



## NEWSLETTER OF THE NATIVE PLANT SOCIETY

September-October 2011

Vol. 26, No.5

*"Devoted to the conservation and study of plants growing wild in Missouri"*

**The Fall meeting of MONPS** (Sept 9-11) will be held at the MDC Sedalia Office at 2000 South Limit Ave. (this is Rt. 65 South) at the intersection with W. 20 St. which is one of the east entrance roads to the State Fairgrounds- it is just south of the inter. with Hwy 50 (Broadway). If you get to the inter. with Rt. B or the bridge over Flat Creek on Hwy. 65 you just missed it.

The Fri. and Sat. night meetings will begin at 7:00 with the doors opened at 6:30 p.m.

Lodging:

1. The main hotel will be the Super 8 on 3402 W. Broadway (Hwy 50 east of Rt. 65) (660-827-5890). As of June 14, they have plenty of rooms.
2. An alternative is the Comfort Inn at 3600 W. Broadway near the Super 8 (660-829-5050).
3. For a comfortable alternative in Lincoln (ca. 26 mi. south of Sedalia) is the Bunkhouse Lodge at 23339 Highway 65 (660-547-3020)- I have stayed here before and it is very comfortable and relatively close to area prairies.

### Field Trips:

The Sat. field trips will be to Paint Brush Prairie in the a.m. and to Hi Lonesome Prairie in the p.m. Paint Brush Prairie is ca. 10 mi. south of Sedalia on Hwy. 65, then east on Manila Rd. ca. ¼ mi. to the 2<sup>nd</sup> parking lot that is on the right (south side of road). We will meet at the Super 8 parking lot at 8:00 a.m. and then at the Manila Rd. parking lot ca. 8:30 a.m. Most folks will eat lunch in the field at Paint Brush but folks are open to eat lunch in Sedalia if they want.

We will meet at Hi Lonesome Prairie at ca. 1:30 p.m. at the area parking lot- it is ca. 1 mi. west of Cole Camp off of Hwy. 52 (east of Rt. 65 ca. 2 .25 mi) and north on Klink Ave. (also Benton Co. Rd. 221 NE) ca. 0.5 mi. The parking lot is on the right (east) side of Klink Ave. If you get to Hi Lonesome Rd. (also Benton Co. Rd. 950 NE) you missed the parking lot.

**Sunday optional field trip:** the Sunday field trip will be to Big Buffalo Creek Conservation Area on the Benton/Morgan Co. line for a change in pace to see Big Buffalo Creek Fen Natural Area that includes the fen, springs and adjacent forest. It is south of Cole Camp ca. 13 mi. on Rt. B, then east on Rt. WW to end of hard top and then north on Big Buffalo Rd. ca. 1.25 mi. Any interested will meet at the Super 8 parking lot at 8:00 a.m. or ca. 9:00 a.m. on the area.

### Native Plant Nursery Suffers Fire Damage

Most MONPS members are familiar with Mervin Wallace's business, Missouri Wildflowers Nursery, located just south of Jefferson City. On the night of July 12, the business suffered a loss from a lightning-caused fire. Lost was the building that housed the sales office and gift shop. Mervin Wallace reported that losses included computers, printers and plant tags. One hard-to-replace item was a copy of Steyermark's 1963 *Flora of Missouri*.

Fortunately, no one was injured and the business has remained open. Internet service was temporarily lost but should be available by now. Telephone service was not lost and the plant and seed inventory was unaffected. The building will be rebuilt and the office and shipping functions will be temporarily conducted from another building at the nursery. Mervin see the loss as an opportunity to improve the business by tailoring the new sales building to accommodate current needs.

Submitted by  
Tim Smith, MDC Ombudsman

### MOPS Sponsors Fern Class

George Yatskievych will teach a class on ferns at the Meramec Campus of St. Louis Community College September 20 – October 1.

The class will cover Missouri's ferns: their ecology, taxonomy and beauty and how to identify them. Two lectures classes will include microscope work to learn taxonomy and identification. A field trip on October 1 will be to Hickory Canyon Natural Area. A text book is required: Yatskievych, George. **Steyermark's *Flora of Missouri***, Vol.1. Enrollment May be done on-line at:

[http://classes.stlcc.edu/ClassSchedule/Term\\_Search.asp](http://classes.stlcc.edu/ClassSchedule/Term_Search.asp)

Or by phone at 314-984-7500 and ask for **Continuing Education.**

## Coppermine Hollow Glade Tour

Excerpted by permission from *Missouri Prairie Foundation Journal* (Summer 2011 issue, Volume 32, Number 2, pp 16-17).

Join the Missouri Prairie Foundation for a tour on September 18 of Coppermine Hollow Glade on Angeline Conservation Area, just north of Eminence in Shannon County. This recently restored glade features thousands of blooming stems of the very showy native silver plume grass (*Erianthus alopecuroides*), and probably the densest natural population of rough blazing star (*Liatris aspera*) in the Ozarks. Spicebush swallowtails, great spangled fritillaries and American painted ladies flock to the blooming oasis.



The Angeline forestry team, headed up by Terry Thompson and Lloyd Rome, deserves accolades for conducting this restoration in a high public use area. Heavily frequented horse trails weave throughout, giving the public a chance to see the effects of restoration close up. In the short term, restoration can be ugly (eg cedar slash and skid trails), but equestrians and hikers will be rewarded for their patience with a tremendous wildflower show for years to come. Diverse natural communities closely adjoin one another here, transitioning rapidly from low rich woods to dry baking glades, and creating a mosaic of exceptional biodiversity.

Contact Susan Farrington for hike details (see contact info on back).

For the complete article about Coppermine Hollow Glade and color photos, go to: <http://www.moprairie.org/PrairieJournalArchive.html> Click on Summer 2011 issue to download (8 mb). Coppermine Hollow Glade is featured on the cover and in an article on page 16-17.

### Just a Little Gaudy - By Barbara Fairchild

American beautyberry's (*Callicarpa americana*) fall display of brilliant yellow leaves and fuchsia berries could be called gaudy, but it's a true show-stopper that makes this native shrub welcome in home landscapes. Once there, it provides not only a feast for the eyes, but a feast for wildlife as well.

While some 135 *Callicarpa* species grow throughout the world, only American beautyberry is native to the United States. Here it is found from Florida to Texas, north to Maryland and in Tennessee, Arkansas, Oklahoma and Missouri, which is at the northern edge of its range. The West Indies and northern Mexico are its southern edge.



This show-stopper starts the growing season in a nondescript manner. From June to July, delicate, rosy pink, perhaps pale blue, flower clusters appear in the leaf axils attracting a bevy of butterflies and hummingbirds. The plant bursts into full glory in late August to early September when its leaves turn lemon yellow and tightly grouped berries clustered around thin stems turn shades of rose-purple or violet-blue, attracting the attention of bluebirds and mockingbirds, among others. The dolomite slopes that bordered the White River in southern Missouri once glistened with this fall display that provides food for at least 10 species of birds, as well as small mammals that include armadillos, raccoons, wood rats, gray foxes, opossums and white-tailed deer. The long-lasting fruits provide nutrition for wildlife into the winter months when other sources are depleted.

Water impounded by Table Rock Dam covers many of those slopes, but the plant is still found just above the high-water mark in the area. Now land managers are discovering the beauty of American beautyberry. Considered a "pioneer" plant, it sometimes is used on surface-mined sites to reclaim the land. It's equally useful in providing "edge" shelter and food for bobwhite quail.

In addition to providing wildlife food and shelter, it's a long-time remedy for repelling deerflies, horseflies and mosquitoes. Old-timers crushed its leaves and rubbed them on their skin and their domestic animals. Recently scientists discovered several insect repellent compounds in the leaves - some equivalent to the repellent value of DEET.

If all these attributes haven't convinced you to look into planting American beautyberry at your home or on your farm, just think, once again, about that gaudy look that makes you catch your breath on a crisp autumn morning. Barbara Fairchild is the communications specialist for Grow Native. For more information about native plants, visit [www.grownative.org](http://www.grownative.org).

CHAPTER EVENTS

**Kansas City Chapter**

Submitted by Daniel Rice chapter representative  
Tuesday, September 6, 7:00 pm: Meeting at the Discovery Center, between KFC and Brush Creek at 4750 Troost, Kansas City, MO. Program to be determined.

Saturday, October 15: Field trip to Maple Woods to enjoy the beautiful display of autumn flora found there. Details on time and meeting place to be announced later.

**KCWildlands Update**

07-31-2011

Just a couple of highlights from the June Wildlands Partners meeting.

- 1) The restoration work at Rocky Point Glades has been extended to a little over 50 acres. It now goes from the entrance road to the exit road.
- 2) We started the Honeysuckle Academy last October. This was started to teach Friends of non-Wildlands parks how to kill honeysuckle. It was very successful. KCWildlands furnished tools to the groups, several of which have gone on their own honeysuckle kills. We will now start marketing the plan to municipalities, etc.

We didn't have as great a season for restoration work last winter, thanks in large part to having to cancel several of our work days due to the weather. Hopefully that will change this winter! Respectfully Submitted, Daniel Rice

**OSAGE PLAINS CHAPTER**

Submitted by Casey Burks chapter representative  
August: No business meeting; A Field Trip may be possible depending on our field trip coordinators' (Jim and Dorothy Harlan) assessment of drought conditions. They do an excellent job of checking out locations for us to visit as well as recording species and distributing a follow-up report to our members.

September: Hopefully our members will be able to attend the fall meetings and field trips in Sedalia (9/9-9/11). TBA: A lunch-time business meeting between the Paint Brush Prairie and Hi Lonesome Prairie field trips.

October: Preparations for having a display table at the Octoberfest/Prairie Days (Sat October 8) in Cole Camp also the Regular meeting at the Henry County Library Friends room 6:30pm, October 17<sup>th</sup>.

**St. Louis Chapter**

Submitted by Pat Harris, chapter representative  
 George Yatskievych is conducting a class at Meramec Community College on Missouri's ferns. There will be two classroom sessions on Tuesday, September 20 and 27. The field trip to Hickory Canyons is on Saturday, October first.

**SOUTHWEST MISSOURI**

Submitted by Brian Edmond, chapter representative  
 August 23, 6 p.m. — Monthly Chapter Meeting. Topic TBD.  
 September 27, 6 p.m. — Monthly Chapter Meeting. Topic TBD.  
 October 25, 6 p.m. — Monthly Chapter Meeting. Topic TBD.

**Are your dues overdue?**

Membership renewals for the July 2011-June 2012 year are due.

Please check the top line of your mailing label. If it shows the date 20110630, your dues are now payable. When renewing, please remember to include your contact information and your society and chapter dues preferences. If you have questions about your membership status, please contact me (see back page for contact information). We value our members and urge you to renew today! By Ann Earley, Membership chair

**MONPS New Members**

\*Jennifer Weaver, Millersville \*Michael D. Salzman, Kansas City \*Diane Donovan, Wildwood \*Cheryl Dillard, Kansas City \*Sharon Hart, Cabool \*Hiltrud M. Webber, Springfield \*Ellen Mueller, Imperial \*Beth Skelton & Ed Shafer, University City \*Raelene Crandall, Richmond Heights \*Alice Tipton, Manchester \*Janet & Carl Haworth, Springfield

**INFORMATION ON JOINING MISSOURI NATIVE PLANT SOCIETY**

**SOCIETY DUES**

**CHAPTER DUES**

**Make checks payable to Missouri Native Plant Society  
 Mail to: Missouri Native Plant Society  
 PO Box 440353 St. Louis, MO 63144-4353**

(Chapter dues additional)	Columbia . . . . . \$6
Student dues . . . . . \$5	Kansas City . . . . . \$5
Regular . . . . . \$10	Osage Plains . . . . . \$5
Contributing . . . . . \$20	Ozarks Native Plant . . . . . \$5
Life . . . . . \$200	Perennis . . . . . \$5
	St. Louis . . . . . \$5
	Southwest Missouri . . . . . \$5

Name \_\_\_\_\_  
 Street: \_\_\_\_\_  
 City, State: \_\_\_\_\_  
 9-digit Zip \_\_\_\_\_ Phone \_\_\_\_\_  
 E-mail \_\_\_\_\_

(circle all above that apply)

\$ \_\_\_\_\_ Contribution for student research award (Hudson Fund) **\*\*All contributions are tax deductible\*\***

## CHAPTER REPORTS

**Kansas City Chapter** – Submitted by Daniel Rice, Chapter Representative 7/31/2011

The Kansas City Chapter doesn't meet during the months of July and August, but we will begin again this September. Our next Chapter meeting is on September 6 at 7:00 pm in the Discovery Center. We also have an October field trip to Maples Woods Natural Area in the works for October 15. This is a great area to hike around because of the autumn flora found there, and for the spectacular fall color of the Maples found there.

If you have any questions, please feel free to contact me.



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6/10-6/12 Casey attended the Quarterly MONPS meeting which was held at Pilot Knob. Enroute to this Southern Missouri area, I briefly stopped at Ha Ha Tonka and walked one of the trail loops, joyously photographing flowers at every turn. Later, making a brief stop at Elephant Rock State Park, I was amazed to see granite! Rocks at our place in Henry County are limestone/clay. Early Friday morning, I joined the group of ten hardy MONPS botanists plus Mike Leahy, Conservation Dept. Natural Areas Coordinator, for an all day hike and flora identification of Tom Sauk Mountain. This is a ruggedly beautiful area where it would be easy to get lost without a GPS. Part of our trek was on the Ozark Trail and Rex Hill explained that at one spot where there is a small opening between two boulders, the settlers needed to dismantle their wagons to get through. Even though I had worked in a cornfield for 25 years, I soon found that the botanists were in much better shape and I was certainly glad when they stopped to have a species discussion which allowed me to catch up. Martha Hill did a superb job of hiking while recording all the plant species being called out to her. The wild blueberries were starting to ripen, purple phlox were blooming and I learned the names of many plants. One plant in particular I was glad to learn, since I had seen it also blooming at our place in Henry County, was New Jersey Tea. Nels Holmberg assured me it was actually very good. (Upon returning home, I collected leaves and brewed it for family and neighbors. They liked it so much I decided to share it at the next meeting of our Osage Plains group.) The Saturday field trip as well as the evening MONPS meeting was at the Johnson Shut-Ins State Park, another beautiful and interesting area where it took five years of work to try to repair damage done by the wall of water that came down from the Ameren reservoir when it broke in 2005. At Saturday night's meeting I was privileged to see Bill Summers (author of *Missouri Orchids*) receive the Steyermark Award as well as the original orchid print drawn by Paul Nelson which will be in color on the new MONPS T-shirts.

7/9 Supper/Business Meeting and tractor drawn wagon ride at Dale Jennings' home. This is a July event Osage Plains members look forward to. Dale and his family facilitate a wonderful place for us to socialize, have a pot luck supper, and then take us on a wagon-ride around the property where we can challenge each other with "quick-name that plant." It was great to have Sherry Leis attend this meeting; she is a great resource and we appreciated her making time in her busy schedule to attend. We also met Mark her fiancé - congratulations!

7/23 Field Trip to the Department of Conservation Loop Trails in Clinton. It was already sweltering at 9:30am but five members plus a prospective new member met and Dorothy Harlan recorded over 40 species. We needed considerable time on several plants since they weren't in bloom and, more than once, lamented that we wished Emily Horner was there; "Emily would know." I brought a sample of a patch of plants growing on our property and was glad to have confirmation from the group that it was "Heal-All." While waiting to collect milkweed pods, my interest in medicinal herbs has grown and I have plans to make a balm out of heal-all, Echinacea, juniper berries, plantain leaves and chamomile which is now marinating in olive oil on our deck. Bernie Henehan said his brother was drinking heal-all tea so my next picking will be for tea! I've also been wondering if any of the MONPS members have made "Balm of Gilead"

**St. Louis Chapter** - Submitted by Pat Harris, chapter representative

Instead of a meeting in June, on the 22nd, approximately 30 people met for an early evening walk. This year we visited the Claire Gempp Davidson Memorial Wildlife Area in Sunset Hills of St. Louis County. The 13.5 acre Natural Resource Area has a one half mile trail through a wooded setting. It features a prairie demonstration area, a disable-accessible trail, and a small fishless pond with native plantings, boardwalk, and two benches. The Nature Park offers residents outdoor recreation and educational experiences.

We saw many vines, some of which were: *Ampelopsis cordata* (raccoon grape); *Campsis radicans* (trumpet creeper); *Toxicodendron radicans* (poison ivy); *Vitis aestivalis* (summer grape); *V. cinerea* (winter grape) and *V. riparia* (riverbank grape). Other plants were: *Sambucus canadensis* (common elderberry); *Cephalanthus occidentalis* (button bush); *Baptisia alba* (white wild indigo); *Symphotrichum novae-angliae* (New England aster). By the pond we saw: *Ludwigia peploides* (floating primrose willow); *Pontederia cordata* (pickerel weed) and *Nymphaea odorata* (fragrant water lily).

At the July meeting: John Oliver reminded all that dues are due.

The LaBarque Creek has been nominated by the Missouri Department of Natural Resources (DNR) to be designated an Outstanding State Resource Water (OSRW). The designation process includes a public comment period and it was suggested that MONPS

**Osage Plains Chapter** - Submitted by Casey Burks chapter representative 8/01/11

6/6 Field Trip to the Elzie and June Berry watergardens. Elzie has created a serene corner of the world with different styles of waterfalls and water gardens with interesting plants. Various sizes of containers from a large urn to a buried refrigerator to a long, flowing stream, gave us some insight to his creative genius. We also wondered where Elzie got his energy since he was scheduled for surgery the next day. {July update: thankfully Elzie has recovered and is back to work}

6/11 Field Trip to the Conrad-Neuenschwander Prairie. Please refer to the previous Petal Pusher and president Emily Horner's colorful article {*Doctor finds a needle in haystack*} on the exciting find of Mead's Milkweed at this location. This is a large and beautifully preserved private prairie; Dorothy Harlan recorded over 50 plant species.

contribute comments. After a brief discussion, and a motion from the floor, the motion carried and MONPS-St. Louis Chapter will send comments supporting the designation.

Thirty one people attended our 27 July meeting, as author James Locklear, Conservation Director at Lauritzen Gardens, Omaha's Botanical Center, introduced us to his new book, *Phlox: A Natural History and Gardener's Guide*. It was a 15 year project that gives us a comprehensive account of a Genus that was established by Linneaus in 1737. A botanical and horticultural history starts the book leading to the key and then "detailed profiles of all the currently recognized species of Phlox." There are 60 species native to North America, with 8 native to Missouri. The Missouri natives are: *Phlox amplifolia*, *P. bifida* subsp. *bifida*; subsp. *stellaria*, *P. carolina*, *P. divaricata* subsp. *laphamii*, *P. glaberrima* subsp. *interior*, *P. maculata*, *P. paniculata*, and *P. pilosa* subsp. *fulgida*; subsp. *ozarkana*; subsp. *Pilosa*.

**SOUTHWEST MISSOURI** - Submitted by Brian Edmond, chapter representative

At our June meeting, Larry Wegmann, chapter president, gave us an informative presentation on his trip to St Thomas' Abbey, Brno, Czechoslovakia, the monastery that served as a Gregor Mendel's home for many years. Of course, Mendel is well-known for his hybridization experiments on pea plants, which formed the foundation of our understanding of genetics. However, Mendel was probably better known at the time for his experiments on bees and his work with astronomy and meteorology. We also learned a great deal about the politics of Mendel's time and the chain of events that led to Mendel's success at the monastery itself. It seems that we learn very basic, and often dry, information about historical figures when there are many fascinating stories that we don't hear.

Dr Ioana Popescu, Drury professor of biology at Drury University, continued her presentation of flora of Bulgaria and Romania at our July meeting. She recently returned from a trip there and brought Romanian cookies to the meeting! At least a dozen members helped weed the native plant gardens. The rain garden has become the disaster of the season. We all hope that mid-summer dormancy due to extreme heat and drought conditions explains the apparent lack of our native species plantings. We had the best attendance of the year at the July meeting: 18.

The new native shade garden has all the infrastructure in place. The irrigation lines are operational, double sifted mulch covers the entire area, and stepping stones are in place. The boys from the Brighton Boys Home are the "movers and shakers" in getting the mulch and stone work completed. We have had between 5 and 8 helpers there every Tuesday morning and we couldn't have done this without them. Bob Childress has been especially helpful in directing all the work done in the garden. We are awaiting a turn in the weather to proceed with the plantings. Many thanks to everyone who has worked on our latest garden contribution at the botanical center!

No fall field trips have been planned due to the weather. As fall approaches, we will add some trips to the calendar if the weather takes a turn for the better.

#### **Proposed Fire Consortia Begin Planning** - Sherry Leis

The Joint Fire Science program (JFSP) is encouraging the development of regional fire consortia. JFSP is an interagency effort to support development of fire science and dissemination of fire science to managers. JFSP has offered competitive grants for groups to form regional consortia to improve communication and information dissemination between researchers, natural resource managers, and fire practitioners [http://www.firescience.gov/JFSP\\_Consortia.cfm](http://www.firescience.gov/JFSP_Consortia.cfm). Three fire consortia with geographic and ecosystem foci that include Missouri have been awarded pre-proposal funding to develop full proposals due this fall.

The Great Plains fire consortium will be based at Oklahoma State University and will focus on increasing the availability and application of fire science information for natural resource management and to serve as a conduit for fire managers to share research needs with the research community within the Great Plains including Missouri. Their focus includes both public and private grassland as well as working lands. The Midwest Oak and Woodland Forest planning consortium will be based in Columbia, Missouri and will focus on woodland systems in the Midwest. The Eastern Tallgrass Prairie and Oak Savanna Consortium will be based in Madison, Wisconsin and will focus on prairie and savanna remnants and restorations in the upper Midwest.

Each of these consortia is developing a full proposal to submit by September 30. The proposal development process includes gathering feedback about information needs and preferred modes of communication from professionals and private landowners in each geographic focus area. The three planning consortia listed above have collaboratively developed a survey that will be disseminated to many who use fire on wildlands in the region. The survey is your chance to help shape the consortium and will arrive in an email from the Survey Center at the University of Wisconsin. Other elements of the proposal include details about website development and other activities and products that the consortia plan to produce to address their objectives.

Existing consortia, such as the Southern Fire Exchange, are already hosting webinars, local training events, and producing newsletters. The three Midwestern consortia in development are also excited to help bridge the gap between natural resource management with fire and the research community of the Great Plains and Midwest. Even though the fire community is a relatively small group of often disconnected individuals, the consortia plan to strengthen existing relationships and build new ones. If you would like to be placed on the contact list for any of the three planning consortiums, please contact the following:

**Great Plains Consortium**, please contact [greatplainsconsortium@okstate.edu](mailto:greatplainsconsortium@okstate.edu)

**Midwest Oak Woodland and Forest Consortium**, please contact Keith Grabner, [kgrabner@usgs.gov](mailto:kgrabner@usgs.gov) (573-777-1670)

**Eastern tallgrass Prairie and Oak Savanna Consortium** or please contact Paul Zedler, [phzedler@wisc.edu](mailto:phzedler@wisc.edu), (608-265-8018)

#### **Lamb's-Quarter – Who Knew?!** By Janet Haworth



**(*Chenopodium album*)** This European relative of spinach and beets, which grows throughout the North America, bears large quantities of edible, spinach-flavored leaves you can collect from mid-spring to late fall. It's one of the best sources of beta-carotene, calcium, potassium, and iron in the world; also a great source of trace minerals, B-complex vitamins, vitamin C, and fiber.

#### ***Chenopodium quinoa***

A goosefoot native to the Andes and cultivated for its edible seeds. The high-protein dried seeds of this plant, used as a food staple and ground into flour. It is the only known plant-based grain that is a complete protein. One 1/2 cup serving of quinoa contains 127 calories, 2 g. of fat, 2 g. of fiber and 4.5 g. of protein. According to the plant-based diet book *The Kind Diet*, whole grains like quinoa contain a range of B vitamins that calm your nervous system, balance your hormones and improve your complexion. The greens are edible, as well. Quinoa has become a staple for those with gluten-intolerance, and I have seen recipes using lamb's-quarter in place of spinach in many dishes, including spanakopita!

## Biodiversity Key to Earth's Life-Support Functions in a Changing World

Reprinted (with editorial adaptations by *ScienceDaily* staff) from materials provided by Albert-Ludwigs Universität Freiburg (submitted by Becky Erickson, editor of Hawthorn Chapter)

*ScienceDaily* (Aug. 14, 2011) — The biological diversity of organisms on Earth is not just something we enjoy when taking a walk through a blossoming meadow in spring; it is also the basis for countless products and services provided by nature, including food, building materials, and medicines as well as the self-purifying qualities of water and protection against erosion. These so-called ecosystem services are what makes Earth inhabitable for humans. They are based on ecological processes, such as photosynthesis, the production of biomass, or nutrient cycles.

Since biodiversity is on the decline, both on a global and a local scale, researchers are asking the question as to what role the diversity of organisms plays in maintaining these ecological processes and thus in providing the ecosystem's vital products and services.

In an international research group led by Prof. Dr. Michel Loreau from Canada, ecologists from ten different universities and research institutes, including Prof. Dr. Michael Scherer-Lorenzen from the University of Freiburg, compiled findings from numerous biodiversity experiments and reanalyzed them. These experiments simulated the loss of plant species and attempted to determine the consequences for the functioning of ecosystems, most of them coming to the conclusion that a higher level of biodiversity is accompanied by an increase in ecosystem processes. However, the findings were always only valid for a certain combination of environmental conditions present at the locations at which the experiments were conducted and for a limited range of ecosystem processes.



In a study published in the current issue of the journal *Nature*, the research group investigated the extent to which the positive effects of diversity still apply under changing environmental conditions and when a multitude of processes are taken into account. They found that 84 percent of the 147 plant species included in the experiments promoted ecological processes in at least one case.

The more years, locations, ecosystem processes, and scenarios of global change -- such as global warming or land use intensity -- the experiments took into account, the more plant species were necessary to guarantee the functioning of the ecosystems. Moreover, other species were always necessary to keep the ecosystem processes running under the different combinations of influencing factors. These findings indicate that much more biodiversity is necessary to keep ecosystems functioning in a world that is changing ever faster. The protection of diversity is thus a crucial factor in maintaining Earth's life-support functions.

*Meadows with different amounts of species were planted in the tracts and compared with each other. (Credit: Sandra Weigelt)*

**Journal Reference:** Forest Isbell, Vincent Calcagno, Andy Hector, John Connolly, W. Stanley Harpole, Peter B. Reich, Michael Scherer-Lorenzen, Bernhard Schmid, David Tilman, Jasper van Ruijven, Alexandra Weigelt, Brian J. Wilsey, Erika S. Zavaleta, Michel Loreau. **High plant diversity is needed to maintain ecosystem services.** *Nature*, 2011; DOI: 10.1038/nature10282

Comment from Becky Erickson, editor of Hawthorn Chapter] There is an article in *Science Magazine* which must be paid for to be read so I can't get it to copy here about recent articles which call upon the conservation community to embrace invasive species. Davis and coauthors propose downsizing the struggle against invasive species (1). In the News Focus story "Embracing invasives" (18 March, p. 1383), G. Vince suggests that the Galápagos "embrace the aliens." In *The New York Times* (2), H. Raffles accused environmentalists, conservationists, and gardeners targeting invasive species of being unreasonably dogmatic and xenophobic.

Please understand that introduced species, unencumbered by predators and disease will quickly monopolize the established biodiversity.

### The following is an argument against the embracing of species in the wrong place.

**Alien Battlefield** August 5, 2011 by Dick Shaw

Recent articles in *Science*, the *NY Times*, and *Nature* have suggested that we should embrace invasive species and the resultant "novel ecosystems" and that those that do battle with such species are verging on xenophobic. This is a common cycle in many fields and I'm told that a discussion thread is considered closed once a poster has been described as xenophobic or worse, if so this discussion could be over before it even begins. Nevertheless, a group of scientists and practitioners wrote a response which can be found on the ISSG website. The issues are certainly complex. It is true that preserving pristine ecosystems is a lost goal and there are probably none in existence anymore, but to do nothing and indeed to try to argue that the new system is one worth accepting suggests that the authors have either given up in the face of too difficult a task, or have seen an opportunity to publish something controversial. (continued on page 7)

There are certainly "profits" of doom to be had on both sides. In order to get your invasive management project funded it is necessary to take the public with you and when engaging with the media evocative negative language can appear in print. On the other side it is easier to stand out from fellow authors if you challenge an accepted paradigm. In the case of weeds, it is generally understood that monocultures of the new plant are less biodiverse but more productive than the flora they replace and depending on your priorities their arrival could be a good or a bad thing. If we accept that biodiversity is a priority there are few arguments to be had for introducing new invasive exotic species except for biocontrol where the excellent paper by Van Driesche and many co-authors shows the potential benefits. It is this tool that was notably overlooked in the discussions despite choosing the Galapagos as a case study where there are excellent targets for weed biocontrol yet no funding has materialised despite the vast sums spent on vertebrate eradications.

Open discussions are valuable and provocative articles can stimulate debate. However, it is important that all parties show balance especially in the current climate when funding for the environment globally is under severe pressure. Any unnecessary doubt over the wisdom of supporting invasive species management efforts could result in decisions being made that have long lasting and severe consequences. I'm pleased to say that *Science* has since published a series of strong rebuttals, one from the heads of key environmental organisations. And *Nature* has done the same including one from 141 eminent signatories. Finally the CBD Secretariat put its weight behind the rebuttals and issued a communique supporting the struggle against invasive species. In short, I think as far as the debate is concerned, normal service has been resumed.

#### Further reading:

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**Missouri Native Plant Society  
 2011 Annual Meeting – June 11, 2011  
 Johnson Shut-ins State Park**

George Yatskievych  
 Bruce Schuette  
 John Oliver  
 Bill Knight  
 Rex Hill  
 Martha Hill  
 Sherry Leis  
 John White

Casey Burks  
  
 Nels Holmberg  
 Bill Summers  
 Jason Allen  
 Wayne Clark  
 Otis Allen

President George Yatskievych called the annual meeting to order at 7:23. After welcoming everyone present, George gave a brief highlight of society field trips during the past year. George also listed other achievements for the past year: The society contributed to the discussion on \* using patch burn grazing with cattle to manage public prairies. \*Teaming with MODOOT to produce a Roadside Wildflower poster and brochure. \* Started developing a Statewide Locality Database \*Presented the Stanton Hudson Award to Steve Kroiss (Washington University), and a small grant to Caitlyn Farris (College of the Ozarks). \*Updated, organized, and indexed MONPS archive at MOBOT. \* Assisted Mark Twain National Forest with an orchid search,\* and helped with plant inventories for a MOBCI Grant.  
 Treasurers Report: Bob provided a handout by e-mail.  
 Awards: **Four society awards were presented:**  
Plant Stewardship Award: Rick Swopes  
Arthur Christ Research Award: Alan Brant  
Erna Eisendraft Education Award: Barbara VanVleck  
Julian Steyermark Award for Lifetime Achievement: Bill Summers.

George will write letters to three of the award winners who were not at the meeting informing them of their award.  
 Thank you to Nadia Navarrete-Tindall for heading the awards committee.  
 Election results:  
 President (2011-2013) Paul McKenzie  
 Vice President (2011-2013) John Oliver  
 Secretary (2011-2013) Ann Schuette  
 Treasurer (2011-2013) Bob Siemer  
 Board Member (2011-2014) Robin Kennedy  
 Board Member (2011-2014) Allison Vaughn  
 Thank you to Susan Farrington (nominating committee), Jack and Pat Harris and Rex and Martha Hill (ballot counters).  
**A motion to adjourn the annual meeting was made by Sherry Leis, seconded by John White, and passed.**

**Missouri Native Plant Society  
 Quarterly Board Meeting – June 11, 2011  
 Johnson Shut-ins State Park**

George Yatskievych  
 Bruce Schuette  
 John Oliver  
 Bill Knight  
 Rex Hill  
 Martha Hill  
 Sherry Leis  
 John White

Casey Burks  
  
 Nels Holmberg  
 Bill Summers  
 Jason Allen  
 Wayne Clark  
 Otis Allen

President George Yatskievych called the board meeting to order immediately following the annual meeting.  
*A check revealed there was not a quorum present, so votes could not be taken.* Approval of the minutes of the April 30, 2011 board meeting was tabled until the next meeting.  
 John Oliver volunteered to be assignment recorder.  
Treasurers Report: Bob Siemer sent out the treasurers report by e-mail. Transfer of funds to the Hudson Fund has been completed.  
Petal Pusher: George announced that he has been talking to a possible new editor for the Petal Pusher, replacing Chuck Robinson. Paul will communicate with her about the editorship and potential software needs.  
Distribution Chairman: Bill announced that he has a new tax exempt letter, and anyone who needs a copy can get one from he or George.  
Publicity Chairman: George reported for Kevin Bley that he had three ideas for Blazing Star Awards. After some discussion it was decided to do an e-mail discussion and vote.  
MONPS Website: George reported that he had e-mailed David Winn. David responded that he had been *very busy with moving, but should now have more time to update the website more regularly.* It would also help if information was sent to him in an electronic form. George will respond to David about granting editing privileges to designated individuals for time sensitive announcements about meeting, field trips, and activities.  
Membership Report: George gave Ann's report, noting that the society's membership stands at 321, with five new life members. June is renewal month, and we need to make sure that the renewal envelope gets in the next Petal Pusher. Rex said he will update information on the envelope.  
Archives: Nothing new to report.  
Roadside Wildflower Brochure: George reported that two new members have been added to the committee, and the next task is to establish a list of possible species to illustrate.  
Board Member Appointment: Election of board member John Oliver to Vice President will require John to resign from the board and new President (Paul McKenzie) to appoint a new/replacement board member.  
MONPS Tote Sacks: Rex announced the new order of 48 tote sacks. The cost is \$7.75 for the chapters, with a suggested sale price of \$10. Chapters can see Rex or George to get them.  
MONPS Tee-Shirts: Allison told George that the art work is done and being colorized. It will have the composite drawing on the front, with close-ups of the flowers on the back. Allison will handle having them printed, and hopefully they will be done in time for the Botany Conference in July.  
 Botany 2011 Conference (July 10-13): Sue is taking the lead in staffing a MONPS booth, and getting sale items. She has three tee-shirts at the printer, beside the new shirt Allison is getting printed. Sue did ask if anyone from the St. Louis chapter may be able to help with staffing and John offered to recruit volunteers (they will need to be registered for the conference).  
MONPS Statewide Locality Database: No report at this meeting.  
**Chapter Reports:**  
 Casey Burks introduced herself as the new Clinton Chapter representative.  
*St Louis- Martha reported that at the April 27<sup>th</sup> meeting the scheduled speaker cancelled at the last minute because of illness and James Trager admirably filled in at the last minute.*  
Miscellaneous Announcements: Information will be forthcoming on the next quarterly board meeting in Sedalia on September 9<sup>th</sup>-11<sup>th</sup>. The meetings themselves will be at MDC Sedalia office at the fairgrounds. RSVP by the 20<sup>th</sup> is required for anyone wishing to go to the MDC Prairie Management Field Trip on June 25<sup>th</sup>. There will be a 'Grasslands in a Global Context Conference' at Konza Prairie (KSU) September 12-14<sup>th</sup>. John reviewed assignments. George expressed appreciation to Allison and the Johnson Shut-ins SP staff for the use of the meeting room.  
  
 The meeting ended at 9:10.

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- **Native Plant Nursery fire loss**
- **Coppermine Hollow Glade Tour**

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