

Naturally Kentucky

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KSNPC Latest News: Kentucky Educational Television is the recipient of the 2011 Biological Diversity Protection Award. The program *Kentucky Life* is the first of its kind to be given the commission's highest recognition (complete story on Page 5).

☞ *Conserve Kentucky!* KSNPC Director Don Dott provides the latest news on this long-running effort to conserve more land in Kentucky (complete story on Page 10).

☞ The commission is pleased to start the new year with two new Registered Natural Areas—Reynolds Prairie in Garrard County and Camp Burnamwood in Estill County (complete story on Page 10).

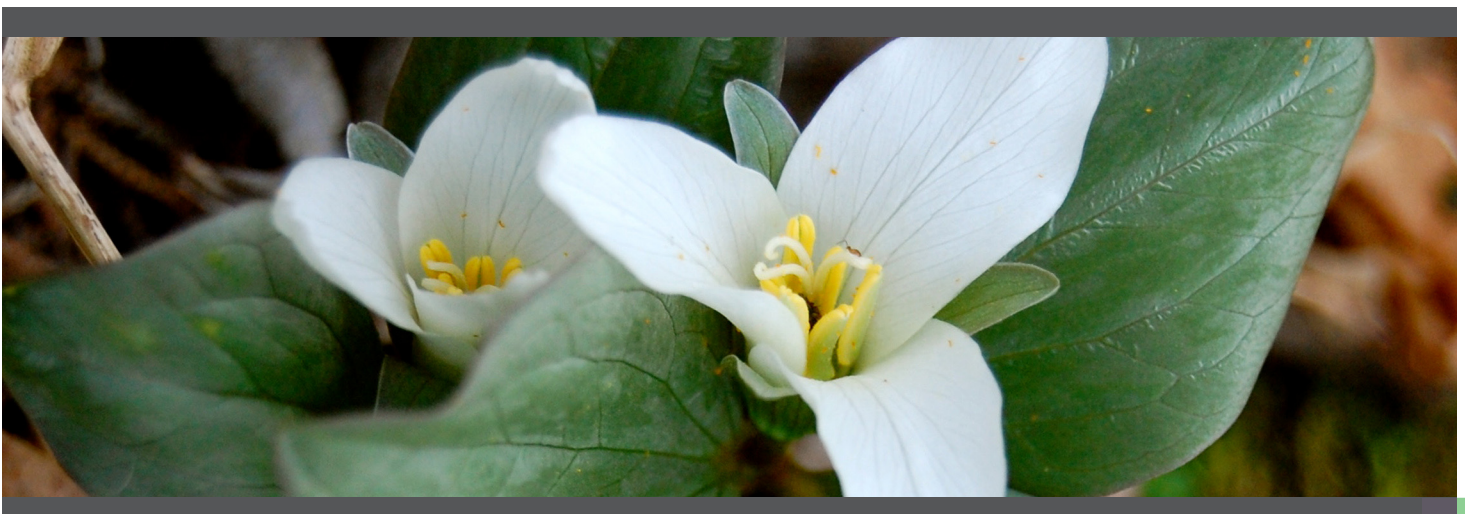
☞ Would you like to name a species? Now is your opportunity to put your imagination to the test! (details on Page 9).

☞ Spring prescribed fire season is underway. Learn about our planned burns and see a picture from a recent burn on Page 9.

☞ A Distributional Atlas of Kentucky Fishes, KSNPC Scientific and Technical Series Number 4, is once again available. This popular atlas was originally published in 1986 and has long been out of print. The 2012 reprint was funded by the U.S. Fish and Wildlife Service, Kentucky Ecological Service Office. Visit our online bookstore to order a copy today - naturepreserves.ky.gov/pubs/Pages/bookstore.aspx.

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Coming Home

By Michael Compton, Aquatic Zoologist

As a Chicagoland native, returning to Kentucky doesn't necessarily qualify as coming home. However, having spent many years working for the Kentucky Division of Water and being a graduate of Eastern Kentucky University, I have grown extremely connected to the Commonwealth. I've been to every county in the state and explored nearly a thousand streams across its diverse landscape. Therefore, when I was selected to carry the torch as aquatic zoologist for the Kentucky State Nature Preserves Commission (KSNPC) last summer, I was honored and thrilled to be returning to a place that I call home.

With Kentucky as my home, it must be maintained and nurtured with the utmost thought and care. To quote Aldo Leopold, "We abuse land because we see it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect." I hold these words to be true; therefore, I would like to share some of the wonderful things I love and respect about Kentucky and will tell you of some of my favorite

aquatic organisms and places.

Kentucky ranks fourth when it comes to aquatic biodiversity, with only Alabama, Tennessee and Georgia having more species of crayfish, fish and freshwater mollusks. Kentucky has over 245 species of native fish, over 100 species of freshwater mussels, over 70 species of aquatic snails and over 50 species of crayfish. And these are only the more recognizable groups; there are thousands and thousands of aquatic invertebrates and insects, and hundreds of species that exist that we don't even know about yet, all within Kentucky.

As an aquatic zoologist one of my job responsibilities is to locate and monitor

the rarest of these species, which often requires me to snorkel the streams and rivers. I particularly enjoy doing this when I am in pursuit of members in one of my favorite groups, the darters. Kentucky has over 70 species of these small benthic (bottom dwelling) fishes. Based on their body shape and fin placement, darters resemble a miniature perch or walleye, and are in the same Percidae (perch) family. However, what distinguishes this group besides their small stature are the magnificent colors and breeding adaptations of male individuals. For example, the ashy darter (*Etheostoma cinereum*) is a rare species in the Cumberland River drainage that exhibits red lips, charcoal-colored strips along its side and an elongated



Arrow darter ~ photo by Matt Thomas



second dorsal fin. Another example is the Kentucky darter (*E. rafinesquei*) that occurs in the Green River in central Kentucky, which shows off its brilliant colors of red, black and turquoise against a straw background. Consider the guardian darter (*E. oophylax*) in western Kentucky that develops little nodules (they actually look like lollypops) that mimic eggs on the first dorsal fin. There is even the common, aptly named,

as the Appalachian Highlands), where we find the highest elevations (Black Mountain at 4,145 feet) and the steepest valleys. The streams in this region cut through Pennsylvania age rock (~300 mya), leaving beautiful watersheds with grand gorges and spectacular waterfalls. Specifically, Red River Gorge and Cumberland Falls are two of the most notable in the state. However, beyond these places are others like

downstream, and I approach the falls, I hear the drops of water leaving their higher perch, splashing on the rocks below in the background. It is in these moments when I understand what Aldo Leopold meant by 'land as a community to which we belong.' I feel very fortunate to call this land my home and to be one small part of the community.

So whether you find yourself in the



Kentucky darter ~ photo by Matt Thomas

rainbow darter (*E. caeruleum*) that is found throughout most of the state and displays fabulous colors and patterns of red, orange, blue and black across its body and fins. For these darters and many of the other fishes in Kentucky, such a variety of colors, patterns and adaptations exist for the sole purpose of attracting females.

One of the reasons for the high level of biodiversity in Kentucky is the state's varied topography, which changes greatly as one travels east to west providing many unique habitats for species. When Daniel Boone first entered Kentucky, he did so through what is now known as Cumberland Gap, near Middlesboro (Bell County). It is here, as in most of eastern Kentucky (also known

Bad Branch and Dog Slaughter Creek, two small streams that offer gorgeous waterfalls off the beaten path and provide a beauty and tranquility that rivals any place else. Bad Branch is a state nature preserve located in Letcher County off of Kentucky Highway 119 and Dog Slaughter Creek is a small stream in the Daniel Boone National Forest that can be accessed off a trail that parallels the Cumberland River (accessed via Cumberland Falls State Park in Whitley County). It is when walking along these trails I truly feel I am 'home,' taking in the sights, sounds and smells of the woods and water. The gentle breeze that passes through hemlocks, mountain laurel and magnolias brings the smell of blossoms and fresh leaf litter. As I hear the rushing water make its way

mountainous region of eastern Kentucky, the rolling hills of the bluegrass, or the lowlands of western Kentucky, there are beautiful places and amazing species to witness and admire. I encourage you to take your family, take a friend, or explore by yourself, but explore, and get to know your home a little better so that you may love and respect this beautiful land that we call Kentucky. 🌿



AQUATIC STUDIES of the South Fork Kentucky River

By Pavan Padapati , Volunteer*

The South Fork Kentucky River watershed contains the most important repositories for aquatic biodiversity. This watershed possesses some of the best water quality in the Kentucky River system (Kentucky Water Resources Research Institute, 2002). For this reason, many rare and/or declining freshwater fish and mussel species, such as the Kentucky arrow darter (*Etheostoma sagitta spilatum*) and the snuffbox (*Epioblasma triquetra*) inhabit this system. However, segments of nine streams in this system have been listed as impaired, or only partially supporting water quality standards under the U.S. Clean Water Act (Kentucky Division of Water, 2008). Ryan Evans, a former aquatic zoologist for KSNPC, conducted this study in order to clarify the relationship between impacts on the quality of habitat for freshwater mollusks and their assemblage distribution in the South Fork Kentucky River system.

Evans' study consisted of two phases of sampling. The first phase was a qualitative survey of 77 sites in the watershed used to characterize mussel species richness and relative abundance. Habitat quality at each site was evaluated by analyzing factors such as riffle quality and quantity, substrate quality, siltation, and riparian quality. Evans also typically collected representative specimens of freshwater snails at mussel sampling sites. The second phase consisted of measuring densities of mussels using shallow bed excavation in fixed quadrat samples. A total of 25 freshwater mussel and 15 freshwater snail species were reported during this study. As drainage area increased, so did the number of mussel species. The South Fork Kentucky River, which contains an estimated 9.5 mussel species, had the highest mean species richness of any stream surveyed. Nevertheless, statistics comparing encounter rates between the Red Bird River/Goose Creek tributaries and the South Fork Kentucky River indicated that areas below impaired tributaries had depressed mussel densities. The Red Bird River, a stream that drains into the South Fork Kentucky River, has experienced a 78 percent decrease in mussel species richness since the last survey of the region. Despite this, the stream contains the best remaining mussel populations of any tributary surveyed in the South Fork Kentucky River watershed.

Quantitative sampling showed that the freshwater mussel communities were fairly diverse, although mussel recruitment (reproduction and survival of young) was low for most species surveyed. Within the basin, three groups of mussel assemblages were found. Generalist assemblages, which consisted mostly of fatmucket mussels (*Lampsilis siliquoidea*), typically occurred



Mucket ~ photo by Guenter Schuster / Ron Cicerello

within extreme headwater environments and depositional, lower-quality habitats of higher order sections of the basin. Spike-threeridge assemblages, highly varied groups dominated by spike (*Elliptio dilatata*) and threeridge (*Amblema picata*) mussels, were found across different longitudinal areas of the Red Bird River and the South Fork Kentucky River. Finally, mucket-medium river assemblages, dominated by rare mussels and mucket (*Actinonaias ligamentina*), characterized the mussel communities of stations above the reach of Buffalo River and in the lower sections of the South Fork Kentucky River.

This study suggests that depressed densities and diversity of the mussel fauna within the South Fork Kentucky basin are caused by water quality and habitat conditions, rather than a net hydrological alteration. It is evident from observations and water quality data that the South Fork Kentucky River has been degraded, which can be attributed to coal mining, agriculture and other land use activities within the watershed over the past century, which has greatly impacted the mussel fauna. Currently, the South Fork watershed serves as the important refuge within the Kentucky River system for the little spectaclecase (*Villosa lienosa*), snuffbox and the last known stream location for the rabbitsfoot (*Quadrula cylindrica cylindrica*) mussels. Habitat management efforts that focus on water quality and habitat protection efforts in small tributary streams could greatly improve fish and mussel fauna in the South Fork Kentucky basin. ☒

* Pavan is a recent Centre College graduate with a Bachelors of Science in Biology. Currently he is assisting the commission with data management, herbarium archiving and preserve monitoring. He will be starting a graduate degree in forestry at the University of Kentucky this fall.



Kentucky Life Receives the 2011 Biological Diversity Protection Award

By Leslie Isaman, Administrative Specialist

The Kentucky State Nature Preserves Commission gave the first Biological Diversity Protection Award to Dr. Tom Barnes in 1996. Since then there have been 14 individuals recognized by the commission as having made a significant contribution to the field of biodiversity protection and education. No agency, company or media organization has been selected to receive the commission's highest accolade until now.

The Kentucky Educational Television (KET) show, Kentucky Life, is the first media company and program to be honored with the 2011 Biological Diversity Protection Award. Kentucky Life is a well-known and successful program within the KET network, providing environmental education to millions of viewers across the Commonwealth and beyond. Kentucky Life has featured the state's biodiversity and amazing natural areas since it began in 1995. Many of these programs have spotlighted the lands, staff and conservation mission of KSNPC. A link to nearly 30 Kentucky Life programs can be viewed online from the KSNPC website: naturepreserves.ky/aboutus/Pages/videos.aspx. Recent segments have included moths and butterflies, prescribed fire and several of our western preserves.

The producer/director of the Kentucky Life programming is

Brandon Wickey who was quoted as saying, "Dave and I are extremely proud to accept this award on behalf of KET and Kentucky Life; we've really enjoyed the opportunity to educate the public about our state's wealth of biological diversity. The true honor, though, is getting to work with the talented and dedicated personnel of the Kentucky State Nature Preserves Commission; their passion for preserving our state's native flora and fauna, and for providing places for the public to interact with them, is contagious. Kentucky is a better place due to the work of the commission."

Dave Shuffett, the current host of Kentucky Life accepted the award along with Wickey and had this to say, "What an honor for me. We've worked closely with the nature preserves commission over the years and I've come to understand the great importance of what this agency does. We're very lucky to have those boots on the ground, seeking out and protecting our last remaining wild places."

The Biological Diversity Protection Award recognizes a person, persons or organization that has made a significant contribution to the discovery and protection of Kentucky's biological diversity. 🦉



Brandon Wickey (L) and Dave Shuffett ~ photo by Shauna Dunham, KSNPC



In the Spotlight: *Appalachian Seep/Bog Communities of Pine Mountain*

In Kentucky, one of the most unique and rarest types of wetlands, the Appalachian seep/bog, is found along the crest of Pine Mountain (KSNPC-listed as state endangered). Similar Appalachian seep/bog communities also occur along ridges of the Cumberland Plateau and a few are found along alluvial bottoms of Appalachian streams in the Cumberland Mountains region, but these are slightly different wetlands and not the focus of this article. Outside of Kentucky, headwater mountain bog communities occur scattered along the summits of the Appalachian Mountains, with similar types found from West Virginia to Georgia. Limited in distribution and size and occurring under specific geology, soils and hydrology, most types of mountain bog (or fen) communities in the southern Appalachians are rare (see [NatureServe Explorer](#) online; NatureServe is the international authority on the status of rare species and natural communities).

Along the upper elevations of Pine Mountain, the Appalachian seep/bog is a small and distinctive type of wetland community that has saturated soils (usually year-round) with characteristic beds of wetland ferns, sedges, forbs and mosses (sometimes sphagnum moss). This community has a dense herbaceous ground layer with few trees or shrubs and is found just below the mountain crest (within small basins where a stream begins). These headwaters are poorly drained and saturated due to flat or minutely sloped topography with sluggish water movement. As a result, water can accumulate through precipitation, groundwater seepage and surface runoff. Groundwater and surface runoff supply low nutrient inputs, resulting in slight to moderately acidic soils that are typically weakly to moderately minerotrophic and weakly organic. If present, the midstory and shrub layer is usually sparse and can include red maple, giant rhododendron and sourwood. The ground layer is distinctive with good populations of cinnamon fern, jewelweed, rough-leaved goldenrod, broadleaf arrowhead, golden ragwort, caric sedges and often carpets of several moss species. Many of the plants occurring in the ground layer are restricted to high-quality wetlands in Kentucky.

The small, boggy openings along Pine

Mountain provide suitable habitat for unique wetland-dependent animals and plants that are limited in distribution in Kentucky. A few of the unique or rare plant species include American golden-saxifrage, Carolina bugbane, and kidneyleaf twayblade. Unique or rare animals include Appalachian brown butterflies, gray petaltail and tiger spiketail dragonflies, and upland burrowing crayfish (please see below for additional species in our species-highlight section). The Pine Mountain bogs are a Kentucky treasure, supporting one of the most sensitive wetland complexes in the state.

Many of these wetlands have endured a history of disturbance, but in many cases, their natural quality has suffered. Often early homesites were on or adjacent to these wetlands since they were relatively flat areas, natural openings in the forest and provided a dependable water source. A few of these historic homesites have been documented on [Blanton Forest State Nature Preserve](#). Mountain bogs have

also been disturbed by logging, which has detrimental effects causing soil erosion, hydrologic changes and invasion by exotic species. Today, another concern is how sensitive these wetlands are to much less intensive disturbances. Even bogs protected from developments and logging on public land can decline. Human trails (by either foot or ATV) and wildlife trails that lead to or through bogs (and any additional trampling activities) can easily transport exotic plants into the bog community. Recent surveys have shown Japanese stilt grass has invaded and displaced native wetland species in many of the bogs on the mountain. KSNPC recommends providing

the most careful protection to the remaining bogs on Pine Mountain as there are only a few handfuls remaining, some of these already degraded and all are extremely sensitive and very small (usually less than two acres).

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Appalachian seep/bog on Pine Mountain dominated by rough-leaved goldenrod (autumn).
~photo by Thomas G. Barnes



Eastern Red Damsel *Amphiagrion saucium*

KSNPC Status: Endangered

USFWS Status: None

General Description: Small damselfly with mostly red abdomen belonging to the family Coenagrionidae.

Habitat: Spring-fed bogs or pond margins, sometimes with a deep peat layer, or seeps with a scattering of *Sphagnum* and algae over sand.

Flight Season: May to September.

Range: Eastern Canada and United States.

Reason for Protection Status: Habitat has been degraded and is limited in Kentucky; only three extant populations are known in the state.



Photo by Ellis Lauder milk, KSNPC

Golden Club *Orontium aquaticum*

KSNPC Status: Threatened

USFWS Status: None

General Description: This aquatic plant has elliptic shaped leaves with parallel venation that narrows to a stout petiole with a dilated base; leaves are all basal. The flowers are in a spadix (an elongated axis with flowers embedded) and the flowers are yellow. The spathe is a tubular sheath surrounding the base of the spadix.

Habitat: Seeps and bogs in the mountains; swamps and shallow water on coastal plain; and the backside of cobble bars or stagnant water on edges of creeks in river gorges.

Flowering Period: Early April to late May.

Range: Massachusetts to Florida, west to central New York, southwestern Pennsylvania, eastern Kentucky, western Pennsylvania, and Louisiana.

Reason for Protection Status: Habitats have been degraded due to hydrologic changes and habitat destruction.



KSNPC Photo by Kurt Emmanuele, TNPS

Baltimore Checkerspot *Euphydryas phaeton*

KSNPC Status: Watch list

USFWS Status: None

General Description: One of our most brilliantly colored butterflies. Upperside of wings is predominantly black with red-orange crescents and creamy white spots. Underside of wings is more boldly patterned with larger red-orange and white crescents and spots intermixed with less black. Wingspan up to 2.75 inches.

Habitat: In Kentucky, the Baltimore checkerspot is typically found in bogs, seeps, wet ditches or marshes where its caterpillar food plant, turtlehead (*Chelone glabra*), is found.

Flight Season: Late May to late June

Range: Locally distributed in most of eastern North America with populations as far west as Kansas and Oklahoma.

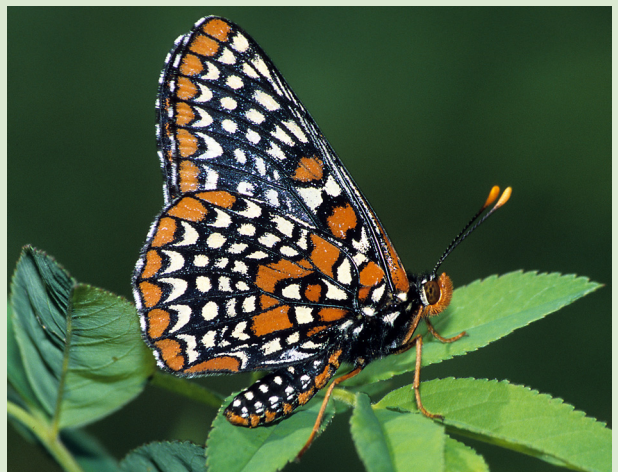


Photo by Ellis Lauder milk, KSNPC



Invasive Species Highlight: *Sweet Autumn Clematis*

Named Kentucky's Least Wanted Plant of 2012

Sweet Autumn Clematis *Clematis terniflora*

Sweet autumn clematis has the dubious honor of being named Kentucky's Least Wanted Plant of 2012. Each year, an exotic invasive plant is named "Least Wanted" to raise awareness of the threat it poses to native biodiversity. A poster is developed by Bernheim Arboretum and Research Forest and the Kentucky Exotic Pest Plant Council (KY-EPPC) for that year's "winner." The poster also suggests native alternatives for planting by conscientious gardeners, landscape architects, and nursery growers.

Description: a climbing, semi-evergreen vine in the buttercup family. It has opposite leaves that are compound with 3-5 leaflets with their margins entire. The shiny, leathery, oval to elliptic leaflets are each 2-3 in. (5-7.6 cm) long. Fragrant, four-petaled white flowers appear in the late summer through the fall. Its seed heads have long, silvery-gray, feather-like hairs attached.

Origin: A native of Japan, sweet autumn clematis was introduced for use as an ornamental and is currently available commercially in the U.S. This non-native is a very prolific seed producer and has the potential to escape cultivation and readily invade natural areas.

Extent in Kentucky: Becoming more common throughout the state. It is recorded in 15 counties, but is likely more widespread. It is found in a variety of habitats; frequently near abandoned home sites, along roadsides, fencerows, floodplains, forested wetlands, moist woodlands, thickets, lawns and gardens.

Impact: Displaces and shades out native vegetation. Its twining vines can climb up trees, eventually killing them. It can also form a dense ground cover and choke out competing native plants. It is spread primarily by being planted as an ornamental.

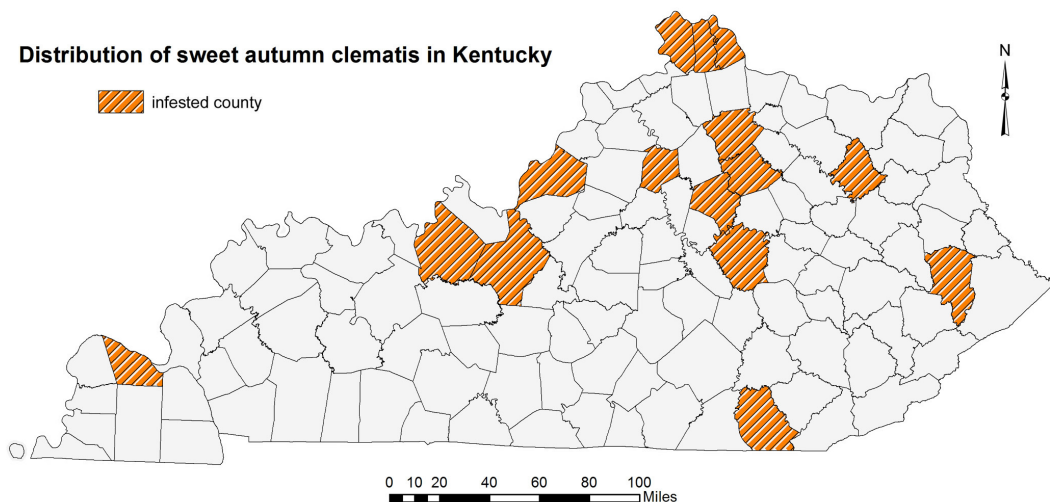
Management: The best management is to avoid a future problem by preventing its introduction into new areas. Chemical control methods include foliar applications of two percent triclopyr (Garlon 3A) in water and cut-stump treatments of 15 percent triclopyr (Garlon 4) in a penetrant oil. For a cut-stump application, be sure to locate the root crown; applying a herbicide to a trailing vine will only kill the distal part of the plant. Do not apply if rainfall is expected within two hours following application. For populations of this plant along streams be sure to use herbicide that is labeled for aquatic use.

Suggested Native Alternatives: Three vines, all native to Kentucky, that conscientious gardeners might consider as an alternative to planting sweet autumn clematis are passionflower (*Passiflora incarnata*), dutchman's pipe (*Aristolochia macrophylla*) and virgin's bower (*Clematis virginiana*).

Additional Information: Visit plants.usda.gov/java/profile?symbol=CLTE4 to learn more



Jeff McMillian © USDA-NRCS PLANTS Database



data from The Illustrated Atlas of Vascular Plants in Kentucky by Julian Campbell & Max Medley, March 2009,
the Southeast Exotic Pest Plant Council EDDMaps Web site, the USDA PLANTS database,
and field observations by KSNPPC personnel
~ blank counties are not necessarily free of infestations ~
map created January 2012 by Byron W. Brooks



NAME a Species

By Deborah White, Lead Botanist and Natural Heritage Branch Manager

It's bad enough to be endangered or threatened, or even special concern, but to not have a name? That's the case for many rare species. They have scientific names but lack a common name. How often do you say *Ursa americanus* for black bear or *Dodecatheon meadia* instead of shooting

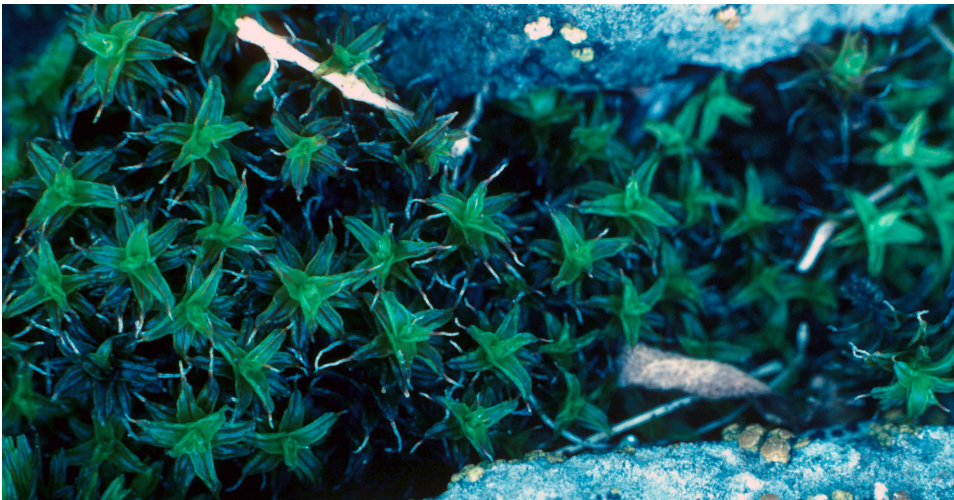
star? A common name can give a species personality and tell a little about the way it looks or behaves. If you look at the [Kentucky species list](#) there are mosses that are still simply called "a moss." Well, we're ready for a more descriptive common name. Would you like to name a species? Submit

your ideas to Deborah.White@ky.gov or Tara.Littlefield@ky.gov and be creative!

Tortula norvegica

Plants medium-sized to fairly robust, in dense, dull, brownish-green to red-brown tufts. Leaves erect, folded lengthwise and somewhat twisted when dry, spreading to curved back when moist, oblong in shape ending in a long, slender, red, shiny, nearly smooth awn (a slender pointed projection, like a bristle); margins of the leaves are rolled in at the edges at the base.

This moss occurs at higher elevations associated with rock outcropping. The genus name, *Tortula*, refers to the teeth that are twisted together at the top of the capsule, as if someone grabbed all of them together at the top and twisted.



A moss ~ photo by Allen Risk

Spring PRESCRIBED FIRE Season

By Byron Brooks, Environmental Technologist

The Stewardship Branch is in full swing preparing for spring prescribed fire season. Burn units have been prepared at Blue Licks SPNP in Robertson County, Eastview Barrens SNP in Hardin County, Raymond Athey Barrens SNP in Logan County, and Bouteloua Barrens SNP in Lincoln County. A total of six units have been prepped. We're hoping for good weather, so keep your fingers crossed for a safe and successful burn season!



Raymond Athey Barrens SNP ~ photo by Zeb Weese



LAND PROTECTION Report

By Brent Frazier, Land Protection Specialist

The commission has several older land acquisition projects that are showing renewed progress. The oldest of the projects is the Van Sant Tract at Frances Johnson Palk SNP in Pulaski County. The owners have corrected the trust issues that halted this acquisition in 2007. We are now purchasing two tracts, one of which was surveyed in our earlier purchase attempt. The two tracts would add approximately 127 acres to the preserve. This preserve contains a series of acid seep (wetland) communities that are very rare in Kentucky. These small wetlands with low pH are formed by groundwater seepage found at the headwaters of several streams. Although much of the preserve is dominated by upland forest, over 70 species of plants occur within the seeps, with several of these considered rare.

A large acquisition along Laurel Fork in Whitley County has been completed by Kentucky Natural Lands Trust (KNLT). A neighboring tract was also purchased to provide sufficient access, a concern that slowed the acquisition process for nearly

a year. We are currently working with the Kentucky Department of Fish and Wildlife Resources on purchasing this tract from KNLT. These tracts contain significant natural areas that include federally listed mussel records and globally rare species including the rock harlequin (*Capnoides sempervirens*), Cumberland arrow darter (*Etheostoma sagitta sagitta*), and blunt mountainmint (*Pycnanthemum muticum*). These tracts are also part of one of the largest forest blocks in the state.

Acquisition of the Smith Tract at Bad Branch State Nature Preserve in Letcher County is still pending due to uncertainty over the mineral rights. The mineral title opinion covered thousands of acres and it was unclear if this small tract was included or not. This tract would expand protection into the Presley House Branch watershed. Threatened and/or rare species that have been found in the watershed close to the preserve's current boundary include several plants, two crayfishes and two small mammals.

The tracts at Apple Valley Glade in Bullitt

County are currently being surveyed. This acreage would provide protection for the Kentucky gladecress (*Leavenworthia exigua* var. *laciniata*), a rare plant that is only known to exist in Jefferson and Bullitt counties and nowhere else in the world. If we are successful with this acquisition, the tract will be dedicated as a new state nature preserve.

The commission is also pleased to start the new year with two new Registered Natural Areas (RNA)—Reynolds Prairie in Garrard County and Camp Burnamwood in Estill County. The RNA program allows landowners to be recognized for sound stewardship and awareness of the ecological significance of their property. Reynolds Prairie contains little bluestem (*Schizochyrium scoparium*) as well as a diversity of other grassland species. Camp Burnamwood is an exceptional example of the upland native forests of the eastern Bluegrass region. We appreciate the landowners for formally recognizing the important natural qualities of their properties by registering them with the commission. 🌿

Director's Notes

By Don Dott, Executive Director

Conserve Kentucky! Doesn't that have a heart-warming, even inspirational sound to it? It is, of course, what the commission, various other state and federal agencies, land trusts, nonprofit organizations and numerous individuals have been struggling to achieve for many years. But a concerted effort by the many partners working for the conservation of our state is re-invigorating the cause, and it's gaining new momentum.

About five years ago, the Kentucky Conservation Committee (KCC) lobbied the General Assembly to create a task force to look at the status of land conservation in Kentucky. The task force not only considered the best protected lands, like nature preserves and national parks, it also looked at any lands having some level of conservation value. This included state and federal lands,

local and even privately owned lands that have some degree of conservation benefit. For example, Ft. Knox, which many people might not consider conservation land (with its primary purpose for military preparedness) encompasses over 109,000 acres and contains wetlands, glades and barrens, and Indiana bat habitat. While these lands could be redirected to military uses, the U.S. Army recognizes the value of natural areas and works to protect and manage them.

The first task force found that when only state lands were counted,



Kentucky protects less than one percent of its lands. In fact, Kentucky has fewer state-owned conservation acres than any of the seven surrounding states. When federal lands, including Fort Knox, Fort Campbell, three national parks, the Daniel Boone National Forest, the Land Between the Lakes National Recreation Area and several others are counted, the amount of conserved land rises to about 7.5 percent. While that might sound like a healthy figure, unfortunately, it isn't. From a conservation perspective, most of these areas, with few exceptions, are small, disjunct and not well protected. There are very few protected areas in Kentucky that achieve a landscape scale. And there are no continuous protected corridors that can facilitate the movement of species, both plant and animal, as they adapt to the changes in ecosystems caused by climate change.


Conserving more land is not only critical from the perspective of protecting our native biodiversity, it is also critical to our quality of life. Forests and wetlands protect drinking water sources, help clean the air, add oxygen and offset the heat sinks created by asphalt in urban areas. Rivers, streams and lakes provide drinking water supplies and irrigation; provide fish as a food source, and reservoirs serve for flood control. Natural areas like Cumberland Falls draw tourists and are vital in the competition with surrounding states to attract better economic development and high paying jobs. Conserved lands are proven to increase the property values of surrounding properties.

The initial work of KCC and the two task force groups it spurred attracted the attention of two national nonprofit conservation organizations, The Nature Conservancy (TNC) and the Trust for Public Land (TPL). These organizations have worked with both state and local governments around the country to pass both statewide and local referendums that support conservation through dedicated funding streams. The sources of funding run the gamut from lottery proceeds, to locally approved taxes, to bond authorizations, and others.

In July 2010, TNC, KCC and TPL coordinated what was likely the largest gathering of agencies and organizations seeking to advance conservation in Kentucky. With critical funding brought by the national organizations, including the Doris Duke Foundation, two key steps have been completed. The first was the drafting of the Conservation Finance Feasibility Report, outlining the possible funding mechanisms available in Kentucky. The second was a public opinion survey to gauge the attitudes and willingness of Kentuckians to support increased land conservation.

One of the key findings of the public opinion survey, which surprised even the professional pollsters, was the strong support for conservation. It revealed that *83 percent* of Kentuckians surveyed said they would support a constitutional amendment to dedicate the existing state sales tax on sporting goods for hunting, fishing, and other outdoor recreation to land and water conservation. This support remained strong despite voter concerns about the economy and unemployment. This is likely due to the fact that the vast majority of Kentucky voters, 74 percent, believe a strong economy and clean environment are not in conflict with each other. The public recognizes what the feasibility report documented - a healthy environment and strong economy go hand in hand. All of this information has been compiled and made available under the auspices of *Conserve Kentucky*.

Conserve Kentucky worked in the 2012 session of the General Assembly to introduce these ideas and information, and to make our legislators aware that even in these times of a slowed economy, there is *strong public support* for increasing the conservation of land. While some of those working on the partnership, including myself, have bemoaned the fact that our ducks seemed to be lining up as the economy went sour, perhaps in the long run this will be a fortuitous turn of events. One or two sessions of the General Assembly may be needed to build recognition of the benefits and need for conserving more of Kentucky, to ensure the protection of this beautiful state that inspires us. An inspiration that began when Daniel Boone looked out over the Bluegrass region from Pilot Knob, now a state nature preserve. Boone was later quoted by John Filson, "Nature was here a series of wonders, and a fund of delight... Soon after, I returned home to my family, with a determination to bring them as soon as possible to live in Kentucke, which I esteemed a second paradise, at the risk of my life and fortune."

We need not risk our lives or fortunes, but it is compelling to know that 83 percent of Kentuckians still share Boone's wonder at our state, and willingness to dedicate a part of their state's fortunes to preserving it. As the economy recovers we will endeavor to create a well funded, secure program to protect the best of "Kentucke." We seek to ensure that the generations that follow us will have the same wonders and wild places to marvel at, will be able to enjoy the same quality of life in Kentucky that we have been so fortunate to experience. You can help us by contacting your state representative or senator and expressing your support. Learn more about this effort by visiting conservekentucky.org. Remember the name, *Conserve Kentucky!* 



Upcoming *Hikes* and *Events*

Please note that most events require preregistration. View our complete events calendar at naturepreserves.ky.gov/news/.

April 7 Wildflower Hike at Floracliff SNP (Fayette County)

April 7 Adventure Trek to the Falls at Bad Branch SNP (Letcher County)

April 7 Volunteer Day at Floracliff SNP (Fayette County)

April 11 Spring Hike at Lower Howard's Creek Heritage Park and SNP (Clark County)

April 14 Last Chance Hike at Lower Howard's Creek Heritage Park & SNP (Clark County)

April 20-22 Pine Mountain Wildflower Weekend at the Pine Mountain Settlement School (Harlan County)

April 22 Celebrate Earth Day by visiting a state nature preserve near you - naturepreserves.ky.gov/naturepreserves/Pages/preserves.aspx

April 27-29 Wildflower Weekend at Natural Bridge SPNP (Powell County)

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May 4-6 Black Mountain Weekend at the Pine Mountain Settlement School (Harlan County)

May 11-12 Herpetology Weekend at Natural Bridge SPNP (Powell County)

May 18 Endangered Species Day - [www.stopextinction.org](http://www.stopextinction.org)

May 19 Wildflower Walk at Blackacre SNP (Jefferson County)

May 22 International Day for Biological Diversity: Marine Biodiversity - [www.cbd.int/idb/2012/](http://www.cbd.int/idb/2012/)

\*\*More spring and summer events are planned so please check our online calendar for an up-to-date list.

**Join the Friends of Kentucky Nature Preserves Today!**

[friendsofkynaturepreserves.org](http://friendsofkynaturepreserves.org)



## KENTUCKY STATE NATURE PRESERVES COMMISSION

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ON YOUR STATE INCOME TAX RETURN AND USE THE CHECKOFF BOX  
TO DONATE TO THE NATURE AND WILDLIFE FUND!

Kentucky State Nature Preserves Commission  
Quarterly Public Meeting

June 14, 2012  
TBA

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

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

It is the mission of the Kentucky State Nature Preserves Commission to protect Kentucky's natural heritage by: (1) identifying, acquiring and managing natural areas that represent the best known occurrences of rare native species, natural communities and significant natural features in a statewide nature preserves system; (2) working with others to protect biological diversity; and (3) educating Kentuckians as to the value and purpose of nature preserves and biodiversity.

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