

January - February 2014

NEWSLETTER OF THE MISSOURI NATIVE PLANT SOCIETY

Volume 29 No.1

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

ANNOUNCEMENTS

MONPS Meetings and Field Trips in 2014 Mark Your Calendars!

Watch for directions and details in the next *Petal Pusher*. Also check MONPS Facebook page.

At their winter meeting in Columbia, on December 7th, the MONPS Board of Directors chose the following locations for meetings and field trips in 2014. At the moment, many of the details are still undetermined, so reserve the dates and look for updates in future *Petal Pushers* or check our website (<http://missourinativeplantsociety.org/>) and our Facebook page (<https://www.facebook.com/groups/251725834062/>) for the latest information. Field trips are well attended: between 30 and 70 people come to learn from the wild side of Missouri. Bring your friends and family. Don't miss these opportunities to see the state's best locations and learn from the state's best botanists! See you there.

Spring Meeting and Field Trips (May 2-4, 2014) – Potosi, MO. Possible field trip locations include Washington State Park, Hughes Mountain Natural Area, Onondaga Cave State Park, St. Joe State Park, Hickory Canyon.

Summer Meeting and Field Trips (June 13-15, 2014) – In and around Bethany, MO. Potential field locations: Chloe Lowry Marsh Natural Area, Dunn Ranch, Helton Natural Area, and Pawnee Prairie.

Fall Meeting and Field Trips (September 12-14, 2014) – Cape Girardeau, MO. We may visit Trail of Tears State Park, Sand Prairie Conservation Area, Kelso Sanctuary.

Winter Meeting and Planning Session (December 6, 2014) – Columbia, MO Dunn-Palmer Herbarium.



Don't miss out on fabulous landscapes like this with people who know how to teach you what is there.
< *Echinacea simulata* at Indian trail June 2013.

George Y explains a goldenrod. > >



What do YOU want from MONPS?

What do you expect from your MONPS membership?

What activities do you expect when you join MONPS?

What additional activities and information would you participate in?

The Board invites you to take a brief survey about field trips, workshops, the *Petal Pusher* delivery and other functions of MONPS. The survey is short and will help us make sure we are best representing you!

Your participation in this survey is essential to the future of offered activities.

<https://www.surveymonkey.com/s/ZZ5ZSNC>

Thanks for your continued membership and your participation in all the activities you choose!

PETAL PUSHER BY EMAIL

From Becky Erickson PP editor.

Eighty two MONPS members have sent me their permission to start electronic delivery and stop paper delivery. If you are receiving occasional messages about interesting ecological updates, you have signed up and do not need to renew this service. If you are NOT receiving periodic messages from me, and you use email regularly from friends and business contacts, PLEASE contact me and request email delivery of PP. If all of MoNPS members with email accounts accept E-delivery, we could save the state over nearly \$2000 per year in printing and postage costs. In addition there are 1100 miles per year on vehicles and days spent to get printing and mailing done.

In order to accomplish this transition into E-delivery of PP, I must have your permission to stop receiving the printed, mailed, paper copy from St Louis. I must receive an email from you requesting to drop the paper copy and allowing me to add your name/address to my Petal Pusher email file. PLEASE respond to these directions. beckyerick711@centurylink.net .Copy this into your email 'to' line.

With your name in this file you might occasionally receive additional messages: updates on state-wide MONPS news, and links to interesting ecological articles in addition to the PP. "Occasionally" means maybe one or two per week. Maybe none for a month. You are free to delete anything you don't want.

Members who do not respond will continue to get the paper copy. Hopefully the transition will be complete by July 2014. Be patient; old wheels turn slowly. I will post the same announcement in the March PP.

When renewing, or joining for the first time, please remember to include your contact information including email address, and your society and chapter dues preferences.



Information on joining Missouri Native Plant Society

<u>Society Dues</u>	Columbia = \$6
Circle all that apply	Kansas City = 5
[Chapter dues additional >]	Osage Plains = 5
Student = \$5	Ozarks = 5
Regular = 10	Southwest = 5
Contributing = 20	Perennis = 5
Life = 200	St Louis = 5
	Empire Prairie

Contribution to Hudson Grant Fund _\$ _____

All contributions are tax deductible

Make checks payable to MO Native Plant Society

CALL FOR AWARD NOMINATIONS

Nominations Needed for Annual Awards due April 1

Submitted by Michelle Bowe, Awards Chairman

Mbowe@MissouriState.edu

The MONPS Awards Committee seeks nominations of people who have supported the preservation of Missouri's flora. MONPS offers five 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) 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 April 1.

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, 8878 N Farm Rd 75, Walnut Grove MO 65770, or 901 S National Ave, Springfield, MO 65897, Mbowe@MissouriState.edu

Mail to: Missouri Native Plant Society
PO BOX 440353
ST. Louis MO 63244-4353

Name _____

Address _____

9-digit zip _____

Sometimes activities are changed at the last minute so we need a way to notify you.

Phone _____

Email _____

St Louis Chapter

Submitted by Rex Hill, Chapter Representative

On the evening of October 23, our chapter held its annual 'show-and-tell' meeting where members bring pictures from the years' forays to share. They can be from fieldtrips, personal trips, and aren't necessarily limited to Missouri. In the past we have had pictures from Iceland, New Zealand, the Canadian Rockies, and many other far-flung places around the nation and globe. Scenery, habitat, and weather that enhance, support, or affect plant communities are suitable topics. Pictures of interesting vertebrate or insect life found in and around plants that were being observed are fair (photographic) game, so to speak. The only limitation is the number of pictures from each individual in order to give everyone a chance. This year we were treated to pictures from eight individuals on a variety of topics from a number of locations, both within Missouri and across the US. Richard Abbott, Jeanne Clauson, Casey Galvin, Jack Harris, Larry Morrison, Burt Noll, John Oliver, and Steve Turner shared their treasured memories of the year with the rest of us making it a most delightful evening.

The October meeting is traditionally our last meeting of the year, as our fourth Wednesday of the month meeting date interferes with the holidays in November and December.

Hawthorn Chapter

Submitted by Ann Wakeman, Chapter Representative

Wreath making workshop & potluck at Nancy Brakhage's home Nov. 3. Attendees made a holiday wreath from cedar trimmings and dried native plants & pods.

September program, Lea Langdon spoke about working with Midway Heights Elementary who received Columbia Outdoor Classroom Monarch Project Grant. This fall they eliminated weeds, set out donated plants to enhance their native prairie plantings. Other activities were participating in Monarch Migration, where monarchs overcome obstacles during migration.

November program, Birds in the Big City: the role of urban green spaces = parks and vacant lots. Graduate student studying bird use in abandoned lots in Baltimore, MD. There were surprising number of birds using even weedy, non-native spaces. She is planning to apply for jobs as urban ecologist and recommend native trees & shrubs be planted to enhance these places.

Third Thursday lunches at a local eatery are regularly attended by Native Plant enthusiasts; wildlife and weed management are usually among the topics.

Our Holiday party was at Vanessa Melton's home, Dec. 8. We were greeted with Wassail, shared a potluck mid-day meal and caught up on all the latest personal activities.

Turn screen time to green time = get outside

2014 Nomination Slate for Board members

The Nominating Committee is pleased to offer the following slate of nominations for 2014. The only offices up for election this year are two at-large Board Member positions whose term expires in 2014. Both have agreed to serve for another three years.

They are:

Robin Kennedy – Board Member ('14 – '17)

Allison Vaughn – Board Member ('14 – '17)

Additional nominations for these two positions can be made from the membership by submitting them to Rex Hill by March 31. Email: RexLHill@charter.net or mail them to: Rex Hill, 4 Grantwood Lane, St. Louis, MO 63123.

South West

Submitted by Brian Edmond, Southwest Chapter Representative

Our chapter celebrated the end of the growing season with our traditional potluck / bonfire at Michelle and Brian's house for our October meeting. This annual event is centered around the cathartic burning of the Brushpile of Shame, which is an accumulation of the year's invasive species cleanup around the farm. Mark your calendars for next year if you want to see some honeysuckle, multiflora rose, autumn olive, thistle, and others literally burn!

We do not have November and December meetings because of their proximity to the holidays. Naturally, I have something to say anyway.

I've noticed around our farm that the normal winter annuals--*Lamium*, chickweed, various geraniums, etc.--are mostly absent this year. At first, I thought all of my digging, burning, spraying, praying, and cussing were actually doing some good. But then I noticed that areas that hadn't really received much of my attention were about the same as the others.

This has two very real consequences. First, areas that are normally too green to burn will probably be pretty flammable this winter. I'm excited about that! Second, without all of the cover, some of our native spring ephemerals will have a better chance of flourishing next spring.

I cannot shake the feeling that this is a temporary occurrence and these species will be back with a vengeance soon, if not our very next winter. But, here's to a great winter season so far!

Be sure to watch the Facebook Events page and your email inbox for details about upcoming events! If there's a place you want to go next year, make your preferences known. We'll be marking our calendars at the January meeting. You'll want to be there!

Osage Plains

Casey Burks, Chapter Representative

The Osage Plains chapter was represented at the Octoberfest/Prairie Event 12 Oct at Dr. Morton's prairie north of Cole Camp. Inside the huge tent set up on the prairie, with booths alongside those of the Missouri Prairie Foundation and Hi-Lonesome chapter of the MO Master Naturalists (OP + MOMN members Theresa Cline and Nancy Konkus did double duty), we enjoyed sharing information on plants, and encouraged membership. OP Treasurer Bernie Henehan drove tractor giving people rides around the prairie on a haywagon. This gave people a chance to visit while enjoying native prairie grasses, sedges, flowers. Highlights along the tour were ladies tresses plus getting off the wagon to photograph open and closed purple gentians in small wet areas. President Emily Horner brought dozens of lanceleaf coreopsis to give away and I had fun getting people to taste persimmon cookies. From the MO Master Naturalists booths I learned how to tell the age of a turtle and how to get cordage from hemp dogbane. The MPF group had food and spirits plus live music. Getting to visit with people and camaraderie between organizations makes this a joyous annual event.

We had our Chapter meeting; 21 Oct 6:30pm at Henry County Library Friends Room. Members played "Name That Plant" testing their knowledge on 100 photos. As we go into winter, it's good to have pictures in our heads of the beauty awaiting us next year. During the business meeting our outgoing President Emily Horner was surprised with a gift from the OP members: Steyermark's Flora of Missouri Vol. 3 autographed by author George Yatskievych. Emily has been a wonderful leader and teacher, making long treks to meetings and field trips even after moving to Polo two years ago. OP also honored Jim and Dorothy Harlan with an autographed Steyermark Vol. 3 for their dedication as members, field trip coordinators, sending meeting and trip reports. They are moving to Springfield and we will miss them dearly.

The next Chapter meeting was 18 Nov. Prior to starting our meeting, we met with the Henry County Library Director, Elizabeth Cashell, to present Steyermark's Vol. 3 for the Library. This was a special occasion to honor our longtime member Dale Jennings who passed away last summer. Dale enjoyed having chapter meetings at his home each July for dinner and a wagon ride around his property in Coal to share his passion for native plants. With Memorial money that was dedicated to Osage Plains, it seemed fitting to purchase two of the Vol. 3 books to share with budding botanists: one for the Henry County Library and one for the St. Clair Library in Osceola. Jo Mohr, Larry and Ruth Lewis and other members from that county will do the presentation there. Both Volumes were graciously signed by author George Yatskievych.

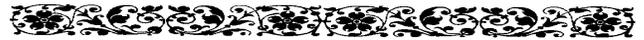
This is our last meeting of the year and, with items for agenda emailed from Emily, we discussed ideas for 2014. One new item: Elizabeth Middleton has a new baby daughter, Corinne Elise!! Congratulations to the Middletons.

[OP Chapter continued]

As part of "craft night" I shared my method for infusing olive oil with plant material (plantain, yarrow, heal-all, Echinacea etc.) to make healing balms. I enjoy learning about and sharing information about common plants that have amazing healing powers. Two guests attended who wanted information on how to turn a large trash pile at a golf course into a native plant garden which made for a fun discussion.

This year has been abundant with flowers which now are abundant with fruits, nuts, seeds. Our freezer is full of persimmon pulp. "What have you found in your persimmon seed?" has been the topic of conversation in several groups. Most everyone has been finding spoons in this area and stacking up extra firewood!

Osage Plains members wish you all a safe and warm winter.

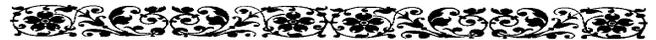


Empire Prairie Chapter (St Joseph)

Submitted by Steve Buback

Six members gathered on a cold Veterans Day November 11 and discussed the intricacies of prairie restoration and starting plants from seed. Most of the discussion focused on techniques of controlling fescue, and working with existing native stock. Some of the difficulties identified involved finding appropriate, local seed source and creating a truly diverse restoration.

We have no meetings scheduled until the Spring.

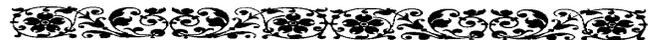


Please Friend us on Facebook



And more information on our website

www.monativeplantsociety.org



Perennis Chapter

Submitted by Allison Vaughn Chapter Representative

No report submitted. Check in with www.semonps.org for any impromptu hikes or outings.



"Go my Sons, burn your books. Buy yourself stout shoes. Get away to the mountains, the valleys, the shores of the seas, the deserts, and the deepest recesses of the Earth. In this way and no other will you find true knowledge of things and their properties."

Peter Severinus, a 16th Century Dane educator.

[BE photo]Page 4

Kansas City

submitted by Hilary Haley, Chapter Representative

A field trip to Jerry Smith Park located near Grandview, Missouri was held in October. Bill Fessler with the Kansas City Missouri Parks and Recreation Department lead the tour through the 360 acre area. Jerry Smith Park maintains a special significance because it contains the only remaining parcel of remnant tallgrass prairie in Jackson County. Our trip began with a walk to one of the two remnant areas, located on the north end of the park. Along the way several beautiful prairie plants were spotted including blue sage, willow-leaved sunflower, grass-leaved goldenrod, and willow-leaved aster. Once we arrived at the first remnant area, the sight of several blooming downy blue gentians interspersed among clumps of little bluestem greeted us. These gorgeous flowers have the deepest blue color found in any prairie plant and are a beautiful sight to see.

After getting our fill of photographs of the gentians, we continued on our walk. John Richter taught everyone a new plant when he found a couple of plants of *Cuphea petiolata* in bloom. This unique plant has opposite leaves, purplish stems, purple blooms, and is covered in a densely glandular pubescence which makes the plant feel very sticky. We arrived back at our vehicles and decided to drive a mile down the road to access the second remnant prairie area located on the east side of the park. Here, we spent thirty minutes searching for the rare *Agalinis auriculata*, or eared false foxglove. Although, we were unable to locate any plants, we were surprised to find two prickly pear plants in a rocky outcropping. With such an easy drive to access the park, I would encourage everyone to plan a trip to experience for themselves the wonderful amount of diversity and breathtaking vistas that Jerry Smith Park has to offer.

Our November meeting included a presentation from Dr. David Ashley, a professor of biology at Missouri Western State University. Dr. Ashley gave a fascinating, in-depth talk on the Eastern and Western prairie fringed orchid populations (*Platanthera leucophaea* and *P. praeclara*) found in northwest Missouri and his research on their phenology and pollination by hawkmoths. Several contributing factors have led to the steep decline in *P. leucophaea* and *P. praeclara* over the last several decades. Among these are habitat fragmentation and degradation, fluctuating climate conditions (including two events of severe drought in the last decade), and decreasing seed production most likely due to decreases in pollinator densities or ineffective pollination activity.

Hawkmoth on native thistle

HH photo



Hawkmoth working a common milkweed
BE Photo



Over the last 18 years, Dr. Ashley has conducted research at various prairies across northwest Missouri to better understand the relationship between the prairie fringed orchids and their pollinators. *P. leucophaea* and *P. praeclara* rely on species of hawkmoths for pollination.

Hawkmoths are specially designed to fit the shape of the orchid flowers they visit. Their long proboscis makes it possible to drink nectar from the long nectar spurs, while they simultaneously collect and transfer orchid pollinia on their heads. However, the length of proboscis matters very much to the prairie fringed orchid. A proboscis that is too long allows the pollinator to take nectar without collecting the pollinia and thus robs the plant of valuable resources.

To determine the rate of successful pollination events in populations of *P. leucophaea* and *P. praeclara*, Dr. Ashley and others have tried observing and recording pollinating events by hawkmoths. This, however, is much more difficult than it seems. These night flying moths are tremendously fast as they buzz from flower to flower gathering nectar making it next to impossible to gather actual proof of pollination. As such, the rate of pollination success is often determined by measuring the rate of seed set in populations of orchids. Dr. Ashley has also implored other methods to determine pollination rates, including painting orchid flowers with differently colored dyes and using high speed cameras. The information gathered by these efforts help us to better understand the specific needs of these orchids and greatly enhances our ability to protect them and the habitats they rely on to survive.



BE A CITIZEN SCIENTIST

Please sign up for Bud Burst and Monarch Watch.

Keep a calendar, or diary, or "list" of when you see plants emerging, when you see trees blooming or leaves erupting, when seeds are ripe. All the instructions are on the Bud burst web site. The site starts by asking you about common garden plants, but you can add anything you want.

If you also enjoy birds and herps and Monarchs, there are citizen scientist data reporting sites for frog calls and for bird counts all year around. Start by looking at the Cornell Ornithology website and the MDC website. Monarch Watch will give you the parameters for Monarch assistance and data reporting.

Ozark Chapter

Submitted by Liz Olson, Chapter Representative

At the October meeting, the Ozark Chapter members voted to purchase two copies of the Flora of Missouri Volume 3. One copy was donated to the West Plains Public Library and the other was donated to Garnett Library of the Missouri State University, West Plains Campus.

Our October meeting featured a visit from Flora of Missouri author George Yatskievych. His presentation began with a fascinating look at the history of botanical exploration in Missouri, the oldest surviving records being from the early 1800s. The foundations of our botanical knowledge were laid down by dedicated botanists such as George Engelmann, Ernest Jesse Palmer, and of course Julian Steyermark. The updated and expanded three volume Flora is a significant contribution that took about 15 years and is over 3000 pages combined.

New plant species continue to be discovered; our state's native plant species richness has more than doubled since Steyermark first published his Flora of Missouri in 1963 – from a count of 1897 species to 2126 species. While it's exciting to consider new discoveries, tragically, 488 (over 20%) of our native plant species are currently “species of conservation concern” which are threatened by a myriad of causes such as habitat destruction and changing climate. George described other aspects of the Flora of Missouri project, such as digitizing the botanical specimens on the Botanical Garden's Tropicos website.

The presentation concluded with a call to go forth and botanize! Many counties in Missouri are woefully under-collected. Additionally, there are 54 species that are historically known from Missouri, but have not been seen or collected in the last 25 years, including *Rubus satiss*, *Fraxinus biltmoreana*, and *Pteridium aquilinum* var. *pseudocaudatum*.

In November, we hosted Steve Bost, Naturalist at Montauk State Park and founder of the Ozark Chinquapin Foundation. Steve has devoted years to restoring the native Ozark chinquapin (*Castanea ozarkensis*) -- a project that some at first called a ghost hunt. Ozark chinquapin is related to the American Chestnut and the Allegheny Chinquapin, but has unique genetic signatures that set it apart. Once a keystone species, it suffered the same terrible fate as the American Chestnut when the non-native Chestnut blight swept through North America. Resistant and reproductive Ozark chinquapins have now been found in southwest Missouri, Alabama, Arkansas, Mississippi, and east Texas. The Foundation's Recovery Action Plan is working to cross pollinate these and oversees research plantings of seedlings to preserve this 'Ozark treasure.' Steve surprised us with a taste of Ozark chinquapin nuts – they were deliciously sweet and reminiscent of macadamia nuts. Please visit the website www.ozarkchinquapin.com to learn more.

Stillness

Submitted by Becky Erickson

6 am BBBBRRrrrrrrrring!. OMG there it is!! The start of every day. NO! yes. Dress. Eat. Go. Get there. Do that. Lunch with her. Meeting with him. Proposal for them. Shopping for this and that. Watch the clock. Go-go-go.

Can I get out of here NOW? Do I have time? One hour of daylight. One hour before I need to be home to get dinner together.

There it is! The exit! The exit from the rat race. The entrance to stillness. The entrance to find who I am; where I am; why I am. Park the car. Walk 50 paces into the wild space. Sit. What?

Everything

Everything that is important.

Stillness is the first sensation. Empty your mind. Release the day. Release the relationships. Release the body. Close your eyes. Listen. Listen harder. Oh!

CCHHEEEEE. CHI CHI chi chi. Ripriprp. Whhhhhllllllll. CAW-CAW-CAW. Wind which no phonetics can express. Crunch of falling leaves and acorns.

Then with eyes open > What moved!?! There it is. Oh yes.

Look between your feet; what is that little green thing? Why do those over there still have green leaves?

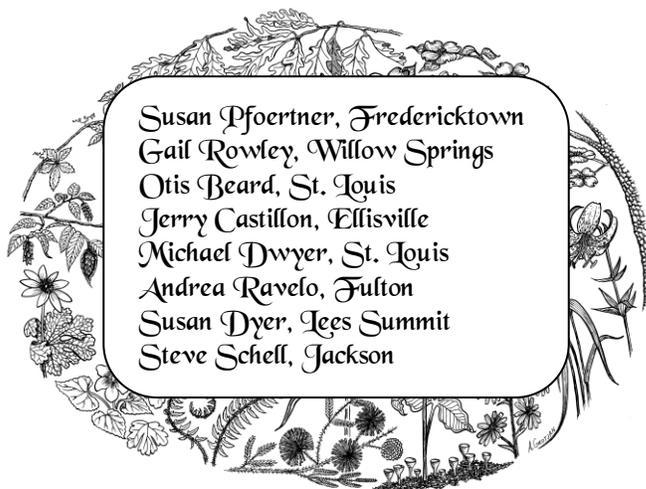
Your interpretation and recognition is your own. Your experience is your own. That you had the experience is important to you and to your education about what life really is here on this tiny spot in the Universe. **Then to the education of the next generation.** When you have had many of these experiences you may share them and teach them. Doug Talamy, Aldo Leopold, Enos Mills, Walden and a host of others have nothing on you except **time and focus.**

Just Do It!

Then share it; teach it at least to one person.



Welcome to New Members!



Kansas City

7 Jan Tuesday 7pm Chapter annual planning meeting at the MDC Discovery Center. All are welcome to attend and bring ideas for field trips for 2014. Thank you!

Hawthorn

For folks interested in hiking and wildflower sightings around the state, See chapter newsletter for details; also available on www.columbianativeplants.org Otherwise you are encouraged to participate in outings with other MONPS chapters and MPF.

13 Jan Monday Membership Meeting, 6 PM Unitarian Universalist Church, 2615 Shepard Blvd. This is a planning meeting for 2014. And we need to elect a new president.

16 Jan Thurs: Lunch with Native Plant Enthusiasts, 11:30 at RagTag, 10 Hitt St [Just south of Broadway]. Informal exchange of ideas and information.

20 Feb Thurs: Lunch with Native Plant Enthusiasts, 11:30 at RagTag,

Perennis

Winter activities are weather dependent. For more information, weather restrictions, rescheduling visit <http://www.semonps.org> or contact Allison at allisonjv@yahoo.com

Empire Prairie

We have no meetings scheduled until the Spring.

Ozark

The Ozark Chapter meets at 6:30 pm on the third Tuesday of each month at the Missouri Department of Conservation, Ozark Regional Office, 551 Joe Jones Blvd, West Plains, MO 65775. The Ozark Chapter does not meet during December and January.

18 Feb: Matthew Olson, Silviculturist with the Department of Conservation, will present an overview of the Missouri Ozark Forest Ecosystem Project (MOFEP). This large scale ecological research project is in Shannon, Carter, and Reynolds counties, and encompasses forestry, botanical, wildlife, and soil nutrient studies.

St Louis

Chapter meetings are held on the fourth Wednesday of the month at the Sunset Hills Community Center, 3915 South Lindbergh Blvd., Sunset Hills, MO 63127. Google Map: <http://goo.gl/maps/K3PR>

22 Jan 7:30 PM Speaker and Topic to be announced

26 Feb 7:30 PM:Speaker and Topic to be announced

Southwest

Greene Co Botanical Center, Spgfld, 4th Tuesday, 6pm

28 Jan Tue 6pm: Master Naturalist Bob Kipfer will talk about black bears in Missouri.

25 Feb Tue 6pm: Dr. Chris Barnhart, Missouri State University, will talk about the emerald ash borer in Missouri and elsewhere.

Tue 25 March 6pm: Topic TBD.

Tue 22 April 6pm: Topic TBD.

Osage Plains

Regularly Scheduled Chapter meetings are held the 3rd Monday of each month, 6:30pm, at the Henry Co. Library, Clinton. No December 2013 or January 2014 meeting.

Starting February 2014, regularly scheduled meetings will be changing from the 3rd Monday to the 4th

Monday and Elizabeth Middleton will be transitioning in as Chapter President.

Contact Bernie Henehan berniehenehan@me.com or Dan Henehan danhenehan@embarqmail.com for trip information.

President is Emily Horner emily.horner3@yahoo.com;

Chapter Rep Casey Burks mobugwoman@gmail.com

Frost Flowers

Submitted by Ann Wakeman

The formation of frost flowers is dependent on freezing weather occurring when the ground is not yet frozen. The sap in the stem of the plants expands (water expands when frozen), causing long, thin cracks to form along the length of the stem. Water is then drawn through these cracks via capillary action and freezes upon contact with the air. As more water is drawn through the cracks it pushes the thin ice layers further from the stem, causing a thin "petal" to form.

The petals of frost flowers are very delicate and will break when touched. They usually melt or sublimate when exposed to sunlight and are usually visible in the early morning or in shaded areas.

Plants that often form frost flowers are dittany (*Cunila organoides*), white crownbeard commonly called frostweed (*Verbesina virginica*), yellow ironweed (*Verbesina alternifolia*), and *Helianthemum canadense*.



AW photo
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<p>Missouri Native Plant Society Quarterly Meeting, 15 June 2013 Bank of Salem, Salem, MO Respectfully submitted by Casey Burks Secretary</p>	<p>In attendance: Brian Edmond Paul McKenzie John Oliver George Yatskievych Rex Hill Martha Hill Michele Bowe Malissa Underwood</p>	<p>Casey Burks Theresa Cline Hilary Haley Bruce Schuette Allison Vaughn Ann Wakeman Mike Ruse Bob Siemer Ann Earley</p>	<p>Wayne Morton Wayne Clark Nancy Clark Burton Noll Justin Thomas Dana Thomas Becky Erickson Bill Knight</p>
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****Please note update regarding awards presented by PM**

At 7:45, with a quorum present, the meeting was called to order by President Paul McKenzie (PM).

The agenda was approved.

John Oliver (JO) volunteered to be the assignment recorder.

A motion to approve the minutes of the April 13, 2013 board meeting held at Jane, MO was made by Rex Hill (RH), seconded by Bruce Schuette, and passed.

Treasurers Report: Bob Siemer submitted the report via e-mail, and read the report. Donations to the Hudson Fund were in the report. \$400+ donated from the native plant sale at Shaw Reserve.

A motion to award Casey Galvin lifetime membership was made by George Yatskievych(GY), seconded by Rex Hill and approved.

PUBLICAIONS & MEDIA

- Petal Pusher report: Becky Erickson submitted request that the PP be sent out to everyone who has an email address. Discussion followed on how to most effectively implement this possibility in the future. One method would be to send both a paper PP plus an electronic PP to everyone with an email address then request information on member preference.
- Distribution Chairman Report: Bill Knight said it costs approximately \$2,000 per year to print and mail the Petal Pusher.
- Publicity Chairman Report: Kevin Bley was unable to make the meeting. JO related that Kevin would welcome someone else taking over the position. Discussion followed and raised the possibility this position could be rolled into Website and Social Media. Also, the Blazing Star Award may need to be re-assigned. Topic tabled until next meeting.
- MONPS Website and Social Media Report: Brian Edmond (BE) reminded us that ‘monps.com’ hasn’t been bought yet and also ‘monps.org’ doesn’t belong to us but someday may become available to buy back. The current domain ‘missourinativeplantsociety.org’ was renewed by David Winn, and is ours until April 2014. {Reimbursement to David for the renewal expense was approved in the April meeting. }
- JO reported our Facebook page has 50 new members. He sees large benefits to our organization in free publicity, education and outreach. The page is especially useful for keeping information updated on state meetings and field trips. He is alert for evidence of spam.
- Missouriensis Report: as reported in previous minutes, GY is working on articles for replacing space allocated for bryophytes.
- GY reported that Steyermark’s Flora of Missouri Vol. 3 by George Yatskievych, has been submitted to the printer and should be available by this fall.

COMMITTEES & TASK FORCES

Membership Report: Ann Early reported that we have 14 new members making a total of 331.

Hudson Fund: GY led further discussion regarding the single applicant for the \$1000 award. Need to see if information is posted on our website and facebook with reminders in November that deadline is approaching (mid December). Goal is to reach Missouri students especially interested in Botany. The amount of \$1000 was left status quo.

****Awards Committee: President Paul McKenzie presented Award plaques to Justin Thomas (Arthur Christ Research Award), Rex and Martha Hill (John E. Wylie Award), and the Erna Eisendrath Memorial Award to Jim and Dorothy Harlan who were not able to attend and will receive their award at their branch meeting. The 2013 Awards Committee members were Malissa Underwood (Chair), Emily Horner and Jack Harris. The full report is available in the September/October 2013 issue of the Petal Pusher authored by Malissa Underwood.**

ITEMS OF SOCIETY BUSINESS

- GY reported the supply of t-shirts was dwindling and it may be time for another printing. Need information on other possible colors that Paul Nelson might approve plus cost of printing on sweatshirts. Allison Vaughn volunteered to contact Paul and the printing company.
- PM read letter from Steve Buback (SB) officially requesting establishment of an active chapter in St. Joseph, MO. New chapter criteria were listed and have been met. Several new members joined MONPS, however, at present, St. Joseph chapter dues will be waived.
- **A motion to approve the establishment of the St. Joseph chapter was made by Rex Hill (RH), seconded by JO, and passed.**
- Wildflower Poster report: Emily Horner (EH) was not able to be at the meeting, but a printed copy of the poster was reviewed. The brochure will be available at rest areas throughout Missouri, courtesy of MODOT. Work by Emily and her committee was applauded and it is something all MONPS members can be proud of. It cannot be sold. Of the 10,000 copies that MODOT plans to print, MONPS will request 1000 folded and 1000 unfolded for those who wish to frame it.

CHAPTER REPORTS: The report from each chapter will be published in the Petal Pusher.

PM thanked Justin and Dana Thomas for their kind hospitality on Friday . He suggested that the Society reimburse them \$100 for food they supplied at their potluck. **A motion was made by Bruce Schuette, seconded by GY, and approved.**

UPCOMING MEETINGS AND FIELD TRIPS

MONPS Fall meeting September 20-22. Latest information will be available on Facebook and website.

MONPS Winter meeting December 7th at University of Missouri Herbarium.

MISCELLANEOUS ANNOUNCEMENTS

Legume Workshop at Meramec: GY reported there will be 3 class sessions (Oct. 2nd, 9th, and 16th) plus 1 Saturday field trip (Oct 12th). JO will work on a response to the Department of Conservation regarding Patch Burn Grazing and submit a draft to the board.

JO reviewed assignments/commitments:

1. BE and JO will put the Hudson award announcement online on the MONPS website.
2. AV will research options for reprinting the orchid t-shirt including alternate colors and also the cost/shirt for sweatshirts.
3. GY will contact SB to inform him that the board accepts the application and welcomes the new St. Joseph chapter.
4. MU will inform EH that we request 1000 folded and 1000 unfolded wildflower posters.
5. JO will write a response to the MDC letter on Patch-Burn grazing. A draft will be submitted to the Board.

At 9:34pm **a motion to adjourn was made by PM, seconded by BS, and passed.**

Change screen time to green time. Get out, explore, learn firsthand.

Missouri Native Plant Society Quarterly Meeting, 20 September 2013 Callaway Electric Coop Meeting Room, Fulton MO Respectfully submitted by Casey Burks Secretary	In attendance: Brian Edmond (BEd) Michele Bowe (MB) Paul McKenzie (PM) John Oliver (JO) George Yatskievych (GY)	Rex Hill (RH) Martha Hill (MH) Casey Burks (CB) Liz Olson (LO) Theresa Cline (TC) Nels Holmberg (NH) Bruce Schuette (BSch)	Scott Lenharth (SL) Robin Kennedy (RK) Becky Erickson (BER) Ann Wakeman (AW) Bob Siemer (BSie) Ann Earley (AE) Bill Knight (BK)
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At 7:15, with a quorum present, the meeting was called to order by President Paul McKenzie (PM).

The agenda was approved.

John Oliver (JO) volunteered to be the assignment recorder.

Minutes of the June 15, 2013 board meeting held at Salem, MO passed with a request to the secretary that the Awards presented at the Annual Meeting in Salem be added to the minutes. Reference September-October 2013 PP for full article by Malissa Underwood, Awards Committee Chair.

Treasurer Bob Siemer (BSie) reported balance of \$2800 but expenses for the Missouriensis haven't been submitted for this calendar year. Expectations are this expense will be submitted in 2014. Biggest expense is the Petal Pusher. Donation income: \$80 from membership chair (AE) and \$20 from Osage Plains chapter (Dale Jennings memorial).

PUBLICATIONS & MEDIA

- Petal Pusher report: Publisher BER had complaint regarding PP content but nothing of substance. PM gave praise to BER for doing a good job and requested if anyone has a question about content to contact him first. Slow implementation of switching people to receiving the PP by E-mail will begin starting with information in the next PP. Both the paper PP and an E-mailed PP will be sent out with a request that members let BER know if they want to receive only the electronic version. Chapter Reps asked to relay the information to branch members. Topic of possible extra charge for members continuing to receive the printed PP will be revisited at later date.
- BSie inquired if BER had procedure for ceasing sending the PP to people who had stopped paying their dues. BER said anyone not paying their dues by the end of December is deleted.
- BSie raised the question regarding institutions that receive the printed PP for free. Discussion followed on paying first class postage vs. E-mail to institutions revolving around question would E-mailed PP be available/useful to students and faculty as much as paper copies? AE will submit a list of institutions receiving the printed PP.
- RH asked for directions to the Herbarium be included in the next PP to aid people driving to the December 7 meeting.
- GY suggested the PP article on the Awards be used for last meeting's minutes. (Secretary will amend and re-send minutes from Salem).
- Distribution Chairman Report: BK outlined annual cost of approximately \$2,000 per year to print and mail the Petal Pusher. This involves 150 lbs of paper, ink, 1100 miles travel for BK and BSie. Expenses for printing/mailing the Missouriensis are separate/additional.
- Publicity Chairman Report: Kevin Bley was unable to make the meeting. RH led discussion of the Coneflower award and noted that one application was received. RH and JO volunteered to review the application and respond.
- MONPS Website and Social Media Report: Brian Edmond (BEd) related recent difficulties with MONPS website. BEd and JO are working to rectify various issues but the best solution may be to get a completely new site. www.missourinativeplantsociety.com is available (\$15/year). They will go ahead and secure this. BEd also noted that for \$24 per month it's possible to have a website with E-commerce which would enable us to sell items such as t-shirts.

- Missouriensis Report: GY reported John Atwood's article is in review.

COMMITTEES & TASK FORCES

- Membership Report: Ann Early (AE) reported that we have 10 new members including 1 life member. This brings total membership to 340 which includes 58 life members.
- Awards Committee for 2014 Michelle Bowe (MB), Rex Hill (RH) and Casey Burks (CB) volunteered to be on committee. MB will chair. Board will approve expenditures for plaques. Committee will decide who gets which award with board approval if necessary.
- Social Media Committee: BEd, MB Facebook has over 400 members and new members are joining every day. Brings value through input: ie gas plant found on public land.

SOCIETY BUSINESS

- Discussion of possible new award category tabled since Jack not able to attend.
- MONPS website BEd will move forward to obtain missourinativeplantsociety.com The Society needs to have administrative control of the Domain and ISP.
- Brochures will need to be reprinted to include new information on Empire chapter in St. Joe. GY asked if anyone needs more of current brochures. Let him know how many and he will mail.
- Re-Order of T-Shirts with new color possible. Paul Nelson OKed request for new color to be used with his orchid design. More information to come on cost, size numbers, possible sweatshirts. AV not able to attend.
- Legume workshop may be rescheduled for next fall. Classes at Meramec CC are scheduled for spring and summer. Nels may give Bryophyte workshop. GY, NH et al
- Wildflower posters still on hold but MoDOT is in charge of printing. EH reported they may not be available until late December. Eventually will be distributed free to rest stops and also will be available free to MoMPS (we've requested 2000).
- MONPS comments on Patch Burn Grazing (PBG) and Grassland Management: We have no input (comments) to Missouri Department of Conservation (MDC) yet. There is also a Forest Management plan. JO will work up a response draft and submit to board for additions/corrections. The MDC continues to insist on using PBG on natural areas. This is contrary to our recommendation as well as the recommendation of the Missouri Natural Areas Committee which is composed of several different organizations. RH wonders why they need PBG in these natural areas?

CHAPTER REPORTS Note: full reports from each chapter are published in the Petal Pusher.

Hawthorn: AW; Kansas City: Hilary Haley; St. Louis: RH; Osage Plains: CB; Ozark: LO; Perennis: Allison Vaughn; Southwest Missouri: Bed; Empire (St. Joe): Steve Buback

UPCOMING MEETINGS AND FIELD TRIPS

MONPS Winter meeting December 7th at University of Missouri Herbarium. Future meetings and field trips planning. PM et al.

MISCELLANEOUS ANNOUNCEMENTS

December distribution of the Petal Pusher will be delayed in order to include Spring, Summer, and Fall meetings and field trip locations decided at the December 7th planning session.

Octoberfest/Prairie days Oct 12th by Cole Camp on Dr Morton's Prairie. In conjunction with Hi-Lonesome chapter of Mo Master Naturalists and the MPF.

ASSIGNMENTS/COMMITMENTS REVIEW

- JO: continue work on response to the MDC regarding Patch Burn Grazing and submit a draft to the board. JO asks for input to strengthen argument that PBG leads to degradation of diversity on high quality natural areas so they won't be used.
- AE: info on institutions receiving free PP
- AV: info on T-shirt, sweatshirt printing cost.
- Jack: info on possible new award
- Awards committee: submit information to PP regarding various awards.
- BEd: secure missourinativeplantsociety.com website and be the ISP of it.
- JO: contact David Winn and ask him to relinquish his control of current website.

At 9:24pm a motion to adjourn was made by Robin Kennedy, seconded by BSch, and passed.

The Year the Monarch Didn't Appear

A version of this news analysis appears in print on November 24, 2013, on page SR9 of the New York edition with the headline: **The Year The Monarch Didn't Appear.** Jim Robbins is a frequent contributor to The New York Times and the [author](#) of "The Man Who Planted Trees." Illustration by Micah Lidberg

By **[JIM ROBBINS](#)**

Published: November 22, 2013

ON the first of November, when Mexicans celebrate a holiday called the Day of the Dead, some also celebrate the millions of monarch butterflies that, without fail, fly to the

mountainous fir forests of central Mexico on that day. They are believed to be souls of the dead, returned.

This year, for the first time in memory, the monarch butterflies didn't come, at least not on the Day of the Dead. They began to straggle in a week later than usual, in record-low numbers. Last year's low of 60 million now seems great compared with the fewer than three million that have shown up so far this year. Some experts fear that the spectacular migration could be near collapse.

"It does not look good," said Lincoln P. Brower, a monarch expert at Sweet Briar College.

It is only the latest bad news about the dramatic decline of insect populations. [MONARCHS cont on page 11]

[MONARCHS continued]

Another insect in serious trouble is the wild bee, which has thousands of species. Nicotine-based pesticides called neonicotinoids are implicated in their decline, but even if they were no longer used, experts say, bees, monarchs and many other species of insect would still be in serious trouble.

That's because of another major factor that has not been widely recognized: the precipitous loss of native vegetation across the United States.

"There's no question that the loss of habitat is huge," said Douglas Tallamy, a professor of entomology at the University of Delaware, who has long warned of the perils of disappearing insects. "We notice the monarch and bees because they are iconic



insects," he said. "But what do you think is happening to everything else?"

A big part of it is the way the United States farms. As the price of corn has soared in recent years, driven by federal subsidies for biofuels, farmers have expanded their fields. That has meant plowing every scrap of earth that can grow a corn plant, including millions of acres of land once reserved in a federal program for conservation purposes.

Another major cause is farming with Roundup, a herbicide that kills virtually all plants except crops that are genetically modified to survive it.

As a result, millions of acres of native plants, especially milkweed, an important source of nectar for many species, and vital for monarch butterfly larvae, have been wiped out. One [study](#) showed that Iowa has lost almost 60 percent of its milkweed, and [another](#) found 90 percent was gone. "The agricultural landscape has been sterilized," said Dr. Brower. #The loss of bugs is no small matter. Insects help stitch together the web of life with essential services, breaking plants down into organic matter, for example, and dispersing seeds. They are a prime source of food for birds. Critically, some 80 percent of our food crops are pollinated by insects, primarily the 4,000 or so species of the flying dust mops called bees. "All of them are in trouble," said Marla Spivak, a professor of apiculture at the University of Minnesota.

Farm fields are not the only problem. Around the world people have replaced diverse natural habitat with the biological deserts that are roads, parking lots and bluegrass lawns.

Meanwhile, the plants people choose for their yards are appealing for showy colors or shapes, not for their ecological role. Studies show that native oak trees in the mid-Atlantic states host as many as 537 species of caterpillars, which are important food for birds and other insects. Willows come in second with 456 species. Ginkgo, on the other hand, which is not native, supports three species, and zelkova, an exotic plant used to replace elm trees that died from disease, supports none. So the shelves are nearly bare for bugs and birds.

Native trees are not only grocery stores, but insect pharmacies as well. Trees and other plants have beneficial chemicals essential to the health of bugs. Some monarchs, when afflicted with parasites, seek out more toxic types of milkweed because they kill the parasites. Bees use medicinal resins from aspen and willow trees that are antifungal, antimicrobial and antiviral, to line their nests and to fight infection and diseases. "Bees scrape off the resins from the leaves, which is kind of awesome, stick them on their back legs and take them home," said Dr. Spivak.

Besides pesticides and lack of habitat, the other big problem bees face is disease. But these problems are not separate. "Say you have a bee with viruses," and they are run-down, Dr. Spivak said. "And they are in a food desert and have to fly a long distance, and when you find food it has complicated neurotoxins and the immune system just goes 'uh-uh.' Or they become disoriented and can't find their way home. It's too many stressors all at once."

There are numerous organizations and individuals dedicated to rebuilding native plant communities one sterile lawn and farm field at a time. Dr. Tallamy, a longtime evangelizer for native plants, and the author of one of the movement's manuals, "Bringing Nature Home," says it's a cause everyone with a garden or yard can serve. And he says support for it needs to develop quickly to slow down the worsening crisis in biodiversity.

When the Florida Department of Transportation last year mowed down roadside wildflowers where monarch butterflies fed on their epic migratory journey, "there was a huge outcry," said Eleanor Dietrich, a wildflower activist in Florida. So much so, transportation officials created a new policy that left critical insect habitat un-mowed.

That means reversing the hegemony of chemically green lawns. "If you've got just lawn grass, you've got nothing," said Mace Vaughan of the Xerces Society, a leading organization in insect conservation. "But as soon as you create a front yard wildflower meadow you go from an occasional honeybee to a lawn that might be full of 20 or 30 species of bees and butterflies and monarchs."

First and foremost, said Dr. Tallamy, a home for bugs is a matter of food security. "If the bees were to truly disappear, we would lose 80 percent of the plants," he said. "That is not an option. That's a huge problem for mankind."



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It is wrong when it tends otherwise." Aldo Leopold**

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