

July – August 2014

NEWSLETTER OF THE MISSOURI NATIVE PLANT SOCIETY

Volume 29 No.4

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

**ANNOUNCEMENTS**

**For email recipients: there is still time to make motel reservations for the MONPS quarterly fieldtrip weekend centered at Bethany MO. Field trips to Dunn Ranch, Pawnee Prairie, Lowery Marsh, and Helton Prairie. See your May PP for ALL the details. You can also find them on the MONPS website = [www.monativeplantsociety.org](http://www.monativeplantsociety.org) . See also the Google Map Page for this event which is self-updating: <http://goo.gl/maps/p1d4m>**

**Information on events and lodging for the MONPS meeting June 13-15, 2014**

**Check the websites and Facebook page for updated information and maps to the field trip locations.**

***Dues are Due***

*By Ann Earley, Membership Chair*

Membership renewals for the July 2014-June 2015 year are due. If you receive your newsletter by postal service delivery, please check the top line of your mailing label. If it shows the date 20140630, your dues are now payable. When renewing, please remember to include your contact information including email address, and your society and chapter dues preferences. Cut the renewal form from the bottom of this page.

If you prefer to get your Petal Pusher by email with color photos, please indicate that preference to Ann [membership] on your renewal form and email Becky [PP editor [beckyerick711@centurylink.net](mailto:beckyerick711@centurylink.net) ] with your request.

For those members receiving their newsletter by email without a mailing label, or for others with questions about their membership status, please contact me or your chapter representative (see back page for contact details) for information about your membership expiration date. **We value our members and urge you to renew today!** If you know you renew every year, simply highlight and print the membership form at the bottom of the page.



*If you would prefer to not bother with annual renewal, we invite you to become a Life Member.*

[This notice will be repeated in September.]

**Information on joining Missouri Native Plant Society**

**Society Dues**

Circle all that apply	}	Columbia = \$6
Chapter dues additional		Kansas City = 5
Student = \$5		Osage Plains = 5
Regular = 10		Ozarks = 5
Contributing = 20		Southwest = 5
Life = 200		Perennis = 5
		St Louis = 5
	Empire Prairie 5	

Contribution to Hudson Grant Fund \_\$ \_\_\_\_\_

\*\*All contributions are tax deductible\*\*

Please mark here if you want PetalPusher and appropriate announcements by email. Include email address > > >

Make checks payable to **MO Native Plant Society**

Mail to: Missouri Native Plant Society  
PO BOX 440353  
ST. Louis MO 63144-4353

Name \_\_\_\_\_

Address \_\_\_\_\_

9-digit zip \_\_\_\_\_

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

Phone \_\_\_\_\_

**Email** \_\_\_\_\_

Reprinted for your immediate convenience. Also consult travel sites on line.

## Motels in the Bethany area:

Prices shown are the lowest available online. Note: "Advance Purchase" rates are billed when booked and are not refundable.

### Super 8 Bethany [\[Google Local Info\]](#)

811 S 38th St, Bethany, MO  
Phone: (660) 425-8881 Fax: (660) 425-8099  
Website: [super8.com](http://super8.com)

Advance Purchase (online): \$50.90/night (Single or Double)

GPS: 40.262553, -94.014837 or 40°15'45.2"N 94°00'53.4"W"

### Comfort Inn Bethany [\[Google Local Info\]](#)

496 South 39th Street, Bethany, MO 64424  
Phone: (660) 425-8006 Fax: (660) 425-8010  
Website: [comfortinn.com](http://comfortinn.com)

Advance Purchase (online): \$59.99/night (Single or Double)

GPS: 40.267150, -94.014285 or 40°16'01.7"N 94°00'51.4"W

### Family Budget Inn Bethany [\[Google Local Info\]](#)

4014 Miller Street, Bethany, MO 64424  
Phone: (660) 425-7915 Fax: (660) 425-3697  
[familybudgetinnmotel.com](http://familybudgetinnmotel.com)

Senior or AAA rate: \$46.76/night (Single or Double)

GPS: 40.264305, -94.011277 or 40°15'51.5"N 94°00'40.6"W

#### Camping is available at:

- Crowder State Park (31.6 miles from Bethany) [Central Reservation System](#)
- [Eagle Ridge RV Park](#) (13.0 miles from Bethany; \$20/night for tents)
- [Grant Trace Conservation Area](#) (8.0 miles from Bethany; 4 primitive campsites)

## Income Mechanism for MONPS: AmazonSmile

*Submitted by Bill Knight*

[Ed note: When I saw this discussion on the BOD email account – the idea was all new to me. So I asked Bill for some clarifying information. To get more answers contact [knight-bill@sbglobal.net](mailto:knight-bill@sbglobal.net). My questions were: Please write an explanation of what it is, how it works [how we use it], and why we need it. These are the main questions MONPS membership will ask.]

Thank you for letting me explain this, Becky, because I think it will be a good thing for MONPS. It will increase our bank account while costing donors zero.

Here are the answers to your questions:

AmazonSmile is a program Amazon.com has for giving an amount of money equal to 0.5% of the amount of an individual customer's pre-tax purchases to a registered charity of that individual's choice. In other words, for every \$100.00 spent, 50 cents goes to the charity.

All a member needs to do is shop at AmazonSmile, which is in all other ways the same as Amazon, and designate the charity of their choice--Missouri Native Plant Society. (I think they call us Missouri Native Plant Society, Inc., but that is us). There is no cost increase to the customer for doing this.

Each quarter of the year, Amazon will deposit the accumulated funds into the registered charity's bank account to be used however the charity sees fit.

If someone has more than one charity they wish to support this way, it is easily done by changing the designated charity

## Welcome to New Members!



after they go to AmazonSmile, and they can do this as often as they want.

We will have to register with Amazon, and have an administrator account. Either the treasurer or I can do that.

For more details on how this works, go to Amazon.com. There is also an article on the web from USAToday explaining it.

## Turn screen time to green time. Get outside!!

### St Louis Chapter

*Submitted by Rex Hill, Chapter Representative*

In April, Richard Abbott of the Missouri Botanical Garden gave another presentation on plant ID. Unfortunately, Martha and I were on the road and missed it. I'm sure it was great, as Richard has a top-down approach to identification starting with characters that identify a plant at the order level and then he moves down to family and species ID.

Last night, our May 28th meeting had John Brinda, a post-doctoral Fellow at MOBOT as the speaker. John, an avid long distance hiker, as well as an accomplished bryologist, talked about three of his recent activities in his professional field. His interests in ecology of bryophyte habitats was apparent from his discussion about where to look for them in a somewhat harsh southwestern desert environment. His degree from UNLV led him to work on bryophyte checklists for the state of Nevada as well as one for the Grand Canyon – Parashant National Monument in northwestern Arizona.

Another of his adventures took him on a bryophyte collecting trip to the Cape Horn region in southernmost Chile with a decidedly different set of environmental conditions from his desert experiences. John, by the way, was the first person to complete the section of what is known as the International Appalachian Trail (IAT) which currently connects the northern terminus of the AT in Maine to the northern tip of the Gaspé Peninsula in Quebec, Canada. He did this as part of a nine-month thru-hike from Key West, Florida to Quebec, including the entire Appalachian Trail as just part of the hike. I'm sure that trip prepared him for the range of conditions he has had to face in his collecting expeditions.

Currently, his responsibilities at MOBOT are associated with an NSF project whose goal is to digitize and database over 2.3 million lichen and bryophyte specimens from 60 herbaria, making this data useful and available to anyone in the scientific or planning sector. Hopefully from this data, questions such as: "How are changes in distribution patterns of lichens and bryophytes over time correlated with man-made environmental changes?" or "How accurately can we predict where specific species can be found using existing herbarium data?" could be answered. This data is being amassed using the rather new technique called 'crowdsourcing' where volunteers are transcribing the handwritten information from bryophyte labels to complete an automatically (OCR) prepared partial version of the label.

### Hawthorn Chapter

*Submitted by Boyd Terry Secretary and Becky Erickson*

Earth Day organizers in Columbia used their rain date of Sun 4 May due to a storm the week before. Hawthorn teamed with the Columbia Wild Ones chapter for a large booth where we informed people about native habitat loss and the plight of Monarchs. We sold nearly 300 milkweed and nectar plants.

Hawthorn Chapter membership meeting was called to order about 7 pm Mon 14 May. Nadia Navarette-Tindall introduced Bill Ambrose, DDS to report upon his passionate restoration of glades on the Double-T Farm near St. Elizabeth Mo. located approximately 17 miles south of Jefferson City. He presented with passionate enthusiasm the history of the degradation of the Ozark Glade and the demonstrated recovery with cedar removal, burning, and reseeded with 40+ native plant species. The result was a clean, clear creek with recovery of the breeding Niangua Darter and also the Eastern Collared Lizard. The specific recovery of stream from erosive uncontrolled runoff was impressive.

Pictures expressed more than words the progressive loss of vegetation to pig grazing, loss of topsoil, then cedar growth preventing native plant growth, then progressive erosion and stream contamination and loss of banks and aquatic habitat.

The transformation after his labor intensive actions and controlled burns with reseeded (no chemicals or fertilizer) was spectacular. The dolomite residue though appearing bleak and sterile has important elements with 3+cation capacity to allow natural recovery.

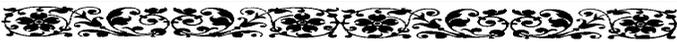
All are invited on Sat 21 June to a demonstration and picnic at Ambrose's TT Farm to benefit the Missouri Prairie Foundation 4:00 to 7:00 pm. See MPF flyer or Facebook page to make reservations.

Bill stressed the importance of periodic burns (every 3-4 years). He referred to *USGS paper 2484* by Robert Jacobsen, and *Sediment In Streams* by Thomas Watts plus calling [217-581-7550](tel:217-581-7550) to ask for Doug Ladds article #5.

His approach is backed by the above articles and differs from some current opinions.

Bill's message--"we caused this devastation and we need to reclaim the ability to perpetuate native plants and purify our water in so doing."

There were 15 present with one visitor, John Valpin of Columbia. Business was conducted by Pres. Denny Donnell. The last treasurer's report was approved reflecting earnings from recent native plant sales. Calendar of events was reviewed with a change in scheduled visit to the Terry farm and trails from June 15 to June 7, 10:00 am. A slide show showing the progression of Adam and Eve orchid to full bloom was shown from the Terry farm. Other activities will be reviewed in the newsletter. Next meeting will be July 14, at 7:00 pm. in the Unitarian Church.



## Osage Plains

*Casey Burks, Chapter Representative*

**April 5<sup>th</sup>: Field Trip to Dave Rock CA** in St. Clair Co. with members of the Kansas City Chapter. This is an intriguing glade with 44 acres of gigantic sandstone outcroppings making a diversity of adapted plants from prickly pear cactus to reindeer moss (lichen). Water running over the rock from the hill creates boggy areas where people of the KC chapter discovered an unusual mugwort. Skeletons of large fossil plants can be seen in the rock. Downhill in the forested area, where Panther Creek begins, provides more diversity. Theresa Cline taught me that raspberry canes have a whitish “bloom” that can be rubbed off but blackberry canes don’t have any bloom. Finally, at last, I know for sure what the patch is that’s growing by my neighbor’s pond!

**April 19<sup>th</sup>: Field Trip to the Peterman’s beautiful 33Acre property** between Clinton and Warrensburg. It is an OP tradition to visit this area to see the spring ephemerals: oxalis, violets, trilliums, blue bells, dutchman’s britches, blooming buckeye trees, bladderworts etc. We refresh our memories on how to differentiate true vs. false anemone; native rose vs. multiflora; lichen vs. moss and see how many non blooming plants we can figure out.

**April 28<sup>th</sup>: At our chapter meeting**, Emily Horner drove from Polo to present her popular program on making rain barrels and creating rain gardens which benefit the environment. Rain barrels can be made from many different types of plastic containers including those that used to contain olives or pork sausage casings. They can be hooked together and placed on an elevated platform enabling gravity flow when watering. Jo Mohr was the lucky winner of one of the rain barrels that Emily and husband, Paul, had made. OP President Elizabeth Middleton described duties of each office and noted that currently there are no changes. She reminded everyone to send in their dues and to let the Petal Pusher editor know if they want to receive the PP by email.

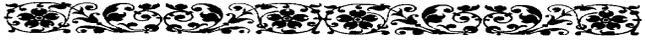
**May 17<sup>th</sup>: Field Trip to Long Prairie** in Henry Co. This was a new site for our group to explore and it certainly is a jewel. Thanks to Bernie and Elizabeth for checking this out and good directions. There were the largest patches of Indian paint brush I’d ever seen, various shades of blue phlox, shooting stars, lots of rattlesnake master and so many other plants ready to bloom that we all want to return in a month. Elizabeth refreshed our memories on the difference between ashy sunflower leaves and rosin weed; also lead plant vs. goats rue. I was curious about the large above ground rhizomes of gamma grass. Elizabeth explained that it is an important cool season part of the prairie with large seeds providing animal nourishment since it is a relative of early corn, Teosinte.

**May 19<sup>th</sup>: Regular OP meeting** was moved up a week since Memorial Day fell on the 26<sup>th</sup>. President Middleton passed around an envelope for people to place their dues which she will mail. Casey presented a program on everyday plants (dandelion, shepherds purse, plantain, cleavers, purple cone flower, monarda, mullein etc) with medicinal properties and

[OP report cont. ]

brought tea made from fresh slender mountain mint, plus New Jersey tea and staghorn sumac both gathered last year. Most everyone was game for doing a taste test both with and without sweetener. The New Jersey tea was the biggest hit but several people were surprised that the sumac and slender mountain teas tasted better than they expected. Members shared what they use for colds such as Elderberry juice and I learned that cleavers was actually used to stuff mattresses as well as for a makeshift sieve. What joy we have in learning and sharing.

Reminder: Any member who would like to receive the Petal Pusher by email needs to send their request to editor Becky Erickson [Becky Erickson@centurylink.net](mailto:Becky Erickson@centurylink.net). Benefits of receiving the Petal Pusher by email include: earlier receipt of information; color pictures; savings in printing costs for MONPS.



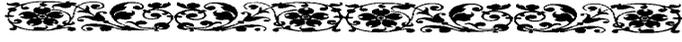
## Southwest Chapter

*Submitted by Brian Edmond Chapter Representative*

Our May meeting featured Dr. George Yatskievych talking about his work with the Flora of Missouri. As always, it is great to hear about the project and see how it has moved from the initial concept stages to a finished product. We were particularly interested in discussing the future of technology as it might be used to identify plants. Thanks, George! We look forward to the next phase of the project!

Max Brown, retired geology professor and plant photographer extraordinaire (<http://www.florabymax.net/>) volunteered to do a vascular plant survey at Wire Road Conservation Area (Missouri Department of Conservation), a site that hasn't been botanized to any great extent. So far this season, Max has identified more than 200 species of vascular plants and noted the times he first saw them blooming (for the flowering plants only, of course). Thanks, Max! The work you've done has been phenomenal!

Check the calendar section for upcoming events. Be sure to watch the Facebook Events page and your email inbox for details about upcoming trips and events! In case of bad weather, watch Facebook for cancellations or call ahead of time and we'll call back with more information.



Please Friend us on Facebook



And more information on our website  
[www.monativeplantsociety.org](http://www.monativeplantsociety.org)

## Ozark Chapter

Submitted by Liz Olson, Chapter Representative

On April 15<sup>th</sup> the Ozark chapter was officially recruited to look for and report on rare plant occurrences in our area! Chapter President Susan Farrington presented a detailed lesson on fifteen species of conservation concern that we could potentially find in this region. Susan's slides featured gorgeous photographs of these rare plants and focused on important features to help distinguish them from common look-a-likes. All attendants received a full color guide to the plants.

These species are rare for a variety of reasons. For instance, *Juglans cinerea* (butternut) is not currently tracked, but is declining rapidly due to a cancer disease. We hope its fate will not be that of the *Castanea pumila* var. *ozarkensis* (Ozark chinquapin), which is now globally vulnerable from the infamous chestnut blight. *Dalea gattingeri* (Gattinger's prairie clover) and *Delphinium exaltatum* (tall larkspur) populations have declined from lack of fire and consequent over-shading. Natural ranges also explain rarity, and are important to conserve because species at range edges contain more genetic diversity. *Crataegus spathulata* (littlehip hawthorn) is common in the southeastern U.S., but here in MO it is on the edge of its natural range, and therefore vulnerable. Similarly, MO is the western edge for *Lycopodium digitatum* (running ground-cedar) and the northern edge for *Yucca arkansana* (Arkansas yucca).

Some of our tracked species we simply do not know much about yet. Reporting on their locations and population size will be important to understand if they are in need of protection. *Perideridia americana* (eastern yampah) and *Lathyrus venosus* (bushy vetchling) fit into this category.

Susan included a species that is newly recorded in Missouri: *Styrax grandifolius* (bigleaf snowbell). It is native and grows in the southeastern U.S., but has been overlooked in MO until Justin Thomas and Jacob Hadle found it in Carter County in 2012. Bigleaf snowbell could easily be confused with blackgum (*Nyssa sylvatica*), but have duller green leaves with a more rounded tip and are finely hairy on all surfaces.

The full list of Missouri's Species of Conservation Concern are updated yearly and is available online at: [http://mdc.mo.gov/sites/default/files/resources/2010/04/2014\\_species\\_concern.pdf](http://mdc.mo.gov/sites/default/files/resources/2010/04/2014_species_concern.pdf).

On May 20<sup>th</sup> our chapter took a field trip to Galloway Park in West Plains. The caretaker Buster Young has planted a mix of native and ornamental plants to please a variety of park visitors.



## Empire Prairie Chapter (St Joseph)

Submitted by Steve Buback Chapter Rep

Look for the latest activities in the next Petal Pusher.

## Perennis Chapter

submitted by Andrew Braum Chapter Rep

Look for the latest activities in the next Petal Pusher

## Kansas City

submitted by Hilary Haley, Chapter Representative

Members of the Kansas City chapter enjoyed a spring full of fun field trips and meetings. On April 5<sup>th</sup>, a field trip was held at Dave Rock Conservation Area in St. Clair County. Members from both the Osage Plains and Kansas City Chapters attended this event. As fortune would have it, a recent burn and spring rains made the designated Natural Area, a sandstone glade, brim with plant life that would ordinarily not be found so easily. Of the plants found, one that provided the most interest was a species of liverwort found in full "bloom". Members also enjoyed exploring the ephemeral springs and nearby woodlands.

Our next field trip took place at Rocky Point Glades on April 26<sup>th</sup>. This area is managed by the Kansas City Parks and Recreation Department, who implement regular prescribed burning and noxious weed control. The limestone glades and surrounding woodlands provided ample opportunities for exploration and discovery. One of the more notable discoveries was cancer root (*Orobanche uniflora*). This vascular plant lacks true leaves and has no chlorophyll, so it is incapable of photosynthesizing. Rather, it sustains itself by parasitizing the roots of other plants. Its diminutive stature can cause it to be easily overlooked, even though it is a plant that is found throughout the U.S.

The final field trip of the spring took place at Shawnee Mission Park in Overland Park, Kansas on May 17<sup>th</sup>. Within this 1,200-acre park lies a very small, yet incredibly diverse, prairie remnant. Members of the chapter spent close to three hours exploring this two acre patch and discovered 75 species of plants in total. Several of these were in full bloom including, prairie phlox (*Phlox pilosa*), dwarf larkspur (*Delphinium tricorne*), prairie larkspur (*Delphinium carolinianum*), Ohio spiderwort (*Tradescantia ohioensis*), bastard toadflax (*Comandra umbellata*), hoary puccoon (*Lithospermum canescens*), and violet wood sorrel (*Oxalis violacea*). We also enjoyed a bit of "scratch-n-sniff" botany, taking in the wonderful aromas of mint, bergamot, and sage leaves, as well as the deliciously sweet smell of rose verbena (*Glandularia canadensis*) in bloom.

Our spring meeting included a presentation from our Chapter President, John Richter. John shared with everyone his collection of botany books that he's amassed over the years, including one treasure he found at a book sale. This 1935 book entitled *Wild Flowers* (Homer D. House, Macmillan Company, 1935) contains photos printed with unique processing, providing an unusual treasure to thumb through. Also in May, our chapter held its annual plant sale at Powell Gardens in partnership with the Missouri Wildflowers Nursery. As usual, this plant sale proves to be popular among the public and serves as our main source of fundraising.



## CHAPTER

## CALENDARS

### Kansas City

*Submitted by John C. Richter, Chapter President*

For questions about upcoming field trips contact the field trip leader, otherwise contact John Richter via e-mail: [jrichter@ene.com](mailto:jrichter@ene.com), or cell phone 913.217.0432. Please RSVP with the field trip leader or John Richter for all field trips. We use RSPV information to plan car pool logistics and if a field trip will have any attendance. This is important for making decisions based on severe weather, etc.

**12 July – Rosedale Park:** Fern walk, appreciation of urban landscapes blended with native ferns. Field trip leader and meeting time/place TBD.

**August – break from activities.**

**September 2, 7:00 PM, MDC Discovery Center: Chapter meeting.** John Richter will give a presentation about the characteristics of select plant families. His presentation will include a multitude of specimens he has pressed and archived in his personal herbarium. This will be a great event for you to see some interesting pressed plants, and maybe inspire yourself to learn more about the native flora around you.

**September 20 – Crooked River Conservation Area:** Car pool location and meeting time TBD. Do note this Conservation Area is located approximately 10 miles north of Richmond, MO. Contact person is John Richter:

[jack\\_o\\_lantern@hotmail.com](mailto:jack_o_lantern@hotmail.com). This area in Ray County actually has some nice woodlands where timber harvests have relaxed some since the early 1900's. Most native forest in Ray County was timbered back in the early 1900s, with logging still occurring on private properties to this day. Come help us learn more about the flora of this Conservation Area

### St Louis

Chapter meetings are held on the fourth Wednesday of the month at the Sunset Hills Community Center, 3939 South Lindbergh Blvd., Sunset Hills, MO 63127. Google Map: <http://goo.gl/maps/K3PR>

**25 June Wed 6:00 PM** – This is the month for our annual evening wildflower walk, to be followed by dinner for those that wish to retire to a local restaurant after the walk. This year we will meet at the Green Center at Ruth Park in University City.

**23 July Wed 7:30 PM** – Richard Abbott, of the Missouri Botanical Garden will speak about Basal Angiosperms. Before there were monocots and dicots, one small group of plants went their own way, taking an evolutionary path that was different from the others – and they still exist today, some of them right here in Missouri.

**27 Aug Wed 7:30 PM** – George Yatskievych, one of our own, and author of the three volume Flora of Missouri, will speak about the rich and lengthy heritage of botany in the St. Louis area.

*“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, a16th Century Dane educator.**

### Osage Plains

**Starting February 2014, regularly scheduled meetings will be changing from the 3<sup>rd</sup> Monday to the 4<sup>th</sup> Monday**

Regularly Scheduled Chapter meetings are held the 4<sup>th</sup> Monday of each month, 6:30pm, at the Henry Co. Library, Clinton.

Meetings are open to the public and our purpose is to enjoy learning about and sharing information about native plants. For further information please contact President Elizabeth Middleton [Elizabeth.Middleton@MDC.gov](mailto:Elizabeth.Middleton@MDC.gov); past President Emily Horner [Emily.Horner3@yahoo.com](mailto:Emily.Horner3@yahoo.com), or Chapter Representative Casey Burks [mobugwoman@gmail.com](mailto:mobugwoman@gmail.com) Contact Bernie Henehan [berniehenehan@me.com](mailto:berniehenehan@me.com) or Dan Henehan [danhenehan@embarqmail.com](mailto:danhenehan@embarqmail.com) for fieldtrip information.

**14 June Sat: Field Trip plus OP Chapter Meeting** will be held at the Conrad-Neuenschwander Prairie. A program on grass identification will be given by Elizabeth Middleton with the meeting afterwards. Currently the plan is for everyone to meet at the Prairie at 9:30am. Stay tuned for updates.

**28 July Mon: OP Chapter meeting; 6:30pm at the Clinton Henry Co. Library Friends Room.**

**August:** no meetings

### 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.

**15 July and 19 Aug:** In the summer months, the Ozark chapter meetings are “**plant-identification nights.**” All are welcome to bring in plant specimens or photographs to share with the group. We have a great time identifying the plants and learning a little about their biology and how they fit into the ecosystem.

### Southwest

Greene Co Botanical Center, Spgfld, 4<sup>th</sup> Tuesday, 6pm

**Sat 21 June 2014 8am: Twenty-Five Mile Prairie.** Meet at the southeast corner of the Kansas Expressway north side Lowe's parking lot. Bring a lunch!

**24 June Tue 24 6pm: Springfield - Greene County Botanical Center.** We'll work in the native gardens and take an evening stroll around to see the prairie plantings. Bring clippers, buckets, gloves, water, and a camera.

**22 July Tue 22 6pm:** Cookout and prairie tour at Brian and Michelle's house. We'll provide the grill fare, you provide the sides. Watch Facebook for details and show up early if you want the tour!

**23 Aug Sat :** Join Missouri Botanical Garden President Emeritus **Dr. Peter Raven** in Springfield MO for a Missouri Prairie Foundation Fundraiser Dinner. You won't want to miss this event!

### Empire Prairie

**June meeting** will be up near Bethany MO due to the State Field Trip being held in NW MO. I strongly encourage anyone who can to attend, and see the details in this issue of the Petal Pusher.

## Orchid t-shirt reprints available.



Same gorgeous print  
on a beige t-shirt.  
Order your size  
while it is available!  
Contact your  
chapter rep.

*PP photo*

## Perennis

Contact Steve Buback fo information.

## Hawthorn Calendar

For folks interested in hiking and wildflower sightings around the state, See chapter newsletter for details; also available on [www.columbianativeplants.org](http://www.columbianativeplants.org) Otherwise you are encouraged to participate in outings with other MONPS chapters and MPF. Chapter meetings held on odd-numbered months on the second Monday at Unitarian Church, 2615 Shepard Blvd., Columbia: 12 May Mon 7pm; 14 July Mon 7pm; 8 Sept 7pm. Third Thursday lunch at Uprise Bakery continues to be well attended by members for informal discussions generally centered around native plants and environmental issues. See [www.columbianativeplants.org](http://www.columbianativeplants.org) for postings of newsletters and activity details.

## June

**13-15 Fri thru Sun: State Meeting and field trips from Bethany MO**

**19 Thurs Quail Day, Bradford Farm 3 – 7pm.** Set up booth at Bradford. Please call Becky to volunteer to help. [see masthead].

**21 Sat 5 – 8 pm Bill and Becky Ambrose TT Farm in Miller Co restoration tour [and potluck dinner].** Sign up through MPF. Bill gave us the fabulous lecture about his landscape efforts at our May Meeting. RSVP by June 16, 2014 by sending a check to Missouri Prairie Foundation, P.O. Box 200, Columbia, MO 65205 or [visit this page to pay securely on-line with a credit card.](#)

**26 Thursday Lunch** with native plant enthusiasts. 11:30 at RagTag 10 Hitt Street = just south of Broadway. Good food; lively conversation regarding plant management, environment, etc.

**28 Sat Tour of Jim Whitley Trust Property** after 10 year's management and Erickson's adjacent land having no management. Several land managers in attendance. Contact [beckyerick711@centurylink.net](mailto:beckyerick711@centurylink.net) for exact time and location.

**29 Sunday Tour 10 am of Louise Flenner's land** after 3 year's work of incorporating natives. Contact Louise at [lfenner@hotmail.com](mailto:lfenner@hotmail.com) for directions.

## July

**12 Sat Deck Party 5pm with Harry and Nancy 5 pm.** West on I-70 to Midway exit. West on Old 40 to Booth Lane [look for line of pine trees], turn north. Watch for sharp right turn north from Walnut Grove Road. Drive north another 2.8 miles. Look for mailbox on left. Call Nancy for more info 874-2463.

**14 Mon 7 PM Membership Meeting** Unitarian Universalist Church, 2615 Shepard Blvd Program TBA. Contact Nadia if you have a program suggestion [see inside].

**24 Thurs Lunch** with native plant enthusiasts. 11:30 at RagTag 10 Hitt Street = just south of Broadway. Good food; lively conversation regarding plant management, environment, etc.

**21 Aug Thurs Lunch** with native plant enthusiasts. 11:30 at RagTag 10 Hitt Street = just south of Broadway.

## PETAL PUSHER BY EMAIL

*From Becky Erickson PP editor.*

**One hundred eighteen[of 350] MONPS members have sent me their permission to start electronic delivery and stop paper delivery.**

**I must have your permission to receive the email edition. Copy this address into your email 'to' line [beckyerick711@centurylink.net](mailto:beckyerick711@centurylink.net) and I will respond.**

**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.**

**Do you remember when we saw a glade carpeted with glade coneflower? Do you remember the gasp of wonder upon walking into it?**

**If not - Come with us to find more places like this.**

*BE photo*



## From Casey's Kitchen: Recipe for Redbud Jelly



© STEPHEN J. KRIEG  
WWW.NATURALMOMENT.COM

4 or more cups of clean redbud blooms

4 plus cups of boiling water; enough to cover blooms. Let steep overnight then pour through coffee filter or cheese cloth to make clear. You will need 4 C total of juice. (Add water if needed) Pour 4 C juice into pan, stir in 1 box pectin, 1 Tbsp lemon juice, and 1 Tbsp butter. Bring to rolling boil and let boil 1 minute. Then add 5 C sugar and bring back to rolling boil. Let boil 1 minute. Remove from heat and pour into prepared jelly jars.



## Please plant lots of swamp milkweed this summer. MONARCHS NEED THEM

Yes there is still time. As long as plants are kept watered, they will survive well.

Cultivate a spot in the sun where you can dig out a dish or raise a small dam to collect rainwater from a draw or a downspout. It is too late for seed, so find a nursery with local source plants. Right after planting potted plants, water until soggy, mulch well, and put up a fence that will keep deer, rabbits, and box turtles – yes really! – from eating them. Keep them wet/moist until they go dormant.

Planting milkweeds, especially in areas where they are currently scarce, can help monarchs be more successful in rearing new generations. Milkweeds are appropriate for use in home landscape plantings and several species are popularly used, especially by gardeners who enjoy helping monarch butterflies. Several milkweed varieties grow well in Missouri and range from 2 to 6 feet tall in a variety of colors. These include marsh milkweed, purple milkweed, common milkweed, and butterfly weed.

Nurseries that sell native plants often sell seeds and potted plants of those species. For a list of suppliers, see the Resource Guide on the Missouri Prairie Foundation's Grow Native website at this link: [grownative.org/resource-guide/](http://grownative.org/resource-guide/). For a free brochure on the topic of butterfly gardening, email [Pubstaff@mdc.mo.gov](mailto:Pubstaff@mdc.mo.gov), or mail your request to Publications, Missouri Department of Conservation, PO Box 180, Jefferson City, MO 65102-0180.

**Millpond Plants: Descriptions of available Missouri water plants. Located near Columbia. Has over 200 swamp milkweeds.**  
<http://millpondplants.wordpress.com/> 573-657-2314

## BEE A CITIZEN SCIENTIST

### Please sign up for Bud Burst Monarch Watch and NEW Bumble Bee 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 and other pollinators, 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 and Bumble bee Watch will give you the parameters for pollinator assistance and data reporting.

**Learn more about BumbleBeeWatch.org:**

- Watch this video to learn how to contribute your photos, <http://www.youtube.com/watch?v=p7Kp3Awf2MQ>
  - Learn how to take helpful photos of bumble bees, [www.bumblebeewatch.org/contents/photo-tips/](http://www.bumblebeewatch.org/contents/photo-tips/)
  - Meet the Bumble Bee Watch partners, <http://bumblebeewatch.org/contents/about/>
- Watch the Bumble Bee Watch trailer video on YouTube, <http://youtu.be/vTLKMAAtXGnA>  
Read more about bumble bees at risk on Xerces' Project Bumble Bee web page, <http://www.xerces.org/bumblebees/>



## Please plant lots of nectar plants this summer. MONARCHS NEED THEM

Yes there is still time. As long as plants are kept watered, they will survive well.



BE photo

## Editor's Picks:

Newest pesticide - **neonicotinoids** –  
please inform your gardening friends.

<http://www.xerces.org/2013/06/21/pesticide-causes-largest-mass-bumble-bee-death-on-record/>

Please do not purchase garden plants from national franchise stores, nor form nurseries who cannot tell you if plants are treated with neonics. Please explain this issue to your friends who are avid gardeners.

Neonic product list for reference

<http://www.xerces.org/neonicotinoids-and-bees/>

## Web links

An Ozark Naturalist's Notebook

<http://gbairdchem.wordpress.com/>

Groton Open Space News

News from a community Nature park in CT

[http://gosaonline.org/wp-content/uploads/2014/03/GOSA-News-Spring-2014.Final\\_1.pdf](http://gosaonline.org/wp-content/uploads/2014/03/GOSA-News-Spring-2014.Final_1.pdf)

Nadia's Yard

Musings about suburban native gardening

<http://nadiasyard.com/>

Ozark Highlands of Missouri

Observations from the hills to the back yard

<http://allisonvaughn.blogspot.com/>

Wren Song

Weekly newsletter with links to several articles

<http://www.ecosystemgardening.com/wren-song/>

Wild Ones Landscaping

Healing nature one yard at a time

<http://www.wildones.org/>

Local ecotype guidelines

<http://www.wildones.org/learn/local-ecotype-guidelines/>

Plant identification [www.plants.usda.gov](http://www.plants.usda.gov)

Plant Conservation Alliance

Info from every agency and most botanical gardens

Edibles, aliens, ecosystems, fire, landscape mitigation, and more.

[www.nps.gov/Plants](http://www.nps.gov/Plants)

Xerces Society

Information on Bees, Monarchs, and most other insects.

[www.xerces.org](http://www.xerces.org)



©Peter Walton/Getty

Stirling Range National Park, an area of Western Australia with more plant species than the whole of Canada

## Why plant conservation matters and how gardeners [YOU] can help

<http://www.ft.com/cms/s/2/fab642ee-d1fc-11e3-8ff4-00144feabdc0.html#ixzz31nPIZO49>

By Timothy Walker *Timothy Walker is Horti Praefectus of Oxford Botanic Garden. He will be talking about plant conservation at Hay on Earth, part of the Hay Festival, on May 22. For more details, visit [hayfestival.com](http://hayfestival.com)*

The director Oxford Botanic Garden explains why plants are more than Nobel-worthy chemists

Plants are not animals. This may seem obvious but too often the techniques used to protect plants from extinction are based on methods developed for animals. Ask an eight-year-old what a plant is and you will be told that they are green, rooted to the spot and boring.

The fact that they are green is fundamental to the animals, including humans, and most of the other species on Earth. If plants were not able to take the energy from the sun and use it to mix together air, water and soil, we would not be here. The silent hum of photosynthesis is seen as a green hue from space but rarely appreciated here.

The fact that plants are rooted to the spot is of profound importance to the plants themselves. If you are unable to run away from danger then you have to develop strategies that enable you to tolerate whatever life and nature might throw at you. The technical term for this is phenotypic plasticity and it is very much more developed in plants than in animals.

The divergence of plant and animal evolution began 1,200m years ago when plants went down the route of self-sufficiency while animals were content to continue exploiting those organisms that harvested or extracted energy from the natural world. However, the plants are much more than just self-sufficient individuals because they give far more than they receive. These individuals have evolved into some of the greatest chemists ever.

Indeed, in 1947 Sir Robert Robinson was awarded the Nobel Prize in chemistry as a result of his investigation of plant-synthesised molecules in plants grown in the University of Oxford Botanic Garden.

Among the plant-derived products for which we should be eternally grateful are artemisinin, used in the treatment of [malaria](#), and digoxin, which has kept my old mother alive for nearly a decade. A common, and reasonable, suggestion is that plants have evolved these extraordinary chemicals as defences against the wretched animals that eat them. **The plants are more than Nobel-worthy chemists, synthesising our every need. Plants provide us with our habitat and all the**

**other terrestrial ecosystems that supply habitats (with the possible exception of the ice-dominated landscapes at the Poles). In addition, they are at the bottom of some food chains in the oceans and fresh water habitats.**

[cont on next page]



©Tim Foley: A Jarrah tree in Western Australia

[Gardening to preserve plants cont. ]

**In these circumstances the plants as a community provide what are collectively known as ecosystem services.**

Thanks to the UN Millennium Ecosystem Assessment classification, ecosystem services can be grouped together under four headings: provisioning, supporting (or habitat), regulating and cultural. Provisioning includes food and medicines, supporting includes the primary photosynthetic products of plants and nutrient cycling, regulating includes carbon sequestration and purification of water, and cultural includes recreational use and spiritual enrichment.

**It has been calculated that the annual value of these services is \$17tn. Given that no one else can supply these services, this price does not represent their true value which is priceless and irreplaceable.**

**The acronym Hippo, accredited to the great Professor EO Wilson, reminds my undergraduates that Habitat destruction, Invasive species, Population growth, Pollution and Over-exploitation alone and together are the reasons why, at current estimates, 28 per cent (or more than 100,000) of all plant species will be extinct by the time that I am 100 years old in 2058.**

When choosing the places on Earth to protect first as a matter of urgency the number of species native and endemic to an area is taken into account along with the current level of Hippo in the area. Using this method a top 25 “biological diversity hotspots” has been drawn up. These include Mediterranean-type regions of Europe as well as areas of tropical woodland, the most stunning of which is southwest Western Australia, home to the tallest hardwood trees in the world – the jarrah. The jewel in this botanical crown is the Stirling Range where in an area the size of London there are more plant species than in the whole of Canada.

Within the Stirling Range there are hundreds of species, some of whose future is threatened by *Phytophthora cinnamomi*, commonly known as bush dieback and closely related to *Phytophthora infestans* which caused the Irish potato famines of the 1840s and 1850s. Among the species threatened by the bush dieback is *Banksia gardneri*. This beautiful little plant was already struggling due to the demise of its pollinators, the possums who are being wiped out by feral cats and rats and foxes. The likelihood of being able to eliminate all of the fungal spores and all of the cats and rats and foxes is so low that an alternative way to save the banksia has to be found. Seed banks are the obvious candidate because they work.

While *Banksia gardneri* might sound like a minor player in life’s rich tapestry of species, respected research by Professor Forest Isbell at Montreal’s McGill University shows indisputably that the resilience of an ecosystem to the normal stochastic fluctuations in weather and climate is proportional to the number of species in the community.

**Or to put it another way, the more species you lose, the greater the likelihood of complete breakdown of the natural interactions that hold together the community and most importantly its soil.**



©Lijuan Guo/Dreamstime  
*Kolkwitzia amabilis*

There are clear parallels with human society here. You would not want a community of just lawyers, just farmers, or just engineers because we need them all.

**The inspirational Professor Gren Lucas describes plants as the green glue that holds life on Earth.** This a particularly appropriate phrase because should the plants fail to glue the soil in place then erosion will remove that soil quickly and we shall be back to the situation 470m years ago when the first land plants began their migration out of the watery habitat they had occupied for more than 700m years.

Trying to save *Banksia gardneri* by controlling the dieback and the European mammals is doomed to failure; the task is just too big for the resources available. This means that the only way to protect individual plant species is to take advantage of one of evolution’s greatest innovations, namely seeds. We now know that the embryos in seeds can survive for 30,000 years in frozen soil and still grow into mature flowering plants. The exploitation of this remarkable survival strategy in artificial seed banks, such as the Millennium Seed Bank project in the UK, is the best way to protect individual species.



©Kevin Schafer/Alamy  
*Marojejy National Park, Madagascar. a biodiversity hotspot*

This is where the conservation of plants diverges very strikingly from that of animals. Animals are much less obliging and must be conserved in their habitats because they are simply far more needy than plants. This is apparent from the fact that to protect bitterns in the UK requires hundreds of hectares of

artificial reed beds that are not only perfect for the iconic bittern but are also home to many other species as well as providing ecosystem services.

The conservation of plants for their aesthetic properties is in the safe hands of the world’s gardeners. Among the 70,000 different plants found in UK gardens are many plants such as *Kolkwitzia amabilis* that are struggling in the wild but are widely grown in cultivation. Strangely, gardens are more often lauded as the refuges of birds than they are identified as safe homes of many beautiful plants, both endangered and common in their habitats. The world’s gardeners need to be less modest and they need to stand up and proclaim the great contribution that they are making to the Global Strategy for Plant Conservation that will result in us handing over this planet to our children and grandchildren in a better state than the one we inherited.

Finally, I have one word for any eight-year-old who describes plants as boring – chocolate. QED.



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

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