

November - December 2015 NEWSLETTER OF THE MISSOURI NATIVE PLANT SOCIETY Volume 30 No.6

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

## ANNOUNCEMENTS

Malissa Brigglar, MDC State Botanist and MONPS Secretary, has an announcement:

### ATTENTION TO MEMBERS RECEIVING HARD COPIES OF THE PETAL PUSHER! JULY ISSUE WAS YOUR LAST FREE PAPER COPY.

The MONPS Board of Directors has reviewed the cost of sending hard copies of the Petal Pusher through regular mail. As printing and postal fees continue to rise, members who would like to continue receiving their copy on paper in the mail will be assessed a \$5 surcharge. However, members can elect to receive electronic copies of the newsletter as an email attachment in PDF format and with the added advantages of full color photos and earlier delivery. Petal Pushers can also be viewed on the MONPS website: [www.monativeplants.org](http://www.monativeplants.org)

It is very important that members interested in receiving only the electronic version of the Petal Pusher give permission for the delivery conversion from paper to electronic. This transfer is not automatic. To make this conversion it is imperative to contact PP Editor Becky Erickson at [beckyerick711@centurylink.net](mailto:beckyerick711@centurylink.net). Fortunately, about half of the members using email are already taking advantage of this opportunity, and they will continue receiving electronic version of the newsletter.

### Dues are Due Now

From Ann Earley, Membership Chair

**Membership renewals for everyone on email service for the July 2015-June 2016 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 20150630, your dues are now payable. When renewing, please remember to include your contact information including email address, and your society and chapter dues preferences. Membership renewal online is also available via our website at [www.monativeplants.org](http://www.monativeplants.org) which offers the option of online payment via PayPal.

For those members receiving their newsletter by email without a mailing label, or for others with questions about their membership status, please contact me or your chapter representative (see back page for contact details) for information about your membership expiration date.

### Welcome New Members!



#### Kansas City

June Newman, Carrollton

#### Southwest

Jason Willand, Joplin

David Bowles, Springfield

#### Ozark

Carly Holmes, Cabool

Claire Ciafre, Harrisburg, PA

#### State Level Membership

Jeffrey Carstens, Boone, IA

#### St. Louis

Andrea Schuhmann, St. Louis

Brock Mashburn, St. Louis

Martha Langill, Scott AFB, IL

Justin Lee, St. Louis

#### Hawthorn

Teri Linneman, Salisbury

Frances Albano, Ashland

William Ambrose, Jefferson City

Kimberly & Jessica Alexander, Columbia

**We value our members and urge you to renew today!**

## Keystone MONPS Botanists Bid Farewell

Submitted by John Oliver; Steve Turner photo

Saying goodbye to George and Kay is not easy for those of us who have relied on his expertise, guidance, and friendship over almost thirty years. His revision of the classic Steyermark *Flora of Missouri* was completed two years ago and will remain the standard of scholarship for botany in the Midwest. George A. Yatskievych became director of the Flora of Missouri Project in 1987. Now, 3,600 pages, almost 3,000 species, and 28 years later, he is leaving Missouri. George has taken an appointment as curator at the University of Texas Herbarium in Austin, Texas.

On Friday night, September 18<sup>th</sup>, members of the Missouri Native Plant Society gathered for a dinner and celebratory send-off for George and Kay at the home of Malissa Briggler near Jefferson City. After a wonderful meal prepared by Malissa, former President Paul McKenzie made a special presentation of the Society's first ever Lifetime Achievement Award to George and a gift certificate to Kay as our way of saying farewell and thank you for all they have done for botany in our state. Many of those in attendance related humorous stories about George and expressed their gratitude for the countless ways his contributions to our botanical knowledge have made a lasting difference. Thanks again, George, and remember that the welcome mat is always out for you and Kay when you return to Missouri!

Dear MONPS Board,

**Kay and I would like once again to express our utmost gratitude for the going away party last Friday. Special thanks to Paul McKenzie for putting together a wonderful award and comments for the event, and to Malissa (and Jeff) Briggler for hosting a great dinner! Kay and I were really moved by the outpouring of affection--makes it all the harder to leave!**

Cheers, GY



Petal Pusher Editor's Note: Please be thoughtful of your volunteer editor and follow [submission guidelines](#) posted in Jan, Mar, May 2013. PLEASE ADD: **Change plain text to *Italics*** when using scientific nomenclature for any biological being. Editor does not appreciate spending hours to make format changes [font, size, spacing, style].

## December Meeting - New Location

Hosted by Paul McKenzie

**The next meeting of the MONPS will be held, Sat. Dec. 5th**

**at the U.S. Fish and Wildlife Service's Office on 101 Park DeVille Dr.** There is plenty of free parking.

**One item of business that will be discussed will be identifying the location for field trips in 2016 so BOD members should come prepared to discuss their suggestions.**

Directions to the FWS Office: >From I-70, take the Stadium exit (last one heading west as you leave Columbia, first one heading east as you enter Columbia: exit 740). Head south on Stadium- you will pass Bernadette, Worley, and Ash Streets as well as the Columbia Mall, McDonald's and turn right (west) onto West Broadway (there is a Pet Co and Mizzo Credit Union on the corner). You will pass Fairview street at the next light and see HyVee on the south side of the road and Wal-Mart on the north. Turn right onto Park DeVille at the next light. The FWS building is on the west side of Park

DeVille directly across the west entrance to Wal-Mart (there is a sign). Go to the west end of the building (FAPRI and the MU Adventure Club is on the east end of the building). Once at the west entrance, my office is the 2nd door on the right. The meeting will be

**in the large conference room which is the first room to the left as you walk through our entrance.**



And more information on our website

[www.monativeplants.org](http://www.monativeplants.org)  
[www.monativeplantsociety.org](http://www.monativeplantsociety.org)

## Missouri Native Plant Society

### Minutes of the Quarterly Meeting, June 27, 2015

Kirkville, Missouri Department of Conservation Office  
Annual Meeting

JO gave a summary of some of the trips MONPS has taken this past year and in year's past. He encouraged those present to propose new places they would like to visit and gave a summary of the use and value of the Society's Facebook page. JO also gave a brief summary of the various awards given by MONPS.

Bill Knight was awarded a posthumous John E. Wylie Service Award. Dianne Benjamin accepted a certificate on his behalf and a \$100 donation was made to the Hudson Fund.

New officers were assigned. JO thanked Paul McKenzie for his service to MONPS and accepted his new role as President. DT has accepted the position as VP. MBr will remain Secretary and Bob Siemer as Treasurer. New Board Members are RG and Steve Buback.

#### Regular Meeting

At 7:45 PM, with a quorum present, the meeting was called to order and the agenda was approved. DT was appointed to record assignments and minutes were approved.

**Treasurer's report** – Money would be donated (\$100) to the Hudson fund in honor of Bill Knight.

**Hudson Fund** – No activity until fall. The announcement for a 2016 award will go out shortly after Thanksgiving. The 2016 committee will soon need to be appointed.

**Distribution Chairperson** – Rex Hill (RH) could not attend the meeting. The first Petal Pusher (PP) issue came out delivered as first class mail (individually, not as a mass mailing). Only those wanting a hard copy and paying the extra \$5 will get the hard copy. There is money in the bulk mailing permit which can be used when the Missouriensis is sent out. Chapter Reps should take the number of hard copies that they want. It was suggested that hard copies of the PP be mailed to Chapter Reps in the regular mail to have a few printed copies on hand for potential new members.

**Petal Pusher** – There is a lag time between new members coming in and BE receiving notification of the new member's e-mail address. BE would like to have no more than 2 weeks notice of new member's e-mail addresses so that she can get a copy of the PP to the new members earlier.

BE also brought up an issue called "black mail – e-mail". Other servers block email from Century Link when you send out e-mails to large groups of people. If it's the PP, BE will spend time to do it in smaller groups, but it will take too much time to do it for all the smaller messages sending interesting links or articles.

**Missouriensis** – Still collecting manuscripts. The next issue will hopefully go out before Sept. 15. GY will be stepping down as editor and Doug Ladd has said he is interested taking over the editor responsibilities.

**Social Media** – Facebook is still getting a lot of use and increasing turn-out at field trips. JO is managing the Facebook page. The website needs a lot of work but we don't really have someone currently to work on it. Anyone willing and able to help with the website is urged to talk with JO.

**Membership** – Ann Earley wasn't able to attend the meeting. The membership report was reviewed by Board members and no additions were suggested. A discussion was held about membership numbers following the setup of a Facebook page. It looks like our membership has increased after Facebook but we've also gotten PayPal. So it's hard to tell whether or not the increased membership is due to Facebook or PayPal or both. Attracting young members is important and it looks like these features may be helping.

**Position changes** – MBo is still working on finding someone for Springfield Chap Rep., RH will be working on a potential archivist in St. Louis. Malissa will serve as Secretary, Rick Gray will join as a Board Member, JO will serve as our President and DT as our VP.

**Poster** – The Roadside Wildflowers Poster has been sent to the printers at MODOT and should be finished soon.

**New brochures** – We are out of brochures. Some changes will need to be made before printing more including dues structure, chapter lists and some spacing corrections. They cost about \$0.29 ea. and there was some discussion on how many to print. There were about 1,000 copies printed last time. JO suggested printing 1,000 again. Board members agreed to ask RH and GY to correct what needs correcting and have another 1,000 printed.

**T-shirts** – Requests need to go to RH. There was a discussion on what to order next. Caps, lunch boxes, water bottles. BE sent links for RH and GY look over. GY suggested in keeping it simple and only offer one or two items. Too much variety would add complication. Hats might be too expensive. GY suggested perhaps a small committee to work on this would be better. Malissa agreed to be on a committee with RH and to find another member.

**Workshops** – RG and Nels Holmberg are hosting a workshop on Aster identification.

**Upcoming meeting** – September meeting in Jefferson City. We were invited to come to Merv Wallace's nursery in Brazito, MO. It was discussed to visit Merv's Sunday morning. Mike Leahy will be our Friday night speaker.

#### **Additional Announcements from Meeting -**

BE reminded everyone of the deadline for Petal Pusher; urged those providing submissions to send them early if possible.

THE DEADLINES FOR ARTICLES TO THE PETAL PUSHER IS THE 27<sup>TH</sup> of January, March, May, July, Sept, and two days after the December meeting!!!

Meeting was adjourned.

**MONPS Assignments – June 27, 2015** JO will let Ann Earley know to send an email to BE every two weeks, containing an updated email list for people who want the electronic newsletter.

## St Louis

*Submitted by Rex Hill Chapter Representative*

At our August meeting, Carol Davit, Executive Director of the Missouri Prairie Foundation (MPF) was our guest speaker. Her talk, titled **The Elemental Prairie**, emphasized the abiotic factors of wind, water, sun, and soil and went on to include biotic microscopic aspects of fungi, and the mycorrhizal relationships with prairie plants. The zeal and dedication of MPF to the preservation and restoration of our state's prairie remnants that have dwindled from approximately 1/3 of the state to less than 60,000 acres is most admirable and many of our members are MPF members and share in their mission. This talk reminded me of the one of our (MONPS) stated goals is the education of our members and the citizens of the state on topics on native flora. It caused me to go back and review what was meant by her references to warm and cool season grasses and to relate this to my understanding of the differences in C3 and C4 photosynthesis where most of our prairie warm season grasses are part of the plant evolution that has led to a two-part process that enables them to retain more moisture by completing photosynthesis in the cool evening and nighttime hours.

Our speaker at the September meeting was Ron Colatskie, State Parks Natural Resource Steward and one of our chapter members. His talk was titled **Prairies, Savannas and Glades - Oh My: Examining ecological evidence for grassland communities in the eastern Ozarks**. Ron presented a very informative view of his understanding of the past, maybe pre-settlement, nature of our landscape citing the evidence available from surveyor's notes, Schoolcraft's travels, Walter Schroeder's summary of Missouri's prairies and to more recent work by James Harlan of the University of Missouri. He pointed to the effects of fire from natural and man-made sources and to difficulties in interpreting the past since even our very oldest surveyor's notes were made at a time when the eastern part of the state had already experienced the influence of European settlers.

The September meeting was the first presided by our new President, Rick Gray, who has been an avid attendee at our state fieldtrips and many other botanical outings. Rick succeeds John Oliver who has taken the position as State President of MONPS. Also at the meeting Jackie Bettale, one of our new chapter members was welcomed by acclamation as our new Treasurer, succeeding Mary Smidt who had held the job for the past 14 years. This month, Rick Gray and Nels Holmberg taught another class in the long running series of Master Naturalist classes at Meramec Community College. The class titled **Master the Asters and Other Fall Wildflowers** finishes with a fieldtrip this weekend. On September 11<sup>th</sup>, the chapter manned a booth at the Fall Wildflower sale at Shaw Nature Reserve with Joan Featherston, John Oliver, and Martha and Rex Hill providing the person power.

## Osage Plains

*Submitted by Casey Burks, Chapter Representative*

Osage Plains field trip to Lichen Glade in St. Clair Co, 5 Sept. This is a small, rather steep sandstone glade that had been recently burned. It always amazes me how many plants thrive in xeric conditions such as rock pinks. Rock pinks, also called "flower of the hour" or "fame flower" have a tiny deep pink flowers that attract pollinators plus conserve water by only opening in the afternoon. Mixed in with vivid yellow flowers of partridge pea were pink blooms of false foxglove. A few of the new plants Elizabeth Middleton taught us were: fragrant everlasting; which I found out later is also called Rabbit Tobacco, old field goldenrod, and button-weed. The aroma from the fragrant everlasting was heavenly, reminded us of maple syrup. Even on a hot day, it was a fun, early Saturday morning summer field trip.

MONPS Fall Meeting and Field Trips around Fulton and Jefferson City Sept 18 - 20  
Theresa Cline and I attended this action packed weekend. It is always so much fun to see friends from other Chapters and also get to meet new people. Friday we caravanned on Hwy 63 South to Spring Creek Gap CA in Maries County, close to Vichy. This CA covers about 1800 acres so we only saw a tiny part but at openings in the ridge trail you could see the beautiful Gasconade River Hills. Many different varieties of goldenrods and asters were in bloom. I found out there are over 20 varieties of goldenrods and around 30 different asters in Missouri so they are quite the challenge to identify. Fortunately George Yatskievych and John Oliver were there!

The evening meeting was an extra special event: The Briggles hosted supper at their home for Mike Leahy's informative presentation on the upcoming fieldtrips as well as celebrating George Yatskievych's 30 years of service with fond memories as he and wife Kay heads to Texas for a new adventure.

Saturday morning's field trip was to Earthquake Hollow CA. I stayed above but enjoyed watching the others climb around the boulders and crevices. This area had an abundance of hawk weed, bastard toad flax, dittany, another fragrant plants I thoroughly enjoy. From Earthquake Hollow, we headed to Reform CA in Callaway Co for access into Auxvasse Glade Natural Area. Auxvasse Glade is a hidden jewel with several different types of regimes with rich diversity of plants. Some of the plants were: Obedient plants, the tallest and fullest pink false foxgloves I've ever seen, white closed bottle gentian, rough blazing star, and an abundance of blooming asters and goldenrods.

Sunday morning we had the opportunity to visit Merv Wallace's Missouri Wildflower Nursery in Brazito (it's amazing!). I filled up my car with Dutchman's pipe, New Jersey tea, rose mallow and large spice bush plants. With Merv's collecting and growing efforts, I think he has a good supply of every native plant one could ever want.

*A huge Thanks to Dana Thomas and John Oliver for putting together another fine agenda of places for us all to enjoy and learn.*

## Hawthorn

*Submitted by Ann Wakeman Chapter Representative*

The bi-monthly membership meeting held at the Unitarian Church September 14 at 7pm. The program for this month, Becky Erickson provided identification as well as for plant samples members brought in. The meeting was well attended, with new members who have joined recently.

Need for seed collection for the CAS /Bonnieview planting was reiterated. We need a big effort from volunteers this fall to collect large bags of wildflower seed. We also need help to clean up potted plants for sale at the Chestnut Festival. To help any time this fall, contact Becky [beckyerick711@centurylink.net](mailto:beckyerick711@centurylink.net) NOW is a good time!

Several members have been working, about 30 hours, on the Stadium Blvd. Adopt-a-Spot site sprucing it up by cleaning out undesirable plants, such as Johnson grass, sweet clover, teasel, crown vetch, poison ivy and the ever present bush honeysuckle. Their dedication to this has hugely improved the site so it doesn't look so unkempt.

Vanessa Melton stepped in as Communications Editor, when Becky Erickson decided 9+ years as editor was long enough. Please send Vanessa News and information of interest to the Chapter via email as shown on the front page of the chapter Newsletter.

After hiatus of a number of years, the Chestnut Festival is back. This is held at University New Franklin Experimental Farm, October 17, from 10 am to 4 pm. Our Chapter will have a booth at this very popular event.

Nancy Brakhage will host the wreath workshop on November 15 where members can create a holiday wreath using native materials, dried as well as fresh cedar boughs.

The Native Enthusiasts lunch on third Thursdays are well attended. Topics range from native plants and issues to landscape maintenance to other hot topics at that time. Attendance is open to all; BRING FRIENDS!



## Southwest

*Submitted by Michelle Bowe, Board member and Chapter president.*

For the last few sessions, we have had speakers. I spoke about edible plants (mostly things you can find in the winter) in August, and in July, Morgen Holt spoke about our work earlier this summer on the San Juan Islands. In September, Sarah Dewey gave a wonderful talk on pollination syndromes entitled, "Sex, the Single Flower, and You."

I attended the Park Partners meeting (at the Springfield Botanical Center, where we hold our meetings), and met their new gardener, David Middleton. Not to brag, but he told me that he got into working with plants after taking and really enjoying my spring Plant Taxonomy class (the very first time I taught it at Missouri State). We will be working with him this month to help clean up our native wildflower garden, and he has already been discovering new plants and working in our rain garden. A note: in order to be Park Partners and use the facility without paying, we need to put in a number of volunteer hours and take care of certain gardens at the Botanical Center.

## Kansas City

*submitted by John Richter Chapter President*

On June 13<sup>th</sup>, four members of the Kansas City Chapter explored Teel Prairie, a 184-acre privately owned property (designated as Prairie View Farm Natural Area, part of the Mo Natural Areas system, by MDC) south of Kansas City on the Vernon-Bates county line. The unplowed prairie features a distinctive hill, seeps, and drainages. It was a good time of the year to view a diversity of seven noted milkweed species and spring prairie flowers. Some of the highlights of the day were Mead's milkweed (*Asclepias meadii*) in an upland area and Virginia bunchflower (*Melanthium virginicum*) along a drainage. The bunchflowers are very large lilies growing to six feet tall; they were in full flower and are known to be poisonous. The attendees also noted regal fritillary butterflies on the walk. Rain showers in the area did not deter the plant hunters at all; the showers just somewhat reduced the need for sun screen and insect repellent. The group enjoyed lunch afterward at a restaurant in Rich Hill. Thanks to Lance Jessee for researching the areas and getting permission for MONPS to visit.



## Ozark

*Submitted by Liz Olson Chapter Representative.*

On August 18<sup>th</sup> the Ozark chapter had our final plant ID night of the year. 18 members and visitors brought in a veritable cornucopia of plant specimens to be identified – 31 in all! We had woodland plants like *Desmodium glabellum* and *D. cuspidatum* (tick clovers), downy agrimony (*Agrimonia pubescens*), and two species of mountain mint (*Pycnanthemum virginianum* and *P. tenuifolium*). Common and weedy natives like Virginia copper leaf (*Acalypha virginica*), American burnweed (*Erechtites heracifolius*), and tall goldenrod (*Solidago altissima*). Quite a few native grasses like beaked panic grass (*Panicum anceps*), Virginia wild rye (*Elymus virginicus*), grease grass (*Tridens flavus*), and broom sedge (*Andropogon virginicus*). No less than five non-native species, which elicited groans from the group. The lovely slender ladies tresses (*Spiranthes lacera*) was a treat – although it's common, it's so nice to observe and study any type of orchid. We'll resume plant ID nights next summer at the June meeting.

On September 15<sup>th</sup>, Susan Farrington gave a talk based on Doug Tallamy's book [Bringing Nature Home](#) and featuring many of his stunning photographs of birds, caterpillars, moths, and butterflies. Dr. Tallamy's main point: we can conserve nature and support ecosystem function right in our own backyards by planting a diversity of native species in place of most of the lawn grasses and non-native trees, shrubs, and flowers that currently dominate the area around our homes. The plants around our private property and neighborhoods should be valued not simply as pretty decorations, but for their ecological role. Dr. Tallamy has visited Missouri many times to speak to groups; his program is lively and inspiring and his books are well worth reading.

## Chapter Calendars

### Hawthorn *from Ann Wakeman*

Chapter meetings held on odd-numbered months on the second Monday at Unitarian Church, 2615 Shepard Blvd., Columbia. Third Thursday lunch at Uprise Bakery [RagTag] 10 Hitt St, Columbia continues to be well attended by members for informal discussions about native plants and environmental issues. See [www.columbianativeplants.org](http://www.columbianativeplants.org) for postings of newsletters and activity details. For folks interested in hiking and wildflower sightings around the state, see chapter newsletter on the website for details. Otherwise you are encouraged to participate in outings with other MONPS chapters and MPF.

**15 Oct Thurs at 11:30 am: Lunch at Uprise Bakery.** 10 Hitt St., just south of Broadway.

**17 Oct Sat from 10 am to 4 pm: Chestnut Festival,** in Franklin at MU's Horticultural and Agroforestry Research Center [HARC], is back after a 4 year break. It is a Chapter favorite and sure to be a fun-filled event.

**9 Nov Mon 6 pm: Members Meeting.** UU Church, 2615 Shepard Blvd., Columbia. Wedge Watkins with the U.S. Fish and Wildlife Service will discuss native bees and monarchs. **Friends and newcomers are welcome at meetings.**

**15 Nov Sun: Wreath-Making Workshop.** Nancy Brakhage has graciously agreed to host this year's event. Ann Wakeman will supply cedar, a much needed staple to make our wreaths complete. Plan ahead: clean up your straw or grapevine wreath and to collect materials for your wreath. Details about the day and directions will be in the Nov chapter newsletter.

**19 Nov Thurs at 11:30 am: Lunch at Uprise Bakery.** 10 Hitt St., just south of Broadway.

**December: Holiday Party.** Paula Peters has offered to host the Holiday Party this year, and details of the event will be given in Nov newsletter.

**17 Dec Thurs at 11:30 am: Lunch at Uprise Bakery.** 10 Hitt St., just south of Broadway.

**11 Jan Mon at 6 pm: Members Meeting.** UU Church, 2615 Shepard Blvd., Columbia.

### Perennis *from Andrew Braun*

We have a field trip to Hickory Canyons Natural Area planned 4 Oct. Look for a trip report in the next Petal Pusher. Possible field trip locations for late fall/winter include Ferne Clyffe State Park or Giant City State Park in Southern Illinois, or Trail of Tears State Park. Watch for announcements by e-mail, Facebook, and the MONPS website.

**Empire Prairie** Nothing submitted at this time.

## Upcoming Events

### St Louis *from Rex Hill*

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>

Our meeting in October will be the last of the year as our fourth Wednesday of the month meeting time is in conflict with the Thanksgiving and Christmas holidays.

At the October meeting, our tradition is to share photographs of plants and other outdoors phenomena seen on outings during the year; some from Missouri and some from wherever our members have traveled in the past year. **Friends and newcomers are welcome at meetings.**

### Osage Plains *from Casey Burks*

Regularly scheduled meetings are held the 4<sup>th</sup> Monday of the month at 6:30 pm at the Friends Room of the Henry County Library. However, no meetings are held during the months of August, December or January. Programs are open to the public and our purpose is to enjoy learning about and sharing information about native plants. Current information available from President Elizabeth Middleton

[Elizabeth.Middleton@MDC.gov](mailto:Elizabeth.Middleton@MDC.gov) or Chapter Representative Casey Burks [mobugwoman@gmail.com](mailto:mobugwoman@gmail.com). Field Trip coordinators are Bernie Henahan [berniehenahan@yahoo.com](mailto:berniehenahan@yahoo.com) and Dan Henahan [danhenehan@embarqmail.com](mailto:danhenehan@embarqmail.com)

### October Field Trips TBA

**26 Oct is the Regularly Scheduled meeting**

### Ozark *from Liz Olson*

The Ozark Chapter meets at 6:30 pm on the third Tuesday of each month except December and January at the MDC, Ozark Regional Office, 551 Joe Jones Blvd, West Plains, MO 65775. For more information, contact chapter president Susan Farrington at 417-255- 9561. We take suggestions for speakers at our meetings. Contact Susan Farrington for more discussion: 417-255-9561.

**17 Nov Tuesday 6:30 pm. Program TBA. Last meeting for the year.**

### Kansas City *from Hilary Haley, Chapter Representative*

**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.** **Page 6**

## Southwest calendar from Michelle Bowe

Meetings are usually held at Greene Co Botanical Center, Spgfld, 4<sup>th</sup> Tuesday, 6pm. In case of bad weather, watch Facebook for cancellations or call ahead of time and we'll call back with more information.

27 Oct, Cookout starting at 5pm at the Lovett Pinetum (directions to be sent electronically on web page, Facebook and Google groups.) November, December: no meetings 26 Jan: Karen Richardson speaking about Monarchs; 6:30 pm at the Springfield Botanical Center (workshop room).



### Curator's Corner:

#### What's in a Job? "Chief Cook & Bottle Washer"

*The ninth in a series about herbarium curation by Michelle Bowe who is an Instructor and Curator of the Ozarks Regional Herbarium (SMS) at Missouri State University in Springfield, Missouri. She is also President and Treasurer of the SW Chapter of MONPS and is on the state MONPS Board. This is a regular column on herbaria and herbarium curation, written from her small, warm, windowless office next to the herbarium in Kings Street Annex. E-mail: [mbowe@missouristate.edu](mailto:mbowe@missouristate.edu).*

The other day as I was working on some herbarium specimens, I found myself doing a million other things at the same time. So, while I call myself "Instructor and curator," here are my other jobs: dishwasher, aesthetics manager, table cleaner, fruit organizer, pest control officer, landscape consultant (way out of my area, but I am often asked for advice, which gives me the opportunity to encourage people to use native plants), forest preservation consultant (this can be controversial, so I won't get into it here), field trip organizer (mostly for classes, but also for visitors to the herbarium and others), editor, database manager, plant disease consultant (again, out of my area, but I am learning because I am often asked). Intake control manager (goes along with pest control, but I also try to avoid adding an extra 50 specimens of dogwood each year), tour guide, librarian, accountant.

You'd think that my dishwashing duties would begin and end at home, but alas, there are always plant bits coming in and they are put into various containers which eventually must be cleaned. So, it seems as though I am constantly washing dishes. Not to mention all the coffee.

Pest control is an absolute must for an herbarium curator. There is some little tiny insect that gets on the specimens. I process specimens thoroughly before adding them to the main herbarium. First, if I do see bugs, I douse them with moth balls. Then, I freeze the specimens for at least 48 hours before they are immediately put into the general collection. Specimens are monitored closely for critters.

Believe it or not, I do actually give tour guides and even have a handout for touring visitors. Often it involves the People In Charge (dean, et al.), but I have had home-schooling groups and staff ambassadors also. And then, there are frequently herbarium visitors who want to study and/or annotate specimens. Often these folks would also like to visit a nearby area for a field trip.

There is always organization to be done, but if I repair or glue down a specimen, I do try to make the final result aesthetically pleasing.

Ubiquitous to all herbaria (it seems), is the cleaning brush (shown in photo). Inevitably, when you deal with plant material, you end up making a mess including dirt, extra leaves, seeds, fruit, etc. Even if you only deal with



already mounted/glued specimens. I learned the hard way that you especially do not want to forget to clean the table after dealing with *Opuntia* (cactus) specimens (also, never bring them in your office).

Our herbarium is not just a plant library. We also have actual books (mostly for reference). Goodness knows most of us can't identify a plant without a key and a description. And the books occasionally need to be re-shelved and/or reorganized. And finally (no, this is not a solicitation), the herbarium does have its own account, so occasionally I deal with receiving donations and buying supplies (it was set up by Paul Redfearn, who called the account, "Friends of the Herbarium").

And now back to our regularly scheduled dishwashing.



#### Savanna goldenrod *Solidago petiolaris*:

a largely overlooked goldenrod very good for urban gardens.

We encountered this species at several places we visited for the state field trips. The most numerous in the communities was at Spring Creek Gap CA near Vichy.

Field characteristics include: the largest of the *Solidago* flowers, a long petiole suspends each flower from the stem, recurved bracts. Habitat: dry/mesic open woodland/savanna.

Most people are afraid

to introduce any goldenrods into a garden or small naturalized area. But, none who have tried this plant have complained; most have rave reviews for its beauty and performance in a dry, partly sunny yard. *Photos by J Oliver*



## James Harlan Obituary

Submitted by Emily Horner, Malissa Briggler, with photos from Emily and Casey Burks

Sadly, we received news of the death of Jim Harlan on Sept 22, 2015. Services were held at Vansandt-Mills Funeral Home in Clinton, MO.

Jim was a retired forester for the Missouri Department of Conservation and continued to pursue his passion for native plants and education through his involvement with MONPS. Jim and his wife, Dorothy, were members of the SW Chapter in Springfield, but were previously long term members of the Osage Plains chapter of MONPS. Jim and Dorothy coordinated field trips for the Osage Plains Chapter during each month of the growing season for seven years. Despite their full calendar, they found time each month from April through August to lead a group of plant seekers through the prairies, glades, woods, weeds, creeks, streams, sloughs and fens of the Osage Plains Ecoregion. It wasn't enough for them to just do the planning either; every morning of the field trip they met other chapter members at the local library to carpool to the field trip location. Whether it was 5 minutes or over an hour away, the Harlans led the way and ensured travel to others who might not have been able to attend otherwise. During each field trip, Dorothy and Jim documented every species encountered and took photos of the community and the people enjoying it. And the following week a list of plants and attendees was sure to follow. These were invaluable, as they assisted chapter members with remembering the plants they saw, as well as documenting the plant community on private and public properties that could then be given to the landowners or managers. On sites visited annually, it provided a long term look at the plant community. The field trip itself, together with the follow up reports furthered the appreciation and knowledge of Missouri's native (and not so native) flora not only to those who attended the field trip, but also to those who had the distinction of being the location's owner and/or steward. In 2013, Jim and Dorothy were awarded the MONPS' Erna Eisendrath Memorial



trip. Shown from left to right: Paul and, Emily holding Samuel, Owen in green cap, Dorothy, Lois, Scott , Jim Harlan [black cap], Wanda. *M Bowe photo*

Education Award. Jim was a treasured member of MONPS and will always be remembered by those whose lives he touched. Osage Plains meeting field

## Southwest Chapter and Knowledgeable Conservationists Remember James Harlan



Jim Harlan—his usual field trip look. (Emily Horner)



### Some Photos From The State Field Trips



Two species of Pine drops  
[J Oliver]

Monotropa hypopitys  
> >

Monotropa < <uniflora



*Investigating Geology at Earth Quake Hollow*  
[J Oliver photos]

## Beechdrops in MO: Find them at Trail of Tears SP

Andrew Braun, text and photo

**In the deep hollows** of Trail of Tears State Park, an odd little plant can be found scattered around the bases of American beeches (*Fagus grandifolia*). At a glance, beechdrops (*Epifagus virginiana*) may appear to be a fungus, but a closer look reveals small, purple-brown flowers. This inconspicuous species belongs to the broomrape family (*Orobanchaceae*), all of which are at least somewhat parasitic.



Other Missouri members of this family appear as typical, green forbs, such as false foxgloves (*Aureolaria* spp.), paintbrushes (*Castilleja* spp.), and blue hearts (*Buchnera americana*), which produce at least some of their own sugars through photosynthesis, but also parasitize various other plant species for extra nutrients (hemiparasitism).

In contrast, broomrapes (*Orobanche* spp.) and beechdrops have abandoned chlorophyll for a holoparasitic lifestyle, where all nutrients for the plant are taken from other plants (Yatskievych 2013). While broomrapes parasitize several plant species, beechdrops are somewhat unique in that they are found only on beeches. In fact, *Epifagus* translates to “on the beech”. While the term “parasite” may imply a harmful relationship, there does not appear to be any evidence that they are significantly detrimental to their beech hosts.

Beechdrops are annuals, beginning growth in late summer, and senescing in early winter, though their dead stems may persist well into the following summer. Perhaps their late growth period takes advantage of the beech’s autumnal process of directing nutrients to the roots for the winter? Beechdrops possess both open (chasmogamous) and closed (cleistogamous) flowers. Seed dispersal of beechdrops is less understood. Thieret (1969) suggested that raindrops may dislodge seeds, but did not hypothesize methods of longer-distance dispersal.

Tsai and Manos (2010) used genetic and fossil pollen evidence to conclude that beechdrop density is dependent on beech density. Similarly, research at Trail of Tears State Park shows that beechdrop presence is positively correlated with density of beeches. In denser groves of large beeches, hundreds of beechdrops stems may be found, but scattered, lone beeches just a few hundred yards away are typically unparasitized.

American beech is most common in the eastern United States, but its range extends southwest into Texas, Oklahoma, and northern Mexico.

For the most part, the range of beechdrops follows that of beech, even into the distant Mexican populations. In Missouri, beeches are found only in a few southeastern counties along the Mississippi River Hills and Crowley’s Ridge. Because of their dependency on beech, and the relatively few locations of beeches in Missouri, beechdrops have been ranked “Imperiled” (S2) by the Missouri Natural Heritage Program, though the populations at Trail of Tears and other locations seem to be doing well. If you’re in southeast Missouri this fall, stop by Trail of Tears and look around – you might find a few stems of this interesting addition to Missouri’s flora.

**Abbate, A.P. and J.W. Campbell.** 2013. Parasitic Beechdrops (*Epifagus virginiana*): A Possible Ant-Pollinated Plant. *Southeastern Naturalist* 12:661-665.

**Missouri Natural Heritage Program.** 2015. Missouri Species and Communities of Conservation Concern **Checklist**. MDC. Jeff City, Missouri. 59 pp.

**Thieret, J.W.** 1969. Notes on *Epifagus*. *Castanea* 34:397-402.

**Tsai, Y.E. and P.S. Manos.** 2010. Host Density Drives the Postglacial Migration of the Tree Parasite, *Epifagus virginiana*. *Proceedings of the National Academy of Sciences* 107:17035-17040.

**Yatskievych, G.** 2013. Steyermark’s Flora of Missouri, Vol. 3. Missouri Botanical Garden Press, St. Louis, Missouri. 1382 pp.



Cream gentian *Gentiana alba* Auxvasse Glade [Casey Burks]



*Aster turbinellis* and *Rhus glabra* at Spring Creek Gap [B Erickson]

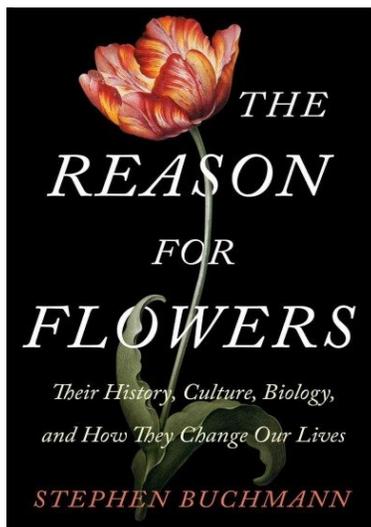
## **Book Review: “The Reason for Flowers: Their History, Culture, and Biology, and How They Change Our Lives”**

is the latest publication from Dr. Stephen Buchmann (with the University of Arizona in the Departments of Entomology and Ecology and Evolutionary Biology). It includes a chapter on bees and other pollinators, and also sections on fossil pollinators and fossil flowers. See below.

Dr. Buchmann was also on NPR's All Things Considered on July 18th "Birds, Bees And The Power of Sex Appeal: The Ribald Lives of Flowers."

<http://www.npr.org/2015/07/18/423478625/birds-bees-and-the-power-of-sex-appeal-the-ribald-lives-of-flowers>

**ABOUT THE REASON FOR FLOWERS:** Cultural history at its best—the engaging, lively, and definitive story of the beauty, sexuality, ecology, myths, lore, and economics of the world’s flowers, written by a passionately devoted author and scientist, and illustrated with his stunning photographs. Flowers, and the fruits that follow, feed, clothe, sustain, and inspire all humanity. They have done so since before recorded history. Flowers are used to celebrate all-important occasions, to express love, and are also the basis of global industries. Americans buy ten million flowers a day and perfumes are a worldwide industry worth \$30 billion dollars annually. Yet, we know little about flowers, their origins, bizarre sex lives, or how humans relate and depend upon them. See more at: <http://books.simonandschuster.com/The-Reason-for-Flowers/Stephen-Buchmann/9781476755526#sthash.PVeQek2Q.dpuf>



*Birds, Bees And The Power Of Sex Appeal: The Ribald Lives Of Flowers Their History, Culture, Biology, and How They Change Our Lives by [Stephen Buchmann](#)*

- More on this book: [NPR reviews.](#)

[interviews and more](#) , [Read an excerpt](#)

July 18, 2015 5:48 PM ET NPR Staff

Flowers, bugs and bees: Stephen Buchmann wanted to study them all when he was a kid. "I never grew out of my bug-and-dinosaur phase," he tells NPR's Arun Rath. "You know, since about the third grade, I decided I wanted to chase insects, especially bees."

These days, he's living that dream. As a pollination ecologist, he's now taking a particular interest in how flowers attract insects. In his new book, *The Reason for Flowers*, he looks at more than just the biology of flowers — he dives into the ways they've laid down roots in human history and culture, too. *To hear their full conversation, click the audio link above.*

Interview Highlights:

### **On the real 'reason for flowers'**

The reason for flowers is actually one word: sex. So, flowers are literally living scented billboards that are advertising for sexual favors, whether those are from bees, flies, beetles, butterflies or us, because quite frankly most of the flowers in the world have gotten us to do their bidding. But that's only the first stage because flowers, if they're lucky, turn into fruits, and those fruits and seeds feed the world.

### **On the raucous secret lives of beetles**

One of my favorite memories is roaming the Napa foothills as a UC Davis grad student. And I would go to the wineries, of course, and in between I would find [western spice bush](#), which is this marvelous flower that kind of smells like a blend between a cabernet and rotten fruit.

And when you find those flowers and open them up, you discover literally dozens of beetles in there, mating, defecating, pollinating — having a grand time.

### **On the modern-day supply chain of flowers**

Domestically in the U.S., we probably raise only about 30 percent of our flowers, and those are coming from California and Florida. But, you know, globally there are about 15 billion stems per year, and in the U.S. we buy about 4 billion cut stems a year — maybe 10 million flowers per day. But the vast majority of the flowers that we find in our big box stores or farmers markets are pretty much coming from Colombia and Ecuador, followed by Costa Rica.

And virtually all of those are coming into the Miami International Airport, so you may not realize it when you're flying in, but below your feet in the cargo hold, there are some perishable flowers as cargo. And they're also coming in airplanes — jumbo jets that are totally stripped no seats and just crammed with boxed flowers.

They have a huge carbon footprint. Millions and millions of them are inspected, bought and sold, and then get back on a plane to go somewhere else in the world.

### **On the universal — and ageless — appeal of flowers**

The floral beauty has beguiled us, along with the birds and the bees. Flowers come in a myriad of shapes, colors, scents and sizes, but they seem to have almost universal appeal.

**Every culture that I researched has a love for flowers. I mean, we use them obviously in decorations and in the decorative and fine arts and prose and poetry. We don't really have petroglyphs about flowers ... but, you know, going back to 13,000 years ago with the Natufian culture in Israel there we find on Mount Carmel in Israel the first seemingly genuine burials where flowers were used extensively when they buried their dead.**



**Ed Note:** Geochemists find evidence that Mosses evolved about 475 Mya; Flowers [dicots] evolved about 250 Mya; grasses [monocots] evolved about 60Mya. [Dinosaurs did not eat grasses.]

<http://news.stanford.edu/news/2001/april4/acsflower-s-44.html> BY MARK SHWARTZ Stanford Report,

4 Apr, 2001

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## Secret Life of Roots

Whole story can be viewed: <http://usbg.gov/exposed-secret-life-roots> and <http://www.voanews.com/content/us-botanic-garden-exposes-secret-life-of-roots/2914509.html> Voice of America; News/ Sci and Tech; Rosanne Skirble Aug 11, 15 6:01 PM  
A new exhibit at the [U.S. Botanic Garden](http://www.usbg.gov) Washington DC puts a spotlight on the parts of plants typically hidden underground and out of sight.

Megan Freier, visiting from Kansas City, Missouri, wasn't expecting much from "Exposed: The Secret Life of Roots."

"I was kind of like, oh, an exhibit on roots. How boring can this be?" she said, chuckling. "And then you walk in and, just, wow!"

Suspended at eye level are roots of dozens of native perennial grasses from the American prairie. Annuals such as wheat and corn hang with their roots exposed against both sides of a partition running down the center of a gallery. The roots are tangled and bushy, with their dried fibers stretching down several meters. The longest ones are rolled up at the ends and tied off so they don't sweep the floor.

The display seems to grow out of a panoramic photo of a farmer's field. It amazed Freier's aunt, Louisa Baylan of Orlando, Florida.

"What shows on the surface is nothing compared to what is grounding them," Baylan said of the plants. She added that she and Freier were "kind of in awe about what it takes to support the growth above ground. I mean, I just had no clue that the roots went so deep."

### Roots grown and excavated

The exhibit tapped the skills of Jerry Glover, who grew the plants at [The Land Institute](http://www.landinstitute.org) in Salina, Kansas. The agricultural ecologist used 3-meter-long sections of polyvinyl chloride (PVC) pipe and special clay material that enabled easy transplanting with the roots intact. Then the roots were soaked in a glycerin solution to prevent rotting.

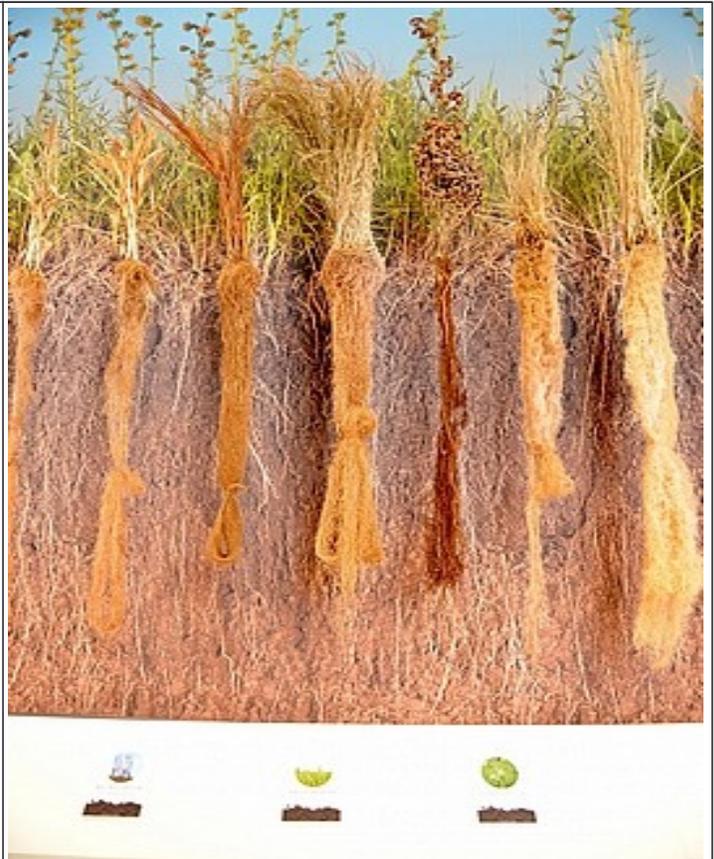
Susan Pell, the Botanic Garden's science and public programs manager, said this unexpected scene delivers a powerful message.

"Roots are the foundation for life" – and not just for plants, Pell explained. Roots absorb nutrients and water, which plants synthesize and make into sugars. "Plants themselves are really what we depend on as a species, whether we are eating them directly or we're eating animals that depend on them for food."

Outdoor portions of the exhibit offer more surprises. Pell picked up a soybean plant and pointed out its root system's importance to soil: Soybean roots "have these little nodules on them, which contain a bacterium, which fixes nitrogen. That's sort of a fancy way of saying it makes nutrients available to plants that otherwise would not be available to those plants."



*Turn screen time to green time  
GET OUTSIDE – EXPLORE!!!*



Apology from editor. Better photos can be seen on line.

### When it's not a root

The exhibit, which continues through October 13, explains that not everything growing underground is a root. For example, ginger and bamboo don't spread from roots but from rhizomes or continuously growing horizontal stems.

These "allow the plant to grow many, many stems above ground and to spread in vast areas," Pell said. "This is why we see bamboo forests. In some cases, actually, bamboo forests and also aspen forests may be a single individual that is entirely connected underground."

"Exposed" reveals a clearer picture of what plants need to survive.

The prairie grasses' long roots illustrate how hard plants must work, and how much they suffer, in drought-stricken areas.

"If these roots have to go so deep into the ground and they need water for sustenance, you just really kind of wonder, are we going to be able to sustain agriculture?" Baylan observed. Pell said she hopes visitors like Baylan leave with a new appreciation of natural systems and a sense of urgency to protect them from ever-pressing environmental problems.



*Get off the highway between work and dinner.*

*LOOK at what is at your feet. LOOK at what is beyond your feet, and in the trees. LISTEN to the natural sounds around; identify them. WALK 20 feet off the road . . . WALK another 50 feet. How is it different? What did you learn? Keep a journal/diary. Do it again tomorrow. Teach it to someone else . . . Teach them to teach.*

# Yaupon: Bain? Or Benefit? Both!

Submitted by Judy Turner, Hawthorn member, Bastrop TX

Since many of you may have read or heard the NPR story about Yaupon (or as we say in Texas "yo-pon"), *Ilex vomitoria*, I thought I'd add my two cents. As the fellow said in the story "if you're from around here (Cat Spring, Texas), you just want to get rid of it!" But there is more to it than that.

First of all, Cat Spring, Texas is actually a little over an hour from Bastrop off the highway to Houston. It is located in Austin County. Most of the county is designated as Post Oak / Claypan area, which means the soils are sandy, sandy loam, and clay. Very similar to much of our soils in Bastrop County. Trees that grow in that area include five species of oaks, hackberry, cottonwood, eastern red cedar, green ash, pecan, sweetgum, and several species pines. To that list one could also add the yaupon. Because if left un-checked, it can grow into a small tree, reaching 15 to 30 feet. Yaupons form dense thickets, shading out other bushes and trees. I know from experience. Before the 2011 Bastrop Complex fire that decimated 34,000 acres in Bastrop County, land that had not been converted to crops and other developments was saturated with a yaupon underbrush. Farkleberry, *Vaccinium arboreum*, is the other major underbrush shrub or small tree. They are both highly flammable. On the five of my six acres that burned in that fire, most of the yaupon and farkleberry were burned, many all the way to the ground. You would think that would have done them in completely. But not so. The roots of both are massive. And a lot of mine have regenerated from those roots. With most of the cover-story gone, some of the yaupon are already eight feet tall! I can cut the stems back to the ground, but they just come right back. Bastrop State Park, which lost 96% of its vegetation in the fire, has resorted to applying glyphosate or triclopyr products to the cut stems. That seems to work. However, it's not something I'm willing to do.

Now for the good side of the yaupon, which is also referred to as yaupon holly. It is evergreen and has lots of red berries in the winter. According to Sally and Andy Wasowski, (*Native Texas Plants*) at least seven species of birds eat the berries relatively late in the winter when not much else is available. It seem that the berries have become fermented by then. Maybe that's why the birds wait. Only the female trees produce berries. Central Texas mammals that eat the fruit are armadillo, gray fox, raccoon, and skunk. Deer eat the new leaves in the Spring. Yaupon is also a larval host for Henry's Elfin, *Callophrys henrici* and the Elf butterfly, *Microtia elva* [Simon Coomba photo]

As the NPR story said, the leaves do contain caffeine. I have only had the tea made from roasting the leaves. It's sort of like other black teas. Several local folks in Bastrop County are selling the tea at farmer's markets. Yaupon is a cousin of the South American tea, yerba mate, *Ilex paraguariensis*, which is fairly common in the more "natural food" stores.

Looks like/acts like bush honeysuckle?



## Here's The Buzz On America's Forgotten Native 'Tea' Plant

August 04, 2015 5:49 AM ET <http://www.npr.org/sections/thesalt/2015/08/04/429071993/heres-the-buzz-on-americas-forgotten-native-tea-plant>



Photos and text by Murray Carpenter [Murray Carpenter](#) is a journalist and author of *Caffeinated: How Our Daily Habit Helps, Hurts And Hooks Us*.

Yaupon growing in the wild in east Texas. This evergreen holly was once valuable to Native American tribes in the Southeastern U.S., which made a brew from its caffeinated leaves.

During a severe drought in 2011, JennaDee Detro noticed that many trees on the family cattle ranch in Cat Spring, Texas, withered, but a certain evergreen holly appeared vigorous. It's called a yaupon.

"The best we can tell is that they enjoy suffering," Detro says with a laugh. "So this kind of extreme weather in Texas — and the extreme soil

conditions — are perfect for the yaupon."

Detro began researching yaupon — a tree abundant in its native range, from coastal North Carolina to East Texas — and discovered that the plant contains caffeine and has a remarkable history.

A thousand years ago, Native American traders dried, packed and shipped the leaves all the way to Cahokia, the ancient mound city near the confluence of the Missouri and Mississippi rivers. Native Americans sometimes used it in [purification rituals](#) involving purging (this led to its Latin name, *Ilex vomitoria* — a misnomer, because yaupon is not an emetic). Traveling through North Carolina in 1775, the naturalist William Bartram said Cherokees called yaupon "the beloved tree." Early settlers even exported yaupon to Europe.

But yaupon was eventually elbowed aside by what purists call true tea — made from the leaves of the Asian shrub *Camellia sinensis*. (Technically, yaupon is an herbal infusion.) Because of yaupon's recent obscurity, Detro had to learn how to dry and prepare the leaves on her own.

"There is a lost art of preparing yaupon tea," says Detro, "because there are so many years between the Native American use of yaupon tea and our modern use of yaupon tea."

After Detro learned how to process the leaves, she told her sister, Abianne Falla, about her plans to sell the product at a farmers market or two. "At first, when she was telling me about it, I kind of had the same mentality of everyone around here, 'Well, let me taste it first,' " says Falla. "And as soon as I did, it was like, 'We might be onto something. I think we should make a run of it.' "

The sisters started selling their [Cat Spring Yaupon Tea](#) online two years ago, both a green tea and a roasted black tea. And Falla began getting the tea onto store shelves and into restaurants. Now the tea is being served at Austin restaurants like Dai Due and Odd Duck that focus on locally sourced food.

Odd Duck manager Jason James said he was surprised to learn about the tea. But he was pleased to find the taste familiar. "The flavor profile of it, I don't think it's too far off from a black tea," he says. "The tannin structures are a little bit different."

James says the lack of tannins can be a benefit, because it is harder to oversteep the tea. He recently started serving yaupon in lieu of black tea, and now the lunch crowd drinks 4 or 5 gallons daily. "Being that we had that ethic of sourcing local, and being sustainable, this just fit the bill," James says.

Detro and Falla have had some guidance along the way from [Steve Talcott](#), a professor of food chemistry at Texas A&M University. Talcott says that yaupon, like coffee and tea, is rich in the antioxidants known as polyphenols. And it's the only native North American plant he knows of that contains caffeine. He says the caffeine levels in yaupon vary, but are roughly comparable to green or black tea.

Talcott says he loves to watch people's reactions when he tells them that this common outdoor tree can be turned into a tasty, and buzz-delivering, brew.

JennaDee Detro harvests yaupon. After it is harvested, she takes it to a drying barn. Only the dried leaves are used to make yaupon tea.

"I'll walk out and pick some leaves off a plant and go, 'This is the only plant we know in North America that contains caffeine. I can make a wonderful tea out of this.' And they are just like, 'No, no way,' " says Talcott. "It's just amazing, until they actually try the tea. Until you try it for the first time, you'd just be blown away that it's an edible food."

Drinking iced tea at the corner store in Cat Spring in the heat of the day, construction worker David Avery is a bit skeptical. He says he has spent many hours on a bulldozer, tearing up yaupon, which encroaches on hay fields and pastures.

"Ahhh, yaupon. Shoot, if you're from around here, you just want to get rid of it," Avery says. "Most of the people, we don't do anything with it. First that I've heard that they're making tea."

But Avery says he'd like to try it. And he's not alone. Detro and Falla have sold enough yaupon to brew more than 100,000 cups of tea, to customers in 36 states. With other companies in [Georgia](#) and [Florida](#) now selling yaupon, it may be poised for a comeback that's long overdue.

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**When we visited Auxvasse Glade on Reform CA, several people asked what Auxvasse means and why is it called that. This is the first three paragraphs of the history of Auxvasse. The rest can be found at <http://www.auxvassemo.com/Pages/default.aspx> . No author was given.**

**Early History of Auxvasse Missouri:** *Auxvasse was laid out in the fall of 1871. Mr. Thomas B. Harris, who owned the land, founded the town when the Louisiana and Missouri River Railroad announced plans to build a rail line from Mexico, Missouri to Cedar City. He named the town Clinton City. The official plat was filed in the Callaway County Recorder's office on October 23, 1873. Mr. Harris's town was bustling with nearly 100 people by that time. Carpenter S.B. Meyers built the first Auxvasse homes in 1872. He also built a carpenter shop that was later converted into a blacksmith shop.*

*The first Post Office was established in about 1874. That brought to light the existence of another Missouri town named Clinton in Henry County. It was clear the name of the town had to be changed to avoid confusion. In fact, the U.S. Post Office insisted. A town meeting was called to allow citizens to suggest a new name. No one could agree on any certain name until the supervisor in charge of construction of the new Auxvasse Creek railroad bridge stepped forward. He suggested the town be named Auxvasse, after the creek. Everyone quickly agreed and the name was changed to Auxvasse.*

*The name Auxvasse was given to the creek by early French explorers who had trouble crossing the stream in the area east of the present town of Mokane. Lillbourn W. Boggs, who later became governor of Missouri, was traveling with the Frenchmen at the time. Some of the wagons became mired and were pulled free only after long hard labor by the entire company. Thereafter, the French called the stream "Riviere Aux Vases" or river with miry places.*

Ed note: French/English dictionary: "vase"[pronounced vaz] masculine *le vase* = vase or vessel; feminine *la vasse* = mud or slime. Could refer to both: vessels or holes in the earth full of mud. "Aux" [pronounced long o] = of. Full translation = river of mud. **P. 13**

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**"A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise." Aldo Leopold**

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