

PETAL PUSHER

March-April 2021 Newsletter of the Missouri Native Plant Society Volume 36 No.2

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

In this issue

| | |
|---|----|
| New Logo | 1 |
| Jack Harris: A Life Well Lived..... | 2 |
| Natural Areas | 4 |
| GrowNative! Classes..... | 6 |
| Announcements, etc..... | 7 |
| From the editor..... | 7 |
| New Members!..... | 7 |
| Field Trip SW Ch..... | 7 |
| Danny Henehan..... | 8 |
| Donate When You Shop.... | 8 |
| Brickyard Hill Loess Mounds Natural Area..... | 8 |
| 2021 Hudson Awards..... | 10 |
| Award Nominations!..... | 10 |
| Logo alternates..... | 10 |
| Better Know a Genus: <i>Andropogon</i> | 11 |
| Natural Areas..... | 12 |
| Chapter Reports..... | 13 |

MONPS Unveils New Logo

Contributed by Dana Thomas

Exciting news! The Missouri Native Plant Society has a shiny new logo! Our previous logo has served us well since it was created in 1981 and it is bitter-sweet to update it on its 40th birthday. But we needed a logo that would play well with current technology so we took this opportunity to freshen up the face of MONPS with a new look while we were at it. The board brainstormed ideas and hired graphic designer Erin Skornia to provide us with concept sketches for those ideas. After the board narrowed the choices to two sketches, all MONPS members were invited to vote on which of those two concepts would become our final logo (Figure 1). Both concepts honored the original logo by incorporating Missouri Coneflower (*Rudbeckia missouriensis*) against the state outline. Option B won by a landslide, capturing 78% of the 156 total member votes. Erin then developed Option B into the final, colorful logo that you see here. The new logo is simpler and offers a clearer focal point than the old logo, and the text is more visible. Most importantly, it can be scaled up in size without losing clarity which allows us to create posters, banners and other large format items. Thanks to all our members who participated in the vote, to our board for the many decisions on which they collaborated throughout the process, and to Erin Skornia for her hard work creating this beautiful piece of artwork for MONPS. We hope you all enjoy it!



Out with the old (left; 1981), and in with the new (right; 2021) logo!

A Life Well Lived

Jack Harris, June 1, 1929 – February 14, 2021

by Rex Hill with contributions from many of his friends

When I think about Jack, I always go back to the evening in 1997 when I first met him and his wife Pat at a talk being given at Powder Valley in St. Louis. You'll forgive me if I frequently mention Pat in this article about Jack, but they were essentially inseparable and most of my experiences with Jack were with them as a couple. Even after Pat's illness left her unable to care for herself, Jack was always there for her, delighting in observing and relating any slight positive change or reaction in her behavior. To the end of her life in 2017, he attended to her daily, helping with feeding her and communicating with her as best he could. He was a devoted husband. Martha and I were accepted and welcomed into their circle on that fateful night in 1997 and I credit that event and his encouragement for helping to shape my retirement years.

I solicited some input from friends and colleagues for the years preceding my first encounter with Jack, in order to clarify information I had heard about him or had discussed with him in our far too few conversations. His career was an extension of his military service at the end of World War II. He worked at the Defense Mapping Agency in St. Louis and rose to the position of Chief of the Cartography Department. Respected and admired by those he worked with, he was described as a man dedicated to accomplishing the mission of the agency but always dealing with his companions at the agency as a caring, listening person. In my stint as a Scoutmaster, I always emphasized what I considered to be the heart of the twelve-point Scout Law, numbers three through six: Helpful, Friendly, Courteous, and Kind. Jack exemplified those qualities, and it sounded to me after hearing from his colleagues that he had applied them well in his career.

Jack and Pat were active members of the Sierra Club. For many years in the 70s and 80s, Jack was the newsletter editor for the Ozark Sierran when the Ozark Chapter included Missouri and Arkansas, and 13 counties in southern Illinois. The publication was an extensive 8-page newsletter and Jack wrote many of the articles himself. Sound familiar? He worked on the campaign to stop the Meramec Dam in 1978 and worked to get the first Design for Conservation Sales Tax passed that goes to support outdoor recreation and conservation efforts in Missouri. He served as chairman of the Eastern Missouri Executive Committee in the early 80s, demonstrating great leadership skills. Great paddlers, Jack and Pat canoed with many of the friends they made in the Sierra Club during their many years of involvement.



Orchid Conference in Ashland, OR

One of Jack's favorite wildflower gawking activities, besides the weekly WGNSS walks and the quarterly and various assorted MONPS outings, was the Native Orchid Conference meeting held once a year in diverse places in the US and Canada. Some of us from St. Louis had the pleasure of joining Pat and Jack on several of those outings. Martha and I joined them in Oregon in 2006, West Virginia in 2008, and Edmonton Alberta Canada in 2010. Some of the attendees could be particularly intense in their devotion to "orchids only" when observing wildflowers on their



Jack found a suitable subject. photo by Rex Hill

fieldtrips. But, as usual, it was always pleasurable to stroll along with Pat and Jack, noting and attempting to identify anything that resembled a plant. Jack's somewhat mischievous nature and his kindness showed through on that trip when one night at dinner in Ashland Oregon, he produced a bottle of Oregon wine from the Rex Hill Winery.

Jack's contributions to the Missouri Native Plant Society were many. He served as President for four years from 1999-2003, Treasurer for four years from 1995-1999, Co-Chairman of the Environmental and Education Committee along with Pat from 1990-1999, and Archivist from 2006 until he moved to Columbia. After I took over Jack's long-time job as Archivist for the Society, one of my self-imposed tasks was to scan and digitize old newsletters in the hope of making their contents more readily available to our members. As I would wait for the scanner to complete each page, I would browse the upcoming material. It struck me that for a long period of time, the newsletter represented a history of the lives and activities of this extraordinary couple. Pat served as the editor, producing the Petal Pusher for nine years, and much of the contributed material was authored by Jack. His articles ranged from descriptions of botanical activities to those apprising Society members of conservation concerns and encouraging them to participate in their resolution. As chairman of the Environmental and Education Committee he took that assignment very seriously. As one example, he worked with the newly hired State Botanist, Tim Smith, to lobby the legislature who eventually passed a bill to make it a misdemeanor to dig or remove plants from State Highway rights-of-way. Jack and Pat were awarded the first, newly created John E. Wylie Service Award in 1997 for their many contributions to the Society over the years. Their service clearly did not end with that award.

In addition to Jack's contributions and service to MONPS, he and Pat were volunteers and active participants in many conservation related organizations, including the Sierra Club, The Nature Conservancy, the Audubon Society, the Missouri Prairie Foundation, and the Webster Groves Nature Study Society who awarded them their Lifetime Achievement Award in 2010. As I was putting this piece together, I was reminded of the gospel song by Carter Stanley, "Who Will Sing for Me?" Jack graced my life with his presence, and I am honored and humbled to 'sing' for him. An eloquent and fitting tribute was penned by John Oliver, noting Jack's passing, and I repeat it here in closing.

My friend and fellow nature-lover, Jack Harris died on Valentine's Day after a long and productive life at the age of 91. We hiked a lot of miles together and shared many good times. His long service to the Missouri Native Plant Society and the environmental interests of the entire state should certainly be celebrated. Jack Harris and his late wife Pat were present at the start of MONPS in 1979, and he served as President, Treasurer, and Board member for much of the time since. Even before that, he was active in the Sierra Club, Webster Groves Nature



Pat and Jack at Wildcat Glade, photo by Rex Hill

Study Society, Audubon Society, leading opposition to the proposed Meramec Dam project, and a fixture in almost every group devoted to preserving and protecting our state's beautiful landscapes for all of us. Somewhere Jack is reunited with Pat and they're hiking across a golden prairie, a flower-filled glade, or staring into the distance from Caney Mountain. We'll miss you Jack!

Here is his complete obituary in the St. Louis Post-Dispatch: <https://www.legacy.com/us/obituaries/stltoday/name/jack-harris-obituary?pid=197888070>



Daydreaming About Orchids - love the smile, photo by Rex Hill

Natural Areas Experiences

by Rex Hill

When I saw that the topic for this month's *Petal Pusher* was to deal with Missouri Natural Areas, it reminded me of what they meant to me as I was beginning to discover unique areas in our state. For years I had used the original *Natural Areas Directory* published in 1985 and a book published by The Nature Conservancy, *Discover Natural Missouri*, published in 1991. These two publications provided me with ideas for unusual hiking areas highlighted by special natural features. When I saw an article by Rick Thom in the March 1997 *Missouri Conservationist* magazine on additions to the list of designated areas, I was prompted to write to him and ask if a new version of the directory was forthcoming. I was casting about for things to do in my approaching retirement and this seemed like an interesting way to learn more about Missouri. In a most kind reply, he said he would be in St. Louis to give a talk on the subject at the Powder Valley Nature Center and he would be bringing a quantity of the new directories with him. I had a passing appreciation for native plants and did not know at the time that Mr. Thom was the featured speaker at a scheduled meeting of the St. Louis chapter of the Missouri Native Plant Society (MONPS). It was at this meeting of MONPS that I first met Pat and Jack Harris who welcomed Martha and me with generous, open arms. Without that warm greeting, I might have never followed the course that led me to MONPS. The new directory was perfect for my needs with maps and information for each of the, at that time, 168 designated natural areas. Subsequently, I've worn out several copies of the directory, secured a box of them that I handed out at a short course taught with Nels Holmberg at Meramec Community College, and greatly appreciated their value for the last 20 years. The information from that directory along with that for areas designated since 1997 is available on the Missouri Department of Conservation (MDC) website <https://nature.mdc.mo.gov/discover-nature/places/natural-areas>, and we now have Mike Leahy's beautifully illustrated, photographically enhanced book, *Discover Missouri Natural Areas – A guide to 50 great places*, that highlights fifty selected areas.



Castor River Shut-ins, photo by Rex Hill

Since that evening at Powder Valley, I've led a charmed and privileged life meeting so many wonderful people dedicated to the field of natural history. After Rick Thom's talk, I discussed with him a trip that Martha and I were to embark on in April that year. We were headed to southeast Missouri to see as much of the nature of that area as we could in a four-day trip. He asked if we would look at some property at Donaldson Point Conservation Area for possible inclusion in the natural areas program. Like I said, he is a kind man and probably spent some time chuckling over my naïve report. The area had recently recovered from flooding and was a muddy mess to hike through. The receding flood waters had carried off any ground detritus that might have made it possible to identify the large trees that grew there, particularly for novices like my wife and me. Nevertheless, the area has since been added to the program in 2003, but I'm very sure it wasn't because of anything I had written about it. The trip we took was our chance to see the Crowley's Ridge area and the swamps and remaining water features to the south. We had seen it from the air as private pilots and were curious about the straight-line water features, having no idea of its history or that these were drainage canals for converting the swampy land to farm fields.



Yellow fringed Orchid at Holly Ridge, photo by Rex Hill

With a borrowed canoe strapped atop our van, we struck out on a Southeast Missouri Odyssey to see all that we could take in. Our first stop was the Castor River shut-ins, a beautiful pink granite feature that graces the front covers of the old conservation atlas and the 1996 revision of the Missouri Natural Areas Directory. While hiking the short trail there we came across a young woman working as a conservation agent. She was placing signs announcing an impending burn of a cedar filled glade. She was infectiously enthusiastic about her work and her agency, MDC. Her name was Amy Salveter, and she would later work with Paul McKenzie at the US Fish and Wildlife offices in Columbia. We came over Crowley's Ridge for the first time by car and were dazzled by the unending flat terrain that rolled out from the ridge to the south. From there the trip consisted of stops at Holly Ridge Conservation Area, canoeing at Otter Slough, canoeing up the Mingo River to the national refuge swamp, locating Blue Pond Natural Area from the sound of the frogs chorusing there, camping, and hiking at Trail



Fall hike at Trail of Tears, photo by Martha Hill

of Tears State Park, a stop at Donaldson Point, and another at Big Oak Tree State Park. Many, if not all, of these places contain designated Missouri natural areas. We finished the trip on the Illinois side of the Mississippi, stopping at Larue Pine Hills and Little Grand Canyon in the Shawnee National Forest. That experience filled us with information and an unfulfilled curiosity. We have returned to these and many other places in southeast Missouri many times in the past twenty years.

In the year 2000, the national Natural Areas Association held their annual conference in St. Louis at the, no longer standing, Henry VIII Hotel. I was working for Mike Currier at the time and he asked me to help with several chores he had been assigned as a member of the local committee. One was to shepherd some of the

speakers around St. Louis while they were in town. This, unbeknownst to me, was to be a very fortunate day, as I met two very interesting people. We're in my van, driving to downtown St. Louis, and I ask the bearded, somewhat burly guy sitting next to me in the front seat, "So, what do you do?" His response, "I'm sort of interested in butterflies." He turned out to be Robert Michael (Bob) Pyle the founder of the Xerces Society. He was a very friendly, pleasant companion for the day, never once mentioning my lack of preparation for whom I might be driving around town. He had his own story about who you meet in life, usually accidentally, and the resulting consequences to your future. When he was a boy, he was interested in the outdoors and spent time by himself exploring nature. He was hiking one day and saw a group of adults with butterfly nets. They summoned him to join them and he began learning from them. One member of the group was Paul Ehrlich, the population guru. Somehow, in the course of driving around, the conversation that day turned to comparing ages of the persons in the car, and when the stranger in the back seat learned that he and I were the same age, he asked me what my birthdate was. We found that we were born on the same date and he referred to me as his 'soulmate' for the remainder of the day. I was honored. A recent article in the July/August issue of *Natural History* magazine about a famous Alaskan anthropologist and biologist, Richard K. Nelson, will reveal my birthdate.

When Michelle Bowe asked for submissions for this issue, she asked us to respond with our favorite natural areas. My answer to that is "all of them", but I will summarize a few by season of the year where Martha and I have had so many wonderful visits. This is, by no means, anywhere near a complete list and is somewhat biased by proximity to St. Louis. As usual, this article can be classified as the ramblings of an old man who is remembering fondly his experiences and some of the most interesting people and places, he has encountered along the path of life.

Natural Areas, continued

Spring: **Washington State Park Hardwoods** – no spring season is complete without a visit to the cliff face where the 1000 Steps Trail in Washington State Park gives access to the most wonderful display of spring ephemerals. **Engelmann Woods** – another great place for spring ephemerals, in particular the celandine poppy (*Stylophorum diphyllum*). **Big Sugar Creek** – three springtime seasons spent traversing the length of the creek in Cuivre River State Park with Bruce Schuette and Bill Moore on garlic mustard patrol. **Meramec Mosaic** – discovering the restored glades in off-trail excursions in the westernmost area of Meramec State Park.

Summer: **Hughes Mountain** – granite extrusions, unusual igneous glade plants such as pineweed (*Hypericum gentianoides*) and fame flower or rock pink (now *Phemeranthus calycinus*) with its succulent leaves and, if lucky, the eastern collared lizard. **Castor River Shut-ins** (Amidon CA) – pink granite shut-ins (best visited on a weekday). **LaBarque Creek** – a large tract of watercourses in sandstone canyons within Don Robinson State Park and LaBarque Creek CA. Land that was saved from development into another St. Louis suburb thanks to the generosity of Don Robinson and efforts of people like Nels Holmberg and Ron Oesch.

Fall: **Ha Ha Tonka Oak Woodland** – beautiful fall colors in the woodlands, glades, and savannas along the Oak Woodland Interpretive Trail and the Turkey Pen Hollow Trail at Ha Ha Tonka State Park. **Vancill Hollow** – beech trees in their native habitat at Trail of Tears State Park. **St. Francois Mountains** – some of the oldest igneous rock in the lower 48 states at Taum Sauk Mountain State Park and a good place to see the brilliant red fall colors of the black gum tree (*Nyssa sylvatica*).

Winter: **Pickle Springs** – a winter wonderland of icicles if you catch it at the right time. **Meramec Upland Forest** – wintertime off-trail hike leading to a frozen sinkhole cave entrance that feeds the copper hollow spring on the Wilderness Trail in Meramec State Park. **Johnson's Shut-ins** – Ozark Trail reroute that now brings you down the side of the East Fork of the Black River opposite the boardwalk. **Pickle Creek** – frozen over in Hawn State Park during a lengthy cold snap.



Rock pink at Hughes Mountain. Photo by Rex Hill

GrowNative! Master Classes for MONPS Members

By Dana Thomas

The Missouri Native Plant Society is a 2021 professional member of the Missouri Prairie Foundation's GrowNative! program and there is a perk for you---all MONPS members can attend **GrowNative! master classes** at no cost! We hope you enjoy this wonderful educational opportunity! The next master class will be held online on Mar. 24 and is entitled, Native Shrubs of the Lower Midwest, with Alan Branham.

When you register be sure to select that you are a GN! professional member, and you won't be charged the \$15 ticket price. Of course, you are still welcome to become MPF members, or to donate when signing up to support MPF's educational programming. Keep an eye on the **GrowNative! webinar** page for more great classes throughout the year. The April schedule will be posted soon.



Announcements and a call for nominations

1) Our current secretary (Pam Barnabee) and treasurer (Bob Siemer) have agreed to serve for another two years and our vice president, Malissa Briggler, accepted the nomination for president, **leaving the office of vice president vacant**. Two positions for at large Board Members, currently filled by Steve Buback and Rick Gray, end this term. Both agree to serve another term. If there are any nominations for **vice president** or for any of the offices, please submit them to Andrew Braun at apbraun1s@gmail.com. Officers will be installed at the next annual meeting held in summer 2021, date TBD.

2) COVID Response Plan. Due to the travel and crowd size at our state field trips, our "cancelled until further notice" policy remains in place at least through the spring. The decision whether to hold summer and fall statewide field trips will be made at the spring meeting. However, the Board approved MONPS chapters to hold their field trips and/or meetings as long as local safety guidelines are met. Keep an eye on the Petal Pusher and website for further information.

3) **The spring board meeting will be held on April 17 at 9:00 a.m. via Zoom.**

From the editor

Apologies for this issue being so late again! Thank you for hanging in there! Thank you to our proofreading team (especially Pam Barnabee); Malissa Briggler, Dana Thomas, and other board members. Thank you 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 "Potential Emerging Invaders." Other submissions are also welcome!!

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) 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: mbowe@missouristate.edu

F. Due date for the next issue is: April 25

Thank you so much,
Michelle Bowe

New Members!

By Ann Earley, Membership Chair

[Click here to join!](#)

Kansas City

Martha McCormick, Kansas City

Kenn Boyle, Kansas City

Amy Johnson, Parkville

Hawthorn

Dale Roberts, Ashland

Nancy Tharpe, Columbia

Cynthia Haydon, Columbia

Ozarks

Clara Applegate, West Plains

Perennis

Debbie Deneke, Cape Girardeau

Paradoxa

James O'Connor, Rolla

St. Louis

Erin Goss, Crestwood

Cathy Gunter, Hazelwood

Lynette Baker, Wildwood

Trevor Rodgers, St. Louis

Tammi Van Horn, St. Charles

Mark Paradise, St. Louis

Southwest

Keith Jones, Anderson

Sarah Mulligan, Bolivar, NV

State

Danielle Evilsizor, Springfield

Field Trip Opportunity

- Greenfield Glade
- See Missouri Bladderpod in Bloom
- MONPS SW chapter in collaboration with The Nature Conservancy
- Saturday, April 17, 2021 (rain date Sunday, April 18)
- 10:00am
- Contact: Andy Thomas at ThomasAL@missouri.edu



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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 monativeplants.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 AmazonSmile. Visit [About AmazonSmile](#) to read more about the AmazonSmile Foundation.

Brickyard Hill Loess Mounds Natural Area

by Steve Buback

Picking a favorite Natural Area can be a lot like picking a favorite child; even if preferences are there, one hates to admit it. Every Natural Area has flora that delights at various times of the year, and different systems are best to visit in spring, summer, and fall. We generally don't plan many field trips to rich, mesic woodlands in July, and we seldom visit wetlands in March and early April. The loess hills have the distinct advantage of combining xeric prairie systems in proximity to rich woods, and for those in the cold corner of the state, offer some of the first good wildflower displays in the spring, featuring some unusual species for Missouri.



High Creek Hill Prairie. Photo by Tom Nagle

In Memorium: Danny Henehan

Submitted by Casey Burks

It is with a heavy heart that I report the loss of Danny Henehan from the Osage Plains Chapter. When there was an OP meeting he traveled from Kansas to attend as much as possible, staying with his brother Bernie Henehan in Clinton. Danny and Bernie were instrumental in organizing field trips, often to privately owned prairies. Danny's love of photography and research gave our group many wonderful and informative programs on native plants. His joyous laugh, corny jokes and lovable personality will be greatly missed. Rest in Peace Danny Henehan.



Indian paintbrush (*Castilleja coccinea*) is a familiar prairie wildflower for many of us, but its range (historically, at least) did not extend to northwest Missouri. Linn County, north of Brookfield, is as far northwest as Steyermark found the species. There have been modern sightings in Harrison, Atchison, and Holt Counties, but it is unclear if these populations are the result of natural migration or misguided plantings. In the loess hills, we get another species of *Castilleja*, *Castilleja sessiliflora*, Downy Painted Cup. The bracts of this species are green instead of the familiar red, and you actually get to see the yellow corolla of the species. Though I have only ever caught bumblebees on this species, there are reports of hawkmoths such as the white lined hawkmoth (*Hyles lineata*) being the primary pollinator of this species in the Eastern US. I have recorded this

species blooming anywhere from April 4 to May 25 over the last ten years. Like many of our loess hill species, this species becomes far more common in mixed grass prairie of the Great Plains, and enters Iowa and Missouri only in the band of deep loess following the Missouri River.

Prairie dandelion (*Nothocalais cuspidata*) is another species that blooms at the same time and place, but is more widely distributed across Missouri. In the Asteraceae, the species is more akin visually to a *Krigia* than dandelion to my eyes, but I was not consulted in the naming of the species. Prairie dandelion has long linear, hairy leaves that are shaped much like those of *Krigia* dandelion, but it blooms much earlier. Prairie dandelions are also perennial and contain milky sap, which can help separate them from other members of the Chicory tribe. Generally, the species has already set seed and senesced by Memorial Day. In western Missouri the species is almost restricted to loess hill prairies, which are often highly calcareous. In the eastern part of the State, it can be found on limestone glades on familiar sites such as Danville Conservation Area and Cuivre River State Park. Dr. Gregg Dieringer at Northwest Missouri State in Maryville has done some interesting work showing that prairie dandelion is primarily self-incompatible, and is primarily pollinated by sweat bees and other solitary bees. The distribution of this species is overall very sporadic, and it's probable that there are other populations on calcareous substrates that have gone undiscovered due to the early flowering of the species. This is primarily a Great Plains species as well, but it does occur sporadically in Illinois and Wisconsin, where it is primarily found on rocky prairies.

A good place to go to see loess hills prairies is the newly expanded Brickyard Hill Loess Mounds Natural Area. Located on Brickyard Hill Conservation Area in Atchison County, north of Rock Port on I-29, this area features some of the highest quality loess hill prairie in the state of Missouri. It is the only public property where you will find species such as wavy-leaved thistle (*Cirsium undulatum*) and scarlet gaura, and also features bur oaks up to 350 years old. This natural area was originally designated as 125 acres in 1971 but was recently expanded to 443 acres and now includes several loess hill prairies, as well as dry loess woodlands and dry/mesic loess savanna restoration potential. This newly expanded natural area recognizes the importance of



Prairie dandelion (*Nothocalais cuspidata*). Photo by Steve Buback

connectivity within this landscape and provides a recognition that these prairies do not exist and can not survive in isolation. The flora and fauna of this natural area and of the loess hills overall represent a unique contribution to the biodiversity of Missouri. Keeping these ancient assemblages will require management and conservation of not just our public properties but private sites as well in order to allow plants and animals to migrate and recolonize through this landscape. Some MONPS members visited this site back in 2015 as part of a state field trip, while others might want to plan a visit to see these unique systems for themselves.



Downy painted cup (*Castilleja sessiliflora*). Photo by Steve Buback

Announcing the 2021 Stan Hudson Research Grant Awardees!

from Justin Thomas

The Stan Hudson Research Grant Committee is excited to announce two awardees. Esther Par, an undergraduate student at Missouri Western State University, will use her \$1500 grant to help fund a study of relationships in False Foxgloves (*Agalinis* spp.). Abigail Giering, an undergraduate at Missouri State University, received a \$500 grant to study competition effects of an exotic duckweed (*Landoltia punctata*) on native duckweeds (*Lemna minor* and *Spirodela polyrrhiza*). The Stan Hudson Research Grant provides funding for undergraduate and graduate level research focused on Missouri's flora. 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 grant program in his memory.



Abigail Giering from Missouri State University



Esther Par from Missouri Western State University

Missouri Native Plant Society Awards

Nominations Due May 15

The MONPS Awards Committee seeks nominations of people who have supported the preservation of Missouri's flora and have helped MONPS beyond an average effort. MONPS offers six awards: 1) Erna Eisendrath Memorial Education Award, recognizing individuals who, through teaching, writing, or other activity have conveyed to others a significant appreciation and knowledge of Missouri's native flora. 2) Arthur Christ Research Award, recognizing an individual's significant contribution in furthering the knowledge of Missouri flora. 3) Plant Stewardship Award, recognizing an individual or organization for the preservation of important elements of Missouri's flora through purchase, registry, and/or management practice. 4) The John E. Wylie Award, recognizing individuals who have provided exceptional service to the Society. 5) Plant Conservation Award, recognizing an individual or organization for outstanding contributions to the conservation or preservation of native plants or plant communities in Missouri. This award differs from the Plant Stewardship Award in that it is not tied to direct acquisition or management of tracts of land, but instead may recognize various types of outstanding achievements or efforts, such as conservation planning, advocacy, or new ways of looking at old problems. 6) Julian A. Steyermark Award, the Society's highest award, given to an individual who has made outstanding contributions to any and all aspects of Missouri botany. The deadline for nominations is May 15. Nominations should contain the full name of the nominee and the name of the person making the nomination, and they should set forth the contributions of the individual or organization that merits recognition. Award recipients need not be members of MONPS. Please submit nominations to Awards Committee Chairwoman, Malissa Briggler: malissa.briggler@mdc.mo.gov.

Logo alternates:

MONPS Board Members voted on the following options for the new logo

Logo Option A



Missouri Native
Plant Society

Logo Option B



Missouri Native
Plant Society

Better Know a Genus: *Andropogon* (but also *Schizachyrium*)

Andrew Braun, Research Associate, NatureCITE

The genus *Andropogon* L. is a cosmopolitan genus in the Andropogoneae tribe of the grass family, Poaceae. *Andropogon* is represented in Missouri by six species. A closely related species, *Schizachyrium scoparium*, may as well be discussed with *Andropogon*, as the differences are subtle. The name *Andropogon* is derived from Greek *andr*, meaning man, and *pogon*, meaning beard, owing to the bushy, beard-like appearance of the inflorescences.

Though some species, like broomsedge (*A. virginicus* var. *virginicus*), are often found in disturbed areas, several species (*A. gerardii* and *S. scoparium* in particular) dominate the once-extensive tallgrass prairie ecoregion, serving in a keystone role by driving autocatalytic nutrient dynamics in prairie soils. Tallgrass prairies can, to some degree, be thought of as landscapes where a diversity of plants and animals have adapted to living in the world that *Andropogon* and *Schizachyrium* have created. Given their outsized role in ecosystem dynamics, it only makes sense to learn this genus.

Broomsedge (*Andropogon virginicus* var. *virginicus*) is, by far, the most common *Andropogon* in Missouri. Inhabiting overgrazed pastures, over-hayed meadows, and over-disturbed soils in general, broomsedge has adapted well to humankind's activities. It can be readily recognized by its golden hue and numerous, evenly-spaced spathes (the leaf-like structures beneath the flowering spikes). Vegetatively, broomsedge's culm bases are lime-green and hairless. A closely related entity, *Andropogon hirsutior* (or *Andropogon virginicus* var. *hirsutior*, depending on who you ask), is rare in Missouri, found on the edges of seasonally wet pools in southwest Missouri prairies, or wet, clayey old fields in a few places in southeast Missouri's coastal plain. It is a taller, more robust plant than *A. virginicus* var. *virginicus*, sometimes making a club-shaped silhouette in the larger individuals. The culm bases are roughened, compared to the smooth bases of typical *A. virginicus*.

Broomsedge shares the section *Leptocarpon* with two other Missouri species, *A. ternarius* and *A. gyrans*. Both seem to like the depauperate soils favored by broom-



Fig. 1. Common *Andropogon* and *Schizachyrium* of Missouri in early winter habit. From left to right: *A. virginicus*, *A. ternarius*, *A. gyrans*, *S. scoparium*, *A. gerardii*. Photo by Andrew Braun.

sedge, and often associate with broomsedge, but also seem to inhabit slightly more ecologically stable situations. *Andropogon gyrans*, Elliott's broomsedge, is found mostly in the southeast quadrant of the state, and tends to never be too abundant where it is found. It has the same leaf-like spathes of *A. virginicus*, but they are bunched up towards the top of the stem, and are often larger (but not always). *Andropogon gyrans* also has a distinctly twisted lemma, unlike other *Andropogon* found here. It also tends to have a somewhat smaller stature and rustier color.

Splitbeard bluestem (*A. ternarius*) has small spathes, usually well below the typically bifurcate inflorescence, giving them a “naked” appearance. The inflorescence has a soft-hairy texture, and large populations of this species can be attractive in the winter time. Disturbed sand prairies are dominated by this species, but *A. ternarius* is often otherwise found just sporadically on acidic substrates. It's a good indicator of sandstone-derived soils in the Ozarks and Cherokee Plains, but can occasionally be found in dry chert situations as well.

The genus *Schizachyrium* is differentiated from *Andropogon* by the rachis internodes – they are flared at the tip in *Schizachyrium* and linear in *Andropogon*. The former also has convex glumes and unbranched inflorescences, though some tropical *Andropogon* are unbranched. The one local species, *S. scoparium*, is found in dry prairies, glades, woodlands, and sometimes previously disturbed, but now stabilized, rocky areas (roadsides, old quarries, etc.) The inflorescences appear “naked” as in *A. ternarius*, but are well-distributed up and down the stem.

Andropogon section *Andropogon* is represented in Missouri by the only two species in North America, *A.*

gerardii (big bluestem) and *A. hallii* (sand bluestem). This section is taller and branchier than most of the individuals found in *Andropogon* section *Leptopogon*, and has two fertile lemmas, not one fertile and one sterile as in section *Leptopogon*. Both have a 2-4 branched “turkey-foot” inflorescence. Big bluestem is relatively common in dry to mesic prairies, and can sometimes be found in woodlands as well. Sand bluestem, however, is known from a few locations in Buchanan county, where the Missouri River had previously blown out levees and deposited sand. These individuals likely washed downstream from the more contiguous populations of this species in the larger western Great Plains ecoregion. Another population exists at Missouri Mines State Historic Site, where it was introduced on the gritty chat piles left from mining operations as a soil stabilization agent. Sand bluestem has a glaucous coat, longer ligules, distinct golden-hairy inflorescence with longer awns, and grows rhizomatously, whereas big bluestem is sometimes, but usually not glaucous, has shorter ligules, and less distinct hairs and awns in the inflorescence.

There are several options for dichotomous keys to this group for Missouri (Kucera 1961, Steyermark 1963, Yatskievych 1999, Braun 2019), but learning by gestalt is also an effective way to learn to identify these grasses (Fig. 1). Although the keys can be technical and the plants initially difficult to identify, with a little practice, you can identify them to species along roadsides as you cruise by at highway speeds.

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Steyermark, J.A. 1963. *Flora of Missouri*. Iowa State University Press, Ames, IA.

Yatskievych, G. 1999. *Steyermark's Flora of Missouri*. Vol. I. Missouri Botanical Garden Press, St. Louis, MO.

Natural Areas Photos

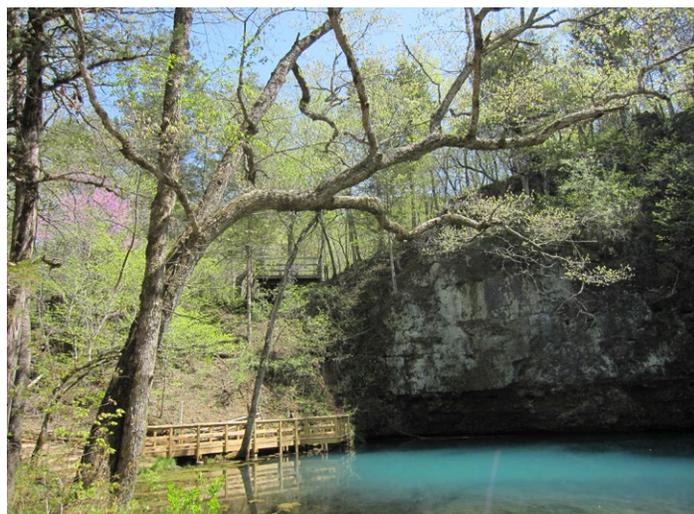
by Rex and Martha Hill



Valley View Glade



The day we walked to TowerRock



Blue Spring

CHAPTER REPORTS

HAWTHORN

Michelle Pruitt, Chapter Representative

The Hawthorn Chapter hosted several speakers via Zoom and the invitations were shared with all MONPS members.

At our monthly meeting via Zoom on November 12th, Hawthorn member Lea presented Outdoor Classrooms: Creating Native Habitats with and for Students and Teachers, an overview of programs in the Columbia area, how they are related to native plants, and how they are created. The Outdoor Classroom Project was started to help connect students and teachers with nature and to help teachers feel more confident with teaching about nature. With the help of about 50 volunteers and students, Lea also directs maintenance of the Outdoor Classroom programs.

Our regularly scheduled monthly meeting on December 14th began with a presentation via Zoom by Hawthorn member Becky on Pollinators and Their Needs. This included a short list of plants that butterfly larvae need, identification of bees, wasps, flies, beetles and resources. Then a brief understanding of four different habitats, some of the plants that prefer them, and a short tutorial on the easiest way to install a garden. We also elected new officers via a SurveyMonkey link (a first for the chapter).

We met via Zoom for our traditional January chapter planning meeting. This meeting was held on January 11th.

Our chapter meeting on February 8th featured Hawthorn member Randal Clark sharing Nature Walks and the Seasons of 2020 via Zoom. Randal is a Boone County, Missouri naturalist who has been leading nature walks for the public in the area for over 39 years with emphasis on Wildflower ID. Unable to lead walks in 2020, he created Randal's Nature Walks Facebook Group where he could still share what he saw in the area throughout the year.

SAINT LOUIS

Lynette Baker, St. Louis Chapter Representative and Rick Gray, Chapter President

On Jan 27, a chapter meeting via Zoom featured a presentation from Dr. Richard Abbott, Assistant Professor of Biology at the University of Arkansas at Monticello, titled "Artificial Plant ID Motifs: Simple and

Useful Patterns for Field Identification of Plants". Richard described a very useful and intuitive methodology for learning plant identification wherein plants are organized by suites of easily recognizable vegetative characters, or "motifs".

The February 24 Zoom meeting featured a presentation from Claire Ciafre, who discussed her research into plant endemism and biogeographic patterns. Claire discussed endemism and shared the distribution map. Her material referenced the Ozark Ouachita and Arkansas River Valley regions. She used *Quercus alba* (white oak), *Lilium grayi* (Gray's lily), *Echinacea paradoxa* var. *paradoxa* (yellow coneflower), and *Scutellaria bushii* (Bush's skullcap) as a few examples. Claire also discussed disjunctions, using *Asclepias meadii* (Mead's milkweed) and *Amaranthus palmeri* (Palmer's amaranth) as a couple of examples. Claire shared that some disjunctions were human-caused, through farmlands, garden escapes, and the re-introduction of species. Illinois is working on this latter example. She wrapped up her presentation with a note about the Coastal Plains being the youngest area and used small-fruit primrose and sawgrass as examples.

Chapter Events (St. Louis)

03/24: Chapter meeting. Zoom link: <https://us02web.zoom.us/j/89411499332?pwd=WExnbWk3Zy-95bHZGQnVRRUdZSGF0QT09>

Dr. Richard Abbott will be back to continue the discussion on plant identification that he began with his presentation to our January 27th meeting.

04/28: Chapter meeting. Zoom link: <https://us02web.zoom.us/j/81912662442?pwd=VkpYWIF4ZS9ZajM-raGILQjVBYi94dz09>

Dr. Kyra Krakos and students from her Maryville University Research Lab will discuss student research presentations.

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

Missouri Native Plant Society Membership Form

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To contact the Missouri Native Plant Society, please [click the "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