

PETAL PUSHER

July-August 2023 Newsletter of the Missouri Native Plant Society Volume 38 No.4

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

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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 "Who are we and what do we do?" combined with "and what resources are available if I want to learn more about plants?!" Enjoy!

Getting to Know Us

The MONPS Board of Directors is responsible for conducting all the official business of the Missouri Native Plant Society. You'll see their

names listed on the final page of every issue of the Petal Pusher as well as in the "About Us" section of the monativeplants.org website. But who are these people, really? We plan to answer that question by featuring one or two members of the group in each future issue.

Dana Thomas - Immediate Past President

My love of plants began during my childhood running wild and barefoot in the hills of West Virginia. My Dad is a biologist and my Mom loves to fish, camp, hike and hunt morels. Both love to garden and I remember evenings of snapping beans and cutting corn off the cob for canning. Their influence was huge, and so was the impact of my beloved babysitter Opal, who grew native wildflowers in her landscaping and taught me the immeasurable joy of popping *Impatiens* fruits. Opal sent her daughter (my best friend Kathy) and I out to gather hickory nuts by the bucketful, taught us to tap maple trees and to stir giant vats of sorghum as they boiled. I was infatuated with the plants, the people, the processes, and the bounty and intricacy of nature. That infatuation resulted in an undergraduate degree in biology.

After college I worked on a



field botany crew for the Missouri Ozark Forest Ecosystem Project (MOFEP) where I met another young plant enthusiast, Justin Thomas, in a plant identification training taught by our brilliant teachers and mentors, Doug Ladd, Jenny Grabner, and Blane Heumann. For the next couple of years, Justin and I explored the Ozarks together, naming every plant we could find, and eventually attended Miami University in Ohio together and earned our Master's degrees in botany. Then we moved to Indianapolis where Justin landed a job with an environmental consulting firm. We knew we wanted to come home to Missouri, and had the wild idea to start our little company, the Institute of Botanical Training, and offer plant identification classes to natural resources professionals. To our surprise and delight, people signed up, and here we are 19 years later, still teaching plant identification classes together.

Our company morphed over the years, and we also began doing botanical consulting work for state and federal agencies and nonprofits. We also founded an ecological nonprofit organization called NatureCITE and a conference called the Missouri Botanical Symposium, and we enjoy nurturing the growth of both those projects. Throughout those years of botanical work, we found that we needed a hobby, and what better hobby than... botany?! So in 2007 we attended our first MONPS field trip and eventually earned various roles on the board, including my role as vice-president from 2015-2019, and a term as president in 2019-2021. We also welcomed two wonderful sons into the world in 2009 and 2010, our favorite project of all, and have delighted in sharing plants with them on MONPS field trips since they were tiny!

Pam Barnabee - Secretary

I have no educational or professional background in botany; my love affair with native plants developed late in life. I grew up in a suburb in Illinois. We had a lawn, some hostas and rose of Sharon, portulaca I remember and English ivy, some other kind of evergreen in a planter box. We weren't an outdoorsy family, didn't hunt, fish or camp. We did take great vacations every summer, visiting many of the national parks out west. But I didn't pay much attention to the greenery; it was just there to frame a photo of a mountain, lake, or stream. When my husband and I bought our property in Pulaski County, Missouri, and moved here in 1975, I did take an interest in some of the wild food plants - we have lots of gooseberries and black walnuts. My husband, a biology major, took a botany course at Drury (College it was then) and one of his textbooks was Steyermark's *Spring Flora of Missouri*. We started identifying the flowering plants that were all around us. Then a forty-year lull in plant pursuits as we had children, moved to Waynesville (for the schools), then (for work) to Heidelberg, Germany, and Bel Air, Maryland.

Retirement brought us back home to Missouri. Shortly after that, I read about a Missouri Department of Conservation program called Missouri Master Naturalists. There was a chapter in Rolla, not too far away, and they were going to hold classes for new members. I've always wanted to know everything about everything, so I immediately signed us up. The classes were all wonderful, and the botany class taught by Justin and Dana Thomas released my inner plant nerd. I began photographing and documenting all the plants I found on our property (now up to 464!), gaining some proficiency at identifying the local flora.

Like many others, I became aware of the Missouri Native Plant Society through their Facebook page, which I found to be a great educational resource. Not only did I get identifications for the plant photos I posted, I learned from others' posts as well. I met some other MONPS members at a Missouri Botanical Symposium in Rolla and they seemed like nice people. My husband and I wanted to get more involved with this organization, so we went to a meeting of the nearest chapter, in West Plains. Living out in the sticks, we're used to long drives, but we knew we wouldn't be able to sustain monthly drives to West Plains. And so in 2017, we started a MONPS chapter in Rolla. Since then, I attend as many of the MONPS field trips and board meetings as I can, so when I was asked to be Secretary in 2020 - why not?



So you want to become a pro at using iNaturalist?

By James Faupel, restoration ecologist, Missouri Botanical Garden

By now you've probably heard about this free app that you can download onto your phone that will help you identify the plants that you see while you are out exploring Missouri and other surrounding areas. The app is called iNaturalist and it is much more than just a plant identification app. It is also a citizen science tool that allows you to share your valuable plant data with scientists studying the flora and fauna of our region. iNat isn't the easiest tool to use for a beginner without a tutorial however. There are other apps out there that are sometimes easier to use than iNat, but they are not as reliable for plant ID, sometimes cost money, and they don't help further the field of science. Below, I will try to help you overcome some of those early hurdles of using this wonderful tool, by breaking it down into easy to follow steps.



Step 1: Plant Photography - So, where to start? Once you have downloaded the iNaturalist app and created a user account, you will then be able to start uploading photos. But let's not jump too far ahead. Before you start using the app, let's first discuss plant photography for identification purposes. To ultimately get the best ID possible, you will need to take multiple clear, detailed photos. Get up close and personal with the plant. You cannot expect a computer program to assist you in identifying, if a human can't even tell it is in the plant kingdom within a second of them looking at your photo. So, take many clear photos from different angles and leave as little negative space in the photo as possible. Crop your photo if need be to make the subject fill out most of the photo. Dark backgrounds will help features, like hairs, stand out better. So, position the plants with

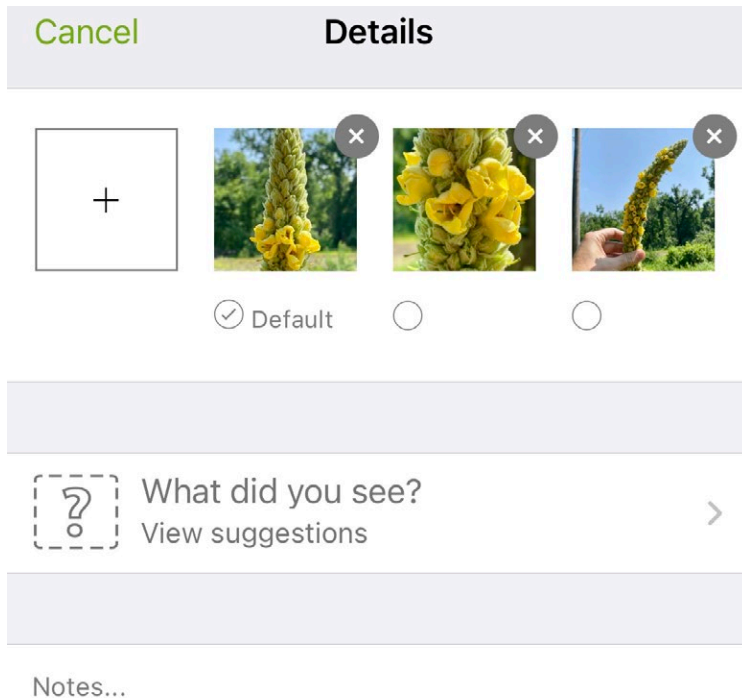
dark areas behind them and you can use your hand next to the plant to help show scale and tap the phone screen to focus on your hand. Photograph the top and underside of the leaves, the stems, leaf attachment to the stem, the flowers, the fruits, the whole plant,...the more variety the better. Every group of plants has different features to look at to separate them from other plant groups. Trying to identify an aster? You better have included some closeup photos of the underside of the inflorescence (flower head) and of their leaves. Trying to get a Carex sedge to species? It will have to be in fruit and you will need to include macro photos of the perigynia (the little leaf-like sacs that contain the seeds). Photograph all the unique details!

Step 2: Uploading your photos - Once you are logged into your iNat account, you can begin to upload photos from your phone's camera roll. Each set of photos from one individual plant should be uploaded together as a group, which on iNat is considered an observation. To upload on an iPhone you will hit the little camera symbol at the bottom center of your screen. On an Android phone you will hit the green plus symbol (+) at the bottom right of your screen. You can unfortunately-



ly only upload 4 photos at a time on iPhone (just keep pressing the + symbol to add another 4 photos), but on Android you can upload as many photos as you'd like at a time.

Step 3: What did you see? - This is a very important step, so I will elaborate more in this section. After uploading your photos, you will see the button space marked "What did you see?". You MUST press this button to get the option to look up species and to get computer assistance in identifying your plant observation. This will pull up two prompts from the iNat photo recognition program. "We're Pretty Sure This Is..." is the main identification suggestion that the app is confident in, generally only to genus. Otherwise, the app will tell you that it isn't that confident. "Top Suggestions" is a more refined selection of options for you to further investigate, beyond the app's primary suggestion. These will generally be plants that are potentially visually similar and/or seen nearby, that could be the plant you observed in case iNat's original selection was wrong.



it isn't one of iNat's listed suggestions, you can search for the species in the search bar by typing in the name. NEVER enter an observation as unknown. You may never get any assistance getting an identification if you do this. At a minimum, please put your observation in as a member of the plant kingdom.

Personal confidence - If you are confident in your ID of a plant, go ahead and enter the plant down to species, for example *Erigeron annuus*, but if you aren't confident which of the five Missouri species of *Erigeron* your plant is, you should only enter it in down to genus, in this case *Erigeron*. If you aren't confident that it is an *Erigeron*, and it kind of looks like it could maybe be a *Boltonia* to you, you should enter it above the genus level, to the family level. You are confident that it is definitely a composite flower head, so you know it is in the aster family. So you would enter it into iNat as Asteraceae. Feel

Narrowing it down - Once the iNat image recognition program gives you a list of plant choices to select from, and you now understand how to make a selection, there are some ways to feel more confident about your final choice. The information button (i) to the right of any species can be pressed to look up additional information and photos of that species, to give you more data on it before your final selection. If you feel like you confidently know what plant it is, and

< Details



🔍 Look up a species by name

WE'RE PRETTY SURE THIS IS IN THE GENUS *Verbascum*.

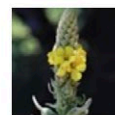


mulleins
Genus Verbascum



Suggestions based on observations and identifications provided by the iNaturalist community, including Ángel Fernández Cancio, Sara Rall, Sandy Wolkenberg, and many others.

HERE ARE OUR TOP SUGGESTIONS:



great mullein
Verbascum thapsus
Visually Similar / Seen Nearby



free to do a little research before uploading your photos, by looking through local field guides and floras, to build your confidence in sharing an observation to iNat down to a genus or species.

*Want to take your botanizing skills to the next level? Take your plant to the plant keys. Below is the link to the free 2023 Flora of the Southeastern US pdf, which includes the flora for the southern halves of Missouri & Illinois. Here you can learn how to hone your plant ID skills like professional field botanists. <https://ncbg.unc.edu/research/unc-herbarium/flora-request/>

Step 4: User Assistance - So, you've uploaded your photo and the iNaturalist image recognition program gave you a suggestion, for example, Erigeron. You selected Erigeron and now your observation sits on iNat for days, weeks, perhaps never getting any input. It's possible that this may unfortunately happen, but most of the time, as long as you provided enough descriptive photos, knowledgeable iNat users will come along and assist you beyond the original computer ID suggestion. Follow up on the notifications iNat sends you, to make sure you go back and revisit your old observations so you see how other iNat users may have helped you get additional ID information.

Step 5: Additional - There is a notes section within your observation where you can enter additional, more detailed information about your plant observation, that may help someone identify your observation further. Here you can include details about the habitat, surrounding plant communities, phenological stage of growth, growing conditions such as soil, sunlight, and moisture, insect associates, etc., all of which might help someone get your plant closer to species.

In the end, have patience once you have uploaded your observation. It may take a bit before someone comes along and is able to give you an answer confirming all the way down to species. You may also never get it all the detailed photos next time or push you to improve your photography skills. If you don't use your cell phone and have a regular camera, you will have to download your photos to your computer first and then upload them onto iNaturalist via their browser version of their website. You can also explore all kinds of really cool data on iNat via the browser version. So go hit the trails, explore your home state, take lots of photos, and share your experience and data with others! Happy botanizing!!!!

Don't forget that we have the Missouri Botanists Big Year competition each year on iNaturalist! You can compete in it by signing up for a free iNat account, joining the current year's project on iNat, and then submitting lots of wild plant observations through your iNat account.

The screenshot shows the iNaturalist profile for user 'jfaupel', who has 3871 observations. The profile includes a circular profile picture of a man in a hat. Below the profile, a list of recent observations is displayed, each with a small image of the plant, the species name, the location, and the time since it was made. Many observations have a red notification bubble with the number '1'.

Species	Location	Time	Notifications
purple milkweed	Kingdom City, MO, US	1 wk. ago	1
yellow coneflower	Steedman, MO, US	5 days ago	1
compass plant	Steedman, MO, US	5 days ago	1
prairie dock	Steedman, MO, US	5 days ago	1
pale purple coneflower	Steedman, MO, US	5 days ago	1
downy pagoda plant	Steedman, MO, US	5 days ago	1
late figwort	Litzsinger Rd, Ladue, MO, US	4 days ago	0
bottlebrush grass	Litzsinger Rd, Ladue, MO, US	22 hr. ago	0
Chinese bushclover	Danfield Rd, Ladue, MO, US	4 days ago	0
great mullein	Danfield Rd, Ladue, MO, US	4 days ago	0

At the bottom of the screen, there is a navigation bar with five icons: Explore (magnifying glass), Activity (bell), Observe (camera), Me (person), and Projects (briefcase).

way to species, and that may inspire you to take more detailed photos next time or push you to improve your photography skills. If you don't use your cell phone and have a regular camera, you will have to download your photos to your computer first and then upload them onto iNaturalist via their browser version of their website. You can also explore all kinds of really cool data on iNat via the browser version. So go hit the trails, explore your home state, take lots of photos, and share your experience and data with others! Happy botanizing!!!!

Missouri Native Plant Society Facebook Page - A Plant ID Resource

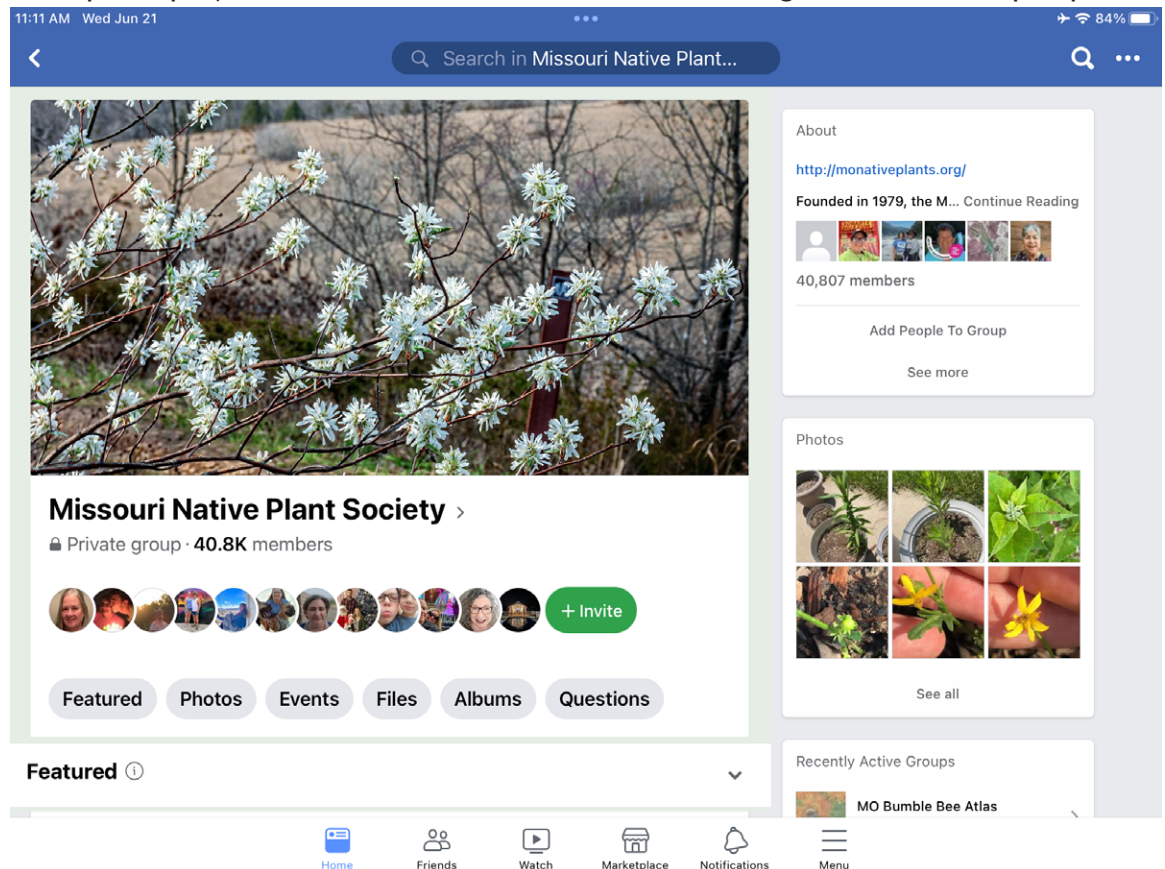
by John Oliver

After a dozen or so years, The Missouri Native Plant Society has established a large community on our Facebook page where thousands of people discuss native plants, ask related questions, and share photographs. Most of these activities relate to our primary mission of educating the public about the plants, native and non-native, around us. The real heroes that make the Society page a low-drama place to find answers to questions and post photos are the administrators; they are our most consistent and expert plant identifiers and question answerers.

Many of the “posts,” as the Facebook entries are called, are either requests for the name of a plant that has been observed (and photographed) or inquiries as to the “friend or foe” status of a plant on their property. As our numbers grow, we get repeated questions that our administrators cheerfully answer repeatedly. Poison ivy and its look-alikes, pokeweed, mullein, Albizia, and bush honeysuckle make frequent appearances, but we also see some surprising and much more desirable plants. Range extensions and new locations for plants with high C values have occurred.

Another area of the site that will repay a closer look is the “Files” tab which has the answer to the question, What is a C-Value?, Susan Farrington’s guide to recognizing native and non-native thistles, Thistle ID[1716109].pdf, and also her guide to Distinguishing Callery pear from native look alike.pdf, the invaluable resource MOFEP 2013 Botany Manual.pdf, a guide to Identifying Oaks and Hickories in Missouri, and two out-of-print books: Central Region Seedling ID Guide for Native Prairie Plants, and Jan Phillips’ Wild Edibles of Missouri among other treasures.

The general attitude we hope to project is summarized in the Rules for the Page which we ask prospective members to read and agree to, and the welcoming A Message from the Administrators. We invite all Petal Pusher readers to join us and contribute your photos, ask questions and share your expertise! (John’s full article about the MONPS Facebook page appeared in the January/February 2023 issue of the Petal Pusher.)



2023 MONPS Awards

Two people were recognized for their outstanding contributions to native plant conservation and education at the 2023 MONPS Annual Meeting on June 17:

Besa Schweitzer received the Erma Eisen-drath Memorial Education Award. Besa's recent book, *The Wildflower Garden Planner* has introduced many new gardeners in the St. Louis area to native plant landscaping and she has been educating on that topic for many years through the Facebook page she created, St. Louis Native Plant Swap, and her involvement with local chapters of Wild Ones and Missouri Master Naturalists. She was nominated by Susan Orr.

The Plant Conservation Award was given to Mike Reed for practicing and promoting the use of native aquatic and wetland plant species on MDC-managed impoundments and wetlands. Mike has worked as a Missouri Department of Conservation fisheries biologist for over 20 years. Early on, he worked with the likes of Jim Whitley and Becky Erickson to learn about propagating and establishing desirable native plants for fish, amphibians, wetland insects, and wetland bird species. Knowledge of the identification and culture of aquatic and obligate wetland plants is often lacking among native plant enthusiasts who typically deal just with upland species and/or facultative wetland species. Mike has pioneered the role of these aquatic and obligate wetland species in wetland reconstructions and pond enhancements for the benefit of both native fish and wildlife. He also has taught multiple MDC staff about the role and propagation of native aquatic and wetland plants. He was nominated for this award by Mike Leahy.

Thank you to the award recipients for their contributions and those who submitted nominations for their recognition!

2023 Spring & Summer Field Trips

Relive the adventure or see what you missed! View photos from our MONPS Spring & Summer 2023 Field Trip Weekends on our website, monativeplants.org, under the link to "Field Trips".



Dodecatheon fassetti (jeweled shooting star), possibly hybridized with *D. meadia*, Spring 2023 MONPS Field Trip, Ha Ha Tonka SP. Photo by S. Turner

Save the Dates for MONPS Fall Field Trip Weekend: September 15-17, 2023

The MONPS Fall Field Trip weekend will be held September 15-17 in the Osage Plains region of Missouri, centering around Clinton. The weekend will include field trips on Friday afternoon, Saturday morning and afternoon, and Sunday morning; a Friday night speaker; and a board meeting on Saturday night. Details will be posted on our website as soon as they're available and will be published in the September issue of the Petal Pusher.

MissouriPlants.com—an online resource for identification of Missouri's flora

by Steve Turner

The two main objectives for the MissouriPlants website are 1) to document plants growing wild in the state and 2) to aid in their identification by non-specialists. Widely applicable botanical terminology has been used in the spirit of education and concision, but specialized jargon has been kept to a minimum.

History

The website (www.missouriplants.com/) was begun around the year 2000 by Dan Tenaglia, a botanical student, photographer, and friend to many in MONPS at the time. Following his untimely death in 2007, work on the website ceased. In 2017, Dan's wife, Karen, graciously relinquished control of the site created by her former husband, and the Missouri Botanical Garden (MOBOT) assumed hosting and oversight. In 2018, the task of updating and expanding the site fell to MONPS, with a meeting held at the Garden in February 2018 to discuss future directions. I became the natural choice for this work, due to my interest in botany and photography, and also my fluency in computer operations. Since that meeting in 2018, I've updated the site with over 10,000 new images, added over 350 new species, corrected a number of minor mistakes, and updated taxa when appropriate. This work continues, with the primary goal of expanding the number of species represented. As of June 2023, that number stands at 1,432, which is thought to be roughly half of the species extant in Missouri and perhaps two-thirds of its forbs. Trees and graminoid forms (grasses, sedges, rushes) are underrepresented on the site and probably will remain so for some time, due to the difficulty in producing meaningful identity imagery for these types of plants.

Philosophy

The primary objective of MissouriPlants.com is to aid interested non-experts in identification of plants they

find growing wild in Missouri. More specifically, the site is designed to...

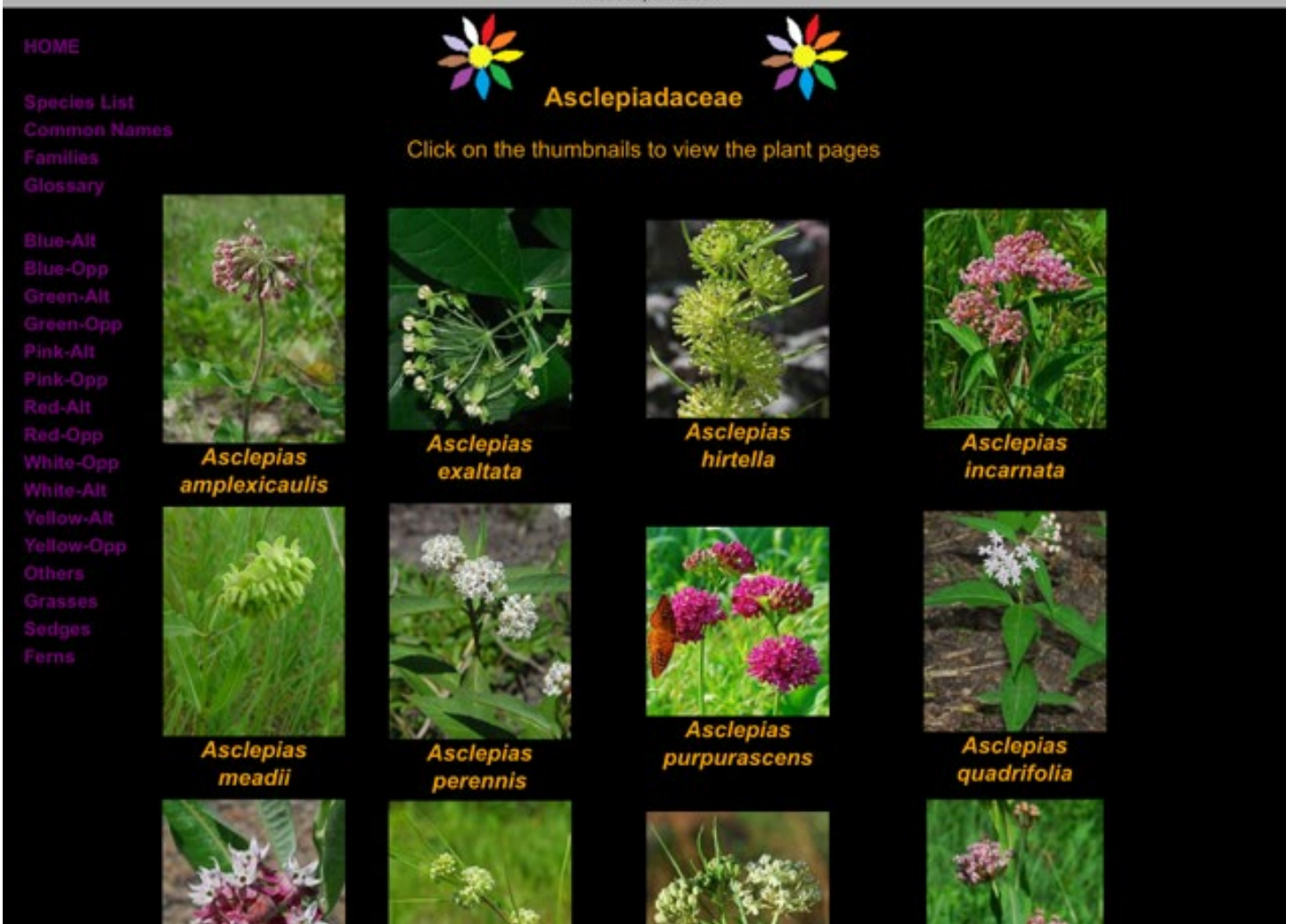
- Aid in identification of plants growing wild in Missouri, in environments ranging from pristine natural areas to disturbed urban landscapes.
- Stimulate interest in plants by presenting images which are not only relevant to identification but also visually compelling.
- Present plants as they appear in their natural settings.
- Maintain emphasis on scientific naming to encourage its use among amateurs.
- Present high quality, reliable information.
- Continue to expand.

Site usage

The organization of MissouriPlants.com is designed to accommodate users ranging from neophytes to experts. For the latter, there is a full listing of species links according to scientific name, and also a listing organized by family. For the beginner, there are pages organized by flower color and leaf arrangement, similar to the organizational concept of most wildflower books. These links will quickly transport the user to the relevant species page. All species pages maintain a navigational pane at the left to facilitate movement within the site. All pages are intentionally kept clean and uncluttered, in the belief that Amazon-like complexity of individual pages would be unattractive, confusing, and counter-functional. We are fortunate in having MOBOT host our site, thus allowing us to present it without advertisements or a stiff annual cost.

Check it out at www.missouriplants.com/. I always welcome comments and suggestions from users via email, at missouriplants@yahoo.com. (Steve's full article about the MissouriPlants website appeared in the January/February 2023 issue of the Petal Pusher.)





An example of plants categorized by family.



One of the 1,432 individual species pages.

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

Apologies for the delay in getting this newsletter out--there always seems to be a huge sudden influx of work at this time of year. Anyway, 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 September 2023 Petal Pusher is "Your Tax Dollars at Work on Invasives" 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: August 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.



Botanical References for Missouri

compiled by Dana Thomas

The Must Haves:

Steyrmark's Flora of Missouri (3 Volumes) by George Yatskievych. Though often considered a revision, little beyond the format of these volumes resembles the original. New takes on keys, full descriptions of taxa and updated distribution maps make this hefty body of work THE must-have for anyone working with Missouri's flora.

Tallgrass Prairie Wildflowers by Doug Ladd. Most useful in the glaciated areas of the state, but also very useful for the Ozarks and unglaciated plains.

Ozark Wildflowers by Don Kurz

The Good to Haves:

Wildflowers of Tennessee by Jack Carman. Comprehensive for most areas of the Midwest. Many of the photos capture some vegetative characters.

Wildflowers of the Midwest (A Timber Press Field Guide) by Michael Homoya and Scott Namestnik.

Weeds of the Great Plains by James L. Stubbendieck. Has some western species that aren't applicable to Missouri. Does a good job of comparing similar species. Includes native and non-native weeds.

Trees of Missouri and *Shrubs and Woody Vines of Missouri* by Don Kurz with illustrations by Paul Nelson. Available in Missouri Department of Conservation's online "Nature Shop".

Weeds of the Midwestern United States and Central Canada by Charles Bryson and Michael DeFelice. Fairly comprehensive and has photographs of seedlings and sterile stages. Also has a lot of grasses.

Woody Plants of the Southeastern United States: A Winter Guide by Ron Lance. Mostly a winter i.d. guide but useful.

Flora of the Chicago Region: A Floristic and Ecological Synthesis by Gerould Wilhelm and Laura Rericha. Though obviously covering a different geographical region, there is sufficient overlap to make this a valuable reference. This text is unique because it has detailed chapters on the theory and practice of Floristic Quality Assessment and lists of associated species for each taxon. Contains information about insect associations and interactions for most plant species.

Weeds of the Northeast by Richard Uva, Joseph Neal and Joseph Ditomaso

Field Guide to Missouri Ferns by James Key

Missouri Orchids by Bill Summers

101 Trees of Indiana by Marion Jackson



Websites and Apps:

iNaturalist - www.inaturalist.org Citizen science website and associated app let you upload photos and will suggest identifications for your photos.

Missouri Plants - www.missouriplants.com Website contains high-quality, full color photographs of plants, and not just flowers. For most species, close-up photos of leaves, stem, petiole, etc. are included as well.

Biota of North America Project - www.bonap.org A great site for county level distribution maps of plant species across North America.

Illinois Wildflowers - www.illinoiswildflowers.info Lots of information for each species, as well as photos of the vegetative parts of plants.

Flora of Michigan online (Voss and Reznicek) - <https://michiganflora.net/> This is an online version of the book with the same title. Although it covers a different geographical range than Missouri, it's a handy reference when you're in the field and need a dichotomous key to a group.

Flora of the Southeastern United States online (Weakley) - <http://www.herbarium.unc.edu/flora.htm>

Tropicos – <https://www.tropicos.org/home> Reference to track nomenclature (scientific name updates and changes)

International Plant Names Index – <https://www.ipni.org/> Another reference to track nomenclature

Virtual Herbaria –comprehensive collections of digitized photos of pressed herbarium specimens

The Consortium of Midwestern Herbaria - <https://midwestherbaria.org/portal/>

The Consortium of Southeast Herbaria – <https://sernecportal.org/portal/>

The Consortium of Northeast Herbaria - <https://neherbaria.org/portal/>

*To learn many plants by joining field trips or by having your photos of unknown plants identified on their Facebook page, consider joining the Missouri Native Plant Society (<https://monativeplants.org/membership/>)

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!

New Members

St. Louis

Don Knobbe, Webster Groves
Michelle Crutcher, St. Louis
Lauren Wolfe, St. Louis
Pamela Danklef, St. Louis
Laura Arthur, St. Louis

Hawthorn

Gary Miller, Columbia
Christi Hopper, Columbia
Louise Miller, Columbia
Jeff Rioux, Columbia

Kansas City

Douglas May, Lawrence, KS
Megan Wiskur, Pleasant Hill
Robert Breeding, Lone Jack
Annie Fischer, Kansas City
Jake Pursley, Eagleville

Perennis

Nancy Fuller, Greenville

Southwest

Robert Peterson, Joplin
Andrew Bays, Morrisville

Empire Prairie

Joel Cook, Savannah

Botanist Big Year 2022 Winner

Norman Murray of Ashland, One Year Membership in
Hawthorn Chapter

Chapter Reports and Events

HAWTHORN

by **Cindy Squire**, Chapter Representative

7 May Field Trip to Hundred Acre Woods with Columbia Audubon Society. Many birds and plants were observed.

8 May Business Meeting at Emily's. Emily included a garden tour amongst the beautiful wooded landscape.

10 May Plant Sale at Songbird Station. Most of our plants found brand new homes.

12 May Work in adopt a spot. Mulch Mania. A big thank you to all who helped!!

18 May Monthly group lunch at First Watch stadium location was moved to HyVee deli due to lack of servers.

20 May Plant Sale at Bass Pro. A busy sale with multiple vendors.

26 May Work in adopt a spot. Weeding.

9 June Work in adopt a spot. Weeding.

10 June Mosey at Jane Haslag's restored prairie. We toured a 3 year and 1 year reconstructed prairie. We experienced the woodlands. An amazing property!

15 June Monthly group lunch at Uprise Bakery at 10 Hitt Street.

16-18 June State Meeting in Columbia area. Many members attended their first state meeting. A big thank you to all who made this experience great!

23 Jun Work in the adopt a spot. Weeding.

Upcoming Chapter Events

10 July Stephen's Lake Happy Hollow Pavilion - Pot Luck Dinner, Meeting and identification of water plants. Adopt a Spot Work Days are dependent on weather - check emails

20 July Monthly group lunch at Uprise Bakery at 10 Hitt Street.

14 August Possible Chapter Meeting TBA

17 August Monthly group lunch at Uprise Bakery at 10 Hitt Street.

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

PARADOXA

By Pam Barnabee, President, and Kathy Gallagher, Secretary

Saturday May 6, the chapter took a road trip to Meramec State Park, with the goal of finding yellow lady slipper orchids in bloom. We weren't disappointed. Our meeting place was the parking lot at Fisher Cave, and we found our first orchid there, on the former entrance road, now nicknamed Orchid Road. We also found a plant we weren't familiar with - wild comfrey - that apparently is common to the north, south, and east of us, but not in Phelps County. Next we drove down the road to the Cane Bottom, planning to park there and work our way cross country to a portion of the Wilderness Trail. Looking at the terrain and thick vegetation, we abandoned that plan and instead parked in a pullout off the Hwy 185 spur, walked to where Wilderness Trail crossed that road, and then followed a portion of it from there towards the river. All told, we found almost fifty species of blooming plants, including several patches of orchids...a very satisfying day.

May 20, we cohosted another successful Spring Native Plant Sale in Rolla, with Meramec Hills Chapter of Missouri Master Naturalists.

June 10 was the Meramec Spring Park's annual Pollinator Festival: we set up our table there with a display on the benefits of native plants and harm of exotic invasives. We also brought a matching game of butterfly/caterpillar/host plant and had pressed leaves from native plants for kids to glue to cardstock and take home.

Our June 13 walkabout saw ten of us, including two visitors from Jefferson City, visiting Spring Creek Gap Conservation Area, about fourteen miles north of Rolla on Highway 63. With its 1800+ acres, Spring Creek Gap includes several different natural communities. We stopped first at a glade, and found a multitude of plants. We also walked into a woodland area, and found many more. The Conservation Area would be worth visiting repeatedly as the seasons change.

Paradoxa's phenology project at Audubon Trails continues weekly. The list of plants observed blooming increases each week, with many prairie plants in recent weeks.

Upcoming Events

Our next walkabout will be on Tuesday, July 11, 6:00 p.m., to view native plant landscaping at the home of Lorely and Ron Lather, near St. James.



Top: Yellow lady slipper orchid, photo by P. Barnabee

Middle: Missouri evening primrose with fruit, photo by H. Johnston

Bottom: A young visitor matches butterflies with their caterpillars, photo by J. Barnabee

ST. LOUIS

by Rick Gray, President

The St. Louis Chapter met in-person with a Zoom simulcast on April 26th and May 24th. The April program included presentations by Dr. Kyra Krakos of Maryville University and from several students from her Botany lab. The title of the ensemble program was “Seeing Beyond the Wall of Green: Cross-discipline Botany”.

The May program was given by Mike Saxton, the Manager of Ecological Restoration and Land Stewardship at Shaw Nature Reserve. He discussed a large grassland restoration project under way around Wolfrun Lake at Shaw Nature Reserve.

Upcoming Events

The next Chapter meeting will be on September 27th beginning at 7:00 pm at the Webster Groves Public Library. We also plan to broadcast the meeting live via Zoom.

Missouri Native Plant Society Membership Form

Name	
Address	
City, State, ZIP	
Phone	
Email	

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):

	Hudson Grant Fund	
	Other contributions	

Total:

Total amount	\$
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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