair ferns (*Adiantum*

capillus-veneris), September elm (*Ulmus serotina*), northern white cedar (*Thuja occidentalis*) and several other rare plants. They also are home to a variety of more common plants and animals. Both the Corps and the Commission look forward to continuing their partnership and furthering conservation of biologically important sites on Lake Cumberland.

Finally, in mid-August we received official word that the Louisville-based Beckham Birding Club had once again chosen to fund a grant request submitted by the Commission. This year's request

is to assist in the acquisition of a critically located 13-acre tract of land in Henderson County that will be added to the John James Audubon State Park Nature Preserve. The \$2,000 award is much appreciated and provides a wonderful example of public-private collaborative conservation efforts.



Don Dott (KSNPC) and Craig Shoe (USCOE) at Lake Cumberland ~ KSNPC Staff



Murphy's Pond ~ Greg Abernathy, KSNPC



HERITAGE BRANCH EXPERIENCES CHANGES

By Deborah White, Botanist / Heritage Branch Manager

Ronald Cicerello recently retired from the Commission after 25 years of serving as aquatic zoologist. He has been a source of inspiration and information to the Commission on mussels and fishes of Kentucky and has written innumerable articles about aquatic resources and their distribution in the state. He is a graduate of Western Illinois University (undergraduate) and Eastern Kentucky University (M.S.). When he came to the Commission as an aquatic zoologist in 1980, he had specialized in fishes and had never studied the identification of mussel species. But he took it upon himself to learn and has become a leading expert in this field. Before leaving the Commission, Ron co-authored a guide to Kentucky mussel identification with Dr. Guenter Schuster, an Eastern Kentucky University professor of biological sciences.



Ron in his element ~ Marc Evans, KSNPC

Ron dedicated himself to doing a job thoroughly and efficiently, setting a standard for ethics at the Commission. We will miss his expertise, his professional standards and, of course, his humor. For Ron, like a lot of biologists at the Commission, conservation isn't just his job but a life view. While we may not see him every day, we expect to continue to see him working to protect natural resources in Kentucky. It is with respect and admiration that we wish Ron the very best in retirement.

Nick Drozda has also left his job as botanist and accepted a position in South Carolina with the USDA Forest Service. We will miss him and the work he did for plant conservation. We're pretty sure he's heard about the longer growing season down there because, as all biologists know, any bad day in the field is better than a good day in the office.

HAPPY TRAILS TO GEORGE CRABTREE, PRESERVE MONITOR

By Alice Mandt, Stewardship Assistant

The Kentucky State Nature Preserves Commission currently manages over 21,000 acres across the state. Over the years, this number has steadily increased, making it necessary for our three regional managers to rely heavily on our preserve monitors – volunteers from the community who regularly visit a site and report back to the regional manager.

We have recently learned we are losing one of our preserve monitors, George Crabtree of Fort Wright. George has been monitoring Quiet Trails State Nature Preserve for three years and has been reliably fulfilling his preserve monitor duties. He has consistently visited Quiet Trails twice a month, ensuring trails are in good condition, cleaning up litter and monitoring for encroachments. George and his wife are moving to the Eastern Shore of Maryland and will be doing a lot of traveling. On behalf of the Commission and visitors to Quiet Trails, we would like to thank George for his hard work and years of dedication.



DIRECTOR'S NOTES

By Don Dott, Executive Director

It was a bit fortuitous that I wrote in the last edition of the exciting rediscovery of the Ivory billed woodpecker and the need to protect its habitat – our all too rare bottomland hardwood swamps. This October we celebrated the dedication of Murphy's Pond as an addition to Obion Creek State Nature Preserve. The pond is Kentucky's best remaining bald cypress, bottomland hardwood swamp. President F. King Alexander of Murray State University, which owns Murphy's Pond, is to be commended for his concern and foresight for this state treasure by agreeing to its dedication. As a state nature preserve it will receive the highest level of protection available under state law. MSU's Biology Department and Drs. Timmons and Zimmerer are also to be recognized for their careful management and study of the pond and for working with us on the official Articles of Dedication. There has also been some activity in the area immediately downstream of Murphy's Pond that is of great interest. The Kentucky Department of Fish and Wildlife Resources, under the guidance of Dr. Art Parola, has implemented stream restoration in a portion of Obion Creek, restoring natural meanders and contours to a segment that had been ditched many years ago. We are now working with Dr. Parola on the feasibility of extending this work (literally across the street) from the KDFWR land onto the Obion Creek SNP. The Nature Conservancy is also active in

the Obion Creek watershed, working with landowners to protect the riparian corridor and surrounding lands. With the Murphy's Pond dedication and nearby restoration activities, it is exciting to see all the progress being made to bring this network of bottomland hardwoods back to a more natural, functional state.

It is unfortunate to have to report a recent trespass into Carpenter Cave, a gray bat maternity site on which the Commission holds a conservation easement. It is good that I can report that under the continued private ownership of John and Jane Newman the cave is receiving the most watchful care. A separate article will explain all the details. I wish to express our greatest appreciation and commendation to the Newmans for their continued diligence, which averted serious injury to the gray bat nursery in Carpenter Cave.

It is with regret that I report the retirement of Ronald Cicerello. He was the most senior staff member of the commission, having worked here for 25 years. His departure is a great loss to this agency and the aquatic species he worked so tirelessly to inventory and protect. A separate article will cover Ron's accomplishments, so I won't repeat them here but will offer him congratulation and thanks for a long and dedicated service to the Commonwealth and its biological treasures, and wish him the best in retirement. I know he will not be sitting idle!

KENTUCKY STATE NATURE PRESERVES COMMISSION

COMMISSIONERS

CLARA WHEATLEY, CHAIR
GAYLE HORN, SECRETARY
NANCY H. GRAYSON
JOY HAWKES
O.D. HAWKINS

STAFF

DONALD S. DOTT JR.
EXECUTIVE DIRECTOR

GREG ABERNATHY
JOYCE BENDER
BYRON BROOKS
JUDY CUNNINGHAM
SHAUNA DUNHAM
MARC EVANS
MARTINA HINES
SARA HINES
HEATHER HOUSMAN
LESLIE ISAMAN
ELLIS LAUDERMILK
LANE LINNENKOHLE
ALICE MANDT
JAYSON MITCHELL
KYLE NAPIER
BRAINARD PALMER-BALL JR.
RON SCOTT
DAVID SKINNER
DEBORAH WHITE
BRIAN YAHN

An Equal Opportunity Employer

Kentucky State Nature Preserves Commission

Quarterly Public Meeting

December 7, 2005

KSNPC Frankfort Office

801 Schenkel Lane, Frankfort, KY 40601-1403

Time to be Determined

How to contact the Kentucky State Nature Preserves Commission:

Mail: 801 Schenkel Lane, Frankfort KY 40601-1403

Phone: (502)573-2886 Fax: (502)573-2355

E-mail: naturepreserves@ky.gov

Visit us online @ www.naturepreserves.ky.gov

It is the mission of the Kentucky State Nature Preserves Commission to protect Kentucky's natural heritage by: (1) identifying, acquiring and managing natural areas that represent the best known occurrences of rare native species, natural communities and significant natural features in a statewide nature preserves system; (2) working with others to protect biological diversity; and (3) educating Kentuckians as to the value and purpose of nature preserves and biodiversity.

The Environmental and Public Protection Cabinet does not discriminate on the basis of race, color, national origin, sex, age, religion or disability and provides, upon request, reasonable accommodations including auxiliary aids and services necessary to afford an individual with a disability an equal opportunity to participate in all services, programs and activities. To request materials in an alternative format, contact the Kentucky State Nature Preserves Commission at 801 Schenkel Lane, Frankfort, KY 40601-1403 or call 502-573-2886. Hearing-impaired and speech-impaired persons may contact the agency by using the Kentucky Relay Service, a toll-free telecommunication device for the deaf (TDD). For voice to TDD, call 800-648-6057. For TDD to voice, call 800-648-6065.

