

March – April 2017 NEWSLETTER OF THE MISSOURI NATIVE PLANT SOCIETY Volume 32 No.2

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

ANNOUNCEMENTS

We are a Dues Paying Organization

If you mine information from our Facebook site, please consider paying for a membership. The cost is VERY LOW.

If annual renewal is becoming a nuisance, please consider a Lifetime Membership.

We value our members in the hopes that they will teach what they have been taught, and urge you to keep your membership current.



2017 Field Trip Schedule

Submitted by Dana Thomas, Vice President

Please join us on our field excursions in 2017 to explore the phenomenal flora of Missouri! Mark your calendars now so you don't schedule conflicting activities later. These weekends are not to be missed. General locations are solidified, but specific field trip sites are very tentative.

Spring 2017 - West Plains, MO - June 2-4 - Possible sites include Vanderhoff Forest, Spring Creek, Carman Springs, Tingler Prairie and Noblett Lake.

Summer 2017 - Kahoka, MO area - July 7-9 - Battle of Athens State Park, Deer Ridge Conservation Area, Acola Woods, Steyermark Prairie and Goose Pond.

Fall 2017 - Ava, MO area - September 22-24 - Glade Top Trail, Taney Mountain, Ozark Underground Lab, McClurg Glade.

Don't miss opportunities to study landscapes like these [BE photos]



For Shopping, Please use Amazon Smile

The easiest way to support the Missouri Native Plant Society!

Please consider using Amazon.com's charitable site to do your shopping.

On your first visit to AmazonSmile (smile.amazon.com), you need to select a charitable organization to receive donations from eligible purchases before you begin shopping. Choose Missouri Native Plant Society Inc. Amazon remembers your selection, and then every eligible purchase you make at smile.amazon.com will result in a donation. Every dollar you spend on the site generates a half cent for us. They gave us \$38 last year. It doesn't seem like much, but every little bit helps, **and the money comes from Amazon, not you!** It is up to you to make the donation higher next year. Thanks for thinking about us.

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, page layout]. Editor thanks all who submit articles and reports for publication in MONPS Petal Pusher. Special thanks to those who submit articles and reports early and in requested format. This edition those people were Casey, Michelle, Retha Meier, and John R. This kind of cooperation is a team effort to make our newsletter readable and interesting.



And more information on our website
www.monativeplants.org
www.monativeplantsociety.org

Welcome New Members!

*Is your friend's name here?
 If you read us on Facebook, – is your name here?
 Membership is easy and very low cost see
<http://monativeplants.org/membership/>*

Kansas City

St. Louis

Mike Walsh, Ballwin

Hawthorn

Linda Karns

Southwest

Osage Plains

Ozark

Perennis

State Level Membership

Caleb English, Steelville

Eric & Nancy Seiler, St. Louis

We hope Caleb, Eric and Nancy find some friendship with the St L chapter so they don't feel left on their own

Welcome to new members.

We all hope your membership with Mo Native Plant Society is fulfilling. When you first sign up you need to do one more thing. You need to send your request for email delivery to the Petal Pusher editor, Becky [see Masthead]. Please do not wait several months to find out your address has been lost in the transfer. If you don't get the information you need, let us know. If there is a wild area you think we should visit, let us know. This is a democratic organization; everyone is invited to all MONPS activities and all suggestions will be heard.

Stanton Hudson Memorial Fund Student Research Awards — 2017.

Submitted by the MONPS Board

The Missouri Native Plant Society announces the availability of funding for research projects conducted by college or university students under the supervision of a faculty member. This award honors the late H. Stanton Hudson (1921–2002), a long-time member of the Missouri Native Plant Society whose passion for the flora of Missouri and its conservation inspired his friends and family to create a small grants program in his memory. To qualify for the Hudson Fund, research must involve Missouri native plants in some way, but may have as its primary focus any pertinent subject-area in plant biology, including conservation, ecology, physiology, systematics and evolution, etc. The grant may be used for any non-salary expenses relating to the proposed research, including travel, equipment, and supplies. **Deadline for submissions is 1 April 2017, with funds to be awarded on about 1 June 2017.**

For 2017, we anticipate awarding a single grant in the amount of \$1,000. At the conclusion of the project, grant recipients will be expected to prepare research results for publication in a scientific journal.

Proposals should not to exceed 5 single-spaced typed pages and should include:

1. Description of the project;
2. How the project relates to native Missouri plants;
3. Estimated completion date;
4. Overall budget for the research;
5. How an award from the Hudson Fund would be used;
6. A list of other funding received or applied for toward the project.

Applicants should also include a current curriculum vitae. In addition, two letters of reference must be included, one of these being from the student's faculty advisor. Materials may be submitted by mail (in triplicate) or preferably electronically as e-mail attachments in Microsoft Word or Adobe Acrobat (pdf) format. Letters from the applicant's references may be submitted as e-mail messages. Proposals will be reviewed by the MONPS grants committee.

Application materials should be sent to: Missouri Native Plant Society, c/o Dr. Paul McKenzie, 2311 Grandview Circle, Columbia, MO 65203.

Missouriensis Goes Digital

Submitted by Doug Ladd, Missouriensis Editor dladd@tnc.org

Earlier this year, the Missouri Native Plant Society board voted unanimously to convert the Society's journal, Missouriensis, to a completely electronic format.

The journal will be published and distributed electronically to members in PDF/A format, ensuring long-term archiving compatibility. The editor is exploring inclusion in multiple global on-line search indices, such as *Botanicus*, *Biodiversity Heritage Library*, and *Scopus*. Recipients will be able to easily print copies of any or all portions of each issue as desired. For priority and citation purposes, the date of electronic posting of the journal will be the date of effective publication.

Current plans are to continue publishing a single volume per year, although future options include continuous electronic publication of articles as they become available. The editorial procedure will remain substantially the same as previously – articles of relevance to Missouri flora, vegetation, and related issues are encouraged to be submitted to the editor, who will coordinate peer reviews and work with the authors on any required revisions and edits.

The transition will require some formatting changes to facilitate clarity and access in an electronic format, and the “Instructions to Authors” section that will appear in the coming volume will also be revised. The next volume will also include an enhanced book review section, and the establishment of a recent and noteworthy collections feature that will allow rapid and efficient dissemination of new discoveries without requiring a full article.

These changes will make the Society's journal more relevant, accessible, and attractive to both contributors and readers. Stay tuned for the next issue in the coming months, [and please send me your comments and suggestions](#). Doug Ladd, Missouriensis Editor dladd@tnc.org

Casey's Kitchen-Medicine Chest

The Lowly Chickweed *Stellaria media* (L.)

Submitted by Casey Burks

[Ed. note. Chickweed is an invasive species introduced from Europe. Yes it is edible, but, discretion and moderation should be exercised as with eating anything.]

It is January and I still see healthy dark green chickweed growing happily among dried garden plants as well as the inhospitable gravel driveway. I have been intrigued with this low growing plant since eating some several years ago and finding out how nutritious it is. I honestly like the taste of it.

The array of vitamins, minerals and other constituents of chickweed lend it to many uses. According to Medical Herbalism by David Hoffmann, “Chickweed is commonly used as an external remedy for cuts, wounds and, especially itching and irritations. It may be used with benefit to treat eczema or psoriasis. Chickweed has a reputation as a remedy for rheumatism when used internally.” For rheumatism tea, pour 1 cup of boiling water over 2 teaspoons of dried chickweed and let infuse for 5 minutes.

Made into a mush and used as a poultice, chickweed has a cooling effect which is soothing as well as healing for an infection. In Medicinal Herbs, Rosemary Gladstar writes that a chickweed poultice can be used for diaper rash on infants. Chickweed has Vitamin C.

You can make chickweed salve to have on hand with olive oil and beeswax in a double boiler. Just let the plant wilt first to remove most of the water content or the salve could mold. In Rachel Weaver's book Backyard Pharmacy, her recipe for salve includes plantain, comfrey and vitamin E. She writes that chickweed contains the healing Vitamins A and C plus saponins which thin cell walls. Thin cell walls enable the healing agents to move into the cells.

I haven't figured out what chickweed has in it that helps it survive the cold so well but I feel blessed that we have it in abundance for free, nutritious salad greens almost year 'round.

**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, 16th. century Dane, educator**





Inquiries Into *Viola pedata*

This is condensed by one of the authors, Retha Meier from a lengthy research project where the different color morphs of *Viola pedata* were compared in their attracting ability to bees. Text and photos by Retha Meier.

When we observe flowers we notice their size, shape, and color. On occasion we may even stop and smell the fragrance, if there is one. Insects are attracted to flowers by visual and olfactory cues. However, floral warmth has been shown to serve as an additional attention-getter for these small, cold-blooded animals (Dyer et al, 2006; Woodcock et al., 2014; Whitney and Chittka, 2007).

<<< Our research team studied two color morphs, bicolor and concolor, of *Viola pedata*, an insect-pollinated, self-incompatible wildflower native to at least 30 states in America and parts of Canada. Our study sites were at Cuivre River State Park (CR) (forest) (2013-2015) and at Shaw Nature Reserve (SNR) (glade) (2014-2015). As curious researchers, we addressed a number of research questions about the flowers, pollinators, and interactions between the two. In addition, park authorities burned both sites in 2014.

We wondered how many of each morph was found at each site. After much counting, we learned that there were more plants producing bicolor flowers than plants producing concolor flowers at CR in 2015 (1.8:1) than 2014 (1:1.02). Also, we documented more plants producing concolor flowers at SNR in both 2014 (40.0:1) than 2015 (2.8:1). Why did these shifts occur? We suggest further research to address this question.

Next, we wanted to know if a difference existed for the number of flowers produced per plant by each color morph. We discovered that there was no significant difference between the number of flowers produced per plant in the two color morphs at CR in 2014 and 2015. However, more flowers were produced per plant by concolor (6.9 flowers/plant) at SNR in 2014 (burn year) than the bicolor plants (2.7 flowers/plant). Interestingly, in 2015 (non-burn year) no significant difference was found between the two color morphs for the number of flowers produced per plant at SNR.

We asked if natural rates of pollination (pollen tubes penetrating pistils) were the same in the two color morphs. Our data revealed that no significant differences were found between sites or years for the mean number of pollen tubes germinating and penetrating pistils.

We wondered whether the color morphs produced the same number of ovules/pistil. No significant difference was detected for the bicolor morph at CR in 2014 and 2015 but the bicolor morph produced more ovules/pistil at SNR in 2014 (burn year) than in 2015 (non-burn year). The concolor morph also produced more ovules/pistil in 2014 (burn year) than in 2015 (non-burn year) but did so at both sites.

Seed set intrigued us so we questioned whether seed set was the same between the two morphs. Although no main effects were found among years, location, or flower morph for seed set, we discovered that seed set was significantly higher in 2014 (burn year) at SNR than in 2015 (non-burn year). Also, seed set was significantly higher at SNR than CR compared to either year.

We queried whether the two color morphs attract the same types of pollinators, how the pollinators forage on the two color morphs, and if the pollinators are generalists or specialists. The major pollen vectors were identified as generalist bees (Andrenidae, Apidae, and Halictidae). In addition, *Andrena carlinii* (females) were prevalent at both CR and SNR. Bees preferred to forage on the concolor morph at both sites and were observed foraging on

flowers both upside down and right side up. No correlation existed between either mode with either morph.

Finally, we asked if the flower petal temperature of the two morphs differed. Using a thermocouple and tissue probe, data revealed that the dark purple, posterior petals of the bicolor morph were warmer than their lilac anterior petals. In addition, the dark purple petals of the bicolor morph were warmer than either the posterior or anterior petals of the concolor morph. When we compared bee visits to the bicolor flowers between the two sites, we found that bees visited the bicolor flowers more frequently at CR (forest) than at SNR (glade). Since only 6 bees were observed visiting bicolor morphs at SNR (2014-2015) whereas 68 bees were observed visiting the bicolor morph at CR (2014-2015) we provide a



Viola pedata with a temperature probe in the lower petal.

possible interpretation - bees are attracted to warm flowers in the cool forest.

In summary, *Viola pedata* caught our attention and stimulated our curiosity. We asked many questions as we compared this interesting model organism in two different ecosystems - a shady forest (CR) and a glade (SNR). We hope our findings 1) provide insight into the pollination ecology of this species and 2) inspire additional research.

References:

Dyer, A. C., Whitney, H. M., Arnold, S. E. J., Glover, B. J., and Chittka, L. (2006). Behavioral ecology: Bees associate warmth with floral colour. *Nature* 442: 525.

Whitney, H. and Chittka, L. (2007). Warm flowers, happy pollinators. *Biologist* 54: 154-159.

Woodcock, T. S., Larson, B. M. H., Kevan, P. G., Inouye, D. W., Lunau, K. (2014). Flies and flowers II: Floral attractants and rewards. *Journal of Pollination Ecology* 12:63-94.

The Tree Who Became a Seed

Valerie Wedel, text and artwork reprinted by permission

Once upon a time there was a tree. She wasn't the tallest or the most beautiful tree in the forest but she had gained some wisdom in her years and had very much enjoyed her tree-existence.

She delighted in the birds and squirrels who would chatter among her branches and experienced the loss of fall leaves and the subsequent spring re-growth with grace.

She produced nuts with a unique flavor which the birds and squirrels found tasty. Being tuned in to her own nature as a tree, she upheld her treeness quite well.

The tree cannot pinpoint exactly when it started, but one day she found she was working much harder than before to maintain herself.

She still produced her nuts and leaves, in fact, a bit more than usual. But, she found she had no energy left to enjoy the birds' songs and had forgotten the names of most of the squirrels.

Winter came, which was a relief, as it meant the tree got a break. "By the time spring rolls around I'll be well-rested and back to normal," she thought and sat back, relishing the magnificent snow formations on her branches.

After a lovely and relaxing winter, the tree opened her eyes but the world was not as she usually knew it in spring.

She expected a slow start to her leaf growth and the birds and squirrels would take some time to arrive-early spring could be quite winter-like. But this time, things were radically different.

For starters, she could not see the sun. No sun. Only an afterimage in her mind. Somehow, this did not alarm her for there was a deep, deep memory of having had a similar experience.

Without the sun, it was, of course, dark. Next, she realized she could not feel the breeze dancing through her branches. She just felt consistently cold and damp.

Taking further stock of her circumstances, she sensed a not-unpleasant pressure at her top and sides. Again, it was a sensation she had not felt for many, many years, the memory of which was among her very earliest.

Instead of the varied smells she was accustomed to, all she could smell now was earth. What a curious situation!

Once she had realized the nature of her surroundings, she attempted to determine where she was exactly. She did not recall having been uprooted and transplanted and found it unlikely that she had been chopped down.

Ironically, even though she could not move, she no longer felt rooted. "Wait a minute," she said to herself, "if I no longer feel rooted it must mean it's because I have no roots!"

With great concentrated effort she also realized that she no longer had any branches, leaf buds, stems, or bark. Without knowing her form and therefore not knowing her part in the theatre of life, she did not know how to act.

Days passed and nothing happened. Nothing. What an odd experience for a full-grown tree. Strangely, she felt fine and often quite happy despite her 180° turn, just curious as to what she really was.

In the meantime, she had lots of opportunity to dream...

Eventually, a revelation came to her- "I'm a seed! I've turned back into a seed!"

And so she was.



Curator's Corner, *Tools of the trade* (part 1)

The eleventh 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.



An herbarium is a plant museum, but what makes it a **museum** rather than an arboretum or greenhouse? I've actually had people ask me to give them tours of the herbarium only to find themselves surprised to be looking at cabinets full of flat dead plants rather than a lush garden of living ones. Let me describe the process that turns those live plants into museum specimens by describing the tools used to do so.

The first thing you need is **clippers** (or a pocketknife) and a plastic **bag** in which to collect the specimens. In the old days, plants were placed in a **vasculum** instead (much more sustainable, by the way). A vasculum is a metal, cylindrical container in which plants are placed and stored until pressing—the humidity naturally remains high within a vasculum, so, other than being bulky, they are ideal for field collecting.

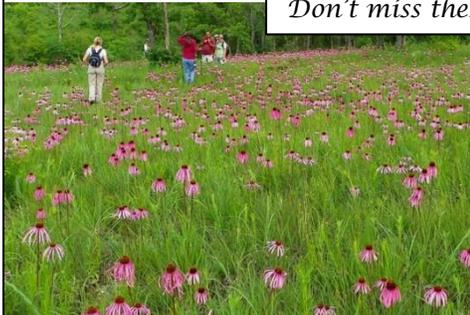
The next thing you need is some **newspaper**. This is useful for several reasons. You can wet it and wrap fresh specimens in it to preserve them longer, but you also need it to act as a folder for the plant when you put it in a plant **press**. The goal here is to permanently flatten and dry the specimen, recording in perpetuity its characteristics at the time of collection. Within the press, one finds **aerators**, otherwise known as cardboard, blotting paper (thick, soft and absorbent/no, toilet paper won't work), and then, with any luck, fresh plant specimens in their well-marked newspaper (or **newsprint**—the paper without any news) folders.

Wooden **backboards** are placed on both the top and bottom of your pile of aerators, blotters and specimens, and then the whole press is held together by two **press straps**—these are like old army belts (and current ones, as a student Army Veteran confirmed for me). The press components should be neatly aligned and the straps pulled as tightly as possible in order to flatten the plants. Remember the goal is well-preserved, flat, dry plants.

Once the plants are dry (1-2 weeks in normal (not too humid) conditions; 1-2 days in a plant dryer), they are ready to be labeled and mounted onto **herbarium cards**--11×17 sheets of archival paper. In our herbarium, we enter specimens into the **Microsoft Access database**, which also functions to format the **labels**. Many herbaria **digitize** their specimens by making and storing high resolution images of the plant specimens with their labels. **Specimen** labels are very important and typically include the following information: plant species and family, collection date, collector, collection number, and where the plant was found. This information provides both a historical context—where did that plant grow that year—and a source of identification—what is that plant?

It is this archiving of history (i.e. what plant was found where, when) that makes an herbarium a plant museum. Many tools are used in the creation and upkeep of specimens in the museum, and this month's column is just the beginning. Stay tuned for more *Tools of the trade* in the next installment of *Curators' Corner*. In the meantime, stay warm and keep your eyes out for the early bloomers—they may be weeds, but they can be beautiful none-the-less!

Don't miss these breath-taking landscapes this summer on our summer field trips



Book Review: Language Making Nature: A Handbook for Writers Artists and Thinkers

David Lukas

256 pages, softcover: \$22.

Lukas Guides, 2015.

Copyright © High Country

News

A new book provides a road map to finding literature in nature.

How to name a rose.

Michael Engelhard | Jan. 13,

2017 | *Web Exclusive*

Ever since 18th century botanist

Carl Linnaeus introduced his

Latin binomial system to the

world, scientists have felt

reassured that every species can be classified in relation to

every other species — that order in nature could be

achieved. We believe that by knowing a thing's name, we

understand something about its essence. Linguists tend to

differ, arguing that the relationship between the signifier and

the signified is generally arbitrary and meaningless. All

names are abstractions; the vanilla scent of cliffrose is not.

Still, it seems to matter if we refer to a plant as a “weed,”

which is easier to eradicate than a rose.

On the flip side, the knowledge of species names betrays

a certain literacy of place, and their allure might tempt us to

further explore relationships and interdependencies that link

Homo sapiens and all other life forms. (From that, true

wisdom might spring.) Unfortunately, the proverbial city

slicker's repertoire rarely extends beyond “pigeon,”

“rhododendron,” and “sewer rat.” How many of your friends

can name 10 local birds?

In his creative manual, *Language Making Nature*, the

writing instructor, *L.A. Times* columnist and Yosemite

naturalist guide David Lukas asks us to reinvent

nomenclature in an attempt to bring back the richness of

language that is owed to the surrounding world. By charging

scientific discourse with passion, he hopes to forge a vehicle

for nascent ideas and to excite fledgling naturalists. Older

and perhaps more jaded ones may feel rejuvenated as

wordplay sharpens their lens on the environment.

An Alaskan wild rose (Rosa acicularis) which we could also call a pricklepink."

Walter Siegmund/Wikimedia Commons

Lukas, who memorized names and pictures from field

guides as a child, honed his ideas while hiking thousands of

miles in wilderness. As part of his love affair with the

English language, he scrutinized its trajectory. Many names

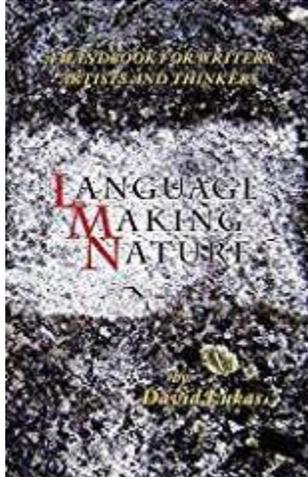
given to plants and animals, he argues, can be classified as

“shallow” placeholders, “concocted by scientists who had

little to no experience with an organism's life or character

when they named it.” Lukas explains that such impoverished

names — which often reference color or shape or the name.



of a naturalist — were coined because new species first are named and classified and only later studied in detail. A good example is the hermit warbler, a quite social bird

Lukas favors three-dimensional words, not flat representations, words that jolt us awake with Zen insights. “When language breaks open, what do we have left, and what does it feel like?” he questions in a koan. Seeking ways to infuse word husks with magic, this Chomsky-esque tinkerer spent four years synthesizing every book he could find on the history, formation and word-making process of his mother tongue. Eager to peer beneath surfaces, he delves into arcane vocabularies with Anglo-Norman roots (*dragoncel* — “young dragon;” *tremble* — “aspen;” *bogee* — “badger”); into “eairthy” Newfoundland English (*pant* — “the swelling of ocean waves;” *conkerbill* — “icicle”); ritual words; and haiku-style place names. Even our sensory perceptions have been muted. Who now thinks, or writes, of the colors “leek green,” “deep sea-foam,” or “fawn”? Who — like Chaucer — accuses speakers of “jangling like a jay”? Much that we experience is straitjacketed by verbal convention. Lukas encourages experimentation, “democratic” neologisms, rebuilding the world from the Ur-clay of language. Dissecting words into their Greek, Latin and English components, he shows how to alter or amalgamate them to great effect. In the book's spirit, from now on I'll refer to Alaska's wild rose, *Rosa acicularis*, with my own made-up label “pricklepink.” A former classmate, should he appear in my writings at all, will be described as “toadine” (not just for his lack of chin). And if I ever buy a house, the neighborhood needs to be “aspy”: lush with silver-barked, swaying trees.



A frozen rose hip after the flowers have successfully been pollinated. What would you call this particularly ice-encased one, following Lukas' creative naming strategies?

Pixabay [BE photo]

People who distrust self-published books or shun discussions of grammar or etymology should not let that deter them from buying this one. Luminaries such as Robert Hass, the former national poet laureate, Beat poet-essayist Gary Snyder and the cultural ecologist David Abram have endorsed it. The author himself is a honeytongued bard, reminding us of the task, in this age of advertising and political sloganeering, “to paint in words the feel of a meaningful life well lived, to share the authenticity of a well-worn haft in hand, the touch of something handmade, the sound of things that are real — words with real meanings, songs of friends, the whisper of wind in a healthy forest.”

Describing a region no European had written about, Lewis and Clark added 1,500 words to the English language. In times to come — with changes so profound that the emerging era has its own name, the “Anthropocene” — truthful new words will be tools of resilience, allowing us to imagine and inhabit a re-enchanted but different West.



Chapter

St Louis *report from Rex Hill, Chapter Representative*

At our January meeting, we were treated to a presentation by Bruce Schuette on the **Floristic Significance of MPF Prairies**. Bruce, as many of you know, was the naturalist at Cuivre River State Park for over 35 years.

After retirement, Bruce has turned his attention to the Missouri Prairie Foundation, where he had been an active board member since 2000 and is now serving as Vice President of Science and Management. As Park Naturalist at Cuivre River SP, he was responsible for instituting many ecosystem management practices such as prescribed burns and exotic species control. He served as an inspiration to others in the state park system to follow his lead. He is applying his considerable experiences to MPF, particularly those in natural resource inventory monitoring and assessment that he practiced at Cuivre River SP.

His talk was about objective methods that involve mainly vascular plant studies of the prairie areas. Using coefficients of conservatism (COFC) numbers assigned to individual plants and producing an average COFC from a plant list for each of the prairies, a measure is obtained that can be used to compare MPF prairies to each other and to other parcels of land. Having these baseline measures allows measurement of changes over time to these areas, and comparison to measurements made in the past. The methods and a table of COFC's for Missouri plants are presented in a recent paper titled "Ecological Checklist of the Missouri Flora for Floristic Quality Assessment" by Doug Ladd and Justin Thomas. A copy of that paper can be retrieved at the following internet address:
<http://www.phytoneuron.net/2015Phytoneuron/12PhytoN-MissouriFlora.pdf>. As usual, in one of Bruce's talks, the audience was treated to a display of beautiful photography of the special plants and places that are found in Missouri prairies.

At the meeting, there was talk of some future fieldtrips being considered later in March and April. Look to the Saint Louis Chapter page on the MONPS website at for any announcements.

<http://monativeplants.org/chapters/saint-louis/>



Ozark

Submitted by Liz Olson Chapter Representative.



Empire

Steve Buback Chapter Representative

No report was submitted at this time.



Reports

Hawthorn

Submitted by Becky Erickson from notes taken by Lea Langdon

After the wreath workshop just before Thanksgiving, we had our Holiday party in early December at the Unitarian Church. It was attended by about a dozen members, including one member's son. The festively decorated table was spread with a potluck of homemade leek soup, pulled pork, baked beans, guacamole and various delicious baked goods. Conversation and a good time was had by all.

At our Meeting 9 Jan, we discovered Gail Pflermons could be our vice president, Paula Peters moved back into Treasurers position and John George wanted to be chapter rep. We also decided on events to attend for our booth display and plant sales.

21 Jan was exceptionally warm, so 6 of us were anxious to get into the woods to identify trees.

It was a scramble to get a propagation workshop together in 6 weeks, but we did it. 28 Jan, 41 people came together at the MU Extension office at Midway for a 3.5 hour session with Becky Erickson on how to identify 'pods on a stick', how to extract the seed, and how to coax the seeds to germinate. Students came from MMN, WildOnes, MONPS, and MG. Most of them took home a pot of soil with some seed to stratify for two months.

Usually 6 to 9 members converge on Uprise Bakery in RagTag Theater for lunch once per month. Join us to share a nutritious meal and discussions about alien control, restoration planting, and garden surprises! We exchange seeds. We report counts of hummers, butterflies and especially monarchs.



Kansas City *Submitted by John Richter, KC Chapter Pres*

KC Chapter was on hiatus for the Holidays. See the posted calendar for upcoming events



Southwest

Submitted by Michelle Bowe, Chapter Representative.

The SW Chapter did not meet in December or January, but we are looking forward to some excellent speakers in February and March. Please refer to the posted calendar.



Perennis

Submitted by Andrew Braun, Chapter Representative

No report at this time.





Osage Plains

Submitted by Casey Burks, Chapter Representative

The Osage Plains Chapter did not meet in December or January, but we are looking forward to some excellent speakers and field trips in February and March. Please refer to the posted calendar.



LINK IN!

Share with friends and neighbors

PLEASE OFFER YOUR SUGGESTIONS!!

Missouri Native Plant Society: our own website
<http://monativeplants.org/>

Linda Hezel strongly suggests reading the article on page 4. This explains how virgin land is tilled to make organic farms when they should be preserved.
<http://www.cornucopia.org/wp-content/uploads/2016/06/Summer2016-Cultivator-Web.pdf>

Paula Peters found a great website www.gardenswithwings.com. As she says, "It has a place to enter your zip-code to get a [list of food plants to plant for the butterflies in your area](#), and it has lots of other handy information too. "This is just in time for Spring; they need food all summer and fall, too—enjoy!"

Birding Trails Website from Becky Erickson
Just because it says "Birding Trail" doesn't mean that's all it is. Just because you go into the fields to find birds, doesn't mean you can't assess the landscape and practice some plant identification; or vice versa. There is a lot of excellent information on this site. Use it; share it; put it on your Facebook page. Open it up; talk it up.
<http://greatmissouribirdingtrail.com/Wordpress/birding-trails/>

Monarch Larva Monitoring Project video
www.mlmp.org

Missourians for Monarchs
<http://missouriansformonarchs.blogspot.com/>

Xerces Society: nfp-ngo for invertebrate conservation
<http://www.xerces.org/>
<http://www.pollinator.org/>

WREN SONG <http://nativeplantwildlifegarden.com/> Blog on native gardens and ecology

Article on the effects of neonics on insects in Sept 2015 Wild Ones! Journal
<http://wildones.org/Neonics.pdf>



Nominations for MONPS Board Officers

Submitted by the MONPS Board

We are pleased to announce that our current slate of officers have agreed to serve for another two years. The officers are:

President: John Oliver
Vice President: Dana Thomas
Secretary: Malissa Briggler
Treasurer: Bob Siemer

In addition, two positions for at large **Board Members** ('17-'20) need to be filled:

These positions are currently filled by:

Mike Skinner ('16-'17) who filled in for Robin Kennedy last year and **Justin Thomas** ('14-'17)

Both have agreed to serve for another three years

If there are any nominations for these offices from the general membership, please submit them to Martha Hill at MarthaJHill@charter.net as soon as you decide. With no further nominations, these named officers will be installed at the next annual meeting held at the meeting held in Kahoka 7-9 July '17.



Backyard biodiversity to replace wild areas by Tallamy
<http://www.americanforests.org/magazine/article/backyard-biodiversity/>

Linda Hezel's organic farm emphasizing biodiversity to maximize production.
<http://www.prairiebirthdayfarm.com/learning/resources.html>
Naturalist's blog on the wild lands of southern MO
<http://allisonjvaughn.blogspot.com/>

Naturalist's blog on a native garden in the suburbs
<http://nadiasyard.com/>

WildOnes! Website full of articles on native habitat restoration
<http://www.wildones.org/>

BE A CITIZEN SCIENTIST!!

Many, many retired and people with interest in nature supply data to several organizations needing data from across the country and around the world. I won't supply links here because it is so easy to Google names.

Bud Burst is a database of DATES of perennial emergence, buds, flowers, seedset.

Cornell Ornithology Lab gives several dates around the calendar when you can submit bird counts, just in your back yard or on vacation trips.

Monarch Watch and Missourians for Monarchs both need data points for wild and planted milkweeds, prairie plantings and wild nectar areas; then they need monarch sightings in all stages of development.

Chapter Calendars

Hawthorn *from Becky Erickson*

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 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. We will email chapter members interested in outings.

16 Feb Thurs 11:30 am: Lunch at Uprise Bakery. 10 Hitt St., just south of Broadway.

13 Mar Mon 6 pm: Bimonthly Meeting at Unitarian Church. Program TBA

16 Mar Thurs 11:30 am: Lunch at Uprise Bakery. 10 Hitt St., just south of Broadway.

8 April 10 to 2: Bradford Farm Native Plant Sale. Set up time 9am. Connect with coordinator well in advance.

20 April Thurs 11:30 am: Lunch at Uprise Bakery. 10 Hitt St., just south of Broadway. This lunch is just before our big booth at Earth Day. If you plan to help, please attend lunch.

23 April Sunday Earth Day Festival. Set up 9am. Pack up 7 pm. Volunteers please commit early.

Kansas City *from John C. Richter, Chapter President.*

Meetings are usually held at MDC Discovery Center 7 pm, 1st Tuesday of odd-numbered months. No meeting in July. <https://nature.mdc.mo.gov/discover-nature/places/gorman-anita-b-conservation-discovery-center> : mid-town on Troost between Cleaver and Volker Blvds.

For questions about upcoming field trips contact the field trip leader, otherwise contact John Richter via e-mail:

RichterJC@bv.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 to determine if a field trip will have any attendance. This is important for making decisions based on severe weather, etc. Regarding our events, please feel free to bring a friend. Our events are open to all who would like to participate, members and non-members.

Kansas City Chapter 2017 Calendar

Submitted by John C. Richter, MONPS KC Chapter Pres

For questions about upcoming field trips contact the field trip leader, otherwise contact John Richter via e-mail:

RichterJC@bv.com, or cell phone 816-519-8201. Please RSVP with the field trip leader or John Richter for all field trips. We use RSVP information to plan car pool logistics and to determine if a field trip will have any attendance. This is important for making decisions based on severe weather, etc. Our events are open to all who would like to participate, members and non-members alike; please bring a friend.

[next column >]

Upcoming Events

[KC Chapter cont.]

7 Mar 7:00 PM, MDC Discovery Center: Chapter Meeting – Presentation by Doug Martin about orchids in Alaska, come one, come all, bring a friend, see you there!

22 Apr – Trice-Dedman Memorial Woods, Clinton County, Missouri. This area, owned by the Nature Conservancy, represents one of the last remaining oak/hickory woodlands with old growth white oaks. Lots of spring wildflowers. Please RSVP with John Richter RichterJC@bv.com, cell phone 816-519-8201. We plan to car pool to this site; car pool information can be worked out with RSVP. Plan to meet at the car pool location at 9:00 am Saturday morning.

2 May 7:00 PM, MDC Discovery Center: Chapter Meeting - Meeting activity TBD.

May ? – Powell Gardens Native Plant Sale: Fri & Sat.

We need volunteers to staff a sale booth Fri 3:30 pm to 7:00 pm, and Sat 10:00 to 5:00. This event comprises our annual fundraiser activity and puts our Chapter above all others in annual income, which can be used at our discretion to fund appropriate conservation efforts. Located at Powell Gardens, the KC MONPS Chapter makes a negotiated percent from the sale of plant material from the Missouri Wildflower Nursery, owned by Mervin Wallace. We can always use volunteers to help us sell plants - Fri evening and all day Sat. For information contact John Richter RichterJC@bv.com, cell phone 816-519-8201.

17 June – Monkey Mountain Conservation Area, Holt County, Missouri. This area may represent some moderate to steep woodlands and may be strenuous. This site was chosen as we can walk anywhere we want to and do some real exploring. Bring lots of food and water. We plan to car pool to this site; car pool information can be worked out with RSVP. Plan to meet at the car pool location at 8:00 am Saturday morning.

July or August: Canoeing anyone? Location TBD. If interested please contact John Richter RichterJC@bv.com, cell phone 816-519-8201

21 Aug - Total Solar Eclipse, Ray County, Missouri. If you are interested in viewing this from the epicenter of the totality path, John Richter owns two parcels of property, and the centerline of the eclipse path runs through each of them. For information contact John Richter RichterJC@bv.com, cell phone 816-519-8201.

5 Sept 7:00 PM, MDC Discovery Center: Chapter Meeting - Meeting activity TBD.

7 Oct – Maple Woods woodland walk. Easy walking on a path, enjoy the fall colors and late blooming flowers. If interested please RSVP with Hilary Haley hhaley@tnc.org.

7 Nov 7:00 PM, MDC Discovery Center: Chapter Meeting - Meeting activity TBD.

Southwest from Michelle Bowe

Meetings will be at different locations in Spgfld, 4th

Tuesday, 6pm. Refer to each date for location In case of bad weather, watch Facebook for cancellations or call ahead of time and we'll call back with more information. Michelle Bowe Mbowe@MissouriState.edu 417-836-6189

28 Feb Tues, 6pm Meeting at the Library Center (on S. Campbell St, Springfield MO), Meeting room A. Dr. La Toya Kisson-Charles, the new wetland ecologist at Missouri State University, will be giving a talk on aquatic ecology with special reference to aquatic plants.

28 Mar Tues, 6pm Meeting location TBA. Dr. Justin Thomas will be speaking about the Botanical Institute: how it was established, its goals, how we benefit. We will also discuss and plan field trips!

25 Apr Tues, 6pm Meeting at the Library Center (on S. Campbell St, Springfield MO), Meeting room A. We will discuss and plan more field trips. Speaker TBA.

Empire Prairie from Steve Buback:

Nothing submitted at this time.

Perennis from Andrew Braun

Watch for announcements by e-mail, Facebook, and the MONPS website.- www.monativeplantsociety.org

Be sure your email is registered with Andrew, your Chapter Rep, and with Becky = PP editor, and with Ann Early = membership Chair.

Field trips and other events for the Perennis chapter are currently being planned. Watch for announcements by e-mail, the MONPS website, and the MONPS Facebook page. As always, ideas are welcome! Contact Andrew for updates on activities apbraun1s@gmail.com



Hope your garden escapes into the surrounds as mine has. BE

St Louis from Rex Hill

Chapter meetings are held on the fourth Wednesday of the month at the Sunset Hills Community Center, 3939 South Lindbergh Blvd., Sunset Hills, MO. Google Map: http://goo.gl/maps/K3PR All Friends and newcomers are welcome at meetings.

22 Feb - 7:30 PM – Casey Galvin will lead a Nature Photography Workshop.

22Mar – 7:30 PM – Steve Turner will make a presentation on The Botany of Little Lost Creek CA.

26 Apr – 7:30 PM – Dr. Kyra Krakos and two students, Adam Rork and Adam Wilson, of Maryville U will be talking about Floral Chemistry in Manfreda and a GIS Study of Plant Pollinators in the Greater Saint Louis Region.

12& 13 May Fri 3 to 7:30; Sat 8am to 4 pm – The annual spring plant sale at Shaw Nature Reserve. Set up booth Fri about 3PM and again Sat about 8AM. If you can help with the booth, contact Rex Hill at RexLHill@charter.net.

Osage Plains from Casey Burks

This year we will be changing our meeting location to the MDC building 2010 South Second St. in Clinton

Regularly scheduled meetings are held the 4th Monday of the month at 6:30 pm. However, no meetings are held during the months of August, December or January.

Activities 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 or Chapter Representative Casey Burks mobugwoman@gmail.com.

Field Trip coordinators are Bernie Henehan berniehenehan@yahoo.com and Dan Henehan danhenehan@embarqmail.com

27 Feb 6:30pm at the MDC office in Clinton. To kick off the 2017 season, President Elizabeth Middleton will give her presentation of edible and medicinal plants. We will also be working on a schedule for field trips. Please come and share in the planning.

Ozark from Liz Olson

The Ozark Chapter meets at 6:30 pm on the third Tuesday of each month MDC, Ozark Regional Office, 551 Joe Jones Blvd, West Plains, MO 65775.

No meetings Dec and Jan. For more information, contact chapter president Susan Farrington at 417-255-9561. We take suggestions for speakers at our meetings.

The Ozark chapter does not meet in December or January.



Missouri Native Plant Society
PO BOX 440353
St Louis, MO 63144-4353
www.monativeplantsociety.org
www.monativeplants.org



The Petal Pusher is printed on recycled paper

RETURN SERVICE REQUESTED

**"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**

PRESIDENT

John Oliver
4861 Gatesbury Dr
St. Louis, MO 63128
314-487-5924
joliver02@earthlink.net

VICE PRESIDENT

Dana Thomas
1530E Farm Rd 96
Springfield MO 65803
mail@botanytraining.com

SECRETARY

Malissa Briggler
10297 CR 371
New Bloomfield, MO 65063
573-301-0082
Malissa.Briggler@mdc.mo.gov

TREASURER

Bob Siemer
74 Conway Cove Drive
Chesterfield, MO 63017
636-537-2466
aee623@prodigy.net

MEMBERSHIP

Ann Earley
P.O. Box 440353
St. Louis, MO 63144-4353
314-963-0103
aee623@prodigy.net

PAST PRESIDENT

Paul McKenzie
2311 Grandview Circle
Columbia, MO 65203
573-445-3019
paulbeckymo@mchsi.com

BOARD MEMBERS

Justin Thomas ('14-'17)
1530E Farm Rd 96
Springfield MO 65803
jthomas@botanytraining.com

Mike Skinner ('16-'17)
167 South Peachtree
South Peachtree
Republic, MO 65738
417-268-5704
Mike.Skinner6680@gmail.com

Bruce Schuette ('16-'19)

678 St. Route 147
Troy, MO 63379
636-528-7247 (w)
basch@centurytel.net

Rick Gray ('15-'18)
6 Montauk Court
St Louis MO 63146
314-9936088
rgray@seilerinst.com

Steve Buback ('15-'18)
MDC NW Regional Office
701 James McCarthy Dr
St. Joseph, MO 64507
816-271-3111
Steve.Buback@mdc.mo.gov

Ron Colatskie ('16-'19)

Ronald.Colatskie@dnr.mo.gov

MISSOURIENSIS

EDITOR
Doug Ladd
The Nature Conservancy
2800 S. Brentwood Blvd.
St. Louis, MO 63144
314-968-1105 (w)
dladd@tnc.org

PETAL PUSHER EDITOR

Becky Erickson
PO BOX 496
Ashland MO 65010
573-657-2314
beckyerick711@centurylink.net

DISTRIBUTION MANAGER

Leslie Limberg
636-398-8809
LLlimberg@aol.com
Assistants: Emily Horton
And Joan Featherston

EDITORIAL COMMITTEE

Lisa Hooper
Jay Raveill and Tim Smith

ARCHIVES

Rex Hill
4 Grantwood Lane
St. Louis, MO 63123
314-849-1464
RexL.Hill@charter.net

WEBMASTER

Brian Edmond
8878 N FR 75
Walnut Grove, MO 65770
417-742-9438
brianedmond@gmail.com

www.monativeplants.org
www.monativeplantsociety.org

PERENNIS

Andrew Braun
apbraun1s@gmail.com

EMPIRE PRAIRIE

Steve Buback [also on Board]

OZARKS

Liz Olson
MDC Ozark Regional Office
551 Joe Jones Blvd
West Plains, MO 65775
417-255-9561 Ext. 296 (w)
Elizabeth.Olson@mdc.mo.gov

OSAGE PLAINS

Casey Burks
914 SE Hwy ZZ
Deepwater, MO 64740
515-291-1550
mbugwoman@gmail.com

ENVIRONMENT & EDUCATION

John Oliver [also President]

CHAPTER REPRESENTATIVES

SOUTHWEST
Michelle Bowe
901 S. National
Springfield MO 65897
417-836-6189
Mbowe@MissouriState.edu

HAWTHORN

John George

Columbia, MO 65102
573-777-0394
John.George@mdc.mo.gov

ST. LOUIS

Rex Hill
4 Grantwood Lane
St. Louis, MO 63123
314-849-1464
RexL.Hill@charter.net

KANSAS CITY

Hilary Haley
204 South 15th Street
Bethany, MO 64424
(660) 867-3866
hhaley@tnc.org