Gaillardia

Oklahoma Native Plant Society

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

Volume 35, Number 3
Fall 2020

Inside this Edition

Upcoming Events/Activities

(check the ONPS website for more details)

September 12 - Audubon Backyard Habitat Tour, tickets MUST BE PURCHASED by Sept 10th at www.tulsaaudubon.org/wildlifehabitatgardentour

September 11—Friday, Field Trip, Okmulgee State Park, meet at Visitor Center at 10:00.

September 26—Field Trip, 10:00 a.m. Location Oxley Nature Center, Grass Identification, Bring your masks and Grass ID books.

October 1—Central Chapter Virtual Program "Sex in the Flower Bed" by Rahmona Thompson, see page 3.

October 2-4—Bioblitz! Statewide event. For details go to biosurvey.ou.edu/bioblitz2020/

October 10—Field Trip, Tree Identification, meet at 10:00 am at Lee Lake in Bartlesville. Bring your masks and Forest Trees of Oklahoma book.

October 24—Field Trip, Fern Identification, meet at 10:00 a.m. at Natural Falls State park.

November 5-Central Chapter Virtual Program by Dr. Rick Lupia on the Evolution of plants, see page 3 for details.

All regular scheduled Indoor meetings have been cancelled for the remainder of 2020. Outdoor excursions with proper precautions are still proceeding.

Oklahoma State Symbols

statesymbolsusa.org

Insect

Honeybee,

Apis mellifera

Welcome New Members

Cosette Armstrong and Christie Martinez * John Unterschuetz * Kess McConnell and George Freedman * Mark Rasco * Jan Hall * Mary Whitney * Erik Swanson * Morgen Phillips * Anita and Bright Gillispie * Melynda Hickman * Jay Welke * Rita Hudson * Jordan and Amanda Williams * Kayce and Marcus Miller * Nicole and Casey Smith

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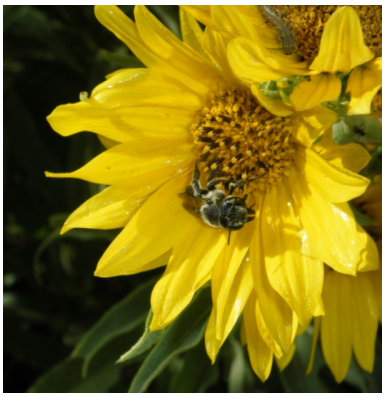
COPY AND ART DEADLINE FOR THE NEXT ISSUE IS Nov 5, 2020



Parliamentarian's Message

"UNDER THE CIRCUMSTANCES"

"Under the circumstances"....these words represent a situation in which many organizations are finding themselves this year. The "circumstances", a pandemic caused by a corona virus, have presented challenges to groups of many kinds....professional, fraternal, business, charitable, social, and special interest organizations.....all are involved in attempting to plan schedules, activities, and projects "under the circumstances."

Oklahoma Native Plant Society finds itself in the same situation. In July, the Society's Executive Board began to plan for ONPS. Using email messaging, a majority of board members participated in discussions, offering proposals, suggestions, possibilities. It was ever in mind that a large percentage of our Society's membership falls in the most vulnerable to the virus age group, and that the safety and health of our members should be our utmost concern.

Many ideas were brought forth, and those which seemed to have most consensus became three areas of emphasis: 1) ONPS meetings; 2) election of 2021 State officers; and 3) fall board meeting arrangements. Decisions reached in each of these areas of emphasis are as follows:

1) Meetings: All in-person meetings of the Society are cancelled until at least January, 2021. This includes local chapter meetings, the Society's Annual Meeting, social get-togethers, and any other function in which a large number of members might participate. Outdoor field trips are allowed with the stipulation that participants wear face covering masks and maintain the CDC recommendation of six feet between each other.

2) Elections: State officers of the Society are normally elected at the Annual Meeting. Our current bylaws include instructions regarding elections, with a nominating committee charged with securing nominees for each elected office...President, Vice President, Secretary, Treasurer, and two Directors-at-Large. The slate would be announced to the membership via the Gaillardia newsletter and on the ONPS website.

(continued on Page 3)

(Parliamentarian's Message "Under the Circumstances" continued from Page 2)

Using the Executive Board as the "pseudo" nominating committee, July email communications determined that 2020 officers could be asked to continue in 2021 in the same office in which they are currently serving. Great appreciation is expressed to those current elected officers who have graciously accepted the challenge of serving ONPS in 2021. Nominations and Voting will be done via our website at oknativeplants.org

3) Board Meeting: The Executive Board normally meets immediately following the Annual Meeting to set the course for ONPS for the upcoming year. Since the 2020 Annual Meeting is among the events being cancelled, the Board will devise a method to meet virtually during the fall in order to plan 2021 schedules, activities, and events. At the virtual meeting, the business of ONPS, including reports, financial concerns, and all other matters relevant to ONPS in 2021 will be considered in as close to the same manner as would normally be conducted at an in-person meeting.

However things work out "under the circumstances", ONPS will manage to move ahead and continue to promote the objectives which our Society espouses.

Northeast Chapter Update

Teresa Blue, *Chair*

Hello everyone, I have missed you all immensely… yes every single one of you. Since we missed hearing Doug Tallamy speak, I am including, below, a link to a video of him speaking about his new book "Nature's Best Hope".

September 14 and December 7 meetings are cancelled. The Fabulous Wildflower Friday meetings that normally occur on the third Friday of each month are cancelled until further notice. The next scheduled NE Chapter meeting is **March 1, 2021** unless notified otherwise.

The Audubon Society's 27th annual Wildlife Habitat Garden Tour and Plant Sale will be held on Saturday, September 12 from 9:00 a.m. to 6:00 p.m. **Tickets are $3.00 and must be purchased online in advance.** Tickets will be for specific timed intervals and masks will be required. Two Tulsa gardens that are connected by a gate for a total area of five acres will be featured on the tour. Find complete information at www.tulsaaudubon.org/wildlifehabitatgardentour or call 918-521-8894.

https://www.bing.com/videos/search?q=doug+tallamy+youtube&&view=detail&mid=F517385FC40E6BE2C754F517385FC40E6BE2C754&&FORM=VRDGAR&ru=%2Fvideos%2Fsearch%3Fq%3Ddoug%2Btallamy%2Byoutube%26%26FORM%3DVDVVXX

News from other Chapters will resume with the Winter issue, announcing dates for early 2021.

Central Chapter Update

Patrick Bell, *Chair*

A long overdue greetings to ONPS members and friends!! Covid-19 has changed most things in our lives, ONPS activities not withstanding. Normally, the Central Chapter meets in OKC on the 1st Thursday of most months. As we all know, these are not "normal" times. That said, most of us would probably enjoy a break from the isolation and have a chance to learn something and perhaps be entertained a bit. With that in mind, The Central Chapter meetings are going to proceed virtually, for the time being. These virtual presentations will be offered to all (state-wide) ONPS members, via our website. And, as an added bonus, they will be archived for viewing at a later time and date, should you choose.

We are on tap to begin the presentations on October 1st, 7:00pm. Might want to go ahead and mark your calendar for this one: Our own Rahmona Thompson will be giving a (most insightful?) talk on "Sex in the Flower Bed". She assures me native plants will be mentioned, at some point...

We'll follow that (as best one can) with a very interesting presentation Nov. 5th, by Dr. Rick Lupia, curator of the Sam Noble Museum at OU. A paleobotanist, he gives a fascinating overview of the evolution (going back to the very beginning) of plants in Oklahoma.

We'll send out e-mail reminders and info for viewing these talks, as we get closer to the dates. If your email is not current with ONPS, please let us know.

Stay safe and try to get out and enjoy the upcoming fall beauty of our diverse Oklahoma natives; plants, birds, monarchs and nature... you deserve it.

BOTANY BAY

Plant Viruses: The famous and infamous

by Rahmona Thompson

Plant viruses major claim-to-fame is that they really jump started the field of virology. Virus' existence was officially hypothesized in 1898, as an explanation for tobacco spot disease. The extraction and characterization of the chemical components of tobacco mosaic virus (TMV) led to a Nobel Prize in Chemistry. But it took the development of the transmission electron microscope for us to finally be able to see what a virus looked like. TMV was the first virus to be visualized. These facts combined to demonstrate that these extremely small, simple structures were causing plant diseases.

In your yards and gardens, you may have noticed viral infections. In flowers and fruit, virus can cause a variation in the color. This is called breaking. In stem and leaves, especially of monocots, the symptom can be a yellow stripping. Leaves of plants infected by a mosaic virus display a mottled, irregular pattern of lighter tissue. And finally, spot viruses cause spots or two-toned targets of dying tissue. Viral plant infections are common. So, what is a virus?

The traditional definition of a virus, and the one I spouted in lectures, is based on its chemical composition. It is a piece of genetic material, either DNA or RNA, surrounded by a protein coat. This definition meshes with the TMV images presented by the OSU biochemistry faculty when I was an OSU graduate student. This reconstruction shows ovoid proteins arranged similar to spiraling-tiles forming a tube. Inside the tube is a piece of RNA. We now know that some viruses (such as SARS Coronavirus 2) have lipid layer on the outside of the protein layer. Those like TMV that don't have the lipid layer are called naked viruses. That descriptive name might wake-up a nodding college student, especially if combined with the quip that presence of a lipid layer might mean the virus is "dressed-to-kill".

A new definition for the word virus is getting increased usage. I find this one very descriptive. It states that a virus is an acellular obligate intracellular parasite. Now this definition is full of technical terms, but their deliberate usage is an attempt to distill what a virus is and does.

Acellular means that a virus is not a cell. It is not surrounded by a cellular membrane. The cell theory states that all cells have cell membranes. Therefore, a virus is not living even though we label vaccines as being from live or killed viruses. I used the acellular nature of viruses and vaccine labelling in my lectures to exemplify what a scientific theory is and how is it is used to examine date and test hypothesize.

The word parasite conjures up lots of gory images especially, if you have a husband who loves watching the Alien movies. Being a parasite means your existence depends on getting something from your host while damaging that host. This brings up an infamous historical plant virus (viral) event: Tulipmania. The tulip breaking virus which causes colored strips in the flowers but very importantly, the virus reduces the health of the bulb. People were paying fortunes for these bulbs. Now I know we have all lost plants for which we have "paid good money" but people went bankrupt buying diseased tulip bulbs! Tulip vendors nowadays let you know they are selling virus-free bulbs.

An obligate parasite requires one or more host. This type of parasite uses its host to be able to reproduce. Without the host(s) there would be no new viruses. We can go back to the Alien movie analogy here to exemplify parasite using the host to continue it is line. This is as opposed to facultative parasites which may resort to parasitism under certain conditions. Fleas and any many saprophytic fungi, especially rots, are examples.

The last part of the definition is the adjective intracellular. A virus reproduces inside a host cell. Its minute size allows it to penetrate a cell and turn the cell into a virus production factory.
So, this newer definition while short and sweet, paints a colorful picture of what a virus is.

But there is new research showing that viruses might not always be involve in parasitic associations. There can be mutualistic interactions: situations where both species benefit

(Continued on Page 7)

Presenting *Acer negundo*

Becky Emerson Carlberg

How many of you recognize a boxelder, or do you think it is a gigantic poison ivy tree? This totally native North American tree has gone cosmopolitan and today is found in South America, South Africa, Australia, New Zealand, Europe and Asia. Not bad for a brittle, short-lived maple with a natural range that covers the Mississippi Basin into Canada with a few stands in the western US as well as Mexico.

Carolus Linnaeus named the boxelder '*Acer negundo*' in Latin. *Acer* is Latin for sharp or acrid, which maple sap becomes if harvested too late. The *negundo* is Sanskrit for that which protects the body from ailments. Linnaeus may have borrowed *negundo* from '*Vitex negundo*' a different plant but with similar leaves.

The poor tree in the soapberry family suffers from a leaf identity crisis. The light green leaves are not typically maple shaped. Three leaflet compound leaves are most common. They do resemble the leaves of poison ivy, the 'three leaflets let it be' plant. The leaves resemble the leaves of the white ash tree. The leaves also look like the leaves of elderberry (Sambucus), a flowering shrub which produces the good-for-you juice to keep your immune system happy.

The soft, light interior grade wood of the boxelder is similar to white birch. Close-grained and creamy white, the wood may have raspberry streaks from fungal activity which woodturners drool over. Boxelder makes decent toys, crates, charcoal, light-weight slack barrels used in rodeos, inexpensive furniture and, you guessed it, boxes! So, combine a few common words about this tree and you have a maple called boxelder or ash-leaved maple. Not the least bit confusing!

Boxelders are dioecious, just like us, with males and females. The female blossoms turn bright green when pollinated. Just think if humans did that. The fruits develop into pairs of samaras and hang on long stalks throughout the autumn into winter. When ready, the maple helicopters whirl to the ground.

The boxelder has a few drawbacks. It produces abundant baby boxelders, sheds branches and leaves in winds or ice, and has a short life of maybe 60 years unlike its sugar maple cousin that can live 300 to 400 years! The tree was planted along streets and in windbreaks until the early 20th century. Then there are boxelder bugs.

Boxelder female trees produce a scent attractive to boxelder bugs. You've seen them. This true bug has a dark brown/black oval shaped back and wings outlined in red veins. They feed, lay eggs and develop on boxelders and other maples. If disturbed, the insects can release a pungent strong-smelling odor. During cooler times of the year they cluster together and sun themselves, but are relatively harmless and little damage is done to the maples.

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(continued from Page 5)

Not so with horses. If a horse eats too many boxelder seeds, it can die of an unusual muscle disease caused by the toxin in the seeds. Why would a healthy horse eat boxelder seeds when there is green grass, oats or hay? Who knows what appeals to a bored horse who has seen too many cooking shows.

On the positive side, the boxelder, a fast-growing inhabitant of stream banks and moist areas, is great for stabilizing edges of creeks and provides shelter for wildlife. It can endure extremes and, when established, tolerate severe drought. The trees form a lumpy rounded crown and range in height from 30 to 70 feet. The boxelder thrives in western US and Canada where the sugar maple doesn't, why it is also called Manitoba maple. Just like the sap of its sweet cousin, boxelder sap can be made into syrup and sugar. Forty gallons of sugar maple sap, or 60 gallons of less sweet boxelder sap boils down to one gallon syrup. The dark boxelder syrup tastes like sorghum.

One unhappy Oregon couple evaporated their maple sap to three tablespoons of dark, bitter syrup. Seems the sap was harvested too late at a time the maples were breaking dormancy. The buds were swelling and beginning to break open. Because of chemical changes in the tree, the sap turns green and becomes bitter. In the maple syrup industry, the off-taste is called buddy-flavor. Think of a burnt Tootsie Roll.

The boxelder is easy to cultivate. Put it in difficult corners of the landscape where other trees don't thrive, unless shady. This maple likes the sun, thus the reason why my boxelder looks so sad. The neighboring pine trees have shot above the boxelder, grabbing all the light. The boxelder stubbornly hangs on, determined not to give up. The mushrooms and woodpeckers love it.

"Many eyes go through the meadow, but few see the flowers in it." Ralph Waldo Emerson

Why I Love Wildflowers

By Megan Huntly

(check out her Blog at www.thecollectedseed.com for more)

Who doesn't love the bright, cheery face of a sunflower? For me, they were the backdrop of one of the most exciting seasons of the year - back to school. Growing up on a farm miles removed from other kids my age, it was about reconnecting, having someone to look at other than my brother, a break from the boredom of old reruns on broadcast TV, new clothes, and a backpack full of fresh supplies. It was thrilling and as a child bouncing around for hours each week on a school bus winding down rural dirt roads, wild sunflowers were the backdrop.

Later, when I got my first car, a rust-colored, two-door clunker with 125,000 miles and no A/C, I would blaze down the Oklahoma red dirt roads faster than anyone should. Behind me was a rooster tail nearly the same color as my old car and alongside were the wildflowers I was not yet fully aware of, setting the scene.

It wasn't until I left Oklahoma and spent a little over a decade in other states that I really understood what made those drives so special. It was a time of introspection, fantasizing, daydreaming and channeling my thoughts. It started on the school bus but it stayed with me and I couldn't find it elsewhere. It was similar but not the same.

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(Plant Viruses: The famous and infamous, continued from Page 4)

from their intimate relationship. Several viruses, including TMV, can provide drought tolerance to their host. Cucumber mosaic virus has been demonstrated to provide improved cold tolerance to greenhouse-grown beets.

In nature, viral ecologists have demonstrated that plant viruses play a critical role in population dynamics. Soil nutrition and viral presence can combine to determine whether or not an invasive plant species is successful. In another study of wild populations of Mexican peppers, the populations with higher levels of genetic diversity showed few disease symptoms. The study suggested that the virus was helping to maintain the heterogeneity of the pepper populations. A review article implied that both types of studies indicate that viruses might be beneficial to plants under stressful conditions.

Thus, the field of plant virology is continuing to expand the field it inspired. New knowledge about the complexities of these ultramicroscopic structures, be they famous or infamous, is showing us how very complex our world is.

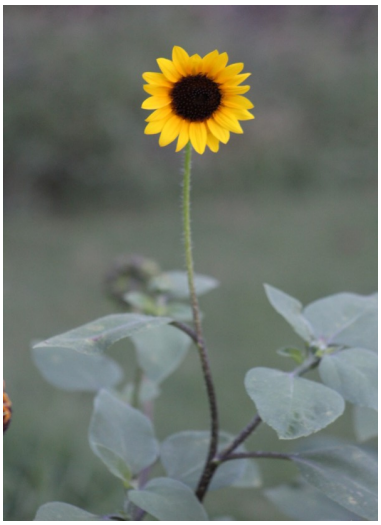
Calling All Members!

The Covid-19 has affected us all. Most notably for our organization has been the cancellation of all our highly anticipated get-togethers for botanizing. Each of us has coped in our own way with volunteer projects, outings and "Covidcations" of all sorts.

The Winter issue of the Gaillardia would like to publish as many of your alternative projects as possible. Please send us your account of what you did during this interruption in our normal schedules. Please send 200 words or less and a picture to the Gaillardia email **ONPSGaillardia@gmail.com** by the deadline of November 5, 2020.

(Why I Love Wildflowers, cont. from Page 6)

When I set out to make these drives, first in Jefferson County, MO, near my new home of St. Louis and later on the secluded rural Mississippi side roads south of Memphis where I also spent a few years, something didn't click. Something about getting behind the wheel forces me to shut down all the noise and focus primarily on driving, leaving only room for a single random thought to rattle through the back of my mind. But I never found that same vibe. I was homesick and anything that reminded me of where I came from was a reassuring sight. This is when I began to notice the flowers I recognized. They might have been there at the wrong time but they offered a reminder that while it felt this way at times, I had not in fact landed on Mars.


Sunflower Photo by Megan Huntley

A dozen years passed and I finally made Oklahoma my home once again. I knew what flowers to expect without even realizing it. Summer felt right again. The temperatures and the surroundings made sense to my heart.

Then, I moved to a suburban property sitting on top of a brutal patch of Oklahoma clay. I'm primarily a vegetable gardener, but I wanted flowers too and knew that between the Oklahoma clay and the Oklahoma summer, few plants would survive. Native plants it would be!

My journey started by learning the names of the flowers I already recognized from roadsides, then I began paying more attention on my drives. I read everything I can find and am a regular stalker of the ONPS Facebook page. I'm still a rank amateur but I learn more every season and have installed my first fully native flowerbed.

Habitat Quiz Answers

1-R, 2-P, 3-D, 4-R, 5-P, 6-D, 7-D, 8-W, 9-P, 10-P, 11-D, 12-P, 13-W, 14-R, 15-D, 16-W, 17-R, 18-P, 19-R, 20-R, 21-W, 22-D, 23-D, 24-P, 25-D, 26-P, 27-W, 28-P, 29-W, 30-R, 31-W, 32-P, 33-P, 34-W

Meet the Founders: CHAD COX

By Fran Stallings

Photo by Kim Shannon

Note: Chad Cox passed away July 5,2020.

Andrew Chadwick "Chad" Cox, who long edited our *Gaillardia* newsletter, came late to a serious involvement with native plants. Born in 1936 in Hattiesburg Mississippi, raised in Houston outskirts playing in wooded areas, he had noticed that different areas had different plants. Traveling as an adult, he saw that related species took different forms suiting different habitats. But his work kept him indoors, lab-bound for decades.

He took freshman biology at the University of Texas in Austin, but majored in chemistry with physics and math. With his BS he returned to Houston although his parents had already moved back to Mississippi, and he worked as a tech at M. D. Anderson Hospital until a seminar in the early days of DNA and protein structure inspired a MS in biochemistry from University of Houston with a professor studying conditions for the origin of life: his MS thesis sought conditions for producing de-hydroxy sugars like the D in DNA. A PhD in biochemistry from Duke University, investigating high density lipoproteins in blood plasma, led to a postdoc at University of Washington working on lipoproteins and blood coagulation. When that lab moved to Tucson University medical school, he went along. He got outdoors a little more in Arizona, where the plants were very different from Texas.

In 1964 Chad joined the Oklahoma Health Sciences Center biochemistry department where he did research and taught, mentoring three graduate students. In 1980 he met his future wife, Patricia Ann Morris, who had joined the joint lab group. They married in 1984. After 30 years in the lab, anticipating retirement in 1998, he joined ONPS in 1996 and became a lifetime member. He did a lot of volunteering, served on the board, and edited *Gaillardia* for 13 years making good use of experience from his many publications at HSC. He says he would have loved to do color editions, but at that time color printing was too expensive.

He laughs at having misspelled "Botany Bay" for three issues before someone called him on it. He threw in the towel when contributing authors became too scanty. After a few irregular issues, Marilyn Stewart took over. Color printing at last is affordable!

Chad's special interest in ONPS was invasive plants. He helped two botanists start the Oklahoma Invasive Plant Council, a citizens lobbying and action group. Although they spoke to the legislature, there was little money to take action except in the Wildlife Department: fishermen supported work on invasive water plants. Chad encouraged ONPS members to be on the lookout for invasives, especially callery pear.

ONPS gratefully acknowledged Chad's contributions with the 2006 Service Award and the 2014 Anne Long Award (shown in photo).

Chad served on the advisory board for the Sutton Urban Wilderness which now has a privet problem in the wooded areas. He noted that Saxon Park recently had few wildflowers, but had become overgrown with blackberry and privet along the perimeter trails in drainage areas. He personally pulled up a lot of them by hand and when they were too big for that, he used a Weed Wrench.

Chad fought a brain tumor from lung cancer, and regretted that irradiation treatments caused memory problems. He sometimes had trouble remembering even the names of plants in his garden, and the DNA reclassifications and taxonomic consolidations didn't help! He complained that the national database accepts only a single common name for each species, and can't recognize alternate spellings.

Chad Cox made a huge contribution to ONPS especially through his many years' editing *Gaillardia,* and his focus on the threat posed by invasive species. He will be deeply missed.

School Gardens

by Holly Hunter

Last year, several ONPS members volunteered as mentors for school gardens in OKC. I volunteered for John Marshall High School. I also recruited Roberta Rains (a master gardener who runs the garden at Southern Oaks Metro Library). As it turns out, the teacher in charge of this garden, Carrie Snyder-Renfro, has been such a high-energy worker and planner, Roberta and I have had to do very little. Such a pleasant surprise!

And just look at this John Marshall High School pollinator garden, in its first summer! Carrie has not let Covid stop her from working it, even though everything is suspended. So she also deserves a "Spirit Award", especially in all this heat. She constantly studies the plants and insects, and sends questions to me and Roberta. When Carrie asked what to do about the ants in the garden, Roberta replied with specific helpful advice about how to address the problem organically. My answer was "Um, just tell the kids to avoid the ants". I keep telling her she needs to fire me as a mentor; honestly, Carrie could teach the rest of us a thing or two, about garden design.

Garden after initial planting, Photo by Holly Hunter

I also want to shout out a big thank-you to Stephanie Jordan, for several flats of plants that she contributed, and also Bryant Decker (another ONPS mentor), for sharing his milkweeds and advice.

It has been fun!

Garden shown in mid July, photo by Holly Hunter

Musings from Joe

Amid the bindweed, Bermuda, and assorted other exotics in the vacant lot next door to my house, it appears the *Gaillardia aestivalis* is spreading from my garden and gaining a foothold. Natives invading? Bwahahahahaaaa! We're takin over baby! We want the world and we want it...now!

BIOBLITZ 2020!!!!!!

Something fun you can participate in this fall is the 20th Annual Bioblitz! BioBlitz! is a celebration of Oklahoma's biodiversity. Each fall expert biologists and citizen scientists come together at an Oklahoma natural area to count as many species as possible over one weekend! This year it will be a Virtual Bioblitz with a few "Biobitz" as in-person activities around the state. The event will run 3 full days, from 12:01 am on October 2nd, through 11:59 pm on October 4, 2020. You may find details and register at biosurvey.ou.edu/bioblitz2020/

Observations are from anywhere in Oklahoma on those days and are submitted through inaturalist.org or using ebird.org Come join the fun.

Habitat Happenings

Test your knowledge of the Habitats for these Oklahoma wildflowers. See Page 7 for answers. Below, you'll find a list of 34 native plants found in Oklahoma. See if you can place each plant in its most common habitat: Woodland-W, Prairie-P, Riparian-A, Disturbed Area-D. Example: Rue Anemone W. (If you get them all in their "proper" habitats, you'll find 8 Woodland, 11 Prairie, 7 Riparian, and 8 Disturbed.)

1. Arrowhead ____
2. Basket-flower ____
3. Bindweed ____
4. Cardinalflower ____
5. Coreopsis ____
6. Dayflower ____
7. Dandelion ____
8. Erythronium ____
9. False Indigo ____
10. Goldenrod ____
11. Henbit ____
12. Indian Paintbrush ____
13. American Ipecac ____
14. Jewelweed ____
15. Johnny Jump-up ____
16. Trillium ____
17. Water-willow ____
18. Liatris ____
19. Lizard's-Tail ____
20. Lotus ____
21. May-apple ____
22. Mullein ____
23. Nightshade ____
24. Old-Plainsman ____
25. Pokeweed ____
26. Queen-Anne's Lace ____
27. Golden Ragwort ____
28. Sensitive-Briar ____
29. Sea Oats ____
30. Rose Mallow ____
31. Solomon's Seal ____
32. Sunflower ____
33. Valerianella ____
34. Wild Yam ____

Contributions

General Fund:
James Elder, Margaret Ewing

Color Oklahoma:

Pearl Garrison, In Memory of Robert Mercer, Barry L. Redlinger, for wildflowers on Oklahoma Highways

Slate of Officers presented by the Board:

Bill Farris - President
Donna Horton - Vice-President
Constance Murray - Secretary
Mary Korthase - Treasurer
Rahmona Thompson, Jim Elder - 2023 Directors

Additional nominations accepted until 9/30/2020 , with voting in October at: oknativeplants.org

Additional instructions on the web site.

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, PO Box 14274, Tulsa, OK 74159.
Membership is for Jan. 1 – Dec. 31 of current year and dues include subscription to *Gaillardia*.

(**Please Print Clearly**) ____ **RENEWAL** ____ **NEW MEMBER** (All dues are tax deductible)

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E-mail 2: _____

Membership Levels:
____ Individual ($20)
____ Family ($25)
____ Life Individual ($300)
____ Family Individual ($350)
____ Student ($10) (free with faculty sponsor)

Chapter affiliation:
____ Central (OKC area)
____ Northeast (Tulsa area)
____ Crosstimbers (Stillwater area)
____ Mycology (statewide)

You may sign up for multiple chapters if you like, to receive field trip and meeting notices from that chapter.

Need more details or a digital directory email: ONPSinfo@gmail.com

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Oklahoma Native Plant Record

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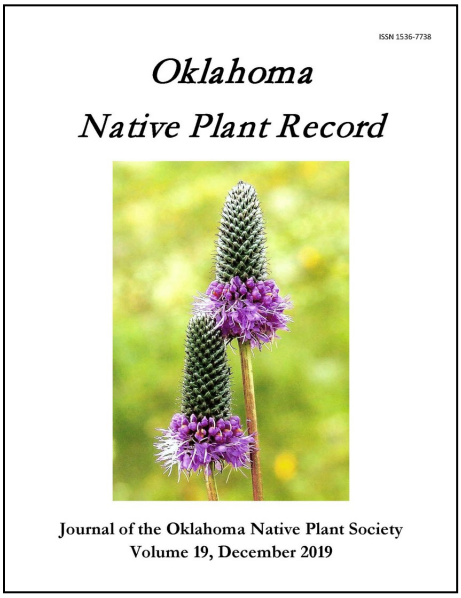

All archived issues of the *Oklahoma Native Plant Record* are available online at:

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Gloria Caddell, Ph.D.

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Sunflowers, by Lynn Michael

Submission Deadlines:
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May 5th
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