



Missouri Native Plant Society Hawthorn Chapter Newsletter

Volume 35, Number 3
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The Hawthorn Chapter of the Missouri Native Plant Society Newsletter is published monthly. Send submissions by the 26th of every month to:

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We would like to read about announcements, impressions, species accounts, photos, poems, links to scientific articles or other creative nature writing **from you, too**. Please submit during the second half of every month.

This is the 35th year Hawthorn has supplied a newsletter to chapter members.

Thanks to Doug Miller for keeping the chapter website up to date.

March 2020

Future Activities Calendar

29 Feb Sat If you didn't make a reservation to the MidMO Expo, here is an alternative free activity: **Sustainable Living Fair** 10-4:30 at City Hall, 701 East Broadway; organized by the City of Columbia and PeaceWorks. Nadia will be giving a presentation about Native Edibles and Lea will have a display with information about MONPS.

5 March Thurs 7pm: This free screening of **Tallamy's Hometown Habitat** will be in the auditorium of the Bond Life Sciences Building on the MU campus. Free parking in the Virginia Ave visitor lot. See more inside.

9 Mar Mon 6:30pm: Membership Meeting at Unitarian Universalist Church, 2615 Shepard Blvd, Columbia. Conserving Columbia's Natural Heritage and Preparing for the Future. Danielle Fox, danielle.fox@como.gov, Community Conservationist of the City of Columbia will give an update/overview of the different programs she has been working on to incorporate conservation into the City. She will also talk about the Climate Action and Adaptation Plan, and how native plants play a role in creating a more resilient Columbia. Meeting follows.

10 March Tuesday: PLEASE VOTE IN THE PRIMARY ELECTION.

19 Mar Thurs 11:30 to 1pm: Lunch at RagTag/Uprise. Just south of Broadway at 10 Hitt Street.

11 Apr Sat MU Bradford Farm 10 to 2. Plant Sale. This is our biggest plant sale of the year. Please put it on your calendar to at least come to buy from our booth. If you can work in a hubbub and explain to the uninitiated which plants go in which place, we can use your help. Come to other activities in March and ask about it, or read more next month.

13 Apr Mon 6:30pm: Membership Meeting at Unitarian Universalist Church, 2615 Shepard Blvd. Probably cancelled Watch for announcement in April newsletter.

16 Apr Thurs 11:30 to 1pm: Lunch at RagTag/Uprise. Just south of Broadway at 10 Hitt Street.

26 Apr Sun 10 to 7 Earth Day Fair in Columbia. We need volunteer help for this, too – mostly for setting up and packing up. Come to other activities and ask or read more next month.

1-3 May Fri-Sun Bolivar MO: MONPS weekend field trips with THE best naturalists. Watch for info in Petal Pusher or a separate message from State.



Announcements

Lunch at RagTag Thurs 19 March

Meet our group for lunch 11:30 at RagTag/Uprise, 10 Hitt St [Just south of Broadway]. We had a group of 10 members converge for good food and good conversation in Feb.



Meetings are the second Monday:

- 9 Mar meeting will open with a program by City Conservationist Danielle Fox.**
- 13 Apr: So many other activities we might not have energy for a business meeting.**
- 11 May meeting will open with Alice Tipton speaking on mycorrhizae [essential soil fungi].**



The editor wants to thank Carol, Michelle, Lea, and Louise for their submissions this month. We all enjoy reading personal articles about your experiences and new knowledge about nature.



Claytonia, our first spring flower

Welcome to new members who joined this winter: Paula, Kay, Debra, Allison, and Melissa. We hope you will join our activities. The best way to learn is immersion.

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, Michelle Bowe, Michelle Bowe Department of Biology Missouri State University 901 S National Ave Springfield MO 65897 mbowe@missouristate.edu

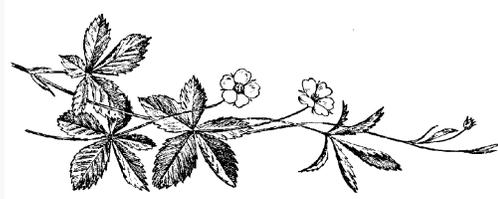
MU/CAFNR

Offering a Movie

This free screening will be Thursday 5 March at 7pm in the auditorium of the Bond Life Sciences Building on the MU campus. Free parking in the Virginia Ave visitor lot.

Hometown Habitat is a call to action environmental documentary focused on how and why native plants are critical to the survival and vitality of local ecosystems. Renowned entomologist Doug Tallamy narrates inspiring stories of community commitment to conservation landscaping, showing how humans and nature can co-exist with mutual benefits.

A panel discussion will follow moderated by the movie producer/director Catherine Zimmerman. Panel members will be from MPF, MDC, CAFNR, MMN, MEEA, Roeslien Alt. Energy, MFB.



Potentilla simplex



Prunus americana

Mid Missouri Wild Ones wants to invite any interested persons to get together for future activities.

Events Offered by WildOnes

March 21, Saturday, 1:00 to 3:00 p.m.: Tour of moss garden in yard of Louise Flenner. Her house is located at 5203 S. Cowan Rd. in Columbia. Cell phone is 573-268-7468 or email to lfenner@hotmail.com. Park on the street and walk down the driveway. We will gather round back of the house so just walk around to the left of the garage. If it has been rainy, the ground will be wet.

April 2, Thursday, 10:00 a.m.: Workday at Forum. This native plant display is at the entrance to the Forum Nature Trail off of Forum Blvd. Park in the Forum entrance to the MKT trail. Drive down to the lower lot and we will be gathered there. Bring garden gloves, pruners, trowel and other tools if you have them. We will do some Spring clean up. There will likely be extra plants that will be thinned and you can take them home if you want.

May 30, Saturday, 10:00 a.m.: Tour of the rain garden at Rockbridge High School. More information to follow.

June 20, Saturday : field trip to Prairie Garden Trust. More information to follow

August: yard tour of Laura Hillman's yard.

Let's tour your yard!

All members who have a native garden are invited to be a part of the yard tour schedule. This is an opportunity to have other members learn from your place and for you to learn from them. There are some very educated members who can make suggestions that will be a benefit to the success of your native plantings. We don't come into your house, just tour your plantings. This is an excellent socialization to get to know other interested members. If you want be on the yard tour list, contact us at wildonesmidmo@gmail.com. Let us know a tentative date, time and place and we will notify the membership.

Moss Workshop Convened 1 Feb.

Compiled by Becky, newsletter editor

Mid-Mo WildOnes chapter invited several groups to attend Louise's moss workshop the first Saturday of February at Laura's house in south Columbia. There was an impressive turnout of 24 from faraway places like Jamestown and Rolla.

Louise became interested in mosses from an article on moss gardening in a WO Journal 4 years ago. She instantly focused on this subject with a passion: collected books, bought a student microscope, which she recently upgraded to a compound microscope, networked with other hard-to-find bryologists, got access to MO Botanical Garden herbarium, took many walks into wild areas to collect mosses to grow a garden. [Deep breath -]

In short, she has learned enough to share her basic knowledge with our group. Louise knows enough to teach the moss section of college 'Botany 101'.

Besides discussing all the failures and a few successes with moss gardening, we learned the life cycle of mosses: the capsule ejects a spore which starts a primitive protenema which grows into an antheridium and an archegonium. It takes rain water for the sperm to wash into the ovum which produces another capsule full of spores. Sexual reproduction has offered mosses the opportunity to develop 22,000 species worldwide on every continent.

Then Louise explained the basic terms in the dichotomous key. She described the difference between Acrocarp [bunch] moss and Pleurocarp [mat] moss. She drew a poster with wonderful illustrations of shapes of different microscopic leaves; also explaining dimensions of capsule, length of seta and numbers of peristome as diagnostic in the key to identify the species of moss.

Louise stated: It was really fun to meet so many new people and reconnect with those we know already. The book she uses is called *Common Mosses of the Northeast and Appalachians* by McKnight, Rohrer, Mcknight-Ward, and Perdrizet. *Mosses with a Hand Lens* by A.J. Grout is a free book available here: <http://www.biodiversitylibrary.org/item/114835>.

You're invited to come to see her moss garden on Saturday, March 21 anytime between 1:00 and 3:00 p.m. She will show you around and talk about moss gardening. If the ground is wet, be prepared to walk through wet grass. Her address is 5203 S. Cowan Rd., Columbia, MO. Phone is 573-268-7468.



[Scientists unravel mystery of photosynthesis -- ScienceDaily](#)

www.sciencedaily.com

Date: February 5, 2020

Source: DOE/Argonne National Laboratory, by Jo Napolitano

Summary: Scientists have solved a critical part of the mystery of photosynthesis, focusing on the initial, ultrafast events through which photosynthetic proteins capture light and use it to initiate a series of electron transfer reactions. Full story:

<http://www.sciencedaily.com/releases/2020/02/202005132347.htm>



Nuggets of Gold Links

The Missouri Invasive Plant Task Force

(MoIP) is a resource of Grow Native!—a 19-year-old native plant marketing and education program serving the lower Midwest. For more information about MoIP, visit www.moinvasives.org

WHERE DO I FIND GOOD NATIVE PLANTS?

With these facts in mind, a large majority of NPS members feel the best policy for native plant and seed purchase is from local vendors who grow perennials only from wild local seed sources. If the vendor doesn't know where the source is or if it is treated with insecticide, I suggest you find a vendor who does so your plants are environmentally compatible. There are several open plant sales in the area and several vendors happy to accommodate you. See the [Grow Native resource guide](http://www.grownative.org/wp-content/uploads/2018/02/2018-Grow-Native-Resource-Guide-Low-Res.pdf). <http://www.grownative.org/wp-content/uploads/2018/02/2018-Grow-Native-Resource-Guide-Low-Res.pdf> Please keep this in mind when you add to your pollinator garden.

Missouri Prairie Foundation [MPF] [home page](https://moprairie.org/), field trips, workshops and plant sales:

<https://moprairie.org/>

Recent article on the status of **bumblebee populations**:

<https://www.washingtonpost.com/climate-environment/2020/02/06/bumblebees-are-vanishing-scientists-blame-climate-change/>

Newest article from Tallamy:

https://www.gardendesign.com/eco-friendly/wildlife.html?utm_source=article-newsletter&utm_medium=email&utm_campaign=10-Ways-Wildlife-2-20-20

Center for Plant Conservation: <https://saveplants.org/>

features best practices for saving endangered plants. This month's newsletter from the Center includes great tips on encouraging communities to plant natives (Connect to Protect Network), answers to some pressing questions like "How native is native?", and links to useful resources such as the CPC Best Practices for plant conservation collections, with an impressive array of authors, including several names from within the Plant Conservation Alliance community. **And beautiful pictures** to boot! Read this month's newsletter: <https://saveplants.org/2020/02/03/february-2020-news/>

The Nature Conservancy [TNC] has announced podcasts available on line, "Destination Nature".

https://www.nature.org/en-us/what-we-do/our-priorities/protect-water-and-land/land-and-water-stories/destination-nature/?src=e_gp.eg.x.pod.LC.loc_b&lu=4439630&autologin=true

Judy Turner's Update from Bastrop: McKinney Roughs Nature Park

<https://www.inaturalist.org/identifications/jtejasrgv>

Lost Pines Master Naturalist Chapter McKinney Roughs Nature Park iNaturalist Project is a project of the Lost Pines Master Naturalist chapter (LPMN) which covers Bastrop and Caldwell Counties in Central Texas. The chapter was founded in 2000. I joined and became certified in 2009 after my return to Texas. At that time I was also a member of our Lost Pines Native Plant Society of Texas chapter.

However, in 2011 Bastrop County suffered a massive complex fire, destroying almost 1,700 houses and structures and burning over 34,000 acres. More than half of our local NPSOT members lost their houses or most of their property burned in that fire. Needing an outlet for our love of plants, several of us who were also Master Naturalists started doing bio-census surveys. Luckily for us, in 2010 the LPMN chapter had been asked by Nicholas Cowey, the naturalist employed by the McKinney Roughs Nature Park, to participate in a grass identification hike and then submit our photos to him. When we regrouped as Master Naturalists after the fire we started doing more bio-census surveys at McKinney Roughs. Sporadic biosurveys were done from 2011 thru 2016. In 2017 we were asked to do monthly surveys. We have been doing them ever since.

Our iNaturalist project is called LPMN McKinney Roughs Biocensus. <https://www.inaturalist.org/projects/lpmn-mckinney-roughs-biocensus> As of this



writing we have recorded 3968 observations of 969 species by 34 observers. This is a public project so anyone should be able to look at our observations. My most exciting observation has been the dwarf sundew, *Drosera brevifolia*. We see this species in several locations within the park from February to April, depending on conditions. Finding these carnivorous plants usually requires crawling around on your knees while brushing the grass and other debris away!
< < < *Judy's photo of Drosera.*

Link to photos on line: <https://www.inaturalist.org/observations/20739872>

Rather than just looking at the iNaturalist grid or list of most recent observations for our project, go to the iNaturalist Export section and create a query. If you've never used this function, here's my suggestions for looking at all the plants observed in our project. Under Show only, select plant. Under Project, enter lpmn-mckinney-roughs-biocensus if it's not already there. Then you can specify which columns you want on your listing. Under Basic, select observed_on. Under Taxon, select scientific_name, common_name. Under Taxon extras, select taxon_family_name. Select Create Query. When it finishes you will get a message at the top of the query sheet entitled Query Complete. Then download it to your computer. The download file is in a zip file and when opened it is in csv format. That format can be opened by most spreadsheet software. Once you've got your spreadsheet you can sort the data in any order you wish. Have fun!

McKinney Roughs Nature Park contains 1,140-acres with four ecosystems – Post Oak Savannah, Blackland Prairie, East Texas Piney Woods, and a riparian zone. It is located 13 miles east of Austin-Bergstrom International Airport. The park is owned by the Lower Colorado River Authority, which is a nonprofit agency created by the Texas legislature to provide energy, water, and community services in Central Texas.

The iNaturalist map shows our current observations. The blue dots are mostly bird sighting. The red dots are insects. The green dots are plants. Most of these are along one of the many trails within the park. Some of the observations may actually indicate which trail the plant was seen on.

Native Plant Conservation Campaign:

<https://plantsocieties.cnps.org/index.php> feature native plant societies all over USA.

Milwaukee Journal-Sentinel Micro prairies: No yard is too small to go with earth-friendly native plants

<https://www.jsonline.com/story/life/home-garden/garden/2018/05/25/turn-your-yard-into-micro-prairie-native-plants/607727002/?fbclid=IwAR1LHvKmDDGYfbxuD0LcuP2hl0JftDydAtGEe7OFiWlhgK3Y-IBKcGQHK0>

Smithsonian study backs all of Tallamy's work on birds: <https://nationalzoo.si.edu/news/new-smithsonian-study-links-declines-suburban-backyard-birds-presence-nonnative-plants>

National Science Foundation – Native plants needed to support bee populations essential for our food supply: https://nsf.gov/discoveries/disc_summ.jsp?cntn_id=295868

TNC on native bees. Fabulous large photos: https://blog.nature.org/science/2019/08/19/focus-on-native-bees-not-honey-bees/?src=e.cgs.eg.x.loc_b&lu=4439630&autologin=true

For those who admired Rick Darke's Pennsylvania garden in the book *Living Landscape* by Darke and Doug Tallamy, *Garden Design* magazine has a feature on his garden this month: https://www.gardendesign.com/pennsylvania/sustainable-strolling.html?utm_source=article-newsletter&utm_medium=email&utm_campaign=Sustainable-Strolling-Garden-9-26-19

Michelle recently ran across this site that looks like a **great way to participate in citizen science**, especially for kids. <https://journeynorth.org/>

About Journey North: In its 25th year, **Journey North is one of North America's premiere citizen science programs** for people of all ages. The project has broad participation, with over 60,000 registered sites in the US, Canada, and Mexico — including families, teachers, schools, nature centers, professional scientists and novices. Journey North provides an easy entry point to citizen science, with simple protocols, strong online support, and immediate results. Reported sightings are mapped in real-time as waves of migrations move across the continent. People report sightings from the field, view maps, take pictures, and leave comments.

Refer to past editions of our newsletter for other important resource links.
Hawthorn website www.columbianativeplants.org
MONPS website www.monativeplantsociety.org



Prairie Remnants, Restorations & Reconstructions

Written and permitted by Carol Davit

MPF's mission is to protect and restore original, unplowed prairie and other native grassland communities, like glades and savannas. Our properties contain **remnants** of original, unplowed prairie—some of which we have **restored**—and also acreage that has been altered, such as converted to row crops, that we **reconstruct** to prairie plantings.

These terms can sometimes be confusing. Below are definitions of these words that MPF uses to describe our work to protect as much original prairie as possible, and to establish reconstructions via prairie plantings.

Remnant: an original, unplowed habitat, often much reduced from a larger, intact original landscape.

Restoration: enhancing a site that has been degraded by disturbances (e.g., overseeded to tall fescue and/or overgrazed, or invaded by trees), but has never been plowed.

Reconstruction: establishing a coarse replica of a natural community, like a prairie, from scratch on a previously row-cropped and plowed site, with a seeded planting. (Current condition of a site before reconstruction could be tall fescue, row crops, or previously disturbed land containing native or non-native weedy vegetation.)

In November 2019, an article published online in *Restoration Ecology*: "[Are we close enough? Comparing prairie reconstruction chronosequences to remnants following two site preparation methods in Missouri, U.S.A.](#)" underscores this point.

Written by Chris Newbold, Natural History Biologist with the Missouri Department of Conservation, and co-authors Benjamin Knapp and Lauren Pile, the article documents results of a study whereby diverse prairie plantings were established through reconstruction, but they did not reach the diversity and comparable species composition of nearby reference, remnant prairies. The article also stresses the importance of site preparation and improved seed collection and establishment techniques for more diverse reconstructions.

Protecting remnants is vital conservation work—because many elements of original prairie are irreplaceable. Establishing reconstructions is critical as well, to expand habitat for many species of grassland wildlife, improve health of watersheds, and store more carbon in the soil. In 2019, MPF seeded 155 acres at several sites with a diverse mix of seeds collected from remnants, and will continue these reconstruction projects in 2020, along with ongoing stewardship of our prairie remnants.

MPF supporters make our prairie protection and reconstruction work possible. **Thank you.**



Coreopsis, Snowball Hill, Cass County, BE photo



Melanthium, Morris Prairie, Sullivan County, BE photo



Hundred Acre Wood Prairie, Boone County, MR photo



Echinacea simulata, Indian Trail CA Glade, Dent County, BE photo



Doc Morton Prairie, Benton County, BE photo



Phlox pilosa, Diamond Prairie, Newton County BE photo

Topics for This Years' Petal Pusher

the state MONPS newsletter

If we have members who are experts on any of these topics, Michelle Pruitt is willing to do an amateur proofread for you if that would be helpful. The submission deadline for the March/April issue is February 20. **ALWAYS 20th of even numbered months. If you don't understand subjects, parameters, or submission format, contact Michelle Bowe, PP editor MBowe@MissouriState.edu .**

March/Apr What's weird about Plant ID = deadline passed

May/June All about fruit: the messy and the dry

July/Aug Plants as insect hosts

Sept/Oct Focus on the (Plant) Family - (Fagaceae/Quercus)

Malissa Briggler, others? You pick one and do the research.

Nov/Dec What's in a name? Common vs. Scientific

2021 Jan/Feb Ecoregions of Missouri

Regular Recurring Columns:

Conundrum Corner Contributors needed!

Invasive Tip of the Month Tips to identify and eradicate invasives, with a different species in each issue. Contributors needed!

Other Recurring Columns: **Casey's Kitchen** Casey Burks

Name Change of the Month Justin Thomas. Other volunteers welcome.

Poetry Corner or Quotation Corner Send suggestions for poems or quotes for inclusion. Note that for poems, we must have permission from the publisher.

Where are we going Features we will see on the next field trip. Malissa Briggler?

And here's where you can become newsletter famous by submitting your questions: <https://monativeplants.org/ask-a-question/>

Ask a question Questions from website, answered. Facilitated by Jerry Barnabee

Please Step Forward For Service

Please contact one of the officers ready to volunteer a little time to a very good environmental and educational service. We need people to serve as officers, to grow plants for fundraising, and we need people to man our information booth at events such as Earth Day and Bradford Plant Sale. There are opportunities to volunteer caring for native gardens in public places. We don't deliver printed copies by mail unless you insist. Please consider requesting email delivery; it saves us money for the Grant Program.

___ Regular (\$16.00)*

___ Student (\$11.00)

___ Contributing (\$26.00)* designate chapter or state

___ Paper postal service (\$10)

___ State Lifetime (\$200) Might be raised for 2020

___ Chapter Lifetime (\$120 – you must also be a member of the state organization to utilize this option)

___ Chapter only (\$6.00 – this is for members who already belong to State and another chapter).

*Includes both Chapter (\$6) and State (\$10) dues.

Make check payable to:

Native Plant Society. Send check and this form to: Paula Peters, 2216 Grace Ellen Dr., Columbia, MO 65202

MEMBERSHIP FORM

Missouri Native Plant Society-

Hawthorn Chapter

July 1 through June 30. Dues are Due NOW!

Name _____

Address _____

Phone: Evening _____

Day or Cell _____

Email: _____

Method of receiving chapter newsletter:

(circle preference)

Email

Regular mail

As of July 2018, Petal Pusher printed on paper in grayscale, sent by post, will cost an additional \$10 more than standard membership. Email delivery brings you color photos, and instant delivery. It saves natural resources, pollution, and MONPS and your money.