



Gaillardia

The Oklahoma Native Plant Society Newsletter

CALENDAR

Note: the events dated below are followed by either a page number for further descriptions or the contact person.

June 1: Central Chapter outing to Wichita Mountains Wildlife Refuge, Page 3

June 7: ONPS Board Meeting at Tulsa Garden Center. Contact Adam Ryburn.

Fabulous Wildflower Fridays, the 3rd Friday of each month, NE Chapter.

Note: all members are invited to all meetings, including board meetings, and are encouraged to bring guests.

The purpose of the Oklahoma Native Plant Society is to encourage the study, protection, propagation, appreciation and use of Oklahoma's native plants.

Volume 29, Number 2
Summer 2014

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PRESIDENT'S PARAGRAPH

In May 2013, my article in the *Gaillardia* was titled "Where is Spring?". In the article I describe the apparent lack of anything spring-related thus far during the year. This spring, however, is shaping up much better than last year. Everything appears to be on schedule, and I anticipate a very colorful late spring and summer season. One obvious exception to the typical spring rituals is the annual Wildflower Workshop. For reasons beyond anyone's control, ONPS and the Garden Clubs of Oklahoma were not able to put together this annual event. I assure you that next spring, we will have an excellent Wildflower Workshop and I hope to see all of our members in attendance. Be on the lookout for other opportunities to get involved, including the ONPS Annual Meeting to be held in the Fall.

IMPORTANT GENERAL NOTICES

2014 ANNE W. LONG AWARD for the Promotion of Native Plants

Please consider making a nomination for the Anne Long Award, which is given in remembrance and honor of one of the ONPS founders, and an early state leader in wildflower protection. The award recognizes individuals or groups who have made outstanding contributions to the stated purpose of ONPS. Nominations must be in writing, and must include the complete names of the individual(s) making the nomination and the nominee(s); a contact person if the nominee is an organization or group; and sufficient documentation of the nominee's activities promoting native plants. For additional information, or to see a list of previous winners, please see the ONPS Awards page on the ONPS Website.

Send or e-mail nominations by August 31st to:

Gloria Caddell
Department of Biology

PEOPLE vs PESTICIDES

Chadwick Cox

Back when I was teaching biochemistry, the report of transferring into food plants the *Bacillus thuringiensis* gene that is responsible for the toxic principle that leads to death of many caterpillars sounded like a really good idea. For example, a transgenic corn plant could be protected from damage, caused by corn-ear worms without spraying anything. In fact in this case, this still might be a good idea. Some of these other transgenic species are no longer looking so benevolent.

Roundup® ready corn and soybeans, product of Monsanto, make up almost all of these two crops grown in America. Roundup is a mixture of glyphosate, a very potent inhibitor of the synthesis of aromatic amino acids, a surfactant to improve wettability and an adjuvant that improves toxicity. It is considered a short-lived herbicide and the main deactivation path is hydrolysis to aminomethylphosphonic acid (AMPA). Because most animals including humans obtain their aromatic amino acids dietarily, glyphosate is only toxic acutely at levels like many common household substances not considered toxic. The Environmental Protection Agency has given it a low rating for harm to humans.

The Roundup Ready term signifies that, by gene modifications, Monsanto has conferred resistance to the toxicity of glyphosate to food plants and have produced the seeds to sell exclusively through patent protection. Several other food crops have been similarly produced but are not grown as prevalent as the modified corn and soybeans.

My concern about this process arises in two ways, firstly, is the procedure of how it is applied. There are two applications during the growing period of the crop. Before the harvest of soybeans, a much higher dose is used to kill the soybean plants to cause defoliation to improve harvesting. There are often additional applications between crops to keep weeds from growing. Not only soybeans and corn but several other crops are now raised similarly, so great swaths of our land are sprayed with this chemical alone. Can spraying so much of this chemical have no bad effects? A recent report has found glyphosate and AMPA in the milk of

some America mothers at levels higher than allowed in drinking water in Europe.

Secondly, the spraying of the great swaths of land includes all the surrounding edges of the fields. This further fractures connectivity required for maintaining biodiversity. In fact, the suspicion that much of the death of honey bees is now attributed to starving bees in areas where there are no crops with bee friendly flowers and in other areas forcing bees into insecticide laden crops, especially those covered in the neonicotinoids. Honey bees are not the only pollinators affected but their connection to so much of our food crops gets them our attention.

As might be expected, several weed species have developed resistance, some possibly direct from the crop. This has caused calls for raising levels of herbicides. Also, has led to increasing development of crops with resistances to other herbicides. Dow has already made application to have approved its 2-4 D resistant crop species. Although a commonly used herbicide, 2-4 D does not have the same consensus for safety that glyphosate has.

Organizations that I am confident have our best interest in mind are asking for caution on the rapidly expanding approval of many of the genetically modified species. Unfortunately, the industries producing these species are very wealthy and carry a big stick with little constraints on their use any more.

CHAPTER ACTIVITIES

Central Chapter
Joe Roberts

Central Chapter has two activities scheduled in May and June. The first is a potluck dinner at the home of Marilyn and Ken Stewart, owners of Wild Things Nursery. The gathering is scheduled for May 24th, so by the time this Gaillardia is published I assume we will have had it. If you weren't able to make it, we will have a recap in the next issue.

Our other outing is a trip to the Wichita Mountains Wildlife Refuge on Sunday, June 1st (in case of inclement weather, on June 8th). We will meet at the Quanah Parker Environmental Center on the refuge at 8:30 am.

RESERVATIONS ARE ESSENTIAL, so please email joeroberts13@cox or call (405) 820-6851 to

secure your place, and let me know if you would like a box lunch (\$5, specify vegetarian or carnivore.) We will be guided by the Friends of the Wichitas and Southwest Chapter of the ONPS. We may be able to take provided buses around, with private cars taking up any overflow. The length of the tour will depend on the heat, but we will wrap up sometime after lunch. There may be an optional tour of the Medicine Park Aquarium and Natural Sciences Center. With a little luck and some rain, there should be lots in bloom on the prairie, so make sure to attend if you can. Standard ONPS field trip guidelines apply (bring proper shoes, sunscreen, hat, water, etc.) There is a first-come first-served campground on the refuge, and other lodging is available in Medicine Park or Lawton. Some useful links are below. See you there!

Wichita Mountains Wildlife Refuge
([fws.gov/refuge/wichita mountains](http://fws.gov/refuge/wichita%20mountains))
Wichita Mountains Plant list
([fws.gov/refuge/wichita mountains/wildlife/species list.html](http://fws.gov/refuge/wichita%20mountains/wildlife/species%20list.html))
Medicine Park (medicinepark.com)

WELCOME THESE NEW MEMBERS

Pam Allison, Canyon, TX
Philip Ansteth, Tulsa
Catherine Barrett, Norman
Laurie Bird, Oklahoma City
Cheryl Evans, Burlington
Tahzeeba Frisby, Elgin
Diane Hartung, Broken Arrow
Rob LeForce, Chickasha
Gina Houston, Edmond
Janet Thomas, Tulsa
Kenny White, Perkins

FOR JOINING OR RENEWING USE THIS FORM

Fill out this form or supply the same information. Make checks payable to Oklahoma Native Plant Society and mail to Oklahoma Native Plant Society, P. O.Box 14274, Tulsa, OK 74159.

Membership is for Jan. 1 - Dec. 31 of current year and dues include subscription to *Gaillardia*.

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Order your copy of Volume 13 of *Oklahoma Native Plant Record Today!*

There are only a few copies of Volume 13 left. Why? Because it's got some of the best articles ever. Amy Buthod inventoried and prepared the species checklist for the Mary K. Oxley Nature Center that so many from our Northeast Chapter have been waiting for. It's in the hands of the Center's naturalists and in this issue. You'll also find Stan Rice's and Sonya Ross' research report on the effects of smoke-induced chemicals on seed germination. While effects of burning and charring have been studied for their effects on species distribution, the effects of smoke enhancement on germination has not been explored here - where drought and fire cycle repeatedly. We can hardly wait to hear more about the effects of smoke, which will undoubtedly follow this preliminary study.

What more could you want? Connie Taylor's master's thesis is finally digitized and available globally. Hers is a thorough accounting of species' distributions in the Water Branch Canyon system west of metropolitan Oklahoma City. It is now available, for botanists here and abroad, as a basis for studying the effects of canyon erosion, filling, and re-erosion on species in Permian Sandstone formations. It was one of the first studies to document the persistence of Sugar Maples in these mesic ancient canyons, long after their extirpation from surrounding uplands.

To top it off, Ron Tyrl has given us an invaluable educational tool and a very enjoyable article to read, with his "Cavalcade of Field Botanists in Oklahoma". In his personal style that we all love to listen to and read, he has written an article that is both inspirational and factual. It introduces us to many field botanists from the past and salutes several, whom many of us have known. From Francisco Vasques de Coronado's expedition to the botanists of the Oklahoma Biological Survey and Flora of Oklahoma, he highlights their importance to us and to future botanists.

Don't forget to order Volume 13 soon. By the way, back issues are half-price.
Sheila Strawn, Managing Editor,

Oklahoma Native Plant Record

Volume 13, December 1, 2013

Volume 13, the 2013 issue of the Oklahoma Native Plant Record, is now available online at <http://ojs.library.okstate.edu/osu/>. It is being offered to members, non-members, libraries, colleges, and universities in print at the subscription rate of \$10.00 plus \$2.00 shipping. It will also be available in electronic format on CD at \$10.00 for all volumes. If you would like to receive the journal please return this notice with your payment to the address at the bottom of the page. You can also order the current and back issues.

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