

PETAL PUSHER

November-December 2023 Newsletter of the Missouri Native Plant Society Volume 38 No.6

“... to promote the enjoyment, preservation, conservation, restoration, and study of the flora native to Missouri.”

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Justicia americana as an Ecosystem Engineer in Ozark Streams

by Alexis Reifsteck, 2022 Hudson Research Grant Recipient

Native aquatic plants are essential in maintaining the health of freshwater ecosystems but are often seen as a nuisance to fishermen, boaters, and management (Gettys 2019; Missouri Department of Conservation n.d.). These plants provide vital ecosystem services. For example, the native yellow waterlily



Water willow growing on bedrock slabs in Bull Creek. It seemed to love the cracks in the bedrock, but it also just rooted right on top

serves as a food source and refuge for waterfowl (Gettys 2019). Yellow water lily also is often used in habitat restoration because it creates valuable fish habitat and stabilizes substrate (Gettys 2019). Aquatic plants inhabit a variety of freshwater systems including wetlands, lakes, and streams (Cronk and Fennessy 2001). Plant life in streams is subjected to flowing water and flood disturbance. In Ozark streams, plant life is still supported despite the frequent extreme flooding events that scour streambeds and displace organisms and their entire habitat. The knowledge of the natural history of native aquatic plants in Ozark streams is lacking.

Justicia americana (water willow) is a Missouri native plant found in Ozark streams. It grows in large patches through

Each issue, the Petal Pusher attempts to coordinate a theme for all of the articles as sort of a fun way to get information to you, the reader. This issue's theme is "Stan Hudson Research Grant" Enjoy!



Our lab grouping standing on the huge raft-like water willow patch after a huge bed-moving flood in Pomme De Terre. Before this, we could barely see any water willow rhizomes on the streambed surface.

rhizomes and is consistently seen on the surface after massive bed-moving floods. After a large flood, we even witnessed a raft-like patch that we could jump off. My hero, Ken Fritz, studied water willow in Alabama sandy-bedded streams and showed that it can be deemed an ecosystem engineer (Fritz et al. 2004). An ecosystem engineer is a species with a large presence in an ecosystem that can modify surrounding resources, like soil or light, by changing the properties of their environment, like turning living trees into dead ones, to create and maintain habitats (Jones 1994). A popular example would be beavers turning trees into a beaver dam and creating a wetland. Water willow increases habitat stability by reducing stream flow and trapping fine sediments through its tangles of roots and rhizomes (Fritz et al. 2004). These conditions create habitat that could provide a refuge for organisms during extreme flooding events.

Thanks to the Stan Hudson grant, provided by the Missouri Native Plant Society honoring the late H. Stanton Hudson, we were able to study the role of water willow in Ozark streams. The funds from the Hudson grant were used for field supplies, travel, and water sample tests. The objectives of our study were to determine: (1) What environmental factors influence water willow occupancy in Ozark streams, and (2) what role does water willow have as an ecosystem engineer within the Ozarks? Our

hypothesis was that water willow growth is limited by nutrients and it increases fine sediment and macroinvertebrate diversity.

Our study includes six Ozark streams of similar size, each characterized by varying nutrient levels and fine sediment amounts. We focused on water willow sampling in two of those streams, Pomme De Terre and Bull Creek. In Bull Creek, an unexpected feature was that water willow grew on large bedrock slabs whereas in Pomme De Terre it is all gravel. To study the differences, we collected samples from two different types of sediment, gravel and bedrock. We also compared two habitat types: within water willow beds and outside water willow beds. To address our first question, we collected vegetative cover and monthly water samples from the six streams. We also gathered monthly vegetative structures from Pomme De Terre and Bull Creek. For our second question, we collected sediment cores and macroinvertebrate samples from Pomme De Terre and Bull Creek.

Our data shows that while nutrient levels may limit water willow occupancy, other factors may play a role. Additionally, we found that water willow not only increased fine sediments but diversified sediment sizes in both bedrock and gravel samples. Surprisingly, macroinvertebrate taxa richness was lower within water willow beds



Our lab collecting vegetative structures from Pomme De Terre later in the growing season.

compared to outside. Our findings indicate that water willow plays a pivotal role in streambed modification and can be deemed an ecosystem engineer within frequently flooded Ozark streams.



Literature Cited:

Anon. (n.d.) Nuisance Native Plants. <https://mdc.mo.gov/trees-plants/nuisance-native-plants>. Accessed 15 Oct. 2023

Cronk JK, Fennessy MS (2001) Wetland plants: biology and ecology. Lewis Publishers, CRC Press LLC, Boca Raton, FL.

Fritz KM, Gangloff MM, Feminella JW (2004) Habitat modification by the stream macrophyte *Justicia americana* and its effects on biota. *Oecologia* 140:388-397

Gettys LA (2019) Breaking bad: native aquatic plants gone rogue and the invasive species that inspire them. *HortTechnology* 29:559-566.

Jones CG, Lawton JH, Shachak M (1994) Organisms as ecosystem engineers. *Oikos* 69:373-386.

(Left) Collecting sediment samples within the water willow patch with a modified core that we had to shimmy aggressively into the streambed.

Meet the Board: Malissa Briggler, President of MONPS



I currently serve as President for MONPS. I have been a member since 2007 and have also previously served as Secretary and Vice President. I work at the Missouri Department of Conservation (MDC) as the State Botanist and coordinate the botanical component of the Missouri Natural Heritage Program. My work with MONPS and MDC often overlap as both organizations strive to promote the enjoyment, preservation, conservation, restoration, and study of native flora.

I live near the family farm where I grew up in Callaway County, Missouri. I am married to Jeff Briggler, the State Herpetologist for MDC. We have three children, Clara, Mary, and Sam. Between keeping up with busy kids, gardening, home canning, and farm work, there isn't much spare time. When we get the chance, Jeff and I enjoy taking a break while the kids explore the creek behind our house.



Research highlights and implications for conservation of the native plant genus, *Leavenworthia*

by Brigette Williams, PhD, 2017 Hudson Research Grant recipient

Leavenworthia is a genus (mustard family, Brassicaceae) of small, winter annual plants native to xeric-limestone prairies and glade-like habitats across eastern North America. Their preferred habitat is dry, open spaces with shallow calcareous soils and areas of exposed bedrock. One species only cross-fertilizes (*Leavenworthia stylosa*), some self-fertilize (*L. uniflora*, *L. crassa*, *L. torulosa*, *L. aurea*, *L. texana*, and *L. exigua*), and two cross- and self-fertilize (*L. alabamica* and *L. crassa*). Species also vary in their range sizes. The Missouri native, *L. uniflora*, is widespread but *L. aurea* and *L. exigua* var. *laciniata* occur in only one state each. Furthermore, *L. exigua* var. *laciniata* is apomictic (seeds are clones of the maternal plant). This variation in reproductive biology and range sizes contributes to differing levels of genetic diversity; cross-fertilizers have more genetic diversity than self-fertilizers. Additionally, the apomictic species has virtually no genetic diversity (every individual is the same genotype).

Leavenworthia are of conservation concern due to changing environmental conditions across their rang-



Figure 1. *Leavenworthia uniflora* in fruit, while in standing water in a glade in southwestern Missouri.

es. Variable precipitation and increased temperatures throughout the region have created persistent drought conditions. Therefore, it is important to understand whether and how these species will respond to watered vs drought conditions.

One way to investigate this is with conservation genetics, which is based on the fundamental theory in biology that species require genetic diversity in order to adapt. But this approach might be limited when species have naturally low genetic diversity (e.g., self-fertilizing and some clonal species, like *L. exigua* var. *laciniata*). Another way is to measure phenotypic plasticity (how traits vary in different environments). Some phenotypic plasticity is due to genetic variation but it can also be due to non-genetic variation, like epigenetic modifications. Epigenetic modifications are naturally occurring chemical modifications on DNA that can change gene expression. One modification, DNA methylation, can be heritable, linked to trait variation, and environmentally sensitive. Measuring DNA methylation and phenotypic plasticity is a new approach to test how species with low genetic diversity respond to different environments.

In 2017, a Stan Hudson Research Grant enabled us to study phenotypic plasticity and DNA methylation in four *Leavenworthia* species (three self-fertilizing and one apomict) under two watering conditions (watered and drought). We used field collected seed from across each species' range and grew them in groups of naturally genetically identical seedlings divided between watered and drought conditions in a greenhouse. We measured trait variation and sequenced DNA methylation because we wanted to see whether species with low genetic diversity could produce variation in traits and DNA methylation in response to different watering conditions.

The widespread species and Missouri native, *L. uniflora*, showed significant phenotypic plasticity and variation in DNA methylation between watering treatments. It was the only species that grew a significantly longer tap root when droughted. A previous study of *L. uniflora* described a metabolic adaptation to flood conditions (Baskin & Baskin, 1976). Since *Leavenworthia* generally experience dry conditions and grow in shallow soil (often directly on top of exposed bedrock), we think *L. uniflora* interpreted being watered as flood-like, triggering its metabolic adaptation. Our results suggest that this response is linked to DNA methyl-

ation since we used genetically identical individuals in both watering conditions. Based on these findings, *L. uniflora* is probably well-suited to respond to changes in precipitation across its range despite low genetic diversity. Unfortunately, it appears to be the only *Leavenworthia* species that is able to respond to watered vs drought conditions, so other species will require more effort to conserve. We hope this fascinating finding in a native plant will lead to more discoveries in the future that will advance the conservation of more native plants.



Figure 2. *Leavenworthia uniflora* with ripe seed exposed on open siliques (narrow seed pods) in northern Alabama

References:

Baskin, J. M., & Baskin, C. C. (1976). Evidence for metabolic adaptation to flooding in *Leavenworthia uniflora*. *Journal of Chemical Ecology*, 2(4), 441–447.

Aquatic Plant Research

by Daphne Miles, 2023 Hudson Research Grant recipient

Under the surface of some Missouri ponds, you might find a submerged aquatic plant called curly-leaf pondweed, also known as *Potamogeton crispus*. This species isn't welcome in these ponds, yet it acts as a long-time resident. So how does an invasive species get by in an environment that it was never meant to be a part of? I wanted to investigate this in my research on aquatic plant communities.

I spent a significant portion of my undergraduate degree completing surveys of aquatic plants in Williams Pond, a spring-fed pond at George Washington Carver National Monument in Diamond, Missouri. Williams Pond is an impoundment, having a spring as the inlet and a man-made dam as the outlet. The dam directs water into a nearby creek. Unfortunately, the bottom of the outlet rusted out, causing the drainage point of the pond to drop. The lower drainage point resulted in a smaller open water area, where parts of the pond had no standing water. These conditions persisted for almost 2 years before the pond managers were able to install a new dam.



Williams Pond in October 2023, photo by D. Miles

I completed seasonal vegetation surveys from a boat throughout this event. Surveys involved identifying aquatic plants present, estimating percent canopy cover, taking depth measurements, carrying out physiochemical water measurements like temperature and dissolved oxygen, and collecting water samples to analyze further in the lab. We have monitored this pond over the last five years, completing surveys to approximately capture changes occurring each season. After the new dam was installed, *Potamogeton crispus* growth exploded! I now carry out monthly surveys to better understand how the abundance of this invasive aquatic plant changes with native aquatic plant abundance, water depth, and other environmental conditions over time. The increased abundance of this plant is concerning in this spring-fed pond because it could serve as a distribution point for the spread of this species in the Ozarks. I hope that my research will help with better management of this pond.



After estimating plant coverage at a sample site, I pull up and clean the quadrat, photo by A. Faust

Aquatic Plant Research continued.

The Williams Pond research has been an adventure of Dr. Kisson-Charles' Wetland and Biology Education Research (WeBER) lab. I highly recommend it to any student looking to join a research lab at Missouri State University. The WeBER lab is a great way to immerse yourself in aquatic life and study the biological processes that occur in these ecosystems. We look at aquatic plants, bugs (macroinvertebrates), ecotoxicology in water systems and more!

I am now a graduate student attending Missouri State University, continuing research, instructing biology labs as a TA, giving tours of the MSU biology department, and doing my best to manage all these awesome opportunities while enjoying the experience.

Being one of two recipients of the Stan Hudson Research Grant has provided much needed encouragement for myself and the WeBER lab. Receiving this grant blew me away. Our research lab works very hard to find funding for the projects we are working on. It was a light at the end of the tunnel!

H. Stanton Hudson - The Man Behind the Research Grant

In Memoriam, by George Yatskievych, reprinted from *Petal Pusher* Vol. 17, No 3 (May/June 2002)

H. Stanton Hudson, a longtime Missouri Native Plant Society member from Poplar Bluff died peacefully on 1 March 2002 from complications following kidney failure and a stroke. He was 82 years old. He liked to tell how he was one of the first naturalists in the Missouri State Park system, around the time he finished high school. He studied biology at the University of Missouri in Columbia, where he met his wife, Wanda (who passed away several years ago). He then worked for 25 years as a fisheries biologist at Ozark Fisheries in Stoutland, Missouri, and retired to Poplar Bluff.

Stan liked to balance interests in conservation, birding, and plants. He was a longtime member of both the Audubon Society and The Nature Conservancy (TNC). He was one of the most prolific contributors to

Plant rake collecting submerged aquatic plants, photo by D. Miles



the Missouri Breeding Bird Atlas project and for many years was TNC's volunteer steward at their pond berry preserve in Ripley County and surrounding areas. He soon became an expert on plant life of this part of the state, often locating samples of particular species for researchers or leading visiting botanists to see in the field. He collected about 2,000 herbarium specimens, which he donated to the Missouri Botanical Garden's herbarium. Among these were numerous county records and several new state records, including *Aeschynomene rudis*, *Ammoselinum butleri*, *Arum italicum*, *Erianthus giganteus*, *Eupatorium rotundifolium*, *Paspalum distichum*, *Poncirus trifoliata*, and *Sphenoclea seylanica*. These finds were meticulously documented and reported in articles published in *Missouriensis*.

In 2000, MONPS presented Stan with the Arthur Christ Memorial Research Award for his outstanding work on the southeastern Missouri flora. His botanical and ornithological projects were also recognized through a Natural History Award from the Missouri Department of Conservation. He also received awards from the Three Rivers Audubon Society and the Missouri Chapter of The Nature Conservancy in recognition of his volunteer efforts.

In 2000, Stan began to develop physical infirmities and was forced to move to Altus, Oklahoma, to be close to his daughter, Patty, and her family. He spoke of dearly missing springtime in Missouri and had hoped to return this year for a visit. While in the hospital before he passed away, Stan and Patty discussed the idea of establishing a scholarship fund in his memory through MONPS to benefit students working on projects involving Missouri flora.

Get to know us: Casey Burks

Osage Plains Chapter Representative

I was born an entomologist. However, I didn't know what that was until many years later. I was 7 when my mother died of Hodgkins cancer and I went to live in Humboldt, Kansas, with my great aunt. My toys were "doodle bugs", the little antlion larva, and I dropped innumerable ants into their cones of soft dirt to watch them get pulled under.

My first round of college, I studied microbiology at Iowa State in Ames. Then I realized I didn't want to work in a lab. My second round of college is when I said I wanted larger "bugs" and to work outside. That's when I heard: oh you want entomology in the Agricultural School. Yes that is when I began to study plant-insect interactions. Insect behavior is fascinating to me. And they have a lot of predators. One corn insect has learned to fling their poop away so predators can't zero in on them. A lot of entomology has to do with learning about them to find their weakness. Insect growth regulators keep insects from becoming adults therefore they can't mate. I loved the milkweed-Monarch butterfly migration connection and started studying the different species of milkweed. I now grow several species at home. Then I became interested in healing herbal plants which opened up a whole new world. I now make herbal balms. Moving to Missouri I joined MONPS. I love learning about Missouri plants and which insects feed on them. I grow Aristolochia for pipevine larvae. I love going on field trips, even though sometimes I need to ask several times "what is that plant again". I love the learning and sometimes can pass on what I've learned.

Missouri has such beautiful State Parks and Conservation Areas and private lands for learning. I had no idea what a fen or a glade was before I joined. I had never heard of a frost flower. Thank you to all my plant teachers for your patience. It's such a joy when I finally do learn a new plant.

Seeking Donations for the Stan Hudson Research Grant

Could you help us support students who are conducting botanical research in Missouri? The Stan Hudson Research Grant is available to assist with funding for research projects conducted by college or university students under the supervision of a faculty member. The grant honors the late H. Stanton Hudson (1921–2002), a long-time member of the Missouri Native Plant Society whose passion for the flora of Missouri and its conservation inspired his friends and family to create a small grants program in his memory. The grant is usually given annually.

To qualify for the Stan Hudson Research Grant, research must involve Missouri native plants in some way, but may have as its primary focus any pertinent subject area in plant biology, including conservation, ecology, physiology, systematics and evolution, etc. The grant may be used for any non-salary expenses relating to the proposed research, including travel, equipment, and supplies. At the conclusion of the project, grant recipients will be expected to prepare research results for publication in a scientific journal and to present their research at the Missouri Botanical Symposium, which is held in Rolla, Missouri each Fall. To learn more about the grant, check out this link to the [Missouri Native Plants website-Hudson Fund \(button below\)](#).

[Click here to make a donation](#) to the Hudson Fund
Any amount is appreciated!

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/>

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 January 2024 Petal Pusher is "Winter Botany" but other submissions are encouraged, especially Genus or Family descriptions ("Better know a genus/family"), Conundrum Corner, Invasive Tip of the Month, Name Change of the Month, Terminology, and Poetry Corner.

B. Send ONE email saying "here is my contribution on _____," and attach (don't embed) the following:

1) an article in Word format with photo captions at the end (no photos in the Word document) and your name in the text.

2) Images, in JPEG format--NOT in a document file.

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: December 20

**Thank you so much,
Michelle Bowe**

Do You Have a Plant Story?

Learn more about Missouri native plants at the newest feature on the MONPS website (monativeplants.org): Plant Stories. Do you have a favorite Missouri native plant? A photo you're particularly proud of? Please submit your story to pamela.barnabee@gmail.com for posting.

We Welcome Member Submissions!

The Petal Pusher wants YOU ... to write articles for the newsletter.

Consider these possibilities:

-Conundrum Corner: Tips on how to distinguish between tricky, look-alike species.

-Invasive Tip of the Month: How to identify and eradicate a particular invasive species.

-What's Cooking: Recipes using native Missouri plants.

-Name Change of the Month: Latin names, they keep on a-changin'; help us all stay up-to-date.

-Poetry Corner or Quotation Corner: Give us your suggestions for poems or quotes, or submit your original poetry. (Note that for poems, we must have permission from the publisher.)



Shop Online for Embroidered MONPS Logo Apparel

A new feature has been added to the MONPS website: from the "MONPS Logo Apparel" link on the menu bar of our home page (monativeplants.org), you'll be able to access our online store. Short-sleeved and long-sleeved t-shirts, sweatshirts, and ball caps with embroidered MONPS logos are available in five colors. There's also a booney hat with embroidered logo, in dark brown. The tote bag has a direct-to-garment print of our logo. Our vendor, Fast Yowi, is located in Columbia, so you can pick up your order there if it's convenient, or have it shipped.



New Members

St. Louis

Ellen Hogrebe, Webster Groves

Aaron Stovall, St. Louis

June Jeffries, Wildwood

Hawthorn

Dana Morris, New Franklin

Kansas City

John Yocum, Independence

Heather Pedersen, Independence

Grant Dilworth, Kansas City

Dustin Schroer, Kansas City

Paradoxa

Christi Leaverton, Crocker

State Level

Barbara White, University City

Isah Webb, Ballwin

Brenton Clover, St. Louis

ALERT: Japanese stiltgrass in Columbia

compiled by Cheryl-Ann Hardy

Invasive Japanese stiltgrass (*Microstegium vimineum*) was recently confirmed by the City to be growing alongside Scott's Branch creek at the Audubon and Bonnieview Nature Sanctuaries in Columbia.

[Japanese stiltgrass](#) is listed as the third worst invasive (bush honeysuckle is fourth!) for our region of Missouri. You can help keep this highly invasive plant from spreading through identification and early reporting. The good news is that the early detection of the infestation in the Scott's Branch area makes it possible for the City to plan on its eradication soon by hand pulling.

[Bugwood has an excellent field guide](#) to identify Japanese stilt grass and other grasses with which it may be confused (see final page of this document for a quick visual summary). However, the main features include: silvery, off-center midrib on the leaves, leaves well-spaced along the stem, delicate flower stalks with 1-3 spikes, thin weak root system (pulls easily), stilt roots, and multiple sprawling stems.

Chapter Reports and Events

HAWTHORN

by Cindy Squire, Chapter Representative

8 September Adopt a Spot Work day - Weed and treat invasive plants.

11 September Meeting at Universalist Unitarian Church. 2615 Shepard Blvd. Plant ID and seed exchange.

21 September Monthly group lunch at First Watch - Stadium location.

22 September Adopt a Spot Work day - Weed and treat invasive plants.

23 September Mosey at Ann Wakeman's restored prairie. Members enjoyed a fabulous reconstructed prairie and met for lunch in Fulton afterwards.

9 October Harvest Potluck Meeting at Elena's - We dined on native foods and had a meeting around the bonfire.

11 October - Adopt a Spot work day - We mulched around the back barrier and helped remove invasive plants at another location.

14 October Mosey at Bonnie Chasteen's native plant tour. Native borders and a rain garden were prominent features of this urban landscape.

19 October Monthly group lunch at First Watch - Stadium location.

Upcoming Chapter Events

16 November Monthly group lunch at First Watch - Stadium location.

Adopt a Spot Work Days will resume in springtime - check emails

11 December - Zoom meeting - Bi-Annual election of Vice President, Treasurer, and Chapter Representative

21 December Monthly group lunch at First Watch - Stadium location.

See www.columbianativeplants.org for an updated posting of newsletters and activity details.

SAINT LOUIS

by Rick Gray, President

The St. Louis Chapter met for a field trip on Saturday, September 30 at Shaw Nature Reserve.

Other Events

The next Chapter meeting will be on October 25th beginning at 7:00 pm at the Webster Groves Public Library and will feature presentations from attendees of botanically themed photographs taken over the preceding year.

OSAGE PLAINS

by Casey Burks, Chapter Representative

September 10: Six members of the Osage Plains Chapter met at the home of Casey Burks for a wonderful fish fry and pot luck dinner. Afterward, President Sondra Raper led the meeting with discussions of possible field trips and the upcoming MONPS meeting in Clinton. This year has been a challenge to go to our favorite places with the heat and drought in our area. Nevertheless the group walked downhill at the back of Casey's place to a dry creekbed and worked on identifying dead plant remnants.

Upcoming Events

November meeting TBD.

PARADOXA

by Kathy Gallagher, Secretary & Pam Barnabee, President

For our August walkabout, Paradoxa Chapter attended a Plant ID Workshop held on Saturday, August 26. The location was a Forest Service property near



Left: *Desmodium glabellum*, photo by J. Becker

Newburg. The workshop was led by Institute of Botanical Training field botanist and educator Nathan Aaron. He showed us the finer points of

distinguishing species of goldenrods, asters, legumes, and a few grasses as we explored the woodland there. There were so many things blooming in the area, and he taught from the actual plants. When he felt we had exhausted the area, he suggested we caravan over to nearby Slaughter Sink, where we saw many additional plants.

The annual Fall Nature Festival & Native Plant Sale was held at Audubon Trails Nature Center in Rolla on September 9, and Paradoxa Chapter participated with a display and matching game on native plants that host caterpillars and a pressed leaf craft for children to take home. Several visitors signed up to learn more about MONPS, and were added to our email contact list.

On September 19, we returned to the property of John and Elaine Edgar, south of Rolla. This time of year, there weren't masses of prairie wildflowers in bloom as we've seen on past visits, but we did compile a list of 35 blooming plants, including closed gentian (right; photo by P. Barnabee) and an *Agalinis* species we weren't familiar with.





Helianthus hirsutus, photo by J. Becker

Our October activity was a seed collection workshop at Audubon Trails, held on the 14th. We collected seed from over a dozen species that we'll use for restoration projects, our November seed swap, and the seed library project initiated by Common Grounds Community Garden, in addition to our home gardens!

Upcoming Events

Saturday, November 18, 10:00am to 1:00pm.

Our final meeting of 2023 will be the annual seed swap/ pizza lunch/ brainstorming session for next year, at Bray Conservation Area, Rolla. We'll be meeting inside the house. All interested plant enthusiasts are welcome to attend. You need not bring seeds, but do bring your ideas for places you want to visit and topics you want to learn more about next year!

PERENNIS

by Stephen Sutter, Chapter Representative

The Perennis Chapter hosted a nature walk around the Sand Prairie Conservation Area (photos by S. Sutter) in Scott County on September 24th. Steve Schell, Natural History Biologist for MDC Southeast Region in Cape Girardeau, led us as we walked through this very interesting sand prairie/sand savanna. Some of the unusual plants we found were *Monarda punctata* (spotted horsemint; below), *Lithospermum carolinense*



(hairy puccoon), *Stylisma pickeringii* (dawnflower), and *Rhynchosia latifolia* (broad-leaf snoutbean). Even Andrew Braun who now works at Prairie State Park in the southwest corner of the state, joined us. As well as finding some interesting flora we had an opportunity to visit and catch up with Andrew.



If you have any suggestions as to locations you would be interested in seeing next year, please contact Stephen Sutter at Stephen.sutter@sbcglobal.net or call 573-222-3968. We are looking towards next spring for our next outing.

Missouri Native Plant Society Membership Form

Name	
Address	
City, State, ZIP	
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Membership Level (check one):

	Student	\$5
	Goldenrod	\$10
	Sunflower	\$25
	Bluebell	\$50
	Blazing Star	\$100

Chapter 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
	Paradoxa (Rolla)	\$5
	Perennis (Cape Girardeau)	\$5
	Saint Louis	\$5
	Southwest (Springfield)	\$5

Newsletter Delivery (normal delivery is via email):

	Check here if you prefer to receive your newsletters via postal mail!	\$10
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Other contributions (optional, check all that apply, specify amount, tax deductible):

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Position open
Interested?
Contact Rick Gray

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To contact the Missouri Native Plant Society, please **click the "Have a Question" link** on our website.

"In nature nothing exists alone."

--Rachel Carson