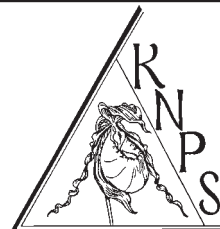


The Lady-Slipper

Kentucky Native Plant Society

Number 23:1

Spring 2008



President's Message

Spring may finally be on its way as the days are getting longer and we have some warmer days. I saw my first crocus flowering March 3 which is always a good sign that things in the woods will be coming along in the not too distant future. Since spring is upon us we can begin to think about the annual wildflower pilgrimage at Natural Bridge. This year the meeting will be held April 17 through 20 and as usual the folks at the park have organized a wonderful meeting. Unfortunately this meeting conflicts with a meeting for professional biologists in the southeastern United States so we will be missing some of our professional friends at the meeting but we will still have a full slate of knowledgeable individuals like Bob Van Hoff, Tara Littlefield, Wilson Francis, and others to lead field trips. Our programs are top notch once again. Valerie Pence will give the talk on Friday evening on the conservation of rare plants and what CREW does at the Cincinnati Zoo. On Saturday night, one of my dear friends and colleagues, John Snell, will provide a slide presentation on the Red River Gorge based on his book. He will have books for sale and signing after his program and I know you will enjoy listening to him and viewing his wonderful imagery.

My term as president is just about over and we need to recruit individuals to serve on the board and to serve as president. Have you thought about volunteering? This is a great opportunity for you to make an impact on YOUR society. Please notify any of the current board members at the meeting to indicate your willingness to serve.

Finally I want to bring up a subject that the KNPS should take a leadership role in developing and promoting. Kentucky is only one of several states that have no law protecting native plants from being dug. Last year I received a call from the VA Native Plant Society about a woman who was selling

continued on pg. 10

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KNPS Annual Wildflower Weekend April 17-20, 2008 Natural Bridge State Resort Park

Field trips

Thursday - 4:00pm
Friday - 8:30am, 1:30pm, 4:00pm
Saturday - 8:30am, 9:00am, 1:30pm, 2:00pm
Sunday - 9:00am

Field trips are for all levels of participation, from beginner to advanced wildflower enthusiast and from short easy walks in Natural Bridge to longer hikes in Red River Gorge.

Evening speakers

Thursday night, 7:30 pm

Brian Gasdorf, Natural Bridge Park Naturalist, will give an introduction to plants of Natural Bridge and the Red River Gorge Area.

Friday night, 7:30 pm

Valerie Pence, Head of the Plant Conservation Division with the Cincinnati Zoo and Botanical Garden. Valerie will give an overview of her work with the CREW (Center for Conservation and Research of Endangered Wildlife) program followed by a focus on native endangered plant species in the area.



Saturday night, 7:30 pm

John Snell, author and photographer of the recently released book, Red River Gorge - The Eloquent Landscape. John will entertain the group with his favorite images from the Red River Gorge area and he'll share the stories and inspiration behind them.

On site registration fee is \$8 per adult; \$5 for students (college and ages 12-17); Free for those under 12. Registration is upon arrival. Participants can pick up an agenda for the Weekend at the Hemlock Lodge when they arrive. Contact Brian Gasdorf at 606 663-2214 or brian.gasdorf@ky.gov for more info.

To make lodge reservations call 1-800-325-1710.



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Botanical Timeline for Kentucky

Continued from Issue 22:3
By Ron Jones

Note: some of this information was extracted from www.eqc.ky.gov and from <http://www.huntington.org/Education/TimeLine.html>. Also note that newly described plant species for Kentucky are only listed if they are now state-listed, or if they were described after 1975. A few national or international events of significance to Kentucky botany are also listed. Also note that full citations are not given for journal articles, and for those interested, most of these articles since 1985 are cited in a new publication in the Fall 2007 issue of the Journal of the Kentucky Academy of Science (volume 68, pages 145-180), and others are cited in the papers by Fuller, also cited in this 2007 article.

1980—Present and presettlement forest conditions in the Inner Bluegrass of Kentucky, a Ph.D. dissertation, at UK, by J.J.N. Campbell, who went on to produce many other significant papers on the flora and vegetation of Kentucky, mostly while working for the Kentucky Chapter of the Nature Conservancy.



Cypripedium kentuckiense.
Photo: public domain

1980—The blue ash-oak savanna-woodland, a remnant of presettlement vegetation in the Inner Bluegrass of Kentucky, by W.S. Bryant, M.E. Wharton, W.H. Martin, and J.B. Varner. One of the major papers on the topic, which still generates disagreements today.

1981—Clyde Reed described a new species, *Cypripedium kentuckiense*, for Kentucky and the southeastern U.S.; this species received two other names by other authors—in 1977 it was named *C. daultoni*, and in 1985 it was named *C. furcatum*—but it was Reed's name that became accepted for the Kentucky lady-slipper.

1982—Kentucky issues first mountain top removal permit.

1983—Kary B. Mullis devised the polymerase chain reaction (PCR), a system to replicate large quantities of DNA from a small initial sample. He reportedly thought of it while driving down a California highway. This ability to create a large sample of DNA, and similar methods developed later, had extraordinary impact on various fields of study, from areas of paleobiology to forensic analysis to plant population biology and endangered species studies. In 1993 Mullis received the Nobel Prize in Chemistry.



Mountaintop removal in eastern Kentucky
Photo: www.appalachianvoice.org

1984—R. L. Thompson of Berea College, publishes the first of his many articles on the flora and vegetation of surface-mined lands, this paper on a mine in Laurel County with coauthors W. Vogel and D. Taylor, and later papers with coauthors G. Wade and B. Raffail.



Dr. Ralph Thompson, 2002
Photo courtesy of Berea College.

1984—T. Patrick describes a new species, *Trillium sulcatum*, for Kentucky and the southeastern U.S.

1986—*Aquatic and Wetland Plants of Kentucky*, by E.O. Beal and John W. Thieret, the second book with county dot maps (after Cranfill's fern book), and for the next 20 years the only available major reference on the aquatic and wetland plants of the state.

1987—*The Vegetation and Flora of Kentucky*, edited by J. M. Baskin, C. C. Baskin, and R. L. Jones, a report on a symposium held at the Kentucky Academy of Science, and the first attempt to publish a variety of articles on the plant life of the state.

1987—*Trees, A Quick Reference Guide to Trees of North America*, by R. Mohlenbrock and J.W. Thieret.

1987—First Lands Unsuitable for Mining petition approved in Kentucky, designating 2,900 acres in the Cannon Creek Reservoir in Bell County.

1988—*Cooperative inventory of Endangered, Threatened, Sensitive and Rare species, Daniel Boone National Forest, Somerset Ranger District*, by B. Palmer-Ball, Jr., et. al.

This was the first of the ranger district surveys, that extended to 1994 with the completion of the London Ranger District, the others also with multiple investigators and contributors but compiled by J.J.N. Campbell.



Max Medley, 1971
Image provided by author.

1989—Max Medley describes a new species, *Silphium wasiotense*, for

Kentucky and Tennessee.

1989—J. Campbell and M. Medley describe a new species, *Aster saxicastelli*, now known as *Eurybia saxicastelli*, for Kentucky and Tennessee.

1989—Environmental Education Council formed.

1989—*Rare Plant Assessment and Checklist for Cumberland Gap National Historical Park*, by L. Pounds, T. Patrick, and R. Hinkle.

1989—M. Fuller, along with coauthors M. Woods and J. T. Grubbs, publishes her second compilation on Kentucky literature, dating from 1784 to 1987, and includes 483 entries.

1990—Forest Stewardship Act funded by U.S. to support conservation practices.

1990—Passage of the Heritage Land Conservation Act in Kentucky, but no funding provided.

1990—E.E. Lamont describes *Eupatorium steelei*, a new species for Kentucky, and now considered endangered in the state.



Eupatorium steelei.
Photo: Amy McIntosh

1991—*Bluegrass Land and Life*, by Mary E. Wharton and Roger W. Barbour. This was the final appeal by the authors to preserve the disappearing resources of the Bluegrass.

1991—*Weeds of Kentucky and Adjacent States*, by Patricia Dalton Haragan. The first popular treatment of this important group of plants in Kentucky.

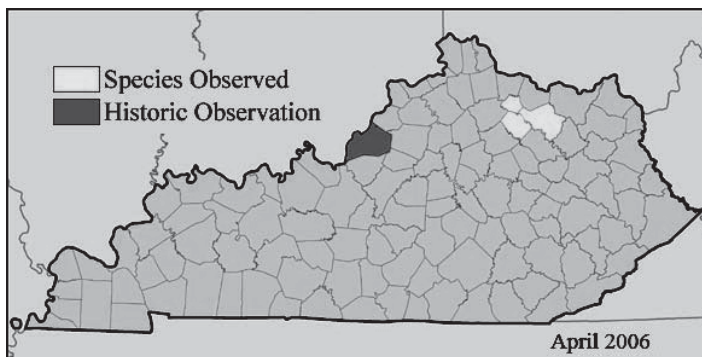
Survival of the Rarest: Short's Goldenrod

Recovery Efforts in Kentucky

by Zeb Weese

Kentucky's federally endangered plants are generally endangered for similar reasons. They don't have the good sense to be generalists, but are rather only found in very specific habitats. Many of these habitats have proven attractive for agricultural use and other development by humans, therefore reducing or eliminating their suitability for rare native plants. Because these plants are rare due to anthropogenic changes to their habitat, active management is crucial to maintain the viability of their remaining populations. An excellent example of this is the Short's goldenrod (*Solidago shortii*) one of Kentucky's most endangered (NatureServe 2008).

At first glance Short's goldenrod looks like many other goldenrods. Only upon close inspection do the glabrous underside of the leaves give you the first hint that you are not looking at a young Canada goldenrod (*Solidago canadensis*), which is often found in similar areas (Jones 2005). First identified by Charles Short in Jefferson County in 1840, its population was destroyed by the development of the McAlpine Dam at the falls of the Ohio River. Thought extinct for decades, in the 1930s botanist Lucy Braun located another population in Kentucky along the Licking River where Nicholas, Robertson, and Fleming Counties converge (Skinner 2004). This is the only place in Kentucky where this plant is now found, although it has recently been found at one site in southern Indiana.



Much of the Kentucky population is protected by the Kentucky State Nature Preserves Commission and the Kentucky Department of Parks at both Blue Licks State Park Nature Preserve and the neighboring Short's Goldenrod State Nature Preserve

A significant amount of the *Solidago shortii* found at Blue Licks is near the historic bison trace which bisects the park. It is believed that the regular disturbance created by the bison's migration created the open areas necessary for the plant to survive. Of course the bison

herds are long gone from Kentucky, and the once open glades have been farms and forests for well over a century. While Short's goldenrod has proven capable of lingering in overgrown areas, it certainly does not thrive without plenty of sunlight. It is thought that the early settlers' livestock mimicked the bison's natural disturbance to some extent and help the goldenrod survive. However, by the mid 20th century more intensive farming practices and the introduction of invasive species became prevalent, and the population dwindled (White 1996). Much of the Kentucky population that Braun found is now gone and the habitat severely degraded. But progress is being made to expand its population on the sites where the goldenrod has managed to survive.

Two of the biggest threats to the goldenrod's habitat are canopy closure and invasive species. Since farming kept this area open for more than a century before becoming fallow, most of the trees shading the goldenrod are relatively young Eastern red-cedars. For several years staff from the KSNPC, as well as volunteers from the Sierra Club and the Kentucky Native Plant Society, have spent many days felling, piling, and burning cedars near the goldenrod sites. Unlike hardwoods, cedar stumps do not resprout after cutting so it is not necessary to apply herbicide to kill them. In a relatively short period of time quite large areas around the goldenrod can be opened up just by cutting. These efforts generally take place in the late winter, long after the goldenrod has bloomed in late September.

The threat of invasive species to in Kentucky's natural areas increases each year, and the Short's goldenrod sites have their share of invaders. The disturbed areas preferred by the goldenrod are precisely the kinds of places many exotic invasives find inviting. Particularly troublesome species on these sites include crown vetch (*Coronilla varia*), sericea lespedeza (*Lespedeza cuneata*), yellow and white sweet clover (*Melilotus* spp), and Queen Anne's lace (*Daucus carota*). Many long summer days are spent hand pulling sweet clover and Queen Anne's lace, after they have matured but before they have set seed. Care must be given to remove all of the roots of each plant to prevent resprouting, and the plants are then bagged and taken off site and dried before disposal. Hand pulling is certainly slow, but it helps reduce the amount of herbicides used on the goldenrod habitat. Unfortunately, herbicide is most practical method of controlling crown vetch and sericea on these sites. A selective herbicide, such is triclopyr, is applied at a low rate, usually 2%, as a foliar treatment to the target invasive while avoiding contact with individual goldenrod plants.

This should again be done when the plant is mature but prior to seed set. Most of this invasive control work begins in late July and may last into September.

The final tool that managers use in Short's goldenrod recovery is prescribed fire. Fire was believed to be a natural part of many systems in Kentucky, and an important source of disturbance historically. When applied to the goldenrod habitat in early spring, fire helps kill many of the woody species while they are still small and before they form a dense canopy. Although fire can also control some invasive species, it actually tends to stimulate seed germination of some others, most notably sericea lespedeza. This can actually be beneficial in its control; if all of the seeds in the seed bank germinate at the same time rather than a few each year over a longer period, then a single herbicide application is much more efficient at reducing the overall population. There are several different goldenrod sites where burns are conducted every few years. Potentially some of the sites where red-cedar clearing efforts have begun will be burned in subsequent years.

While prescribed fires and herbicide applications are only conducted by trained staff, anyone who is interested can volunteer to help Kentucky's Short's goldenrod population recover. The KSNPC has volunteer days each winter to work on clearing cedars, and several KNPS members have participated. For those that prefer warm weather, volunteers may also help hand pull invasives in the summer. In addition, each September the KSNPC and Blue Licks State Park host a "Short's Goldenrod Festival" dedicating to increasing awareness of the Commonwealth's endangered species and biodiversity. If you are interested in helping out with any of these efforts, please check out the KSNPC's volunteer program at <http://www.naturepreserves.ky.gov/> or call 1-502-573-2886. Just a few hours of your time can make a huge difference in the recovery of Short's goldenrod, one of Kentucky's most rare native plants.

Literature Cited



Jones, R. L. 2005. Plant life of Kentucky. University of Kentucky Press: Lexington, Kentucky. 834 pp.

NatureServe. 2007. NatureServe Explorer: An online encyclopedia of life [web application]. Version 6.2. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: February 22, 2008).

Skinner, D. 2004. Volunteers and Staff Help One of Kentucky's Rarest Plants. KSNPC Naturally Kentucky 42: p.2.

White, D. 1996. Short's Goldenrod: A plant with a past. KSNPC Naturally Kentucky 17: p. 5.

TIMELINE (continued from page 3)

1991—*The species-area curve and regional floras*, by G. Wade and R. Thompson, an influential paper on how to calculate the expected number of species in a particular area.

1991—Robinson Forest declared unsuitable for mining; no net loss wetland national policy adopted (over 80% of Kentucky's wetlands already lost).

1991—Raymond Athey (1914-1991) passes away. Athey was a well-known expert on the flora of western Kentucky, coauthor of the first state checklist in almost 50 years, and contributor of several major endowments to the Kentucky Academy of Science.



Raymond Athey. ca. 1965.
Photo courtesy of Athey family.

1991—Farrar & Mickel provide a name for the *Vittaria appalachiana*, previously known as the "Appalachian gametophyte".

1991—Allen Risk publishes the mosses of Rowan County, and continues at Morehead State University with additional studies, mostly on the bryophytes of the state.

1991—*Manual of Vascular Plants of Northeastern United States and Adjacent Canada*, by H. Gleason and A. Cronquist, is published by the New York Botanical Garden. The coverage includes all of Kentucky. A companion volume of illustrations, by N. H. Holmgren, is published by the NYBG in 1998, and a corrected edition of the Manual is published in 2003. Although the nomenclature is now out of date, these volumes still provide the best set of keys and illustrations for the northeastern U.S.

1991—*Flora of Mammoth Cave National Park*, by L. E. McKinney, M. Evans, and K. Nicely.

1992—*A Taxonomic Revision of the Acaulescent Blue Violets (Viola) of North America*, by L. E. McKinney. This is the only monographic-type work published by a Kentucky author in the last two decades. Ten years later McKinney followed this work up with a major

TIMELINE (continued from page 5)

paper coauthored with N. Russell on the Violaceae of the southeastern U.S.



Viola sororia. Photo: claytonvnps.org

1992—Marc Evans discovers the largest old growth forest in the state, at 2,350 acres. Blanton Forest was established as a state nature preserve in 1995.

1992—*Vascular Plants of Kentucky, an Annotated Checklist*, by E.T. Browne, Jr., and Raymond Athey, the first checklist since Braun's list in 1943.



E.T. Browne, Jr., ca. 1965
Image provided by author.

1992—Environmental Quality Commission publishes the first *State of Kentucky's Environment* trends report;

over 100 acres of Kentucky land per day being converted to urban areas and roads.

1992—R. L. Thompson of Berea College publishes the first of his many articles on mistletoe in the state.

1992—W. H. Martin publishes *Characteristics of Old-Growth Mixed Mesophytic Forests* in *Natural Areas Journal*; the first paper to extensively describe old-growth characteristics for this major Appalachian forest type and one of the first papers defining old-growth forests and their characteristics.

1993—*An Annotated catalog of the Known or Reported Vascular Flora of Kentucky*, by Max E. Medley, a Ph.D. dissertation out of the University of Louisville, a comprehensive bibliographic work on the Kentucky flora (the most extensive yet attempted), listing information on 3254 taxa documented or reported for the state, and providing a basic foundation for all future floristic work in the state.



Sandstone rock shelter on Pine Mountain

1993—the 3-volume work, *Biodiversity of the Southeastern United States*, edited by W. H. Martin (professor at Eastern Kentucky University and Commissioner of the Kentucky Department of Natural Resources) and others, was published, providing the first overall treatment on both the plant and animals life of the region.

Flora of North America



1993—A new species, *Carex juniperorum*, is described for Kentucky by Catling, Reznicek, & Krins.

1993—The first volume of *Flora of North America* is published by Oxford Press. Through 2007 a total of 13 volumes have been published, providing keys, descriptions, and up-to-date nomenclatural changes for the flora of Kentucky and the entire continent. Of Kentuckians, J.W. Thieret and R.F.C. Naczi, both of NKU, contributed the most treatments to the series.

1994—Kentucky Rare Plant Recognition Act, passed by the state legislator and signed by Governor Brereton Jones.

1994—Gov. Brereton Jones appoints a Kentucky Biodiversity Task Force, with a mission to report on the state of biodiversity in Kentucky and to make recommendations on maintenance and conservation of biodiversity.

1994—Guy Nesom, working in Texas, proposes a new nomenclatural system for wild asters, into such genera as *Eurybia* and *Symphyotricum*, so that

Kentucky no longer has any native species in *Aster*. This change was at first controversial, but has now been generally accepted across the U.S.

1994—Legislation established the Kentucky Heritage Land Conservation Fund and created a managing board: W. S. Bryant and W. H. Martin appointed to the initial board and Martin remains chairman of the Board to this day. Over 28,000 acres of land has been conserved and preserved by the Fund.



tain. Photo: Amy McIntosh

1995 The UK Herbarium is moved from the School of Biological Science to the Department of Forestry, and Robert Paratley is hired as curator. This move, two years after the retirement of Willem Meijer, saves the herbarium from abandonment or transfer to another institution. Paratley went on to become active in KNPS and in publishing articles on forest ecology and floristics.

1995—*Kentucky Alive!*, in two volumes, edited by D. Taylor, and being a report of the Kentucky Biodiversity Task Force. These volumes include a comprehensive assessment of the state of Kentucky's biodiversity, as well as extensive literature citations.

1996—*Rare and extirpated plants and animals of Kentucky*, by the Kentucky State Nature Preserves Commission, the first of the published lists by the KSNPC, updated through 2001 and now on their website.

1996—*Sandstone rockhouses of the eastern U.S., with particular reference to the ecology and evolution of endemic taxa*, by J.L. Walck, J.M. Baskin, C.C. Baskin, and S.W. Francis. A major work on this fragile habitat and its unusual species in Kentucky.

1997—Biodiversity Center established at WKU. Botanical expertise for the center is now provided by L. Alice, who specializes in the genus *Rubus*, and by A. Meier, who specializes in forest ecology. Previous curators at WKU included E.O. Beal, K. Nicely, and Z. Murrell.

1997—*Index Kentuckiensis*, by C. J. Lapham, R. L. Jones, and J. J.N. Campbell, comprehensive herbarium database management software, eventually being adopted by herbarium curators from across the U.S; this software package includes the entire atlas of vascular plant distributions compiled by Campbell during his herbarium survey in the early 1990s.

1997—*A floristic study of barrens on the southwestern Pennyroyal Plain, Kentucky and Tennessee*, by E.W. Chester, B. E. Wofford, J. M. Baskin, and C. C. Baskin. The only extensive listing on the flora of the barrens.

1997—*Assessment and Management of Plant Invasions*, edited by J.O. Luken and J.T. Thieret. Luken, Thieret, and colleagues published numerous papers on this topic, especially related to Amur honeysuckle (*Lonicera maackii*) from 1988 to the present.

1997—Kentucky reached an all-time record timber harvest of over 1 billion board feet, surpassing the 1907 total.

1997—A new species, *Carex molestiformis*, is described for Kentucky by Reznicek and Roth.

1997—*Wildflowers of Mammoth Cave National Park*, by R. Seymour, published by the University Press of Kentucky, and treating about 400 species in the area.

1998—*Seeds: ecology, biography, and evolution of seed germination*, by Carol C. Baskin and Jerry M. Baskin. During the long career of the Baskins at UK they have published numerous scientific articles, far more than any other botanical scientists in the state, and have contributed immensely to our knowledge of the seed biology and life histories of our native species.

1998—*Plant communities of sandstone rock shelters in Kentucky's Red River Gorge*. Ph.D. dissertation, at UK, by S.W. Francis. A survey of the only habitat of the endemic white-haired goldenrod.

To be continued in an upcoming issue of The Lady-Slipper.



Hemlocks in Peril Update!!!

HWA was found at Red River Gorge a few weeks ago. This is very alarming, it is spreading faster than originally thought.--Tara Littlefield.

KNPS Spring Wildflower Hikes

April 5, 2008, 1 pm EDT. Floracliff SNP

led by botanist Tara Littlefield, Kentucky State Nature Preserves Commission. This wildflower Hike in Fayette County will showcase wildflowers at their peak. Please contact Tara to register at tara.littlefield@ky.gov or 502-573-2886.

April 27, 2008, 10 am EDT. Bad Branch Falls

led by Zeb Weese, KNPS board, KSNPC regional manager. Join us on a hike to Bad Branch Falls at Bad Branch SNP (Letcher County) and see the spring wildflower display on Pine Mountain. This hike is part of the Kentucky Society of Natural History Spring Meeting. Hike is moderate/strenuous in difficulty. Registration required for this event. Call Zeb at (502)573-2886.

May 24, 2008, 10:30 am EDT. Horner Wildlife Preserve

led by Jonathan White, University of Louisville. Horner Wildlife Preserve is a 200 acre wilderness in Crestwood, KY. It is surrounded by farmland and houses 3 telescopes for the University of Louisville. It contains many types of wildlife and is part of the South Fork Harrods Creek watershed. It is only accessible via a locked gate in order to limit human traffic entering the preserve.

Meet in the Re-MAX parking lot off of I-71. If travelling on I-71 N, take exit 14 (KY 329) and make a right onto KY 329. The parking lot is the first right. If travelling southbound on I-71, take exit 14 and turn left onto KY 329. The parking lot will be 1000 feet on the right just under the overpass.

Other Hikes:

Call Sarah Wolff at 502.432-2677 for more information about the following Louisville area hikes:

Wildflower Walk with Jerry & Portia Brown
Cherokee Park
Saturday, April 26 10-11:30am

Hikes with Dennis Crowley of Ky Trails Assoc.
Cherokee Park
Saturday, April 26 1-3pm
Iroquois Park
Saturday, May 10 Noon-2pm

KNPS Native Plant Certification Course Northern Kentucky University 2008

All NKU classes meet at the Highland Heights campus new Science Center Room 168. Register on line at nkuconnections.nku.edu or call NKU Connect Center at (859) 572-5600. NKU classes are \$85.

Kentucky's Spring Wildflowers (Core course)
Instructor: Larry Brewer, Senior Plant Ecologist, Center for Applied Ecology, NKU.

If you have good familiarity with basic descriptive plant terminology, join this class and learn to use the technical plant identification keys for the spring wildflowers of Kentucky. The distinctive features of some of the more common spring wildflowers will be emphasized. Recommended text: *Plant Life of Kentucky*, (\$65—\$75) by Ronald L. Jones.

Saturdays from 9:00 to 12:00 on Apr 12, Apr 19, Apr 26 and May 3rd.



Madison Southern High School students are shown after decorating the KNPS-sponsored rain barrel, to be auctioned at the rain barrel festival at Berea on April 26. Kathleen Jones, MSHS science teacher and KNPS Treasurer, has encouraged her students to become more interested in our native plants, and arranged to have the students decorate the rain barrel with images of native plants to promote the KNPS. For more event information see http://www.sustainableberea.org/upcoming_events/2008/4-26_rain_barrel_project.html.

KNPS Native Plant Certification Courses Eastern Kentucky University 2008

Plant Taxonomy for the Amateur

Naturalist (Core Course)

Instructor: Dr. Ronald Jones, Foundation Professor of Biological Sciences, EKU.

Plant Taxonomy is the study of plant naming, classifying, and identifying. We will address such questions as how and when did plants appear on Earth, what are their patterns of evolution, how can their diversity be studied, how are they named, and what are the techniques for identification? The emphasis will be on learning basic terminology to describe plant parts, and to prepare for keying and the use of manuals in subsequent classes. A great deal of information will be covered, and students should be prepared to work hard and actively participate. The text, *Plant Life of Kentucky*, (\$65—\$75) by Ronald L. Jones, will be used in this class and subsequent classes dealing with the identification of ferns, wildflowers and trees.

May 7 (Wed) 6 to 9 pm; May 17 (Sat) 9am to 12 pm;
May 21 (Wed) 6 to 9 pm pm; May 31 (Sat) 9 am to 12 pm. All classes meet in Moore 202 on the EKU Campus, and some classes may involve field trips or hikes.

Kentucky Wildflowers (Core Course)

Instructor: Dr. Ronald Jones, Foundation Professor of Biological Sciences, EKU.

This course is designed for those with some background in botanical terminology, or with some knowledge of the variety of wildflowers in the region. We will meet at Maywoods Environmental and Educational Laboratory, a 1700 acre natural area operated by EKU, in Garrard and Rockcastle Counties, about a 30 minute drive from Richmond. The course will involve instruction in the use of keys—plant specimens will be collected and examined using hand lens or dissecting scopes, and then keyed to family, genus, and species. Information will be provided on the rare species and plant communities of the region, as well as conservation issues related to native plants. The course will involve some moderate hiking on the trails at Maywoods. Participants will be contacted before the first class and provided with some instructional materials, such as lists of terms to review, and directed to helpful website. The text, *Plant Life of Kentucky*, (\$65—\$75) by Ronald L. Jones, will be used in this class and subsequent classes dealing with the identification of ferns, wildflowers and trees.

August 9 (Sat.) 9 am—4 pm
September 6 (Sat.) 9 am—4 pm

Basic information

To register: call EKU Community Education at (859)622-1228. For more information contact: ron.jones@eku.edu. EKU courses are from \$59 to \$73.

ELSIE QUARTERMAN CEDAR GLADE FESTIVAL Cedars of Lebanon State Park

Lebanon, Tennessee

April 11-13, 2008

I would like to invite each and every one of you to this special annual wildflower weekend. As some of you might know, Middle Tennessee is known for its Cedar Glades and the interesting and sometimes rare flora associated with them. These rocky openings, wet in the spring and dry in the summer, play host to over 400 plant species, some of which are not found anywhere else in the world.

This year, the park has planned a special weekend to honor Dr. Elsie Quarterman who is considered by most to be the leading expert on the Cedar Glades of Middle Tennessee. Retired Professor from Vanderbilt University in Nashville, Dr. Quarterman is soon turning 86 and is supposed to be in attendance. There are many walks, talks and other activities planned. Several Kentucky botanists will be participating in leading programs, including Landon McKinney, and Jerry and Carol Baskin.

The park has campgrounds and cabins and the city of Lebanon with many hotels/motels is just 5 miles away. Cabins can be reserved by calling 1-800-713-5180. The festival is free and open to the public. Those that have attended in the past remember how fun and educational it has been.

So make your plans now and I will hope to see many of you at the festival.

--Landon McKinney

Detailed activity schedule and additional information is available at <http://www.tnps.org/calendar.html> or by calling Cedars of Lebanon State Park at 615-443-2769.



Check out our website at

www.knps.org

for membership forms, upcoming events,
past newsletters,
and grant information

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woodland wildflowers on E-bay and inquired about why that was allowed. I indicated to her there was little we could do because unless she was caught in the act and shipping across interstate lines with known stolen material, we couldn't do anything. I believe our group should begin the process of working with the legislature to draft a statute specifically protecting native plants and then perhaps it can help to strengthen our endangered species act in this state, which of course has absolutely no teeth. While we are at it, perhaps we can begin to discuss working with the legislature to require a biological assessment prior to the development of any land if state or county money is involved, just like they are required to do if federal money is involved. Now is the time to begin thinking about these important measures because our environmental protection laws are among the poorest in the nation. This would be a great noble adventure for all of us who cherish native wildflowers and perhaps you can provide your insight to board members at the annual spring wildflower pilgrimage.

I hope to see you all at Natural Bridge the weekend of April 17 - 20!

~President Thomas G. Barnes



Membership Renewal Time!

Please renew your membership in KNPS promptly!

Dues for 2008 are:

- Individual—\$15
- Family—\$25
- Lifetime—\$200

Membership forms are available at www.knps.org. Make checks payable to KNPS, and send forms and checks to: KNPS, P.O. Box 1152, Berea, KY 40403)

American Bellflower research *Campanula americana*

We are plant ecologists studying the evolutionary and ecological genetics of *Campanula americana* (Campanulaceae) (syn = *Campanulastrum americanum*; common names = American bellflower; tall bellflower). As part of our ongoing research (funded by the National Science Foundation), we need to locate and collect seed from 40 populations of this species from throughout its range (essentially the eastern half of the U.S.). This seed will be used for experimental work in the greenhouse at the University of Virginia.



photo: www.psu.edu

(1) We wondered whether you might know of one or more specific population locations for this species? We have already gathered location information from dozens of herbaria, however many herbarium specimens are quite old, and we have often found that the populations to which they refer no longer exist. If in doubt as to its morphology, a decent account of the species can be found here:

http://www.missouriplants.com/Bluealt/Campanula_americanana_page.html

(2) As you might imagine, collecting seed from 40 populations distributed across (at least) 21 states will require a great amount of time and effort. Therefore, we are extremely interested to find kind-hearted volunteers (living or working near local populations) who might be willing to collect for us. The collection process is very straightforward, would take no more than 15-30 minutes, and all collection and mailing materials (and funds to cover mailing costs) would be sent to the appropriate person(s) well ahead of time.

Please note that even if you are not willing/able to collect seed on our behalf, we would still be very interested to obtain population location information if you are willing to share.

Thank you for any help you might be able to offer. Brian Barringer and Laura Galloway, Department of Biology, University of Virginia; Charlottesville, VA; bcbarringer@virginia.edu





Photo: www.robspplants.com

Wildflower of the Year 2008 CUP PLANT

(*Silphium perfoliatum*)

By Mary Carol Cooper

Wildflower enthusiasts statewide have chosen the Cup Plant (*Silphium perfoliatum*) as the Salato Native Plant Program *Wildflower of the Year for 2008*. The flowers are yellow, 2-3 inches across and have a yellow center and 20 to 30 rays. They look much like small sunflowers. The Cup Plant grows from three to eight feet tall; the leaves are connate-perfoliate. The two upper leaves under the flower head join around the stalk to form a cup (more on that later). The 6 to 12 inch opposite leaves are sharply toothed, and the stems are

square. The whole plant is very coarse. By now you should be getting the idea that this is a BIG perennial! It blooms from July to September and is found in mesic to wet woodlands across Kentucky.

Silphiums were a favorite of Aldo Leopold, one of the foremost conservationists of our century and author of *Sand County Almanac*. He wrote in this book "*Silphium* first became a personality to me when I tried to dig one up to move to my farm. It was like digging an oak sapling. After half an hour of hot grimy labor the root was still enlarging, like a great vertical sweet-potato. As far as I know, that *Silphium* root went clear through to bedrock. I got no *Silphium*, but I learned by what elaborate underground stratagems it contrives to weather the prairie droughts."

Cup Plants are a favorite of butterflies and songbirds and are a great choice for backyard wildlife habitat. They also provide water for wildlife in their cups. After a rain or early in the morning after heavy dew, you can find all sorts of wildlife drinking from the cups. Thus the name, Cup Plant, also known as Indian Cup and Ragged Cup named for the fused leaf bases that form a "cup-like" depression on the upper stems. Another name, Carpenter Weed, refers to the square stem of this plant.

Native Americans used root tea for lung bleeding, back or chest pain, and to induce vomiting. Smoke from this plant was inhaled for head colds, neuralgia and rheumatism. Historically, root tea was used for enlarged spleen, fevers, internal bruises, debility, liver ailments and ulcers. The toxicity is unknown and medicinally it is not used today.

Although seldom used in the garden because of its size, Cup Plant should be considered for sunny locations as a backdrop for shorter perennials. They will grow in heavy clay soil, and in moist and dry areas making it a great drought tolerant plant for clay soils. Cup Plants are available at many native plant nurseries. Like most native plants, when planted in appropriate habitat, they are very hardy. They can also be grown from seeds. Seeds need 90 days of cold moist stratification to germinate.

The *Wildflower of the Year* is chosen based on the number of nominations it receives and how well it fits the established criteria: native to Kentucky, common and fairly widespread across the state, seeds readily available, easy to grow, and a good source of food or cover for wildlife.

Previous year's winners: 1997 Butterfly Milkweed (*Asclepias tuberosa*), 1998 Cardinal Flower (*Lobelia cardinalis*), 1999 Purple Coneflower (*Echinacea purpurea*), 2000 Wild Columbine (*Aquilegia canadensis*), 2001 Wild Bergamot (*Monarda fistulosa*), 2002 Great Blue Lobelia (*Lobelia siphilitica*), 2003 Spiked Blazing Star (*Liatris spicata*), 2004 Joe-Pye Weed (*Eupatorium maculatum*), 2005 Showy Goldenrod (*Solidago speciosa*), 2006 Orange Coneflower (*Rudbeckia fulgida*), and 2007, Black-eyed Susan (*Rudbeckia hirta*).

Packets of free seeds will be available at the Salato Wildlife Education Center after Derby Day.



Calendar of Native Plant-related Events

Elsie Quarterman
CEDAR GLADE FESTIVAL
Cedars of Lebanon State Park, TN
April 11-13, 2008
See page 7 for details.

Native Plant Sales



Dropseed Native Plant Nursery will have their spring plant sale May 16 (12-7) and May 17 (9-5) at their new location at 1205 S. Buckeye Lane in Goshen, KY. You can visit their website at www.dropseednursery.com for additional information and directions to the nursery. They will have more than

100 species of native plants available including both sun-loving and shade-loving herbaceous perennials. Members of the Kentucky Native Plant Society will receive a 10% discount on their purchase! 502-439-9033

Louisville Nature Center

Spring Sale

Sat. May 10, 2008; 9:00 am-3:00 pm

www.louisvillenaturecenter.org

Invasive Species Volunteer Workdays

Louisville volunteer workdays occur at the Olmsted parks (Cherokee Park, Iroquois Park, Shawnee Park) nearly every Saturday. Call Sarah Wolff at 502.432-2677

CHEROKEE Every 1st & 3rd Saturday 9am-Noon

IROQUOIS Every 2nd Saturday: 9am-Noon: Meet in the Amphitheater parking lot @ 9am

SHAWNEE Every 4th Saturday: 9am-Noon: Meet at the South Concourse near the Lily Pond @ 9am.

KNPS Annual Wildflower Weekend

April 17-20, 2008

Natural Bridge State Resort Park

See page 1 for details.

Berea Rain Barrel Festival

April 26 2008

See page 8 for details.

**SEE HIKES, COURSE SCHEDULES AND
OTHER EVENTS ON PAGES 8-9.**

SEE PAGE 2 FOR CONTACT INFORMATION.

*(Return address below is for
POST OFFICE USE ONLY.)*

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