A Message from the President:

Hello everyone. Another winter has passed and I trust that everyone survived. By the time you read this, Spring will be here and the weather will be more acceptable. For those of you who might remember, our son spent last year in Iraq. He is home now, safe and sound and his mom and I are much happier now.

The Native Plant certification program at NKU is going well. Next fall, we will likely begin the second cycle of core courses and will continue as long as we have interested students. We would still like to see the program offered somewhere in the greater Louisville area but as of yet, we have not had any firm commitments for a location or instructors. If any of you in the Louisville area have any ideas, please do not hesitate to contact me.

We had an excellent piece about the Society and our certification program come out in the magazine "Kentucky Living" in the March issue. Since then, we’ve had a number of requests for information from people who did not know we existed. We’ve always had a problem with actively marketing our Society. Any and all efforts are, of course, extracurricular as we all have day jobs. We do what we can and will continue to do so.

Our Spring Meeting and Natural Bridge State Resort Park is coming up soon and it looks to be great one as usual. Zeb Weese, the Park Naturalist has lined up some great speakers for Friday and Saturday nights. If you’ve never made it to one of our annual Spring Meetings, I’d encourage you to do so. Everyone has a great time.

In closing, I wish everyone a joyous Spring. Don’t let those busy lives keep you from getting out and enjoying nature, especially all of those wildflowers.

Landon McKinney

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Celebrate Kentucky Native Plant Society’s 20th Anniversary!
Join us for our Wildflower Weekend and annual spring conference May 4-7, 2006, featuring field trips throughout Natural Bridge State Park and the Red River Gorge Geological Area and guest speakers from around the region.

This year’s spring conference will feature a presentation by Matt Klooster from the University of Cincinnati on “Non-photosynthetic Plant Species” on Friday evening. Saturday evening our guests from the Tennessee Native Plant Society, Dennis Horn and Tavia Cathcart, will discuss “Wildflowers of Tennessee and the Ohio Valley” and Julian Campbell of the Kentucky Nature Conservancy will give us a brief update on "The Kentucky Flora Atlas". Early arrivals can learn a little about the “Non-native Plants of Natural Bridge” and what is being done to control them on Thursday night from the Park Naturalist, Zeb Weese.

Enter our first photo contest, and submit your favorite photos from past KNPS activities for our reminescent PowerPoint Slide show. See details on page 14.

Please remember that it is KNPS membership renewal time. Memberships are $10 annually or $150 for a lifetime membership. Please send dues to KNPS; P.O. Box 1152; Berea, KY  40403. Membership forms are available at www.knps.org.
John W. Thieret (1926—2005)

By Ron Jones

The following series of articles on John Thieret reveal the breadth and depth of his influence on the lives of those he touched in his long lifetime of work and play with plants. He loved plants—all kinds—trees and wildflowers, wild and ornamental, native and non-native—his curiosity was boundless, and his enthusiasm exhilarating. He was a student of the world’s flora. He once told me that his life-long hobby was learning new plants. He enjoyed traveling, going on long collecting trips, especially to the west and north. On of my great regrets is that I did not get the chance to accompany him on one of his big field trips (and very much envy the experience that Julian Campbell relates in his article).

I first met John in the early 1980s when I arrived at EKU. He invited me up for a visit, we got along great, and before I knew it we were working on various projects, and he was even inviting me to substitute for him on a Dendrology class trip to the Red River Gorge. In the late 1970s and early 1980s John had begun organizing state botanists to work on a Kentucky flora project. He began publishing a newsletter and persuading state botanists to sign up to write treatments for Kentucky plant families. I agreed to join the effort, and soon had a long list of woody plant families for which I was gathering distributional data, and later, in the late 1980s, I began writing keys for all the woody plants of the state. Several papers were published from this flora project, but it soon became obvious that a more concerted effort was needed, and with fewer people involved. In the mid 1990s, a more definite plan was worked out, in which I took over the major writing chores, with several families and genera to be completed by other writers, and John continuing as an editor for the project and writer of the Poaceae.

So for the last decade, I have regularly been sending John large blocks of text to be edited, sometimes 50 or more pages at a time, and which would arrive back, often in a remarkably short time period, usually with more red than white showing on the papers. I learned early on that one of John’s deeply held beliefs was that “consistency is next to godliness.” This went on, month after month, year after year, until we had a complete manuscript. Then we went back through the entire manuscript again, and again. John must have read the complete text, which numbered over 1000 pages in rough draft, at least 10 times. And this was not easy reading, it was mostly densely packed keys and species accounts. In addition, he somehow found time to write the treatment for the grass family, over 50 pages and including 274 species.

I am indebted to all my colleagues who helped me in various ways with Plant Life of Kentucky, but I am especially indebted to John; he is the one that stuck with me through it all. What I will remember about our relationship, is that, although he was always incredibly busy, he always found time to work with me. I will always remember how he...
never seemed to tire of the endless drafts, that he always seemed so happy, even joyful in his editing, and how, although he might be finding all kinds of problems, he would write me little notes of encouragement. I also remember how dependable he was—I knew that I could always count on John, if he said a job would be done at a certain time, then it most certainly was; I remember how, even as we neared a final draft, and we were ready to turn it over to the publisher, that he again offered to read it one last time—just to get it as right as possible. I feel extremely lucky that I was able to work with John over this last decade, to see his powerful intellect in action, to witness his work ethic.

John had a unique presence about him, a magnetic personality. You always knew when John Thieret walked into a room. Well, John has left the room now, but what a life! For the last 50 years John Thieret has been one of the towering figures of North American botany. I see him as one of the last great naturalists of our time, one of a vanishing breed, of a kind that we are not likely to see again. We Kentucky botanists were lucky to have such a man walk among us, and I, personally, feel a great sense of loss in his passing, and am fortunate to have known him as a colleague and as a friend.

*Travels with Thieret*

by Julian Campbell

*For unexpurgated version complete with limericks, please contact author.

Saturday, 16th April 2005. As we pulled into the parking lot behind the Stearns Restaurant, our first substantial stop on the journey, John looked over from the passenger seat, and reminded me again, with a wry smile—"You know, I have been warned about you—some people say you are hard to get along with; but, so far, this trip has been well planned, enjoyable and productive... Of course, some people may say the same thing about me; I suppose after this week, we will both find out."

I locked the truck and walked around to his side. He was purposefully poking with his foot at some weeds a few feet away at the base of a wall—"Do you know what this is?" I picked some of the plant, and peered feebly at the little orange flowers nestled along sprawling shoots with a vaguely malvaceous look—almost no idea. He told me: "Modiola caroliniana, I knew it well in Louisiana." But that is unknown in Kentucky, surely, I noted—we had better make a specimen—and we did—and it is the first record in Kentucky, surely, I noted—we had better make another search for it. It was the first record of the place had a slight air of hillbillyism, and John made the most of it—"Do these people have any taste, and what is that music, God!... [hands over ears]" When other members of the group—the Kentucky Natural History Society—showed up, conversations botanical resumed with high abandon. John was in his element, impressing all present as the elder statesman of Kentucky Botany, representing us for better or worse on the national scene in the Flora of North America project. But with full acknowledgement of others' work, and encouragement of students, amateurs and novices alike, he was gently inspiring, and completely modest. Instead, my ego swelled as I noted that I was the one chauffeuring this great man around the southeastern states on a Grand Tour.

He has become known as simply the best botanical editor in North America, hard working, and persistent with details of correctness in language, abbreviations and punctuation. Yes, at times he could appear harsh. My first meaningful encounter, in the early 1980s, concerned his submission to me when I helped put together the first newsletters of the Kentucky Native Plant Society—I had changed an "em dash" into a simple hyphen. Also, I had left one el out of "Willd." (the abbreviation for famed German botanist of the 18th Century, Karl Ludwig Willdenow). He called me when our amateurish printing arrived at his house: "Are you the Julian Campbell who is editor of the KNPS newsletter—I wish to complain..." He later submitted another article all about Willdenow for me. Actually, he mellowed, on his admission, in later years.

He did not really like large gatherings for long periods, and after our lunch at Stearns, we took off for some local botanizing down a Forest Service road. I showed him the graveled remnants of a sandstone glade, and we picked a few plants. The majestic sedge, Carex picta, displayed large glossy patches along the road and John feasted upon it. After returning for supper, followed by an insightful talk by Ed Clebsch (University of Tennessee) on the Big South Fork's flora, John had to retire again to the Holiday Inn Express. The truck had difficulty navigating the next little drop-off zone in front of the lobby;—"Ye Gods! Protect us!", John uttered as a back wheel mounted the curb and crushed a large planting of day-lily, luckily not yet in flower.

That evening, we became more intimate. I exited the bathroom to find him lying on the bed, naked from the waist up. "Could I prevail upon you," he said, "to perform a small personal favor". My jaw dropped (internally) but the stiff upper lip held strong. "I have two ticks on me; please can you get them off." Why couldn't he do it?—they were embedded in flabby folds of the armpit region, difficult to access and manipulate. Well I did my best, but the heads broke off. He must have picked them up looking at the Carex picta, on that warm sunny 

Continued, page 4
bank, primed for our sweaty torsos. As we dozed off, he added fond memories of various other personal encounters of all types. I had trouble reciprocating.

On the next day, Sunday, we drove down to Knoxville to meet up with the young botanical star of Tennessee—Dwayne Estes. Dwayne let us in the back door of the old Hoskins Library Building and into the new, partly compacting, herbarium. He and John had not met before but they did have shared interests in the disintegration of Scrophulariaceae, and Dwayne began to impress the old master at once with details of his graduate work on *Gratiola*, flipping through a Powerpoint on the computer screen. "Je..Je..Je..Je.. Slow down! Relax!" — John calmed him— "We have plenty of time." John loved new botanical talent, and always took time to ask helpful questions, offer friendly advice on technical matters, and, perhaps most importantly, advance a healthy psychological approach to daily taxonomic difficulties. In some ways, he seemed almost Freudian.

We were interrupted by the rattle of small pebbles hitting the herbarium window—Professor Emeritus Hal DeSelm had left his key at home. We let him in, and the four of us chatted further, looking up at the old portrait of Augustin Gattinger, the father of Tennessee Botany. He would have been glad to see the torch handed on. After lunch with Hal, we drove on down to the Chattanooga area at break-neck pace behind Dwayne, to rendezvous with John Beck, another UT graduate student with great potential, who had been studying various glades in the Ridge-and-Valley. JB has an extraordinary botanizing style, literally bouncing with glee from novelty to novelty, and the glade he showed us was indeed full of them, including thick wet wads of the newly described spikerush, *Eleocharis bifida*, in muddy swales. JT scooped up some of this, but his post-polio syndrome was kicking in and after a few hundred yards, he had to go back and wait near the vehicles.

After resting at the local Waffle House, I continued with John down to the outskirts of Dalton, Georgia, the reclusive abode of Max Medley. Max is a household name among the naturalists of Kentucky, but he left some years ago to find solace in the south—not far from the type locality of *Silphium incisum*, which he will rediscover some day. John and I had not seen Max since he left Kentucky, but both of us had been close to him in various professional and personal ways. The reunion touched us all, and John helped us rekindle the spirit for floristic adventure. On Monday, we made a fairly long trip through the Chattahoochee Mountains, where I had never been before—extensive hemlock forest, trees festooned with *Decumaria* vines, elegant-beyond-words *Trillium catesbaei*, huge *Hexastylis*, other-worldly sedges, and vast beds of *Veratrum parviflorum*. All this majesty, in my mind however, becomes tempered by the prospect of impending death to the hemlocks, from the dreaded Wooly Adelgid that is spreading through the Appalachians. After a Mexican meal, we bid adieu to Max, and drove east into the night, to lodge somewhere in the foothills before we faded.

On Tuesday, we drove and drove—or rather I drove and John led the conversation—along back roads across to Greenville, and then the long Interstate haul to Chapel Hill. Everything under the sun —and moon—of his complex life was covered: John's childhood in Chicago, associated racial tension, the meaning of the word "blivy", the day he contracted polio at a summer camp in Missouri, his conversion from ragtime to opera, the development of his botanical expertise, and the building of his

Photo compliments of the Thieret family
family, fame and fortune. At even the briefest stop, he noted new weeds for the trip, e.g. *Soliva sessilis* [?] at the Welcome Center near the North Carolina border. We settled into a merry outlook, alternating between plans for floristic works (always a dozen or more on his desk); details of his kidney function; the meaning of life, death and religion—or its lack; attempts at identification of roadside weeds or Coastal Plain shrubs at 70 mph; obscure warm-temperate ornamentals in containers by gas stations—some obscure even to John, like *Lorapetalum* (Hamamelidaceae); and further quiet comments on people, music and decor in fast food joints—I learned the definition of steatopygia, becoming fully initiated into the Thieret way. In a somewhat more cultured establishment, one waiter introduced himself to us: “Hello, welcome to Friendly’s, my name is Andrew and I will be your server”; John replied, “Hello, my name is John and I will be your customer.”

Fairly late that eve, we pulled in to Chapel Hill for supper with another preeminent botanist of North America—John Kartesz, the master of species lists and distributions across the continent. Now, JK has had his troubles in some quarters, as is natural when great botanical personae interact across the academic stratosphere. And JT has helped mediate difficulties, always reminding us of the common goals, seeking correctness if possible, but forgiving disagreements and urging resumed cooperation. As we dug into little remarinated octopi at the new Chinese place in town, JK revealed fascinating details of his forthcoming masterpiece—a compilation of county records across the continent, with all sorts of relational database stuff, and quick potential presentations of the data in various combinations of counties, associations with eco-morphological characters, and whatnot. Now, JT has had little direct dealings with databases, but really appreciated the value of JK’s work. Sitting between these two masters, I basked in the warm glow of botanical camaraderie, and cold Chinese beer.

On Wednesday, we spent much of the day in Coker Hall at the university herbarium. While I checked on some Kentucky collections, John helped out and then chatted with herbarium staff, Carol-Ann McCormick and Lisa Giencke, the new curator, Alan Weakley, and the eminent ecologist, Bob Peet. John was consulted on a variety of topics, from the appropriate usage for “cf.” and “aff.”, to the treatment of minor neglected families like Elaeagnaceae. At this hub of southeastern botany, the hope for a synthesis of the Carolina flora and adjacent states has been revived. There is no doubt that Alan’s broad exposition of the flora in his widely distributed draft (including the web) will be a huge advance, and it will also focus new attention on the many neglected problems that remain be solved in this diverse region.

Northward later in the afternoon through Virginia, John began to worry about his tick bites with the leftover heads. They had become a little infected, and with his history of heart problems and other assorted medical issues, he was prepared to take no chances. We pulled into a little town and sought the nearest clinic; I waited while he submitted himself to the bureaucracy first and then the treatment—no charge with his insurance card! I tried to be patient, composing feeble limericks about a man called Thieret to help pass the time. A kind lady doctor performed the little incisions and extractions, and advised on antibiotics. John was extremely grateful, and told me he would write her a report and thank-you note upon his return to Kentucky, and I think he really did.

On Thursday, we got through heavy traffic around DC, avoiding politicians like the plague, and crossed the big bridge into the Delmarva Peninsula. We approached our furthest destination—Dover, Delaware—where the prominent sedge systematist, Rob Naczi, resides. When John officially retired from active duty at Northern Kentucky University, Rob had replaced him for several years as curator of the herbarium and professor in the Department of Biology. Though separated by several decades in age, and all sorts of other characters, they were united in love of sedges and botanical excellence in general. One of Rob greatest achievements at NKU was to raise funds for the transfer of the herbarium into compactors. Fond memories flowed, and I left them to reminisce over lunch and, of course, a field trip to the nearest weed patch in town. True to form, John found a new species for the flora of Delaware. At supper that evening we were regaled by Rob and family, plus the Tuckers and other associates of the herbarium. We were astounded at the exceptionally polite conversation engaged in by Rob and Mary’s children, aged circa 2 to 10, aided in part by parental control of television-watching in the home.

After saying Goodbye, on Friday evening, we eventually had to set out for home in Kentucky. This marathon leg of the journey promised to be truly grueling. But, by pacing ourselves with stops at the various establishments that we considered worthy enough, and through further titration of personal opinions and experiences, we survived in a friendly fashion. Somewhere in the wilds of the Maryland Panhandle, we nestled into a foreign-owned motel for our final night together. As usual, John washed his underwear and socks, then set them out to dry on the wall-mounted lamps just over our heads in bed as we gazed at the evening’s news. But I was also in for a special treat: John extracted the Gideon’s Bible from the drawer, and read solemnly from Deuteronomy Chapter 23. After relevant physiological, psychological and philosophical commentary, we fell asleep in bonds of mutual schoolboy humor.

On the final Saturday, we drove all morning through West续页
John William Thieret was born on 1 August 1926, in Chicago, Illinois. During his youth, he was interested in plants and became an avid botany student during his school days at Hyde Park High School, Chicago. John earned his B.S. in Botany in 1950 and M.S. in Botany in 1951 from Utah State University, and received his Ph.D. in Botany in 1953 from the University of Chicago through the Chicago Field Museum of Natural History. His dissertation was “Gross Morphology of the Seeds of the Scrophulariaceae and Classification of the Family.”

From 1954 to 1961 John was Assistant Curator of Economic Botany at the Chicago Field Museum and then Curator of Economic Botany and published 26 articles. From 1961 to 1973, John was Associate Professor and later Professor of Biology at the University of Southwestern Louisiana, Lafayette. He published 47 articles while in Louisiana. In 1973, John joined the faculty at Northern Kentucky University in Highland Heights, as Professor and Chair of the Department of Biological Sciences, serving as Chair until 1980 and continuing as Professor until retiring in 1992, with the title Professor Emeritus of Biological Sciences. During his professional career, John authored 157 refereed journal articles and book articles, and published 19 nomenclatural combinations, including four species new to science: Cyperus brevifoliioides Thieret & Delahoussaye; Limnophila x ludoviciana Thieret; Isoetes louisianensis Thieret; and Cyperus louisianensis Thieret. In 1964, another new species that John had discovered in Louisiana was named by Lloyd Shinners in his honor, a mint, Scutellaria thieretii.

In addition, John wrote 136 book reviews, 65 articles for Encyclopaedia Britannica, 46 articles for Encyclopedia Americana, and many popular science articles. He was also the author or co-author of five books: Louisiana Ferns and Fern Allies (Thieret 1980); Aquatic and Wetland Plants of Kentucky (Beal and Thieret 1986); Trees: A Quick Reference Guide to Trees of North America (Mohlenbrock and Thieret 1987); Assessment and Management of Plant Invasions (Luken and Thieret 1997); and National Audubon Society Field Guide to North American Wildflowers: Eastern Region (Thieret et al. 2001).

John loved teaching and was an exemplary teacher in the classroom, laboratory, and field. His classes were challenging, enjoyable, informative, and popular. John was a strong believer in providing students with actual plant specimens, either fresh or dried, for a “hands-on” approach, and he went to great effort to accomplish that goal. John generously shared his interests and time, and published many articles with undergraduate students, graduate students, and colleagues. Indeed, John was a mentor whose enthusiasm was contagious and inspired botanists from other Kentucky institutions to get involved in Kentucky research activities. He was the prime mover and inspiration of the Kentucky flora project, which culminated this past year with the publication of Ron Jones’ Plant Life of Kentucky, for which he served as Editorial Associate.

He established the Northern Kentucky University Herbarium in 1973, and built it into a major collection of 35,000 specimens by 2005. Through his efforts, the NKU Herbarium became the best-curated herbarium in Kentucky. He was very proud of the NKU Herbarium, and in his honor, NKU Board of Regents has now renamed this facility as The John W. Thieret Herbarium.

John served several significant editorships and advisory roles...
during his professional career, including multi-year terms in various editing roles for the journals *Economic Botany; Sida, Contributions to Botany;* and the Journal [Transactions] of the *Kentucky Academy of Science.* Of most significance to the botanical science of the continent, he was an Editor for the first 10 volumes and writer of 25 family and generic treatments for the monumental project, *Flora of North America North of Mexico.* He also was an Advisor in Botany for *Encyclopaedia Britannica* and a Member of the Advisory Committee at the Lloyd Library in Cincinnati.

John loved editing and his ability as an editor was extraordinary. He was a perfectionist and a superlative editor second to none, but his efforts always brought out the best in authors. Those who submitted manuscripts for John’s editorial scrutiny often found them returned with a profusion of red ink on the printed text. When his recommended changes were made, the greatly improved manuscripts always told the story better.

John received the 1984 Distinguished Kentucky College/University Scientist Award from the Kentucky Academy of Science for his significant academic research and teaching contributions to the Commonwealth. He was presented the 2005 Outstanding Academy Service Award from the Kentucky Academy of Science for his outstanding editorial contributions to the JKAS.

John W. Thieret was an internationally recognized American plant taxonomist, a skilled field botanist, excellent teacher, acclaimed author, splendid editor, fine herbarium director, inspiring mentor to students and colleagues, and a noble friend. John dearly loved his family, and after family, his great passion was plants. He was an avid collector all his life, and his career specimen accession numbers were over 62,000. John is survived by his devoted wife of 55 years, Mildred Thieret, his five children, Robert, Nancy, and Jeffrey in Minnesota, Richard in China, and Jennifer in Highland Heights, seven grandchildren, and five great-grandchildren.

John Thieret was one of the patriarchs in North American plant taxonomy, and one of the last great field naturalists of the 20th century. His death marks the ending of a botanical era, but his legacy continues through the work of many former students and colleagues. John was an inspiring mentor who enriched the lives of those who knew him. He will be greatly missed.

*Adapted from an article that appears in Journal of The Kentucky Academy of Science 66(2). In press.*

A Tribute to
Dr. John Thieret

By Patricia Dalton Haragan

I was in the musical city of Vienna when I received word of John’s passing. Grieving the loss of my good friend and mentor, I could only be comforted by the feeling that John was with me as I walked the streets where Beethoven, Mozart, Schubert and other great composers once lived. John was not only a well-known botanist but a musician who loved classical music, opera, and ballet….our friendship was built on these passions.

Mentors are rare in a life time and how blessed I was to know John. He was an inspiration and stabilizing force ever since I met him on a field trip in 1984. Nervous about being with such a great botanist, my uneasiness soon vanished as time went on. His enthusiasm and love for plants was contagious and his knowledge unparalleled. We reveled at finding common (and rare) plants along the railroad tracks, one of John’s favorite haunts. Weeds were dear to his heart and our friendship only grew as I began my new job at the College of Agriculture Herbarium studying the weed flora of Kentucky.

Throughout the years, John has always been there for me. Even with his busy schedule he always found time to answer my emails, edit my writing, or identify plants I questioned. He was a giving, caring, intelligent person. He also understood the importance of family.

I have so many wonderful memories of John: visiting the Lloyd Library in Cincinnati and delving into the weed literature; collecting plants in disturbed sites throughout Kentucky; going to the Speed Art Museum with him and his wife, Mildred, and talking about life’s choices; singing songs from Schumann’s “Frauenliebe und leben”, and working in the Northern Kentucky University Herbarium with his newest opera CD playing in the background. Our times together have enriched my life and his passing has left an emptiness in my heart…a void in Kentucky botany.

It was in Salzburg where I walked into an ancient abbey church near the Alps. For centuries its walls had heard glorious music. Mozart had even directed his great orchestral and choral works in this very place. In the dim light, I lit a candle for John…..it was a powerful moment.
Effects of Global Warming on Native Plants and Animals

A collection of writings from various web sites and journal articles.

Union of Concerned Scientists Web Site

Global biome models generally predict a poleward shift of the northern hemisphere taiga, boreal conifer, and temperate mixed forests belts. One limitation of the global models is that the output represents a vegetation distribution that is in equilibrium with climate, a condition that is unlikely to occur in the next century. The spread of tree species involves several factors, including dispersal, regeneration on a suitable site, maturation, and seed production, disease, fire, flooding, and wind damage.

If climate changes faster than trees can disperse to new, more suitable areas, the composition of the forest may change and the survival of some species could be at risk. Global-scale models are also inadequate to evaluate the indirect effects of climate, such as disturbances from pests, disease, fire, flooding, and wind damage.


Using General Circulation Models, General Vegetation Models, and estimated migration rates during the last glacial period, the authors concluded that the likely speed of global change in the next century will outpace the potential migration capability of most plant species, and lead to decreases in biodiversity (highly mobile and opportunistic species, i.e. "weeds" will have the advantage).

Range shifts in areas with regional warming trends have been reported in alpine plants, butterflies, birds, marine invertebrates and mosquitoes. In a sample of 35 European non-migratory butterfly species, 63% had ranges that shifted to the north by 35-240 km during the past century, and only 3% shifted to the south.

The range shift parallels a 0.8°C warming over Europe during the last century, which has shifted the climatic isotherms northwards by an average of 120 km.


These authors found that species such as birds, butterflies and alpine herbs had shifted their habitats northward an average of 6 kilometers per decade, or to higher altitudes of 6 meters per decade. Other species have also adjusted behaviors: migratory birds, amphibians and other animals are breeding earlier in the spring, and plants are blooming earlier. A "diagnostic fingerprint" indicating a response to global warming was found for 279 species.

Many animals are able to respond to climate at a faster rate than plants. For those animals that do not migrate, a distribution change in response to a warming trend would occur at the population level as a result of changes in the ratios of extinctions to colonizations at the northern and southern boundaries of the range.

A northward range shift would thus be reflected in either a net extinction at the southern boundary or a net colonization at the northern boundary.

Who am I?

I am originally from Asia, but I now grow in habitats throughout much of eastern U.S. I especially like wet woods, where I can spread rapidly by putting down roots from each of my nodes. I can spread so fast that I can replace the plants that were here before me. For many eastern states I am now on their list of Top Twenty most threatening invasives. While my cousin, Johnson grass, is taking over the fields and roadsides, I am taking over the moist forest floors! I am a straggling, low-grower, with leaves to 8 cm long, and racemes to 5 cm, my spikelets are paired but only one is fertile, with hard glumes and soft lemmas.

Who am I?

Hemlock waterparsnip
Apiaceae Sium suave (Walter)

The following KNPS members correctly identified the last species:
Chris Bidwell
Charles Chandler
Judy Dumke
Allen and Susan Sweetser

Send your answer including family name, genus and species name, the correct author citation, and the geographic range of the species to ron.jones@eku.edu!

Editor’s Note—This is a major article that has been widely quoted and referenced in the last year.

Climate change over the past 30 years has produced numerous shifts in the distributions and abundances of species. Using projections of species’ distributions for future climate scenarios, the authors assess extinction risks for sample regions that cover some 20% of the Earth’s terrestrial surface (including the Eastern Deciduous Forest and Kentucky). Exploring three approaches in which the estimated probability of extinction shows a power-law relationship with geographical range size, they predict, on the basis of mid-range climate-warming scenarios for 2050, that 15–37% of species in our sample of regions and taxa will be ‘committed to extinction’.

These estimates show the importance of rapid implementation of technologies to decrease greenhouse gas emissions and strategies for carbon sequestration.

From the National Wildlife Federation Web Site

Causes of Global Warming:

When coal, gas and oil are burned, they produce carbon dioxide that builds up in the atmosphere and traps the sun’s heat. Much of this greenhouse gas released today remains in the atmosphere after even 100 years, trapping more and more heat.

Since the mid-1800s, emissions of carbon dioxide have skyrocketed, and subsequently global temperatures have risen by about 1 degree Fahrenheit in the last century. Earth has not experienced such a rapid change in temperature in thousands of years.

Unless we reduce the pollution that causes global warming, temperatures could climb between 2-10 degrees Fahrenheit this century. Such a rapid rise in temperature would fundamentally reshape the planet’s climate, forever changing the landscape and water resources people and wildlife depend upon.

Global Warming is likely to have a significant impact on Kentucky in the next few decades. Rising temperatures will likely change the makeup of entire ecosystems, forcing wildlife to shift their ranges or adapt (or become extinct). There is likely to be a loss of cool water fish (trout and brook trout) from streams, harmful effects on irrigation, urban water supplies, and wildlife habitat, in particular—loss of wetland habitats with many rare species in Western Kentucky; more invasive species will impact the state, causing a reduction in biodiversity; there will be more flooding, change of migration patterns by waterfowl, shift northward of the breeding ranges of many songbirds; loss of valuable timber trees and replacement by scrub vegetation and exotic species.

The loss of wildlife habitat could lead to a loss of million of dollars in tourism dollars (in 2001 1.8 million people spend more that 1.8 billion dollars on wildlife viewing, hunting and fishing, which in turn supported 40,285 jobs).

Solutions???
Require power plants, oil companies, and other major sources of greenhouse gases to reduce these emissions; encourage the creation of new energy technology jobs, provide funds for wildlife conservation projects to help protect plants and animals from global warming, encourage farmers to adopt environmentally friendly farming and forestry practices; encourage alternative fuel projects and various kinds of "green" power (solar, wind, land-fill gas, animal waste, biomass, etc.)—Kentucky has the potential to generate 20% of its energy needs from renewable sources. On a personal level—plant shade trees, adopt energy conservation practices for home and auto, replace light bulbs with compact fluorescent bulbs; act on a local level to encourage energy savings and environmental practices in your community.

Editor’s Note—A Conclusion
Modern-day species assemblages in Kentucky have developed in the last 10,000 years, and in association with the emergence of human civilization. Current human activities and climatic changes, especially global warming, will likely overwhelm local conservation efforts, and result in massive species extinctions in next 50 years.
Native Plant Certification Courses for Spring 2006 Semester

Core Course:
Introduction to Spring Wildflowers in Kentucky*
$79.00
Instructor: Larry Brewer

This course is designed as an introduction to Kentucky's spring wildflowers. The students will learn to identify elements of our spring flora through the use of technical keys and floristic manuals. Basic terminology and key characteristics of some of our more common plant families will be provided. Ron Jones' "Plant Life of Kentucky: An Illustrated Guide to the Vascular Flora" is the recommended text for this course. However, alternative texts will be provided for those unable to purchase Dr. Jones' text. This course will include both lab and field exercises.

Dates and times: Saturday's 9:00 am to 12:00, April 29, May 13, 20, and 27, 2006.

Elective Courses:
Gardening with Native Plants*
$59.00
Instructor: Margaret Shea

This course is designed as an introduction to the use of native plants for gardening and landscaping purposes. While both woody and non-woody plants will be discussed, emphasis will be placed on the use of non-woody plants in the garden.

Date and time: Saturday, April 22 from 9:00 am to 4:00 pm with a one-hour lunch break.

Spring Wildflowers**
$40
Instructor: Anne Ramsay

This class will meet in two 3-hour field sessions. Each session, we will enjoy identifying and learning about approximately 24 species of flowers, with additional facts about scientific name, distribution and natural history of the plants. Bring a good wildflower identification book for KY or the Eastern United States.

We will be going to Raven Run Nature Sanctuary for our first field trip. It is near Lexington and we will meet at 1:30 sharp at the visitor parking lot (phone no. 859-272-6105). Our second field trip we will go to different places in the Berea College forest. We will meet at 1:30 sharp at the Artisan Center parking lot at the north Berea exit.

Dates and times: Sundays from 1:30-4:30, April 9 and 23. Our "rain date" is April 30th (which will meet at 1:30 p.m. at the Artisan Center at Berea). See above for locations.

* These classes meet at Northern Kentucky University. Contact NKU Community Connections for enrollment, fees, etc. (859)572-5600 or connect@nku.edu

**This class is offered through Eastern Kentucky University. Call (859)622-1228 to register (class number CS6187).
The following is a summary of a recently status report submitted to the 2006 Kentucky Legislature by the Kentucky Nature Preserves Commission.

**Status of Kentucky’s Rare and Native Plant Flora**

Of the 2,030 native plants reported from Kentucky, 275 are listed under 400 KAR 3:010 to 3:040. Of these endangered and threatened plants, 117 have at least one population on natural lands that are managed primarily for natural resource protection (i.e. state nature preserves). Only 60 listed plants have more than one occurrence protected (and the vast majority of these have only two). One or a few protected occurrences for these plants is far short of what is needed to ensure that they can sustain themselves in the Kentucky landscape. National guidelines suggest about 100 populations of a plant are needed to consider it secure; a lesser number may be considered if there are stable populations on natural areas dedicated to its protection and management.

Of the 275 plants listed as endangered and threatened, 61 have not been seen in Kentucky for 20 or more years. This generally provides evidence that rare plants are disappearing from our flora and could be indicative of a trend toward extinction. However, the lack of botanical inventories and a sustained monitoring program may account for some of the missing species. Another 56 are listed as special concern under a state list produced by KSNPC and many more that are considered candidates for listing need to be assessed. KSNPC needs additional staff to complete this work.

Primary threats to rare plants are: 1) habitat destruction and land development that fragments the natural landscape; 2) invasive exotic plants; and 3) disruption of ecosystem functions such as suppression of natural fire and damming of rivers and streams. Considering the changing patterns of development and resource use in Kentucky, it is clear that natural areas are being degraded and converted for other uses. It follows that the native flora is also declining in diversity and that the rare plants will be the first to disappear, simply because their low population numbers make them acutely vulnerable.

**Recommendations of the Kentucky State Nature Preserves Commission**

1. Provide funding for Kentucky’s Endangered Plant Program—establish a state botanist position; train state biologists in rare plant identification and issues; fund systematic surveys of Kentucky’s botanical resources.
2. Develop a public information program for Kentucky’s rare plants—education materials and outreach, internet access, etc.
3. Provide information to landowners—access to information and consultation on rare species; develop plans for land management that emphasize rare plant conservation.
4. Regulate indiscriminate plant collection and sale—restrict the collection of rare and exploited species without landowner permission (KY is one of only two southern states lacking this protection); regulate the sale of rare plants.
5. Fund biological inventories of public lands—protect rare plants and inventory flora of state lands.
6. Educate plant nursery owners, public agencies, and others about invasive exotic species and restrict their sale.

The Kentucky State Nature Preserves Commission believes the recommendations set forth herein would provide the most effective and cost efficient measures to reverse the decline of Kentucky’s native flora. We seek to protect beauties such as the Kentucky lady’s-slipper orchid, the wood lily and numerous other plants that are not only important to our ecology and economy but are part of Kentucky’s natural heritage.

**Values of Native Plants to Kentuckians**

- **Recreation Industry** – Unique rare plants and native flora are important to Kentucky’s appeal as an ecotourism destination
- **Heritage** – Kentucky is proud of its natural heritage and native plants are integral in maintaining these ties to our state
- **Research** - Well over 40% of the drugs we use today are derived from native plants
- **Environmental Stability** - Rare plants are excellent indicators of state of the environment and the flora as a whole is essential for environmental stability
- **Health** - Not only do people need green space around them, they need space that is diverse and beautiful. And, they need places for relief from everyday stress.
- **Legacy** - Can we ethically permit a situation that does not leave Kentucky lady’s-slipper for the next generation to see? It is an obligation that state government needs to take more seriously.
The Kentucky State Nature Preserves Commission maintains a system of nature preserves, whose primary function is to protect rare biological resources and natural communities. For this reason, only passive recreation is appropriate on a nature preserve. The majority of the preserves are open to the general public, and many of these showcase excellent examples of Kentucky’s biodiversity. These preserves are open year round from sunrise to sunset for passive recreational activities such as hiking, photography, bird watching and nature study. Trails are open to foot traffic only and visitors must stay on them at all times. In order to protect the natural and cultural resources occurring on State Nature Preserves, motorized vehicles, horseback riding, bike riding, artifact gathering, plant gathering, hunting, climbing, rappelling, camping, picnicking, building fires, radios/tape decks and pets are not permitted.

Staff availability limits our ability to provide regularly scheduled hikes on all of the nature preserves. Each year, a series of hikes led by Commission biologists is offered. Periodically, guided hikes are arranged for preserves that are closed to the general public. Two preserves under the management of onsite custodial partners offer a variety of programming for children and adults. The Louisville Nature Center is adjacent to Beargrass Creek State Nature Preserve and is open Monday through Saturday 9 a.m. to 5 p.m. The Blackacre Foundation offers public access and programs at Blackacre State Nature Preserve on Sunday afternoons, 1-5 p.m. April through June and September through November. Several of our other partners, such as the Floracliff Board and Friends of Lower Howard’s Creek may offer outings on their properties as their time and staff allow.

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State Nature Preserve Hikes

Spring hike at Blanton Forest State Nature Preserve (Harlan County) with KSNPC Southeast Regional Preserves Manager Kyle Napier
When: Saturday, May 13, 2006
Start time: 9 a.m. EDT
End time: 4 p.m. EDT
Maximum # Participants: 20
Minimum # Participants: 5
Length: 6 miles
Difficulty: strenuous
As part of our 30th anniversary celebration, join us as we hike through Kentucky’s largest surviving old-growth forest. Come see a large diversity of tree species that have been standing since before this nation was born. Knobby Rock offers a spectacular view of the surrounding forest and countryside. Participants should
wear long pants and hiking boots, and be sure to bring a lunch and plenty of drinking water. We will meet in the parking area for Blanton Forest SNP on KY 840. Hikes can fill up quickly, so don’t hesitate to reserve a spot today by contacting KSNPC Southeast Regional Preserves Manager Kyle Napier at (606) 633-0362 or kyle.napier@ky.gov.

To reserve a spot on this hike contact KSNPC Southeast Regional Preserves Manager Kyle Napier (606) 633-0362 or kyle.napier@ky.gov. Please don’t hesitate to reserve a spot; these hikes can fill up quickly.

Fall hike at Bad Branch State Nature Preserve (Letcher County) with KSNPC Southeast Regional Preserves Manager Kyle Napier
When: Saturday, November 4, 2006
Start time: 9 a.m. EST
End time: 4 p.m. EST
Maximum # Participants: 20
Minimum # Participants: 5
Length: 7.5 miles
Difficulty: very strenuous
As part of our 30th anniversary celebration, join us for this extended hike through the Bad Branch gorge. On this hike participants will have the opportunity to visit High Rock, an area that offers an unparalleled view of the Cumberland Plateau. Kyle Napier will be the guide on this trek through one of Kentucky’s true natural treasures. Participants should wear long pants and hiking boots. They should also bring a lunch and plenty of drinking water. We will meet at the trailhead/parking area for Bad Branch SNP on KY 932.

Hikes can fill up quickly, so don’t hesitate to reserve a spot today by contacting KSNPC Southeast Regional Preserves Manager Kyle Napier at (606) 633-0362 or kyle.napier@ky.gov.

### Botany

There should be no monotony
In studying your botany;
It helps to train
And spur the brain—
Unless you haven’t got any.

It teaches you, does Botany,
To know the plants and spot any,
And learn just why
They live or die—
In case you plant or pot any.

You learn, from reading Botany,
Of wooly plants and cottony
That grow on earth,
And what they’re worth,
And why some spots have not any.

You sketch the plants in Botany,
You learn to chart and plot any
Like corn or oats—

Continued, page 14
Wildflower Weekend May 4-7, 2006
presented by Kentucky Native Plant Society and Natural Bridge State Park

**Registration**

$5 per adult  
$2 per child ages 6-12  
No preregistration required. Fees include all hikes, evening speakers and socials. All hikes depart from the Activity Center and registration occurs at the Activity Center. Location of presentation will be announced.

**Thursday, May 4th**

7:30 p.m. “Non-native plants of Natural Bridge”, presented by park naturalist Zeb Weese

**Friday, May 5th**

Morning Field Trips Depart at 9:00 a.m.

Registration & Sign-up for field trips 1:00—2:00 pm.  
Afternoon Field Trips Depart at 2:00 p.m.

Registration & Sign-up for field trips 5:30 -7:30 p.m.  
Dinner available at Lodge  
Friday night social- 6:30- 7:30 p.m. Activity Center.  
Snacks and drinks provided.

7:30 p.m “Non-photosynthetic Plant Species” presented by Matt Klooster, University of Cincinnati

**Saturday, May 6th**

Registration & Sign-up for field trips 7:00- 8:30 a.m.  
Morning Field Trips Depart at 9:00 a.m.

Registration & Sign-up for field trips 1:00 - 2:00 pm.  
Afternoon Field Trips Depart at 2:00 p.m.

Registration & Sign-up for field trips 5:30 -7:30 p.m.  
Dinner available at Lodge

6:30- 7:30 p.m. Activity Center

Saturday night social and celebration of 20th Anniversary of KNPS—snacks and drinks available, special activities and displays planned; photo exhibit and contest (see details below).  
7:30 p.m “Wildflowers of Tennessee and the Ohio Valley” presented by Dennis Horn and Tavia Cathcart (of the Tennessee Native Plant Society)

**Sunday, May 7**

Morning field trips depart at 9:00 am

Attention—Special activities for 20th KNPS Anniversary

1) **Call for KNPS photographs**—locate those old photographs, your favorite images, from 20 years of KNPS field trips and Wildflower Weekends (need to be in digital format, either from digital cameras or from scans of prints or slides, all images should be set to 150 dpi or less). Send by email to Kathleen Jones (KJones@madison.k12.ky.us), or by compact disk by April 24th (mail to K. Jones, 131 Redwood Dr. Richmond, KY 40475). Please indicate date, location, and people in the image. We will set up a power point slide show for past two decades of KNPS activities.

2) **Photo Contest on Saturday night**—all members are welcome to bring in your favorite photos featuring native Kentucky plants; images need to be 8 X 10, matted—we will set up a display and have a panel of judges pick their favorites. To generate some prize money contestants will asked to contribute $5 per person for up to two entries. Please provide a tag that indicates date and location of the image.

Cont. from p. 13

You jot down notes,  
If you know how to jot any.  
Your time, if you’ll allot any,  
Will teach you how and what any  
Old plant or tree

Can do or be—  
And that’s the use of Botany!

Poem by Berton Braley from Science News Letter, March 9, 1929

Birdwatching, Herp-Watching and Wildflowers at Kentucky State Parks in 2006

**Carter Caves**
April 28th - 30th
*Wilflower and Campers Appreciation Weekend*
This weekend has been set aside as a special weekend for campers. Those camping will receive two nights for the price of one. Special rates will also be available for mini-golf and cave tours. Recreational programs planned for the weekend include canoeing, crafts, homemade ice cream, and evening entertainment. For the Wildflower weekend the park will offer a variety of tours, programs, and field walks to showcase the beautiful array of wildflowers at Carter Caves.

**Cumberland Falls**
May 5th and 6th
*Natural Wonders Series – Birding & Wildflowers*
This weekend will be a nature lover’s dream. There will be guided bird & wildflower walks at various times on Saturday. Walks will cover various topics from identification to conservation, plus guest speakers will conduct evening programs Friday and Saturday. $5 registration fee per person. Lodging discount offered for nature lovers.

**Natural Bridge**
May 4th – 7th
*Wildflower Weekend*
The Natural Bridge area is home to hundreds to species of native plants; 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 enthusiast and from short easy walks in Natural Bridge to longer hikes in Red River Gorge. Our evening speakers will focus on the native plants of the region. Registration fee is $5 per adult and $2 per child.

**December 16th**
*Christmas Bird Count*
For more than 100 years the National Audubon Society has been counting birds around the holidays, information which helps scientists determine how our feathered friends are doing. The Natural Bridge Christmas Bird Count is a great chance to learn a little about our winter residents while hiking at Natural Bridge and the Red River Gorge National Geologic Area. It's also a great time to drink hot chocolate in the lodge while counting birds at our feeders! $5 registration fee includes birding hikes, bird identification class, participation in the National Audubon Society’s Christmas Bird Count.

**Pennyrile Forest**
May 13th
*International Migratory Bird Day*
Join us at Pennyrile Forest State Resort Park as we celebrate International Migratory Bird Day. Lots of bird-brained activities will be available including: an early bird hike, bird migration presentation, free IMBD poster, and live bird show. Registration fee is $2 per person if registered by May 12th, $5 after. Registered participants will receive a 10% discount on lodging or camping.

**Fall Colors**
**Pennyrile Forest**
October 20th – 22nd
*Fall Color Weekend*
Come to Pennyrile Forest State Resort Park to celebrate autumn at our Fall Color Weekend. During the weekend you’ll learn about what causes fall color and enjoy loads of fall activities. Registration fee for activities is $5 per person. Participants in Fall Color Weekend are eligible for a 10% discount on lodging or camping.

Please bring your own GPS! Registration is $25 per couple (additional)

**Herpetology**

**Natural Bridge**
April 21st – 22nd
*Herpetology Weekend*
Learn about nature’s most misunderstood critters! Experienced herpetologists will lead field trips in to the Red River Gorge to observe reptiles and amphibians in their native habitat. Collection is prohibited. Demonstrations will include live venomous snakes! Evening presentations will focus on reptile and amphibian conversation. Registration fee is $5 per adult and $2 per child.

For additional information contact:
Carey Tichenor
Kentucky State Parks
500 Mero St., 11th floor
Frankfort, KY 40601
phone: (502) 564-2172
email: carey.tichenor@ky.gov
Calendar of KNPS and Other Native Plant-related Events

Dropseed Nursery's Native Plant Sale  
Friday  
April 28, 12-7; Saturday April 29, 9-4 and every Friday and Saturday during May. 13930 Brush Run Road, Louisville, KY 40299.  502-439-9033  
http://www.dropseednursery.com

Shooting Star Nursery  
Schedule of Events  
Apr. 18, 19, 20 --Shooting Star is a vendor for the KY Gardeners Annual Meeting at the Capital Plaza Hotel, 405 Wilkinson Blvd., Frankfort KY.  
Apr. 21-22 will be our first weekend with a “Recover From the Drought Sale” all sun-loving wildflowers will be 10% off.  
Wed. May 3 is Scott County Day, all Scott Co. residents are invited to the nursery to receive 10% off all nursery stock (excluding ladyslippers). Our first May weekend, May 5-6 is our “Welcome Us to the Neighborhood Sale” all trees and shrubs will be 10% off.  
Spring Hours:  
Fridays and Saturdays from 9-5 Apr. 21 through May 27. Otherwise, please call for an appointment.

Natural Bridge Events:  
For more information: contact the Park Naturalist, Zeb Weese, at 1-606-663-2214 or jason.weese@ky.gov

Natural Bridge Invasive Species Workshops  
Apr 1; May 6; June 3; July 1; Aug 5; Sept 2; & Nov 4, 2006  
Natural Bridge has long been a favorite of native plant enthusiasts because of its biodiversity. But a few alien plant species from Europe and Asia are overtaking habitat needed by Kentucky’s native species. Help stop this invasion by volunteering to assist the naturalist staff in pulling and cutting some of the worst invaders. Each volunteer day begins at 9:00 am at Natural Bridge’s Hemlock Lodge and ends whenever you get tired!

“Exploring the Arches” Guided Hikes  
March 18; June 17; July 15; & Aug 19, 2006  
Join a naturalist to get a good look at the area’s rugged cliff lines, rockhouses, rhododendrons, and natural arches. Destinations include White’s Branch Arch, Whittleton Arch, Kentucky’s Natural Bridge, and many other lesser known geological formations in the area! Each trip is different, distances vary from 6 to 12 miles and they will last from 6-9 hours each. There is a $15 for the first trip, $7 for each additional trip (Limit 12 people per trip), which includes a guide, sack lunch and Natural Bridge Trail Guide bandana.