



# Missouri Native Plant Society Hawthorn Chapter Newsletter

Volume 28, Number 7  
Hawthorn Chapter Officers:

**President**  
Vanessa Melton  
573-864-3905  
[vanndawn@gmail.com](mailto:vanndawn@gmail.com)

**Vice President**

**Secretary**  
Lea Langdon  
864-7647  
[langtree@gmail.com](mailto:langtree@gmail.com)

**Treasurer**  
John George  
573-234-1784  
[John.George@mdc.mo.gov](mailto:John.George@mdc.mo.gov)

**Membership**  
Paula Peters  
2216 Grace Ellen Dr  
Columbia, MO 65202  
573-474-4225  
[pieridael@gmail.com](mailto:pieridael@gmail.com)

**Chapter Representative**  
Ann Wakeman  
5798 Windy Meadows Lane  
Fulton, MO 65251  
573-642-6927  
[mike-ann@socket.net](mailto:mike-ann@socket.net)

**Web Master**  
Doug Miller  
[thedesign@bigthe.com](mailto:thedesign@bigthe.com)

**Web site:**  
<http://columbianativeplants.org/>

The Hawthorn Chapter of the Missouri Native Plant Society Newsletter is published monthly. Send submissions by the 26<sup>th</sup> to:

**Communications Editor**  
Becky Erickson  
573-657-2314  
[beckyerick711@centurylink.net](mailto:beckyerick711@centurylink.net)  
PO BOX 496  
Ashland, MO 65010

July 2013

## Future Activities

Watch email for email notices of impromptu hikes. **Please offer suggestions of your favorite walking destinations** to Paula or Becky; we will get them posted as soon as weather permits. **PLEASE call or email Becky 657-2314 or Paula 474-4225 as soon as you know you will attend an activity.** We don't want to leave anyone behind if weather or plans change. Leave your name and PHONE # if you leave a message. If you do not communicate by email and have a suggested destination or want notice of a walk, call Paula 474-4225 to get on the phone list **Call Paula for more information.** Carpool meeting place, commuter parking lot at AC and US63.

**We will no longer offer planned tours of local wild areas. Occasionally one will be posted on the calendar. Otherwise, only interested members will be contacted by email a few days in advance of a mosey activity. As stated above, let your ideas for a mosey location be noticed. We will let the rest of the local membership know about the visit to your favorite location.**

**In case you didn't notice the announcement about dues in the last Petal Pusher:**

## DUES ARE DUE

**Use the form on the last page of this document and send to Paula – address on form.**

## July

**8 Monday Regular Membership Meeting, 7 PM** Unitarian Universalist Church, 2615 Shepard Blvd. Richard Guyette, Dendrologist teaching at MU, will be talking about Acoustic Expression of Tree Growth.

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

## August

**1 Thursday –Organic gardening workshop at Bradford Farm.** We will set up booth for teaching and small plant sales. Look for details by email. At printing, OG workshop organizers will have an organizational meeting on 1 July. The results come too late for this printing.

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

## September

**20-22, 2013 – [NE] Kirksville, Morris Prairie and Union Ridge CA** See MONPS facebook page for details.

MONPS State Board Meeting Schedule for 2013

Winter - December 7, 2013 – Columbia, Dunn-Palmer Herbarium



Postcard of what y'all missed on the state field trip to Salem. Glade at Indian Trail. *BE photo*  
Don't miss out on the trip to Kirksville in September.

**Thanks to Ann Wakeman, Nancy Langworthy for their articles; Mike Rues, Vanessa Silvey, for their photos, articles and suggestions in the newsletter this month. Thanks to Doug Miller for keeping the website up to date. We would like to get announcements, impressions, species accounts, poems, links to scientific articles or other creative nature writing from you, too.**

## Announcements:

### **Reminder: Summer Evening Hawthorn Party July 7th**

*Submitted by Nancy Langworthy*

You are invited to a summer evening get-together Hawthorn Chapter potluck dinner at my house on July 7<sup>th</sup>, 5 pm to 8 pm. The a/c will be on inside, the porch fans will be on, and usually there's a good breeze anyway, so you should be comfortable if it's hot. We have wonderful views of the sunset, lush/overgrown cottage garden spots of natives and non-natives (also weeds, farm weeds, & invasive weeds), good places to wander, even a fishing pond if that appeals to you.

I'll put out a ham, a vegetable or salad, and iced tea and a bottle of wine. I'd appreciate it if you each brought something to share for dinner. I have a gas grill, if someone would like to use it; it's not my expertise.

Please let me know if you can come. My number is 874-2463, my email is langworthyn@gmail.com.

You can get a googlemap of possible routes to our address: 7301 N Boothe Lane. Quick directions: There are at least two routes: you can just head west on I-70 to Midway where you pick up Hwy 40 going west; take Boothe to the right off Hwy 40 and head north; or you can take J (from either I-70 or Hwy 40 ) north to the water tower at Woodlandville, make a sharp right on to Boothe, and come back south 1.1 miles. A black mailbox on the west side of Boothe marks our driveway.

Well-behaved dogs are welcome. NOTE: Our two old dogs have passed on. We now have 3 cats (absolutely no cat chasing or barking or other such harassment will be allowed).

[That odd date is the anniversary of our being back in the US after decades overseas, and I'd like to celebrate that anniversary with you all. We flew into Chicago with our two dogs early on July 7<sup>th</sup>, and a friend kindly drove us all back to our farm in Woodlandville (it was so hot that the airlines refused to carry the dogs into St. Louis).]



*Echinacea simulata* and *Asclepias tuberosa*, leaf of *Silphium terebinthinaceum* on a glade at Indian Trail CA *BE photo*

### **July Meeting Program**

Richard Guyette comes back to talk to us about trees. He graces us with his knowledge every two to three years. Don't miss his talk on Acoustic Expression of Tree Growth. We will meet back at the Unitarian Church at 7pm.

### **July 18 Lunch at RagTag**

Meet for lunch 11:30 at RagTag, 10 Hitt St [Just south of Broadway]. Lunches have been well attended this winter and spring with lively discussions. Hope to see you there.

### **Our Network**

Look for announcements by email of activities with Missouri Prairie Foundation [MPF], WildOnes [WO] Columbia Audubon Society [CAS] and training from Stream Team and MO Master Naturalists. Other pertinent information comes from Plant Conservation Alliance [PCA]. Direct membership in all of these is free or nominal and can bring you a wealth of information on natural environmental issues. You won't have this source forever.

**Don't forget to keep a journal** of first leaves, first flowers, first seed and report it to Bud Burst. Search the NRCS Plant Database on line for plant identification and habitat needs.

### **Project Table is still available ONLY \$100**

Large sturdy plywood table with folding legs. So you can store it against a wall. Well made by a cabinet maker. 3' by 8' with 4" skirts for stability; all varnished. The pocket change requested [only \$100; really worth about \$400] goes back into the chapter educational grant fund. Call Becky 657-2314 for viewing and pickup.

**Most members have  
paid next year's dues,  
PLEASE RENEW**

*Exchange screen time for green time!*

## News from Stateside

Submitted by Ann Wakeman Chapter Rep

June 15, 2013 Salem, MO

Friday evening, Justin Thomas updated attendees about fens for Saturday's field trip. Fens are mineotrophic wetlands, that is wetlands kept moist or wet by mineralized water seeping from rocky layers in the slopes or hillsides surrounding the open wetlands. Fens unique combination of species have been a result of three waves of colonization. 1) Boreal when the glaciers advanced, pushing more northern species ahead of them. 2) Deciduous when Appalachian species as well as Southwestern prairie species arrived. 3) Hypsithermal during a period of elevated global temperatures moving coastal species north via river systems.

The annual board meeting, presided by Paul McKenzie, summarized Missouri Native Plant Society events of the past year. MoNPS membership is now 331 with the announcement of a new chapter in St. Joseph. President Paul McKenzie commended the committee (including Becky E.) on completion of the MoDOT native plant ID poster. He held up a preliminary printing of the two sided poster. (see photo)

Awards were announced and given out was also on this meeting's agenda. Details of awards and bios will be in Sept PP. Awards were as follows:

- **Jim & Dorothy Harlan received the Erma Elsenrath Award**
- **Rex & Martha Hill received the John E Wiley Award**
- **Justin Thomas received the Arthur Christ Award**

Quarterly meeting for Society's business followed. Becky [PP editor] brought up the likelihood of sending the Petal Pusher electronically. After discussion, the board decided to phase in the next copy of that newsletter. Members will continue receiving a paper copy by mail and can decide which method of delivery they wish to receive it in the future. It may mean amending the bylaws which state the newsletter is to be printed and mailed. Publicity chairperson Kevin requests finding a replacement. Alternatively, publicity may move to Facebook and the website pages.

Membership committee: Ann Early reported 14 new members.

Hudson Awards committee: To attract more applicants, George Y. will put announcement on the website and Facebook pages.

New business: Brochures-with the formation of the new St. Joe chapter, new brochures will need to be printed once that chapter decides on chapter dues. The orchid T-shirts are in low numbers. Discussion whether this design can be printed on a different color as well as if this design could be printed on sweatshirts.

Paul updated the board on the letter he and John Oliver wrote on MDC's inclusion of patch burn graze management for Grassland Conservation Partners.

Next quarterly meeting will be September 20-22 in Kirksville. Details TBA in PP.

Paul conducted a grass ID workshop @ MSU in Springfield earlier in June.

George Y. will be conduct a legume workshop in October, with 3 sessions and a field trip.

## Petal Pusher: Proposed Change in Delivery

Submitted by Becky Erickson Petal Pusher Editor

I am following up on Ann's report in previous column.

As Petal Pusher [PP] Editor, I have been sending PP to you via email since I started with the January issue. You were able to get it with color photos and get it early enough to plan for state field trips.

If most of us accepted E-delivery, we could save the state over \$1500, possibly \$2000 per year in printing and postage costs. As we transition into E-delivery of PP, I must have your permission to stop receiving the printed, mailed, paper copy from St Louis. There will be another announcement in the September PP with directions on how to accomplish this transition. PLEASE respond to these directions.

I believe the BOD wants paper copies to continue to be mailed until they are satisfied the E-delivery is satisfactorily received by most of the membership. So you will get both for a while. Be patient; old wheels turn slowly.

Active beaver pond at Grasshopper Hollow NA  
MR photo



Dobson fly at Grasshopper Hollow NA  
MR photo



*Phlox pilosa* [BE photo] and *Echinacea simulata* [MR photo] white form and red form: both from glade at Indian Trail CA.

## Where are the butterflies . . . ?

Susan J. Tweit, plant ecologist in Salida CO; memoir: *Walking Nature Home: a life's journey*.

Essay copied from *Thoreau's Legacy American Stories About Global Warming*; Union of Concerned Scientists; Penguin 2009.

For the past month my husband and I have hosted an accidental house guest. She [of he as we can't tell at this stage] possesses an appetite so insatiable that we named her Gluttonous.

Her small size and single-minded quest for food allowed her to remain unseen among the anise flowers I cut from our kitchen garden, even as she ate them. I spotted her munching on the bouquet several days later, balanced on several pair of stubby legs – clearly a caterpillar, but one I didn't recognize, dressed as she was in wrinkled black skin with white and red dots.

The next morning. The empty black gauze of that now-shed skin swung from a branch. Nearby, the insect herself – surely plumper already – chewed steadily in her dazzling new skin; the green and black stripes studded with orange dots identified her as an eastern black swallowtail. Watching this unexpected guest pull an anise blossom into her mouth and eat, I remembered a friend's question: "Where are the butterflies this year?"

Our high-desert yard and kitchen garden usually attracted five species of swallowtails, plus monarchs, sulfurs, painted ladies, fritillaries, western whites and common blues. Anise swallowtails are normally so abundant that I plant extra anise in order to feed the plump caterpillars.

But not this year, when every butterfly has cause for remark. Until this accidental houseguest, in fact, I hadn't found a single swallowtail caterpillar in the garden. My plants had flourished un-munched.

What had changed? After a decade of increasing drought, this year's weather patterns oscillated wildly, bearing out the predictions for global climate change in our region. First came a winter snowpack that it broke records, and then nothing: no wet spring snow, no summer rain until it was too late to do any good.

Watching our caterpillar guest chew another flower, I counted out the weeks and calculated that she would metamorphose just in time for winter, tricked by abnormal weather.

Over the next weeks, Gluttonous ate her way steadily through the anise bouquet, growing larger and plumper by the day as autumn flared gold outside the windows. One morning she slung herself under a branch of anise, held by her stumpy pair of hind legs and one glistening strand of white silk. Forty-eight hours later her stripped skin had hardened into a pale green chrysalis. The miracle of metamorphosis had begun – and snow painted the peaks white.

We debated what to do with our nascent adult eastern black swallowtail. She has no future inside or out. Yet she is the only butterfly our garden produced this year.

If this heartbreaking hatch of a single caterpillar, whose maturity comes too late to seed future generations, is a gift of global climate change, I grieve for us all. Because of what we are losing is not just a single species, but a thread of connection with the everyday wild that secures our place in nature's community.

[Ed note This essay was written before publication in 2009. Here in MO, 2006 was the last year those of us who notice saw good numbers of monarchs. 2011 was a flurry of swallowtails. Last year, their numbers were noticeably reduced. This year the clouds of last year's fritillaries are gone. Most of what I and other commiseraters see are checkerspots and mourning cloaks. When air temperature is higher than 95 degrees during metamorphosis, they cook in the chrysalis. We also know neonicotinoid insecticides have permeated agriculture, lawn care and, building fumigation. Please do what you can to correct these issues.]

I have seen none of these this year:



I didn't know Sept 2009 would be the last year I could see this in person. So glad I captured the image.



Nor that 2010 would be the last time there would be clouds of swallowtails and 2012 was the last year for fritillaries.

## Rare Species Perform Unique Roles, Even in Diverse Ecosystems

**Story Source:** Public Library of Science. "Rare species perform unique roles, even in diverse ecosystems." *ScienceDaily*, 28 May 2013. Web. 4 Jun. 2013. Mouillot D, Bellwood DR, Baraloto C, Chave J, Galzin R, et al. **Rare Species Support Vulnerable Functions in High-Diversity Ecosystems.** *PLoS Biology*, 2013 DOI: [10.1371/journal.pbio.1001569](https://doi.org/10.1371/journal.pbio.1001569)

28 May 2013 — A new study, published 28 May in the open access journal *PLOS Biology*, has revealed the potential importance of rare species in the functioning of highly diverse ecosystems. Using data from three very different ecosystems -- coral reefs, tropical forests and alpine meadows -- a team of researchers led by David Mouillot at the University of Montpellier 2, France, has shown that it is primarily the rare species, rather than the more common ones, that have distinct traits involved in unique ecological functions. As biodiversity declines, these unique features are therefore particularly vulnerable to extinction because rare species are likely to disappear first.

"These unique features are irreplaceable, as they could be important for the functioning of ecosystems if there is major environmental change," explained Dr. Mouillot.

Biodiverse environments are characterized by a large number of rare species. These rare species contribute to the taxonomic richness of the area, but their functional importance in ecosystems is largely unknown. Represented by few individuals or distributed over narrow geographic areas, rare species are generally considered to have little influence on the functioning of an ecosystem compared with more common species. Indeed, it is often assumed that they fulfill the same ecological roles as those of common species but have less impact because of their low abundance; a phenomenon known as 'functional redundancy'. This redundancy suggests that rare species merely serve as an "insurance" policy for the ecosystem, in the event of an ecological loss.

To test this, the team of researchers analyzed the extent to which rarer species in the three different ecosystems performed the same ecological functions as the most common ones. They examined biological and biogeographical information from 846 reef fish, 2979 alpine plants and 662 tropical trees and found that most of the unique and vulnerable functions, carried out via a combination of traits, were associated with rare species.

Examples of such species supporting vulnerable functions include the giant moray (*Gymnothorax javanicus*), a predatory fish that hunts at night in the labyrinths of coral reefs; the pyramidal saxifrage (*Saxifraga cotyledon*), an alpine plant that is an important resource for pollinators; and *Pouteria maxima*, a huge tree in the rainforest of Guyana, which is particularly resilient to fire and drought. Not only are they rare but they have few functional



Photo by [Bente Bing Kleiva](#)

equivalents among the more common species in their respective ecosystems.

"Our results suggest that the loss of these species could heavily impact upon the functioning of their ecosystems," said Dr. Mouillot. "This calls into question many current conservation strategies."

The work emphasizes the importance of the conservation of rare species, even in diverse ecosystems. **Rare species are more vulnerable and serve irreplaceable functions, explained Dr. Mouillot: the preservation of biodiversity as a whole -- not just the most common species, but all those who perform vulnerable functions -- appears to be crucial for the resilience of ecosystems.**

"Rare species are not just an ecological insurance," he said. "They perform additional ecological functions that could be important during rapid transitions experienced by ecosystems. The vulnerability of these functions, in particular biodiversity loss caused by climate change, highlights the underestimated role of rare species in the functioning and resilience of ecosystems. Our results call for new experiments to explicitly test the influence of species rarity and the uniqueness of combinations of traits on ecological processes." This line of research will also inform the lively debate about the relationship between biodiversity and ecosystem functioning.



### For your consideration:

from Nancy Langworthy

I've been seriously considering buying some blue squill (*Scilla siberica*) bulbs to plant this fall, hoping these pretty blue things would fare better here than tulips which don't apparently like my clay. Reading from the current Petal Pusher that the Liberty nature sanctuary is really seriously infested with them puts a whole other perspective on what the catalogs call reliable. Reliable may equal invasive. They don't tell you that.

Editor's note on this species: Checking the USDA Plant Database for *Scilla siberica* leads to: [Ornamental Plants From Russia And Adjacent States Of The Former Soviet Union](#).

The plant can also be found in the newest edition of Flora of MO V1 P528.

A quote from Flora of MO Page 528 within the species account of *Scilla siberica*: "should be considered poisonous and several are known to contain saponins and cardiac glycosides." So it could be presumed that it probably survives well because it is so unpalatable, and escapes from gardens because it has adapted to our climate.

When introducing ANY plant to your garden, it is wise to invest the time to find out how aggressive it is before you have to invest the time to remove a thug.

A great majority of introduced species have no predators or diseases so they spread 'like wildfire'. Please try to stick with natives. At least when they spread, they will have some kind of check.

Most natives come along fine, but I have encountered a few aggressive natives. RESEARCH/ASK before you plant.

**Please Step Forward For Service**

Please contact one of the officers ready to volunteer a little time to a very good environmental and educational service. We need people to serve as officers, to grow plants for fundraising and we need people to man our information booth at events such as Earth Day and Bradford Plant Sale. If you get this only by mail, please consider requesting email delivery; it saves us money.

\_\_\_ Regular (\$16.00)\*

\_\_\_ Student (\$11.00)

\_\_\_ Contributing (\$26.00)\* designate chapter or state

\_\_\_ State Lifetime (\$200)

\_\_\_ Chapter Lifetime (\$120 – you must also be a member of the state organization to utilize this option)

\_\_\_ Chapter only (\$6.00 – this is for members who already belong to State and another chapter)

*Don't wait until your name is removed from the mailing list. Send your dues to Paula now.*

\*Includes both Chapter (\$6) and State (\$10) dues.

Make check payable to: **Missouri Native Plant Society.**

**Send check and this form to:** Paula Peters, 2216 Grace Ellen Dr., Columbia, MO 65202

**MEMBERSHIP FORM Missouri Native Plant Society-Hawthorn Chapter**

**July 1 through June 30. Dues are Due NOW!**

Name \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_

Phone: Evening \_\_\_\_\_

Day or Cell \_\_\_\_\_

Email: \_\_\_\_\_

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Hawthorn Chapter Missouri Native Plant Society  
Newsletter editor, Becky Erickson  
PO Box 496  
Ashland MO 65010-0496

