

Naturally Kentucky



Winter/Spring 2016 Number 75

Green tree frog, Murphy's Pond SNP ~
Photo courtesy Jason Butler

Celebrating 40 Years of Protecting Kentucky's Natural Heritage —

- ◆ On March 29, 1976, Governor Julian Carroll signed the bill establishing a Kentucky State Nature Preserves system. There are four branches of the commission: director's office, heritage, data section and stewardship. The author of the bill was the late Jon E. Rickert of Elizabethtown, KY.
- ◆ KSNPC protects almost 28,000 acres of nature preserves from the banks of the Mississippi River to the Virginia border. Only three stewardship staff are caretakers of 63 nature preserves. Joyce Bender, the Nature Preserves and Natural Areas Branch Manager, has been with the commission for 30 years and is our longest-serving staff member.
- ◆ The commission's largest state nature preserve is Blanton Forest in Harlan County at 3,509 acres, while Woodburn Glade in Warren County is the smallest with 20 acres.
- ◆ The preserves also provide opportunities for the public to enjoy our best natural lands, with an estimated 25,000 visitors annually.
- ◆ Featured stories about the commission have appeared on Kentucky Educational Television (KET) in 45 different segments over the last 21 years.
- ◆ Kentucky's natural heritage database is currently tracking an impressive 12,684 records of species and ecological communities, 768 high quality site records, including caves, and 695 conservation lands records.
- ◆ Kentuckians who want to help care for a specific preserve are called "preserve monitors" and are highly prized and sought after.

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Forty Years of Biodiversity Protection

By Joyce Bender, Nature Preserves and
Natural Areas Branch Manager

The Kentucky State Nature Preserves Commission celebrates its 40th anniversary this summer. We plan to commemorate the occasion at Berry Hill Mansion on July 21st. Please join us as we reflect on our accomplishments and the people who have helped along the way. More details on the event will be on our website.

In July 1976, the statutes that arose from Senate Bill 155 went into effect. KRS 146.410(2) mandated the commission to “secure for the people of present and future generations the benefits of an enduring resource of natural areas by establishing a system of nature preserves, protecting these areas and gathering and disseminating information regarding them, establishing and

maintaining a registry of natural areas, and otherwise encouraging and assisting in the preservation of natural areas and features.” Commission staff past and present have diligently done their jobs with this as the agency’s marching orders.

So much has happened over the past four decades. Information is available on our website to give a broader view of the commission’s history. Former employee Tim Clarke did a great job compiling the highlights of our first 20 years and his synopsis can be viewed in a newsletter article he wrote at <http://naturepreserves.ky.gov/news/Newsletters/Natky18.pdf>. Many of the commission’s accomplishments are also summed up in more detail in our biennial reports to the legislature, some of which can be viewed at:

<http://naturepreserves.ky.gov/pubs/Pages/reports.aspx>.

Leading an organization with such an all-encompassing mission can be daunting, especially when many staff members are field biologists and funding is limited. We have had four Executive Directors since 1976. Only a few of their many contributions can be presented, but the following are offered as examples of how each man has aided the commission’s growth. Donald F. Harker, Jr. served as our first director, beginning in 1977. With an incredible vision to build capacity, he used several substantial grants to hire a number of field biologists to initiate inventories of the state. These surveys enabled the commission to lay the groundwork from which we started building a nature preserve system and a rare species database. Richard Hannan led the Commission from 1982 until 1992. His tenure brought the first appropriation of funds from the General Assembly to purchase nature preserves. Prior to 1990, we dedicated state park properties and cobbled together funds from various sources and matched Land and Water Conservation Fund grants with land donations to reach a total of 18 preserves. The Natural Areas Inventory (NAI) had begun in 1988 and we spent the appropriation on a number of high quality sites that were the first fruits of the NAI process.

Robert McCance was the third director, serving from 1993 until 1997. The Rare Plant Recognition Act was passed during his term and we closed on the first tract at Blanton Forest State Nature Preserve, the state’s largest old growth forest. The nature plate became available for purchase in 1995, providing the commission’s first regular funding for the acquisition of natural areas through the Kentucky Heritage Land Conservation Fund. The pace of preserve acquisition really stepped up, resulting in several new preserves as well as key additions to existing preserves.



Joyce Bender, Nature Preserves and Natural Areas Branch Manager

Donald S. Dott, Jr. became the fourth director in 1998 and after eighteen years, he has the distinction of being the longest-serving director to date. In 1998, the commission moved ahead with new technology by acquiring Geographic Information System (GIS) capability. We continue to update software and technology to stay current with information management. In 2001, the commission could finally say there were preserves from one end of the state to the other with the acquisition of 215 acres on the Mississippi River. Don oversaw the reorganization of the agency into two branches. In 2015, he successfully spearheaded efforts to get our highly regarded book, *Kentucky's Natural Heritage: An Illustrated Guide to Biodiversity* (published in 2010) into every high and middle school library in Kentucky. He has also had the toughest series of budget cuts to contend with than any of his predecessors. These budget cuts from 2008 to the present challenge us and remain a constant struggle.



Some notable items that illustrate the breadth of our work include: protecting 63 state nature preserves and natural areas totaling over 28,000 acres and tracking 12,684 records of rare species, natural communities in the Natural Heritage Program database. Our biologists continue to conduct inventories and we support research that has resulted in finding some species new to science and a few species that have not been seen for decades. Our work has led to the federal listing of two plant species, one in 2013 and the other in 2014 and the delisting of one in 2016. Many of these projects are the results of collaborations with state, federal and private conservation organizations and colleges and universities with whom we share common goals. The job is too big for any one agency, so success occurs with strong partnerships.

Pooling expertise and resources is the strategy for these tight fiscal times. Budgets have certainly waxed and waned over the last 40 years, but we have been dealing with very lean times for the last fifteen years. This has led to considerable belt tightening and struggles with an aging fleet of vehicles and staff reductions. Changing public attitudes about the environment as well as economic downturns have made carrying out our work more challenging.

One of the most significant recent changes to the commission has been the retirement of another long-term employee, Deborah White. She retired in 2014 after serving 23 years as our botanist. The wealth of knowledge that she and our other retirees have passed on to our current field biologists has led to good results. Hopefully these young people will have their chance to mentor the next generation of biologists and reflect on just as many, if not more accomplishments when they look back on their careers.

Looking ahead, one thing we know for sure, land alterations and invasion of non-native species will continue to take their toll on natural areas and rare species habitat. The impacts from global climate change are still hard to assess and plan for. The commission is working with partners to consider appropriate responses to the potential changes coming to Kentucky. We are trying to predict where best to designate protected corridors for species movement as conditions change and animal and plant populations shift in response. We have taken on the study of hymenoptera (bees) and joined forces to aid the monarch butterfly as we assess the plight of pollinator decline. Outreach to the public remains an important part of our mission. We need to ensure that all the citizens of Kentucky are aware of the great benefits derived from maintaining high quality natural areas across the Commonwealth.

With the sudden passing of our first director, Don Harker in February 2016, we reflect on his spirit and drive as he established the commission and set us on the path we walk today. May we rededicate ourselves and draw inspiration from his vision and continue to do all we can to sustain the mission that began in 1976.



Don in 1977



Donald Francis Harker, Jr., KSNPC's first director
May 9, 1947 - February 25, 2016, age 68, of Bend, Oregon.
Photo courtesy of the Harker Family



In the Spotlight: Cumberland Plateau Gravel/Cobble Bar

By Brian Yahn, Vegetation Ecologist

KSNPC Staff photo by Tara Littlefield

KSNPC's "Community Spotlight" is on a unique type of flood-scour riverine community, commonly called a gravel/cobble bar. Gravel/cobble bar communities are deposits of gravel, sand, and cobble laid-down along the banks of moderate to high gradient streams, often mixed with boulders. Throughout most of Kentucky, the plants associated with gravel/cobble bars are usually common species, with a good assortment of disturbance-tolerant weeds, capable of withstanding continual flooding disturbance and instable, shifting soils. Floods occur during the winter wet season, and during growing-season rain events. Fast-moving water carries sediments and other debris which scours through the vegetation and against the substrate of the bar. This process is the same in the southern Plateau Escarpment (Woods et. al 2002) of Rockcastle, Laurel, Pulaski and McCreary Counties. But another kind of gravel/cobble bar has developed with a very different array of plant species. This unique type is referred to as the Cumberland Plateau gravel/cobble bar. In Kentucky, it is extremely rare and is only documented from the Rockcastle and Big South Fork Rivers. It supports a flora more typical of western prairie and Coastal Plain regions, supporting an array of rare plants. In fact, one species, the Cumberland rosemary, is only found on these river-scour bars in the Cumberland Plateau of Kentucky and Tennessee, and nowhere else in the world! (Note: A section of the upper Cumberland River (above the Falls) has been reported to support this community as well, but more surveys are needed.)

Since settlement, modern humans have channelized and drained streams, damned rivers into reservoirs and deforested areas around watersheds, which has reduced the range of this community and its distribution on the landscape. As a result of such disturbance and modification, the two best remaining locations in Kentucky occur along densely forested stream corridors of the Daniel Boone National Forest and the Big South Fork National Recreation Area. A seven mile stretch of the Rockcastle and a three and a half mile stretch of the Big South Fork represent the only two areas in Kentucky where the communities occur in a regular, more frequent, distribution (KSNPC 2016, Map 1.). In addition, these high quality stream corridors are further impacted by invading non-native species. The most invasive include: autumn olive, Japanese spiraea, and silk tree. Due to these impacts, KSNPC lists Cumberland Plateau gravel/cobble bar as state endangered (=S1), one of the rarest communities in Kentucky.

Outside of Kentucky, areas to the east, south and west have documented occurrences of gravel/cobble bars somewhat similar to Kentucky's



Photo courtesy Dr. Thomas Barnes

Cumberland Plateau gravel/cobble bar (including but not limited to areas in MD,WV, VA, TN, GA, AL, AR and OK) (NatureServe 2016). In fact, several occurrences in Tennessee (and perhaps Georgia), especially along the Big South Fork, are essentially the same community. With very few occurrences remaining, NatureServe (the national authority on the status of rare species and natural communities) lists the status as globally imperiled (=G2) (NatureServe 2016).

A description of the natural condition of this community is defined by the remaining examples in Kentucky. Although these examples are considered high-quality, they're still affected by past and current disturbances and landscape changes (upstream ponding and dams, ditching, draining, nearby logging, erosion, siltation, exotic species invasion, etc.). Soils are silt loam to fine sandy loam mixed with small to large stones. From deep to moderately-deep, the soils are well-drained but also frequently flooded (Byrne et al. 1970). Gravels and cobbles are abundantly exposed at the surface, with occasionally scattered boulders. The gravel/cobble bar is predominately an herbaceous community but shrubs and small trees can occur at high to low densities. Typically, the more frequently flooded and low-lying, flat-level bars have a less woody component.

Lightly scattered shrubs and trees include buttonbush, hazel alder, silky dogwood and sycamore. Prairie grasses such as big bluestem, little bluestem and Indian grass are usually dominant. Characteristic forbs include blue wild indigo, false dragonhead, flaxleaf whitetop aster, Maryland goldenaster, smallhead blazing star, and spiked hoarypea (goat's-rue) (KSNPC 2016). These gravel/cobble bars are so similar to the prairie communities in western regions, they are often referred to as "riverscour prairies" or "riverside prairies".



In Kentucky, Cumberland Plateau gravel/cobble bars provide essential habitat for rare plant and animal species, several found nowhere else outside of this community. At least 14 KSNPC-listed plants have been documented on Cumberland Plateau gravel/cobble bars, with an astounding seven of these being globally rare (KSNPC 2016)! These associated rare plant species (not highlighted below or listed above) include Cumberland sandgrass, mountain witch-alder, northern white cedar, prairie redroot, Rand's goldenrod, Rockcastle aster, sand grape, southern bog goldenrod, sweet-fern, Turk's cap lily, vetchling peavine and Virginia spiraea (KSNPC 2016). Herps associated within these gravel/cobble bars include “copperheads, five-lined skinks, and fence lizards (all in very good numbers in the summer), plus occasional longtail and southern two-lined salamanders, northern water snakes, and queen snakes” (J. MacGregor, KDFWR, personal communication). Also, several rare fish and mussel species are found in the streams where these gravel/cobble bars develop.

Since the time of Euro-American settlement, Kentucky’s wilderness has been disappearing at an alarming rate, with most areas now severely fragmented or completely destroyed. The great human improvements of the Industrial age and the expansion of modern civilization have left humanity with a broken and abused landscape. Rare communities like the Cumberland Plateau gravel/cobble bar hover on the brink of existence (in Kentucky and maybe throughout its range). Steps should be taken to ensure that existing occurrences are protected and efforts to restore stream corridors that support this community should be made. For more information on gravel/cobble bars in Kentucky contact commission ecologists Brian Yahn, (brian.yahn@ky.gov), Martina Hines (martina.hines@ky.gov) or botanist, Tara Littlefield (tara.littfield@ky.gov).



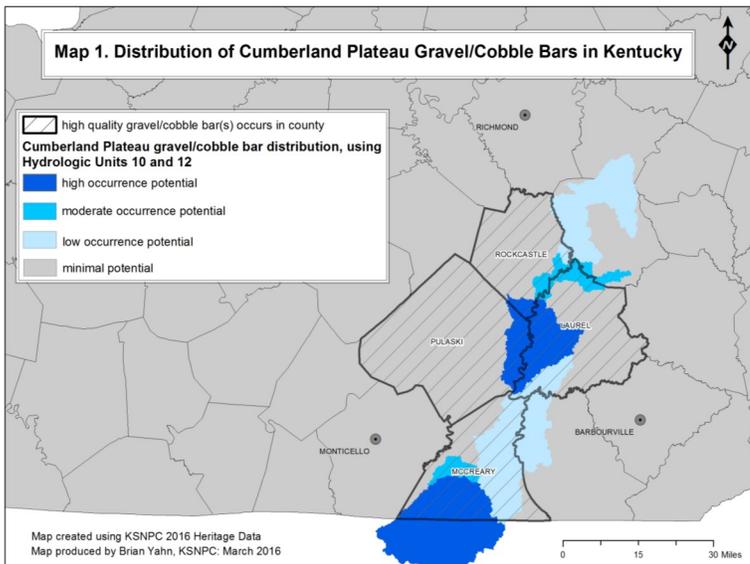
Copperhead pair, Wandering Woods ~ Photo courtesy John R. MacGregor, KDFWR



Copperheads are often encountered on Cumberland Plateau gravel/cobble bars!!



KSNPC Staff Photo by Tara R. Littlefield



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Byrne, J.B, C.K. Losche, C.R. Gass, G.D. Bottrell, P.E. Avers, J.K. Long, and L.G. Manhart, Forest Service. 1970. Soil Survey of McCreary-Whitley Area, Kentucky. U. S. Dept. of Agriculture Soil Conservation Service, In Cooperation with Kentucky Agricultural Experiment Station, Washington DC.



Species associated with Cumberland Plateau gravel/cobble bar:

Cumberland Rosemary

Conradina verticillata

KSNPC Status: State endangered

Flowering Period: May to June

USFWS Status: Federally threatened

General Description: Cumberland rosemary is a small evergreen shrub in the mint family that resembles the popular culinary herb rosemary. It even has a similar smell. The leaves are small and needle-shaped, and the pale purple 2-lipped flowers have dots on the corolla tube throat.

Habitat: Cumberland Plateau cobble/boulder bars (prairies of the river).

Range: Endemic to the upper Cumberland plateau in north central Tennessee and adjacent southeastern Kentucky.

<http://eppcapp.ky.gov/nprareplants/Details.aspx>



KSNPC Staff Photo by Tara Littlefield

Queen Snake

Regina septemvittata

KSNPC Status: None

USFWS Status: None

General Description: The Queen Snake is one of Kentucky's medium-sized, aquatic snakes, ranging from 15 to 24 inches in total length. Overall, the Queen Snake is light brown to gray with a white to pale yellow stripe running along the lower sides. Three faint, narrow black stripes may be visible along the back, with four brown stripes more prominent along its pale belly. Queen snakes feed almost exclusively on soft, newly molted crayfish.

Habitat: Prefers rocky streams, like those where the Cumberland Plateau gravel/cobble bars develop. Often found under large rocks or logs around the edges of these streams or rivers, occasionally basking on branches over water.

Range: Native to the Eastern U.S. and ranging as far north as southern Ontario, Canada and as far south as the panhandle of Florida. It occurs in the central part of Kentucky (north to south), but does not inhabit western Kentucky or most of the Cumberland Plateau in eastern Kentucky.



Photo courtesy John MacGregor, KDFWR

Large flowered Barbara's buttons

Marshallia grandifolia

KSNPC Status: State endangered

Flowering Period: June to July

USFWS Status: None

General Description: Large flowered Barbara's buttons is a perennial herb with solitary white to light blue flowers on a single peduncle (flower stalk). The flower itself has a long hairy tube that is lobed at the end. The leaves are mostly basally disposed, with the lower ones on a long petiole (leaf stalk)

Habitat: Cobble/boulder bars along flood-scoured banks of large, high-gradient Rivers in Kentucky, but also reported from creek banks, bluffs and floodplains elsewhere in its range.

Range: Endemic to the Appalachians in West Virginia and Pennsylvania and the Cumberland Plateau in north central Tennessee and adjacent southeastern Kentucky.



Photo courtesy Ben Moyer



Kentucky's Least Wanted Plants

By Shaun Ziegler, Eastern Regional Preserves Manager

The Kentucky Exotic Pest Plant Council (KY-EPPC) released its 2016 Least Wanted Plant poster in January. Every year since 2000, a non-native invasive plant has been named 'Least Wanted' to raise awareness of the threat the species poses to native habitats. An educational poster is developed by Bernheim Arboretum and Research Forest and KY-EPPC. The poster provides information on an invasive plant and suggests three native alternatives for planting by conscientious gardeners, landscape architects and nursery growers. Copies of the poster are available for download at: <http://www.se-eppc.org/ky/leastwant.htm> or by contacting the commission.

This year's poster features chocolate vine or five-leaf akebia, (*Akebia quinata*). Introduced from Asia in 1845, this fast growing woody vine with small fragrant flowers that are pale purple to chocolate in color was planted as a ground cover and trellis plant. However, like many ornamentals that have been introduced from foreign lands, chocolate vine has escaped yards and gardens and has invaded natural areas. This species can form thick dense growth, climbing over and shading out native plants and decreasing site diversity. Chocolate vine primarily spreads vegetatively, but the seeds can also be carried and dispersed by animals and humans. The poster suggests using native trumpet honeysuckle (*Lonicera sempervirens*) and crossvine (*Bignonia capreolata*) as beautiful native alternatives with similar vining growth habits that will not overtake and crowd out other native vegetation.

Chocolate vine is found across Kentucky, but there are large gaps in distribution information for much of the state. If you know of places where this plant occurs, please go to the Southeast Early Detection Network (SEEDN) website at <http://www.eddmaps.org/southeast/report/index.cfm> and follow the instructions to provide the locations.

Your help in tracking the extent of this invasive vine and other invasive plants provides a clearer understanding of their range and impact in Kentucky. The information you share will also be used to revise the KY-EPPC's list of invasive plants that are most harmful to Kentucky's native biodiversity.



Photo: Leslie J. Mehnert, UConn, www.bugwood.org

Kentucky's Native Alternatives

Trumpet honeysuckle



Photo courtesy, David Taylor

(*Lonicera sempervirens*)

Crossvine



Photo: Mark Pistrang, Univ. of TN Herbarium

(*Bignonia capreolata*)



The Way We Were - 40 years of protecting Kentucky's natural heritage



Stewardship Crew:
Left to right: Joyce Bender, Cindy Campbell, Kris Snyder



Commissioner Ken Jackson



Deborah White, Botanist



Ron Cicerello, Aquatic Biologist

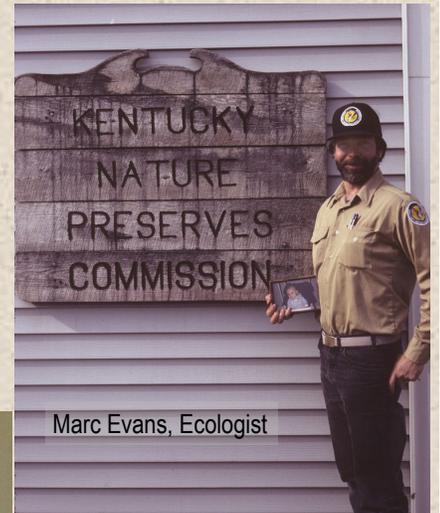


2nd Director, Richard Hannan

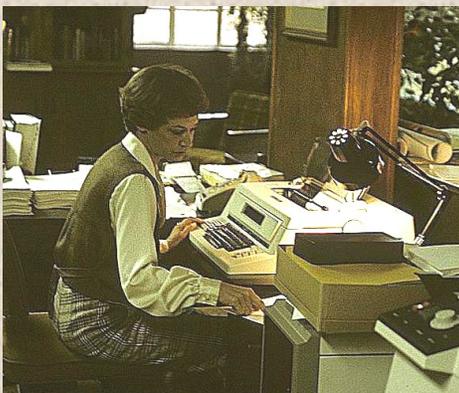


Original Building, 407 Broadway, Frankfort

Commissioner Clara Wheatley



Marc Evans, Ecologist



1st Administrative Secretary, Van Denton



1979 - Using advanced technology



Lane Linnenkohl, Western Preserves Manager



Land Protection Report

By Brent Frazier, Land Acquisition Specialist



Northern cricket frog ~ KSNPC staff photo



After years of hard work, several existing projects are nearing completion.

The Van Sant Tract at Frances J. Palk State Nature Preserve in Pulaski County closed in February and was dedicated at the March commission meeting. The oldest active project the commission had pending - roughly 14 years in the making - has now become a great accomplishment. Frances J. Palk SNP is a 150-acre preserve containing a series of acid seep communities that are very rare in Kentucky.

Final steps are underway to conclude the Carmical Tract at Hi Lewis State Nature Preserve in Harlan County. Barring unforeseen events, we expect to close on the tract and dedicate it during the June commission meeting. Named for the stream that drains the area, the preserve on Pine Mountain supports an extremely rare Pine Barrens community as well as numerous rare plants associated with it.

The Wagner Tract at Bad Branch State Nature Preserve in Letcher County has closed and was dedicated at the commission meeting in December 2015. This addition brings the total acreage of Bad Branch SNP to 2,785 acres, which includes Bad Branch Gorge, a forested gorge with a 60-foot waterfall tumbling over sandstone cliffs on the south face of Pine Mountain. This preserve protects one of the largest concentrations of rare and uncommon species known in the state. Species documented at Bad Branch SNP include the sharp-shinned hawk (*Accipiter striatus*), long-tailed shrew (*Sorex dispar blitchi*) and American black bear (*Ursus americanus*).

American Black bear, Pine Mountain ~ Photo courtesy Dave Baker, KDFWR

Natural Area Registry Spotlight

We shine the spotlight on the Crady Creek Hill Prairies Registered Natural Area.

At the time of settlement, the lands of Kentucky harbored large native grasslands and open woodland ecosystems spanning great swaths of the western two-thirds of the state. Today, only small remnants of this vast and diverse ecosystem remain. Crady Creek Hill Prairies (CCHP) located in Larue County is a high quality example of such a native grassland remnant. The glade areas (i.e., slabs of exposed bedrock with very dry soils) are less developed at CCHP and intermixed within the prairie areas. Limestone prairies and slope glades in Kentucky are considered state endangered and threatened, respectively. Crady Creek Hill Prairies include three prairie and glade openings with the central and largest being the most notable, and the name sake for the registry. A mature and rich limestone forest also occurs to the south of the largest opening and has been included in this registry due to its age and quality.

CCHP supports a multitude of unique prairie and glade species that have become less common on the landscape as agriculture and development have increased. Purple prairie-clover (*Dalea purpurea*), is tracked by Kentucky State Nature Preserves Commission as a species of Special Concern, and it has been found at CCHP. This population is significant as it is the first documented in Larue County. This rare plant has been found at only 20 locations in five counties. There is also potential for other rare prairie or glade species to occur within this native grassland.

The registry program is a voluntary, non-regulatory program designed to provide landowners with awareness of the ecological significance of a special piece of land and encourage them to provide for its sound stewardship. To be eligible for registration, a property must contain habitat for plants or animals that are rare, have declining populations in Kentucky, or contain an outstanding example of a Kentucky ecological community such as an old growth forest, wetland, glade or prairie.



Aerial of limestone hill prairie ~ KSNPC Staff photo



The Director's Notes

By Don Dott, Executive Director

Observations:

July 17, 2016 is the 40th anniversary of the Kentucky State Nature Preserves Commission. It calls for a celebration and a look back at what the commission has been able to accomplish. Yet, before “tooting our own horn”, I must begin by recognizing that we have many partners in conservation - other state and federal agencies, non-profit organizations, land trusts, citizen advocacy groups and individual citizens. All these and more have been working to protect our wildlife and our wild lands. We cannot and do not do it alone.

A few of KSNPC's more outstanding recent accomplishments include:

- 63 impressively diverse state nature preserves have been dedicated across the state. They protect 239 listed or rare species and 23 high quality natural communities. Over half the preserves have trail systems for visitors to explore and experience Kentucky's exceptional natural lands.
- KSNPC botanists were recognized by the U.S. Fish and Wildlife Service in 2015 for over 20 years of work to locate and monitor populations of federally threatened white-haired goldenrod (*Solidago albopilosa*). Due to the botanist's work and protective actions by the Daniel Boone National Forest, white-haired goldenrod was proposed to be delisted in September 2015 and it should become final in 2016.
- Short's goldenrod (*Solidago shortii*), almost a Kentucky endemic, except for a single population in Indiana, is halfway to its recovery goals due to the combined work of commission botanists and the stewardship branch. Prescribed fire and other techniques have been key to restoring its open barrens/glade habitat at Blue Licks State Park Nature Preserve.
- Eggert's sunflower (*Helianthus eggertii*) was removed from listing under the Endangered Species Act in 2005, due in part to commission botanists discovering more populations of this bright yellow sunflower than were previously known.
- One of only three native clovers known from the Commonwealth - appropriately named “Kentucky clover” (*Trifolium kentuckiense*), a state endemic, was a co-discovery by a commission botanist and a wildlife biologist at the Kentucky Department of Fish and Wildlife Resources (KDFRW).
- A new population of one of Kentucky's rarest mussels, the clubshell (*Pleurobema clava*), was found in fall 2015. Sixteen individuals showing evidence of reproduction were located in the Green River.

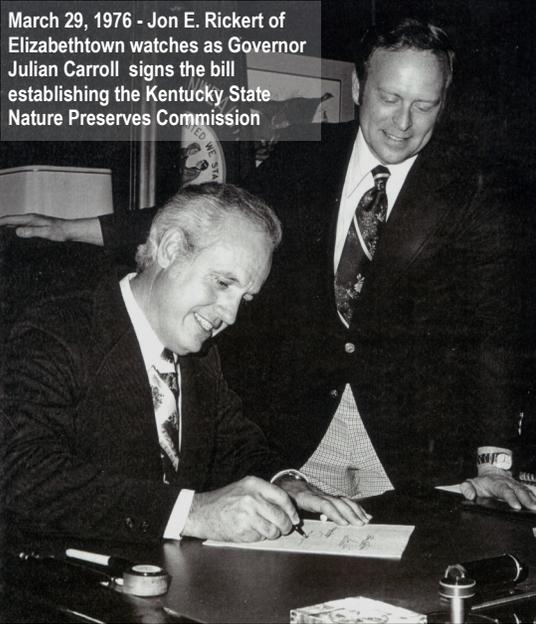
But along with successes, come challenges:

- To protect Black Mountain, a biodiversity “hotspot” and Kentucky's highest elevation, in 1999, the Commonwealth purchased the timber rights above the 3600' and the uppermost coal seam. But logging and mineral development activities still conducted on the mountain threaten the loss of a globally rare forest community, Cumberland Highlands forest, which is found only in Kentucky.
- Freshwater mussels are still the most at-risk group of organisms in the U.S. We have seen the collapse of what were considered stable mussel communities in Horse Lick Creek, Marsh Creek and the Little South Fork.
- Once common in blue fall skies across the U.S., Monarch butterflies have been proposed for federal listing as threatened due to a precipitous decline. Other pollinators, from the (non-native/European) honey bee to native bee species are likewise in decline. At least 4 species of formerly common bumblebees are threatened, and two species are feared to be on the brink of extinction. A new “silent spring”?



Photo courtesy Barry Howard





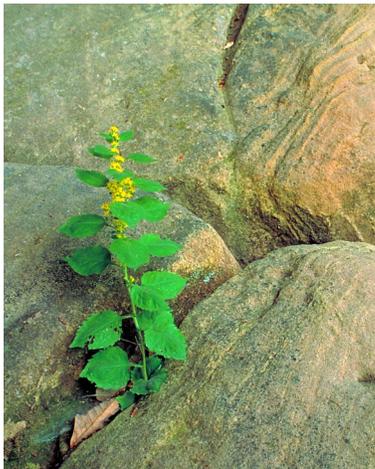
March 29, 1976 - Jon E. Rickert of Elizabethtown watches as Governor Julian Carroll signs the bill establishing the Kentucky State Nature Preserves Commission

The 40th year for the Kentucky State Nature Preserves Commission warrants a bit of reflection. The statute creating the commission passed in 1976, and the 70's were *the* decade for environmental consciousness and action. The 70's saw passage of the federal Endangered Species Act and historic changes to the federal Clean Air and Clean Water Acts. The public support that made these environmental advances possible was driven by several galvanizing events. Our national symbol, the bald eagle was disappearing from the skies. Those same skies were being polluted by black plumes billowing from thousands of smokestacks. The Cuyahoga River in Cleveland literally caught fire and helped spur the environmental conscious of the 1970's.

Today, bald eagles are no longer a rare sight and uncontrolled pollution is largely eliminated. Yet new concerns have taken their place, due to the increasing number of humans on the planet and the growing demands we put on its finite resources. The escalating rate of species extinctions, a massive swirling vortex of plastic in the Pacific Ocean and a hypoxic dead zone in the Gulf of Mexico, the size of Connecticut and Rhode Island combined, would seem to be equally egregious galvanizers. But perhaps they are too far out of sight. Climate change is indisputably the overarching challenge to our biological resources - the plants, animals and unseen multitudes of organisms that keep our ecosystems functioning. In eons past major changes in the earth's climate forced species to move north or south, east or west, but these changes typically occurred over thousands of years or more. But humans have interfered with the "escape

valves", if you will, by extensively altering the landscape. From superhighways cutting off migratory routes, to urban/suburban zones and even intensive agricultural practices, our activities prevent or impede movement for many plants and animals. Monarchs and polar bears, dead zones in our fisheries, loss of pollinators in our vegetable gardens - these are today's galvanizers calling us back toward a truly sustainable path.

We cannot go back to what existed before. We must be mindful of the consequences of our actions and advance human society in a manner that Wendell Berry, Prince Charles and many others have advocated: living sustainably, in harmony with the ecosystems of the only planet we have. In the past humans engaged in much worse practices and got away with it - for a time. Bison and passenger pigeons were slaughtered for sport, streams were used as sewers, and on and on, but our sheer numbers have eliminated the ability to act so carelessly. We must look ahead to see where our actions will lead us, to make sure we do not end up in a place we don't want to be. We can do it - working together toward a common good for all on *our only* planet!



White-haired goldenrod ~ Photo: Dr. Tom Barnes



Short's goldenrod ~ KSNPC Staff photo



Eggert's sunflower ~ Photo: Charlie Lapham, KY Native Plant Society



New clover, *Trifolium kentuckiense*, Woodford County ~ Photo: Joe Lacefield, KDFWR



Clubshell in Green River ~ KSNPC Photo: Mike Compton



Sun., April 17, 2:00 - 3:00 p.m. Join ecologist Brian Yahn at Cove Springs Park in Frankfort for a native wildflower hike as part of the Explore Nature Series, a Frankfort Parks and Recreation Department partnership with Canoe KY. The trail is rated as "easy" and may exceed one mile. More info at <http://www.canoeky.com>.

Sat., April 23, 10:00 a.m., Central Time. Earth Day weekend, ecologist Brian Yahn strikes out again to celebrate the commission's 40th anniversary with a hike at Brigadoon State Nature Preserve in Barren County. Come prepared for a one and a half to two hour journey on a moderately strenuous trail through ridge and valley terrain. Attendance is limited to 20 participants. Registration is required, but no cost is involved. Please contact the commission office (502) 573-2886 to sign up. DEADLINE for registration is April 21.

** More events celebrating our 40th anniversary are being planned. Please check our [online calendar](#) for an up-to-date list. Most events require preregistration. View our complete [events calendar](#).

Join the Friends of Kentucky Nature Preserves Today!

friendsofkynaturepreserves.org



KENTUCKY STATE NATURE PRESERVES COMMISSION

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Kentucky State Nature Preserves Commission Quarterly Public Meeting

June 9, 2016
Site to be determined

Kentucky State Nature Preserves Commission
801 Teton Trail, Frankfort, KY 40601-1403
502-573-2886

naturepreserves@ky.gov
<http://naturepreserves.ky.gov>

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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 preserve 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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