



Newsletter

Volume 37, Number 6

Hawthorn Chapter

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The Hawthorn Chapter of the Missouri Native Plant Society Newsletter is published monthly. We would like to read about announcements, impressions, species accounts, photos, poems, links to scientific articles or other creative nature writing from you, too. Send submissions before the 26th of every month to:

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This is the 37th year Hawthorn has supplied a newsletter to chapter members.

June 2022

Future Activities Calendar

Our traditional meeting time is second Mondays at 6:30.

We will be holding an in-person meeting 13 June at Elena's house: 2815 N Oakland Gravel Rd, Columbia. Entertainment will be to inspect the seeded areas of Elena's yard and identify what has germinated. There are a few business items to discuss – mostly what activities to have this summer for fun. Bring some good ideas, a beverage, and a snack to share [or not], and a folding chair. Dress for weather and use insect repellent [chiggers, etc]. You will receive an agenda a few days before the meeting.

3-5 June – there is still time to join all the best naturalists in Festus for the [state fieldtrips](#). You don't need reservations except at the motel. Just show up at the right place and time. Anyone who has ever gone on a state field trip has found them fun and educational. Contact Cindy to see if she wants a travel companion.

Fall 16-18 Sept - Eagleville: Dunn Ranch, Rolling Thunder Prairie (IA)

More details can be found in upcoming Petal Pusher and later on the MONPS website.

4 June 9am - noon Fox Hollow Forest [Bill Rupert] will host a special event: **Rural Land Stewardship Field Day** in the Hollow west of Ashland. As in the announcement last week, you needed to make a reservation by 29 May. Those who did make a reservation could contact Becky to arrange to carpool.

4 June, 2:00pm Boyd Terry announces a memorial service for his wife Carolyn White Terry (03/18/35)-(11/25/21) to be held at Church of Jesus Christ of Latter Day Saints chapel, 904 Old 63 South. She was a long time member of Native Plant Society. [Her obituary is on line](#) with Columbia Tribune in December.

11 June, 10:00 am Wild Ones has included Hawthorn to visit the native plant garden of **Gary and Linda Shillito** - 4702 Cedar Rock Court, Columbia. There is room for parking of 4 cars in their driveway with additional parking in the cul-de-sac. This is a very beautiful garden that will give you lots of ideas for your own native plants. We look forward to gathering with other native plant enthusiasts.

Monday 13 June, 6:30pm at Elena's house: 2815 N Oakland Gravel Rd [Guitar Mansion], Columbia. In-person membership meeting.

Be sure to check on the MPF/GN site [under Activities](#) for webinars on **alternate Wednesday afternoons at 4pm**. Recent topics were butterfly & moth identification, and citizen science projects. Our chapter pays to be a member so these on-line activities are free to you as a member. However, if you feel they are giving you a good education, a donation is welcomed. MPF is offering a [bioblitz 4-5 June](#) at a new, unnamed, prairie in St Clair County near Deep Water.

Thursday 16 June LUNCH starting at 11:30: Café Berlin 220 N 10th, Columbia. In May, 10 members came to Third Thursday Lunch at Pierpont Store. We had a good meal and a wonderful time to share on the patio. We decided that – the people who come to lunch get to decide where the next lunch will be. Please join us. If you like Café Berlin, you may voice your opinion. We might be there in July.

GOLD LINKS

All new MPF/GN events posted here:

<https://grownative.org/event/s/>

Primary reasons to **NOT** buy peat based

soil: [it's a high carbon bank and it is non-renewable.](#)

Sign up for MO Prairie Journal

<https://moprairie.org/mision/missouri-prairie-journal/>

[Find links to educational webinars every Wed afternoon on the MPF site.](#)

Here is a link to a **Missouri Bee Identification**

Guide put out by St Louis Zoo (Edward M. Spevak), and MDC (Michael Arduser)

The presentation at the Jan meeting was about bumble bees; Emily found the link to watch the [PBS Nature program about bees.](#) It will be repeated on PBS, NOVA, Wed 4 May. This and Nature usually repeat the following Friday around noon.

Karen wants to share:

This might be a good link for the Hawthorne newsletter. It is very readable. Good for those who aren't botanists. I got this link when I was taking a bumblebee class via zoom. [Botany primer](#)

ANNOUNCEMENTS

Teamwork makes light work. Thanks to Christi, Elena, John, Louise, Bob, Nadia, Paula, Carol-Leigh, Becky, Emily, Cindy, Diane, Nancy and Lea for helping at the booths this spring. Altogether they were very successful with 4 new members, and more books and plants than ever before went to new homes.

Greetings to our newest member: Maggie Johnston

[Give turtles a break means brake for turtles!](#)

VOLUNTEERING OPPORTUNITIES

CPS Outdoor Classrooms

Many of you have expressed interest in helping to manage the myriad of native plant gardens around town and at Columbia Public Schools as a reason to get outside and a process of education. Doing this community service is applicable to your MMN re-pay requirements. Even if you have not had MMN training, working in these gardens will help you learn how to recognize good native plants from undesirables. Lea is the leader for this volunteer group [named Volunteer of the Month by City of Columbia last summer].

Activities are announced weekly, so sign up now to know when and where to get started. Lea knows where all the gardens are and offers a schedule, received from her by email, when group weeding parties occur. If you have confidence in your knowledge of species recognition, don't be shy! – ask Lea for a garden and do what you can to remove 'bad plants' when you want to work. If you need assistance with id and technique, go with a group several times before you strike out on your own. langtrea@gmail.com call or text 864-7647.

If you ever want to participate in these activities, please contact Lea at langtrea@gmail.com. Photos of these projects are in a Powerpoint I did last year: [Lea's Outdoor Native Plant Classrooms](#)

Tick Study - Interim Results

MDC and A.T. Still University in Kirksville partnered in a new research study asking people to save ticks they encounter and mail them to the University. The ticks will be used for two-year scientific research study to help better understand the statewide distribution of tick species and the human pathogens they carry. [Get more information and images](#) Since this is a 2-year study, you can submit ticks this year

If Omicron virus has been found scientifically in whitetail deer in AR, IL, KS & OK, [[NY Times 7 Feb 2022](#)] it is safe to assume covid is in whitetail here in MO. Covid ran rampant throughout the mink industry kennels in OR/WA and China. All of those minks were destroyed in summer when their hides could not be salvaged. One way to keep covid, tick diseases, and cwd in check is to kill deer.

Please encourage anyone who hunts to kill all deer that is legally possible.



Time for a nature walk!

Spring is here and the Prairie Garden Trust is welcoming visitors again! To [schedule a visit](#), just let us know when you'd like to come and how many will be with you. We have maps to help you explore the paved and natural trails on your own. We also have two more guided walks scheduled for 2022. Each Walk is limited to 30 people. Sign up via [events registration](#).

Wildflower Walk - June 11 - 9AM - Leader: Tim Smith, State Botanist emeritus

Butterfly Walk - July 16 - 10AM - Leader: Gabe McNett

Prairie Garden Trust | 8945 County RD 431, New Bloomfield, MO 65063

www.prairiegardentrust.org

May Day Mosey at Pinnacles

Elena offered to share this article on [butterfly identification](#) from MPF.

Excellent info from GN

[Native Landscape Care Calendar](#) - for pros and homeowners. Also - a brief [one-page care overview](#)

And just added: extensive [Butterfly Host Plant list](#)

We had a hardy group of 10 show up on the best May Day you could ask for. Joanna and Eric had scouted the best places to find plants. We wandered up the hill to the top of to appreciate the vista and the glade plants. Later we headed for the sand bar by the cave to see liverworts, Heuchera, and Aquilegia growing in the wet cliff. Karen was the only person who offered a comment or report, but this gallery is the perfect illustration of the statement “a picture is worth a thousand words.”



Left: *Aplectrum hyemale* found here with both the leaf and bolt.
Center: *Antennaria plantaginifolia* white flower at top of photo.
Right: even weedy leaves have an attraction – *Polygonum* and *Viola*

Bird-safe windows

Transparent, reflective glass confuses birds. Up to a billion a year in the U.S. die from collisions with glass—nearly half from hitting home windows. These DIY fixes discourage birds from trying to fly through windows: Mark glass with tempera paint, stickers, or tape, making gaps in the pattern no larger than 2 inches tall by 4 inches wide—or 2 inches by 2 inches for greater deterrence. The American Bird Conservancy has more ideas at [abcbirds.org/glass-collisions](https://www.birdbirds.org/glass-collisions).

A DIY approach to helping avert bird collisions: Create patterns on windows with tempera paint, stickers, or tape. <https://www.birdsavers.com/make-your-own/>

To help birds that've collided with glass, see if your area has a bird strike watch program. Audubon Society chapters have volunteers who monitor bird strikes and collect data that can be used to make cities and towns more bird safe.



Left: *Asclepias quadrifolia* forming its future umbel of blooms on long pedicels.

Right: *Oxalis violacea* accents a notch in a rock wall.

All photos from Karen



Left: The highlight of the day is the *Viola pedata* bicolor. Named for the deeply bisected leaf resembling a bird foot, it also occurs in the single sky blue color.

Right: *Trillium sessile* is commonly found in undisturbed, moist woodlands.



Jarrold Fowler (with a little bit of funding from us[PCA] and the FWS) has created [a Bumble Bee Plant Finder](#) [Sent to me from PCA listserve 16 May 22]

Quoting Jarrod: “The Bumble Bee Flower Finder helps you discover the [best native plants for bumble bees from the Eastern United States](#). Find flowers for habitat gardening, conservation planting, and bee monitoring. Under Construction. Email: info@bumblebeeflowerfinder.info.”

Link to

Braiding Sweetgrass

by Robin Wall Kimmerer. If you want to assist Robin's cause with a purchase of one or more of her books, please do. If you cannot afford this purchase at this time, [this link is a gift of a free download](#).

Geared towards those who need to plant plants. This guide will be useful to those of you who are landscapers, architects, nursery people, gardeners, botanists, and bumble bee researchers who need to explore plants.

You can select on the physical features from bloom time, color, height, habitat, form, water requirements, state, and information about gender and status of bumble bees.

This finder is just the start as the USGS Bee Lab and associates quantifies visitation rates of bumble bees and other species via the citizen based **Ask A Bumble Bee Program** (email bumblebeecount@gmail.com for more info on that program) and other quantitative methods using photography and non-lethal netting surveys.

Audubon e-newsletter 6 April 2022 offers an article for the uninitiated on [the difference between native and non-native](#) and invasive – and many reasons why true native plants are better for the environment. And there are several follow-up articles with this page. You might want to share this link with a friend or neighbor who is unaware.

Info to identify invasive species: Maps for [142 individual species](#) in MO and descriptions for [25 species](#) have been combined by [MO Invasive Plants Task Force](#).

Links from Xerces Society

[Ed note: I exchanged several messages with Melissa, the new public relations person with Xerces. She wanted to share these links with you; The text is copied from her email. And she sent us a box of wonderful handouts for the booth!]

[Roadside Habitat For Monarchs: Milkweeds Of KS & MO](#)

[Habitat Assessment Guide For Pollinators In Yards, Gardens, And Parks](#)

[100 Plants to Feed the Monarch](#)

- [Xerces Bring Back the Pollinators](#). Join thousands of community members in taking our pollinator protection pledge. We have loads of resources to help you make room for pollinators in your community in our regional [Pollinator Conservation Resource Center](#).
- Check out our [community science](#) opportunities. From Bumble Bee observations to our new Firefly Atlas, we have something for everyone.
- We have lots of webinars coming up and you can browse them all at xerces.org/events. On May 12th, Matthew Shepherd, Xerces Director of Outreach & Education will host a wonderful webinar called [What Bee is That? An Introduction to Commonly Encountered Bees of the US](#).
- If you missed a webinar, don't worry you can view most on our [YouTube channel](#).

How (and Why) to [Welcome Insects](#) Into Your Yard By [Brian Lovett](#)



From YES newsletter 22 May 22 originally pub 30 Mar 21

Photo by twomeows/Getty Images

Gardening isn't just about plants. It's about the entire ecosystem those plants can support.

[Why you can trust us](#)

As winter phases into spring across the U.S., gardeners are laying in supplies and making plans. Meanwhile, as the weather warms, common garden insects such as bees, beetles, and butterflies will emerge from underground burrows or nests within or on plants.

Most gardeners know how beneficial insects can be for their plots. [Flies pollinate flowers](#). Predatory bugs, such as the [spined soldier bug](#), eat pest insects that otherwise would tuck into garden plants.

As a [scientist whose research involves insects](#) and as a gardener, I know that [many beneficial insect species are declining](#) and [need help from humans](#). If you're a gardener looking for a new challenge this year, consider revamping all or part of your yard to support beneficial insects.

Lawns are an ecological food desert. [NASA estimated in 2005](#) that lawns covered at least 50,000 square miles of the U.S.—about the size of the entire state of Mississippi. Dig up some fraction of your lawn and convert it into a meadow by [replacing grass with native wildflowers](#).

Click on title for the whole story.

How to Turn Your Yard Into an Ecological Oasis [Read the full story.](#)

TYLER WELLS LYNCH

From YES newsletter 22 May 22

For years, Toni Genberg assumed a healthy garden was a healthy habitat. That's how she approached the landscaping around her home in northern Virginia. On trips to the local gardening center, she would privilege aesthetics, buying whatever looked pretty, "which was typically ornamental or invasive plants," she says. Then, in 2014, Genberg attended a talk by Doug Tallamy, a professor of entomology at the University of Delaware. "I learned I was actually starving our wildlife," she says.

The problem, Tallamy explained, is with the picky diets of plant-eating insects. Most of these bugs—roughly 90%—eat and reproduce on only certain native plant species, specifically those with whom they share an evolutionary history. Without these carefully tuned adaptations of specific plants, insect populations suffer. And because bugs themselves are a key food source for birds, rodents, amphibians, and other critters, that dependence on natives—and the consequences of not having them—works its way up the food chain. Over time, landscapes that consist mainly of invasive or nonnative plants could become dead zones.



How Does a Caterpillar Turn into a Butterfly?

Originally posted 12 Aug 2012 in [Scientific American](#)

Ferris Jabr is a contributing writer for Scientific American. He has also written for the New York Times Magazine, the New Yorker and Outside.

To become a butterfly, a caterpillar first digests itself. But certain groups of cells survive, turning the soup into eyes, wings, antennae and other adult structures.

• *Ferris Jabr*



Photo by barbaraana / Getty Images.

As children, many of us learn about the wondrous process by which a caterpillar morphs into a butterfly. The story usually begins with a very hungry caterpillar hatching from an egg. The caterpillar, or what is more scientifically termed a larva, stuffs itself with leaves, growing plumper and longer through a series of molts in which it sheds its skin. One day, the caterpillar stops eating, hangs upside down from a twig or leaf and spins itself a silky cocoon or molts into a shiny chrysalis. Within its protective casing, the caterpillar radically transforms its body, eventually emerging as a butterfly or moth.

But what does that radical transformation entail? How does a caterpillar rearrange itself into a butterfly? What happens inside a chrysalis or cocoon?

First, the caterpillar digests itself, releasing enzymes to dissolve all of its tissues. If you were to cut open a cocoon or chrysalis at just the right time, caterpillar soup would ooze out. But the contents of the pupa are not entirely an amorphous mess. Certain highly organized groups of cells known as [imaginal discs](#) survive the digestive process. Before hatching, when a caterpillar is still developing inside its egg, it [grows an imaginal disc for each of the adult body parts](#) it will need as a mature butterfly or moth—discs for its eyes, for its wings, its legs and so on. In some species, these imaginal discs remain dormant throughout the caterpillar's life; in other species, the discs begin to take the shape of adult body parts even before the caterpillar forms a chrysalis or cocoon. Some caterpillars walk around with tiny rudimentary wings tucked inside their bodies, though you would never know it by looking at them.

Once a caterpillar has disintegrated all of its tissues except for the imaginal discs, those discs use the protein-rich soup all around them to fuel the rapid cell division required to form the wings, antennae, legs, eyes, genitals and all the other features of an adult butterfly or moth. The imaginal

disc for a fruit fly's wing, for example, might begin with [only 50 cells and increase to more than 50,000 cells](#) by the end of metamorphosis. Depending on the species, certain caterpillar muscles and sections of the nervous system are largely preserved in the adult butterfly. [One study even suggests](#) that moths remember what they learned in later stages of their lives as caterpillars.

Getting a look at this metamorphosis as it happens is difficult; disturbing a caterpillar inside its cocoon or chrysalis risks botching the transformation. But Michael Cook, who maintains a fantastic [website about silkworms](#), has some [incredible photos](#) of a Tussah silkmoth (*Antheraea penyi*) that failed to spin a cocoon. You can see the delicate, translucent jade wings, antennae and legs of a pupa that has not yet matured into an adult moth—a glimpse of what usually remains concealed.

Two more reasons for us to rebuild native habitats . . .

Arrived 10 May 22 via PCA Listserv

1. Global bird populations steadily declining

Cornell University, May 5, 2022, [Read full article](#) in ScienceDaily

Summary: Staggering declines in bird populations are taking place around the world. So concludes a study from scientists at multiple institutions. Loss and degradation of natural habitats and direct overexploitation of many species are cited as the key threats to avian biodiversity. Climate change is identified as an emerging driver of bird population declines.

www.sciencedaily.com/releases/2022/05/220505114633.htm

2. More than one in five reptile species are threatened with extinction//

A global reptile assessment highlights shared conservation needs of tetrapods

Neil Cox et al., TOP NEWS, Biodiversity Conservation, Media Release [Read full article](#), April 27, 2022;

[Read original article](#) in Nature

Summary: At least 21% of all reptile species globally are threatened with extinction, according to a new study led by NatureServe, the International Union for Conservation of Nature (IUCN), and Conservation International, with contributions from the German Centre for Integrative Biodiversity Research (iDiv) and the Martin Luther University Halle-Wittenberg (MLU). The study, published in the journal Nature, also shows that conservation efforts for other animals also contribute to the preservation of many reptile species... *“The results of the Global Reptile Assessment signal the need to ramp up global efforts to conserve them,”* says Neil Cox, co-leader of the study and Manager of the IUCN-Conservation International Biodiversity Assessment Unit. *“Because reptiles are so diverse, they face a wide range of threats across a variety of habitats. A multifaceted action plan is necessary to protect these species, with all the evolutionary history they represent.”*

Topics for This Year's Petal Pusher

the state MONPS newsletter

Petal Pusher Topics for 2022

Due date	Pub Date	Theme	Contributors
June 20	July 1	All About Botanical Latin	-James Trager??
Aug 20	Sept 1	Parasitic Plants	-??
Oct 20	Nov 1	Invasive Species Control for Winter	-Malissa
Dec 20	Jan 1	MONPS Chapters	-Dana Thomas (develop questionnaire)

Send submissions attached in Word format.

Send photos attached separately in jpg format.

To: Pam Barnabee pamela.barnabee@gmail.com

You don't need to be an expert, but if you have good repeatable experience as a naturalist on any of these subjects, you are welcome to offer your knowledge to the rest of us.

If we have members who are curious about any of these topics, Michelle Pruitt [michelle.pruitt@gmail.com] is willing to do an amateur proofread for you if that would be helpful. Send to her early!

ALWAYS - 20th of even numbered months. If you don't understand subjects, parameters, or submission format, contact Michelle Bowe, PP editor
MBowe@MissouriState.edu.

- Potential Emerging Invaders. **Have you seen a new plant invader?** Someone from MoIP as contributor; Malissa Briggler volunteered. Any one of us could study invasive plants; MPF Journal featured invasives during 2020. Just search 'invasive plants' and pick one to report on.

- Favorite Natural Areas. Suggested to also have chapters solicit articles from their members. This means YOU can write about your favorite Natural Area

- Better Know a Genus. These are species accounts. You observe/research a species or genus and describe the whole life cycle including preferred habitat and vectors/predators.

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 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, to man our information booth at events such as Earth Day and Bradford Plant Sale, and to care for native gardens in public places.

MEMBERSHIP FORM Missouri Native Plant Society Hawthorn Chapter

How were you attracted to join MONPS?

Membership runs from July 1 through June. You must be a member of the State Missouri Native Plant Society (MONPS) in order to join a chapter. You may send state and chapter dues to our membership chair, Diane Privitt.

Please check membership category you desire:

Minimum required annual membership per household is \$10 for students or \$15 for non-students [state+chapter]

*These amounts include both state and chapter dues

_____ Student \$10.00*

_____ Goldenrod \$15.00*

_____ Sunflower \$30.00*

_____ Blue Bell \$55.00*

_____ Blazing Star \$105.00*

_____ Surcharge for paper state Petal Pusher by mail (+\$10.00)

_____ Chapter only \$5.00 – this option is for members who already belong to State and another chapter

_____ Amount Paid

Make checks payable to:

Missouri Native Plant Society

Mail payment and this form to:

Diane Privitt

3810 Koala Dr

Columbia MO 65202

Name: _____

Address: _____

Telephone: _____

Home _____

Cell _____

E-mail: _____

Chapter newsletters and messages will be sent by email