

# The Lady-Slipper

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A Publication of the Kentucky Native Plant Society

[www.knps.org](http://www.knps.org)

[info@knps.org](mailto:info@knps.org)

## Wildflower Weekend 2011 at Natural Bridge, April 29– May 1

Brian Gasdorf, Natural Bridge Park Naturalist

A world without plants is simply unimaginable. Plants are woven into the fabric of our lives. Countless materials, foods, and medicines come from plants and as the base of the food chain, all life relies on their existence. Plants are amazing creations that call our attention. Their intricate detail, diversity of forms, and dazzling array of colors seem to draw us near to them...to admire, to ponder, to enjoy their beauty. Although simple at a glance, a closer look at plants can amaze us with intriguing complexity in their form and function. It is no wonder that people are drawn to them and that is what Wildflower Weekend is all about - gathering together people who are drawn to plants.

Celebrate plants and the **Kentucky Native Plant Society's 25<sup>th</sup> Anniversary** during the annual Wildflower Weekend at Natural Bridge State Resort Park. The Kentucky Native Plant Society got its start at Natural Bridge's Wildflower Weekend in 1986 and continues to promote education, preservation, and protection of Kentucky native plants and ecological systems. One of the best things about Wildflower Weekend is that it brings together some of Kentucky's leading plant professionals and joins them with plant and outdoor enthusiasts that are looking to find out more about Kentucky's diversity of plants and their ecology. It is always astonishing how much that we can see and learn when going on plant fieldtrips with a group and an experienced leader...so many eyes searching, so many eyes finding, so much experience teaching!

### **FRIDAY APRIL 29<sup>th</sup>**

Fieldtrips - 8:30 a.m., 1:30 p.m., 4:00 p.m.

Evening Presentations – beginning at 7:30 p.m.

7:30 p.m.—The Hemlock Woolly Adelgid in Kentucky — Alice Mandt,  
Hemlock Woolly Adelgid Coordinator, Kentucky Division of Forestry

8:00 p.m.—“Subtle Beauty: a Natural History of Sedges”—Tyler Smith,  
Department of Biological Sciences, Eastern Kentucky University

### **SATURDAY APRIL 30<sup>th</sup>**

Fieldtrips – 8:30 a.m., 9:00 a.m., 1:30 p.m., 2:00 p.m.

8:30 a.m. — Wildflower photography with Tom Barnes, UK Extension

Evening Events—beginning at 6:30 p.m.

6:30 p.m.—KNPS General Meeting (everyone welcome)

7:00 p.m.—KNPS's Anniversary Reception – celebrate with cake, refreshments, old photos, and good friends! Bring any photos you have of previous KNPS events to add to a "photo collage wall". You will get your photos back at the end of the program.

7:30 p.m.—“Reading the Forested Landscape of Floyd's Creek in Jefferson County, Kentucky.”—Michael Gaige,  
21<sup>st</sup> Century Parks Natural Areas Manager.

### **SUNDAY MAY 1<sup>st</sup>**

Fieldtrips: 9:00 a.m.

--All fieldtrips begin at the Hemlock Lodge lobby.

--All evening presentations and activities are located in the Woodland Center (formerly know as the Activities Center).

--Registration table opens 30 minutes before each fieldtrip and evening activity/presentation.

--Registration fee for the weekend is \$10/adult, \$3/ages 13-17, and free for ages 12 and under.

--Be sure to bring your cameras to participate in the KNPS annual photo contest.

--There will be a photo op just prior to Saturday's evening program for anyone who has ever been on the board, been a hike leader, spoken, or contributed to the Lady-slipper Newsletter - please join us!

--A detailed agenda with specific fieldtrips/leaders will be available upon request on or after April 11<sup>th</sup> by contacting Brian Gasdorf at [brian.gasdorf@ky.gov](mailto:brian.gasdorf@ky.gov) or (606) 663-2214.



Photo by Jack McKinney, 2009

## The President's Message

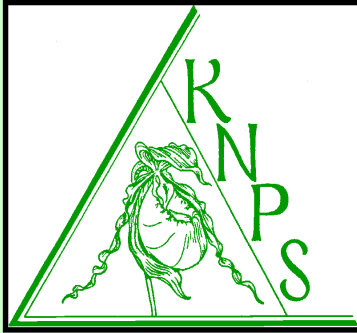
By Alan Nations

This year, as we celebrate KNPS's 25<sup>th</sup> anniversary, it is a time to reflect on our history and remember the events and people of the last quarter century. It is also a time to look ahead and plan for the future, mindful of changes that have occurred since our founders originally penned our mission and purpose. It is a time to celebrate successes and learn from failures, using our experience to help guide us into the future. I once read that the best way to prepare for the future is to study the past. When I recently reviewed all the historical records, notes and meeting minutes available from our 25 years of history, I noticed one constant throughout the history of the society: the dedication of the membership, officers and board. Although small in number, these folks held KNPS together through the years. They maintained a good sense of direction as they moved methodically through the process of building the society's stable foundation and framing its mission and purpose. Along the way, much thought and consideration went into important decisions such as incorporating the society as a non-profit organization. Educational programs were developed, brochures and booklets were written and printed, symposiums were held, funds were raised, and scholarships were granted.

These folks also lobbied for the passage or defeat of bills that were coming before the state legislature to protect our native flora and ecological systems. In the late 1980s, KNPS supported the Kentucky Transportation Department's successful roadside wildflower program. In 1990, transportation secretary Milo Bryant ordered the wildflowers to be mown down, saying the project was not in keeping with his decision to mow roadsides back to the fence rows. The society responded with a newsletter article that prompted letters of protest from our membership to the state. Bryant soon reversed his decision and the program was reinstated, emphasizing the power in the voice of the people and our membership's dedication to the society's mission. We owe a debt of gratitude to our founders and those who have worked so hard and sacrificed their time and expertise over the last 25 years. Their contributions are commendable.

Looking forward, we must use our resources effectively to protect Kentucky's Native plants and ecological systems. Educational programs have always been the most effective tool in our box. We can reach our educational goals through the Native Plant Stewardship Program, structured field trips, and the revised Native Plant Certification Program. The rising level of public awareness and concern about the environment provides us with a tremendous educational opportunity. Success in this area should also bring the added benefit of membership growth, which is essential. I believe that educational programs and outreach are the future of KNPS.

I hope to see you all at Wildflower Weekend for the grand celebration, Alan.

The Lady-Slipper is intended to be published by the Kentucky Native Plant Society [IRC 501(c)(3)] in March, June, Sept., and Dec. Deadlines are the 10th of the prior months, but Editorial Committee members welcome article submissions at any time. Send dues and membership status inquiries to:

Kentucky Native Plant Society Membership  
801 Schenkel Lane, Frankfort, KY 40601  
[www.knps.org](http://www.knps.org) [info@knps.org](mailto:info@knps.org)

For all other business please contact an appropriate officer or board member.

**KNPS Officers—**  
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[alan.nations@insightbb.com](mailto:alan.nations@insightbb.com),  
502-235-8068

Immediate Past President:  
Dr. Thomas G. Barnes, UK Forestry  
[tbarnes@uky.edu](mailto:tbarnes@uky.edu), 859-257-8633

Vice-president: Zeb Weese, KSNPC  
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[tara.littlefield@ky.gov](mailto:tara.littlefield@ky.gov), 502-573-2886

Secretary: Sarah Hall, KSU  
[shall@chpl.net](mailto:shall@chpl.net), 859-494-5789

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[dluzader@insightbb.com](mailto:dluzader@insightbb.com), 859-356-8581

Membership: Chris Chandler,  
[membership@knps.org](mailto:membership@knps.org)

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Zeb Weese

David Taylor, DBNF  
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Kentucky Rare Plant Series—Spring 2011

## Sweet fern—A rare Kentucky shrub with an interesting history

By Tara Littlefield, Botanist, Kentucky State Nature Preserves Commission

The wax myrtle or bayberry family (Myricaceae) is known for its odor. These plants have resinous dots on their leaves, making their leaves aromatic. Plants in this family have a wide distribution, including Africa, Asia, Europe, North America and South America, missing only from Australasia. Myricaceae members are mostly shrubs to small trees and often grow in xeric or swampy acidic soils. More familiar members of the wax myrtle family include many in the Genus *Myrica* (sweet gale, wax myrtle), some of which are used as ornamentals and are economically important. In addition, the wax coating on the fruit of several species of *Myrica*, has been used traditionally to make candles.



So what does this interesting family have in common with Kentucky's flora? We are lucky to have just one species in the wax myrtle family, Sweet fern (*Comptonia peregrina*). In addition, it is also a monotypic genus restricted to eastern North America. This means that the genus *Comptonia* has only one species (*C. peregrina*) worldwide, and just happens to be found here in KY! Of course the common name sweet fern is misleading. This woody shrub is certainly not a fern. However, the leaves have a similar shape to pinnules of a fern frond (leaf). But having sweet in the common name is no mistake. If you crush the leaves throughout the growing season, a lovely smell is emitted as the essential oils volatilize into the air.

Sweet fern is a clonal shrub that grows up to one meter high and spreads through rhizomes. The leaves are alternate and simple, linear and coarsely irregularly toothed, dark green above and a bit paler below. It is monoecious (meaning male and female flowers on different plants). The female flowers are not showy—short rounded catkins [dense cluster of apetalous flowers, usually associated with oaks, birches and willows] with reddish bracts. The male flowers are elongated yellow-green catkins clustered at the branch tips, the pollen being adapted to wind dispersal. The fruit is a round, bur-like cluster of ovoid nutlets that turn brown when mature in late summer. The bark is reddish and highly lenticled (small corky pores or narrow lines on the bark that allow for gas exchange).

While very common in the northern part of its range (northeastern United States and Canada), sweet fern is state listed endangered in Kentucky, along with being state listed as rare in

(Continued on page 4)

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Ohio, Tennessee, South Carolina, West Virginia, Georgia, and North Carolina. The populations of sweet fern in the southern part of its range are isolated and disjunct from the common habitats up north. There seems to be a close association of these remnant populations with the Appalachian Mountains, which suggests that the populations in the southern ranges remained in protected “refugia” during periods of great plant migrations, such as during glaciations.

Sweet fern is typically found in openings in coniferous forests with well drained dry, acidic sandy or gravelly soils with periodic disturbances. In the north, it can be found in pine-oak barrens or jack pine and spruce forests that are maintained by fire, creating openings and decreasing competition. It has also been noted to colonize road banks and even highly disturbed soils such as mined areas. Contrary to these open coniferous habitats with periodic fire, the remnant populations of sweet fern in Kentucky and Tennessee are found on sandstone cobble bars, which are maintained by annual floods. Despite being found on habitats that are maintained by different disturbance regimes, these two communities share a few things in common—they are both dry, acidic, sandy and nutrient poor. Disturbances are a natural occurring impact in these communities that removes shrubs and saplings, thus decreasing competition so that sweet fern can thrive.

Sweet fern has adapted to these specialized habitats. It is a fire adapted species; it will resprout after a fire and increase its clonal sprouts through underground rhizomes. It is also a xerophyte, a plant adapted to dry conditions. And since it is adapted to living in nutrient poor, acidic soils, it has evolved with the bacteria *Frankia* that fixes nitrogen, somewhat like the more famous nitrogen fixing legumes who have partnered with the bacteria *Rhizobium*. Did you know that there are over 160 species of nonleguminous plants that fix nitrogen? It is also the host of the sweet fern blister rust (*Cronartium comptoniae*) which reduces the growth of pines, particularly Jack pine. What interesting relationships this shrub has with bacteria and fungi! In addition, sweet fern is the food plant to larvae of many species of Lepidoptera (moths and butterflies). These include the Io moth (*Automeris io*), and several *Coleophora* case-bearers (some of which are found exclusively on sweet fern).

But perhaps the most fascinating facts about the rare shrub sweet fern is what it can tell us about the evolution of plants, the history of the earth, and the paleovegetational past of Kentucky. Geologically speaking, sweet fern is an old plant. In Kentucky, it was most likely more common some 20,000 years ago during the last glaciation, as Kentucky used to look like Canada. Analysis of pollen in sediment cores taken from natural ponds in Kentucky confirms this, spruce and jack pine was common in the uplands in the bluegrass. Sometimes it is difficult to think of plants migrating north and south in order to adapt to a changing climate. But what is even more mind blowing is that the genus *Comptonia* is perhaps millions of years old. Numerous fossils of dozens of extinct species of *Comptonia* have been found all across the Northern hemisphere, and the earliest of the fossils have been dated back to the Cretaceous period (the age of the Dinosaurs) over 65 million years ago. The first flowering plants (angiosperms) evolved only 135 million years ago, so *Comptonia* is one of the oldest living plants in the world—a true living fossil!

So when April comes around, and all of the spring wildflowers are emerging, think of sweet fern tucked deep into the gorges of Big South Fork and Rockcastle, its catkins releasing pollen in the wind, using the nitrogen fixed from its bacterial friends, withstanding the massive floods of two of Kentucky’s last wild rivers. And if you use your imagination, you may be able to see dinosaurs and tree ferns in the distance.



Female flowers (short round catkins with reddish bracts) and male flowers (elongated catkins clustered at the branch tips) - [www.nativehaunts.comphenology.html](http://www.nativehaunts.comphenology.html)

475, pp. 485-524.

Darlington, Emlen. 1948. Notes on some North American Lepidoptera reared on Sweet Fern (*Comptonia asplenifolia* Linnaeus) with Description of new species. *Transactions of the American Entomological Society (1890-)*. Vol. 74, No. ¾, pp. 173-185.

Liag, X., Wilde, V., Ferguon, D., Kvacek, Z, Ablav, A., Wang, Y., and Li, C. 2010. *Comptonia naumannii* (Myricaceae) from the early Miocene of Weichang, China, and the paleobiogeographical implication of the genus. *Review of Paleobotany and Palynology*. Vol. 163, p. 52-63.

Medley, Max and Eugene Wofford. 1980. *Thuja occidentalis* L. and other noteworthy collections from the Big South Fork of the Cumberland River in McCreary County, Kentucky. *Castanea*. Vol. 45, No. 3, pp. 213-215.

Natureserve Explorer, 2010.

<http://www.natureserve.org/explorer/servlet/NatureServe?searchSciOrCommonName=comptonia&x=7&y=7>

Wilkins, Gary, Delcourt, Paul, Delcourt, Hazel, Harrison, Frederick, and Turner, Manson. 1991. Paleoecology of central Kentucky since the last glacial maximum. *Quaternary Research*. Vol. 36, Issue 2.

Virginia Tech Woody Database <http://www.dendro.cnre.vt.edu/dendrology/syllabus2/factsheet.cfm?ID=869>

Zomlefer, W. 1994. Guide to Flowering Plant Families. University of NC Press, Chapel Hill.



## Kentucky Native Plant Society reinstates the Student Research Grant Program!

KNPS is pleased to announce the reinstatement of the student research grant program, a funding source to support botanical knowledge and understanding in Kentucky. **One award of \$500 will be distributed for a field-based botanical project which contributes to the knowledge of Kentucky's flora or natural communities.** A grant will be awarded to a student preferably attending a Kentucky college or university. Both graduate and undergraduate students are eligible. The grant may be used to purchase consumable supplies and materials such as rebar, herbarium paper, label stock, and topographic maps. The grant may also used to cover travel expenses. It may not be used to pay time (e.g., labor) for any party. **Applications are due by April 15, 2011** and the successful applicant will be notified by the end of April and will be announced at the KNPS wildflower weekend conference April 30<sup>th</sup> 2011. Proposals will be reviewed by the KNPS Grant Committee.

Proposals must include:

1. A current curriculum vitae;
2. A proposal (not to exceed two single - spaced typed pages) describing the proposed research and the role the grant would play in the research;
3. An itemized budget; and
4. One letter of recommendation from faculty member.

Applicants are encouraged to become members of the KNPS, but membership is not required to be awarded a grant. Grant recipients are required to provide KNPS with a short summary of the funded research suitable for publishing in KNPS's newsletter *The Lady-Slipper* within one year of receiving the grant. Grant recipients are also expected to present their work at the KNPS Fall meeting, in addition to presenting their work at the annual Kentucky Academy of Sciences meeting within one year of completion of their research.

Submit electronic copies (as Word or PDF attachments) of all items listed above including letter of recommendation (sent separately by faculty member) to:

[info@knps.org](mailto:info@knps.org)

subject: Kentucky Native Plant Society-Grant Program

## Native Prairie/Savanna Concepts in Restoration

By Portia Brown, Simply Natural Landscape Concepts

Recent developments in social, scientific, and economic arenas have brought several favorable concepts to the forefront in the context of residential landscaping. The new “green landscaping” focus promotes reducing traditional lawns with their heavy reliance on mowing, chemicals, and water. This is where residential landscaping can meet native grassland concepts.

Historically native prairie/ savannah grasslands comprised a significant portion of the natural landscape in Kentucky. In recent years the efforts of several non-profit organizations, government programs and private landowners have brought back some large tracts of grasslands. The full character of native grasslands can only be realized in the context of larger expanses; however, there are many residential (and commercial) landscape situations that lend themselves well to prairie/savannah grassland communities.

A yard that offers full sun southern or western exposure is ideal, but any orientation with 6 hrs of sun per day can work. For purposes of a residential installation a prairie site would be full sun and the site for a savannah would be largely open to the sun with some degree of shaded area under one or more trees or shrubs. Shade varies in a true savannah from full sun to deep shade, thus plants that tolerate variations in sun, shade, and wind are used.

Site preparation requires removal of existing vegetation before installing prairie/savannah species. This can be done without chemicals but is faster with the use of an herbicide. The plant species are selected based on their suitability to existing soil and light conditions. Implementation can be done by seeding, plants, or by a combination of seeding and planting. Seeding is much less expensive but establishment is slower and requires more work initially.

Large suburban lots as well rural residential settings lend themselves to seeded installations while typical urban and small town neighborhood lots are generally more suited to planted beds. In Louisville many yards have steep slopes that are difficult to mow. Far too often the turf on such slopes is replaced with exotic invasive species such as English ivy, *Hedera helix*, or winter creeper, *Euonymus fortunei*. Frequently native grassland species are suited to such



Photo and installation by John Pacyga, RLA, LEED AP, Verdant Design LLC



**With it's ship like design this home rides the waves of native warm season grasses blowing in the wind.**

**Portia Brown, Simply Natural Landscape Concepts**

Bland residence photo by Portia Brown

sites, especially if they are accessible for maintenance (such as slopes on each side of entrance steps or on gentler slopes). In highly developed urban and suburban areas the soil disturbance has degraded the soil itself, leaving the site unsuitable for many landscapes uses. One of the greatest benefits of native prairies/savannas is soil enrichment that comes with the deep root systems.

The full spectrum of grassland species is not needed to provide a beautiful and beneficial landscape effect. In the context of small yards a sweep of straight little bluestem, *Schizachyrium scoparium*, or prairie dropseed, *Sporobolus heterolepis*, can be stunning. An adjacent or nearby planting bed might have a selection of just three or five native flowers. A combination I like in this context is rattlesnake master, *Eryngium yuccifolium*, with orange coneflower, *Rudbeckia fulgida*, and purple coneflower, *Echinacea purpurea*. Adding a legume such as purple prairie clover, *Dalea purpureum*, provides further soil enrichment, fixes nitrogen, and in this case blooms earlier in the season.

Once established, residential plantings using the grassland model eliminate routine lawn care chores such as constant weekly mowing, the use of fertilizers/pesticides/chemical treatments, watering, sweeping, clipping, etc. Maintenance requirements do use some of the same traditional landscape maintenance equipment but do so much less frequently. Long term maintenance requirements are far less than typical lawns and the benefits continue to accrue for years to come by virtue of the self-sustaining nature of native plant communities. This type of installation does not require a given number of hours per week, but rather, requires periodic inspection and maintenance. Most maintenance work is done in the spring or fall...leaving hot summers to play! 🌿

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## **US Army Corps of Engineers and Friends of Nolin Lake Launch Floristic Inventory of Nolin River Lake**

**By Carl Suk, Friends of Nolin Lake**

Nolin River Lake, a flood control facility headquartered at Bee Spring, Kentucky (about 20 miles SW of Leitchfield) is a 5,795 acre impoundment (566 feet above mean sea level at summer pool) designed to reduce flood damage downstream to the Green River Basin approximately 8 miles distant. During the fall and winter months when excessive rainfall is likely, the lake is kept at winter pool levels. In the event that heavy rain and runoff occur, water is stored in the lake until the swollen streams and rivers below the dam recede and can handle the release. (Winter pool holds 2,890 acres at 490 feet above mean sea level). Construction began in 1959. It was completed in 1963 at a cost of 14.5 million dollars. It is estimated today that since its impoundment it has prevented roughly \$82 million in flood damage.

Today, Nolin River Lake is known for its scenic beauty, clean water, abundant fishery, and many outdoor recreational activities. In addition to the water area, the Corps of Army Engineers control 13,413 acres surrounding the lake and an additional 4,000 acres leased for flowage easements. This area is known affectionately by local residents as “below the redline” because the boundary is marked with red blazes painted on trees and markers. Approximately 11,500 acres are leased to Kentucky Fish and Wildlife Resources.

In 2009 The Friends of Nolin Lake was formed. Working closely with the Corps their Mission is:

Increase the visibility and perception of Nolin Lake, promote and protect natural resources, encourage safe use of water resources, and promote the local economy through public awareness, community efforts, and recreational opportunities.

Specifically the goals of the Friends are to:

- Provide and promote recreational & educational opportunities at Nolin Lake;
- Promote businesses around and affiliated with the lake;
- Participate in and support projects that benefit natural resources;
- Provide the community and visitors with information relevant to Nolin Lake;
- Assist the US Army Corps of Engineers in promoting water safety.

Historically there have been limited botanical studies within the boundary limits surrounding (red line) the Army Corps of Engineer’s holdings on Nolin Lake. John Hussey did some early floristic studies in 1876. With increasing development, management of the shore line vegetation has taken on a very important role in protection of the lake. Shortly after the formation of the Friends of Nolin Lake, member Carl Suk who is the retired Land Manager for Louisville Metro Parks Natural Areas Division and a KNPS member who has a interest in the flora of the vicinity, volunteered to head this project. Carl owns lake front property and had developed a check list database for the native and exotic plants growing on his and surrounding properties.

Goals of the project are:

- Catalog and inventory the flora of the three county area Grayson, Edmonson and Hart that surrounds Nolin Lake, paying particular attention to:
  - rare and endangered species and associated habitats and
  - invasive species location and population demographics;
- Map the above;



- Create and enter data into a computer database;
- Through vegetation analysis, help the Corps develop land management programs.

Priority projects at this time are:

- Snap Wildlife Management Area to delineate sensitive areas such as cedar glades, wetlands, rare plants, invasive plants --- and monitor successional emergence after controlled burns --- and make recommendations for controlled burns to Fish and Wildlife.
- Brier Creek --- work closely with the Bowling Green Chapter of the Kentucky Mountain Bike Association (KYMBA) who are proposing to construct an approximate 8 mile mountain bike trail through the state park and beyond to: insure that the trail does not encroach upon any sensitive plant or geological communities.
- Flag Island --- develop a management plan to restore Flag Island a historically significant landmark and water-fowl rookery in Iberia Bay.
- Dog Creek Recreational area --- assist in the development of an interpretive nature trail --- Dog Creek has a very nice manmade pond and associated emergent wetlands.
- Moutardier Recreational Area --- enhance the existing interpretive nature trail.
- Develop a volunteer base to assist in accomplishing the aforementioned goals.
- Produce lectures and workshops to inform land owners about good land management techniques so they can help preserve the lake shore integrity.

The plant database so far consists of 748 entries of 125 families representing 358 genera. This includes not only native plant species or plants awaiting positive ID but exotics whether invasive or not and ornamentals. For more information about the project, any comments or if you would like to volunteer please contact Carl Suk at [hollyhawk@windstream.net](mailto:hollyhawk@windstream.net).

### **Acknowledgments:**

**Pat Haragan** for all her assistance in helping me ID plants and encouragement.

**Julian Campbell** and **Duane Estes** for helping ID plants

**Bryan Lewis** an excellent naturalist and a great friend for all his encouragement and his expertise in helping me ID ferns.

**Deryck Rodgers**, Lead Ranger at Nolin River for with out his assistance this project would never gain the momentum it has.


All the other rangers, **Chris Boggs**, **Danielle Treadway**, **Curtis Martin**, **Dwight White**, **Dan (GIS)Taylor** and **Judy**, thanks for your support. (I hope I didn't forget any body, if I did I apologize)

**Glenna Black**, President of the Friends of Nolin Lake for her support and encouragement.

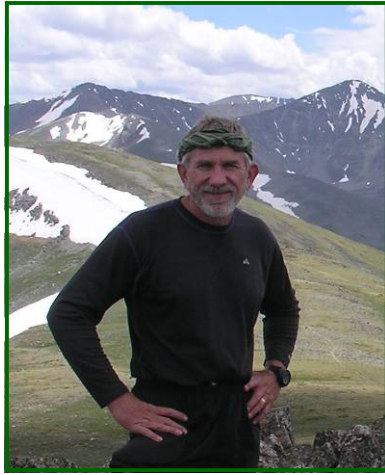
All the great people at the **Kentucky State Nature Preserves Commission** who without their support and friendship I don't think we could make this happen, **Joyce**, **Brian**, **Tara**, **Don**, **Deb**, **Zeb** and **Tom**. Thanks guys.

**Alan Nations** president of KNPS and a great a friend for asking me to write this. Alan, now everyone knows what a retired horticulturist/botanist does in his spare time.

**Katherine Rowell** affectionately known as **BEAR** who helps me with my poor writing skills---Thanks Bear.

Finally my wife **HAWK** who puts up with my muddy shoes, plant specimens strewn around the house, helps pick off ticks and sometimes will trek out in the field with me -----thanks my dear. 

## Meet your KNPS Officers and Board!

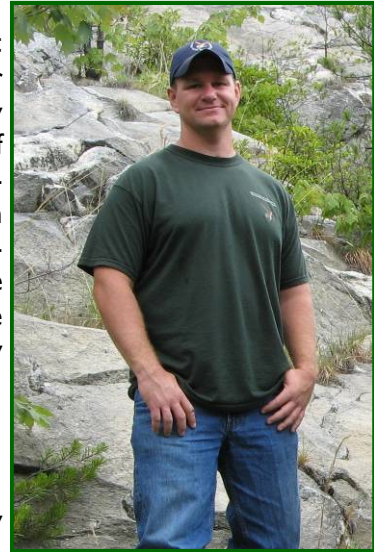


**Alan Nations, President**

Alan is owner and senior naturalist with NativeScapes Inc., a company he founded in 2008 in Jefferson County. A graduate of Columbia College, he has spent the last 15 years working in natural area restoration and interpretation. He is a certified arborist, interpretive guide and naturalist. His leisure time is spent botanizing, backpacking and honing his skills in wildlife photography.

**Zeb Weese, Vice-President**

Zeb has managed natural areas in the Commonwealth for over 15 years, and has been a regional manager with the Kentucky State Nature Preserves Commission since 2006. He is a graduate of the University of Kentucky with a BS in Zoology, MA in Environmental history, and additional graduate work in Forestry with an emphasis on invasive species management. A native of Elizabethtown, he currently lives in Midway with his wife, son, dogs, and cats; a 6<sup>th</sup> generation Kentuckian, he appreciates any opportunity to help protect Kentucky's vanishing habitats. He has been active in the KNPS since 2002 when he became the Park Naturalist at Natural Bridge State Park, and currently designs the newsletter.



**Tara Littlefield, Treasurer**

Tara has been working as a rare plant botanist for Kentucky State Nature Preserves Commission since 2006. At the commission, she focuses on rare plant conservation, federally listed plants, and floristic inventory across the state. In addition, she works as a contract botanist surveying National Forests for rare plants, mainly in Tennessee. She has a B.S. in Chemistry from the University of Louisville and an M.S. in Forest Ecology from University of Kentucky. She organizes the KNPS field trips.

**Sarah Hall, Secretary**

Sarah is a native of Madison County, Kentucky interested in restoration ecology. She completed a bachelor's in Environmental Education from Appalachian State University, a masters in Forestry (Restoration Ecology concentration) from the University of Kentucky, and is currently finishing a PhD in Crop Science (Grassland Ecology concentration) at UK. Her work experience includes ecological outreach and research in New York and Connecticut, advocacy in Minneapolis, and plant-insect research at Kentucky State University. Her involvement with KNPS began in 2008 and has included the roles of hike leader, board member, and coordinating the Native Plant Stewardship Certification Program. When not working, Sarah enjoys gardening, hiking, fishing, baking, and spending time at home with her family (including fiancé and two dogs).



**Neil Pederson, Board of Directors**

Neil Pederson grew up in snow-bound central NY State and spent much time in the Adirondack Mountains. Between his B.S. and M.S. degrees in forest ecology, he worked in the longleaf pine forests of southern Georgia, hardwood forests of northern Vermont and then forests of Mongolia, China, Russia before focusing on eastern U.S. forests for his dissertation. Neil taught biology at Eastern Kentucky University for five years before becoming a research scientist at the Tree Ring Laboratory of Lamont-Doherty Earth Observatory and Columbia University. His main research interest is the interaction between climate and forest dynamics in diverse, temperate forests.

Although they did not submit bios, we would like to note that this newsletter would suffer greatly without the able assistance of editors David Taylor and Dr. Ron Jones.

### **Brian Gasdorf, Board of Directors**

Brian has been a park naturalist at Natural Bridge since February 2007. The experience of working as a seasonal naturalist at Natural Bridge years ago sparked his passion to pursue a career in the field of natural history. Brian has worked as an environmental educator at the Salato Wildlife Education Center, Audubon State Park, and with Touchstone Energy. In his search for plants, birds, reptiles, amphibians, and bats, Brian has explored the Cumberland Mountains of eastern Kentucky, the swamps of western Kentucky, and everything in between! He enjoys many outdoor activities, especially hiking and canoeing. Brian organized the annual KNPS Wildflower Weekend.

### **Scott Slankard, Board of Directors**

Scott is a graduate of EKU with a B.S. in Wildlife Management. He has worked for ETC Ecological, Inc. in Frankfort since the 2004 and has a solid background in wildlife biology, ecology, botany, wetland delineation, and GIS (ArcView). His regular duties include but are not limited to, surveys for various species of threatened and endangered flora and fauna, jurisdictional waters determinations, botanical, small mammal, reptile, and amphibian surveys. He is knowledgeable in many ecological disciplines, but his main interests lie in native flora and botanicals.

### **Mary Carol Cooper, Board of Directors**

Mary Carol has recently retired from the Kentucky Department of Fish and Wildlife Resources where she served as the Coordinator of the Salato Native Plant Program for 14 years. There she maintained 2 greenhouses full of native plants which are used to landscape Salato exhibits and are donated to any public lands and schools who are installing outdoor classrooms. Over the past 14 years she has served on the Board of the Kentucky Native Plant Society, the KY-Exotic Pest Plant Council, the WildOnes Natural Landscapers, Raven Run Nature Sanctuary, and the Bluegrass Rain Garden Alliance.

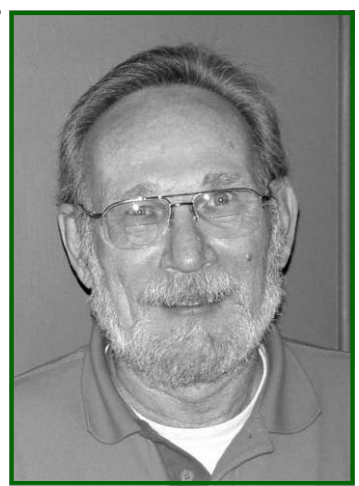
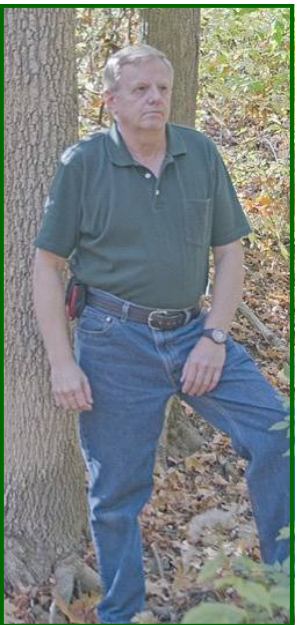
### **Christopher L Chandler, Membership Chair**

A U of L graduate with a BA in Communications (Archaeology minor), Chris works at NativeScapes, Inc., as a restoration tech. He lives in Oldham County and is a father of one with another on the way .

### **Dave Luzader, Webmaster**

Dave lives in the Northern Kentucky area and worked for many years in the graphic arts industry. Then he changed to Electronic Engineering and worked for a military contractor, until he called it quits and semi-retired. Dave now considers himself a nature photographer, artist and naturalist. A life long naturalist, he loves exploring the woods and forested mountains of Kentucky.

Sadly, I must announce the passing of board member **Steve Sensenig** on January 21, 2011. Steve was a dedicated member for many years along with his wife, Becky, and served in several officer, committee and chairman positions. He was always in attendance at Wildflower Weekend, where he cherished the field trips and visiting with friends. We will miss Steve's presence, his intelligence, unbelievable memory, eloquent writing ability and above all his loyalty and dedication. Steve, an Army veteran, served in the Viet Nam War. He is survived by his son, Sean, of Lawrenceburg, Kentucky. Memorial contributions may be made in his name to Lexington Cancer Foundation at 1504 College Way, Lexington, Kentucky 40502 – Alan Nations





## Kentucky Botanical Highlights from 2010

Tara Littlefield, Botanist, Kentucky State Nature Preserves Commission

Reported by Kentucky State Nature Preserves Commission unless otherwise noted.

For more information on any of the rare plants highlighted in this report visit the Kentucky Rare Plant Database <http://eppcapp.ky.gov/nprareplants/index.aspx>

- New county record of mercury spurge (*Euphorbia mercurialina*, S1S2- G4) in Simpson Co. This is the western most extent of this plant in Kentucky.
- New state record Western wallflower (*Erysimum capitatum* var. *capitatum*, S1-G5)—new showy wildflower found on the bluffs of the Cumberland River.
- New county record populations of rose verbena (*Glandularia canadensis*, S1-G5)—this showy wildflower was considered historic and possibly extirpated from the state until 2 new populations were found on the bluffs of the Cumberland river drainage this past year; one of the populations was reported by an interested landowner!
- New populations of softleaf arrowwood (*Viburnum molle*, S3-G5) on Cumberland river—most of the populations of this beautiful shrub were known from the slopes of the Kentucky River, but recent surveys have discovered several new populations along the Cumberland River, and it is likely that there are many more to find in this region.
- New populations of vetchling peavine (*Lathyrus palustris*, S2-G5) found on rocky banks and riparian areas on the Big South Fork. This trailing vine is known from the Cumberland Falls area in McCreary Co, but this is the first report of vetchling peavine from the Big South Fork in McCreary Co.
- New population of Carolina anglepod (*Matelea carolinensis*, S1-G5)—only one flowering individual with several vegetative plants were found, this vine in the milkweed family was growing on rocky limestone slopes.
- New high quality population of the federally threatened Braun’s rockcress (*Arabis perstellata* S2, G2) found in Franklin County. The new population is partially protected already!
- New county record of federally endangered Running buffalo clover (*Trifolium stoloniferum*, S2S3, G3) was reported in Bath county by John Merkle. There have been several new county records of this rare clover over the past few years, many of them reported by interested landowners. Keep an eye out for it; you never know where it will pop up!
- New population of Cumberland sand reed (*Calamovilfa arcuata*, S1-G2) was found on the Big South Fork. This rare grass grows on cobble bars and is also globally rare.
- Two populations thought to be extirpated of Cumberland rosemary (*Conradina verticillata*, S1-G3) were rediscovered on the Big South Fork. This federally threatened mint grows on cobble bars and is endemic to just Kentucky and Tennessee!
- Populations of Eggert’s sunflower (*Helianthus eggertii*, S2-G3) were surveyed this past year and dramatic increases in many populations on protected nature preserves were noted. It is hypothesized that the ice storm in 2009 opened up the canopy and caused this clonal plant to increase! Eggert’s sunflower was federally threatened, but was delisted in 2005. It is important to note that the majority of this sunflower’s populations are on roadsides, and these populations continue to decline due to roadside maintenance, invasive plants, and succession of plant communities.
- New county record of Hairy fimbristylis (*Fimbristylis puberula*, S2-G5) was found in Barren Co in a limestone/shale glade. This plant is a member of the sedge family.
- New county record for nettle-leaf sage (*Salvia urticifolia*,

Global (G) and State (S) Conservation Ranks				
G1 or S1	G2 or S2	G3 or S3	G4 or S4	G5 or S5
<b>Critically Imperiled</b>	<b>Imperiled</b>	<b>Vulnerable</b>	<b>Apparently Secure</b>	<b>Secure</b>
Very high risk of extinction or extirpation due to rarity (often five or fewer populations), very steep declines, or other factors.	High risk of extinction or extirpation due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.	Moderate risk of extinction or extirpation due to restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.	Uncommon but not rare; some cause for long-term concern due to declines or other factors; or stable over many decades and not threatened but of restricted distribution or population size.	Common; widespread and abundant.
				
Additional ranks: GX or SX = Presumed extinct/extirpated. Not located despite intensive searches; virtually no likelihood of rediscovery. GH or SH = Possibly extinct/extirpated. Missing; known only from historical occurrences, but still some hope of rediscovery.				

S1-G5) in Barren Co. This rare sage was found in a limestone/shale glade where there were 1000's of flowering plants.

- New population of Allegheny chinkapin (*Castanea pumila*, S2-G5) found in McCreary Co near the TN border. This rare shrub, related to the American chestnut, has been declining rangewide. Many of the populations in KY have disappeared, so it is relief to find the find new populations (only 3 have been found in the past 20 years)!
- New county record population of white rattlesnake-root (*Prenanthes alba*, S1-G5)—two populations were found in Kentucky this past year, one was found in Estill Co on the Grassy Ridge System and the other is a county record from Pulaski Co [Reported by Dan Boone]
- New county record population of rough pennyroyal (*Hedeoma hispidum*, S2-G5) in Ohio County. This interesting plant in the mint family was found growing in a field with many natives.
- New high quality communities found in Edmonson County— Shawnee Hills sandstone glades (S1S2) and Riparian forest (S5).
- New high quality communities documented in Mammoth Cave National Park—Wet flatwoods (S3S4) and Shrub swamp(S2S3)/ Sinkhole/depression marsh (S1S2).
- New population of hispid falsemallow (*Mvastrum hispidum*, S2?-G3G5) in Warren County. This plant was found growing in rocky glades.
- New populations of round head bush clover (*Lespedeza capitata*, S3-G5 ) in Warren and Barren County. This member of the clover family was found growing on limestone glades and prairie remnants.
- New populations of upland privet (*Forestiera ligustrina*, S2S3, G4G5) found in Warren county. This native privet was found in limestone flat rock glades.
- New county record of spinulose wood fern (*Dryopteris carthusiana*, S3-G5) documented in Elliot County. 🌿

## Kentucky's rare species and natural areas need your help!

### Join the Friends of Kentucky Nature Preserves today!

Over the past several years the Kentucky State Nature Preserves Commission, the agency responsible for the inventory and protection of Kentucky's rare plants, has lost much of its funding . As a result, many opportunities to save natural areas and protect rare species have been missed . A newly formed non-profit (501c3) friends group has been started to bridge the gap and improve the chances for long-term survival of Kentucky's natural heritage.

#### The Goals of Friends of KNP are:

- Help with land protection and management for rare species and landscapes in need, but also for the benefit of Kentuckians who need more places to enjoy the outdoors and explore our incredible biodiversity!
- Support biological surveys because the faster inventories are completed and information made available to land planners, the more likely it is that important natural areas can be protected.
- Ensure that more people learn about our natural treasures and their contributions to quality of life by working with schools, training volunteers and developing educational materials.

Please consider donating to the Friends of Kentucky Nature Preserves to help us achieve these critical goals. Your gift will help protect rare species and establish and expand nature preserves, trails and wildlife areas where you and others can enjoy nature.

To learn more, please go to

<http://www.friendsofkynaturepreserves.org/>



## Kentucky Native Plant Society Field Trips 2011

**March**—Several spring wildflower hikes in the Kentucky River Palisades region of Central Kentucky. Hikes are scheduled at Floracliff SNP (<http://www.floracliff.org/>) and Lower Howard's Creek SNP (<http://www.lowerhowardscreek.org/>). Visit their websites for more information.

**April 2—Kentucky River Palisades Spring Wildflower Hike at Floracliff SNP in Fayette County with Martina Hines (Ecologist at KSNPC).** Early spring wildflowers will be discussed, along with natural communities. Registration is required. Programs are limited to 15 participants. All events are \$4 per person or \$10 per family. Call 859-351-7770 or email [floracliff@aol.com](mailto:floracliff@aol.com) to register or for more information.

**April 9—Dropseed Native Plant Nursery in Oldham County with Margaret Shea and David Keal.** Margaret and David will lead a tour of their farm in Goshen, KY. Margaret runs Dropseed Native Plant Nursery and David runs Field 51 Produce. We will tour the greenhouses, seed production plots and gardens of Dropseed and visit the vegetable production field, as well as the chicken and sheep of Field 51 Produce. If the timing is right we might get to see the baby lambs! From 1 to 4 PM. E-mail [info@knps.org](mailto:info@knps.org) to register.

**April 15-17— Pine Mountain Wildflower Weekend at the Pine Mountain Settlement School in Harlan County.** During mid-April the Settlement School property is a wildflower wonderland, with nearly 100 species of spring wildflowers. The weekend will be filled with hikes, presentations and traditional music. **\*\*Registration is required for this event.** For more information visit <http://www.pinemountainsettlementschool.com/>

**April 16— Hike at Creasy Mahan Nature Preserve in Oldham County with Tavia Cathcart.** Join Tavia, the executive Director, Naturalist, and Certified interpretive Guide, as she holds an open house and wildflower hike at the Creasy Mahan Nature Preserve from 11 AM until 1 PM. E-mail [info@knps.org](mailto:info@knps.org) to register.

**April 22—Hike at Big Bone Lick State Park in Boone County to see Running Buffalo Clover with Tara Littlefield (Botanist at KSNPC) and Todd Young (naturalist at Big Bone Lick).** Join us on this hike to see the federally listed Running Buffalo Clover plant community. We will also be removing invasive pest plants from the area, in addition to conducting our annual count of clover plants. Hike is from 10:00 AM to 2:00 PM. Hike is easy to moderate; bring lunch, water, gloves and wear sturdy boots. Registration is required, please call 502-573-2886 (ask for Tara) or email [info@knps.org](mailto:info@knps.org) to register.

**April 23—Hike at Tioga Falls in Hardin County with Alan Nations, KNPS President.** Alan, a Naturalist/Arborist and Certified Interpretive Guide, will lead a hike along the historical Tioga Falls National Recreation Trail in the Muldraugh Hills, West Point Ky from 10 AM until noon. E-mail [alan.nations@insightbb.com](mailto:alan.nations@insightbb.com) to register.

**April 29—May 1-Kentucky Native Plant Society's Wildflower Weekend at Natural Bridge in Powell County.** This is the Kentucky Native Plant Society's 25th annual Wildflower Weekend! The beautiful area around Natural Bridge is home to hundreds of native plant species; enjoy them this weekend with other botanists, gardeners, and nature lovers. Our field trips are for all levels of participation, from beginner to advanced wildflower enthusiasts and from short easy walks to longer hikes at Natural Bridge and the Red River Gorge Geological Area! For more information see page 1 of this issue or call [brian.gasdorf@ky.gov](mailto:brian.gasdorf@ky.gov).

**May 6-8—Black Mountain weekend at the Pine Mountain Settlement School in Harlan County.** Wildflower lovers will enjoy visiting Black Mountain, the highest point in Kentucky and habitat to rare species of wildflowers and birds. KSNPC Botanist and Natural Heritage Branch Manager, Deborah White, will be giving a presentation on Orchids of Kentucky Friday evening and leading hikes throughout the weekend. **\*\*Registration is required for this event.** For more info visit <http://www.pinemountainsettlementschool.com/>

**May 28—Hike at Cherokee Park in Jefferson County with Pat Haragan, Botanist and author.** Pat will lead a wildflower hike along the walkways of Cherokee Park, Louisville Ky from 10 AM until noon. Limit 15 persons. E-mail [info@knps.org](mailto:info@knps.org) to register.

**June 4—Cobble Bar Vegetation on Rockcastle Wild River in Pulaski County with Tara Littlefield (KSNPC botanist).** Join Tara on a hike along the Rockcastle Wild River to visit some cobble bars “prairies of the river”. Plant communities will be discussed and a checklist will be handed out to all participants. Hike is from 10:00 AM to 3:00 PM. Hike is moderate to difficult; bring lunch, water and wear sturdy boots. Limit 10 people. Registration is required, please call 502-573-2886 (ask for Tara) or email [info@knps.org](mailto:info@knps.org) to register.

**June 11—Hike at Berea college forest in Madison County with David Taylor (Daniel Boone National Forest Botanist).** Join David on this exploration of the vegetation of the eastern knobs. The area where two physiographic regions meet (knobs and Cumberland Plateau region) creates a unique assemblage of plants. The hike will encounter geologic substrates ranging from Devonian shale to Pennsylvanian limestone and conglomerate. In addition, vegetation will be studied in an area that was burned by a very hot arson fire in 1987. Hike will be from 9:00 AM to 12:00PM. Hike is moderate to difficult; bring snacks, water and wear sturdy boots. Registration is required, please call 502-573-2886 (ask for Tara) or email [info@knps.org](mailto:info@knps.org) to register.

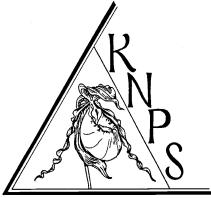
**June 8-12—Pine Mountain Settlement School forest study workshop in Harlan County — “In the footsteps of Lucy Braun”.** Trips to Blanton Forest SNP, Bad Branch SNP, Lily Cornett Woods, Black Mountain and Pine Mountain are planned. **\*\*Registration is required for this event.** For more info visit <http://www.pinemountainsettlementschool.com/>

**June 18—Hike at Eastview Barrens SNP in Hardin County with Martina Hines (Ecologist at KSNPC).** Plants along with plant communities will be discussed, including sandstone/limestone barrens, glades and prairies. Purple Coneflowers should be in peak! Hike is from 10:00 AM to 2:00 PM. Hike is moderate; bring lunch, water, gloves and wear sturdy boots. Registration is required, please call 502-573-2886 (ask for Tara) or email [info@knps.org](mailto:info@knps.org).

**July 30—Hike at Beaver Creek Wilderness Area in the Daniel Boone National Forest in Pulaski County with Tara Littlefield (KSNPC botanist).** We will explore old growth forests and search for new populations of rare plants in one of the few wilderness areas in Kentucky. A checklist will be handed out to all participants. Hike is from 10:00 AM to 3:00 PM. Hike is difficult; bring lunch, water and wear sturdy boots. Limit 10 people. Registration is required, please call 502-573-2886 (ask for Tara) or email [info@knps.org](mailto:info@knps.org) to register.

**August 13—Hike at Red River Gorge in Powell County to explore rockhouse vegetation and help protect the federally listed White Haired goldenrod by weeding invasive grasses around populations.** Hike will be lead by Rita Wehner (Backcountry ranger) and David Taylor (Botanist for the DBNF). Hike is from 10:00AM to 2:00 PM. Bring lunch, water, gloves, and sturdy boots. Registration is required, please call 502-573-2886 (ask for Tara) or email [info@knps.org](mailto:info@knps.org) to register.

**Other hikes will be added in the future,  
please check [WWW.KNPS.ORG](http://WWW.KNPS.ORG) for updates!**



Kentucky Native Plant Society  
801 Schenkel Lane  
Frankfort, KY 40601

### 2010 KNPS Membership Application or Renewal

Detach and send to: Kentucky Native Plant Society / 801 Schenkel Lane / Frankfort, KY 40601

**Note: To pay by credit card or PayPal account, please visit the website [www.knps.org](http://www.knps.org).**

Name(s)\* \_\_\_\_\_

**Membership Type: (memberships are for calendar year)**

E-mail(s)\* \_\_\_\_\_

Address\* \_\_\_\_\_

City, State, Zip\* \_\_\_\_\_

Telephone \_\_\_\_\_

\_\_\_\_\_ Individual \$15 (includes e-newsletter)

\_\_\_\_\_ Family \$25 (includes e-newsletter to 1-4 e-mails)

\_\_\_\_\_ Lifetime \$200 (includes electronic newsletter indefinitely)

\_\_\_\_\_ Additional gift (optional, tax-deductible)

**Total** \_\_\_\_\_ Check No. \_\_\_\_\_

\* denotes required fields, we MUST have your e-mail address in order to distribute the newsletter!

*The Kentucky Native Plant Society was founded in 1986 for everyone interested in the native plants, trees, and wildflowers of Kentucky. Plants are essential to both the well-being of our Commonwealth's natural ecosystems and our enjoyment of its unique environment. With members in Kentucky and neighboring states, the Kentucky Native Plant Society is a leader in promoting education about, appreciation for, and conservation of the native flora of our Commonwealth.*