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Fall meeting will be via Zoom!

From your president, Dana Thomas

You are invited to the Missouri Native Plant Society’s Fall Webinar

The Missouri Native Plant Society is excited to invite you to our Fall 2020 Webinar entitled:

“Plants in Place: The Nature of Native. How Missouri’s native plants came to be, what they tell us about the places they live, and what they tell us about ourselves.”

This digital presentation by Justin Thomas, Science Director at NatureCITE will be held via Zoom webinar on September 25th at 6:00pm. The presentation will last about 40 minutes and will be followed by a Q&A session. (You will type in your questions. You will not be on camera.) It will be a great way for us all to connect and learn something new in a safe and socially distanced format. We hope you can join us from the comfort of your home as we delve into some fascinating information and ideas!

When: Sep 25, 2020 6:00 PM CST
Note: the meeting will open at 05:45 PM to allow participants time to download, configure, and log in with the Zoom software.

Please register in advance for this free online event: https://us02web.zoom.us/webinar/register/WN_YAdInnarSEEd1ikjhtfGg

After registering, you will receive a confirmation email containing information about joining the webinar. You will also receive reminder emails containing the meeting link one week, one day, and one hour before the webinar.
Fall and Winter Board Meetings

Our fall and winter board meetings will be held digitally via Zoom this year. Anyone is welcome to attend. Please note that you must register in advance using the links below.

**Fall Board Meeting**

*When: September 26, 2020 6:00 p.m. CST*

Note: the meeting will open at 5:45 p.m. to allow participants time to download, configure, and log in with the Zoom software

Please register in advance for this meeting:  
https://us02web.zoom.us/meeting/register/tZYkfuivqDgvH9fJ8-jx3eLxvX44qweNuJPT

**Winter Board Meeting**

*When: December 5, 2020 10:00 a.m. CST*

Note: the meeting will open at 9:45 a.m. to allow participants time to download, configure, and log in with the Zoom software

Register in advance for this meeting:  
https://us02web.zoom.us/meeting/register/tZwudeiuqz8vGdy0b-URCm_CUwWevFlqTLFH

After registering, you will receive confirmation emails containing information about joining the meetings.

Never used Zoom? Never fear! Use the info below to get set up.

This is the link to download Zoom:  
https://zoom.us/download

This is the link to test your Zoom software:  
https://zoom.us/test

An example Zoom meeting. Some of the wonderful women of MONPS! Screenshot by Michelle Bowe.

"Women belong in all places where decisions are being made. It shouldn't be that women are the exception."  
-Ruth Bader Ginsburg
Okay, choir, before we begin, you MUST put on your face masks!!!

Social distancing you ask? I’ll address that next. One step at a time!

Missouri Native Plant Society Receives Missouri Prairie Foundation Award
From MPF's August 31, 2020 press release:

MONPS was awarded the 2020 Grow Native! Native Plant Protector Award:

This 41-year-old conservation organization has worked, on a purely volunteer basis, to educate Missourians on the many values of the state’s native flora. The Missouri Native Plant Society was founded in 1979 and is devoted to the enjoyment, preservation, conservation, restoration, and study of the flora native to Missouri. The Society is active both at the state level and regionally with chapter affiliates. It organizes presentations on native plants, free and open to all, and many field trips around the state where participants learn how and where plants grow in specific habitats. The Society has also organized trips in partnership with native plant societies of neighboring states and publishes the scientific journal *Missouriensis* to document and share native plant knowledge in Missouri. The Society’s Facebook group has more than 28,000 members.

If I can teach with Zoom, it must be easy!—LMB
I first met Larry at the first meeting of the not-quite newly established second incarnation of the Southwest Chapter of the Missouri Native Plant Society. He is really the reason I became active in the Society again after years of sitting on the sidelines. With abundant energy, planning, organizing, Larry resuscitated the "Springfield Chapter," with speakers scheduled each month, field trips to places we'd never been, and activities we had not done in years, like keeping two native plant gardens at the Springfield Botanical Center.

Because I knew him only through MONPS, I was completely ignorant of the fact that he was also an award winning fly-fisherman. That is, until we found him tying flies at the Springfield Nature Center, and one of my botany students mentioned that he knew Larry from a fly-fishing course.

Based on some tributes I've read, and my own experience, I think that one of Larry's favorite things was sharing his knowledge--in many areas of science and in fly fishing. He helped my plant taxonomy class out on several occasions, including right after my son was born.

Larry had a nose, so to speak, for orchids. On several occasions, he led us right to some of the most rare orchids there are in Missouri, including the small whorled pogonia and white lady slipper.

Larry lived his passions, and he had many of them. We thank him for all of his contributions to the Missouri Native Plant Society and to science, natural history, and fly fishing education. Larry was dearly loved by his family, friends, and students, and he will be sorely missed.

His obituary can be found here: https://greenlawnfuneralhome.com/obituary/larry-lynn-wegmann/
Primrose Family - Primulaceae

by Louise Flenner

Primulaceae, the Primrose family, has some twenty-eight genera with about 1000 species in the north temperate zone, many of which are alpine, according to Edgar Denison in Missouri Wildflowers, 6th edition. Despite its common name of Primrose family, it should not be confused with Onagraceae, Evening Primrose family, which is home to the familiar Missouri evening primrose (Oenothera missouriensis). There is a second point of confusion related to Primulaceae that I will clear up later.

Primulaceae is the family that houses the much-loved spring ephemeral, Primula meadia (formerly Dodecatheon meadia) or shooting star. Supposedly, its flowers give off the aroma of grape juice and its root stock smells like canned corn beef. The entire plant is edible. Thomas Elpel in his book, Botany in a Day, says, “I like to pick the flowers and present them to whomever I am with, then gobble them down!” My interest in the Primulaceae family started with this flower. Each spring it blooms along the Shooting Star Trail at Rockbridge Memorial State Park in Columbia, Missouri. When I first started walking this forested trail back in 1988, I thought the trail’s namesake was related to the expansive view of the sky from the bluff top that overlooks Gans Creek. This presented a perfect place to watch for shooting stars at night. It wasn’t until I joined a guided hike along the trail that I learned it was named for the cluster of Primula meadia that blooms at this bluff-top site. The park ranger rather liked the double meaning my observation gave to the trail name and I liked learning about the Shooting Star wildflower.

This year I had the privilege of having a blooming Primula meadia right in my backyard garden. Unfortunately, the day after I first noticed its bloom, I found it lying on the ground, a victim of a curious rabbit (?). I couldn’t just leave it lying there so I brought the harvested plant indoors, put it in a vase of water and observed it over the span of twenty-one days. Highlights of these observations included watching the buds bloom. The five sepals spread to allow the petals to bend back. I noted that the petals reflexed one at a time, not all at once. The whole process took about two and a half hours. With the aid of a loupe, I could see the cascade of colors that adorn the flower and flow from the green sepals to pink petals to yellow and purple designs covering the ovary. Once the iconic shooting star shape dies back and the flower begins to go to seed, five long pink stamens eventually flare out. Their stiff lines provide contrast to the soft ribbons formed by the spent petals.

Plants of the Primrose family are generally slightly woody with basal or opposite leaves. Many are found near water or at least in moist soils. Some are even aquatic. The flowers are regular and bisexual, often in clusters above a bract on the main stem. There are usually five sepals, five petals and five stamens aligned in the middle of the petals. The ovary has five united carpels forming a single chamber. It then matures as a capsule. A quick key to this family is “plants in moist soil with parts in fives and stamens aligned opposite the petals”. I also note that the flowers are often nodding on a single style. Capsules frequently house the seeds. Some, like Primula meadia, can be found in glades and prairies, thus forming the exception to the moist soil rule. With flowers, no key is ever 100%, it seems.

Missouriplants.com lists nine plants in the Primulaceae found in Missouri. Seven of these are native. This brings me to the second point of possible confusion in the Primulaceae family. The genus Lysimachia, common name loosestrife, is in this family. This is not to be confused with the Loosestrife family (Lythraceae) and the invasive purple loosestrife (Lythrum salicaria).

The genus Lysimachia includes L. ciliata (fringed loosestrife) which is widespread across the state and blooms May to July. The fringed name likely refers to the hairy leaf stalks. In the photo you can see flowers have the characteristic five petals with a reddish region toward the center and five stamens. A shadow of...
the five sepals can be seen through the petals; flow-
erers are nodding on a style. This plant is easily grown
from seed and could make an attractive addition in
a garden. Lysimachia lanceolata (loosestrife), found
mostly in eastern and southern Missouri, blooms May
to August. A small plant with similar-looking flowers to
L. ciliata, L. quadriflora (narrow-leaved loosestrife) is
found in central portions of Missouri and blooms June
to August. The plant has the same five yellow petals
with pointed tips and reddish middle, but very thin,
opposite leaves. L. terrestris (swamp candle) was first
found in Missouri in 2006 in northwest Adair Coun-
ty. Tim E. Smith and Greg Gremaud of the Missouri
Department of Conservation wrote about their find
in Missouriensis, Vol. 27. L. terrestris has showy ra-
cemes of yellow flowers that produce floral oil rather
than nectar. All of the Lysimachia genus tend to grow
in moist areas, and their flowers are similar in color-
ation but vary in size.

A truly aquatic plant that is in the Primulaceae fam-
ily is Hottonia inflata. This quote from missouriplants.
com may pique your interest as it did mine. “This plant
gets my nomination for the most bizarrely cool of all
of Missouri’s flora”. This is an uncommon species,
rated S2 (imperiled) in Missouri. The habitat for this
plant is swamps, sloughs, ponds, and ditches. It has
no lookalikes and flowers April to July. Its abundance
varies year to year. Featherfoil is a common name for
the plant and seems to describe the leaves which re-
semble feathers and are arranged alternately along a
submerged stem. The leaf blades can be up to ten
cm long. The stem is horizontal and up to ninety cm,
as big around as a finger and spongy in texture. The
flowers are white with the characteristic five petals.

The inflorescence ascends out of the water at flow-
ering and somewhat resembles a cactus plant, but of
course in a completely opposite habitat. The seeds
are dispersed in the summer and germinate to form
new stems with submerged leaves that overwinter
under the water or ice until the following spring. There
are multiple photos on missouriplants.com that help
give an idea of the uniqueness of this plant. The pho-
tos were taken at Otter Slough CA on April 22, 2019.
Check it out next spring and you might get lucky to
see this unusual gem of a plant. Flowers are seldom
seen as there can be spans of seven or eight years
between flowering.

A couple more native plants to mention in this family
are Androsace occidentalis (western rock jasmine), a
tiny annual forb with white flowers found in disturbed
areas and along gravelly edges of trails and roads that
blooms March to June; and Samolus parviflorus (wa-
ter pimpernel or brookweed) found blooming April to
September in moist areas, even underwater. It has tiny
white flowers and small round fruits on a zigzag stem.

Having a close encounter with a plant like I did with
Primula meadia led me to research an entire family
of plants and whet my appetite to learn more about
the language of botany and the classification system.
I am very much a novice in a field that has so much
to offer. In this search, I studied in more depth Mis-
souri Wildflowers by Edgar Denison, discovered the
fabulous website missouriplants.com, and bought the
resource book, Botany in a Day by Thomas J. Elpel. I
am thankful to the Petal Pusher and Missouriensis for
their written contributions to our local flora, and am
proud to be a member of Missouri Native Plant Soci-
ety whose members continue to stimulate interest in
native species.

Lysimachia ciliata with parts in fives. Photo by Steve R. Turner

Hottonia inflata with parts in fives. Photo by Steve R. Turner

Dues are Due
By Ann Earley, Membership Chair

Membership renewals for the July 2020-June 2021 year are due. If you receive your newsletter by postal service delivery, please check the top line of your mailing label. If it shows the date 20200630, your dues are now payable. When renewing, please remember to include your contact information including email address, and your society and chapter dues preferences. Membership renewal online is also available via our website at www.monativeplants.org which offers the option of online payment via PayPal.

For those members receiving their newsletter by email without a mailing label, or for others with questions about their membership status, please use the "Have a Question?" feature on our website for information about your membership expiration date. We value our members and urge you to renew today!

New Members

St. Louis
Michelle Coats, High Ridge
Paul Winterfeld, Dardenne Prairie
Besa Schweitzer, St. Louis
Pete Kozich, Chesterfield
Karen Joyce, Dardenne Prairie
Joan VonDras, St. Louis

State Level Membership
Maria Evans, Greentop

The Other Hyssop
by Steve Buback

Plant enthusiasts around the state are doubtless familiar with giant yellow hyssop, *Agastache nepetoides*. This tall, late-blooming member of the mint family occurs throughout the state in habitats including woodlands, bottomland forests, and the ubiquitous “disturbed areas” designation. Giant yellow hyssop has a cousin, however, which is much more limited in the state of Missouri, and goes by the clever name of giant purple hyssop, *Agastache scrophulariifolia*. At this point, you can probably guess what one of the major differences between the two species might be, but in Missouri these differences are muted and other characters might aid in identification.

*Agastache* is fairly easy to recognize as a genus in Missouri because of its stature (often growing from three to six feet tall), late bloom period (August and September), and the dense spike of relatively small flowers. Both of our *Agastache* species are found throughout the Midwest, but the range of giant purple hyssop is mostly in the northern Midwest and we are on the southern edge of its range. Accordingly, most records of the species are from north Missouri, but the differences between the two species are not as obvious as it might seem and it is possible that giant purple hyssop occurs across more of the state than is currently recognized.

In July 2020, the Missouri Botanical Garden herbarium had six counties listed for the species, and one collection has been made in the last seventy years. The Missouri Department of Conservation has tracked this species as well and has thirteen populations known across nine counties (obviously a few more voucher specimens need to be collected!). At least five of these are considered historic populations. I set out to update all of our known populations in northwest Missouri this year and quickly discovered I had been overlooking the species for quite a while. Over the course of a day, Wildlife Management Biologist Jesse Kamps and I were able to document ten populations in Harrison County alone. We focused on woodland edges and overgrown prairie swales and found that the majority of sites that had a quality oak overstory also had giant purple hyssop. The known populations at The Nature Conservancy’s Pawnee Prairie are still the largest in the state, but there are now a lot more supporting populations on the landscape. The farthest south I have seen the species is at Pony Express Conservation Area in DeKalb County.
but there are old B. F. Bush (of course) records from Jackson and Macon Counties.

Giant purple hyssop is probably under-surveyed in Missouri because of the bloom period - August is not the most popular month with botanists - but also because most of the individuals within the state seem closer to the white form of the species that has been described. From even ten feet away, the color difference between a pale yellow corolla and a pale blue color is easily overlooked. Since the species also shows a preference for swales and thickets, along with ticks and chiggers, one might not go through the full effort to identify the species; however, if you can get to the plant an easy difference besides the corolla is the pubescence of the stem. Giant purple hyssop has a pubescent stem, and the upper side of the leaves is pubescent as well. Giant yellow hyssop is mostly glabrous, though the stems and leaves are pubescent when the plants are young. Both species are rhizomatous, but the colonies of giant purple hyssop seem more crowded, indicating shorter rhizomes. Giant purple hyssop also seems to prefer wetter situations than its yellow counterpart, though our sample size is still small.

If you are venturing out this fall, it might be worthwhile to take a closer look at the hyssops you encounter. Even if you don’t come across the giant purple hyssop, the yellow variety is still a quality member of our woodland flora, and deserves a closer look.

Agastache scrophulariifolia, photo by Steve Buback

From the editor

Apologies for this issue being so late! Let’s blame it on it being 2020. Thank you for hanging in there! Thank you to Erin Skornia and 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 "What's in a name: common vs. scientific" but feel free to deviate from this and/or submit for other issues.

B. Send ONE email saying "here is my contribution," 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).
   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!

Thank you so much,
Michelle Bowe

Donate to MONPS When You Shop!

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

Simply visit smile.amazon.com and search for Missouri Native Plant Society Inc. After you finish shopping, Amazon will automatically donate to MONPS. You may also click the AmazonSmile link on monnativeplants.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 smartphone application may not support AmazonSmile. Visit About AmazonSmile to read more about the AmazonSmile Foundation.
In his book, *Botaniste*, the current director of the Paris Botanical Garden, Marc Jeanson, explains how he had to carefully organize his 2010 stay in China to collect *Arenga longicarpa* C.F. Wei—the palm plant he was missing to complete the lineage of the Caryoteae and finalize his doctoral thesis. His allotted time was fourteen days in and around Canton, and not one more. He carefully studied the notes taken by the botanists who had preceded him in the region, because dawdling was a luxury he could not afford.

His two short weeks of botanizing contrasted with the ten years it took the Jesuit Nicholas d’Incarville just to obtain permission to botanize around Peking in the 18th century. D’Incarville also faced some administrative overhead, not the least from then-emperor Qianlong,. Thinking about how he could obtain favors from Qianlong, who he had learned was a plant nerd in his own right, he wrote to Jussieu, his teacher in France, to send by caravan across Siberia some seeds of a sensitive plant species growing in the Caribbean island Martinique, *Mimosa pudica*. After tending to the seedlings’ growth and acclimation, d’Incarville presented two plants with a multitude of pink pompoms to the emperor, hoping to charm him with the leaf behavior of this plant genus, which includes our own *Mimosa quadrivalis*.

Qianlong, reportedly, was absolutely captivated by his gift, whose leaves seemed to bow to him in a show of respect. He granted d’Incarville all his travel requests and access to the imperial gardens.

I have translated the details of this story from: Botaniste (essai français) by Marc Jeanson, Charlotte Fauve. This book is not yet translated into English at printing time.
Join Us!

You may become a member online at https://monativeplants.org/membership/, or you may fill out this form and mail it to:
Missouri Native Plant Society
PO BOX 440353
St. Louis, MO 63144-4353

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State Membership
(Choose one):
□ Student ($5.00)
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□ Contributing ($20.00)
□ Life ($200.00)

Chapter Membership
In addition to society dues:
□ Empire Prairie (Saint Joseph) (+$5.00)
□ Hawthorn (Columbia) (+$6.00)
□ Kansas City (+$5.00)
□ Osage Plains (Clinton) (+$5.00)
□ Ozarks (West Plains) (+$5.00)
□ Paradoxa (Rolla) (+$5.00)
□ Perennis (Cape Girardeau) (+$5.00)
□ Saint Louis (+$5.00)
□ Southwest (Springfield) (+$5.00)
□ None

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□ Perennis (Cape Girardeau) (+$5.00)
□ Saint Louis (+$5.00)
□ Southwest (Springfield) (+$5.00)
□ None

Optional Contributions:
Hudson Fund:
I wish to donate an extra amount to the Hudson Research Grant Fund.
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Other Contribution:
I wish to donate an extra amount to general Society business.
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Newsletter Delivery:
□ I wish to receive the complimentary email newsletter
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Make check payable to: Missouri Native Plant Society