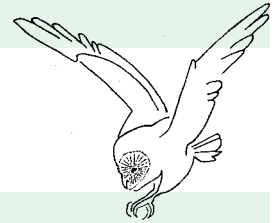


# NATURALLY KENTUCKY

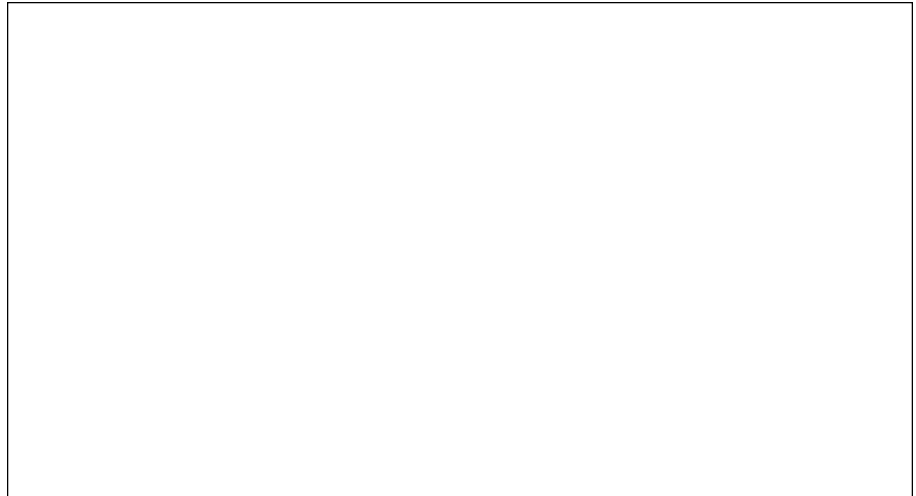


Number 20, October/November/December 1996

## Hi Lewis Pine Barrens, Another Unique Area on Pine Mountain

by Marc Evans

By now, most of you probably know that Pine mountain is a very special place that supports many rare and endangered plants and animals as well as a number of known natural areas such as Blanton Forest State Nature Preserve, Bad Branch State Nature Preserve, Pine Mountain Wildlife Management Area, Pine Mountain State Park Nature Preserve, Kingdom Come State Park Nature Preserve and others. In fact, the entire 100 plus miles of Pine Mountain in Kentucky is considered to be an



Hi Lewis Pine Barrens

KSNPC Photo

important natural area that supports an incredible diversity of plants and animals and acts as an important natural corridor for their movement. In addition, Pine Mountain has some of the larger blocks of contiguous forest unbroken by roads or other openings.

In the spring of 1992, while conducting a natural areas inventory of the Cumberland Mountains, another unique area was discovered on Pine Mountain in Harlan county. Unlike other natural areas on Pine Mountain, this one is very different because it is an open pine woodland (often referred to as a barrens) on the side of the mountain. Called Hi Lewis Pine Barrens after the branch that drains the area, it supports an extremely rare natural community as well as a number of rare plants.

Hi Lewis Pine Barrens occurs on the steep mid- to upper south facing slope of the mountain just outside of the community of Cumberland. The site is a large remnant pine-oak barrens (or woodland) that is dominated by scattered pitch pine and chestnut oak. The aspect of the understory and ground layer ranges from very open areas to densely overgrown areas. The more open areas are dominated by many interesting plants including some usually thought of as typical prairie plants as well as some unusual and rare species. Several massive sandstone rock outcrops and cliffs occur on the site as do some areas of mesic forest and dry forest which are more typical of the mountain. The tract, which rises over 1,000 feet in elevation, runs from near the base of the mountain to the top of the

ÉëÎÉâÆ ÉëæÉíËÀíÉËë

ÅçÆÅÊ Êî ÊÏî`

√ Commissioner's

Re-appointed (pg. 2)

√ Aquatic Wetland Plants of Kentucky- Reprinted (pg. 2)

√ In Memoriam: Dr. Robert Russell Starr (pg. 3)

√ Unwelcome Company (pg. 5)

√ Planning for the Future (pg. 6)

√ Kentucky's New Nature License Plate! (pg. 7)

√ Kentucky Breeding Bird Atlas-Completed (pg. 8)

continued on page 4

## KSNPC Commissioners Re-appointed

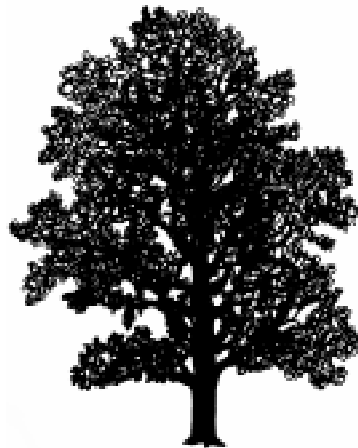
Commission members O. D. Hawkins, representing the Kentucky Farm Bureau Federation, and Mrs. Lucy Breathitt, representing the public at-large, have been re-appointed to the Commission by Governor Paul Patton effective July, 1996. They will serve terms ending June 30, 1999. Mr. Hawkins, with one more year of service on the Commission, will become the longest serving Commissioner in our history, with over 14 years of total service to our natural area protection efforts. Mrs. Breathitt was first appointed in December 1995, filling the unexpired term of Hugh Archer, who resigned to take the position of Executive Director of the Kentucky River Authority. We are very pleased to have these dedicated individuals leading our efforts to protect Kentucky's natural areas and biological diversity.

## *AQUATIC AND WETLAND PLANTS OF KENTUCKY*

BY ERNEST O. BEAL AND  
JOHN W. THIERET

### **REPRINTED**

To order send a request and a check for \$22 plus \$2.68 shipping (KY residents add \$1.32 tax, for a total of \$26.00) to:  
Kentucky State Nature  
Preserves Commission  
801 Schenkel Lane  
Frankfort, KY 40601  
(502)573-2886



## KSNPC Quarterly Commission Meeting

WHEN: Dec. 10, 1996  
WHERE: KSNPC office  
801 Schenkel Lane  
Frankfort, KY  
TIME: 10:00 a.m.

## KSNPC Brochure Available

After many months of writing, rewriting, design and redesign, the new KSNPC brochure is finally available. The brochure accurately describes our interests and activities. However, it has been brought to our attention there are a few mistakes. Oh, how we wish we had caught those photo caption typos that added extra letters to "lily" and "department". If you're interested in obtaining a copy (that's 99% correct) just give the Commission a call.

# In Memoriam: Dr. Robert Russell Starr

by Wayne Mason

Biology Professor at WKU

The Kentucky State Nature Preserves Commission was greatly saddened by the death on January 25, 1996, of Dr. Robert Russell Starr, one of the biggest contributors to the state's nature preserve system and one of Kentucky's most fervent advocates of the conservation of this state's natural resources.

Dr. Starr's fondness for nature was evident at an early age. Born on December 1, 1917, near Glasgow, his childhood days were filled with hiking, exploring and fishing the farmlands, woodlots and streams of Barren County. Although birds quickly became his primary interest, he was equally fascinated by the relationships of other organisms to their environment, and he spent many an afternoon studying the plant and animal associations he would find as he roamed the forests and farmlands near his home.

Natural history remained an important part of his life when he left home to attend Western Kentucky State College (now University) in 1936. Under the tutelage and encouragement of Dr. L.Y. Lancaster and especially Dr. Gordon Wilson, Russell became a skilled amateur ornithologist and ecologist who made considerable contributions to the knowledge of this state's bird and plant distributions.

Following graduation from the University of Louisville Medical School in 1943, and brief stints as an intern in Wisconsin and an army Ward Officer at Rodes General Hospital, Dr. Starr returned to Glasgow in the late 1940's to practice medicine. He soon developed a flourishing medical practice, and he and his wife Faye (a nurse anesthetist) became highly respected leaders in southcentral Kentucky for their roles in improving medical care in this rural section of the state.

Despite a hectic and time-consuming practice, the preservation of Kentucky's dwindling natural resources remained a priority for him. Toward that end, he and Faye purchased a 100(+) acre plot of woodland bordering the Skaggs Creek in Barren County in November of 1960. Aptly named "Brigadon," this farm was to become the focus of his life outside medicine. He spent as much of his free time as possible on the farm, caring for its native plant populations, managing it for wildlife, and maintaining careful records of the animal life observed there. Later, two additional tracts of woodland, contiguous with Brigadon, were purchased and managed in the same way. He was an avid reader and was particularly fond of the writings of Henry David Thoreau, whose journals served as the foundation for many of his conservation ethics and practices. Dr. Starr's conservation efforts did not go unnoticed: in the early 1970's he was awarded

a Tom Wallace Farm Forestry Award, and in 1975 he was named one of Kentucky's Master Conservationists.

Russell frequently lamented the possibility that future generations might grow up never having the opportunity to witness or experience the beauty of Kentucky's natural heritage. In an effort to provide for this shortcoming, he decided in 1983 to donate Brigadon and its adjoining woodlands to the state's nature preserve system. The preserve has been well used since its dedication by a variety of organizations for educational purposes, meetings, field trips, nature study and research. Although failing health over the last few years prevented him from enjoying the preserve, he took great satisfaction in knowing that others were using it for its intended purpose.

Those who knew him well will remember him most for his generosity in sharing his most cherished possessions with others. No where was this characteristic better illustrated than with his donation of Brigadon and its adjacent woodlands to the nature preserve system such that others might enjoy it for years to come. Although he is physically departed from us, we will be forever reminded of his generosity and dedication to conservation with every trip to Brigadon State Nature Preserve.

**Hi Lewis Pine Barrens, Another Unique Area on the Slopes of Pine Mountain**  
continued from page 1

crest. A portion of the Little Shepherd Trail runs through the site giving it relatively easy access.

Although a complete floristic survey has not been completed, a rich assemblage of plants has already been documented. (The barrens has also been observed to be the home of many animals, most noticeably rattlesnakes and copperheads!). In the more open areas one finds an interesting mix of prairie plants and xerophytic (drought tolerant) mountain plants. The grasses, little bluestem and indian grass are common, as are low-bush blueberries which often cover the ground in some areas and are certainly good to eat!

Some of the more common or characteristic plants of this community include goat's-rue (*Tephrosia virginiana*), butterfly-pea (*Clitoria mariana*), golden-aster (*Chrysopsis mariana* & *C. graminifolia*), false foxgloves (*Aureolaria pedicularia* & *A. laevigata*), bracken fern (*Pteridium aquilinum*), large coreopsis (*Coreopsis major*), bush-clover (*Lespedeza hirta*), sweet goldenrod (*Solidago odora*), and many others too numerous to list in this article.

In addition to the many common plants, several rare plants were also found. Probably the largest population known in Kentucky

of yellow wild indigo (*Baptisia tinctoria*) was found at the site. Another rare and unusual plant is the diminutive screwstem (*Bartonia virginica*) which is found scattered in the barrens. The discovery of frostweed (*Helianthemum canadense*), a small member of the Cistaceae or Rockrose family, was a very exciting discovery. It previously was only known from an old historic record which stated only "Pine Mountain" for the locational data (in fact, the date given for the historic record was 1894 and we rediscovered it in 1994, one hundred years later!).

Some other unusual finds include the discovery of pale corydalis (*Corydalis sempevirens*) an interesting biennial that grows primarily on rock outcrops, and several orchids including spreading pogonia (*Cleistis divaricata*), adder's-mouth (*Malaxis unifolia*), and yellow-fringed orchid (*Platanthera ciliaris*). Also of interest was the discovery of flowering and fruiting American chestnut trees (*Castanea dentata*).

Protection of this natural area was the result of a joint effort between the KSNPC and the Kentucky Chapter of The Nature Conservancy. After discovery of the area the Commission asked TNC for assistance to assure its protection. Jim Aldrich, Director of TNC successfully negotiated with the landowner and the property was recently purchased by the Conservancy. The land will be

resold to the Commission at below fair market value for dedication and permanent protection and management by KSNPC. Funds to purchase Hi Lewis will come from the Heritage Land Conservation Fund, a fund established by the Commonwealth for the purchase of natural areas and related lands. Some additional lands are still needed to fully protect the natural area. It is hoped that we will be able to work with the landowners to protect these other lands.

Hi Lewis Pine Barrens is a wonderful place that deserves the attention and protection that the Conservancy and the Commission have given it. The Nature Conservancy has given the pine barrens community the highest rarity rank (B1) that can be given. Because it is a barrens community, active management in the form of prescribed fires will probably be needed to maintain and restore the area. On a steep mountain-side this can be a difficult task that will require the cooperation of several agencies.

The Commission greatly appreciates the help given by Jim Aldrich and all the TNC staff in protecting this unique area!

# Unwelcome Company

by David Skinner

Visitation to some of the 34 preserves managed by the Kentucky State Nature Preserves Commission requires a permit. Fortunately many of the preserves are open for all to visit. Most people are renewed by a short period of solitude that a visit to a nature preserve provides. However, we do sometimes encounter visitors that will not willingly leave a preserve. No amount of diplomacy will persuade them to leave. We must use physical force and chemical warfare and only after long persistent badgering will they consider leaving. Of course human visitors to the preserves are not so stubborn but some plants commonly known as weeds are.



In human terms some exotic plants behave like conquistadors displacing native plants and drastically changing the species composition of a natural area. Many exotic plants (plants introduced from other continents) are invasive and overrun native flora. Some of these plants were accidentally introduced and may have been mixed in with seed or nursery stock of plant shipments from overseas, others have been intentionally introduced either as ornamental plants or for wildlife management. Unfortunately, the preserves are all too often

sanctuaries for introduced species of plants that insidiously displace the native plants the preserves are intended to protect. Nodding thistle, Japanese honeysuckle, cocklebur, Japanese stilt grass, Oriental bittersweet and multiflora rose are just a few of the exotic plants we must battle with on our state nature preserves. Kudzu is one of our greatest enemies and it occurs at Blanton Forest (Harlan County), Pine Mountain State Park and Vernon-Douglas (Hardin County) state nature preserves. At Bluelicks Battlefield State Park Preserve (Robertson County) we fight with crown vetch, sweet clover, tall fescue and Queen Anne's lace. The preserve harbors a population of Short's goldenrod, a federally endangered plant. The goldenrod also occurs at a few other locations within a two square mile area of the preserve. Sometimes we even consider native plants our adversary if they threaten other rare plants or natural communities; the eastern red cedar is one of these plants. In the absence of fire our glades, barrens and prairie preserves in central and western Kentucky are rapidly invaded by red cedars which shade out the rare species and other sunloving flora.

There are a number of ways these invasive plants can be controlled. Under historical conditions wild fires, fires set by Native Americans and trampling by bison helped to keep the cedars out of prairie areas. Of

course these conditions are no longer present so we implement prescribed burns to keep cedars and other trees out of these unique areas. In other situations we find mowing, digging and pulling the most effective means of removing exotic plants.

Because of staffing limitations, sometimes the only feasible method to eradicate exotics is through the use of chemical warfare. Some people are surprised to learn that we do use herbicides on the preserves to control exotic plants. We always try to use herbicides that have the narrowest spectrum (kills only the plant or group of plants we want to get rid of) and are not persistent (they chemically breakdown into other harmless chemicals). With the assistance of East Kentucky Power Cooperative we have even been able to spray the "kudzu seas" at Vernon-Douglas State Nature Preserve by helicopter. The helicopter spraying began in 1995 and has saved KSNPC staff many years of arduous ground attack.



Invasive plants can be like the dreaded visit from a door-to-door salesman. Once they get a foot in the door even Herculean efforts to roust them are ineffective. KSNPC stewardship staff will continue the combat against the unwelcome

continued on page 6

# Planning for the Future

by Brad Nyholm

Beginning in 1988, the Stewardship Program began to write management plans for each state nature preserve. The management of the preserves had always been carefully guided by the agency's scientists, but immediate stewardship needs and minimal staffing left inadequate time for much management plan development. In June 1995 Cabinet funds were transferred to KSNPC for additional work at nature preserves, and this included support for management plan development. By January 1996, draft management plans for ten state nature preserves had been written or revised from earlier versions. With the guidance of KSNPC Commissioner's Advisors and staff, the draft management plan for Raymond Athey Barrens State Nature Preserve was revised, submitted and approved at the March 15, 1996 Commission meeting. By July 1996, four more draft management plans had been submitted and approved, including: Axe Lake Swamp SNP, Chaney Lake SNP, Goodrum Cave SNP, and Jesse Stuart SNP. Six more management plans are nearing completion.

Management plans are an exciting and critical element of preserve stewardship. In content, the management plans list and describe species and ecological communities found in the preserve. They also seek the answers as to how Native

Americans and European settlers shaped the landscape. The plans outline our intentions of management; including how to protect and restore ecological communities. They record all scientific knowledge gained through experience and research, provide consistency in management techniques, promote accountability from our agency, and highlight the elements of the preserve for which Kentuckians should be proud. Management plans are essential for the long-term stewardship of Kentucky's natural treasures. We expect management plans for all thirty-four state nature preserves will be completed, in at least draft form, by the end of 1998.

## Staff Update

Tim Clarke, KSNPC Systems Support Technician left the agency effective August 16. Tim served as our PC troubleshooter, managed the agency's hardware, software, and provided application support. Tim's departure was not really a surprise. He informed us he would be leaving in October to move to Jackson County to live the simple life. However, in early August, Tim was offered a job to move out west to herd cattle! We wish Tim all the best and we hope his saddle sores heal real soon.

## Unwelcome Company continued from page 5

company that get more than just a foot into our preserves. We can make great strides towards eradicating exotic plants on the preserves but they will always be a part of our landscape. One thing you can do to help minimize the problem is to landscape with native trees and flowers or exotic ornamental plants that are known not to be invasive. If you would like to learn more about the impact of exotic plants on our natural areas you may want to attend the Exotic Plant Symposium on October 19 in Winchester at the offices of East Kentucky Power Cooperative. For more information call the KSNPC office at 502/573-2886.



### A Symposium: The Impact of Exotic Plants on Kentucky's Biodiversity

October 19, 1996  
East Kentucky Power  
Cooperative,  
Winchester, Kentucky

\$15 on-site registration  
Contact KSNPC for more  
information.



## The Kentucky Nature License Plate-Buy It Today for Kentucky's Tomorrow

Effective December 1, 1996, a new nature license plate will be available at your county clerk's office. The new plate features Kentucky's state bird, the cardinal, sitting on a coffee tree branch. But don't worry, if you have the Kentucky warbler plate and like it—you can keep it. Now you have a choice of two nature plates.

That's not the only change taking place—with the passage of House Bill 477, the Nature License Plate program will be changed from a two-year plate to a five-year plate costing \$25 per year in addition to your vehicle registration fee. Of this \$25, the Transportation Cabinet receives \$12, the county clerk receives \$3, and \$10, which is tax deductible, goes to the Heritage Land Conservation Fund Board. The legislation also changes the program so that plates are renewable in the owner's birth month.

The Heritage Land Conservation Fund (HLCF) was established to provide funding for: 1) natural areas that possess unique features such as habitat for rare and endangered species; 2) areas important to

migratory birds; 3) areas that perform important natural functions that are subject to alteration or loss; and 4) areas to be preserved in their natural state for public use, outdoor recreation and education. Revenue for the Fund comes from the state portion of the unmined minerals tax, environmental penalties, and the nature license plate.

The Fund is managed by a 12-member Heritage Land Conservation Fund Board appointed by the Governor that consists of five state officials and seven citizens representing agriculture, conservation, the Kentucky Academy of Science, The Nature Conservancy, the League of Kentucky Sportsmen, and the public. Funds received are distributed as follows: 10% each to the Department of Fish and Wildlife Resources, Department of Parks, Division of Forestry, Nature Preserves Commission, and Division of Water's Wild Rivers Program. Fifty percent is allocated to local governments, state colleges and universities and other agencies.

All nature plates currently issued will expire December 1996. At that

time, renewal will move to the birth month system. The system is designed to prorate the state fee for the initial change over to the staggered system. For example, when applying for renewal in December 1996 for a February birth date, registration will expire in February 1997, a \$2 state fee, \$10 nature fee and \$3 clerk fee will be assessed. The next renewal will occur in February 1997, at which time, the \$25 annual fee will be charged.

If an individual desires to exchange a warbler plate for the cardinal plate, it will be processed as a plate replacement. A \$5 fee will be assessed for the exchange which includes a \$3 clerk fee and \$2 state fee. The warbler plate must be returned to the clerk and the renewal date will not change once the staggered system is established.

In the event an individual desires to change to a nature plate during the middle of their regular registration, the system will credit the remaining portion of the state fee (\$1 per month) and charge the \$10 nature fee. If at normal renewal time someone converts from a warbler plate to a cardinal plate, the regular fee of \$25 will be charged.

So the next time you renew your plate, renew Kentucky's environment too.

# *Kentucky Breeding Bird Atlas* Completed



by Brainard Palmer-Ball

Twelve years after initial planning was begun, the results of the Kentucky Breeding Bird Atlas have finally been published. The atlas project was sponsored by the Commission and the Kentucky Department of Fish and Wildlife Resources in cooperation with the Kentucky Ornithological Society. Field work for this effort was conducted from 1985-1991 and involved nearly 100 volunteers. The project represents the most comprehensive effort ever undertaken to document the nesting birds of the state.

*The Kentucky Breeding Bird Atlas* can be obtained from a variety of sources. Copies should be in bookstores across the state, but you can also order it through the University Press of Kentucky at 800/839-6855 for \$ or you may purchase at the KDFWR Salato Education Center. The 372 page, hardbound book has black-and-white photographs of all 150 species confirmed or suspected of breeding during the study. Also included are maps showing their distribution and abundance in the state. Accompanying text gives many details concerning nesting habits, historical notes, and habitat information.

*An Equal Opportunity  
Employer M/F/H*

## **Kentucky State Nature Preserves Commission**

801 Schenkel Lane, Frankfort, KY 40601  
Tel. (502)573-2886 Fax (502)573-2355  
*office@mail.state.ky.us*

### **Director**

Robert J. McCance, Jr.

### **Staff**

Joyce Bender  
Ronald Cicerello  
Michelle Clendenin  
Amy Covert  
Marc Evans  
Aissa Feldmann  
Martina Hines  
Ellis Lauder milk  
Dot Marek  
Brad Nyholm  
Brainard Palmer-Ball  
Teresa Prather  
Rick Remington  
Melissa Richey  
Dan Russell  
David Skinner  
Pam Snyder  
Deborah White

### **Commissioners**

Judith McCandless, Chair  
Kenneth Jackson, Secretary  
Lucy A. Breathitt  
O.D. Hawkins  
Edwin Sutton

The Natural Resources and Environmental 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.

*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 conservation.*

Commonwealth of Kentucky

## **Kentucky State Nature Preserves Commission**

801 Schenkel Lane, Frankfort, KY 40601

**BULK RATE  
U.S. POSTAGE  
PAID  
FRANKFORT, KY  
PERMIT NO. 379**

Printed with state funds on recycled paper