Kentucky State Nature Preserves Commission

NATURALLY KENTUCKY

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KSNPC receives two Governor's Environmental Excellence Awards

Karen Armstrong-Cummings, O.D. Hawkins, Robert McCance, Jr., Hugh Archer, Judith McCandless, Don Harker, Richard Hannan, and Phillip Shepherd

KSNPC was honored to receive two of the Governor's Environmental Excellence Awards presented on September 30 at a banquet held as part of the 19th Annual Governor's Conference on the Environment. Thirteen awards were given to citizens, businesses, and organizations who had made outstanding contributions to the protection and preservation of Kentucky's natural resources and its environment. Awards were presented by Natural Resources and Environmental Protection Cabinet Secretary Phillip Shepherd and Deputy Secretary Karen Armstrong-Cummings.

The award presented to the Commission itself was in the area of "Heritage Land Conservation." Commission Chair, Judith McCandless (elected at the September 24, 1994 Commission meeting), was on hand to accept the award, as was the former chairman, Hugh Archer, and Commissioner O.D. Hawkins. In addition, the two former directors of the KSNPC, Richard Hannan and Don Harker, were in attendance with current KSNPC Director Robert McCance, Jr. These leaders, along with the two KSNPC Commissioners who were unable to attend the banquet--Kenneth Jackson and Edwin Sutton--were acknowledged for their contribution to the Commission and the Commission's achievement in natural areas protection.

In recognizing these individuals and their staffs, other farsighted Kentuckians who set the standards for today's victories were mentioned--Dr. Mary Wharton and Dr. Roger Barbour who documented Kentucky's flora and fauna in their books; Dr. Bruce Poundstone, a retired University of Kentucky extension director; Hunter Hancock who worked tirelessly on heritage preservation and the reestablishment of the KY chapter of The Nature Conservancy; Sally Lyons Brown, former KSNPC Chair, whose leadership helped treble the land protected as nature preserves; Cathy Wilson of Ft. Thomas who volunteered her valuable time protecting Boone Cliffs; and Judge and Emily MacCauley Smith who in 1979 dedicated approximately 170 acres for Blackacre State Nature Preserve, an environmental education center in Jefferson County.

Because the Commission was recognized for its achievements since 1976 and because so many persons and organizations have contributed to these efforts, the KSNPC--its Commissioners, Director, and Staff--would like to thank its supporters for their tireless help.

The second distinction was earned by KSNPC botanist and ecologist Marc Evans. Marc received one of the two Secretary's Awards given to individuals who distinguish themselves in state service within the Natural Resources and Environmental Protection Cabinet. He was recognized for his 1992 discovery of Blanton Forest, a 2,350 acre old-growth forest in Harlan County. Since its discovery, Marc has worked toward the vision of a Blanton Forest Preserve by contacting landowners, planning a preserve design, educating public officials and citizens on Blanton's significance, and negotiating for Blanton Forest's eventual preservation. Marc has been with KSNPC for 12 years, served as acting Commission director, and has been and is a zealous promoter and protector of Kentucky's natural treasures.

KSNPC would like to acknowledge another of the Governor's Environmental Excellence Award winners, Dr. David Wicks, coordinator of environmental education programs for the Jefferson County School System. Dr. Wicks received an award for his life-long contributions to educating the public about environmental stewardship. His work at Blackacre State Nature Preserve near Louisville has made this state nature preserve one of the most successful education centers in the nation.

Marc Evans (center) accepting the Secretary's Award for the discovery and promotion of Blanton Forest--presented by NREPC Secretary Phillip Shepherd and Deputy Secretary Karen Armstrong-Cummings

Blanton Forest--exploring Kentucky's largest old growth forest

by Marc Evans

In the spring of 1992, while conducting a Natural Areas Inventory of the Cumberland Mountains in southeastern Kentucky, a tract of remarkable old growth forest was discovered in Harlan County. Covering over 2,350 acres, Blanton Forest--named after the family which owns it--is by far the largest known tract of old growth in Kentucky and is one of the larger tracts in the eastern states.

This significant natural area occupies a part of the south slope of Pine Mountain, a long mountain ridge which runs over 100 miles through Kentucky. Pine Mountain has steep, rugged slopes rising over 1,500 feet above the valley floor. The slopes are cut by numerous deep ravines or "hollers," and large sandstone outcrops and cliffs are common. Because Pine Mountain is an upthrust mountain and the rock strata are tilted, several "false summits" occur as one proceeds up the slope. All of these features provide an assortment of habitats which support a high diversity of plant and animal life.

The rich mesic ravines support a lush, almost jungle-like growth of plants. The mixed mesophytic forests of these ravines are dominated by a variety of large, tall trees such as hemlock, beech, tulip poplar, sugar maple, and white oak. Many of the largest trees are three to four feet in diameter and stand well over 100 feet tall. Many shrubs and smaller understory trees occur beneath the giants with some areas having almost impenetrable stands of great rhododendrons. In spring a profusion of wildflowers, such as wild geranium, yellow lady's-slipper orchid, bishop's cap, and dozens of others, carpet the forest floor in some places, while in other areas huge masses of varied fern species densely cover the ground.

The drier, rocky slopes of the mountain support forests dominated by oaks such as chestnut oak, black oak, and scarlet oak. Some parts of the dry slopes also have pitch and Virginia pine mixed in with the oaks. Unfortunately, the large numbers of American chestnut that once thrived on the slopes were all killed by blight, but numerous sprouts still struggle to re-establish themselves. Large stands of white to pink flowering mountain laurel also occur scattered throughout, and the early spring flowers of trailing arbutus are common.

Many other ecological communities, features, and interesting species occur in Blanton Forest. Near the crest of the mountain at the heads of several streams, beautiful mountain bogs occur with dense mats of sphagnum moss and large stands of huge cinnamon ferns and showy wildflowers such as meadow phlox and cardinal flower. Large cliffs, boulder fields, and outcrops all add to the diversity of the forest habitats. A federally threatened fish, the blackside dace, occurs in Watts Creek within Blanton Forest.

Blanton Forest is but one of many significant discoveries made so far during the Kentucky Natural Areas Inventory--a county by county search for the best remaining natural areas in the Commonwealth. This huge undertaking, started in 1988, is being conducted by the Kentucky State Nature Preserves Commission. The Commission is mandated to inventory the state and establish and manage a nature preserves system to protect the best remaining natural areas and rare species populations.

The protection of Blanton Forest is one of the most important goals of the Commission, and Commission members and staff were extremely pleased when an option to purchase 1067 acres was signed in April 1994, giving the Commission the chance to acquire one of the two tracts which make up the old growth portion of Blanton Forest. This option must be fully exercised by July 31, 1995.

The Commission has developed a nature preserve design for the natural area that includes Blanton Forest and additional land primarily to the north and east of the old-growth area which represents the desired ecological boundaries of the prospective state nature preserve. The Commission only acquires land from landowners willing to transfer their land by purchase, dedication, or donation. This design may take years to complete and may be revised in the future.

The Commission needs help to raise the money to purchase the tract under option by the spring of 1995. A fund-raising committee has been formed to assist in this endeavor. The committee, composed of private citizens, will request donations from foundations, organizations, and individuals. The Kentucky General Assembly has appropriated $500,000 toward acquisition of Blanton Forest and other Kentucky natural areas in state fiscal year 1995, ending June 30, 1995. The Commission's goal is to raise an additional $2.1 million by the summer of 1995. These funds will provide for the acquisition of currently available land at Blanton Forest and provide a management endowment for the preserve. Funds will be deposited in the Nature Preserves Fund, which was created in 1976 to receive private donations to further the mission of the Commission.

SPECIAL THANKS!

In June of 1994, the Kentucky State Nature Preserves Commission received a notable contribution of $13.46 to the Nature and Wildlife Fund--otherwise known as the tax checkoff fund. This donation, perhaps modest to some, is more than twice the amount of the average donation to the Nature and Wildlife Fund. Moreover, these generous supporters were not yet eligible to contribute on their tax forms. The fifth and sixth graders of the Chapter 1 Reading Program at Lincoln Elementary School in Dayton, KY, donated this money from their own allowances and personal funds. After finishing a section on wildlife conservation Joan E. Berkemeyer's group was, in her words, "very excited about the idea of donating their money to a fund that helps wildlife in their very own state of Kentucky." To all the now 6th graders in Ms. Berkemeyer's reading group, to the 7th graders now in middle school, and to Ms. Berkemeyer herself, please accept our gratitude and assurance that the two agencies that manage the Nature and Wildlife Fund--the Kentucky State Nature Preserves Commission and the Kentucky Department of Fish and Wildlife Resources--share your interest in protecting nature and wildlife. We'll work hard to use your donation wisely to protect the natural treasures that you and all of Kentucky's children deserve to inherit.

To speak in literature with the perfect rectitude and insouciance of the movements of animals and the unimpeachableness of the sentiment of trees in the woods and grass by the roadside is the flawless triumph of art.
***Walt Whitman** preface to Leaves of Grass*

Glade Cress (*Leavenworthia exigua* var. *laciniata*): A tiny survivor

by Deborah White

Kentucky can claim very few plants or animals as endemic to the state. One very small true endemic is the glade cress (*Leavenworthia exigua* var. *laciniata*) which has a worldwide range of extreme southern Jefferson and northeastern Bullitt counties. This white-flowered annual stands two to four inches tall. This member of the mustard family is listed as threatened on the KSNPC rare species listing. Glade cress blooms in early spring usually from early March through mid to late April. It is naturally found in gravelly areas in or around dolomite limestone glades that are scattered throughout these two counties. Exposed deposits of silurian limestone (dolomite) that occur as large flat surfaces are unique in Kentucky. The soils in these areas are only a few inches deep, and because of the limestone just beneath its surface the soils remain wet for long periods in the early spring. These wet periods are critical during the growing season of glade cress. The open glades in this area become extremely dry in the summer prohibiting most other plants from establishing themselves in this habitat.

Although glade cress occurs naturally in glades and other natural openings, these plants have also survived in some disturbed habitats as well--habitats that simulate its natural growing conditions. Glade cress can be found in pastures, lawns, and other sites where the grass or other vegetation is not dense and has been kept cropped close to the ground. Usually these areas are obvious because the rock outcrops can still be seen at the ground surface.

Glade cress has adapted as best it can to the changes in its environment. However, this area south of Louisville has undergone a tremendous amount of commercial and residential growth. Because of this growth the U.S. Fish and Wildlife Service provided funds to revisit all of the documented sites of glade cress (a candidate for listing under the Endangered Species Act) in order to determine whether the population still existed and to evaluate other changes that threatened its persistence at the site. The survey was conducted in April of this year.

Very little natural dolomite glade habitat remains within the range of glade cress, and most of these occurrences support only small patches of native vegetation. The results of the April '94 survey demonstrate that few natural populations of glade cress remain. The study also brings to light an important conservation question. This tiny plant can still be

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(Glade Cress--continued from page 3)

found in pastures and similar open sites, and from the comparison with past information on these populations, glade cress is probably increasing at a few of these disturbed sites. But, should we consider these sites a stable home for glade cress? This tiny endemic can be found fairly frequently in northeastern Bullitt County. However, most of the sites are roadsides, lawns, and pastures that will eventually be altered by construction, lawn maintenance, or, in the case of the pastures, a few too many cows or horses, all of which would eliminate the population. Regardless whether the U.S. Fish and Wildlife Service protects glade cress through the Endangered Species Act by listing it as endangered or threatened, Kentucky's conservation strategy must consider the unique qualities of this tiny survivor's life history and the dynamics of its environment.

Biodiversity Task Force

by Robert McCance, Jr.

The Environmental Quality Commission passed a Biodiversity Resolution early in 1993 urging Gov. Brereton Jones to appoint a Biodiversity Task Force to address the need for a state strategy to protect biodiversity in Kentucky. At the Governor's Conference on the Environment in October 1993, Gov. Jones committed to signing an Executive Order to appoint a task force. On March 14, 1994, the task force was appointed by Executive Order 94-247. It consists of 31 government and public members and is charged with developing a statewide "strategy to sustain and conserve our biological diversity" and to "provide recommendations" for:

(a) A state policy to insure the actions, policies, and programs of all state agencies are consistent with conserving, restoring, and preserving Kentucky's biodiversity;

(b) Legislation and executive orders that will address conservation and protection of Kentucky's biodiversity;

(c) The development and implementation of educational programs that result in a lasting appreciation and understanding of Kentucky's biodiversity and a commitment for sustaining and restoring it.

Co-chairmen for the task force are Dr. William H. Martin (Commissioner, Department for Natural Resources) and C. Thomas Bennett (Commissioner, Department of Fish and Wildlife Resources). Bob McCance (KSNPC Director) and Jim Aldrich (KY TNC Director) also serve on the task force. The task force has 18 months to submit a report. This task force should heighten interest in and attention to the needs of biodiversity protection activities in Kentucky.

"NATURALLY KENTUCKY" The Presses Roll Again

Our faithful readers surely have noted a pause in the publication of "Naturally Kentucky." KSNPC's last newsletter, Number 11, was dated March, April, and May of 1994. Due to personnel changes and the aftershocks of our facility relocation, the summer and fall 1994 newsletters were never actualized. The new commission staff are settling in, and in 1995 "Naturally Kentucky" will adopt a quarterly schedule that we all can look forward to. Please direct your article comments or suggestions, or mailing list changes to the attention of Martha Brent.

DR. BURT L. MONROE, JR. (1930-1994)

On May 14, 1994, the KSNPC lost one of its most ardent supporters, Dr. Burt L. Monroe, Jr. Dr. Monroe had served as scientific advisor to the Commission for more than 15 years. He had recently retired from the Biology Department of the University of Louisville, where he had taught for nearly 30 years and had served as its chairman for more than a decade.

Dr. Monroe was best known for his prominence in the field of ornithology, although he had a passion for many interests including butterflies, amphibians and reptiles; University of Louisville sports; and UFOs. Dr. Monroe had served as president of the American Ornithologists' Union and the Kentucky Ornithological Society, and he was chairman of the AOU's Committee on Classification and Nomenclature. In the latter capacity, he authored the 1983 *A.O.U. Check-list of North American Birds*. More recently he had co-authored a publication of *Distribution and Taxonomy of Birds of the World*.

Outside of ornithology Dr. Monroe was also active on numerous boards and committees dealing with conservation issues and scientific topics, especially at the local level. Dr. Monroe was instrumental in formulating the Commission's relationship with the Louisville Nature Center; this resulted in the establishment of our Beargrass Creek State Nature Preserve, one of the three state preserves that focuses on environmental education.

We will greatly miss Burt's contributions, but we take comfort in knowing that he has left behind a stronger conservation effort within Kentucky due in no small part to his dedication and hard work.

Kentucky Outlook 2000: defining Kentucky's next-century needs

"Kentucky Outlook 2000" is being conducted by the Kentucky Natural Resources and Environmental Protection Cabinet and the Kentucky Long-Term Policy Research Center. The project, made possible by a grant from the U.S. Environmental Protection Agency, has the mission of determining and executing the very best resource management plan for the future of Kentucky. Toward this end, these environmental issues, listed irrespective of hierarchy, have been identified by the Public Advisory and Technical Advisory Committees of *Kentucky Outlook 2000*. The comparative risk track of this project will analyze the following major issue areas for their impact on ecological health, human health, and quality of life.

Air Quality--Risks associated with emissions from stationary (industrial), mobile (vehicular), and area (small unpermitted) sources will be studied and evaluated.

Water Quality/Quantity--The risks associated with the impacts of natural and human events on groundwater, surface water, and drinking water will be studied and evaluated.

Groundwater: Risks associated with point source, non-point source, waste discharges, hazardous waste, accidental spills, biological pollution, and chemical pollution impacts will all be evaluated.

Surface Water: The condition of Kentucky's streams, lakes, and rivers will be evaluated with emphasis given to point and non-point sources, sedimentation, accidental spills, solid and hazardous waste, and waste discharge systems.

Drinking Water: Risks associated with contamination of Kentucky's drinking water from chemical, microbiological, solid and hazardous waste, point and non-point sources, waste discharge systems, and urban infrastructure will be studied and evaluated.

Land Quality--This issue area encompasses a wide range of activities associated with agriculture, forestry, and mining. Of concern are the productivity of the land and the contamination resulting from petroleum products, chemicals and biological products, pesticides, and waste disposal. Also to be studied are flooding, recreational uses of land, and peoples' attitudes toward property.

Protecting/Maintaining Biodiversity--The risks associated with factors affecting the different levels of biological diversity will be evaluated. Examples of such are habitat loss, impacts of pests/foreign species, and the adverse effects of pollutants on native plants and animals.

Food Safety--This study will consider the risks associated with the chemical, microbial, and radiological contamination of the foods Kentuckians eat.

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Freshwater mussel declines in the Cumberland River at the Falls

by Ronald Cicerello

The Cumberland River has long interested aquatic biologists because of the broad array or diversity of aquatic organisms it supports. Freshwater mussels--bottom-dwelling invertebrate animals--were especially diverse and included many species unique to only the upper Cumberland and Tennessee rivers worldwide. A series of researchers have visited the river below Cumberland Falls to study these organisms for scientific as well as economic reasons. By comparing the results of these efforts we can gain an understanding of the status of the mussels below the Falls and the impact humans have had on them.

C.B. Wilson and H.W. Clark of the Bureau of Fisheries, today's U.S. Fish and Wildlife Service, were the first to study the river's mussel fauna. They examined the length of the river in 1910-1911 seeking a new source of mussels to replace upper Mississippi River populations that were over harvested to provide shells for button manufacturing and pearls for jewelry. They found 20 mussel species in the river below the Falls, 12 of which were common or abundant. Many were crowded about the base of large rocks just below the falls. These were easily accessible during low water to predators who left mussel shells scattered along the shoreline. From Anvil Shoals, one mile below the Falls, to Burnside the river was reported by a mussel fisherman to be "full" of mussels. Wilson and Clark's findings represent our best picture of the original or baseline condition of the mussel fauna below the Falls and throughout the river.

During 1947-1949, just prior to the closure of Wolf Creek Dam and the formation of Lake Cumberland, J.K. Neel and W.R. Allen of the University of Kentucky studied the river's mussel fauna. They recognized that this "offered one of the few remaining opportunities to study big river mussels before and after impoundment of their normal habitat." By digging with their fingers through sand deposits among large stones and slab rocks below the Falls, Neel and Allen encountered dense mussel populations of 15 species, 13 of which were common or abundant, including many large and very old individuals.

In 1961, 50 years after Wilson and Clark's visit, D.H. Stansbery of the Ohio State University Museum of Zoology collected mussels below the Falls for comparison with earlier studies. He noted that changes in mussel species composition prior to 1947-1949 resulted from almost 40 years of water quality changes, mainly from coal mining and washing above the Falls. Changes in composition after 1949 were a consequence of continuing water quality problems and the influence of Lake Cumberland. Stansbery found that four mussel species (Butterfly, Fluted kidneyshell, Purple wartyback, and Threehorn wartyback) were lost from the river below the Falls by the time of Neel and Allen's study in 1947-1949, and one species, the Rainbow, was added (see page 7). Between 1949 and 1961, the Deertoe and apparently the Elephant-ear were lost, and several others had decreased in abundance. Only nine species were stable or had increased in number.

Commission staff searched for mussels in the river below the Falls, most recently in 1993, and as far downstream as Burkesville. We found that the fauna has continued to decline. Of the 10 species we found, only two were common or abundant, and only one area was located where the mussels were somewhat concentrated. The river bottom is no longer crowded with mussels as observed by Wilson and Clark early this century. Nor are the shorelines littered with shells left behind by muskrats, raccoons, mink, and otters. To the contrary, live mussels or their shells are hard to find. The mussels live among large boulders, as reported by Neel and Allen, but the sand deposits they formerly inhabited are now mixed deposits of sand, coal fines, and larger pieces of coal, along with bottles, cans, and the refuse of modern living. These materials originate in the upper Cumberland watershed and are deposited in huge piles immediately below the Falls. The physical and chemical changes these activities cause are not tolerated by most mussel species. Adverse impacts from the creation of Lake Cumberland are a result of converting a free-flowing river into a lake. Most of Kentucky's mussels are highly adapted to and dependent upon flowing water to breathe, feed, and reproduce and to remove waste products, silt, and sediment. In addition to inundating the mussels and their habitat, dissolved oxygen concentrations and water currents are reduced in impoundments increasing siltation. These alterations also have greatly changed the composition of the resident fish community, upon which mussels are dependent to complete their life cycle.

Human activities during the 20th century have greatly altered the Cumberland River and its mussel fauna, not only at the Falls but also downstream to the Tennessee border and beyond. Only a few species tolerant of lake conditions are known to or possibly continue to live in Lake Cumberland. Below Wolf Creek Dam only two native species persist. Perhaps 20 of the 65 mussel species historically known from the river between the Falls and the Tennessee border remain. Several of those that have been extirpated from the river are now U.S. Fish and Wildlife Service listed species (e.g., Cumberland bean, Cumberlandian combshell, Oyster mussel) that are present in greatly reduced numbers only in segments of selected Cumberland River tributaries (e.g., Buck Creek, Rockcastle River,

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Results of freshwater mussel studies on the Cumberland River at the Falls

	Wilson & Clark	Neel & Allen	Stansbery	KSNPC
	1911	1947-1949	1961	1993
Species		**Relative Abundance**		
Black sandshell	P	A	P	R
Butterfly	P	NF	NF	NF
Cumberland bean*	C	A	P	NF
Cumberland moccasinshell	P	A	A	NF
Deertoe	C	R	NF	NF
Elephant-ear	A	C	NF	R
Fluted kidneyshell*	P	NF	NF	NF
Fluted-shell	C	NF	R	R
Kidneyshell	A	A	C	P
Little spectaclecase*	P	NF	P	NF
Mucket	A	A	C	R
Pheasantshell	A	A	A	A
Pimpleback	C	A	A	C
Pink heelsplitter	P	C	C	R
Pistolgrip	C	A	A	R
Plain pocketbook	NF	A	NF	NF
Pocketbook	C	NF	C	NF
Purple wartyback	P	NF	NF	NF
Rainbow	NF	R	C	NF
Spike	A	A	A	P
Threehorn wartyback	P	NF	NF	NF
Wavy-rayed lampmussel	C	C	C	NF
Total species	**20**	**15**	**15**	**10**

A = abundant (=>50 individuals found); C = common (10-49); P = present (4-10); R = rare (<4); NF = not found.
* = considered rare by the United States Fish and Wildlife Service and/or Nature Preserves Commission.

State Nature Preserve Spotlight

Beargrass Creek State Nature Preserve

By Kristin Snyder

One of only four urban state nature preserves in Kentucky, Beargrass Creek State Nature Preserve is located in the heart of the most highly developed portion of the largest metropolitan area in Kentucky--downtown Louisville. Surrounded by urban and suburban development, the preserve is one of only a few animal and plant refuges that remain in Louisville. It is also a green space that provides humans an escape from the steel-trussed hustle-and-bustle of the modern world.

The preserve consists of 41 acres of upland and floodplain between Joe Creason Park and the channelized South Fork of Beargrass Creek. The topography consists of slopes, a ridge that runs through the center of the preserve, floodplain, and part of Beargrass Creek itself. The land was acquired and dedicated by KSNPC in 1982 to protect the unique natural area and to provide passive recreation and environmental and natural history education opportunities to Kentuckians. Beargrass Creek is Kentucky's 9th state nature preserve. Since the dedication of the preserve, the Louisville Nature Center, Inc. (LNC), a nonprofit organization, has helped to maintain the preserve. LNC primarily conducts a wide variety of environmental programs for schools and the general public; they also conduct research and produce educational materials on Kentucky's plants and animals. This year, KSNPC's stewardship staff has been working closely with the new director of LNC, Barbie Bruker-Corwin, to produce a working management plan for the preserve.

At first glance, the preserve appears to be a very scrubby woods whose small trees are being slowly entwined by dense honeysuckle, grape vines, ivy, and greenbriar plants. But to the trained eye, the presence of these plants is a sign that the site was once greatly disturbed by humans and is now in the process of recovering. You might ask, "What disturbed this land in the past?" Perhaps a brief overview of the known history of the area might provide some clues to answering this question. The following information on Beargrass Creek area is based upon an archaeological survey done by KSNPC staff in 1988.

Settlement of the local area began in the late 1790s, with the first stone house in Beargrass Valley being built in 1796. By the mid-1800s, 300 acres of land west of the current preserve were owned by William L. Prather and were used for raising livestock, farming, and breeding horses. Prather Road (our trail along the northern boundary) came into existence at this time. The northern section of what is now the preserve was purchased in 1852 by the Rand family. An 1858 map shows a house on the crest of the ridge near the creek and Newburg Road. A trail passes by the foundation of the house. It is uncertain when the house was built, but the land around the house was probably used for farming, grazing, and timber supply into the mid-1900s. Historical records of the activities on the southwestern portion of the nature preserve are not complete. We do know that it became part of Camp Zachary Taylor, a World War I Army camp built in 1917 to process drafted and enlisted men from surrounding states. In 1942, this same piece of property became part of the Ben Collings Estate and was then sold to the Catholic Archdiocese in 1960.

One need not travel so far into the past to see the effects of

Steps were recently constructed on ridge trail near boardwalk

disturbance to the preserve. As more and more people visit Beargrass Creek State Nature Preserve each year, their feet alone will change the soil and vegetation on and along the trail. Some feet will wander off of the trail and, whether knowingly or not, will trample plants and disturb nesting birds and wildlife. This type of disturbance is detrimental to the diversity of plants and animals. All too often one finds evidence of bicycles being ridden on the trails throughout the preserve. Bike tires cause severe damage to trails on slopes and to herbaceous plants and small trees that are run over as the cyclist tries to avoid obstructions in the trail. Therefore, bikes are not allowed in the nature preserve.

Despite the heavy use of the land over the years, this 41-acre preserve is home to more than 180 species of trees, shrubs, and flowering plants, 26 animal species, and more than 150 species of birds. The area is well known by local birders for the diversity of warblers that pass through in spring and fall migrations. Just this year a bird checklist was developed by LNC and KSNPC with assistance from the Beckham Bird Club. You may obtain a copy from the Louisville Nature Center located in the Nature Clubhouse in Joe Creason Park across from the Louisville Zoo. (Hours 9 a.m. - 5 p.m.; phone 502-458-1328)

PUBLICATIONS AVAILABLE

We would like everyone to know that the following publications in our Scientific and Technical Series are still available:

No. 1. Ferns and Fern Allies of Kentucky, by Ray Cranfill. 284 pages. 1980. Price $4.50 plus 27 cents sales tax (Kentucky residents only), plus $1.50 for postage and handling.

No. 4. A Distributional Atlas of Kentucky Fishes, by Brooks M. Burr and Melvin L. Warren, Jr., 398 pages. 1986. Price $10.00 plus 60 cents sales tax (Kentucky residents only), plus $2.00 for postage and handling.

Anyone wishing to order either one or both of these publications should make their check payable to the "Kentucky State Nature Preserves Commission" and forward their request with payment to following address:

Kentucky State Nature Preserves Commission
801 Schenkel Lane
Frankfort, Kentucky 40601

Changing Faces at the KSNPC

by Gary Libby and Martha Brent

Darby Dougherty and **Rob Klein** were hired for the 1994 field season through the summer cooperative program with Kentucky universities. Darby worked as a botanical assistant, and Rob worked as a field assistant on the biomonitoring of running buffalo clover (Trifolium stoloniferum) at the Bluegrass Army Depot (BGAD). Darby, a 1994 graduate of Eastern Kentucky University (EKU), finished her seasonal rotation with us on Aug. 31. Rob, a senior working towards a bachelor's degree at EKU, also left the Commission in August.

Stephen McMurray and **Matthew Patterson** were both hired through the EKU cooperative education program to assist the KSNPC aquatic biologists with field and lab work. Stephen returned to EKU for graduate work in August, while Matthew will assist the Commission through November and return to EKU in January to complete his senior year.

Steve Walker finished his six-month term at the Commission on Oct. 31. Steve was hired as a botanist to do the running buffalo clover monitoring and experimental treatment plots at the BGAD. **Gary Libby** was hired in June as a botanist for nine months to work on various projects dealing with endangered, threatened, and rare plants in Kentucky including a survey of a series of locks and dams on the Kentucky River and several U.S. Fish and Wildlife Service funded projects. Steve and Gary are both finishing M.S. degrees at EKU. **Elizabeth Bunzendahl** and **Travis Livieri** joined the stewardship program in June for five months as nature preserve management workers. Elizabeth recently graduated from the University of Kentucky (U.K.) College of Agriculture with a bachelor's degree in Natural Resources Conservation and Management. Travis is a graduate of the University of Wisconsin-Stevens Point where he earned a bachelor's degree in both Biology and Wildlife Management. **Malissa Lenn**, a seasonal data specialist who began with the Commission in October 1993, left us in July and has moved to Bloomington, IN, to begin graduate work at Indiana University. The Commission has benefited greatly from the contributions of these talented seasonal staff.

Four new permanent staff members have recently been hired. **Martha Brent** began as executive assistant and special projects coordinator in August. Martha transferred from an administrative position within the Natural Resources Cabinet. Her academic training is in English literature, and she is completing thesis requirements toward a master's degree at Western Kentucky University. **Mary Jean Eddins** began work in September as the Commission's fiscal officer. Mary Jean's credentials include a bachelor's degree in Business Administration at U.K. and experience as both the KSNPC accountant at the cabinet's budget office and the accountant for the Petroleum Storage Tank Environmental Assurance Fund Commission. **Dot Marek** began as Commission secretary in mid-September. Dot's corporate and government experience is full and varied. Her last state position was as a secretary in the Commissioner's office in the Department of Education. **Martina Hines** began work on October 3 as a data specialist. Martina comes to us from The Nature Conservancy where she was a field biologist, and her most recent degree is her master's degree in Forestry from U.K.

Melissa Richey began work on October 17, 1994, as a seasonal data specialist. She received her bachelor's degree in Biology in June 1994, from Centre College where she also gained experience as a researcher and laboratory assistant.

Two full-time employees have left since our last newsletter. **Linda Pollock** who worked as the Commission's executive secretary for five years is now pursing educational goals at U.K. **Melissa White**, the Commission's secretary for more than six years, submitted her resignation. Melissa has become a work-at-home mother following the delivery of her first child, Anthony, Jr., on Oct. 11. We thank these women for their years of service and wish them good fortune in all of their future endeavors.

Expected additions include two regional nature preserve managers. Because of all of these changes, our next newsletter will also feature a staff photograph.

(Issues List--continued from page 5)

Indoor Environmental Quality and Safety--The risks associated with natural and human-made hazards and materials in residential, industrial, and public buildings will be evaluated. Asbestos, radon, lead, and environmental tobacco smoke will be addressed.

Waste--The focus of this area will be on determining the threats associated with what we throw away. This study will address contamination of the land (both urban and rural) from hazardous materials, solid waste disposal and management, radioactive waste, incineration, and hazardous material transport.

If you have questions or comments regarding this issues list or the *Outlook 2000* project, contact Eric Seigel at the Department for Environmental Protection, 14 Reilly Road, Frankfort, KY 40601, (502) 564-2150.

(Freshwater Mussel--continued from page 6)

Big South Fork Cumberland River, Little South Fork Cumberland River). Several others have been extirpated from Kentucky or are now extinct (e.g., Dromedary pearlymussel, Tan riffleshell, Acornshell, Cumberland leafshell).

The mussel fauna of the mainstream upper Cumberland River has been lost for all intents and purposes. With 18 percent (19 of 103) of Kentucky's mussel fauna already extirpated from the state or extinct, and 41 percent (35 of 85) of those remaining considered rare by the Commission, mussels are probably our most endangered group of organisms. If this unique segment of our natural heritage, as well as the remainder of our highly diverse aquatic fauna are to persist into the 21st century, we will need to monitor their status more closely and protect our remaining free-flowing rivers from pollution and impoundment.

Kentucky State Nature Preserves Commission
801 Schenkel Lane
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The Kentucky State Nature Preserves Commission is mandated to identify and preserve the best remaining examples of Kentucky's natural heritage in a statewide system of nature preserves.

Commonwealth of Kentucky
Kentucky Nature Preserves Commission
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