



The Lady-Slipper

Number 27:2 Summer 2012

A Publication of the Kentucky Native Plant Society

www.knps.org

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Physiography and Plant Communities of Maywoods Environmental and Educational Laboratory

By Will Overbeck, Eastern Kentucky University

Maywoods covers 1700 acres, and is a research forest owned by Eastern Kentucky University and managed by ECU Division of Natural Areas; which is located in Garrard County, Kentucky south-east of Lancaster, the county seat. Several studies of plants, reptiles, and mammals have been conducted at Maywoods and I had the chance to examine the vegetation as part of "The Vascular Flora of Garrard County, Kentucky" which was the subject of my Master of Science thesis research at ECU. The financial support of the KNPS for this project is gratefully acknowledged.

Maywoods is within the Knobs Norman Upland physiographic region of Kentucky. The Knobs Region is characterized by Devonian shale outcrops capped by Mississippian limestone and bounded by the Cumberland Plateau to the east and the Bluegrass Basin to the west. This area is covered by a mosaic of plant communities depending on local soil conditions, aspect, and disturbance history.

The Knobs region is dominated by deciduous forest, which varies in composition according to the acidic or basic nature of the soil, moisture and light availability, and fertility. The area of Maywoods can be divided into several major habitat types consisting of rock outcrops, south slopes, north slopes, ephemeral streams,



Tradescantia virginiana – Virginia spiderwort

Hairy Lip Fern – *Cheilanthes lanosa*



stream terraces, perennial streams, lake shores, emergent and aquatic habitats. Past disturbance history such as water scouring, burning, logging, succession, and forest canopy gap dynamics can influence contemporary species associations.

South facing slopes at Maywoods are very dry and can be classified as Pine-Oak communities. *Pinus virginiana* (Virginia pine) is abundant along with *Quercus coc-*

(Continued on page 16)

KNPS President's Message by Alan Nations

Hi Folks,

The early spring of 2012 has made its way into the record books. This follows 2011's record heat, the warmest year ever in 49 of 50 states. Kentucky's native plants bloomed several weeks early throughout much of the state. Most trees were fully covered with young leaves by mid April in the central part of the state. It was an unusual and interesting spring.

Wildflower Weekend was a great success; we had 132 guests registered along with our board members and officers. The weather was great for the many outings. Our hike leaders did a great job, despite the early bloom and the absence of many species of wildflowers. Dr. Ron Jones and Pat Haragan presented a class on collecting and preserving herbarium samples. It was interesting to hear about the flora of Costa Rica and Dr. Jones' collection of samples there. We plan to include classes like this in future Wildflower Weekends. Finally, guest speakers Tavia Cathcart, Dr. Mary Arthur and Zeb Weese, provided interesting presentations at the end of each day of hiking and fun.

Our election was held at the general meeting. I was elected for a second term, as were Zeb Weese, our Vice President, and Sarah Hall, our Secretary. Scott Slankard left his board position to become Treasurer, and Tara Littlefield, who had been our Treasurer, was elected to Scott's board position. Laura Darnell and Wilson Frances were elected as board members, to positions vacated by Brian Gasdorf, who became Chairman of the Wildflower Weekend committee, and Neil Pederson, who will be co-editing the Lady-Slipper. I'd like to thank these officers and board members for their support and hard work over the last two years, and to welcome Laura and Wilson to the board. I look forward to working with you all.

Have a safe, enjoyable summer. I hope to see you at the fall meeting at Flora Cliff.

Alan

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

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[KNPS NEWS](#)

KNPS Fall Meeting—October 13, 2012 at Floracliff Nature Sanctuary

Join us for a day of hikes and programs in Fayette County this fall as we celebrate the 100th birthday of Dr. Mary Wharton, benefactor of Floracliff and author of the original “Wildflowers and Ferns of Kentucky.” Floracliff is know for its wildflower displays in the spring, but it is also home to a tufa at Elk Lick Falls and the oldest recorded tree in the Commonwealth! For more information stay tuned to www.knps.org and www.floracliff.org.



KNPS Wildflower Weekends —April 19-21, 2013 and April 11-13, 2014 at Natural Bridge State Park

Save the dates! The 2012 Wildflower Weekend was one of our most successful in years, despite fears of an early spring. We had such a good time we have already set the dates through 2014! For more information stay tuned to www.knps.org.

KNPS Fall Meeting—September 20-22, 2013 at Lake Barkley State Park

September 2013 will be a great time for KNPS! We are going to hold a joint meeting with the Tennessee Native Plant Society in far Western Kentucky, an area many of our members do not get a change to see very often. Plans have not been finalized, but we hope to visit a few of the Purchase Region’s unique vegetative communities. For more information stay tuned to www.knps.org.



Meet your new KNPS Board members!

Our newest board member is Laura Darnell from Louisville. Laura has been an ecologist with Redwing Ecological Services since 2007, and has her BS from the University of Kentucky and an MS in Environmental Science from Washington State. Her work involves wetland assessment and monitoring, habitat surveys, and protected species surveys. She is interested in edible plants, gardening and natural history.



Returning to the board is Dr. Wilson Francis, an early board member and former KNPS President. Wilson is a professor of Biology at Hazard Community and Technical College with a BS, MS, and PhD all from UK. He is co-author of “Wildflowers and Ferns of Kentucky” along with another former KNPS President, Tom Barnes. Many KNPS members know Wilson from his 25 years with Natural Bridge State Park and his coordination of over a dozen Wildflower Weekends. Wilson lives in Campton with his wife Jennifer and spends most of his spare time barbequing.

Tall Tree Tales: Meet the Beast of Broadleaf Longevity
By Dr. Neil Pederson

Quick: name the longest-lived, broadleaf species in temperate North America. Is it the stalwart sugar maple? How about the grand white oak? Perhaps the blue oak of western North America? Maybe the sprawling live oak trees in and around our southeastern coastal cities? They are huge, they must be old, correct? How about the interior live oak of California (*Quercus wislizeni*)? A live oak living in a hot region? That tree ought to bring the longevity (i.e., it ought to be quite old).

We have hints that trees live longer when in extreme climatic settings (dry, cold, etc). We've also learned recently that trees growing slow earlier in their life tend to live longer than those that grow faster during the early stages of their life. You know, the whole Tortoise and the Hare thing, but for tree longevity.

Given this, does it surprise you that the oldest-documented broadleaf tree species in temperate North America is a southern species living in humid eastern North America? How about this? This species not only lives in a humid region, the oldest individuals are found live in wetlands. Were those clues helpful? Have I dragged this on long enough? Give up? Please keep reading!

The broadleaf species with the greatest longevity in temperate North America is pepperidge! Oh, you don't know pepperidge? How about gum? No, not sweetgum. Hmm, how about snag? That help? How about blackgum (for Yanques) or black tupelo (for Southerners). Yup, a *Nyssa sylvatica* in New Hampshire was shown to live at least 679 years. Since then, we have documented *Nyssa* 300-570 in New York State, New England, and Pennsylvania and at least 400-500 years in Arkansas. Not only is it the oldest broadleaf temperate species in North America, it is actually the fourth oldest species documented in eastern North America. It beats the oldest white oak by more than 200 years. It squeaks by blue oak by about two dozen years (whew!). We do not have a good estimate for the longevity of the southeastern live oak, but medium-sized individuals are often only 120-220 years; they seem to be wicked fast growers (as a Bostonian might say).

Me, in front of a swamp tupelo during a floodplain-drying drought, in the monument formerly known as the Congaree Swamp.



Before we go further, I would like to clarify that these ages and longevities pertain to stem longevity – the tree itself. Great longevities are being proclaimed via DNA analysis for the roots of spruce and aspen. The analyses suggest that some root systems are thousands of years old. While this is cool, a similar claim could be made for *Nyssa sylvatica* in the northern end of its range: there is a tendency for it to regenerate in this region from its roots more than seed. So, it seems possible that the 500

-year old trees in the northeast have root systems that reach back for millennia (Hat tip to David Orwig for this concept).

My first, full-on introduction to wild *Nyssa* trees was near Columbia, SC in the deep floodplain forest of what is known today as the Congaree National Park. Because the Congaree is actually a broad river floodplain, the preserve's prior name, Congaree Swamp National Monument, is ecologically incorrect. It is unfortunate, however, that when renaming the Congaree they couldn't have retained the phrase 'monument'. The trees, even the *Nyssa*, are monumental.



Marc Abrams and Emily Russell Southgate next to a large *Nyssa syvatica* in Bear Swamp, NJ (lft). Dee Cabaniss Pederson next to a rather normal-looking but likely 300+ year old *Nyssa syvatica*, in RamsHorn-Livingston Sanctuary, NY (rt).

Looking back on that picture it is now clear that those *Nyssa*, *N. aquatica* (water tupelo) and *N. biflora* (swamp tupelo), are still among the largest *Nyssa* I've seen to date. While you can find large *Nyssa*, most upland forest *Nyssa* are rather middling in size. Of all the *Nyssa*, the often pint-sized *Nyssa ogeche* (Ogeechee tupelo) brings up the rear. It might be for this reason, as well as a few others, that *Nyssa* has been so overlooked (no pun intended). This is maybe a good reason to become fascinated by *Nyssa*: we as Americans like underdogs who achieve in unexpected ways, eh?

Nyssa is likely best known because of its ability to produce the best honey in the world (Editor's Note: OK, that might have been an overstatement. Author's Response: True, but what other honeys have a song and movie named after it? *Ulee's Gold*, anyone? Editor's Response: Uh, how about sourwood honey, *The Cadillac of Honeys*?...). *Nyssa's* honey is spectacular because it does not sugar (put it on a shelf and watch it, but do not eat it, for years – I dare you). What I love most about tupelo is the piney flavor it imparts.

Otherwise, *Nyssa* is mostly likely overlooked in the forestry and ecological world because it is slow growing, difficult to identify, has a propensity to hollow, is mostly found in wetlands (eww...for some people), and typically does not dominate large ecosystems. Other than in some of the deep swamps of the southeast and in some portions of red maple swamps, it can be an infrequent forest denizen. These characteristics do not typically inspire most humans into acts of tree hugging. In contrast, bears, bees, and various species of birds call this species big friend. But, for us humans, it is a sort of an odd tree. Even during the days when natural history ruled the landscape it was called a 'peculiar tree' (Holm, 1909). How peculiar might it be? I was taught as an undergrad that the leading twig in the crowns of *Nyssa*, the leader, points east.



Can you point me east, please?



Is this an inspiring species to you? Sure, pileated woodpeckers and college students enjoy it (Drew Stockwell (lft) and Glade Brosi (rt)), but does this seem like a majestic tree?

Once you get past that, *Nyssa* is actually a fascinating tree. Some might categorize it in Class: Charismatic Megaflora. Despite slow growth and a propensity towards decay, it has a wide distribution. It can be found from Maine and southern Ontario to Florida and Texas. Intriguingly, there are outlier populations in the Florida Keys and central and southern Mexico. Therefore, this tree must have some tenacious adaptability. While most commonly found in wetlands, it can be found growing in the cracks of rocky ridges or on dry sandhills in the longleaf pine ecosystem. It tolerates deep shade and can persist in the subcanopy for nearly two centuries. It likely can persist below the canopy for more than 200 years; it just isn't well-studied. Two studies indicate that it is one of the most resistant trees to wind and ice storms. And, if you haven't seen it in the autumn, go run to the nearest wetland at the beginning of the fall. It has some of the shiniest, most vibrant red leaves of any tree in the eastern US. More highly recommended: find your way to the edge of a cliff overlooking a wetland in early fall. *Nyssa* will send beams of ruby-colored sparkles into your eyes.

Oh, don't forget the honey.

For many dendrochronologists, the fascination with *Nyssa* began in earnest during the mid-

1990s. Reports started coming from New Hampshire indicating that there were *Nyssa sylvatica* 400-500 years old and many swamps with 200-year old trees. There were previous reports of 400-year old *Nyssa sylvatica*, but for whatever reason, they never took fire. It took the singular work of Dan Sperduto to catch the attention of Paul Krusic for *Nyssa* to get on the radar of tree-ring scientists. The biggest problem with *Nyssa* is that it has diffuse porous rings that make it difficult to consistently identify ring boundaries. The annual growth rings have numerous, evenly distributed, and uniformly-sized pores and fine rays. The outer boundary of a growth ring, the paranchemya, therefore, is essentially not visible. The first well-verified and well-dated time-series of *Nyssa sylvatica* growth required the work of an All-Star team of tree-ring scientists (http://dendrolab.indstate.edu/nadef/Reports/1996_Villalba.pdf). Soon after, Dan confirmed these great ages and reported New Hampshire to be the hotbed of ancient *Nyssa sylvatica*, including the 679-year old tree (<http://www.nhdfl.org/library/pdf/BlackGumReport.pdf>). Not too shabby for a seemingly diminutive species, huh?

Since then, 500-year old *Nyssa sylvatica* have been reported in other portions of New England and the Southern US. As an eager graduate student interested in the impact of climate change on southern species, I started plunging into swamps looking for this Rebel species. The funniest interaction that illustrates much of the attitude towards *Nyssa sylvatica* occurred when I went to a state forestry office. I was directed towards a group of foresters, including one who had been working for the state for more than 30 years, to inquire about southern species. I brought up the various names for *Nyssa sylvatica* until I connected with the Yanque name, blackgum. As soon as I brought up this name the veteran forester departed the room without a word.

Ten minutes later he returned with a hand-drawn map from the 1940s that had the words “scattered black-gum throughout” written across the facsimile of a red maple swamp.

I said, “Are they still there?”

He said, “I don’t know. I’ve never been in the swamp.”

Yes, not once in 30 years of managing this property had this man of the woods traveled into the swamp. So, I took the map and with my undergraduate research technician, Myvonwynn Hopton, promptly set out for this swamp. It was late in the afternoon by the time we found its southern end. We started easing our way into the swamp. It is understandable why folks didn’t travel into this ecosystem – it was deep, wet, heavily-vegetated, and pretty full with mosquitoes. The first two hours of searching resulted in us discovering that, while the species was still present, we might not find anything of great age. We finally passed through a narrowing in the swamp and spied a delightful scene: a cluster of medium-sized *Nyssa sylvatica*. We literally whooped out loud and sprinted to these trees - *swamp holes be damned!* In the remaining hour of decent light we cored five nice *Nyssa sylvatica* that turned out to be 250-350 years old. Being happy with the re-discovery and confident that there were some old trees in the forest, we returned to the lab and planned an exploration further into the swamp.

Unfortunately, Myv was unable to make the next trip, but I was lucky to have David Frank volunteer for the next phase of exploration. Having found a quicker way to the waist of the swamp, we beat feet and proceeded north. What we found was thrilling: the forest was quite full of old-looking, weathered *Nyssa sylvatica*. We cored another 20 trees that day and then another five the following winter. It took a full month of work in the lab – 5 days/week, 40 hrs/week plus some time on weekends - to analyze 30 trees; the rings can

A *Nyssa sylvatica* in the midst of the Carolina Sandhills, SC.



be nearly impossible to read! It was worth it. The oldest living tree dated to 1436 of the Common Era. Of these 28 trees (two were too hollow to date), 17 have an inner ring date of 1597, 12 have an inner ring date of 1527, while eight have an inner ring date of at least 1495. Two date to at least 1454 (These are not age extrapolations. They represent all the visible rings on the cores retrieved). I still remember coring the second-oldest tree. I stood on my tip-toes and looked straight through the tree and saw the swamp on the other side. Not ready to give up on this ancient-looking tree, I got on my knees (prayed to the Druids) and cored much lower than normal. It paid off – the bottom of the tree was pretty solid to the pith.



Myvonwynn Hopton (lft) coring a ~300-yr old *Nyssa sylvatica*. David Frank (ctr, rt) seeking and finding an ancient *Nyssa sylvatica*.

It became clear that old *Nyssa* were everywhere. I spent much of the following year ducking into old swamps with my new eyes. If you know where to look, it is almost hard to not find ancient *Nyssa* tree. Go out and find one today. Perhaps better, plant one in your yard. Your great-great-great-great grandchildren will thank you.



Postscript: That forest manager who never stepped foot in the ancient blackgum swamp? He began leading annual hiking tours into the swamp to see the ancients!

References:

Holm, T. 1909. *Nyssa sylvatica* Marsh. American Midland Naturalist 1: 128-137.

All photographs submitted by Dr. Neil Pederson.

Conservation is Patriotic and Has Bipartisan Support, According to New Poll

ARLINGTON, VA (July 3, 2012) – Nearing the Fourth of July in the highly partisan atmosphere of a presidential election year, The Nature Conservancy released a bipartisan national poll showing that at least one issue is widely supported by Americans across the political spectrum: the conservation of our nation's land and water. And, the bipartisan team of pollsters note, from "Tea Party Republicans to liberal Democrats, more than four-in-five American voters say that conserving our country's natural resources - our land, air and water - is patriotic." In addition, three-quarters of the American electorate says that "one of the things our government does best" is protecting its "history and natural beauty through national parks, forests and other public lands."



Not surprisingly, then, three-fourths of voters say they would prefer to go on vacation this summer in a national park or other public lands. "Many, many Americans spend the Fourth of July holiday outdoors—in a local park, at the beach, on the water, or in a National Park," said Mark Tercek, President and CEO of The Nature Conservancy. "In effect, by our actions we are celebrating and enjoying both the creation of our republic and the long history of our country's commitment to conservation of our land and water. These poll numbers reveal that the overwhelming majority of Americans still believe in conserving our natural resources and that this is, in fact, patriotic."

Voters also voiced overwhelming support for a number of specific federal policies to support conservation. Three-quarters (74 percent) of American voters say that even with federal budget problems, funding for conservation should *not* be cut. Many voters even are willing to reach into their own pockets to fund conservation, with 83 percent – including more than seven-in-ten voters across the political spectrum – willing to pay more in taxes to fund protection of land, water and wildlife habitat in their area. In fact, the overwhelming majority of American voters reject the notion that protecting our environment is at odds with a strong economy.

More than three-quarters of voters (79 percent) believe we can protect land and water and have a strong economy at the same time. "Given these poll results, we are deeply concerned that public conservation policy in our country today is departing from America's bipartisan conservation tradition and does not reflect the current thinking of Americans across the political spectrum. In particular, the idea that there is inevitably a conflict between our economy and our environment is not borne out by popular views." concluded Tercek.

"The vast majority of Americans value the many ways nature benefits them and their communities -- just as strongly as they always have."

Specifically, key findings of the poll can be found in a memo from the pollsters at <http://www.nature.org/aboutus/june-2012-public-key-findings.pdf>

Woody Plant and Fern Inventory and Species Richness Patterns at
Greenbo Lake State Resort Park, Greenup County, Kentucky
 By Alexia Lane Callihan, Morehead State University

Last spring, I applied for the \$500 Student Research Grant to fund a personal research project of my botanical choosing. Upon hearing from the Kentucky Native Plant Society, I was thrilled that I would receive my first grant of \$250 as one of the only undergraduate students to apply for the award. So as I am a native of Greenup County, I chose to conduct a species richness survey and examination of spatial analysis of the woody plants and ferns of Greenbo Lake State Resort Park. With permission from the Kentucky Department of Parks and the State Naturalist, I was issued a scientific research permit to collect plants as needed for my research throughout the park.

Greenbo Lake State Resort Park (GLSRP) is a mainly recreational park of approximately 3,000 acres located in Greenup County of northeastern Kentucky. It is less than ten miles from the Ohio River, just outside of the floodplain, located in Ecoregion 70f as specified by the EPA (Woods et al 2002). This is a region consisting mainly of Maple, Oak and Hickory forest, with few wetlands, and higher gradient streams than the surrounding ecoregions. The bedrock consists mainly of siltstone, sandstone, and shale of the Pennsylvanian period, ranging from 500 to 1400 feet in elevation. Because of the lack of geologic diversity and distance from major universities, it has received little attention from biological researchers, especially floristically, but with a broad search, the species richness of the park, as well as that of Greenup County, has greatly increased.

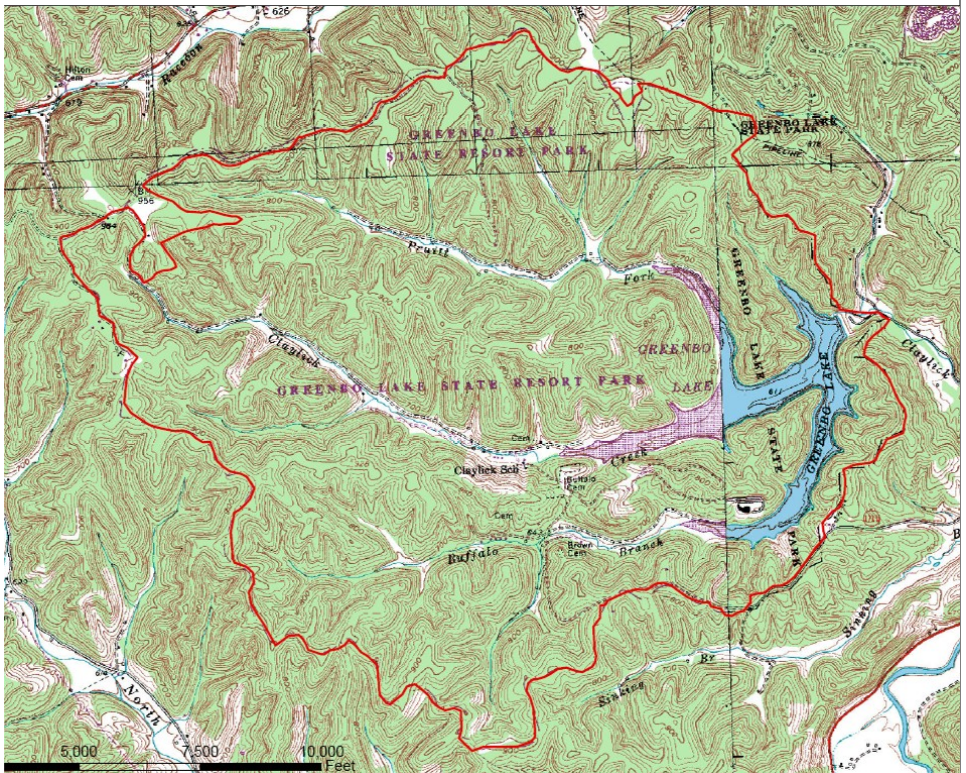


Figure 1. Boundary map of GLSRP showing topographic lines, roads and landmarks.

The previous number of woody species for Greenup County, as specified by the *Annotated Catalog and Atlas of Kentucky Woody Plants* by Clark and Weckman (2008), was 64, an extremely low number compared to most of the surrounding counties (exception of Boyd County). Carter, Bath, Lewis, Rowan, and Fleming Counties had species richness of 157, 120, 144, 174, and 144 respectively. Their total documented number of woody species for the state of Kentucky was 417. The most recent documentation of the ferns of Kentucky was *Plant Life of Kentucky* by Jones (2005), with 77 fern species.

Most diversity of plants in GLSRP was found as a result of searching for variety in habitat such as the lakeshore, creek banks, human impacted areas, rock outcrops, dry ridge-tops, and forested slopes. Some of the woody plant inventory was done by Byron Newland, a former student of Morehead State University, the rest of it being completed in the summer and fall of 2011 by Dr. Allen C. Risk and myself. Taxonomy and nomenclature followed that of *Plant Life of Kentucky* by Jones (2005) for woody plants and *Flora of North America Vol. 2* (1993) for ferns. All specimens were deposited in the Morehead State University herbarium

(MDKY). This exploration gave rise to an inventory amounting to 103 woody species, 9.7% being non-native and 22 ferns (none of which were non-native), as well as an increase in species richness of Greenup County from 64 to 120 woody species, including a KSNPC monitored species *Castanea dentata*, the American chestnut.

Another aspect of this research was to conduct an examination of spatial analysis using species richness of these plant groups in order to determine the predictability of species richness at large scales such as county- or state-wide from species richness patterns at small scales of up to a half hectare. The methodology was modeled after the *Carolina Vegetation Survey Protocol (CVS)* by Peet et al (1998). The CVS is a research program designed to allow for the participation and coordination of many institutions as well as individual volunteer botanists, the purpose of which to document the composition and status of the natural landscape.

This documentation is used for inventory, environmental impacts and conservation status. Thus far, throughout Pruitt Fork of GLSRP, five semi-permanent plots of 1000m² have been established, PVC pipe indicating each 10 foot interval within the plots (See Figure 2). Three of the plots are south-facing and two are north-facing ranging in

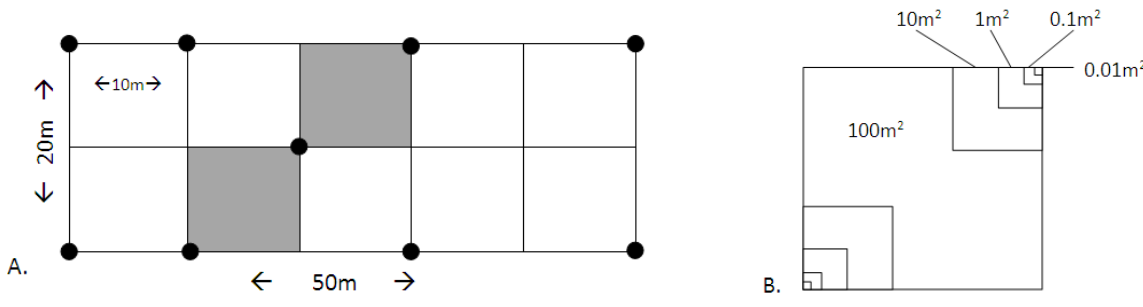


Figure 2. Nested plots for analysis of species richness with increasing area. **A.** Plot diagram of 1000m² showing blocks of 100m² within. Shaded sections represent areas analyzed for species richness at smaller scales. **B.** Detailed diagram of fine scale analysis from 100m² to 0.01m².

elevation from low (700ft), middle (780ft), and high (860ft) on each aspect. Evaluation of species richness at different spatial scales, involved assessment at 12,000,000m²(3,000 acres), 1000m², 100m², 10m², 1m², 0.1m², and 0.01m² (the latter six assessed within plots).

The spatial analysis of ferns showed no significance because of low diversity within plots. That of woody plants however resulted in a high rate of increase in species richness from 0.01m² to 10m², the rate decreasing up to 44.6 (±6.4) species as the area approached 1000m² and further decreasing, reaching 103 species upon approaching 12,000,000m². This trend can be seen by transforming the raw data to a log-log form along with the species richness of Greenup County and the entire state of Kentucky, resulting in a triphasic curve (figure 3). By adding a linear trend-line to the data points of the micro-scale (six nested plots) and extending it out to the known macro-scales, we can see that the species richness cannot be analyzed at the micro-scales—micro-scale rates of species increase cannot be used to determine rates of increase at large scales. . If the rate of increase in species richness occurred at all scales, GLSRP would hold within it approximately 3,756 woody plant species, a highly unrealistic number compared to the known 103 present in the park and 417 in the state of Kentucky.

A similar research project was done in North and South Carolina by Fridley et al (2005) which also included the continental US and the entire world land (minus ice), resulting in an al-

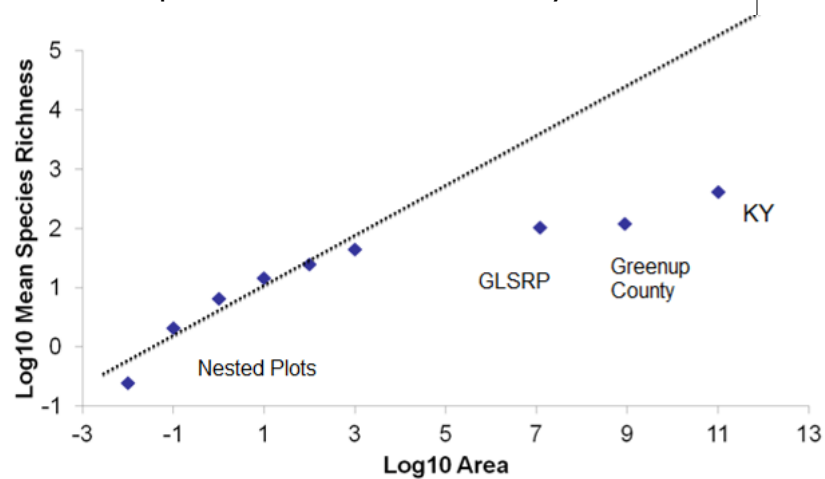



Figure 3. Woody species richness patterns from micro-scales to macro-scales, the data points showing three significantly different rates of increase

most identical triphasic curve. Though my spatial analysis of GLSRP comes from only five plots, I am confident in the results that they have rendered.

My intentions are to continue exploring GLSRP throughout the summer of 2012, to continue installing and analyzing plots in the Pruitt Creek water shed, and to seek out locations of interest within Greenup County from which to collect rare species. It is doubtful that some counties have low species richness as a result of lack of species but instead a lack of collection and identification and it is likely that the species richness of GLSRP as well as Greenup County will continue to increase as more collections occur. This can be seen as the species richness of Greenup County approaches that of the surrounding counties.

I would like to thank the Kentucky Native Plant Society for funding this project as well as my friends and my undergraduate mentor Dr. Allen C. Risk for offering so much help in the field, be it in pure manual labor or in intellectual capacity. However neither of which helped in getting through the multiflora rose. 

References

Woods, A.J., Omernik, J.M., Martin, W.H., Pond, G.J., Andrews, W.M., Call, S.M, Comstock, J.A., and Taylor, D.D., 2002, Ecoregions of Kentucky (color poster with map, descriptive text, summary tables, and photographs): Reston, VA., U.S. Geological Survey (map scale 1:1,000,000). Available at [http://www.eoearth.org/article/Ecoregions_of_Kentucky_\(EPA\)](http://www.eoearth.org/article/Ecoregions_of_Kentucky_(EPA))

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Welcome to
The Kentucky Native Plant Society

HOME INFORMATION NEWS/EVENTS MEMBERSHIP LINKS

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

Our mission is to promote education, preservation, and protection of Kentucky native plants and ecological systems.

KNPS Native Plant Stewardship Certification Program

The Lady-Slipper Archives

Fall 2011 Newsletter

The Lady-Slipper

Kentucky's Common Pitcher Plant (Sarracenia coccinea L.)





And a Partridge in a Pear Tree

by Barry Glick

Forgive me for borrowing a line from that little diddy that some wily Jesuit priests penned in the 16th century, but I couldn't think of a more clever way to headline this article and introduce you to *Mitchella repens*, aka "Partridge Berry." Yes, your Christmas decorations may be down and stored away by now (at least, I hope so), but we can carry the spirit of generosity and giving in our gardens all year long

Mitchella repens has opposite, ever-green, glossy, oval to heart-shaped leaves, ½-inch across, with parallel veining in the midrib and carpets the ground with its 12-18" vines. The bright red berries are edible, but nowhere near as tasty as *Gaultheria procumbens* (Teaberry), and persist all winter unless the partridges, grouse, fox, or other wildlife discover them.

Native to 35 states and 3 provinces of Canada east of the Mississippi according to the USDA plant database, this extremely useful groundcover is rarely seen in the trade. I fail to see why, as it's very easy to propagate by rooting cuttings or from seed. In fact, it forms

adventitious roots as it gently winds its way around the garden. It could never, by any stretch of the imagination, be considered aggressive or invasive.

And guess what else! I just happened to have a pot at eye level and discovered that the pink to pure white, tubular flowers that occur in pairs from June to July are really very fragrant. A close-up image of the attractive flowers is on page 3 of this issue. As I said, the flowers occur in pairs and after fertilization, the two flower ovaries fuse together, giving rise to a single red fruit. The two dimples on the fruit reveal its fused nature.

As strange as it may seem, the genus *Mitchella* is in the Rubiaceae (Madder) family, the same family as *Coffea arabica*. Yes, that's the same coffee we get at Starbucks and Panera!

Native American women often drank a tea made from the leaves of this plant as an aid in childbirth.

I use *Mitchella repens* as a native alternative to that nasty *Vinca* that I've been trying to rid myself of for over 30 years.

It seems to tolerate dry soils although in its natural habitats, it's usually found in rich, moist, acidic woods.

I can't say that *Mitchella repens* is completely deer-proof, however, it does seem that Bambi is more fond of the berries than the foliage and frequently seems to beat the birds to the bounty, while not intentionally disturbing the plant. 🐇

Barry Glick, the self-proclaimed "King of Helleborus," grew up in Philadelphia in the '60s, a mecca of horticulture. Barry cut high school classes to hitchhike to Longwood Gardens before he was old enough to drive.

In 1972, he realized there was just not enough room for him and his plants in the big-city environment, so he bought 60 acres on a mountaintop in Greenbrier County, WV, where he gave birth to Sunshine Farm & Gardens (www.sunfarm.com), a mail-order plant nursery.

Barry grows more than 10,000 different plants and specializes in native plants and hellebores. He can be reached at 304.497.2208 or barry@sunfarm.com.



Reprinted from the Washington Gardener Winter 10-11

Barry

Happy Gardening,
Barry Glick aka Glicksterus maximus aka The Cyber-Plantsman
Sunshine Farm & Gardens
696 Glicks Rd
Renick WV 24966 USA
304-497-2208
EMAIL - barry@sunfarm.com



Class is in session!

KNPS Native Plant Stewardship Certification Classes 2 and 3 finish up their coursework

It's been a busy spring for KNPS Native Plant Stewardship instructors, with courses going on simultaneously in Louisville and Danville! Two dozen KNPS members spent three months learning about native plants and communities and how to take care of them—as well as not-so-native threats to biodiversity and how to take care of them as well. Here is a sample of the classes taught this year:

Kentucky's Native Plant Communities

Instructors: Tara Littlefield and Brian Yahn (Kentucky State Nature Preserve Commission)

Enhancing Biodiversity in Your Own Backyard: Growing Native Plants

Instructor: Margaret Shea (Dropseed Nursery) or Mary Carol Cooper (Ky Fish and Wildlife)

Threats to Ecological Communities and Biodiversity of Kentucky

Instructors: Jody Thompson (Ky Division Of Forestry), Zeb Weese (Ky Heritage Land Conservation Fund)

Invasive Species: Field Identification and Management Techniques

Instructors: Chris Chandler (Eco-Tech Consultants), Brad Nations (NativeScapes Inc)

Native Plant Identification 101

Instructors: Pat Haragan (Botanist, Author) , Dr. Julian Campbell (Biologist Consultant),
or Rob Paratley (UK), Dr. Sarah Hall (Berea College)

Emerald Ash Borer and Hemlock Woolly Adegliid Control

Instructors: Alice Mandt (Kentucky Division of Forestry), Alan Nations (Arborist, NativeScapes Inc)

Management and Control of Invasive Bush Honeysuckle

Instructors: Clint Patterson and Glen Dandeneau (Berea College Forestry)

Plans are underway for our next round of classes, for more info just go to <http://www.knps.org/stewardshipcert.html>.



Back by Popular Demand: 3 Nature License Plates from the Kentucky Heritage Land Conservation Fund

Original designs are agency's biggest seller

Based on popular demand, the Kentucky Heritage Land Conservation Fund has turned back the hands of time to re-issue three past nature license plates: the bobcat on a rhododendron branch, the Viceroy butterfly perched on a goldenrod stem, and the cardinal landing on a Kentucky Coffeetree branch.

These plates will hit the road in the near future. When you purchase one of these plates for your car or truck, the extra \$10 is used to purchase important natural lands, including state parks, wildlife management areas, and nature preserves. Since 1995, the money raised from these plates has helped purchase and protect over 77,000 acres in 63 counties. Cities, counties, universities, conservation districts and other eligible agencies have been awarded grants to purchase and manage significant properties. The Heritage Land Board can approve funding for properties that meet these criteria:

- o Natural areas that possess unique features such as habitat for rare and endangered species;
- o Areas important to migratory birds;
- o Areas that perform important natural functions that are subject to alteration or loss; and
- o Areas to be preserved in their natural state for public use, outdoor recreation and education.

If you are registering a new or out-of-state vehicle in Kentucky for the first time, request a nature license plate from your county clerk or motor vehicle dealer.

If you lease in Kentucky, offer your leasing company a check for the extra charge to get the nature license plate. If you are converting from a regular plate, turn in your plate to your county clerk and you will be given credit for the months remaining on your decal. For more information go to <http://heritageland.ky.gov>.

By Popular Demand...

They're BACK!



Kentucky UNBRIDLED SPIRIT
HELP US
Nature's Finest
Bobcat (Lynx baileyi)



Kentucky UNBRIDLED SPIRIT
SAVE KY
Nature's Finest
Viceroy (Limenitis archippus) Kentucky State Butterfly



Kentucky UNBRIDLED SPIRIT
4EVER
Nature's Finest
Northern Cardinal (Cardinalis cardinalis) Kentucky State Bird

Preserve
the
GREAT
OUTDOORS
with
GREAT
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Drive home your support for the great outdoors.

Kentucky Heritage Land Conservation Fund
HeritageLand.Ky.gov



(Continued from page 1)

cinea (scarlet oak), *Quercus montana* (chestnut oak), and *Quercus marilandica* (blackjack oak). Various other trees form a component of this dry-mesic forest such as *Acer rubrum* (red maple), *Carya ovata* (shagbark hickory), *Carya glabra* (pignut hickory) and *Carya tomentosa* (mockernut hickory). Rock outcrops have a similar tree canopy with the above mentioned species, especially chestnut oak, and sometimes *Quercus stellata* (post oak) and *Quercus velutina* (black oak) or sometimes *Quercus falcata* (southern red oak). Several “barrens” are historically known from Maywoods, associating with the dry white oak woods on Mississippian limestone. A planted prairie near the entrance represents the only viable example of this community type, although many remnant shale barrens species persist along the trails on ridgetops and natural openings.

North facing slopes have the most well developed forests at Maywoods and can be classified as Mixed Mesophytic or Hemlock-Mixed Mesophytic. *Tsuga canadensis* (eastern hemlock) is a distinctive evergreen tree in this community, but is absent from much of Maywoods and will need to be monitored in future years to prevent decline from the invasive insect Hemlock



Silene virginica – Fire Pink

Fall Lick Creek drains Maywoods to the northwest and flows into the Dix River

Woolly Adelgid, which has been killing hemlocks in the Southern Appalachian Mountains, already. Other species that associate on the north slopes include *Quercus alba* (white oak), *Quercus rubra* (northern red oak), *Carya cordiformis* (bitternut hickory), *Liriodendron tulipifera* (tulip poplar), *Tilia americana* (basswood), *Fraxinus americana* (white ash), and *Acer saccharum* (sugar maple).

Watercourses at Maywoods provide wetland habitats for a very different association of plants. Streams are dominated by *Platanus occidentalis* (sycamore), *Acer saccharinum* (silver maple), *Acer negundo* (boxelder maple), *Fraxinus pennsylvanica* (green ash), *Liquidambar styraciflua* (sweet gum), *Carya lanciniosa* (shellbark hickory), *Aesculus flava* (yellow buckeye) and *Quercus imbricaria* (shingle oak). *Betula nigra* (river birch) and *Acer rubrum* can be found dominating lake margins along with abundant sphagnum moss and many interesting wetland ferns. Maywoods is a great place to visit so please get a map and start to explore!



Volunteers needed!

From: Monarch Watch <bbtn@monarchwatch.org>
Subject: **Milkweed Seed Collection in Kentucky**
Date: July 11, 2012 12:56:21 PM EDT
To: info@knps.org

Board of the Kentucky Native Plant Society,

My name is Tori Pocius and I am the Milkweed Coordinator at Monarch Watch at the University of Kansas. Over the past two years, we have launched a "Bring Back the Monarchs" Campaign which focuses on restoring milkweed habitat across the country. The link below details our campaign:

<http://monarchwatch.org/bring-back-the-monarchs/>

Unfortunately, we do not currently have asclepias seeds from Kentucky as part of our seed bank here in Kansas. We were hoping that your organization would be willing to help us gather seed pods from your area to facilitate milkweed restoration in Kentucky. We are looking for seed pods from the following species:

A. incarnata
A. tuberosa
A. variegata
A. verticillata
A. viridis
A. exaltata

We would really appreciate any help you would be willing to provide. Please let us know if seed collection would be possible :-)

Thank you for supporting the conservation of native plants and wildflowers,

Tori Pocius
Milkweed Coordinator
Monarch Watch

tori@monarchwatch.org

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**The Kentucky Native Plant Society is an official Affiliate of the
Kentucky Conservation Committee!**

The KCC is the state's only organization dedicated solely to providing a non-partisan voice for Kentucky's environmental community in Frankfort. KCC works to make sound environmental stewardship a priority for elected officials and voters. For more information on KCC's activities, just go to:

www.kyconservation.org



Kentucky Native Plant Society
801 Schenkel Lane
Frankfort, KY 40601

2012 KNPS Membership Application or Renewal

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

Note: To pay by credit card or PayPal account, please visit the website www.knps.org.

Name(s)* _____

Membership Type: (memberships are for calendar year)

E-mail(s)* _____

Address* _____

City, State, Zip* _____

Telephone _____

_____ Individual \$15 (includes e-newsletter)
_____ Family \$25 (includes e-newsletter to 1-4 e-mails)
_____ Lifetime \$200 (includes electronic newsletter indefinitely)
_____ Additional gift (optional, tax-deductible)
Total _____ Check No. _____

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

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