

# Naturally Kentucky

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**KSNPC Latest News:** 30 years of caring for nature began in 1976. Director Don Dott discusses promoting biodiversity and pursuing KSNPC's mission in this edition's lead article (story on page 3).

 Governor Ernie Fletcher has declared Feb. 25 through March 7, 2007 as Invasive Weed Awareness Week. The week is aimed at getting the word out about the threat that invasive non-native plants pose to our native plants and wildlife. Here are some ideas you can do to preserve Kentucky's natural heritage: when gardening, use native plants wherever possible; contact your legislator to make them aware of the need for laws limiting the use of weeds that spread to natural areas; volunteer to remove invasive plants from a natural area near you; and prevent the spread of invasive plants by cleaning seeds from your boots after hiking in weed-infested areas. Check KSNPC's on-line Events Calendar for information about planned activities for the week ([www.naturepreserves.ky.gov/events/](http://www.naturepreserves.ky.gov/events/)).

 Land acquisition projects are well underway at the eastern and western extremes of the Commonwealth and several new properties were enrolled in the Natural Areas Registry program in 2006 (see complete story on page 10).

 The entire Naturally Kentucky archive has been posted online. View all of our past newsletters by visiting [www.naturepreserves.ky.gov/newsroom/newsletters.htm](http://www.naturepreserves.ky.gov/newsroom/newsletters.htm).

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## A MESSAGE FROM GOVERNOR ERNIE FLETCHER

My fellow Kentuckians:

For 30 years, the Kentucky State Nature Preserves Commission has worked to preserve and protect pieces of our heritage – rare areas that offer revealing glimpses of ancient Kentucky.

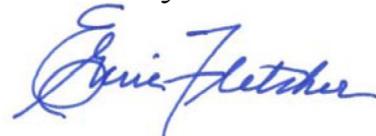
It's estimated that only about one-half of 1 percent of our beautiful and beloved commonwealth remains in a condition comparable to that which greeted the pioneers.

We are known as the Bluegrass State, but Kentucky is so much more. It is forests, glades and grasslands, barrens and wetlands, gorges and caverns, rivers and palisades, creeks, lakes and ponds.

The commission owns or manages a system of dedicated state nature preserves, state natural areas and conservation easements encompassing 23,379 acres of ecological communities and natural habitat for rare species.

A clean and healthy environment and the honoring of our natural heritage have been, and continue to be, priorities of our administration. Plan on visiting a preserve in the near future. And join me in celebrating the Kentucky State Nature Preserves Commission and its work.

Sincerely,



Ernie Fletcher



# 1976-2006 **30** YEARS FOR KSNPC

By Don Dott, Executive Director

The Kentucky Nature Preserves Act, passed by the General Assembly and signed into law by former Governor Julian Carroll, established the Kentucky State Nature Preserves Commission (KSNPC) in 1976. In 30 years the hard working, dedicated staff of this small agency has accomplished a great deal. From its humble beginnings in 1976 with a staff of four we now have 23 full-time employees, with 12 staff in the natural heritage program branch, six in the nature preserves stewardship branch, four administrative and one for land acquisition. Much work has been done, and yet much more remains. It's in part the nature of the business, the more you learn the more you realize how little you know. Certainly this truism applies to the workings of our natural world.

Why is the Commission engaged in all of this effort and clamoring that more needs to be done? Many of our readers would likely never even consider that question; to them it's just the right thing to do. But on occasion, someone unfamiliar with the issues of biodiversity conservation does ask. To help answer that question, a couple of brief, sometimes witty, one-page summaries have been written. A quick revisit to a few of those reveals the following:

- 🌿 **Feeding the World:** A mere 20 species provide about 90 percent of the world's food. Wild strains can provide genetic resources to cope with evolving diseases, pests and environmental stresses (i.e., global warming).
- 🌿 **Not Feeling Well?** Forty percent of all prescriptions in the United States are based on chemical compounds derived from plants, animals or microorganisms. Aspirin, penicillin, quinine (for malaria), taxol (for ovarian cancer) are some of the major ones. Who knows what others remain to be discovered?
- 🌿 **The Wealth of Nations:** Most of life's necessities - food, clothing, building materials, etc. - are derived from a small number of plants and animals. Thousands of natural products are used in industry to produce everyday goods. We must preserve this genetic capital for use by future generations.
- 🌿 **The thigh bone's connected to the...** Some species are "keystones in the arch" supporting entire ecosystems. When they disappear, the web of life begins to unravel. Another way of illustrating this is by the oft quoted analogy - you can pop out some of the rivets on the plane, but at some point, it's going to crash.
- 🌿 **Look at that!** Nature's beauty inspires the human imagination, and it can restore the spirit. A recent book by Richard Louv, Last Child in the Woods suggests the growing disconnect of children from nature may be linked to health and mental/behavioral problems.
- 🌿 **Planetary Life Support:** We are only beginning to understand the economic value healthy ecosystems provide to the planet. Tropical forests return oxygen to the air and influence weather. Wetlands filter pollutants. New York City currently has \$250 million committed to additional land and easement acquisitions in its watershed. If these "eco-services" must be artificially duplicated (i.e., water treatment plants), the cost is enormous, at best.

There are more such compelling reasons discussed on the various lists that get circulated. If you would like to see one that can be found online, visit: [www.natureserve.org/consIssues/bioInsights.jsp](http://www.natureserve.org/consIssues/bioInsights.jsp).

What are some of the Commission's accomplishments for protecting biodiversity in Kentucky during the past 30 years? For one thing, we have created a state nature preserve system of 57 separate properties encompassing 23,379 acres - and it continues to grow. The first, Blackacre State Nature Preserve in Jefferson County, was created by a generous donation in 1979 and is an excellent resource for

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Crooked Creek SNP ~ David Skinner, KSNPC



environmental education. Our other state nature preserves are found scattered across the breadth of Kentucky, as we strive to achieve our goal of protecting at least one example of each natural community known from Kentucky. Our progress to date finds 21 of 60 recognized natural community types under safe harbor in our preserves. Protection of rare species is also a primary goal, and of 727 state-listed rare species, 203 find refuge in our nature preserves. As dedicated state nature preserves, these lands have the highest protection available under Kentucky law, a legislative recognition of their great value and importance. Uncommon fire dependent natural communities on several of these preserves are being restored with the use of prescribed fire. Others preserves are rebounding due to our work to control non-native invasive species to spur the recovery of rare native plants and animals. In addition, protection from more direct human abuses such as illegal ATV use is a growing challenge we must meet.

In the process of surveying our commonwealth to find the most rare, at-risk species and natural communities, the Commission's natural heritage branch also has accomplished a great deal in 30 years. The Natural Areas Inventory Program has thus far been able to search over half of Kentucky's approximately 25,000,000 acres with only a few staff. To date, 39 counties have been completely checked for surviving high-quality natural areas, 46 are partially surveyed and 35 have at least some minimal data collected. In 2002 our senior botanist, Deborah White, with input from the state botanical community, compiled and published in the Kentucky Administrative Regulations a list of *state* endangered and threatened plants. That list has just undergone its first four-year update. The Commission is the official monitor and manager of federally listed endangered or threatened plants in the state. We also have on staff a terrestrial zoologist, an aquatic zoologist and an invertebrate zoologist who have been hard at work locating, identifying and monitoring their particular groups of species. All of the data they collect is entered in the natural heritage program database, which now contains over 11,000 element occurrence records. The Commission has participated in this international natural heritage data collection program, housed by NatureServe, since our first director, Don Harker, enrolled the Commission in it. This cooperative relationship with NatureServe assists us with taxonomy and classification issues and enables us to assign national and global rankings to species found in Kentucky.

The Commission has been publishing a list of state endangered, threatened and special concern species since 1981. The list was initially published every four years in the Journal of the Kentucky Academy of Science. More recently we have published the list on the Commission's Web site, enabling us to update it more frequently. As of the 2005 list, one lichen, 390 plants and 317 animal taxa are listed as rare. Six plants and 49 animal species are either extirpated from Kentucky or extinct.

A sampling of natural heritage records and our biologists' surveys during the past 30 years reveals a few illustrative items:

- The Indiana bat (*Myotis sodalis*), a federal and state endangered species, experienced the first overall population increase as determined by a survey of Kentucky's main winter hibernacula in 2005. It was the first survey in about 20 years that had not recorded a decline.
- The Great blue heron (*Ardea herodias*) population has increased sufficiently to remove it from its listing as a state species of concern. It is no longer as rare a site in the Kentucky sky or along our waterways.
- Blanton Forest was recognized in 1992 as our largest old growth forest. The 2,300 acres of old growth are now part of the 3,090-acre preserve, which includes forested buffer. Recent tree corings confirm that one Chestnut oak (*Quercus prinus*) was 338 years old.
- Eggert's sunflower (*Helianthus eggertii*), formerly a federally threatened species, has been found in sufficient numbers to "delist" it federally and state delisting is expected.
- A dragonfly species previously unknown to science was identified and described in 2002.
- One damselfly and three moth species not previously known to occur in Kentucky were discovered in the state during 2003.
- Black bears (*Ursus americanus*) have moved back into Kentucky from wild populations in adjoining states, primarily from West Virginia.
- Kentucky has nine federally listed plant species and 28 federally listed animal species (not including 15 species considered to have occurred in Kentucky historically).



Eggert's sunflower (*Helianthus eggertii*)  
~ Heather Housman, KSNPC



Interior Least Clubtail (*Stylogomphus sigmastylus*)  
~ Ellis Laudermilk, KSNPC



Black bear (*Ursus americanus*)  
~ KSNPC Files



Several scientific publications have been authored since 1976, relying, at least in part, on the information contained in the natural heritage database. In cooperation with other biologists in the state, the Commission has produced seven publications in our scientific and technical series. Species groups addressed include ferns, fishes, mussels, birds, moths and butterflies. The Commission also has contributed to the publication of other scientific treatises important to the documentation of our biodiversity.

Geographic information systems (GIS) is a tool that has greatly enhanced and expanded the ways in which we can analyze and present our natural heritage data. The Commission initiated a GIS program in 1998, beginning with a conversion of the database from a DOS-based system of tables and charts to a GIS compatible system known as BIOTICS. BIOTICS enables the mapping or spatial display of species locations and natural communities. GIS tools also have a myriad of other uses from creating posters to preserve maps to conservation assessments. One of the key benefits of GIS is that it enables the incorporation of a large amount of data into a more easily assimilated visual display.

GIS was essential to the development of the Aquatic Hotspots and Priority Watershed Analysis. Kentucky's native freshwater fish and mussel faunas are among the richest in North America. The southeastern U.S. is the center *worldwide* of freshwater mussel and temperate freshwater fish diversity. However, habitat destruction and degradation have caused the extirpation or extinction of 21 percent of mussels and 4 percent of Kentucky's fish species. Of the survivors, 41 percent of mussels and 25 percent of fishes are imperiled. Mussels are our most imperiled group of organisms. The hotspots and priority watershed analysis will help guide the actions of the Commission and others involved in aquatic protection efforts.

In 1984 the Commission began a Natural Areas Registry Program to encourage other landowners, both private and public, to protect important natural areas under their control. As 93 percent of Kentucky is held in private ownership, biodiversity protection must involve private landowners. The registry program provides information to enable participating landowners to protect important sites. It now involves 48 landowners with 59 different sites encompassing 4,783.5

acres. We also have expanded the scope of our preserve system to include the dedication of qualifying privately owned natural lands as nature preserves. In addition, since 2001 we have begun using conservation easements when appropriate, which ensures perpetual protection of high quality natural areas without the need or added expense of purchasing the property outright.

The Commission has also expanded its efforts to work with private landowners for biodiversity protection through the Landowner Incentive Program (LIP). Under this federally funded program, the Commission partners with the Kentucky Department of Fish and Wildlife Resources and The Nature Conservancy. The Commission's role has been to work with private landowners to protect rare plant species. We estimate 75 percent of rare plant populations occur on private lands. Cooperating with 36 private landowners thus far, this new program has already resulted in recovery management work for 18 rare plant species. Unfortunately, fewer cost share dollars will be available for landowners for the next two years; however, we can continue to offer technical advice and management expertise.

During the past 30 years the Commission has had special opportunities to work with Kentucky Educational Television (KET) on particularly notable events like the acquisition of Blanton Forest. In the last several years we have seen a significant increase in the featuring of nature preserves and Kentucky's biodiversity on the *Kentucky Life* program. This past year alone we have worked with KET on segments that will feature the wildflowers of Black Mountain, rare butterflies and moths, dragonflies and damselflies and a visit to Murphy's Pond, which harbors our most significant bald cypress swamp and the largest concentration of cottonmouth snakes (*Agkistrodon piscivorus*) in Kentucky. Murphy's Pond is owned by Murray State University, and we were delighted they agreed to dedicate it as a state nature preserve in 2005. KET's programming is providing our best resource for educating Kentuckians about biodiversity values, which is also part of our agency mission.

Financially, the most beneficial event for the Commission in the past 30 years was the creation of the Heritage Land Conservation Fund Board in 1994. As a recipient of 10 percent of the moneys garnered by the fund, it provided our first sustained funding source for land

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Furtive forktail (*Ischnura prognata*)  
~ Ellis Laudermilk, KSNPC



Great blue heron (*Ardea herodias*)  
~ Lana Hays



acquisition. Prior to the Heritage Land Conservation Fund we had to seek specific appropriations from the General Assembly, or rely on donations and tax check-off receipts. A significant portion of the Heritage Land Conservation Fund receipts are generated by sales of the *Nature's Finest* license plates, the first of which featured the Kentucky Warbler in 1995. Three new nature plates will be released in 2008. Please be sure to buy one for your vehicle. It's only an additional \$10 for a great program.

Another significant event in the history of the Commission was the creation of the Kentucky Natural Lands Trust (KNLT), a private nonprofit organization, in 1995 by friends and supporters of the Commission. Its purpose was to help raise funds for the acquisition of Blanton Forest. Successful in that endeavor, KNLT has now expanded its agenda to establish a 110-mile long, contiguous protected ecological corridor along Pine Mountain in southeastern Kentucky. KNLT continues to assist the Commission in the acquisition and

stewardship of nature preserves on Pine Mountain, where we have five preserves, and will soon dedicate a sixth.

The creation of the KSNPC in 1976 by the General Assembly was a very timely and critical step forward in protecting the biodiversity and natural lands of the Commonwealth. Much has been accomplished by this small agency, but much remains to be done. We are fortunate in that we do not strive at this task alone. There are many other state, local and federal agencies, non profit organizations, land trusts, allies and associates in academia and individual citizens – from preserve volunteers to self-taught naturalists -who are partners in this challenging mission. But there remain serious and growing threats to Kentucky's biodiversity, led by land conversion and invasive species. We need your help and support and that of the General Assembly to be successful. We owe it to ourselves, but more particularly to our children - and their children. We do not own this world; we are merely its temporary custodians. Let's do the best job of it that we can!

## DR. WILLIAM H. MARTIN RECEIVES 2006 BIOLOGICAL DIVERSITY PROTECTION AWARD

By Don Dott, Executive Director

In recognition of a lifetime of achievements, Dr. William "Bill" Martin was honored during the December 13 Commission meeting. Only a few of his many accomplishments will be recounted, so that we may reprint an inspiring article he wrote for the journal *Sustain*.

Dr. William H. Martin, III has devoted his professional career and a great deal of his personal life to protecting biological diversity and natural lands. While we have been fortunate that most of his work has taken place in Kentucky, he has been involved in biodiversity protection throughout the southeastern U.S., and extending even to the Jiangsu Province of China. Since 1969 he has been a professor of biology at Eastern Kentucky University (EKU). He received a Ph.D. in botany from the University of Tennessee-Knoxville in 1971. By the time he retired from EKU in 2005 he was director of the Division of Natural Areas Program. He was instrumental in the protection of Lilley Cornett Woods and served as its research coordinator from 1977-2005. His research and teaching interests have been in the composition and dynamics of forests and grasslands of the southern Appalachians and Midwest. He has taught and mentored countless students in his 36-year tenure at EKU and published at least 21 edited or refereed books and papers, the most significant of which is a three volume set, "Biodiversity of the Southeastern United States."

Dr. Martin took temporary leave from EKU to serve as the Commissioner of the Department for Natural Resources (in the former Natural Resources and Environmental Protection Cabinet) from 1992 to 1998. He was co-chair of the 1995 Kentucky Biodiversity Task Force and was a lead member of the team that developed and successfully worked to pass the 1998 Kentucky Forest Conservation Act.

In 2005 Dr. Martin served as chair of the Kentucky Conservation Committee, which began a project to persuade the Kentucky General Assembly to increase the amount of funding dedicated to conservation of land, particularly natural areas and farmland conservation. Those efforts are still underway. Dr. Martin currently serves as chair of the Kentucky Heritage Land Conservation Fund Board, and has been serving in that capacity since its inception in 1994. During his tenure, more than \$31 million has been awarded to purchase more than 27,000 acres statewide. Dr. Martin has described this position as one of the most rewarding he has ever held.



Dr. William H. Martin ~ Photo by Shauna Dunham

The following excerpt is from a compelling article appearing in *Sustain* (a publication of the University of Louisville, Fall/Winter 2004) written by Dr. Martin on the status of biodiversity in Kentucky.



## Sustaining Biodiversity & The Challenge

Consideration of the condition and future of Kentucky's biodiversity is at a critical stage in our history. The major threat to native biodiversity is the same one in Kentucky as it is elsewhere in the nation and the world - the loss or fragmentation of natural habitats. Loss of habitat is due to the unrelenting growth of the human population and its demands for space and resources. In the United States, the number of people is approaching 290 million with 3 million added every year (including immigration). Kentucky's population is now over 4 million, with most of us living in urban areas.

To accommodate growth and demand, over 130 acres of Kentucky's forests and fields are being converted into developed land *every day*. This means loss of agricultural lands and wildlife habitats to highways, subdivisions, commercial and industrial development; every week, one square mile has been lost to development. Accelerated development in recent years has been astounding. From 1982 to 1997 Kentucky's rate of growth was second in the nation. Other substantial threats include introduction and invasion of exotic pests and diseases; habitat degradation by pollutants; over use of certain species and ecosystems; and bad resource management practices.

What are we to do? Given the reality that growth and development will not stop, the challenge to preserve and conserve biodiversity only increases with each passing year.

In the long run, sustaining Kentucky's biodiversity-the natural capital of this state - means reduction and, to the extent possible, the elimination of some of the threats just noted. In 2001, Governor Paul Patton established the Smart Growth Task Force in response to the state's increased rate of growth and development. The report recommended taking long-term actions that would reduce the pressure on land and life. Major recommendations for future "smart growth" include community and regional planning to coordinate growth with transportation corridors and other infrastructure needs; revitalization of downtowns and reinvestments in existing residential, commercial, and industrial buildings; redeveloping abandoned industrial sites; and development of smart growth educational efforts at all levels of formal schooling and informal education. Certainly, these recommendations do pave the way for a different and smarter way of growing across the commonwealth in the coming decades provided there is broad support, continued leadership, and funding to support communities in these efforts.

What about the next 2 to 10 years? The efforts mentioned above will not immediately address the issues of biodiversity while land conversion and development continue at the current pace. Here are some steps that need to be taken now:

- State natural resource agencies need to continue and substantially increase their outreach conservation programs to private

landowners. With over 90 percent of Kentucky in private ownership, any realistic biodiversity programs must include implementing conservation practices on private lands. This means actively contacting landowners about existing, voluntary programs and informing them of the need for considering these stewardship programs on their lands.

- Initiate a coordinated, state-wide inventory of biodiversity that addresses all levels of diversity. There are ongoing inventory efforts but they are not sufficiently comprehensive and they are woefully under funded. In 1995 the Biodiversity Task Force recognized this need as a top priority. It was true 8 years ago and it remains true today. The issue is one of increased and continuing funding, and the scientific and conservation communities need to repeatedly take the issue to the Governor and General Assembly. The 2000 General Assembly authorized a state natural history museum that would coordinate and house the inventory. Those who are interested in a comprehensive inventory effort must become the lobbyists for the biodiversity of Kentucky, an issue that has no political advocate in the halls of government.
- The Smart Growth Task Force recommended that there be "substantial, sustained, and dedicated state funding and tax incentives" to protect and conserve natural resources. Kentucky has the programs in place through the Kentucky Heritage Land Conservation Fund and Purchase of Agriculture Conservation Easements (PACE) to achieve such a conservation effort. The key words to success are "substantial," "sustained" and "dedicated."
- We must be more vigilant about the invasion of exotic pests and diseases. The West Nile virus is a new disease that affects both wildlife and humans. It has spread across the country in less than five years from the time it was first reported. Our forests are threatened by such insect pests as the gypsy moth and hemlock wooly adelgid. Other forest pests that are already a problem in other parts of the nation may be on the way here and we need to be aware of them and be ready to respond.
- Invasive species that are already here need to be identified, located, and monitored. Aggressive campaigns need to be developed to reduce their impacts through educational as well as aggressive eradication programs.

Some biologists assert that the 21st century will be a critical time with the possibility of up to 40% of species going extinct. Regardless of the validity of such a dire prediction, conserving habitats and diversity are never-ending challenges. In Kentucky, we do have the opportunity to sustain the existing diversity of species and ecosystems by working together as agencies, landowners, students, conservationists, and concerned citizens. It is a matter of being willing to work together to recognize that these living resources are renewable and every bit as valuable as the coal, gas, and oil resources that once used, are gone forever.

Sustain Fall/Winter 2004



# IN THE SPOTLIGHT: KENTUCKY'S RARE SPECIES AND COMMUNITIES

## *Lithasia armigera* *Armored Rocksnail*

**KSNPC STATUS:** Special Concern

**USFWS STATUS:** None

**GENERAL DESCRIPTION:** A thick-shelled species with prominent knobs on the shell, about 1.25 inches in height.

**HABITAT:** Medium to large rivers on rocky substrates.

**RANGE:** Ohio River system.

**REASON FOR PROTECTION STATUS:** Although not currently under federal protection, loss of populations due to habitat degradation and loss are of mounting concern to resource managers.



Photo by Ryan Evans, KSNPC

## *Circus cyaneus* *Northern harrier*

**KSNPC STATUS:** Threatened

**USFWS STATUS:** None

**GENERAL DESCRIPTION:** A medium-sized hawk with long wings and tail; white rump; male gray above and white below with black wing tips; female and young brownish.

**HABITAT:** Year-round in open grasslands and agricultural land; nests on the ground. Prior to European settlement, occurred on native prairies; today occurs most frequently in open grassy fields and other habitats that mimic native grasslands.

**RANGE:** Circumboreal; occurring throughout much of North America.

**REASON FOR PROTECTION STATUS:** Species is at the southern limit of its breeding range in Kentucky; native habitat is all but gone, but this raptor nests in limited numbers in extensive artificial grassland areas that mimic the native prairie.



Photo by Brainerd Palmer-Ball, 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.



## *Aesculus pavia* *Red Buckeye*

**KSNPC STATUS:** Threatened

**USFWS STATUS:** None

**GENERAL DESCRIPTION:** A shrub or small tree that is vegetatively similar in appearance to other horse chestnuts and most commonly has red flowers.

**HABITAT:** Stagnant swamp forests, rich damp woods and thickets.

**FLOWERING PERIOD:** Early April to mid May.

**RANGE:** Throughout the southeastern U.S; Kentucky is the northern limit of its range.

**REASON FOR PROTECTION STATUS:** Few known occurrences, though it is a showy plant that is easily identified and therefore likely to be reported.



Photo by Dennis H. Horn

## *Cumberland Plateau Gravel/Cobble Bar*

**KSNPC STATUS:** Endangered

**GENERAL DESCRIPTION:** Gravel/cobble bars are deposits of gravel, sand, cobble and boulders along the banks of streams and rivers and occur throughout Kentucky. The plants that grow on them are usually common and often weedy species. However the Cumberland Plateau Gravel/Cobble Bar is unique because it supports a flora of prairie and Coastal Plain related species, some of which are very rare. Prairie grasses such as big and little bluestem and Indian grass are common as are forbs such as goat's-rue, smooth aster, false dragonhead and yellow stargrass. Some of the rare and unusual plants include Cumberland rosemary, sweetfern and Barbara's-buttons. Scattered shrubs and small trees also can occur, however scouring from periodic floods help to keep the woody plants suppressed.

**RANGE:** In Kentucky this community is restricted to several small rivers in the Cumberland Plateau of southeast Kentucky. It also occurs in the Cumberland Plateau of Tennessee.

**REASON FOR PROTECTION STATUS:** This community is small, rare and restricted in range.



Photo by Heather Housman, KSNPC

### ADDITIONAL RESOURCES:

KSNPC Species and Community Information ~ [www.naturepreserves.ky.gov/inforesources/SpeciesCommunityInfo.htm](http://www.naturepreserves.ky.gov/inforesources/SpeciesCommunityInfo.htm)

NatureServe Explorer ~ [www.natureserve.org/explorer/](http://www.natureserve.org/explorer/)

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

### KEY TO USFWS 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.



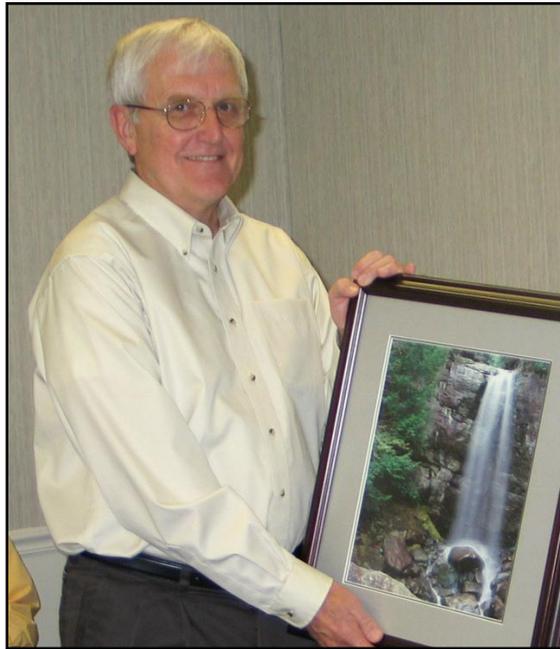
## VOLUNTEER STEWARD FOR 2006 IS HAROLD KELLEY

By Lane Linnenkohl, Western Regional Nature Preserve Manager

Commission Chair Clara Wheatley presented Harold Kelley of Glasgow with the 2006 Kentucky State Nature Preserves Commission (KSNPC) Volunteer Steward award at the December 13 Commission meeting. Since 2000, Harold has been the volunteer preserve monitor at Brigadoon State Nature Preserve. His job duties include roaming the ridges and hollows of Brigadoon, walking the trails and monitoring the historic buildings and reporting conditions he observes. He is an avid photographer and Brigadoon has become the subject of many stunning photographs. One of Harold's photographs forms the background of the preserve's entrance sign.

Harold has embraced Brigadoon State Nature Preserve, watching it and tending it as if it were his own. Harold has reported on trail conditions, illegal horseback riding and ATV activity, and illegal hunting and deer feeders. He keeps the stewardship staff updated on

public use, and the condition of the historic Renfro buildings and surrounding yard. As if this weren't enough, Harold continues to keep watch for that perfect flower, tree, spider web, water flow or combination of colors and textures with which to make his next award-winning photograph. Harold's feelings for Brigadoon run so deep, he decided to make it the setting for his wedding last year.



Harold Kelley ~ Photo by Shauna Dunham

Volunteers are an integral part to the monitoring and management of KSNPC's nature preserves system. With so many nature preserves throughout the state, and so few staff to tend them, KSNPC is forced more and more to rely on and trust our volunteers for assistance. Since Harold's first day he has been there - ready on short notice to respond or assist in any way that is needed. Harold Kelley has earned our trust over and over again, which is why he is the recipient of the 2006 Volunteer Steward Award. Congratulations Harold and keep up the good work!

## LAND PROTECTION REPORT

By Ron Scott, Land Protection Specialist

In describing the breadth of our land protection efforts to others, I have often used the phrase, "from Harlan to Hickman" counties. For those who are unaware, Harlan County lies in extreme southeastern Kentucky along the border with Virginia. The Kentucky State Nature Preserves Commission (KSNPC) has three state nature preserves (SNP) – Hi Lewis Pine Barrens, Blanton Forest, and Kingdom Come State Park – and two state natural areas, Martin's Fork Wild River and Stone Mountain located in Harlan County. Around 300 miles as the crow flies west, located along the Mississippi River and the border with Missouri, lies Hickman County. The Commission owns two preserves in Hickman County, the Obion Creek SNP and Three Ponds SNP. During the course of the past three months, we have been fortunate to reach agreements with private landowners in both Harlan and Hickman County that will result in important additions to the state nature preserve system. Owners of relatively small but critically located tracts on both the south and north face of Pine Mountain, within the preserve design for Blanton Forest, have recently agreed to sell their property to the Commission. These parcels should be acquired sometime shortly after the first of the year. In addition, we are adding two small parcels of land to our Obion Creek SNP near Murphy's Pond. Lastly, we have reached an agreement with the owner of a 315-acre parcel adjoining our existing 216-acre Three Ponds SNP on the banks of the Mississippi River, and the survey of this property should be complete by the time you are reading this newsletter. This

parcel will require rather extensive ecological restoration, and we have recently submitted a proposal for a federal North American Wetlands Conservation Act grant to assist us with this endeavor.

Along with acquiring land or conservation easements protecting land, the Commission also administers a program entitled the Kentucky Natural Areas Registry. Authorized under KRS 146.460, the Kentucky Natural Areas Registry program was created in 1984 by the KSNPC, with assistance from the Kentucky Chapter of The Nature Conservancy. The Kentucky Natural Areas Registry is a non-binding, non-regulatory program that provides recognition for owners of eligible land through the presentation of plaques and other means. Participating landowners agree to steward their property in a manner that will protect the natural resource(s) that make it ecologically significant. As of December 18, 2006, a total of 49 landowners with interests in 60 different sites are enrolled in the Natural Areas Registry Program. These registry agreements encompass approximately 4,858.5 acres in 40 counties. Three new sites have been enrolled in the program this past year, including a 30 acre site in Franklin County containing globally rare and federally endangered Braun's rockcress (*Arabis perstellata*); a 100-acre site in Livingston County containing federally threatened Price's potato-bean (*Apios priceana*); and several sites encompassing 75 acres in the Pennyryle State Forest supporting rare plant and animal habitat, along with several unique natural community types.



## EASTERN REGION HAS A NEW MANAGER

By Zeb Weese, Eastern Regional Nature Preserve Manager

Allow me to introduce myself. My name is Zeb Weese and I'm Kentucky State Nature Preserves Commission's (KSNPC) new eastern regional nature preserve manager. As park naturalist of Natural Bridge State Resort Park for the last five years, I worked with the previous preserve manager, Dave Skinner, on many projects, so I'm very familiar with KSNPC. While I hated to see Dave leave, I look forward to working on all of the natural areas in Central and Eastern Kentucky that he spent the last decade managing. Prior to my work at Natural Bridge, I spent five years with the Kentucky Department of Fish and Wildlife Resources in addition to several years in interim ecological research jobs with the University of Kentucky. I'm also a graduate of UK with bachelor's degrees in zoology and American history and master's degrees in environmental history and forestry.



Zeb Weese at Natural Bridge SPNP ~ Noelle Therese

I'm particularly interested in the invasive species management and ecosystem restoration projects that are conducted on the preserves. In my short tenure I've been getting ready for prescribed burns planned for this spring, and on my site visits I've seen lots of exotic plants that are begging to be attacked. There are currently more than 20 preserves in my region, which stretches from Jefferson County in the west to Greenup

County in the east and all the way south to Pulaski County. Ecosystems in this region range from remnant tallgrass prairies to mature mixed mesophytic forest. One of my "new" preserves is on my old Natural Bridge stomping grounds. I look forward to seeing some of you on the volunteer days and guided hikes I'll soon be leading!

## DIRECTOR'S NOTES

By Don Dott, Executive Director

I would like to say, "Support your local land trust!", but unfortunately they are sometimes hard to find in Kentucky and are completely lacking in some parts of the state. I know of none operating west of Interstate 65 and the Louisville area (but hopefully someone can prove me wrong). The northeastern U.S. seems to sprout a land trust next to every open acre. It's not that Kentucky's citizens don't have an interest in conservation. It's in large measure a consequence of a greater loss of natural areas in the northeast, coupled with higher land values, which make donations to land trusts more financially attractive.

The Commission has hosted a couple of networking meetings for Kentucky's land trusts. Participation has shown about 11 local land trusts and one that has a statewide interest. This tally excludes the Kentucky Chapter of The Nature Conservancy (TNC). TNC has long been a conservation leader here, but as part of a huge worldwide organization, it's really in a whole different category than a local land trust.

More local land trusts are needed to fill in the gaps, to protect lands and sites that aren't on the radar screen of TNC or conservation agencies like the Commission. We receive a varied number of calls throughout the year from landowners who would like to see their

land conserved. Sometimes they may be willing to donate the land but can find no one to take it. By constraint of our mission purpose and our limited size, we cannot take every piece of land offered to us. People are often surprised at this, until we explain every piece of land requires at a *minimum* an investment of staff time for surveillance to guard against trespass and abuse. We simply lack the staff to take on sites of limited ecological value that do not meet our mission. If we did, we would be unable to meet the management needs for our existing nature preserves.

With a more restricted focus, a local land trust can fill a need that is currently not being met. Often there is strong local support for a particular site that the larger conservation entities can't address. Such local sites may have complimentary historical or social values for the local community. While this secondary value may have a consequence of reducing the biological significance needed to attract the larger conservation organizations, it can also be the catalyst to create a local land trust. Any lands that retain a good measure of their natural qualities can serve to enhance the overall conservation effort and help provide environmental services, such as watershed benefits. Saving a wooded area can provide habitat for common species, trees for cooling shade and a place where neighborhood children can kindle an interest in nature.

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How does a land trust work, and how do you go about creating one? Quite simply a land trust protects land from further development. The land can be completely natural, or even partly developed as with agricultural land. It can have historical importance, like a civil war battlefield or archeological site that retains significant natural qualities. The trust can own the land, acquiring it by purchase or gift. Alternatively, the trust can hold a conservation easement. This is a binding, perpetual restriction on the land, agreed to by the landowner that prevents development, but may allow limited uses (e.g., continued farming, silviculture, etc.). With a conservation easement, the landowner retains ownership of their land and is there to steward it. They must also abide by the restrictions agreed to in the conservation easement. The land trust holds the easement and ensures its terms are met. The trust must monitor the land at least on a yearly basis. One of the benefits of a conservation easement, whether donated or purchased, is that it costs the land trust less than buying property outright. A second advantage of a conservation easement is that it may be attractive to a landowner who does not want to part with their land, but does want to see it conserved.

A conservation easement can only be held by a government agency, or a legally created charitable entity whose purpose includes land conservation, such as a land trust. For a local group, the monitoring

is not as great a burden and may be accomplished by volunteers. If the trust can raise sufficient

funds and recruit volunteers to manage the area in question, it may even be made available for public use. These are questions the land trust can decide for itself.

What does it take to form a land trust? A willing, committed group of volunteers. The financial resources needed will depend on how the land is acquired (donation or purchase), the legal assistance needed to create a nonprofit corporation (possibly donated) and staff (paid or volunteers). As a nonprofit, the trust must conduct the basic meeting requirements and monitor/manage the conservation land. It's not as difficult as it may sound, and there are literally hundreds of land trusts throughout this country. There are many resources for help and guidance. Existing land trusts are one such resource, as they are always excited to see more join the ranks. For example, the Kentucky Natural Lands Trust, in Berea, seeks to foster other land trusts. The Land Trust Alliance, a national organization, has excellent staff and guidance materials to encourage the formation of new land trusts as a primary part of their mission. Another national group, the Trust for Public Land, is also an excellent source of information and assistance and is geared more toward assisting communities. All three of these organizations can be found online at: [www.knlt.org](http://www.knlt.org), [www.lta.org](http://www.lta.org). and [www.tpl.org](http://www.tpl.org).

If you also see the void in conservation and think this is a service you or others you know might be able to fill in your local community, don't wait! We NEED MORE LAND TRUSTS in this state!

**KENTUCKY STATE NATURE PRESERVES COMMISSION**

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Kentucky State Nature Preserves Commission  
Quarterly Public Meeting  
March 14, 2007  
KSNPC Frankfort Office  
801 Schenkel Lane, Frankfort, KY 40601-1403  
10:00 AM EDT

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- Visit us online @ [www.naturepreserves.ky.gov](http://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.

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