PETAL PUSHER

July-August 2021 Newsletter of the Missouri Native Plant Society Volume 36 No.4 "... to promote the enjoyment, preservation, conservation, restoration, and study of the flora native to Missouri."

Fall Field Trip - September 24-26 - Save the Dates! .. 2

Connections – Historic
Botanists3

MONPS Awards7

Missouri Botanists' Big Year 2021 Update......7

From the editor.....7

Virginia Creeper's Colorful Past......8

Update from MBG Press:9

A Blast from the Past..... 10

Donate to MONPS When You Shop!......I I

Chapter Reports.....12

New Members!.....14

MONPS Summer field trip, 202 I Kansas City area field trip, in review

Members gathered for our first state trip since the start of the COVID 19 pandemic. We began the weekend on Friday afternoon with a visit to Lamb's Prairie, a privately owned remnant and known to support a population of small sundrops (*Oenothera perennis*). The last observation of this species was

recorded at this prairie in 1987 and it is currently considered a Species of Conservation Concern by the Missouri Department of Conservation. After a good search, we failed to find the elusive small sundrops which would be a bit past flowering time. The bunchflower (Melanthium virginicum) was gorgeous, and Michigan lily (Lilium michiganense) was another highlight of the prairie. After compiling a quick species list, members headed out just as storm clouds started rolling in.

The first destination for Saturday was to Snowball Hill Prairie. The property is owned and managed by the Missouri Prairie Foundation and features a rather large hill within a relatively flat



Meg Engelhardt diligently records a species list of Lamb's Prairie as MONPS members gathered at the parking area and rumbles of thunder began. Photo by Malissa Briggler



MONPS group at the top of Snowball Hill Prairie. Photo by Michelle Bowe

Pollinator (bumble bee) on a pale purple coneflower. Photo by Michelle Bowe

_arry Rizzo explains restoration efforts at Rocky Point Glade in Swope Park, Kansas City just before everyone got drenched by brief rain shower.

Summer field trip, continued.

landscape. We again saw bunchflower in full bloom along with several prairie favorites like pale purple coneflower (Echinacea pallida), leadplant (Amorpha canadensis), New Jersey tea (Ceanothus americanus), and compass plant (Silphium laciniatum). With the southern half of the prairie a reconstruction and the northern half a remnant, it was interesting to see the transition from one to the other.

Our group later met at Swope Park in Kansas City for lunch and our afternoon speaker, Linda Lehrbaum, the Program Manager for KC WildLands. Linda spoke about the volunteer work and coordination they do with other organizations to restore and maintain the wild lands in the Kansas City area. Following lunch, the group took a very interesting albeit very wet hike through nearby Rocky Point Glade. Just as our guide, Larry Rizzo was explaining some of the success in restoring natural communities to the area, a downpour of rain hit and didn't let up until the group returned to the parking area (of course). After an assessment, it was determined that nobody melted and to my knowledge, no cell phones were ruined.



Linda Lehrbaum discusses the important work that KC Wildlands has supported to restore natural communities in the Kansas City area. Photo by Malissa Briggler

Our final trip of the weekend was at Jerry Smith Park in Kansas City to see another restoration effort of KC WildLands. Jacob Canyon led a tour of the east side of the park where we saw more native prairie plants. Jacob also showed us the procession of prairie restoration at the site by explaining

the portions of the restoration that were the oldest and the areas that have only recently begun the restoration process.

Fall Field Trip - September 24-26 Save the Dates!

Our next meeting is scheduled for September 24-26 and will be in the Eminence area with tentative plans to visit a virgin pine natural community, beautiful Alley Spring, and Mill Mountain Natural Area. Make your lodging reservations soon as it's difficult for us to block rooms in advance. Call the Riverside Motel (573-226-3291) for a room under the Native Plant Society block. The River's Edge Inn and Resort (573-226-3233), Eagles Landing River Resort (573-226-5665), and Jack's Fork River Cabins (573-226-6450) also currently have rooms available.



acob Canyon guides the MONPS group on a hike through a prairie restoration site at Jerry Smith Park, Kansas City. Photo by Malissa Briggler

Connections – Historic Botanists

by Rex Hill

At one of our Missouri Native Plant Society board meetings I suggested the topic of Historic Botanists as a theme for a newsletter, in a volunteer organization that pretty well nominates the person who suggests something as the responsible party. I have my heroes and they are those that take on a task with a sense of adventure, often ignoring their own personal comfort or well-being. I have chosen four botanist stories and they are not necessarily Missouri stories, but they do have their connections to our state. For an excellent discussion of Missouri botanical history, much more than I can provide, I refer you to George Yatskievych's introduction in Volume I of his Flora of Missouri. The four people I have chosen have all been responsible for advancing botanical knowledge of the western United States and have popped up on my 'radar' as a result of some accidental or fortuitous occurrence on one of my travels. These 'accidents' always surprise me, like the time I found out at the Visitor Center at Lake Itasca State Park in Minnesota that Henry Rowe Schoolcraft, famous in our state for documenting the pre-settlement nature of the Ozarks, was credited with discovering the headwaters of the Mississippi River. Who knew? Not the naïve bumpkin writing this article.

Some of this rambling story I'm about to relate was triggered by a spring trip this year that Martha and I took along the Natchez Trace traveling from Nashville, Tennessee to Natchez, Mississippi. The grave of Meriwether Lewis is one of the points of interest on the trace. He was despondent and apparently took his own life when traveling to Washington, DC to defend some of his actions and expenditures while serving as Governor of the newly acquired territory of the United States. Thankfully, we don't have any badgering from politicians looking to feather their own nests these days. On our way back home, we came north through the delta formed by the Black, the St. Francis, and the Mississippi Rivers in eastern Arkansas and found a place we had never heard of, the Arkansas Post, site of a town and trading center that existed well before the Louisiana Purchase. It was located at what was the confluence of the Arkansas and Mississippi Rivers and Thomas Nuttall's name was embedded in the National Memorial brochure we picked up. The other two persons, David Douglas, and John C. Fremont are included because of places we've seen or experiences we've had that brought their stories to light in our lives.

I. Meriwether Lewis (1774 - 1809)

We are all familiar with the story of the 1804-06 Lewis and Clark expedition, and while Meriwether Lewis was not strictly a botanist, but more of an explorer, he served as the naturalist on that daunting journey. Thomas lefferson had given him explicit instructions to observe, collect, and report back to him the nature of the western lands about which little was known. Jefferson put Lewis in touch with Benjamin Smith Barton in Philadelphia who gave him a 'crash' course on botany and plant collecting techniques. The trip was challenging and to Lewis's credit he found time to observe and collect a number of plants, many of which were new to science. Some were sent back to Washington, and many were lost due to the rigors of the trip, but from those specimens, journals of the expedition, and notes made on some specimens that have disappeared along the way, more than 130 species were identified, with 94 of them being new to science. Martha and I used a wonderful reference, Plants of the Lewis and Clark Expedition by H. Wayne Phillips on several trips we made out west, particularly in the Lolo Pass area

on the border of Idaho and Wyoming. After their return from the western expedition, both Lewis and Clark played significant roles in the development of St. Louis and what was to become the state of Missouri. After Lewis's untimely death in 1809, William Clark served as Superintendent of Indian Affairs in the territory and was appointed Governor of the Missouri Territory in 1813, an office he held until he ran unsuccessfully for Governor of the new state of Missouri in 1821. Lewis had served as Governor of the Louisiana Territory until the time of his death.

Many of the plants identified from the expedition have eponymous references to the two explorers, including: Linum lewisii (wild Clarkia pulchella - elk horns. Photo by Rex and Martha Hill



blue flax), Mimulus lewisii (purple monkeyflower). Philadelphus lewisii (wild mock orange), Clarkia pulchella (elkhorn clarkia), and Lewisia triphylla (threeleaf lewisia). Another book we found useful on our western trips was Lewis and Clark's Mountain Wilds (A Site Guide to the Plants and Animals they Encountered in the Bitterroots) by Sharon Anelia Ritter. It was most useful in planning our stops where the original expedition had passed. One more random Missouri connection related to the Lewis and Clark expedition: Shannon County in Missouri is named for George 'Peg-Leg' Shannon, the youngest member of the expedition.

2. Thomas Nuttall (1786-1859)

Thomas Nuttall, trained as a printer in England, came to North America in 1808 with an emerging interest in botany and zoology and wanting to explore a new land. There, in Philadelphia, he met Benjamin Smith Barton, the same person who trained Meriwether Lewis, who soon had him botanizing salt marshes around Chesapeake Bay. He moved on to botanizing in the Great Lakes area in 1810 where at Mackinac Island at John Jacob Astor's American Fur Company he learned of a planned expedition from St. Louis up the Missouri River along the Lewis and Clark expedition route. He travelled to St. Louis and temporarily worked as a printer where he met another person with similar interests, John Bradbury. Nuttall and Bradbury travelled up the Missouri River and met the John Jacob Astor expedition at the mouth of the Nodaway River in now Nodaway County in the spring of 1811. On the trip they encountered Manuel Lisa of the Missouri Fur Company, joined his group, and returned with him to St. Louis in the fall of 1811. Many of the plants collected by Nuttall and Bradbury were new to science and possibly represented some of those collected by Lewis and Clark that were lost during their expedition. Another aside/connection that Missourians can identify with: After returning to St. Louis, Bradbury continued down the Mississippi River headed for New Orleans. On December 13, while near present day Memphis, he experienced the first of the New Madrid earthquakes and is credited with giving the only firsthand account of the event by a scientifically trained observer. After returning to St. Louis, Nuttall felt compelled, as a British citizen, to return to England as the war of 1812 was looming on the horizon.

Nuttall returned to Philadelphia in 1815 and in October of 1818 began an epic journey to the Arkansas River in what was then Arkansas Territory and relatively unexplored scientifically. His earlier trip up the Missouri must have prepared him for the rigors of this new adventure. It is documented in his published work: A Journal of the

Travels into the Arkansas Territory: During the Year 1819. This was available as a scanned document, OCR interpreted, and somewhat difficult to read. In it, Nuttall describes the difficulties leaving Pittsburgh in late October of 1818, traveling down the Ohio River in a purchased skiff, departing Louisville in December 1818 on a flatboat with some rather unsavory individuals and finally reaching the White River cutoff to the Arkansas River in late January 1819. This was a monumental accomplishment to get this far battling winter weather, rivers whose levels were fluctuating all the time and, according to Nuttall, performing the difficult tasks of jumping into the water to free the flatboat from snags and sandbars. He was not yet doing much botanizing. He finally reached Arkansas Post in early February 1819 and began his botanizing in earnest. He traveled up the Arkansas River, well into what is now Oklahoma, reaching the Verdigris River in January of 1820. He had planned to travel to the Rocky Mountains, but contracted malaria, developed a severe fever, and had to be helped back down the river and to safety. He was a formidable contributor to the botanical knowledge of this country and a list of those species native to Missouri honoring his name follows.



Thimbleberry: Rubus parviflorus Nuttall, 1818. Photo by Rex and Martha Hill

From the Flora of Missouri:

Polytaenia nuttallii – prairie parsley

Ptilmnium nuttallii - Ozark mock bishop's weed

Evolvulus nuttallianus – evolvulus

Sedum nuttallianum – Nuttall's sedum

Quercus texana - Nuttall's oak; previously Quercus nuttallii

Desmodium nuttallii - Nuttall's tick trefoil

Lespedeza x nuttallii – bush clover

Elodea nuttallii - elodea

Nemastylis nuttallii – celestial lily

Zigadenus nuttallii – death camas

Mimosa quadrivalvis var. nuttallii – sensitive brier



Douglas fir cone. Photo by Rex and Martha Hill

In addition, Nuttall was an accomplished ornithologist, and various birds have been named in his honor: Nuttall's Woodpecker (*Picoides nuttallii*) in 1843, Yellow-billed Magpie (*Pica nuttallii*) in 1837 and Common Poorwill (*Phalaenoptilus nuttallii*) in 1844.

3. David Douglas (1799-1834)

David Douglas, a native of Scotland of humble background started out as a gardener at the Glasgow Botanical Garden. It was here that he met and was inspired by Sir William Jackson Hooker, a prominent British botanist. Hooker's recommendation led him to be selected as a collector for the Royal Horticultural Society and, as a result, he made three sponsored trips to North America. It was his second trip that took him to the Pacific northwest for the first time and that reads like an adventure novel. He departed England in July 1824 on a Hudson Bay ship, the William and Ann, and after nine months at sea, facing all the difficulties of a voyage that took him around Cape Horn of South America, he reached the mouth of the Columbia River. Here at the site of Fort Clatsop, where the Corps of Discovery had over-wintered almost twenty years before, and the location of present-day Astoria (remembering John Jacob Astor's name), Douglas was to embark on his defining quest.

He spent the next two years traveling into the interior, always interacting with the natives and the traders moving to and from the Hudson's Bay Company posts, east using the Columbia River, north along the Pacific coastline, and south along the Willamette River, there to discover the sugar pine (Pinus lambertiana), with its massive cones over a foot in length. He traveled in all kinds of weather conditions, disregarding his own personal comfort, collecting over 204 species of plants later introduced into British cultivation and many others for scientific investigation and identification. He was particularly taken with the conifers of the Pacific northwest environment including the Douglas fir (Pseudotsuga menziesii) named in honor of him. (This tree has special meaning to Martha and me, as one of our sons was married in a grove of Douglas firs at the Arboretum in Portland, Oregon.) In March of 1827, Douglas departed Fort Vancouver in the company of trappers and voyageurs on the 'spring' express where accumulated furs were carried to York Factory on Hudson Bay. Lugging his collected plants he canoed, hiked, and snowshoed over Athabasca Pass in Alberta, finally reaching Hudson Bay by September. After a final misadventure with a storm that rendered him somewhat incapacitated, he sailed back to England with such collections as he could carry. He returned once more to the Pacific northwest in 1829 in what was to be his final collecting expedition. His journals from that trip were lost, but letters home tell the story of botanizing in Oregon, California, and the Hawaiian Islands where he met his untimely death being trampled by a wild bull in a capture pit. His story is related well in two books by Jack Nisbet, The Collector: David Douglas and the Natural History of the Northwest, and David Douglas, A Naturalist at Work.

4. John C. Fremont (1813 - 1890)

How many of you have found a book on your shelf that you bought at one time, put it on the shelf, and then forgot about it? I have one that I came across when thinking about the historic botanist theme for this newsletter. I had purchased a copy of a book, John Charles Fremont, Botanical Explorer by Stanley L. Welsh, some years ago at a Missouri Botanical Garden botanical symposium, probably because I have always been interested in stories about exploration and discovery in the western United States and the book was on sale. When I spotted the book on

my shelf, the title and the author struck a nerve with me. First, one of the plants Martha and I searched for in Missouri when we were first introduced to the concept of native plants and the fact that some are rarer than others, was Fremont's leather flower (Clematis fremontii). We spent a bit of time searching the glades at Washington State Park and finally found it in bloom one year. Another thing that got my attention was the author's name. Stan Welsh is a botanist with whom Martha had developed a correspondence friendship while she was working as a technical editor for the Flora of North America project. He is an expert on members of the Fabaceae plant family and was responsible for developing a dichotomous key for the Astragalus genus having 354 species, some with many varieties such as Astragalus lentiginosus, itself having forty-two varieties. This was an extremely complex key and Martha and



 ${\it Clematis\ fremontii}$ (Fremont's leather flower), photo by Rex and Martha Hill

I always marveled at the meticulous, detailed thinking that must have gone into developing such a key. We wondered who Stan Welsh might be and what kind of a person could do that kind of work. As time passed and the Fabaceae volumes matured, Martha found him to be a kind and thoughtful person and through some personal vignettes he had written about his life and shared with us, we learned that almost by accident he ended up as a botanist after growing up in a mining community in Utah, destined to become another miner.

Stan Welsh's story about Fremont is thoughtful and intriguing and emphasizes his contributions to the botanical knowledge of western plants. He does give a summary of Fremont's personal and professional life which was generally less than successful. He had powerful connections, but his ventures into politics and the military met with marginal success. He had a Missouri connection in that he was the son-in-law of the powerful Senator from our state, Thomas Hart Benton. He married Benton's daughter, Jessie, in 1841. Senator Benton remained one of Fremont's supporters and promoters throughout their lives, but Fremont could be inconsistent, and self-promoting to the point of antagonizing those who might have supported him during his career, including Abraham Lincoln at the outbreak of the Civil War. He made five expeditions into the west in 1842, 1843-44, 1845-46, 1848-49, and 1853-54 mainly for developing maps and routes for settlers or railroads to use in westward expansion, something his father-in-law supported as the 'manifest destiny' of the United States. Four of his expeditions took him through a supply point named Bent's Fort near what is now Pueblo, Colorado. I am familiar with this area as it was one of the stopping points for many of my trips to Philmont Scout Ranch with the young men in my troop. On each of his trips, Fremont collected plants, many of which he could not identify, but leaving names blank, he took notes on their location and sent them to John Torrey for determination. The magnitude and importance of his collecting work is reflected in this partial list of genera which have a species named with the species epithet fremontii. They include: Amphipappus (Fremont's chaffbush), Anticlea (now Zigadenus – Fremont's deathcamas), Aplopappus (now Haplopappus – goldenweed), Asclepias (Indian milkweed), Astragalus (Fremont's milkvetch), Berberis (Fremont barberry), Calycadenia (Fremont's western rosinweed), Chaenactis (Fremont's pincushion), Chenopodium (Fremont's goosefoot), Clematis (Fremont's leather flower), Dichaeta (now Lasthenia – Fremont's goldfields), Echinospermum (two-row stickseed), Garrya (Fremont's silk tassel), Geranium (Fremont's geranium), Gentiana (Fremont's gentian), Lepidium (desert pepperweed), Lesquerella (Fremont's bladderpod), Lycium (Fremont's thornbush), Oenothera (shimmer evening primrose), Penstemon (Fremont's beardtongue), Phacelia (Fremont's phacelia), Philadelphus, Populus (Fremont cottonwood), Prunus (desert apricot), and Senecio (dwarf mountain ragwort). These are western plants. Fremont's first two expeditions started in Kansas City, and the last three began at Bent's Fort in southeastern Colorado, always moving west.

In Closing. As usual, I have submitted this article for your perusal in hopes of encouraging you to explore, learn, surprise yourselves about the wonders of nature, and to understand the people that came before you and how close they were to having the same interests and curiosity that is in you.

MONPS Awards

I) Plant Stewardship: Jeff Cantrell

Jeff has been an advisor for the Missouri Master Naturalist (MMN) Chert Glades chapter since helping establish the group in 2005 and also assists with the Lake of the Ozarks chapter. He donates the majority of the MMN advisor workload as a volunteer, allowing him to devote his full work schedule to his conservation educator job. Advising these and other public groups, he directs several stewardship projects each year for Missouri State Parks, Corps of Engineer, and Mark Twain Forest public lands near Cassville and Shell Knob. Of particular significance is his work at Chute Ridge near Roaring River Conservation Area and Big Sugar Creek State Park.

Beyond those special projects, Jeff conducts garlic mustard pulls in Barry County and highlights star of Bethlehem as a problem exotic species at special event share tables at George Washington Carver National Monument and at the annual Dogwood Festival in Neosho, Missouri. For Naturescaping classes (pre-pandemic with live audiences), Jeff made freshly-cut displays of invasive burning bush, privet, bush honeysuckle, and other exotics local to the site where the classes were taught and offered native planting solutions to fit that landscaping niche. These are just a few of the examples of what leff tackles as a volunteer and the teamwork he puts together for our public contact areas and regional natural communities. He is a longstanding member of Arkansas and Missouri Native Plant Societies, the Missouri Prairie Foundation, and other nature place-based non-profit organizations. Our native plants and world benefit from his stewardship efforts.

2) Top Facebook Administrator Recognition



Awarded to seven individuals for their exceptional efforts in managing the MONPS Facebook page: Michelle Bowe, Andrew Braun, Brian Edmond, Susan Farrington, Jeff Nelson, John Oliver, and Deb Tyler. Thank you for your diligence!

Left to right: Michelle Bowe, Andrew Braun, John Oliver

Missouri Botanists' Big Year 2021 Update

The contest is off to a good start, with twenty-two participants submitting photos of nearly 4,000 wild plant observations. It's not too late to enter! Missouri is home to a variety of habitats, and we need more observers to document the many native and non-native wild plants found here. As only about half of those 4,000 observations have been verified by "identifiers", there's also a big need for members to take on that role. Let's show our neighboring states what flora we're made of! You can sign up here: https://www.inat-uralist.org/projects/missouri-botanists-big-year-2021. Prizes (and bragging rights!) will be awarded to top observers and identifiers.

Want to know more about using iNaturalist? James Faupel, our contest organizer, will give a presentation to the MONPS St. Louis Chapter on July 28. MONPS members will receive a link to the Zoom meeting via email, and the presentation will be recorded and posted on the MONPS website (monativeplants.org).

From the editor

Thank you to our Assistant Editor, Pam Barnabee for getting everything in good shape before it came to me! Thanks also to our Board members who proofread each issue and all authors, chapter representatives, and other contributors.

Please consider making a submission for a future Petal Pusher! Here is some information for submissions:

A. The theme for the next issue is "Better know a Genus" Other submissions are also welcome!! Especially "Where are we going "(stories from the next field trip location). Conundrum Corner, Invasive Tip of the Month Name Change of the Month, and Poetry Corner.

- B. Send ONE email saying "here is my contribution on ," and attach (don't embed) the following:
 - I) an article in Word format with photo captions at the end (no photos in the Word document) and your name in the text.
- 2) Two to 3 images, preferably in JPEG format C. Use only one space between sentences
- D. Even short notes with pictures would be great!
 E. Send to: pamela.barnabee@gmail.com (don't send them directly to me!)

F. Due date for the next issue is: August 20

Thank you so much, Michelle Bowe

Virginia Creeper's Colorful Past

By Heather Thudium

Heather Thudium is a freelance artist from Missouri, specializing in botanical and historical art. Her work has been made into cards, prints, a historical coloring book, and featured on magazine covers.

One of the most beautiful autumn sights is the bright splash of color created by a swath of Virginia creeper. Crimson, orange, gold and green tumble together across buildings, trees, and the ground. As an artist, I found it to be an irresistible subject, and soon began drawing and studying it. In the course of my research, I discovered it has a long and interesting history, making it worthy of study by no less than Charles Darwin himself. It has been used as medicine by Native Americans, and as a host plant for many moth species. Remarkably adaptable and resilient, (sometimes to the point of excess), Virginia creeper (Parthenocissus quinquefolia) is much more than just an ornamental vine. The name "parthenocissus" means "virgin ivy" in Greek, and "quinquefolia" means "five-leaved" in Latin. Whether its scientific name was created after the English name or the other way around, is unknown. The name is derived from the plant being found in Virginia, although its range includes Central and Eastern North America, and it is native to Missouri. Virginia creeper has found its way overseas, as well. Early American colonists, taken with its beauty, brought it back to England in 1629. They discovered that it thrived, to the point that it had to be vigorously maintained.

A 'liana', or woody vine, it climbs by using spiraling tendrils, which have small, sticky pads at their tips. Upon examining a Virginia creeper vine, Darwin wrote, "The gain in strength and durability in a tendril after its attachment is something wonderful. There are tendrils now attached to my house, which are strong, and have been exposed to the weather in a dead state for fourteen or fifteen years. One single lateral branchlet of a tendril, estimated to be ten years old, was still elastic, and supported a weight of exactly two pounds...so that after having been exposed during ten years to the weather, it would probably have resisted a strain of ten pounds!" (1)

Darwin studied climbing plants in the hope of proving his theory of natural selection.

In The Power of Movement in Plants he concluded that "circumnutation (the process that creates the circular or elliptical movement of the stem and tips of plants) was central in the development of multitudes of adaptations to the environment and thus resulting in an immense variety of plants. The climbing habit evolved from this basic power of movement." Darwin conducted, in his own words "observations, founded on the examination of above a hundred widely distinct living species." These, he maintained, "contain sufficient novelty to justify me publishing them." He stated, "It has often been vaguely asserted that plants are distinguished from animals by not having the power of movement. It should rather be said that plants acquire and display this power only when it is of some advantage to them; this being of comparatively rare occurrence, as they are affixed to the ground, and food is brought to them by the air and rain." (2)

The vine's climbing ability allows it to grow forty to fifty feet high, and it can spread thirty-five feet along the ground. This enthusiastic growth can lead to it overwhelming other plants, and even structures, as those early colonists learned.

However, it has benefits as well. Virginia creeper is a larval host plant for many moth species, most notably the Virginia creeper sphinx moth (*Darapsa myron*), which lays its eggs in twos and threes. When the larvae hatch, those leaves provide them with food. In caterpillar form, they tend to rest with their heads up, looking somewhat like the Egyptian Sphinx, hence the name. Other moths that use Virginia creeper as a host plant include: Abbott's sphinx moth (*Sphecodina abbottii*), Pandora sphinx moth (*Eumorpha pandorus*), and the White-lined sphinx moth (*Hyles lineata*). (3) The flowers of a Virginia creeper vine usually appear in midsummer and are pollinated by insects, being particularly attractive to honeybees.

While certain aspects do attract insects, Virginia creeper leaves, sap, and berries contain calcium oxalate. These microscopic, needle-shaped crystals, called raphides, can irritate the skin. The high concentration of calcium oxalate also makes the plant extremely toxic to humans and many animals, and therefore should never be eaten or chewed.

Virginia creeper is often mistaken for poison ivy (Toxicodendron radicans), but aside from its calcium oxalate, does not cause the same level of skin irritation. A convenient rhyme to tell the difference is, "Leaves of three,

let it be. Leaves of five, let it thrive." Unfortunately, poison ivy is often found growing alongside Virginia creeper, so care should be taken when in the area.

Toxic it may be, but Native Americans found many practical and medicinal uses for such a plant. "The Kiowa used the fruits as paint," and the Houma used a "leaf and vinegar poultice, externally, as a treatment for wounds. A decoction of stems and leaves, applied externally, was used on swellings." (4) My favorite use by far is one from the Navajo. "Virginia creeper has been...used by the Navajo in their nine-day long Mountain Chant Ceremony, which is held at the end of winter, and is considered to be a healing ceremony, not only for individuals who may be sick, but for the whole of the Navajo universe." (5)

Whether used as a subject of study, or part of a ceremony to heal the entire universe, Virginia creeper has many uses and a rich history. It has become entwined with our daily lives, and is one of many native plants that make Missouri beautiful.

Literature and websites used:

- I. Darwin, Charles. 1875. On the Movements and Habits of Climbing Plants. London: John Murray
- 2. On the Movements and Habits of Climbing Plants. Wikipedia. https://en.wikipedia.org/wiki/On_the_
 Movements and Habits of Climbing Plants
- 3. Lady Bird Johnson Wildflower Center. https://www.wildflower.org/plants/result.php?id_plant=PAQU2
- 4. Moermann, D. 2006. Native American Ethnobotany Database. http://herb.umb.umich.edu/herb/search.pl?-searchstring=Parthenocissus+quinquefolia
- 5. Bug Woman Adventures in London. Wednesday Weed Virginia Creeper. https://bugwomanlondon.com/2019/11/13/wednesday-weed-virginia-creeper/

Not getting the Missouri Native Plant Society organizational emails?

Most email clients have a "safe senders" mechanism for you to make sure that your email server always sends mail from our MONPS server to your inbox.

*Some just have you add our server to your "Contacts" *Some have you create "Rules".

*Some have an actual "Safe Senders/Domains" area in the settings.

To ensure that you get the organizational emails please add these two domains to whatever your email's "safe senders" process is: monps.org and webapps.monps.org

OR: You may simply need to update your email address with us. If so, click this link: https://monativeplants.org/ask-a-question/



Illustration: "Virginia Creeper", digital and colored pencil on paper. Heather created this illustration over the course of a year, looking at what was outside her window.

Update from MBG Press:

Flora of Missouri Volumes I and 2 are Available

The Missouri Botanical Garden Press is pleased to announce that Volumes I and 2 of Steyermark's Flora of Missouri are once again in stock.

Originally published in 1963, the late Julian Steyermark's Flora of Missouri was the principal reference on plant life in the state. In 1987, the Missouri Department of Conservation and the Missouri Botanical Garden recognized the need for an up-to-date reference on the state's flora and agreed to jointly sponsor the production of a thoroughly revised manual, resulting in the three-volume Steyermark's Flora of Missouri. Volumes I and 2 have been out of print for several years, and due to recurring requests, MBG Press has reprinted the volumes.

All volumes of Steyermark's Flora of Missouri are available for purchase through the website mbgpress.org, or by contacting orders@mbgpress.org.

Steyermark's Flora of Missouri, Volume I By George Yatskievych ISBN: 9781887247191 \$65

Steyermark's Flora of Missouri, Volume 2 By George Yatskievych ISBN: 9781930723498 \$65

A Blast from the Past

Historical articles on historical botanists

Brought back by Becky Erickson; articles by **Rusty White**

The following articles on botanists Ernest J. Palmer and David Baxter Dunn originally appeared in the Botanical Notes column of the Missouri Native Plant Society's Hawthorn Chapter newsletter. The column was written by chapter member John R. (Rusty) White, who was a chapter member and employee at the University of Missouri Dunn-Palmer Herbarium, named in honor of the two botanists who collected many of the plant specimens stored there. Founded in 1896, it was the oldest public institutional herbarium west of the Mississippi River, containing over 300,000 vascular and non-vascular plants. The herbarium was closed in May 2015, and its collection moved to the Missouri Botanical Garden Herbarium.

Earnest Jesse Palmer 1875-1962

Submitted by John R White

Ernest Jesse Palmer was born in Leicester, England, April 8, 1875. He and his sister, Louise, were brought to this country by their parents when he was three years old. They settled in Warrensburg, Missouri, and later moved to Webb City, Missouri. The home was maintained throughout his life, in spite of spending many of his years away. Palmer and his family moved back to the home after his retirement in 1948 where he lived the rest of his life.

With a brilliant mind and a curiosity concerning the wonders of nature, young Ernest found fossils in the rocks and chat of the mining district of Webb City. He began to study fossils and discovered many plantlike animal forms among them which led him into the studies of botany and archeology. His education came to a halt due to a physical breakdown of his father and he found it necessary to leave high school and seek employment. He loved educational study and research and continued to pursue his interests in natural science, English literature, mathematics, economics, poetry, and managed to study Latin and Greek at old Webb City Baptist College.

When Palmer was 24 years old, he had found many plants unknown to him. He mailed a package of twigs and leaves for identification to Benjamin Franklin Bush of Independence, Missouri, another naturalist and pioneer in the field of botany. In 1901 Bush visited the Palmer home and spent a week there while collecting specimens, especially Crataegus, for C. S. Sargent, then director of the Arnold Arboretum of Harvard University. On his departure he left Palmer supplies for further collections which resulted in a lifelong interest in Crataegus and, at age 25, his association with C. S. Sargent and the Arnold Arboretum. Twelve years later, in 1913, Palmer became associated with the Missouri Botanical Garden. In two years, at age 40, he began his many collecting trips in the southwest for both the Missouri Botanical Garden and the Arnold Arboretum.

After eight years, in 1921, he came to Jamaica Plain as a regular staff member as research taxonomic botanist at Arnold Arboretum. He retained this status until he retired in 1948.

He began publishing as early as 1910. He published seven papers in the next ten years, mostly on ferns, and in 1920 sent the first of many papers from Webb City to the new Journal of the Arnold Arboretum, a Harvard University publication. Two publications by Palmer and Julian Steyermark, another notable botanist, included Ferns and Fern Allies of Missouri and An Annotated Catalogue of the Flowering Plants of Missouri.

Palmer didn't marry until 1930, at the age of 55, while he was at Cambridge, Massachusetts, where he married Elizabeth McDougall, a bacteriologist. Their three children were born there.

After his retirement in 1948 his collecting trips continued from his Webb City, Missouri, home. He collected extensively in Missouri but garnered specimens from every state in the U.S. except two. Palmer donated more than half of his 66,000 lifetime specimens to the University of Missouri Herbarium in 1962, just before his death, the rest residing at Harvard in the Arnold Arboretum Herbarium. His renowned knowledge of Missouri's flora, notably Crataegus and Quercus among other genera, led Steyermark to rely on him for assistance in writing the Flora of Missouri, which Steyermark dedicated to Palmer.

Ernest Jesse Palmer, without a college degree or even a high school diploma, pursued what he loved in life and won world renown as a naturalist. He died at 86, just a few months before he was to have received an honorary Doctor of Science degree from the University of Missouri. When Palmer heard of the honor

to be conferred on him he said: "Now, after all these years, I can stop explaining to people why they must not call me Doctor".

References

Kershaw, Marcia W. Saga of a Missouri Self-Made Scientist. St. Louis Post Dispatch, March 12, 1962.

Kobuski, Clarence E. Ernest Jesse Palmer, 1875-1962. *Journal of the Arnold Arboretum*, Vol. XLIII, October 1962, Number 4.

David Baxter Dunn 1917-1994

Submitted by John R White

Dr. David Baxter Dunn came to Columbia in 1967 where he joined the Botany Department as associate professor in plant taxonomy and Curator of the Herbarium. He became a professor at the University of Missouri in 1969 and was granted the title of Emeritus Professor of Biology on August 31, 1987.

Dr. Dunn was born January 10, 1917, in Mustang, Oklahoma. He received his bachelor's degree at the University of California - Los Angeles (UCLA) in 1940, where he became a teaching assistant, followed by his master's degree in 1942. UCLA awarded him a doctoral degree in 1948. From 1948-50 he was assistant in charge of botanical research for the UCLA Atomic Energy Project following the United States' detonation of atomic bombs on test sites in New Mexico.

Before joining the University of Missouri faculty, he taught at the University of California and Occidental College in Los Angeles, New Mexico State College in Las Cruces, plus a lectureship at the University of Minnesota.

Dr. Dunn published more than sixty papers in the field of plant taxonomy and plant ecology. He trained fourteen PhD and seventeen masters' degree students and, as Curator of the Herbarium, he and his students added more than 137,000 plant specimens to the collection. His expertise in plant identification brought in specimens for determination as well as gifts from all over the world. He was a world authority on the genus *Lupinus*. Gifts of specimens from Mexico, Columbia, Ecuador, Brazil, Argentina, and from herbaria in North America and Europe were received.

Dr. Dunn estimated that during five decades he had taught sixteen different biological science courses. Known to all his students as "Doc", his graduate stu-

dents were taken on field collecting trips to the west, southwest, and Mexico with him and his wife, Betty. These trips became legendary for the numbers of specimens collected as well as the amount of beverages consumed in the hot, dry deserts.

His work was his hobby. Other than fishing trips to Colorado he spent his time on his work. After his retirement in 1987, at which time Dr. Robin C. Kennedy became the new herbarium curator, a greenhouse was built onto the back of his home. "Doc" continued to enjoy his work and Emeritus status until his death on Jan. 3, 1994; he was 76.

References

David Baxter Dunn, Professor Emeritus. *Alumni News*. Biological Sciences, University of Missouri, Columbia. Winter 1992, page 6.

Carlson, Caron. Former Herbarium Curator Dies. *Columbia Missourian*. Wednesday, January 5, 1994, page 10A.



Donate to MONPS When You Shop!

AmazonSmile is an easy way to support MONPS. Every time you shop on smile.amazon.com, the AmazonSmile Foundation donates 0.5% of your purchase of eligible products to MONPS.

Simply visit smile.amazon.com and search for Missouri Native Plant Society Inc.After you finish shopping, Amazon will automatically donate to MONPS. You may also click the AmazonSmile link on monative plants.org.

Make sure to navigate to smile.amazon.com each time you shop. The default amazon.com will not result in a donation, and your smart phone application may not support Amazon-Smile. Visit About AmazonSmile to read more about the AmazonSmile Foundation.

CHAPTER REPORTS

Lynette Baker, Chapter Representative

04/28: Chapter meeting, Dr. Kyra Krakos and Students. What happens when the student becomes the teacher? The St. Louis MONPS Chapter found out. Dr. Kyra Krakos and students from her Maryville University Research Lab brought their student research learnings to us. Dr. Krakos started out with sharing that it was the 10th year at the Maryville Research Lab. The outdoor fieldwork for summer research began in June of 2020. Although the inside lab was shut down due to the coronavirus, this did not prevent the students from learning in nature outside. The budget was frozen, there were no funds, and attendance was not required. Thirteen students and new recruits showed up, with an eagerness to learn. The study site was Shaw Nature Reserve, opened by the Missouri Botanical Garden in 1928. Dr. Krakos teaches, 'Great science takes three things. It takes eyes, brains, and a notebook'. The students were able to complete pollination observations, morphology measurements, later blooming species study, fruit and seed counts, and hand pollination experiments. The timing was nice because the plants were in bloom June through August. 2020 was a successful summer with thirteen students and nine new projects. 2021 will start off with six new students and eight returning students. Below are a few topic areas presented by the students:

- 1. Silphium laciniatum, 2015 vs. 2020
- 2. Reproductive biology in Eastern and Western Missouri with Asclepios tuberosa, how temperatures can cause variations
 - 3. Monarda fistulosa, urban versus rural populations
 - 4. Forest species, Frasera caroliniensis, mass seeding and blooming every fifteen years, a fascinating topic
 - 5. Penstemon digitalis and the different habits
 - 6. Phlox paniculata, impact of morphology and pollinator presence
- 7. Student to scientist challenges; three aspects of research: data collection, analysis, and presentation; Veronicastrum virginicum focal study plant
 - 8. Botany 2019 Conference success

05/26: Chapter meeting. Dr. Quinn Long, Director of Shaw Nature Reserve for the last four years, began his presentation with history. Shaw Nature Reserve was founded in 1925 during the industrial revolution. The orchids moved to Gray Summit and the daffodils, although not native or invasive, represented biodiversity. When Dr. Quinn arrived to fill the position, the community wondered if he was going to remove the daffodils. As a great leader would do, Dr. Quinn reassured people that he would not remove them. The daffodils would stay, as their beauty continues to attract visitors to the Reserve. Dr. Quinn talked about native plant horticulture, ecological restoration, and environmental education. He discussed cultivation versus habitat, using Lespedza repens as an example. He also mentioned Tradescantia ohiensis. He continued his discussion on how the Reserve uses prescribed fire for invasive species control and how the fragmented landscape can be complex. They typically use volunteer land stewards. For 2021-2023, they were able to hire three restoration technicians. They also have an ecological resource scientist focused on the biodiversity of the Nature Reserve. Dr. Quinn talked about Viburnum dilatatum and the localized infestation. He also mentioned bush honeysuckle and the difficulty with eradicating it. The presentation took an interesting turn to discuss the federally endangered Indiana bat. There was a convergence of disturbances and there were two 100-year floods in the last five years. Flood, drought, and fire create these disturbances. When there is convergence, the bat habitat is created. When the silver maple burned, they found the bats. Today, there are four federally listed species of bats. In closing, Dr. Quinn shared that the Shaw Nature Reserve continues land stewardship and environmental education. There are school programs with up to 20,000 children and public programs. If interested, volunteers can sign up in their area of preference.

June 23 meeting: St. Louis Chapter of the Missouri Native Plant Society is sponsoring an evening wildflower walk at Shaw Nature Reserve led by Dr. James Trager who, until his recent retirement, was the restoration biologist/naturalist at SNR.

Upcoming St. Louis Chapter Events

July 28 meeting: James Faupel, Supervisor, Ecological Restoration at Litzsinger Road Ecology Center will give a talk on iNaturalist.

Meetings for 2021 will be held via Zoom on the 4th Wednesday of each month, January through October (excluding June), at 7:00pm. Zoom invitations to be sent out within a week or so in advance of each.

PARADOXA

Pam Barnabee, Chapter President

With new CDC guidance on outdoor gatherings and many of our members vaccinated, we felt comfortable resuming our monthly walkabouts in May. Member Linda Frederick offered her property to explore, and so we met there on the slightly damp evening of May 25. Linda had described her place as a "wild yard"; I would say it's an amazing yard. Mossy paths wind through the trees, with banks of wildflowers on either side. Around each bend you might find a wooden bench, a water feature, or an odd bit of sculpture. Low stone walls form terraces. Linda bought some of the plants that have spread through this woodland haven, but many have just drifted in on their own. One "constructed area" is a berm Linda created and filled with sand to provide habitat where Virginia bluebells and fire pink thrive. Coreopsis was in full bloom for our visit, also pale purple coneflower and bee balm. Our chapter namesake, Echinacea paradoxa, was just starting to bloom. Linda led us through the woods to see the final highlight of the walkabout: a purple twayblade orchid.

Our June 22 meeting was held about ten miles south of Rolla at John and Elaine Edgar's reconstructed prairie. John and Elaine were the 2019 recipients of Missouri Prairie Foundation's Grow Native! Ambassador Award, a well-deserved honor. The couple welcome all visitors to explore their property, no appointment necessary, on the five miles of mowed path they maintain. They graciously gave us a guided tour, describing how the project began when they discovered a shooting star flower in their fescue field. In 2008, they committed to restoring thirty-five acres of their land to native tallgrass prairie. John showed us the different areas of prairie that had been established with different methods (drilling seed in May versus broadcasting in winter versus elimination of fescue with no additional seeding). With guidance from Mervin Wallace, he applied thirty-five species of native plants; now he and Elaine have counted about 225 species present. The Liatris pycnostachya (prairie blazing star) is particularly impressive, with an estimated three million stems; Mis-



One small portion of the Fredericks' amazing yard

souri Wildflower Nursery harvested five pickup loads of seedheads last year. John also talked about his management practices: annual prescribed burns and occasional mowing or haying. Two years ago, John and Elaine decided to extend their commitment to native plants by restoring some of their woodland to pre-settlement flora. They're also in the process of removing cedar and

restoring an acre and a half of sandstone glade. A return trip is planned for mid-July, when the blazing star should be in peak bloom.

Upcoming Paradoxa Events

July 10, departing Rolla at 8:30 a.m.: We'll travel to Prairie Garden Trust (PGT) near Fulton, about an a hour and a half north of Rolla. Bring a sack lunch. Contact us to sign up for the carpool John Edgar surrounded by praior meet us at PGT at 10:00 rie plants a.m.



July 14, 6:00 p.m.: Walkabout at John and Elaine Edgar's reconstructed prairie to see Liatris at peak bloom and visit a sandstone glade.

August 24, 6:00 p.m.: Meet at Audubon Trails Nature Center in Rolla for this month's walkabout.

OSAGE PLAINS

Casey Burks, Chapter Representative

May 26:The Osage Plains chapter met in the afternoon at a private prairie we call Ragland Prairie. It has always been a great place for a spring trip but this time grasses were thigh high so perhaps we were too late. This is where we found a Meads milkweed several years ago but haven't seen it since. There's usually an abundance of New Jersey tea, but we didn't see any. However we did have a hallelujah moment to see a small grass pink orchid almost hidden in the tall grass. Of course we didn't know what it was at first until I submitted a fuzzy photo to the MONPS Facebook page. So glad for the ID. There were a few of our friendly natives. After the field trip, President Sondra Raper led our parking lot planning meeting.





Left: Lobelia spicata, spiked lobelia; Right: Baptisia alba, white wild indigo



Also seen at Ragland Prairie: Amorpha canescens, lead plant

HAWTHORN

Michelle Pruitt, Chapter Representative

who gave a presentation on Careful Chemical Use. 12 April: Monthly business meeting was held via Zoom. 22 April: For Earth Day, about a dozen members met at the Grindstone Nature Area parking lot in Columbia and hiked one of the dirt trails to see spring blooming wildflowers including blue-eyed Mary (Collinsia verna), sweet william (Phlox divaricata), common blue violet (Viola sororia), yellow violet (Viola pubescens), false rue anemone (Isopyrum biternatum), and trillium (Trillium sessile). We returned on Sunday, 25 April, and identified May apples (Podophyllum peltatum), yellow star grass (Hypoxis hirsuta) dwarf larkspur (Delphinium tricorne), shooting star (Dodecatheon meadii), dutchman's breeches (Dicentra cucullaria), wild comfrey (Cynoglossum virginianum), rue anemone (Thalictrum thalictroides), Indian physic (Gillenia stipulata), and pussytoes (Anten-

8 March: Zoom meeting was held featuring Paul Smith,

9 May: Mother's Day Mosey to 100 Acre Woods in northern Boone County.

naria parlinii). [wildflowers report courtesy of Chapter

12 May: A "popup" native plant sale was held in the parking lot of Songbird Station in Columbia. Through the power of social media, attendance and sales were excellent.

22 May: We participated in the Walk-Through Native Plant Sale at Columbia Bass Pro Shops Sportsman's

Sessions were scheduled to help manage native plant gardens around town and at Columbia Public Schools on 2 June, 14 June and 16 June.

12 June: We toured a native plant garden at a member's house in cooperation with WildOnes.

Upcoming Hawthorn Events

President Elena Vega]

12 July: Regularly scheduled monthly meeting 9 August: Regularly scheduled monthly meeting See <u>www.columbianativeplants.org</u> for an updated posting of newsletters and activity details.

New Members!

By Ann Earley, Membership Chair Click here to join!

Kansas City

Darin Banks, Prairie Village, KS Sandra Ferguson, Smithville Rick Mareske, Kansas City, KS Lee Ann Googe, Kansas City

Paradoxa

Judith Dudley, Rolla Kathy Gallagher, St. James Rebecca Lexa, Long Beach, WA

St. Louis

Anne Cummings, University City Maureen Hoock, Shrewsbury Alaine Mertens, Shrewsbury Meghan Whitley, Kirkwood Doreen Kozeny, St. Louis Bob Loo, Valley Park Matthew Walters, St. Louis Barbara Brain, University City

Hawthorn

Anne Alexander, Columbia Dacoda Maddox, Columbia Howard Fenster, Columbia

Perennis

Cynthia Durgan, Cape Girardeau Tom Allen, Naylor

Osage Plains

Christopher McLaughlin, Butler

State Level Membership

Marge Maher, Pacific Patricia Tataryn, Weston Bill Duncan, Chesterfield Paula Betz, Dardenne Prairie

Missouri Native Plant Society Membership Form

Nan	ne	
Add	ress	
City	, State, ZIP	
Phone		
Ema	nil	
Memb	ership Level (check one):	
	Student	\$5
	Goldenrod	\$10
	Sunflower	\$25
	Blue Bell	\$50
	Blazing Star	\$100
Chapte	er dues (optional, check all that apply):	
	Empire Prairie (Saint Joseph)	\$5
	Hawthorn (Columbia)	\$5
	Kansas City	\$5
	Osage Plains (Clinton)	\$5
	Ozarks (West Plains)	\$5
	Perennis (Cape Girardeau)	\$5
	Saint Louis	\$5
	Southwest (Springfield)	\$5
Newsl	etter Delivery (normal delivery is via email):	
	Check here if you prefer to receive your newsletters via postal mail!	\$10
Other	contributions (optional, check all that apply, specify amount, <u>tax deductible</u>):	
	Hudson Grant Fund	
	Other contributions	
Total:		
Total		

Make checks payable to the $\it Missouri~Native~Plant~Society$ and mail to: Missouri Native Plant Society PO Box 440353

Saint Louis MO 63144-4353

Visit us on the web (monativeplants.org) and join us on Facebook!



PO BOX 440353 St Louis, MO 63144-4353

monativeplantsociety.org monativeplants.org



RETURN SERVICE REQUESTED

President

Dana Thomas 1530 E Farm Rd 96 Springfield MO 65803

Vice President

Malissa Briggler 10297 CR 371 New Bloomfield, MO 65063

Secretary and Petal Pusher

Assistant Editor Pam Barnabee 34653 White Oak Rd Plato, MO 65552

Treasurer

Bob Siemer 74 Conway Cove Drive Chesterfield, MO 63017

Membership

Ann Earley P.O. Box 440353 St. Louis, MO 63144-4353

Past President

John Oliver 4861 Gatesbury Dr St. Louis, MO 63128

Board Members

Justin Thomas (2020–2023) 1530E Farm Rd 96 Springfield MO 65803

Mike Skinner (2020–2023) 167 South Peachtree Republic, MO 65738

Bruce Schuette (2019–2022) 678 St. Route 147 Troy, MO 63379

Rick Gray (2018–2021) 6 Montauk Court St Louis MO 63146

Steve Buback (2018–2021) MDC NW Regional Office 701 James McCarthy Dr St. Joseph, MO 64507

Aaron Floden (2019-2022) Missouri Botanical Garden 4344 Shaw Blvd. St. Louis, MO 63110

Missouriensis Editor Doug Ladd

Missouri Botanical Garden 4344 Shaw Blvd. St. Louis, MO 63110

Petal Pusher Editor

Michelle Bowe 901 S. National Springfield MO 65897 417-836-6189 mbowe@MissouriState.edu

Distribution Manager Rex Hill

4 Grantwood Lane St. Louis, MO 63123

Assistants: Emily Horton, and Joan Featherston

Editorial Committee

Lisa Hooper Jay Raveill and Tim Smith

Archives

Rex Hill 4 Grantwood Lane St. Louis, MO 63123

Webmaster

Jerry Barnabee 34653White Oak Rd Plato, MO 65552 www.monativeplants.org www.monativeplantsociety.org

Environment and Education

John Oliver (Past President)

Chapter Representatives

Empire Prairie Steve Buback (Board Member) 701 James McCarthy Dr St. Joseph, MO 64507 816-271-3111

Hawthorn Michelle Pruitt 1305 Overhill Road Columbia, MO 65203

Kansas City Cécile Lagandré 6040 Wornall Rd., KCMO 64113

Osage Plains Casey Burks 1080 SE 915P Rd Deepwater, MO 64740

Ozarks Susan Farrington, Interim Rep.

Paradoxa Jerry Barnabee 34653 White Oak Rd Plato, MO 65552 Perennis Andrew Braun apbraun I s@gmail.com

Saint Louis Lynette Baker Ibleadershipcoach@gmail.com

Southwest Michelle Bowe 901 S. National Springfield MO 65897

To contact the Missouri Native Plant Society, please <u>click the</u>
"Have a Question" link on our website

"A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."

—Aldo Leopold