


# Naturally Kentucky


Winter 2009


Number 61



**KSNPC Latest News:** Retirements! KSNPC sends off two of its own. Ecologist Marc Evans and Terrestrial Biologist Brainard Palmer-Ball Jr. are embarking on new paths in their lives. Both men have been invaluable resources over the course of their extensive careers, each having made benchmark contributions in their fields. While we wish them well, their absence will be unmistakable. Read more on Page 8.

 KSNPC staff assisted the Kentucky Department of Parks and members of the American Cave Conservation Association in building bat-friendly cave gates for Natural Bridge Cave to protect the federally endangered Virginia big-eared bat. Read more on Page 5.

 Heavy hearts note the passing of Jon Rickert, a visionary legislator who wrote the Nature Preserves Act, which created the Kentucky State Nature Preserves Commission. Read more on this notable legislator on Page 12.

 Change is inevitable and that extends to the newsletter as well. Beginning in 2009, Naturally Kentucky will be distributed biannually rather than quarterly. Look for our next issue to come out in mid-June.

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Native Prairie ~ Thomas G. Barnes

# Protecting Biological Diversity

## The 2007/2008 Biennial Report

By Don Dott, Director

The commission issues a report every two years on its activities. Following are some of the highlights of that report, which is available at [www.naturepreserves.ky.gov](http://www.naturepreserves.ky.gov).

**Climate Change:** This is perhaps the most significant environmental issue to gain national attention and public acceptance in the past two years. The director of the U.S. Fish and Wildlife Service, H. Dale Hall posted on the USFWS web site the following message:

The Intergovernmental Panel on Climate Change has concluded that "... Warming of the climate system is unequivocal." I have seen no substantial argument to dispute that conclusion. The professionals of the Fish and Wildlife Service have faced adversity in our history, from the severe droughts of the 1930s to the environmental effects of chemical pesticides highlighted in Rachel Carson's Silent Spring. The warming of the earth, however, could potentially have more far-reaching impacts on wildlife and wildlife habitat than any challenge that has come before us."

Climate change is unquestionably going to be a tremendous challenge. It is uncertain only in how soon and how severe it will be. Localized effects will be very difficult to predict, but one thing is clear – we will have to work on a landscape level scale. We need to protect larger areas and establish green corridors that connect areas of high biodiversity to facilitate the movement of animals and plants as they are thrust into an unprecedented period of rapid change.

**Countering a New Invasive Species:** The hemlock wooly adelgid (*Adelges tsugae*), first found in Harlan County in March 2006, has infested all nine of the commission's state nature preserves on Pine

Mountain, including Blanton Forest, the state's largest old growth forest. It has been found in other areas in southeastern Kentucky and in the Red River Gorge. This insect slowly kills hemlock trees (*Tsuga canadensis*) which make up a significant portion of the forest. Kill rates in other Appalachian states have been about 80 percent. The commission and other state and federal agencies joined forces with individuals and nonprofit organizations to pool resources and prioritize areas to treat hemlocks on public and private lands, creating the group Save Kentucky's Hemlocks.

**Invertebrate Zoology:** Over 95 percent of Kentucky's animals are invertebrates and research reveals that over 15,000 insect species may exist in the state.

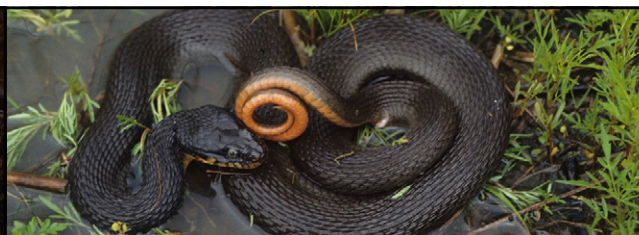
- A species account was updated for the American burying beetle (*Nicrophorus americanus*), federally listed endangered, which is now considered extirpated (no longer found) in Kentucky.
- The first Kentucky populations of the cobblestone tiger beetle (*Cicindela marginipennis*), a globally imperiled (G2) species, and the Appalachian tiger beetle (*Cicindela ancocisconensis*), a globally vulnerable (G3) species were discovered and will be added to the list of rare biota of Kentucky. Subsequent searches in museums revealed misidentified specimens of the Appalachian tiger beetle that had been overlooked for more than 100 years.

**Botany:**

- A grant from the National Park Service enabled us to update rare plant records (many were more than 20 years old) for Cumberland Gap National Historic Park. Several mountain species are more common than previously thought and we were able to downgrade their rarity listing.
- Another discovery was the detection of a notable decline in a



Earth star ~ John MacGregor



Copperbell water snake ~ John MacGregor



Red-headed woodpecker ~ Lana Hays



small evergreen plant, Canby's mountain lover (*Paxistima canbyi*), a globally imperiled (G2) species, and state listed threatened, that has been affected by a disease found on cultivated plants (euonymus or wintercreeper (*Euonymus fortunei*)).

- Conducted sampling on over 20 miles of shoreline habitat in the Ohio and Licking Rivers for a freshwater snail species (*Somatogyrus trothis*) which will be undergoing scientific revision.

Terrestrial Zoology:

Notable observations include:

- The Interior least tern (*Sternula antillarum athalassos*) did not have a successful breeding season in 2008 due to high water, the survey noting only about 10 young out of 300-400 birds.
- Observed a nesting of Northern Shoveler ducks (*Anas clypeata*) in southern Christian County, the first seen since 1997.
- Conducted Gray bat (*Myotis grisescens*) (federally listed threatened) emergence counts with U.S. Fish and Wildlife Service at Goodrum and Mutters Caves state nature preserves. Approximately 33,000 bats were observed at each cave using thermal imaging.

Ecology:

- Mapped and delineated the natural communities at Clarks River National Wildlife Refuge, covering over 8,500 acres in Marshall, McCracken and Graves counties.
- Began a three-year project under a KDFWR State Wildlife Grant to inventory rare grasslands of central and western Kentucky that provide habitat for declining grassland birds including the Northern Bobwhite Quail (*Colinus virginianus*).
- Conducted a survey and provided community level data on rare bogs and seeps of southeastern and western Kentucky. This information will help classify and determine the global rarity of these communities.

Aquatic Zoology:

- Presented a poster at the Freshwater Mollusk Conservation Society on freshwater snails, a group that has not been fully studied in Kentucky.
- Assisted Kentucky Department of Fish and Wildlife Resources with arrow darter (*Etheostoma sagitta sp.*) surveys in Lee County and blackside dace (*Phoxinus cumberlandensis*) surveys in Knox County.
- Assisted colleagues with mussel surveys in the Big South Fork Cumberland River and Green River within Mammoth Cave National Park
- Surveys of Kinniconick Creek, Lewis County, showing mussel fauna declines.
- Completed surveys for the Blood River crayfish (*Orconectes burri*), an endemic to the Blood River watershed in Calloway County.

Education and Outreach: Kentucky Educational Television (KET) has been a tremendous partner helping to accomplish the commission's education mission by providing a broad public venue for our work. The Kentucky Life programming featured episodes on Three Ponds State Nature Preserve in Hickman County, the dragonflies and butterflies of Kentucky, spring wildflowers of Black Mountain and Murphy's Pond SNP, located in Hickman County.

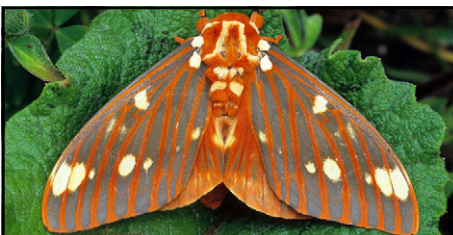
Small Grants: Funds from the Sherri Evans Memorial Fund were used for dendrochronological research on drought history at Blanton Forest and Three Ponds SNPs, compilation of a statewide atlas of the flora of Kentucky, and genetic research at Bradley University to study the effects of isolation and small population size on yellow gentian (*Gentiana flavida*) survival.

Species Observations: The Natural Heritage Program is utilized to create the most complete and accurate database of information on rare species, natural communities, conservation sites and managed areas in Kentucky. It is the result of 32 years of field research by commission biologists, and the compilation of herbarium and natural history museum records and field records from other biologists. The natural heritage database currently contains an impressive 11,968 species and ecological community records, 531 site records and 556 managed area records.

Some of the changes experienced by Kentucky's rare species can be revealed by reviewing the natural heritage data for a six-year period from November 2002 to November 2008. One tool used for monitoring species status is the SRANK (state rank) – a rating of species rareness on a state level (i.e. Kentucky populations only). S1 is rarest, to S5 more common. SH – "historic" indicates the species has not been found in 20 years, SX – "extirpated" means the species is no longer found in the wild in Kentucky.

SRANK Changes 2002-2008

- 43 species declined by becoming rarer, e.g. rank change from S2 to S1. Of these 43 species, 17 are now ranked historic and five extirpated.
- 24 improved in rank, becoming less rare, e.g. rank change from S1 to S2, including 15 species previously ranked historic that were rediscovered.



Regal moth ~ Ellis Lauder milk



Big brown bat ~ John MacGregor



Speckled darter ~ KSNPC Staff





**Nature Preserves and Stewardship:** The commission manages 59 preserves and easements containing 24,498 acres. The commission holds conservation easements on 116 acres of private property with significant populations of rare species. One of our major acquisitions was an addition of 81 acres to Short's Goldenrod State Nature Preserve in Fleming County. The remaining 490 acres of this 571-acre purchase serves as an addition to the nearby Blue Licks Battlefield State Resort Park. A new preserve was established in Harlan County in partnership with the Department of Parks, protecting over 600 acres on the south face of Pine Mountain adjacent to the Little Shepherd Trail. This preserve protects several rare species and its rugged beauty will enhance the experience for hikers along the Pine Mountain Trail. An addition of over 300 acres to Three Ponds State Nature Preserve in Hickman County adds critical upstream protection to a wetland complex on the banks of the Mississippi River.

Major stewardship activities since the January 2007 biennial report include:

- Acreage managed by prescribed fire has increased each year. Barrens communities at Crooked Creek, Jim Scudder, Raymond Athey Barrens and Eastview Barrens (SNPs) are becoming more open as woody stem densities decrease. Long-term goals are coming to fruition on these preserves with restoration of periodic burns.
- Kudzu (*Pueraria montana var. lobata*) control at Vernon-Douglas and Blanton Forest State Nature Preserves (SNP's) and Pine Mountain State Park Nature Preserve (SPNP) have virtually eliminated this pest from the preserves. Asian bitter-sweet control at James Bickford SNP and Pine Mountain SPNP has been very successful.
- A joint project with the Kentucky Department of Parks and the American Cave Conservation Association resulted in construction of gates to protect a federally endangered bat roosting cave at Natural Bridge State Park Nature Preserve.

- Tree ring research at Floracliff SNP resulted in identifying a tree that dates to 1611, making it one of the oldest known in the state.

**Registered Natural Areas:** The Natural Areas Registry is a non-regulatory program that recognizes landowners who agree to exercise good stewardship of ecologically significant property. With 93 percent of the state in private ownership it is critical to partner with these landowners. Two privately owned caves were added in 2008; Tatum Cave in Marion County and Harberson's Station Cave in the city of Perryville which each support Kentucky endemic cave beetles.

The Kentucky State Nature Preserves Commission has created an impressive system of nature preserves, safeguarding some of the most unique habitats in Kentucky. The best resource for information on the rare species and natural areas of the state is the commission's Natural Heritage database. But much work remains to be done. Currently 24,498 acres have been forever protected as preserves, but considering that Kentucky has over 25 million acres, we need a greatly expanded preserve system to protect at least one viable example of each of Kentucky's many unique natural communities. There are other natural areas under public ownership, but the commission's nature preserve system is truly



Swamp rose ~ Barry Howard

the best-protected repository for Kentucky's biological diversity, as that is its primary function. We also need to increase our rate of rare species and natural area surveys, especially with Kentucky's high rate of land conversion and the pending challenge of climate change. It is the task of the Kentucky State Nature Preserves Commission to protect our natural heritage – in partnership with other state, federal and private organizations, and individuals. ☒



# GATING PROJECT PROTECTS ENDANGERED BATS AT NATURAL BRIDGE

By Zeb Weese, Eastern Region Preserves Manager

The Kentucky State Nature Preserves Commission and the Kentucky Department of Parks have completed the gating of Natural Bridge Cave at Natural Bridge State Park Nature Preserve, home to the federally endangered Virginia big-eared bat (*Corynorhinus townsendii virginianus*). This small cave has been a popular tourist attraction at the park for well over 100 years, but unfortunately the increased traffic resulted in a severe degradation of the cave's resources. Kentucky's first record of Virginia big-eared bats were reported from this small cave in 1952 and long-time residents reported large numbers of "mule eared" bats in the cave many years ago (Barbour 1974; MacGregor 1996). However, by the 1990s only an occasional solitary male was found in Natural Bridge Cave during the summer months. The almost continuous human presence and associated noise in the summer and fall greatly reduced the suitability of this cave for sleeping bats. Since Virginia big-eared bats have a worldwide population of less than 20,000 individuals, are very selective in hibernacula and roost sites selection, and are extremely sensitive to disturbance, the protection of any cave known to have suitable habitat is critical (NatureServe 2008).

It has long been known that properly designed gates can greatly increase bat populations when the main limiting factor is human disturbance (Houghton 1995). A \$10,000 grant from the Governor's Office for Local Development, along with help from the Slade Chapter of the Kentucky Society of Natural History, was secured in 2007. In May 2008, Roy Powers and Jerry Fant from the American Cave Conservation Association (ACCA) came to Natural Bridge to design and build bat-friendly gates at the cave's two entrances, with assistance

from KSNPC, Natural Bridge park staff, and volunteers. Similar ACCA gates have been very successful at increasing bat populations at Carter Caves State Park and Mammoth Cave National Park. These gates are designed to prevent unauthorized human access without altering air flow or impeding movement of the bats. It is hoped that this gating will protect and expand the population of Virginia big-eared bats and potentially other rare species such as Indiana bats (*Myotis sodalis*) and Eastern small-footed bats (*Myotis leibii*), while also providing a safer and more educational experience for people. A lockable entry was constructed in the larger opening to allow access for guided tours and researchers to ensure that Natural Bridge Cave will provide memorable experiences to park visitors for years to come along with improving habitat for cave dwelling species. ☞

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Setting a cave gate bar at Natural Bridge Cave ~ Brian Gasdor





# Hemlock Woolly Adelgid Treatments Completed For 2008


By Joyce Bender, Nature Preserves and Natural Areas Branch Manager

The commission began treating hemlock trees in 2008 in an effort to combat the spreading threat from the hemlock woolly adelgid in southeastern Kentucky. The adelgid attaches to the base of needles on the hemlock tree and feeds on the plant's sap, which over time weakens and eventually kills the tree. Southeastern Regional Preserve Manager Kyle Napier has developed a plan to protect key areas of hemlock trees on our state nature preserves. The treatment plan prioritizes critical habitat for species dependent upon cool temperatures and shady, moist conditions provided by the hemlocks, such as the federally threatened blackside dace (*Phoxinus cumberlandensis*) and a number of rare plants including Fraser's sedge (*Cymophyllus fraserianus*). Other criteria include protecting trees for future nursery stock to re-seed drainages where the hemlocks thrive, and treating trees along trails to protect visitors, bridges, steps, etc. from falling trees or limbs.

A total of 4,058 infested trees were treated through soil injection with the pesticide imidacloprid. The pesticide is taken into the tree through its root system and the adelgid is killed when it consumes the chemical-laden sap. At Bad Branch State Nature Preserve, 2,389 hemlocks were treated with the pesticide in the spring and fall. At Blanton Forest State Nature Preserve, a total of 1,669 trees were treated in the spring. The

total cost for both treatments was \$19,000. Staff and volunteers worked very hard in order to give the hemlocks a fighting chance against the adelgid. The pesticide is mixed right in the injector so water had to be carried up the steep slopes to the treatment zone numerous times each day. The treatments may last from three to five years depending on the condition of the tree when it was first treated. It is our hope that in the intervening years more research into biological control methods and other means of protection will become available to help us maintain hemlock populations in Kentucky.

Until that time, work will continue in an attempt to contain the infestations on the state nature preserves. Considering the devastation that has come to the Smoky Mountains and other locations throughout the eastern seaboard where the hemlock woolly adelgid has been long-established, we will do all that we can to sustain this important mainstay of Kentucky's natural heritage.

If you would like to assist with this work or contribute towards the cost, please contact the commission or visit the web site that has been developed by a dedicated group called Save Kentucky's Hemlocks: [www.kyhemlocks.org](http://www.kyhemlocks.org). 



Kyle Napier injecting a hemlock with pesticide. ~ KSNPC staff





# DR. THOMAS BARR JR. RECEIVES BIOLOGICAL DIVERSITY PROTECTION AWARD

By Ellis Lauder milk, Invertebrate Biologist

The distinguished career of Dr. Thomas C. Barr Jr. was recognized by the Kentucky State Nature Preserves Commission during its year-end commission meeting on Dec. 10. Dr. Barr was the recipient of the 2008 Biological Diversity Protection Award, which recognizes a person, persons or organization that has made a significant contribution to the discovery and protection of Kentucky's biological diversity.

Dr. Barr was born in Nashville, where his lifelong commitment to the study and protection of caves began. Dr. Barr holds an A.B. degree from Harvard University, an M.A. from Columbia University and a Ph.D. from Vanderbilt University. He has taught at Texas Tech and Tennessee Tech universities. In 1961 he joined the University of Kentucky faculty as an assistant professor of zoology, remaining there for 32 years until his retirement in 1993. During his career at UK, he served as the chair of the Zoology Department and president of the National Speleological Society, an organization dedicated to the study, conservation, exploration and knowledge of caves.

Dr. Barr's research focuses on the ecology and evolution of cave communities and ecology and systematics of carabid beetles, most notably of mountaintops and caves. He has long been recognized as an international authority on cave ecosystems and has published more than 100 papers in refereed journals. Following are highlights of some of his most important or Kentucky-related publications.

In 1959 he published a paper on new cave beetles from Kentucky and Tennessee. *Caves of Tennessee*, a widely used and often cited book, was published in 1961. In 1962, he published the blind beetles of Mammoth Cave, Kentucky, and in 1963 he published an ecological classification system for cave organisms that is still used today. "Cave Ecology and the Evolution of Troglodytes" was published in 1968, and in the late 1960s and early 1970s, after extensive work in Mammoth Cave, he published a two-part series titled, "Ecological Studies in the Mammoth Cave System of Kentucky."

In the late 1970s and early 80's, Dr. Barr co-authored two of KSNPC's technical reports on the cave fauna of the eastern and western Kentucky coal fields. He is a leading authority on cave beetles, describing many species that were new to science, and in 1985 he published one of his major works on beetles titled, "Pattern and Process in Speciation of Trechine Beetles in Eastern North America." During the 1990s he conducted status surveys for rare cave beetles in Kentucky and Tennessee, funded by the U.S. Fish and Wildlife Service and his data and recommendations were essential in determining which cave invertebrates were included on KSNPC's list of rare biota.



Rogers' cave beetle was described by Dr. Barr as a new species to science in 1981. ~ Ellis Lauder milk, KSNPC

Dr. Barr continues to be actively involved in the protection of caves by publishing papers, sitting on boards, working with state and federal agencies, local and national cave organizations, and local citizens, such as the recent efforts to protect the Sloan's Valley cave system in Pulaski County. For more than 50 years, Dr. Barr has been involved in cave ecology research and the protection of these fragile ecosystems, so it is with great pleasure that KSNPC recognizes and thanks him for his major contributions to our knowledge of Kentucky's biodiversity. 🐞





# Retirements

By Deborah White, Lead Botanist

Even in lean times there are some things you just can't do without. With recent retirements, the Kentucky State Nature Preserves Commission is finding out how to operate without two of its most important scientists, Marc Evans and Brainard Palmer-Ball Jr. Their expertise in ecology and terrestrial zoology, respectively, has helped the commission to buy critically important lands and identify many species that need conservation attention. The depth of their experience made them the "go to" biologists, not only at the commission, but for many others as well.

Marc has served as a botanist, ecologist and even an acting director. However, his true calling is natural areas inventory and community classification. Upon his arrival at the commission, Marc started the natural areas inventory project, a technique he learned in Illinois before coming to Kentucky. This county-by-county survey for high quality natural areas resulted in the identification of many sites important to the state's natural heritage, including the high profile, old growth forest known as Blanton Forest. In 1991, he established the natural community classification system currently used by the commission and continued to refine it throughout his career. What is remarkable about Marc is the way in which he throws himself into any area he is working in - no swamp is too deep and no mountain too high. He roamed the most remote parts of Kentucky by himself, which in these wild places separates even the toughest biologists. He has stories about bear encounters, falling off cliffs and other tales that would be hard to explain to workman's compensation. In recent years he has used these stories to inspire other people to participate in the protection of beautiful natural places and he has certainly inspired many of us at the commission. Marc serves on the boards of the Kentucky Natural Lands Trust,



Metropolis Lake State Nature Preserve, McCracken County ~ © Chuck Summers



Blanton Forest State Nature Preserve, Harlan County ~ © Chuck Summers







Wood thrush ~ Steve Maslowski, courtesy of USFWS Digital Library System

Bernheim Arboretum and Research Forest, and Pine Mountain Settlement School, working to connect and expand natural lands.

Brainard's story is thoroughly Kentucky. He grew up on a farm outside of Louisville where he first discovered his keen ear for bird sounds. Thus began his endless fascination with animals of all kinds and the makings of an all-around naturalist. Brainard earned a master's degree from the University of Louisville, and then began his career with the commission in 1985. Brainard has served as KSNPC's terrestrial vertebrate zoologist since 1988, covering primarily amphibians, reptiles, birds and mammals. He has added countless records for rare bats, snakes, salamanders, mice, weasels and even a few plants to the commission's database. He amassed this knowledge without trapping, something he realized early in his career that he couldn't stomach.

Brainard also served as the commission's environmental review coordinator and recycling program leader. However, Brainard is mostly for the birds; he is one of Kentucky's best ornithologists and wrote *The Kentucky Breeding Bird Atlas*. He is active in the Kentucky Ornithological Society and a long-time member of Louisville's Beckham Bird Club. For an intriguing look back at some of Brainard's favorite places and his "best" and "worst" days as a commission biologist, please see issue #52 of our newsletter.

KSNPC gratefully thanks Marc and Brainard for dedicating their professional careers and much of their personal time to the identification and preservation of Kentucky's rare species and



Three-lined salamander ~ John MacGregor

natural areas. Some say working for the commission isn't just a job; it's a way of life. So, it's not surprising that both men plan to remain active in conservation issues and hopefully the commission can continue to take advantage of their expertise. However, their daily contributions will be sorely missed. We wish them the very best and look forward to their continued commitment to the conservation of Kentucky's plants, animals and natural communities. 🌿





# In the Spotlight: Kentucky's Rare Species & Communities

## *Leptoxis praerosa* *Onyx Rocksnail*

**KSNPC STATUS:** Special Concern

**USFWS STATUS:** None

**GENERAL DESCRIPTION:** A globe-shaped snail measuring 0.25 - 0.5 inches in diameter.

**HABITAT:** Medium to large rivers in areas of flow.

**RANGE:** Portions of the Ohio, Green, Licking, and Rockcastle rivers.

**REASON FOR PROTECTION STATUS:** Sedimentation and water quality degradation.



Photo by Ryan Evans, KSNPC

## *Cicindela patruela patruela* *Northern Barrens Tiger Beetle*

**KSNPC STATUS:** Watch List; currently being evaluated for possible addition to KSNPC's rare biota list.

**USFWS STATUS:** None

**GENERAL DESCRIPTION:** An approximately ½ inch long tiger beetle with a metallic green head, thorax and abdomen, the latter also with prominent white or cream-colored maculations. Three distinct areas of maculation are present on the wing covers (elytra) of the abdomen. The middle line is complete and reaches the outer edge of the elytra.

**HABITAT:** Lives in association with dry, sandy soils of mixed oak and pine forests, often in clearings with eroded sandstone and frequently near mosses, lichens and other ground vegetation.

**FLIGHT SEASON:** In Kentucky, adults are most active during spring, but individuals have been found all summer and into fall.

**RANGE:** Occurs across the northeastern and northern Great Lakes area of the United States and as far south as northern Georgia.

**REASON FOR PROTECTION STATUS:** This species is considered globally vulnerable (G3) with discontinuous and localized populations across its range. In Kentucky, very few populations are known in limited habitat patches.



Photo by Ellis Laundermilk, 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.





## *Castanea pumila* *Allegheny Chinkapin*

**KSNPC STATUS:** Endangered

**USFWS STATUS:** Threatened

**GENERAL DESCRIPTION:** A shrub related and similar to the American chestnut with elongated leaves, wavy margins and spiny hulls around the nut.

**HABITAT:** : High, dry, rocky forests.

**FLOWERING PERIOD:** June- July.

**RANGE:** Generally south of New Jersey and Pennsylvania (also reported from New York and Massachusetts) to mainly parts of eastern Kentucky, Arkansas, Oklahoma, south to Florida and Texas.

**REASON FOR PROTECTION STATUS:** Narrow range and few known populations.



Photo by James Kiser

## *Shrub Swamp*

**KSNPC STATUS:** Threatened

**GENERAL DESCRIPTION:** Shrub swamps are a type of wetland that usually occur in floodplains of rivers and large streams but also occur in isolated upland wetlands. Shrub swamps are tolerant of flooding and develop in areas where water pools for long periods of time like inundated depressions, oxbow ponds and backwater sloughs. Soils are usually deep, mucky and very poorly drained. Shrubs dominate in scattered clumps or dense thickets, with little to no tree canopy. Common or characteristic shrubs of this community include buttonbush, Virginia-willow, silky dogwood and swamp rose. Herbaceous vegetation can be sparse to dense and may include species such as marsh fleabane, smartweeds and duckweed, a floating aquatic.

**RANGE:** Shrub swamps occur throughout Kentucky along rivers and large streams but can occasionally occur in isolated uplands (often a perched water table).

**REASON FOR PROTECTION STATUS:** Kentucky has lost over 80 percent of its original wetlands. Shrub swamps are unique communities that once occurred infrequently throughout Kentucky's pre-settlement landscape. Today's remaining shrub swamps are rare and threatened with hydrological alteration, disturbance from logging and invasive exotics.



Photo by Brian Yahn, KSNPC

### **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.

### **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>





# In Memory of Jon E. Rickert

By Don Dott, Director

It was with deep sadness that we learned of the passing of Jon Edward Rickert, on June 9, 2008, at the age of 73. An Elizabethtown attorney, community leader and local icon, he served in the Kentucky House of Representatives from 1968 to 1972, where he was named by the news media the most outstanding freshman legislator for his first term. But of more importance to the commission is the fact that Jon Rickert sponsored the Kentucky Nature Preserves Act, which created the commission in 1976. I first had the pleasure of meeting Jon in 2001, when he spoke at the commission's 25th anniversary celebration.

Jon's commitment to environmental protection issues preceded the introduction of the commission's enabling act; with his active opposition to the proposed dam which would have impounded the Red River Gorge. Out of that successful effort came the Nature Preserves Act, which he wrote and saw passed in 1976 after he left office. Jon served as the first chairman of the Kentucky State Nature Preserves Commission from 1976 to 1988. He also served on Kentucky's Environmental Quality Commission.

Jon was an avid birder his entire life and traveled to all 50 states and several foreign countries following his avian hobby, which culminated in his authoring *A Guide To North American Bird Clubs*. He helped found the American Birding Association and served as its attorney and was part of an expedition into the swamps of Arkansas in 2004, to search for the ivory-billed woodpecker.

Jon's lifelong commitment to conservation was demonstrated once again by his selection of the Kentucky State Nature Preserves Commission to receive donations given in his memory. We were overwhelmed to receive contributions that came in not only from his home town, but from all across the U.S. and even from Great Britain. In appreciation for this generous effort to yet again further the work of the commission, a trail will be named in his memory at Jim Scudder State Nature Preserve



Gov. Julian Carroll signing bill that established KSNPC. Jon Rickert, the bills sponsor looks on. March 29, 1976 ~ KSNPC files

in Hardin County and the donations will be used to help purchase additional land for the preserve. As the family desires we will potentially open the trail dedication ceremony to the public. It is with sadness, but great respect and appreciation that we observe the passing of the commission's founding legislator, Jon Edward Rickert. ☞

## LAND PROTECTION Report

By Brent Frazier, Land Protection Specialist

The commission currently has seven properties in various stages of acquisition. Two properties at Crooked Creek SNP in Lewis County have been in process for a long period. Both tracts have minor title issues that we are working with the landowners to correct. A new tract at Terrapin Creek SNP in Graves County is scheduled to be surveyed next month. The appraisal on the Gomer Tract located at Raymond Athey Barrens SNP in Logan County is complete, and KSNPC is developing an offer. We are cautiously optimistic the owner will sell to the commission.

We have two applications that were approved during the January meeting of the Heritage Land Conservation Fund (HLCF) board:

The Carmical Tract, which would be an addition to Hi Lewis Pine Barrens SNP in Harlan County and the Blackstone Tract, which would be an addition to Jim Scudder SNP in Hardin County. The Division of Real Properties should be making contact with the landowners to begin negotiations within the next week or two.

I am also working on updating a registry agreement on the Log House Prairie in Logan County and getting together preliminary paperwork for two Transportation Enhancement grant applications. ☞





## Director's Notes

By Don Dott, Executive Director

For most of its existence the commission has published the *Naturally Kentucky* newsletter on a quarterly basis. Several years ago we had to cease printing and mailing paper editions as a mandated cost savings. At its zenith the newsletter distribution was about 6,000 subscribers. Now due to a much more serious fiscal situation, which has reduced staff levels at the commission by three positions in as many years, we find it necessary to cut back on the newsletter again. E-mail distribution will continue, which we will seek to expand, but the frequency of the newsletter will be reduced to twice a year, beginning in 2009. We regret that there will be only one more edition of *Naturally Kentucky* this year, but we must be strategic in the use of our reduced staff and limited resources. Although less frequent, the newsletter will be larger and will continue to be published at the same professional level, with great photos, intriguing species accounts and feature articles. I hope you enjoy this winter edition of the newsletter, and you can expect the summer edition in June 2009.

I am pleased to have been re-appointed to the renewed Land Conservation and Stewardship Task Force. It will be co-chaired by its sponsor, Rep. Robin Webb and by Sen. Brandon Smith. This second incarnation of the task force is charged with investigating the need for increased recreational properties in Kentucky, in addition to the original charge to develop a program for increased acquisition of conservation land. The 2008 task force with great support from Legislative Research Commission (LRC) staff issued a thorough report on the status of land conservation in Kentucky, describing the existing state programs and the funding mechanisms used throughout the country. See, LRC Research Memorandum, No. 502. The reauthorized task force is directed to complete a conservation and recreation plan and recommend revenue generating tools in preparation for the 2010 legislative session. I hope the new task force will be able to hold a first meeting during the 2009 session of the General Assembly.

The economic hard times have impacted the commission in a way unforeseen as little as eight months ago. While we have had to do more with less during the last several years of continued declining budgets, it has now reduced staff levels. First, was the loss of the federally funded Landowner Incentive Program in 2008, which was used to work with private property owners to

employ federal cost share funds for rare species conservation. Of course, being a federally funded program, it was always at risk of losing funding, but my expectations had been that it would have lasted longer than three short years. A lot of good work was accomplished to benefit listed plant species while this program existed.

But worse has been the recent reduction in the commission's CAP - the number of employees which this agency is approved to have. The gist of this is that after two of the commission's longest term employees retired, with 50 years or more of



New England aster ~ Thomas G. Barnes

experience between them, they can not be replaced. The departure of Marc Evans, senior ecologist, and Brainard Palmer-Ball Jr., senior (and sole) terrestrial zoologist is a huge loss of expertise for the commission. To their credit both have volunteered an impressive number of hours since their last work day – sometimes it seems they are still here – a testament to their dedication to their “line of work” – really a calling. The commission will continue without them; Brian Yahn is now our only ecologist, and the terrestrial zoologist position will simply not exist until better days return, or some opportunity manifests itself. These two gentlemen, who both would likely prefer the moniker of ecologist/zoologist, are well deserved of their retirement, and doubtless neither will stay that way for long – too many unanswered conservation calls awaiting them! On behalf of all the staff and our commissioners, I wish them the very best in their coming adventures! 🌿





# Upcoming Hikes and Events

Please note that most events require preregistration. View our complete events calendar at [www.naturepreserves.ky.gov/events/](http://www.naturepreserves.ky.gov/events/).

March 7, 2009. Invasive Species Volunteer Workshops at Natural Bridge SPNP (Powell County).

March 7, 2009. Volunteer Day at Floracliff SNP (Fayette County).

March 7, 2009. Mushrooms for Beginners at Floracliff SNP (Fayette County).

March 21, 2009. Signs of Spring at Floracliff SNP (Fayette County).

March 26, 2009. KSNPC Commission Meeting (Franklin County)

March 28, 2009. Pollinators with Blake Newton at Floracliff SNP (Fayette County).

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April 1, 2009. Mid-week Wildflower Hike at Floracliff SNP (Fayette County).

April 4, 2009. Medicinal Wildflowers with Ciara Lockstadt at Floracliff SNP (Fayette County).

April 17-19, 2009. Wildflower Weekend at Natural Bridge SPNP (Powell County).

April 25, 2009. Family Spring Adventure at Cumberland Falls SPNP (McCreary County).

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May 1-2, 2009. Herpetology Weekend at Natural Bridge SPNP (Powell County).

May 2, 2009. Family Spring Adventure at Cumberland Falls SPNP (McCreary County).

May 9, 2009. Family Spring Adventure at Cumberland Falls SPNP (McCreary County).

May 16, 2009. Cumberland Falls Beautification at Cumberland Falls SPNP (McCreary County).

May 23, 2009. Family Spring Adventure at Cumberland Falls SPNP (McCreary County).

## KENTUCKY STATE NATURE PRESERVES COMMISSION

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### Kentucky State Nature Preserves Commission Quarterly Public Meeting

March 10, 2009

KSNPC Frankfort Office

10 a.m. EDT

Kentucky State Nature Preserves Commission  
801 Schenkel Lane, Frankfort, KY 40601-1403  
502-573-2886

[naturepreserves@ky.gov](mailto:naturepreserves@ky.gov)  
[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.

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