



Fall field trip heads east

By Rex Hill
MONPS president

On the weekend of Sept. 12-14, the Missouri Native Plant Society will meet in the St. Louis area and explore the LaBarque Creek watershed in nearby Jefferson County.

This unique area is laced with sandstone canyons and plants characteristic of earlier times in our state's geologic history. The landowners in the area and several partnering public agencies have come together in an attempt to stave off development and protect this special place for future generations.

Much more information is available by visiting the organization's website at www.labarque.org.

For years, part of the watershed was held aside as Nature Conservancy property and known as LaBarque Hills. This tract was rugged and beautiful but difficult to access. The Missouri Department of Conservation has taken over responsibility for this area and added to that property to develop a much more accessible LaBarque Creek Conservation Area.

The area in and around the watershed has been identified as one of MDC's 33 conservation opportunity areas in Missouri and more can be learned by obtaining a brochure describing this area at www.mdc.mo.gov/documents/coa/22.pdf. A 1,000-acre tract in the watershed has been donated to the state by a gentleman and conservationist named Don Robinson, and it will become a Missouri state park. The area has also been nominated and will officially be added to the Missouri Natural Areas program in the near future.

Members of the St. Louis chapter of MONPS along with the Webster Groves Nature Study Society have visited the area numerous times and have developed a plant list that includes upwards of 700 vascular plants and over 150 bryophytes, many of them state listed and of high conservation value. We have much to see and to learn from a visit to the area.

Itinerary

On Friday evening at 7 p.m. at MDC's Powder Valley Nature Center, we will have the privilege of hearing Mike Arduser speak to us about the LaBarque Creek area. Mike is a conservation biologist with MDC, and many of us know him for his expertise in the entomology area with the order *Hymenoptera* (bees and wasps). He, along with others, was instrumental in bringing attention to the area, surveying the area for some of its special organisms and geology and working on the development of a plan for its protection.

On Saturday morning we will meet at the Powder Valley parking lot at 8 a.m. and carpool to the LaBarque Creek area for a day of



Photo by Rex Hill

A tributary at LaBarque Creek.

field trips. Again on Sunday, we will meet there at 8 a.m. for an additional short field trip in the morning. The MONPS board meeting is scheduled for Saturday evening at 7 p.m. at the Powder Valley facility.

Directions

For those of you coming to St. Louis from out-of-town, the Powder Valley Nature Center is at 11715 Cragwold Drive (63122). Take I-44 east from I-270 and exit south(right) at Lindbergh Boulevard. Go a short distance on Lindbergh and take Watson Road west (right). Turn right from Watson Road at the traffic light onto Geyer Road and go 1/4 mile and turn left on Cragwold Road. Follow Cragwold for about 1.5 miles to the Powder Valley entrance on the right.

Lodging

A block of rooms has been set aside at the Quality Inn, 3730 S. Lindbergh Blvd.. (63127), near Powder Valley. To make your lodging reservation, call (314) 842-1200, weekdays 7 a.m.-3 p.m. and ask for Carol Sherrell. Tell her you are with the Missouri Native Plant Society. She handles group contracts for the motel and prefers that you talk to her, directly. These rooms will be released for general reservation by Aug. 29, so call before then. A room with two beds for two adults has been quoted at \$62.99 plus tax.

Additional lodging at Drury Inn & Suites, Corner of I-44 and MO 141 The phone number is (636) 861-8300 The cost is quoted as \$69.99 + tax for a room with one king, \$74.99+tax for a room with two queen beds.

Calendar of Events

Hawthorn Chapter

Monday, July 14: — Regular Meeting at 7 p.m. at the Unitarian Church, 2615 Shepard Blvd. Hwei-Ying Johnson, professor from Lincoln University in Jefferson City, will give a presentation on her DNA research with native plants with native plants.

Thursday, July 17 — Lunch with Native Plant Enthusiasts! 11:30 a.m. at Felini's, 700 E. Broadway. All are invited

Saturday, July 19: Hawthorn Chapter Picnic at Columbia Audubon's Wildhaven. Noon. Bring a dish to share. Bring family and friends.

Thursday, Aug. 21 — Lunch with Native Plant Enthusiasts, 11:30 a.m. at Felini's, 700 E. Broadway. All are invited:

Sept 8 — Regular Meeting at 7pm at the Unitarian Church, 2615 Shepard Blvd. Topic to be announced.

Thursday, Sept. 18 — Lunch with Native Plant Enthusiasts! 11:30 a.m. at Felini's, 700 E. Broadway. All are invited

Saturday, Oct. 18 — Chestnut Festival at the University of Missouri Horticulture and Agroforestry Research Center, New Franklin, Mo. 10 a.m. to 4 p.m. Please plan to help with our booth.

For more information contact Paula at (573) 474-4225.

Kansas City Chapter

Saturday, July 19 — Backyard cookout at the home of Daniel Rice. Dan's garden boasts many native plant species and will provide a colorful backdrop for a summer cookout. Dan is known for his expertise in the identification of native plant species, and has put his knowledge to

work in his own backyard. Join us for a fun afternoon of good food and the opportunity to learn how you can beautify your own landscape using Missouri natives. For information on what to bring, contact Dan at (816) 461-0206.

Osage Plains Chapter

Saturday, July 12 — Potluck dinner, Field tour and meeting at Dale Jennings. Bring a good dish to share. For information contact Emily Horner (660) 885-6981.

Saturday, July 26 — Field trip to Paintbrush Prairie to see the wildflowers and pick ticks. Meet at the Henry Co. Library at 9 a.m. Contact Jim and Dorothy Harlan at jdharlan@socket.com for more details

August — No meeting

Saturday, Aug. 23 — Field trip to Chapelview Prairie. Meet at the Henry County Library at 9 a.m. Contact Jim and Dorothy Harlan at jdharlan@socket.com for more details.

Ozarks Chapter

Chapter meetings scheduled for 6:30 p.m. at the MDC Ozark Regional Office, 551 Joe Jones Blvd., West Plains. For more information, contact Susan Farrington at (417) 255-9561 x 307.

Tuesday, July 15 — Chapter meeting/field trip. We'll take advantage of daylight savings and enjoy a field trip to Galloway Creek Nature Park in lieu of our usual meeting. Meet at 6:30 at the MDC Regional office parking lot. Bring

plenty of water.

Tuesday, Aug. 19 — Chapter meeting/field trip. We'll take a field trip to Tingler Prairie in lieu of our usual meeting. Meet at 6:30 p.m. at the MDC Regional office parking lot. Bring plenty of water.

Other field trips — Bill Summers and/or Susan Farrington will likely lead a few serendipitous field trips (as the spirit and wildflowers move them!). If you are interested, be sure that our secretary Betty Queen (ozarksnps@yahoo.com) has your email address, and we will keep you informed of our plans.

Perennis Chapter

Saturday and Sunday, July 26-27 — Field trip to join lepidoptera experts on the annual North American Butterfly Association butterfly counts at Big Oak Tree State Park on July 26 and at Trail of Tears State Park on July 27. Both butterfly counts will begin at 10 a.m. at the visitor center of each park.

St. Louis Chapter

Wednesday, June 25 — Twilight Walk. Meet at 6 p.m. at Emmenegger Park, which is reached by driving to Powder Valley, continuing west on Cragwood Drive, and turning left at the T to the parking area at the end of the road.

Wednesday, July 23 — Chapter meeting at 7:30 p.m. at Powder Valley Nature Center. Theo Witsell, Arkansas natural heritage botanist, plans to talk about his botanical inventory of Saline County, Ark.

St. Louis chapter welcomes Arkansas' Witsell to speak



Theo Witsell

The St. Louis chapter invites all MONPS members to visit us in St. Louis for a special program.

On Wednesday, July 23 at 7:30 p.m., at our monthly chapter meeting at Powder Valley Nature Center, our featured speaker will be Theo Witsell.

Theo is the state natural heritage botanist for the state of Arkansas and a tireless explorer for new plant finds.

Theo will be presenting the results of his botanical inventory of Saline County, Ark. This

county has more than 1,500 species recorded, more documented vascular plant species than any other county in Arkansas.

During his research, Theo found many new records of rare plants and species of conservation concern. Even more exciting, he found at least one species entirely new to science, the recently described Pelton's rose gentian.

Plan to attend this chronicle of the ups and downs of botanical exploration in our state's southern neighbor.

Check out the Web site

Be sure to check out the redesigned Web site of the Missouri Native Plant Society.

David Winn of the Kansas City Chapter is the Web master.

“For a number of years, Robin Kennedy has hosted the MONPS website at the University of Missouri. We have benefited greatly from her prompt, thorough response to requests from us to keep the site updated,” said Rex Hill, MONPS president. “David Winn, from the Kansas City chapter, has offered (and succeeded) to take responsibility for the site and expand the scope to allow much more interaction from our membership. It is a marvelous new resource for MONPS. My heartfelt thanks to Robin for her past efforts and to David for his initial significant effort and what we hope will be many future interactions. Please try the site for yourselves at: MissouriNativePlantSociety.org. I am certain that you will make it one of your favorite places to explore on the Web.”



www.MissouriNativePlantSociety.org

‘Little Hermit’ brings MONPS botanist notoriety

George Yatskievych, great boon and leading light to the Missouri Native Plant Society, has found and identified a rare parasitic plant in the mountains west of Acapulco, Mexico. The Associated Press picked up on the story in May.

Yatskievych is director of the Flora of Missouri Project and co-editor of *Missouriensis*, the annual journal of MONPS.

The plant has been dubbed *Eremittilla mexicana*, which translates to “little hermit of Mexico.” The name has not been formally published and is not official. Yatskievych plans to present his findings this summer at a joint conference of the Botanical Society of America and the Canadian Botanical Society meeting in Vancouver, B.C. His research is expected to be published next year.

The Little Hermit is an orange-brown, fleshy-stemmed plant that grows on the side of an underground root. It pushes a fleshy stem 18 inches through rocky soil to flower.

A scientist from the New York Botanical Garden discovered the plant in 1985 and took specimens. Eventually, the scientist



Photo by Dianne Fristrom

was referred to Yatskievych, who is writing for the “Flora of North America” on plants in the Orobanchaceae family, which attach as parasites on the roots of host plants. However, Yatskievych says the Little Hermit is both a new species and a new genus.

Yatskievych received a specimen in 2005 and went to Mexico in search of it in 2006. Though the original site was

destroyed, days of searching resulted in finding the plant not far off. Yatskievych returned in 2007 to collect data on the 60-foot host tree and see the plant’s fruits.

Yatskievych plans to present his findings this summer at a joint conference of the Botanical Society of America and the Canadian Botanical Society meeting in Vancouver, B.C. His research is expected to be published next year.

In terms of Missouri, the closest relatives of the Little Hermit are in the genera *Epifagus* and *Orobanche*, Yatskievych said. *Orobanche uniflora* was in flower in mid-May in the St. Louis area, he said.

“These are true parasites, with a direct attachment to a host root,” he said.

Just east of St. Louis, in Illinois, there is another genus, *Conopholis*, that is also a member of this group of true parasites.

However, Indian pipe, *Monotropa uniflora*, is different in that it connects to fungal hyphae in the soil. These fungi are also the mycorrhizal species that are associated with trees and other plants, so *Monotropa* is a secondary parasite of other plants with a fungal intermediate.

Hawthorn Chapter

Submitted by Judy Turner, chapter representative

Spring has always been the busiest time of the year for our chapter, and this year was no exception.

A late March hike to Jim Whitley's property gave us an opportunity to see blooming snow trilliums. They were incredible! Jim rescued six bulbs about 25 years ago from what is now part of the Mark Twain Lake. Through his nurturing he now has more than 250 plants. Thanks Jim!

Several chapter members were able to attend the joint state meeting with the Arkansas Native Plant Society. We all were thrilled to see ever-bloomin' thing in northwest Arkansas. It was quite a treat since the natives in central Missouri were at least two or three weeks behind them.

Our first educational activity for April was the annual Native Plant Day at Bradford Farm. As usual we talked to lots of folks and sold lots of plants and books. The very next day was our day to plant trees on the area we are restoring along Stadium Boulevard. One hundred and fifty bare-root twigs were given new homes. At last check most all of them were doing well, thanks to the weekly rains we've had this spring.

Next on our April schedule was the annual Earth Day Festival. The weather cooperated and we had lots of plants, books and advice for the hundreds of folks who visited our booth.

Our last field trip for April was a trip out to Columbia Audubon's property just north of Columbia. The spring beauties were showing their blooms all along the two mile trail that includes part of Hinkson Creek. For those of you not familiar with the Columbia area, the Hinkson is on the federal 303(d) list of impaired waters. The impaired portion starts just south of I-70 at Walnut Street and runs 14 miles through the city of Columbia into Perche Creek. Audubon is doing their part to keep the upper part of Hinkson Creek clean.

Randall Clark's weekly wildflower walks at Rockbridge State Park started in April and continue into May. No matter how many times I've gone on these walks, I always learn something new about the history of the plants or the area.

A small group of chapter members journeyed to the Shaw Nature Reserve to visit the Whitmire Wildflower Garden in early May. It was a long day, but well worth it. Our next field trip was to the Auxvasse Glade just east of the power plant at Reform. The Missouri Department of Conservation had burned the area earlier this year and things were already coming up and some were blooming. They are also removing invasive trees. The intent is to restore the glade area back to approximating a 1941 aerial photograph. It's an ambitious undertaking and will take many years.

Our last field trip for May unfortunately was rained out. It was to have been a return to private land with a spectacular colony of putty-root orchids. We will try again.

Our May regular program meeting was a presentation by Becky Erickson on the natural history of fire and on the cumulative research of response to seasonal fires. Becky also provided a brief explanation (with assistance from Ann Wakeman) on how to burn a small area (carefully and with planning!).

Last, but not least, I must bid ya'll a fond farewell. This is my last chapter report and last board meeting as my partner and I are returning to Texas because of job relocation. My time on the MONPS state board has been very enjoyable and educational.

Thanks to all ya'll! I would really enjoy seeing any of ya'll who might be visiting my part of Texas. Come on down, ya' hear!

Kansas City Chapter

Submitted by Daniel Rice, chapter representative

Field trip season is open!

The Kansas City Chapter's first field trip of the year was April 12. Four hearty (and I do mean hearty) souls met at the Wal-Mart in Liberty to carpool to Isley Park Woods in Excelsior Springs. We hiked through light rain, light snow, and finally sleet, only to find most of the natives were a lot smarter than us and were waiting for warmer times to show their stuff. We did find un-opened blood-root, some harbinger of spring, and many un-identifiable rosettes of leaves. Not many plants, but we did have fun!

Kathy Winn attended the Sprint Earth Day event at the Sprint campus on Friday, April 18. She dispensed literature and promoted MONPS as an excellent resource for Sprint employees wishing to learn more about native plants.

David and Kathy Winn, and Dan Rice sold native plants at the Lakeside Nature Center's Earth Day event on April 19. They did a brisk business, selling nearly all of the plants, as well as t-shirts. Kathy Winn also attended the Whole Foods Earth Day event on Tuesday, April 22. Again, she dispensed literature and promoted MONPS to attendees who were interested in the use of native plants in landscaping and where to go to find them in natural settings.

On May 2-4, Sue, Chuck, Brian, Dan and Ed braved gale-force winds to sell native plants at Powell Gardens' annual Springfest. Despite the wind and cold (not very spring-like) we had our best sales to date. It just goes to show that lots of people are getting interested in using native plants in the landscape!

Our second field trip took place on Saturday, May 10. We again carpooled and visited the property of new members Karen and Joe Nease near Hamilton, Mo. The Neases have ambitious plans to return part of their property to the native prairie that once was



Photo by Brain Chadwick

On May 10 during a hike in the woods, David Winn of the Kansas City chapter of MONPS offers advice to Karen and Joe Nease about their property near Hamilton, Mo.

there. We had a great time identifying what they have to start with, and giving pointers on how to get started. Some of the natives we located were spring beauty, wild sweet william, meadow rue and rattlesnake fern. After the three-hour hike, we had our lunches, and discussed more ideas on what they should do.

May 15 was our last chapter meeting of the spring. The topic of discussion was the new Web site. If you haven't accessed it or registered, you really need to do so. Dave Winn has done a fantastic job with the help of Robin Kennedy. Even though the site is still in its infancy, Dave is always looking for ways to make it better. If you have any ideas about it, let Dave know!

Our third field trip of the season was the annual Mead's milkweed count at the Winn prairie. This is always an exciting event, as we always hope to find more plants in bloom each year. And this year was a record year! We located a total of 30 blooming plants and 17 sterile plants, surpassing the old record of 36 by 11! Dave and Kathy now have to try and keep the deer away from the plants in bloom to give the plants a chance to reproduce. We also saw a number of other plants, including *Asclepias viridiflora*, *Baptisia bracteata* var. *leucophaea*, *Lithospermum canescens*, *Sedum pulchellum*, and *Phlox glaberrima*.

Well, that wraps up the chapter report for now. If you have any questions or want more information, feel free to contact me at (816) 461-0206 or drice95875@aol.com.

Osage Plains Chapter

Submitted by Emily Horner, Missouri Department of Conservation biologist

Ever find it hard to identify the different oaks and hickories out in the woodlands of Missouri?

Jacon McMains, assistant resource forester for the Missouri Department of Conservation, discussed Missouri tree identification with us on April 21. From leaves, to bark, to seed, to where on the landscape each tree is found we learned how to determine the species of trees and shrubs. Now we can set out in winter for field trips, as well! Surely we can identify a few oaks without leaves.

A few new faces went along to the field trip to visit the Peterman property, a private woodland and stream, on April 26. There was a bit of delay to visit the site because of the late spring, but never fail, the woodland wildflowers were beautiful once again. This is an annual field trip, and the weather held out with no rain for the Harlans.

For our latest meeting, Brent Jamison, grassland biologist for the Missouri Department of Conservation, discussed greater prairie chicken recovery in Missouri.

In 2005, a new recovery plan for this declining charismatic grassland bird was announced. Brent discussed this plan and the goal of increasing Missouri's birds from less than 500 to 3,000. Because of fragmentation, urbanization, tall fescue, increasing trees in the landscape and more, greater prairie chicken populations have significantly declined. Parts of this plan include: tree removal, planting of appropriate grasslands near active lek sites and translocations of greater prairie chicken from Kansas to Wah' Kon-Tah Prairie near El Dorado Springs.

To date, 50 male birds have been released at Wah' Kon-Tah, and since then many have set aflight for other prairies, including one going back to Kansas. This summer 50 hens and chicks will be brought to Wah' Kon-Tah.

Ozarks Chapter

Submitted by Susan Farrington, chapter representative

At our April meeting, Pat French presented an informative, entertaining and tasty program about edible plants. The redbud-sprinkled brownies and passionflower jelly-covered cheesecake were especially delicious. At our May meeting, Chris Williams presented a beautiful and informative presentation illustrating and comparing the natural communities and flora of Ohio, northern Minnesota and the Missouri Ozarks. We all learned a lot. Thanks so much, Pat and Chris!

Nominations for officers were made at our May meeting, and will be voted on at our June meeting. Our long-serving president, Ellen Kaufman, and secretary, Betty Queen, told us they were read to pass on the baton. Thank you Ellen and Betty for doing such a great job getting our chapter society off the ground!

The new victims (nominees) are:

- Secretary: Polly Anna Higgins;
- Vice-president: Rose Scarlet;
- President and rep to the state board: Susan Farrington.



On the late April field trip of the Ozarks Chapter, in front: Polly Higgins (from left), Dearndia Higgins, Rick Scarlet. In back: Pat Cromwell, Mary Hogle, Donna Larsen and Ellen Kaufman.

Our late April field trip was our own informal joint Arkansas-Missouri native plant gathering: of the eight participants, three were from Arkansas. We very much enjoyed showing our beautiful Missouri scenery to Arkansans Mary Hogle, Pat Cromwell and Donna Larsen.

We hiked the Lick Log Nature Trail near Eminence, Mo., which features a wide variety of habitats and many different wildflowers, including wild hyacinth (*Camassia scilloides*), ground plum (*Astragalus crassicaarpus* var. *trichocalyx*) and rose verbena (*Glandularia canadensis*), and a few morel mushrooms! We also took a side trip, hiking cross-country to observe small white lady-slipper orchids (*Cypripedium candidum*). It was a great day!

Perennis Chapter

Submitted by Allison Vaughn, chapter representative

The May 18 field trip to Morris State Park involved hiking the 2.5 mile Trail of the Beech trees to examine red buckeyes and devil's walking stick in bloom.

Part of the area visited was burned in April 2007, and the vegetative response was duly noted; sedges, ferns and *A. quadrifolia* in full bloom were seen in the burn unit. The 2007 burn was the first burn in roughly 50 years and the relictual sand prairie at the base of Crowley's Ridge is expected to be burned in fall.

The next field trip will be June 18, at 6 p.m. at Sand Prairie Conservation Area. Members are invited to join lepidoptera experts on the annual North American Butterfly Association butterfly counts at Big Oak Tree State Park on July 26 and at Trail of Tears State Park on July 27. Both butterfly counts will begin at 10 a.m. at the visitor centers of both parks and native plant enthusiasts will be able to see which plants attract which butterflies.

Members are encouraged to submit articles for the upcoming Perennis newsletter. Please send any information or articles to allisonjv@yahoo.com. A Perennis website will be made available within the month at www.semonps.org.

St. Louis Chapter

Submitted by Martha Hill, chapter representative

Our April meeting was held on Wednesday the 23rd with a presentation by Valerie Vartanian on "Choosing the Right Plant." Her talk was in regard to educating the public about alternative choices of plants for landscapes, using native noninvasive species rather than some of the more vigorous ornamentals sold at nurseries and plant retailers. She is the horticulture and landscape professions liaison with the Nature Conservancy, and her program of changing the way people select the plants they want for their landscape was right on target with the audience's general feeling of using native plants instead of aggressive ornamental species.

Our May meeting was on Wednesday the 28th, with a program by Dr. David Bogler on "Poisonous Plants of the St. Louis Area." David is a curator at the Missouri Botanical Garden. He gave several facts about the toxicity of plants that we, as gardeners, forget or never thought about as potentially dangerous. It was an interesting presentation, and we were fortunate to have Dave come talk to us.

Classes:

* Planting a Native Plant Garden — held on April 23-24 at St.

Louis Community College, Wildwood campus, by Nels Holmberg and Martha Hill. We gave a class presentation with several handouts and beautiful pictures of native flowers and gardens. The next week the class met to actually install a native garden on the campus, which is certified as a "Green Campus." This school is new this year, and we were fortunate to have Nels schedule a class there.

* Natural Areas — held on April 24 with field trips on April 26 and May 3, at St. Louis Community College, Meramec campus, by Rex Hill and Nels Holmberg. The class was filled early and many people expressed their enthusiasm and appreciation for the handouts, slide shows and walks through Engelmann Woods and Pickle Springs natural areas. This year has had a wet and slowly developing spring, making the walks very colorful with a lot to look at.

* Field Botany — held on June 4 at St. Louis Community College, Meramec campus, by Pat Harris and Jack Harris. Field trips: June 7 to Cuivre River State Park, and June 14 to Hughes Mountain. Again, we're fortunate to have Nels put these classes together, both to educate the public and as a source of income to the to the MONPS treasury. All instructor fees are donated.

Field Trips:

* April 20: Onondaga Cave State Park, led by Steve and Ariel Buback. Several participants reported that they enjoyed the walk and wildflowers.

* May 17: Razor Hollow Natural Area in the Daniel Boone Conservation Area, Warren County, led by Nels Holmberg. This newly designated natural area provided many interesting plants and scenic views even though only a small area could be seen during the visit.

Plants of interest included *Lithospermum latifolium* (American gromwell, S2), *Panicum leibergii* (a panicum grass, SU), *Triosteum angustifolium* f. *rubrum* (red form of yellow-flowered horse gentian) and *Cypripedium calceolus* var. *pubescens* (large yellow lady's slipper (but with very small flowers). Intensive management of the area was noted: red cedar cutting, prescribed burning, and timber stand thinning. Nels reports that they added 37 plants, nine birds, one lizard, and many snails to the species list for the area.

Plant Sale:

* May 9-10: The Shaw Nature Reserve Plant Sale was a (muddy) success and our MONPS booth gave away several brochures, both informational and membership. We sold several T-shirts and hats, and were busy with many people stopping to talk about plants and what our organization does.

Bioblitz:

* May 30-31: At Forest Park, with several breakout groups, a couple were led by Nels Holmberg and George Yatskievych. Attending were several members of the St. Louis Chapter.

Other:

* May 31: LaBarque Creek Watershed Festival — MONPS members were asked to lead nature walks at the festival and Jack Harris, as usual, had a colorful display of wildflower photography. Pat Harris and Rex Hill led walks throughout the day.

In the footsteps of a naturalist

By Christine F. Williams

Retired chief naturalist for Ohio State Parks

Footsteps that have led through a career and passion to the wild places, those places of solitude where the big trees grow, massive roots of prairie dock reach deep, and mosses still whisper of an age of ice. My journey began in the heartland of one of the most majestic biomes on earth's face and has led to its northern and western fringes.

I was born and raised in Ohio at the center of the temperate broadleaf forest biome. After retirement, I moved to Shannon County in southern Missouri, where that forest interfaces with the prairie. Summers I spend in northern Minnesota, in the northeastern Arrowhead region where the temperate forest meets the boreal, named for the Greek goddess of the north wind. Reading the stories of each of these has led me in search of shared history, through the spiritual beauty of the earth, toward the solitude that is the signature of wild places.

Chapter One of the story is in the rocks, for they feed the plants. They are the backbone and nourishment of all biological life. Minnesota yields the oldest rocks at the surface, the granites that are the basement rocks of the continent. Most Ozark rocks are sedimentary sandstones and dolomites, formed in ancient seas of the Ordovician period. My native Ohio offers the youngest, geologically speaking, at the surface with some Ordovician limestone and dolomites but mostly sandstone and shales less than 400 million years in age.

Chapter Two includes the upward thrust of first the Ozark Mountains and then the Appalachians. Plateaus created in Missouri and Ohio initiated several hundred million years of weathering and erosion yielding rugged topography and innumerable niches for plants to colonize.

Chapter Three came grounding out of the north with mile-thick sheets of ice. Ohio was covered four times in the million years of the Pleistocene Ice Age, burying old valleys in the northern and western parts of the state. Minnesota and the Canadian shield contributed rock and soil, leaving some of the oldest rocks on the planet at the surface, and thousands of lakes and wetlands.

I love to sit among the plants and contemplate this history of the Earth. The deciduous forest biome, although widespread on the planet, has never covered much of it. It offers diversity almost unparalleled because of the varied topography resultant of its geologic legacy, as well as a temperate climate with ample rains throughout the year, and seasons. Unfortunately, its assets have also attracted development, leaving only 6% intact worldwide.

Common threads run through each of the regions my footsteps trace. In the forest itself, the oak is most widespread. While over 20 species dominate the Ozarks, only a few stunted red oaks appear in the boreal-temperate interface. In Ohio, oak/hickory assemblages dominate drier soils in glaciated Ohio, form forested islands of bur oak in the prairie openings, and cloak the rugged sandstone ridges of the unglaciated southeast. By con-

trast, the shortleaf pine, though widespread in the original forest, is the only pine native to the Ozarks while conifers dominate much of the Minnesota wilderness represented by red, white, and jack pines, balsam fir, white and black cedar, and tamarack. Ohio's coniferous species numbers fall in the middle with the majestic Eastern Hemlock dominating the cool southern gorges. Other forest remnants of the cold ice age persist there as well including Canadian yew, black birch and white cedar.

Wetlands are to me magical, almost ethereal in beauty. These communities are well represented in northern Minnesota, both in depressions left by the gouging ice and lake fringes. Sphagnum moss is often the dominate feature, providing support as a mat on

open water, maintaining cool temperatures and contributing to the acidic conditions. Plants adapted to living in this environment are as unique as they are exquisite. Sundew and pitcher plant have both added to the low nutrient substrate by augmenting with absorption of insect bodies. Pink lady's slipper orchid dazzles at the edge of the mat while bog rosemary, leatherleaf and Labrador tea find foothold in the quaking environment.

Ohio's glacial heritage created wetland environs reflecting the far north in plant representation. Kettle lakes, left by melting ice blocks, provide habitat for bog assemblages noted above. Four hundred-acre cedar bog, actually a calcareous bog or fen, exists where water percolates through gravel in a buried preglacial river bed. Small yellow and showy lady's slipper orchids, grass pink orchid, smaller fringed gentian and prairie valerian speak to the diversity of wetlands. Although never scraped by Pleistocene ice sheets, hidden recesses in the Ozarks capture some of the same fen conditions where seepy dolomite ledges are secreted in deep hollows. The porcelain beauty of the diminutive small white lady slipper is perfect splendor in Minnesota, Ohio or the Ozarks.

My Minnesota haunts border on not one, but two biomes. While global warming drives the boreal assemblages north, it is bringing the prairies east. In the Ozarks, prairies with their deeper soils encroach just to the west, while shallow-soiled Ozark glades host many of the same species. In Ohio, tension between forest and prairie biomes existed until agriculture disrupted the dance, with the most extensive intrusions during the dry period of 7,000 years ago. Ozark-type glades persist in just one county there, precisely predicted by bedrock similar to that of the Ozarks. Radiating their full glory in summer, Ohio's tall grass prairie openings, Missouri and Adams County, Ohio, glades traverse the visible light spectrum from red (royal catchfly), orange (butterfly weed), yellow (sunflowers), green (big bluestem), to the purples of the coneflowers.

Through each and every footstep, I have sought the harmony and connectedness of nature's tapestry. For in the end, it is not just about the rocks or flowers, it is not about the trees or animals or water. And it is certainly not just about mankind. It is about the harmony we all weave and must create to protect the beautiful blue orb we call home.

In May the author gave a program to the Ozarks chapter of MONPS comparing the plant communities of Ohio (Appalachian), northern Minnesota (Canadian shield boreal fringe) and the Missouri Ozarks. This article is drawn from her talk.

Ironweed adds a purple punch to fields

By Chuck Robinson
Petal Pusher editor

The flat purple heads of Missouri ironweed add a particularly pleasing aspect to fall, my favorite of seasons.

You can spot them in open fields and along roadways. The flower packs a big purple punch and keeps delivering when summer's heat has gotten to most other plants. It rivals the rich hues of horticulturally enhanced mums in garden center fall sales, and it waves tall enough at 4 feet or so that it gets noticed from a distance. Each mostly unbranched stalk serves up a broad platter of flower heads.

Ironweeds are part of the aster family. While many of its familial relations have straplike ray or ligulate flowers, ironweeds have only disc florets, like the fuzzy yellow centers of daisies, except purple.

The Missouri ironweed, *Vernonia missurica*, tends to favor the eastern part of the state. Edgar Denison's *Missouri Wildflowers* tells us it is also called Drummond's ironweed. Look for it in damp areas. It is very hairy and saves its blooming energy for late summer and fall. It has 32-60 disc florets per stem.

Another ironweed blooms earlier and is more widespread in the state, according to George Yatskievych's revised edition of *Steiermark's Flora of Missouri*. Vol. 2, Baldwin's ironweed blooms earliest of the ironweeds, blooming from May to September. Denison says to look for *V. baldwinii* in waste areas, along roads, field and glades. Bless its little plant soul, it grows in most any soil type and in mesic to dry conditions — drier than its ironweed cousins.

V. baldwinii also goes by Western ironweed in the revised *Flora*.

The maps in the revised *Flora* depicting the verified distribution of a plant shows dots representing *V. baldwinii*'s spread in 93 of Missouri's 114 counties, with dots getting sparse in southeast Missouri's bootheel and the northeast quadrant of the state. By comparison, there are county dots for *V. missurica* in only half of the counties.

Besides the bloom time, which overlaps considerably, you can tell these two ironweeds apart by the size of the flower heads — the Missouri ironweed has 30-55 disc florets and Baldwin's has 15-30 florets. The Missouri ironweed likes moister environs than Baldwin's ironweed, tending more toward stream banks and fens.

A key identifying characteristic are at the base of the flower-head, where on Baldwin's ironweed the green bracts curl out. On the others, except for *V. arkansana*, the bracts lay flat.

The bracts on *V. arkansana* are not just recurved, but curly.

After all, it is commonly known as curlytop ironweed. It is also known as Southern, Arkansas or Ozark ironweed.

V. arkansana stays south of the Missouri River in the Ozark regions of the state. You can find it gravel and sand bars along streams, at the edges of sloughs, wet meadows, thickets, open woods, prairies and glades. It has willow-like leaves and large flowering heads from July through September.

The Ozarks ironweed is available to gardeners from Missouri Wildflowers Nursery in Jefferson City. Each flower head is a small purple pompon, bigger than the florets of the Missouri or Baldwin's ironweeds. Owner Mervin Wallace only rates the curly-top ironweed two stars out of four, but knows the purple flowers will have gardeners lining up for the plant. He says it is a sizeable plant for the backs of beds and rain gardens. He suggests it may not be a front-yard plant all by itself.

There are three other ironweeds found in Missouri. *V. gigantea*, tall ironweed, grows up to 8 feet tall or so. Again, it likes medium to wet soils. There also is *V. fasciculata*, with shiny, glabrous leaves, which is found in wet prairies, marshes and areas that periodically get briefly flooded. It is found north of the Missouri River, mostly, and in the western part of the state. It can get 6 feet tall, but more normally grows to 4 feet.

Cattle tend to leave ironweed alone. The revised *Flora* says ironweeds contain toxins, though no livestock deaths have been attributed to them.

The revised *Flora* also warns that North American ironweeds are notoriously promiscuous, meaning there is quite a bit of cross-pollinating going on and a lot of hybrids.

The common name "ironweed" may have been drawn from the gray cast of the plant's color because of its fuzzy stems and leaves. The Missouri Botanical Garden Web site suggests the ironlike, tough constitution of the plants or the change of the flowers to rust-colored seed heads as reasons for the common name.

The genus *Vernonia* commemorates William Vernon, an English botanist who collected in Maryland in the late 1600s and died in 1711, according to the *Flora of North America North of Mexico*, provided online by the University of Maryland.

V. baldwinii commemorates the original collector of the plant, William Baldwin, who lived 1779-1819. He was botanizing in Georgia and Florida when he was appointed botanist on the expedition of Major Stephen H. Long to the Rocky Mountains, according to Harvard University Herbaria. He left with the expedition in March 1819 but his health deteriorated and he died in Franklin, Mo., in 1819.

Please don't let your MONPS membership lapse

Check to see if your membership has lapsed To find out, look at the top line of your mailing label. If it shows the date 20080630, we have not received your dues for our new membership year, which begins in July.

Unless we receive your dues renewal soon, this issue of the newsletter may be your last.

To renew, please use the form on page 9 or the one on the MONPS Web site.

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Botanical Inquiry

By Retha Meier
St. Louis Chapter

One of my favorite plants is *Talinum calycinum* (TAL-ih-num ka-LEE-kin-um).

The word *Talinum* has an African origin and *calycinum* is derived from a Greek word meaning “like a calyx”, that refers to the sepals.

Rock pink, flower-of-an-hour and fameflower are common names for this plant. The name “rock pink” probably refers to the fact that the plants grow in rocky areas and the flowers are pink. “Flower-of-an-hour” most likely originated because the flowering occurs for a short time during the afternoon hours. The common name “fameflower” originates from the fact that the flowers are only open for a short time period during the day and goes back to the saying “fame is fleeting”.

I like rock pink because it’s such a beautiful plant! Dainty pink flowers appear suspended above the green, thick leaves clustered close to the ground in a basal rosette formation. I remember the first time I saw this plant growing in the Ozarks. My husband, Larry, and I were hiking with Peter Bernhardt in the Angeline Conservation Area. We were on a rocky hillside near a shut-in when we located a few plants with fully opened pink flowers growing between rocks, surrounded by fruticose lichens and moss. Previously that very same day we were visiting the Missouri Department of Conservation offices in Eminence, where we noticed a rock pink decorating an office window.

This Missouri native perennial belongs to the purslane family, *Portulacaceae*. Naked flower stalks, known as scapes, can reach heights of up to 30 centimeters (12 inches). Pink to purple to red flowers, measuring approximately 2.5 centimeters in diameter (1 inch) are located at the top of the plant. Flowers have 5 petals arranged in cymes and bloom around noon and close midafternoon. The fact that flowers open during the afternoon is another feature about this plant that I find fascinating. A circular tuft of small succulent leaves that measure about 5 centimeters (2 inches) is at the base of the stalk. I find the entire architecture of this plant striking.

In Missouri, flowers typically appear May through August.



Photo by Retha Meier

Rock pinks have dainty pink flowers about an inch in diameter.

Large colonies of these native perennials can be found growing in glades and rocky or sandy acidic soils south of the Missouri River. They do not appear to require much soil since sightings have been documented of plants growing from rocky crevices. Seeds are produced in capsules and are freely dispersed. Information on pollinators is lacking but would be an interesting investigation.

Talinum calycinum is available from many Missouri wildflower nurseries for reasonable prices. Typically prices range from \$2-4 per plant. These plants are easy to grow when planted in full sun and in well-drained soil. They are suitable for borders, native plant gardens and rock gardens. Since it is not an invasive plant, and since it is a native Missouri plant that is not rare, endangered, or threatened, it is a favorite plant of many Missouri gardeners. This attractive plant can also be placed indoors to be admired year-round.

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