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 36, Number 4
Winter 2021

INSIDE THIS EDITION

Oklahoma State Symbols

https://statesymbolsusa.org/states/united-states/oklahoma

Reptile

Eastern Collared Lizard

Adopted in 1969. Also called Mountain Boomer.

Eastern collared lizard (Crotaphytus collaris); photo by Laura Gooch on Flickr

Upcoming Events/Activities

(check the ONPS website or Facebook for more details)

Dec 6 - NE Chapter meeting, 6:30 at the Tulsa Garden Center, Tulsa.

Dec 17 - Fabulous Wildflower Fridays at Panera Bread, 41st Street, Tulsa, 5:30 pm

Jan 21 - Fabulous Wildflower Fridays at Panera Bread, 41st Street, Tulsa, 5:30 pm

Feb 4-5 - Doug Tallamy presentations in the Tulsa area on the 4th and Oklahoma City area on the 5th. See insert for details.

Feb 18 - Fabulous Wildflower Fridays at Panera Bread, 41st Street, Tulsa, 5:30 pm

Mar 3 - Central Chapter in-person and Virtual program, 7 pm oknativeplants.org **Watch for new location information.**

Mar 7 - NE Chapter meeting, 6:30 at the Tulsa Garden Center, Tulsa

Mar 18 - Fabulous Wildflower Fridays at Panera Bread, 41st Street, Tulsa, 5:30 pm

All regular scheduled Indoor meetings may resume.

Central Chapter, 6:30 pm socializing and 7:00 pm meeting watch for new location announcement.

NE Chapter, 6:30 Social and 7:00 Meeting **Tulsa Garden Center**, 2435 S Peoria Ave, Tulsa

Fabulous Wildflower Fridays, 3rd Friday monthly, 5:30 casual, **Panera Bread,** 5601 E 41st Street, Tulsa

Preview Chapter meeting topics inside. All members are invited to all meetings, including board meetings, and are encouraged to bring guests.

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COPY AND ART DEADLINE FOR THE NEXT ISSUE IS FEB 5, 2022

Fall Color at Oxley Nature Center, *Quercus sp.*

Photo by Lynn Michael

President's Message

By Patrick Bell, ONPS President

Tis the season…

of contemplation and marcescence. Or more precisely, leaf marcescence. Webster defines marcescent as "withering without falling off". For those that have not read Dr. Tallamy's book *The Nature of Oaks*, yet, there are lots of little tidbits to enjoy. This winter, as you look out the window, walk the dog, stroll in the park, or simply get away from the bustle of life for a while, you may notice some trees (e.g. oaks) retain dead leaves (typically on lower branches), while other trees are bare. Ever ponder why: Browsers (deer, elk, moose in our timeframe, but mammoths, mastodons, and giant ground sloths from the eons before us) prefer(ed) the tender shoots/buds at the branch tips of woody plants. Dead leaves are not tasty or nutritious for browsers; perhaps they offer some protection to those yummy buds. Additionally, if the old leaves 'fall' in the early spring—well, what a perfect time for mulching!

And, what a perfect time for the ONPS. Tallamy is coming to town. The awareness of, and interest in, native plants is steadily increasing, as bird and pollinator numbers and species are drastically decreasing. Vibrant habitats to support them, and us, should be a vital concern to all that happen to live on this planet. Never before has the information possessed by our members, and our society, been more timely or needed. As we start the new year, I encourage you to contemplate how it will be different—from all the others. It can, of course, should you choose to make it so. One conversation, one meeting, one plant, one commitment... at a time. We have an important, exciting year ahead. Let's enjoy it, and the difference we can make, together.

Sow Some Wild Seeds!

Central Chapter Update

Patrick Bell, Out-going Chair

Meetings, webinars, Tallamy, and changes…

Central Chapter monthly meetings and virtual webinar presentations continued through November. The September talk was given by Doug Schoeling, a fish and wildlife biologist with the USFWS. He gave an overview of his agency's *Partners for Fish and Wildlife Program*;. He presented some of the Oklahoma native grassland restoration projects that have been completed, highlighted a few current ventures, and discussed cost sharing opportunities for property owners/ managers wishing to restore land back to natives.

October's presentation was given by Jenna Messick, assistant professor of Biology and Herbarium Curator at the University of Central Oklahoma. She gave a timely (fall seed collection and planting) talk on *Native Plant Seed Germination; What Works and Why*.

Leah Lowe; staff biologist, Oklahoma Department Wildlife Conservation, gave the November presentation featuring some private lands native plant/ prairie restorations projects. Additionally she discussed avenues for potential ODWC help with planning and cost share programs that are available.

The Central Chapter webinars remain available for viewing on the ONPS website, oknativeplants.org.
Upcoming events: After the holiday break, ONPS will proudly sponsor Doug Tallamy's return to Oklahoma on February 4th and 5th, 2022 (see insert for details). If you haven't read *Bringing Nature Home,* by Dr. Tallamy, I strongly encourage you to do so. You'll even be able to attend his presentation at no charge, buy a book and get his autograph, all at a price cheaper than Amazon…possibly the best deal of the new year!

March 3rd, 2022 meeting/ webinar: Planting natives is catching on. The Wildcare Foundation in Noble, Oklahoma is the 6th largest wildlife rehabilitation organization in the nation. And, they are helping sponsor the Tallamy event. Part of the reason; critical wildlife habitat continues to contract (i.e. shrink). Something has to change, which is Tallamy's message. And Wildcare gets it. They are beginning to focus on encouraging native plant usage to the thousands of people that come through their doors each year.

And the changes: Congratulations to Micah Friedman, recently elected as *Chair, Central Chapter, ONPS.* We'll all look forward to his upcoming contributions and leadership. And, lastly, the Central Chapter meeting location will be changing venues, to the Oklahoma City University, (OCU) beginning with the March meeting. Watch for emails from Micah regarding location and parking. And on a personal note: It was a cold evening on November 5th, 2015 when a group of brave souls had coffee at Whole Foods in OKC and discussed getting the chapter up and going again… little did I know. What an amazing journey of growth and opportunity this has been, and continues to be. For all that have offered support, appreciation and friendship over the years, and to those that have endured the 6 years of having to listen to me, I give my warmest, heartfelt thank you. ONPS has some wonderful members… I encourage you to get to know some of them.

Northeast Chapter Update

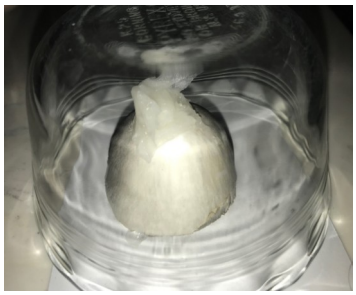
Kathy Doss, Chair

In October, Lynn Michael led a series of fall field trips, to area locations including Keystone State Park and Oxley Nature Center.

Our December 6 program will be a presentation by Gabriael Parker, Tulsa County Conservation District, about their Yard-by-Yard program which highlights community members who implement practices that promote water, land, and ecology resiliency and positively impact their communities, one yard at a time.

We continue our Fabulous Wildflower Fridays, at 5:30 the third Friday of each month at Panera at 41st and Hudson Avenue. We plan field trips and events, identify wildflowers and share fellowship. We are looking forward to Doug Tallamy's visit on February 4 in the Tulsa area and February 5 in OKC. Our first 2022 NE Chapter meeting will be March 7 at the Tulsa Garden Center.

Lemon-yellow Lepiota, *Lepiota lutea*



Mushroom cap under glass for spore print making

Mycology Chapter

Nancy Hamill, Chair

I was asked recently to identify a yellow fungi growing in a flower bed. It was a Lemon-yellow Lepiota (*Lepiota lutea*). They are small, bell shaped, powdery yellow mushrooms with free gills and a ring on the stalk. At first the cap is lemon yellow but fading to creamy yellow. Out-of-doors to be found July-Sept., and year round indoors. The photo is from my parsley pot. On the ground they can be found in leaf litter and compost. Actually, they show up fairly often in indoor plantings. Spore print is white and they are poisonous! Making a spore print adds to the clues for identification. Cut off the stem and place the cap on a white piece of paper under glass. I use a custard cup. Select a mature cap, too immature and there won't be spores. To speed spore deposit, place a small wet piece of paper towel on top of cap. If the spore deposit is white on white paper you will still be able to see the print!

The arrangement of, in this case, the gills is clear. David Arora's *Mushrooms Demystifided* and Gary Lingcoff's *The Audubon Society Field Guide to North American Mushrooms* both give spore color information.

Spore print from black spore producing mushrooms.

Maximilian sunflowers (*Helianthus maximiliani)* in a lost corner in Checotah. Photo by David Patton

Welcome New Members

Hilda Kaiser

Jackie and Art Lambert

Christa D. Askins

Oscar and Evangelina Ornelas

Janis Griggs

Keenan Lorenzato and Jenny Sperling

Vicki Thompson

Josh Schatte

Terri Sims

Celeste Cleary

Contributions

Aug 24, 2021-Nov 15, 2021

General Fund

Mary Korthase, Thomas W. Creider, Joe Roberts, Margaret Ewing, (TIAA)

Be a Plant Guardian

Article and Photos by Becky Emerson Carlberg

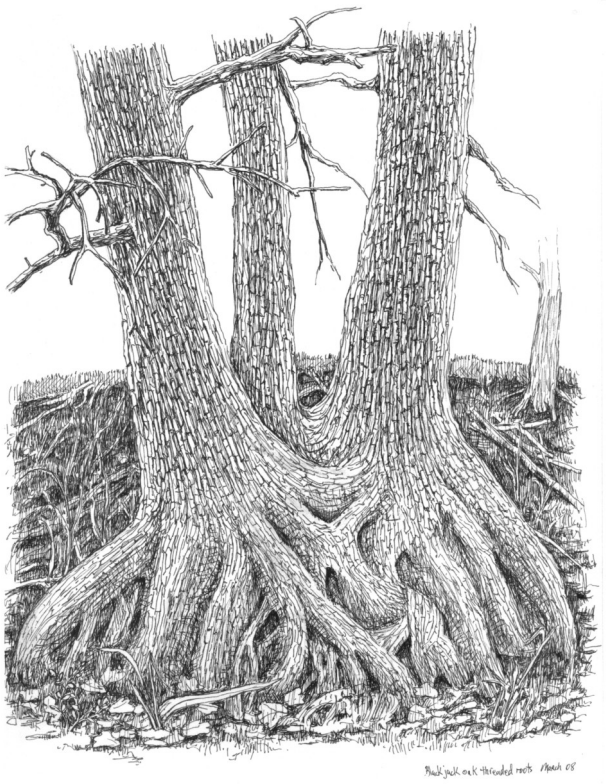
We members of the Oklahoma Native Plant Society tromp through the most varied of environments in threatening weather just to get a fleeting glimpse of a spring ephemeral or immerse ourselves within a patch of autumn wildflowers.

Oklahoma needs more plant guardians. Did you realize the only bits of nature most folks ever notice (other than in their yard or on the way to work, school, stores, malls, ballgames or restaurants) are the plants growing along the road?

Each county shapes what their populace sees by how they maintain their waysides. The wild plants are at the mercy of county mowers and pruners. The road by my house used to be flanked by thick stands of *Coreopsis tinctoria.* After a few years of diligent roadside mowing, the beautiful wildflowers disappeared, replaced by grasses of little beauty and nothing for pollinators.

Elders in the area remember groves of huge old oaks. The trees that grew above the ditch. away several feet from the rural road (one mile from my house), were eighty years old. The post oaks (*Quercus stellata*) and blackjack oaks (*Quercus marilandica)* were stump sprouts from ancient roots of forests that had grown in the area for centuries. Their exposed roots were fiercely intertwined. Mushrooms periodically appeared at their bases. Dark twisted branches draped down around the trunks. The trees were home to countless wildlife.

Last year the trees were ripped out, roots and all, in preparation for widening and paving the two-lane country road. The trees were dumped in a pile one mile west to rot. Not even cut for firewood. Two months ago trees at the edge of a large plot of red earth were destroyed for development.



Why? The question has three possible answers that apply to road construction or development: easier and cheaper to bulldoze everything in sight; have no clue how to save native plants during construction; or ignore the value of trees. Was a survey done of the existing trees? Trees, roads and development can coexist together.

Tree windbreaks preserve the landscape, create microclimates for other native plants and temper the flow of air. In winter, windbreaks reduce heat loss and cut heating bills by as much as 30%. Summer shade from trees save up to 58% in air conditioning costs. Cool shade reduces energy demands during power blackouts, which will happen more frequently. Future temperatures are predicted to only go higher.

("Plant Guardian" continued on Page 6)

("Plant Guardian" continued from Page 5)

Native plants and trees protect our water and govern the quantity and quality of water reaching streams and rivers. Roots hold soil in place as well and help absorb chemicals. Even roots left after trees have been cut serve as retainer walls. Tearing out the roots with the rest of the tree increases the intensity of erosion and creates unstable soil banks. Erosion eats away at the denuded soil and pretty well messes up the aquatic populations that don't deal well with dirty water.

Trees control stormwater by breaking the force of falling rain and holding water on their leaves. Even leaves on the ground make the soil more absorbent. Tree cover moderates the stress on sewer systems, storm drains and water treatment plants.

Natural landscaping adds beauty. Native trees attract native birds. Birds eat insects. A wren may feed 500 insects/day to its young in the spring. In one day a brown thrasher can eat 6,000 insects. That's a lot of bugs to no longer bug you. Pines, oaks, redcedars and locusts release distinctive volatile chemical oils—phytoncides—which have antibacterial and antifungal properties. The compounds seem to lower stress hormones and blood pressure in humans. Have you ever walked by a pecan tree (*Carya illinoinensis*) after a rain and smelled the sweetness of wet pecan leaves? Trees connect families and kids with nature. Trees increase property values.

What to do? Plant and protect native trees, wildflowers and grasses. Along waterways and ditches they reduce erosion, slow flood waters, filter runoff and even cool the water for the little fishies. Remember, roots function as soil anchors. The 'Big Four' native grasses—Switch grass (*Panicum virgatum*), Big bluestem (*Andropogon gerardii*), Little bluestem (*Schizachyrium scoparium)* and Indian grass (*Sorghastrum nutans*)—produce exceptionally thick deeper roots. Their above-ground stems, leaves and autumn seed heads create screens that filter strong northern or southern winds, buffer noise, clean the air and trap carbon dioxide (one of the culprits for boosting temperatures worldwide).

Good info: "Oklahoma's Native Vegetation Types" OSU Fact Sheet E 993 and "Forest Trees of Oklahoma" by Dr. Elbert Little Jr.

Wildflower field at Pawnee Lake, June 2021, Photos by Lynn Michael

Loving Nature

Article and Photos by Judy Stoyanoski

Monarch caterpillars have tentacles on both ends of their bodies and when Brylee Burch tickled the tentacles, the caterpillars stood up on one-end and wiggled their tentacles. Brylee's curiosity about the outdoors and nature was born.

Bees, butterflies and hummingbirds are a large part of pollination so a garden area for them was needed. Brylee planted a raised bed and a flower bed this past spring learning how to feed and take care of all three species while they are in Oklahoma.

Ferry Morris Seed Company carries a seed package for pollinator gardens and it contains a variety of different plants: Purple Coneflower, California Poppy, Black-eyed Susan, Sweet Alyssum, Mexican Sunflower, Sweet William, Larkspur, Coreopsis, Butterfly Weed, Milkweed and others. These seeds were planted in the raised bed since the soil warms faster and she could plant in late March. Brylee planted Zinnia seeds in the flower bed and planted them in April. The plant that was a surprise was the Mexican Sunflower which got to 7 feet tall. The honey bees, mason bees and bumble bees loved this plant. Many types of butterflies visited the zinnias and were fun to watch from the back porch. Thank you Brylee for your hard work and your love of the outdoors and nature. We wish you many more gardens in the years to come.

(Editor's Note: seedsource.com has all native seed mixes)

The Red Shadow

Article and Photo by Dale Amstutz

Sue and I got a real surprise Thursday afternoon, October 21. "The FOX is in the backyard!" called Sue as she looked at the backyard through the kitchen window. However, I had already seen him standing at the foot of the backyard garden steps. I grabbed my camera hoping he would stand there until I could get a picture—he did. The fox stood there motionless, like a statue at the foot of the steps, and seemed transfixed by something at the back of the house. I took two more pictures, delighted at his cooperation but regretting that I had to take them through the den window glass. That degrades pictures.

The fox stood motionless for several minutes—then turned around slowly and walked toward the plants behind him in the east flower bed. Lowering his head, he very slowly sneaked into the four to five foot tall east side garden plants. I watched him disappear. Then I thought I could keep track of his prowling by watching for the tops of the plants to "jiggle". However nothing moved—nothing.

A squirrel spotted him from a tree, however, and shouted the alarm. Hanging head down from an adjacent tree trunk, he waved his tail furiously. After about 10 minutes I gave up trying to find the fox. "There he goes across the middle steps and into the front flower bed!" called Sue from the kitchen window. Again, I watched for the tell-tale sign of jiggling plant tops, but there was nothing—nothing moved. I watched for another fifteen minutes.

A half hour later, the resident rabbit emerged from the middle flower bed and began feeding on the lawn grasses. Two squirrels appeared and resumed finding and burying nuts, birds returned to the feeders. *Evidently the fox was gone.* Except for the few minutes he was seen around the flagstone steps, he had passed unseen through the east and middle flower beds and exited the yard as silent as a shadow.

Native Plants, the Yard-by-Yard Resiliency Project, and Community Health

By Kurtis Koll

Native plants and healthy soil, waterways, and community are interlocked sustainable systems. In an urban environment, the community can improve and even preserve the quality of the local land and waters using a different approach to lawncare and gardening. The Yard-by-Yard Resiliency Project (Yard-by-Yard) is an initiative of the Oklahoma Conservation Commission. Yard-by-Yard helps urban residents manage their lawns and gardens in a sustainable, environmentally friendly approach; even utilizing native plants (existing plants in the lawn or planting native plant species) and reducing the need for excessive watering and pesticides.

Why should urban homeowners cultivate native plants in their gardens and lawns? Foremost, native plants help preserve Oklahoma's biodiversity; increasing the number and variety of living species in a geographic region. A healthy native plant community provides food and shelter for other organisms; especially pollinators which benefit the Yard-by-Yard Resiliency Project's mission. Unfortunately, many urban lawns are monoculture lawns supporting pesticides and herbicides to control the insect and non-grass plant species. Gardens and selected lawn areas can become an ecological paradise using the best practices of Yard-by-Yard.

Native plants used and encouraged in our lawns and gardens, not only support pollinators, but provide a habitat for songbirds, beneficial insects, cotton rats, and other organisms. Without native plants, wildlife is at risk of extinction. My lawn, five years ago,was a prairie with a mixture of grasses. Today, most lawns in housing developments, as was with my home, are monoculture. Plants and animals I observed five years ago are no longer present. The cause may be for several reasons, but one reason possibly is the absence of native plants. From the Backyard Garden Lovers list of native plants, I plant the common yarrow (*Achillea millefolium*), the Eastern red columbine (*Aquilegia canadensis*), coreopsis (*Coreopsis tinctoria*), and orange milkweed (*Asclepias tuberosa*). These plants seemed to be well conditioned for the soil in my yard and climate experienced in Southwest Oklahoma. Native plants are a key to an abundant, affordable food supply for other organisms, contributing to healthy water by the avoidance of pesticide and herbicide use, supporting clean air, and promoting healthy communities. Place the native plant in a lawn location that provides the conditions it prefers which include soil type, water amounts, sun, or shade. When done so, the native plant will thrive.

It is wonderful to have a beautiful, productive garden and lawn which benefits the community ecosystem at the same time. Urban citizens do not always realize what a difference they can make in their communities by using just a few earth-friendly practices. Entire communities working together can absolutely add health and resilience to their community. Individuals and communities will enjoy,
to a greater extent, wildlife neighbors like the songbirds, butterflies, bees, and maybe even including the horned toad. For me, a huge added benefit are the colorful blossoms of the native plants, plants flowering through the growing seasons providing pollen and nectar to various pollinators as the pollinator moves through the area. Native plants can offer a natural protection from insects providing a taste of our home-grown fruits and vegetables. Native plants improve soil health and contribute to water conservation practices. This example of stewardship contributes to the idea of Yard-by-Yard as a movement connecting one lawn at a time to the community and the Earth.

The Yard-by-Yard certification checklist is available to individuals wanting to certify their lawns and gardens as herbicide, pesticide, and pre-emergent chemicals free. There are four categories of environmental concerns: soil health, water quality, habitat availability, and food sources. Each category includes several activities or promotions from which the homeowner can select. Regarding soil health, I personally, for example, mulch the lawn when mowing, mow with a deck height to cut the grass three inches in height, and compost organic waste.

("Native Plants…" continued on Page 9)

("Native Plants…" continued from Page 8)

Water quality is maintained by using native plants that require less water from irrigation. Fewer chemicals leach from the lawn into the storm water drainage system. Water irrigation is controlled. With respect to food, my in-ground garden is maintained as well as my potted or above-ground gardens. Potted plants are used for native plants. Since using native plants, there has been more evidence of pollinators such as bees. Regarding habitat, I maintain birdhouses and utilize a diversity of native plants more adapted to Oklahoma soils that provide flowers, nectar, and pollen throughout the growing season. The native plants are especially pollinator friendly and provide a natural insecticide.

The Yard-by-Yard Resiliency Project offers an opportunity to enjoy an environmentally friendly lawn and garden. Yard-by-Yard is a conservation-driven project to encourage community health.

ONPS Annual Meeting Field Trip Photos
September 25, 2021, Pawnee, Oklahoma

Above: members at the home of Pam and CR Ledford.

Below: Leavenworth's eryngo, *Eryngium leavenworthii*,

Photos by Lynn Michael

Musings from Joe

By Joe Roberts

ONPS sponsored a nice field trip to Pawnee recently. It was a very enjoyable outing to the property of C.R. "Mad Dog" Ledford and his wife Pam. It's a beautiful piece of land with incredible diversity, in one of my favorite parts of the state. Among the many plants we saw was the Boxelder. I don't see it very often as I spend most of my time out west. But like C.R. and Pam, it is an old friend, and when I saw it I was reminded of a memory tool I learned many years ago. I'm not even sure who taught it to me, whether it was Dr. Tyrl or someone else, but it is called "MAD Box."

As I was taught it, Oklahoma has 4 trees that have opposite branching; **M**aples, **A**shes, **D**ogwoods, and **Box**elders. Another way I've heard it is "MAD Horse", for **M**aples, **A**shes, **D**ogwoods, and **Horse** Chestnuts, but I don't think the Horse Chestnuts are that common in Oklahoma. I've also seen MADCapHorse, which is the aforementioned group plus **Cap**rifoliacae (honeysuckles and viburnums). I've also been informed that Boxelders are Maples, so it is somewhat redundant. But Boxelder leaves aren't very Maple-y, so it is useful to have it in there separate from the Maples. If you are only in Oklahoma, MADBox seems to work pretty well. Outside the state you may need MADHorse or MADCapHorse. Whatever works for you. I am feeble-minded enough to love a good memory aid, and this one works most of the time just fine for me. Just check out a tree, even in winter, and it really helps to determine what it is and what it is not just based on the branching.

These kinds of memory aids are pretty useful. Most people know some, like "Leaves of three, let it be." Lynn Michael taught us one about identifying Switchgrass at Pawnee that was good (I won't tell it here, but will save it for a future article). Some of you may have similar memory aids for plant identification. If you do, please share it with us. I'll collect them all and try to put them together for a future article. Email your tricks to me at joeroberts13@cox.net. I'm looking forward to learning some new ones.

Meet the Members: Sheila Strawn, PhD

By Fran Stallings

Photo used by permission from Sheila Strawn's Facebook profile page.

Sheila A. Strawn is a native Oklahoman, born and lived her first two years in Guthrie. The family lived in town and mother grew vegetables, but both grandparents were farmers (Guthrie, W Texas) and Sheila has fond early childhood memories of her grandmother's wildflower garden and free range chickens at the edge of Guthrie.

After being raised a military brat living in Oklahoma, Texas, and New Mexico, Sheila met Steve Strawn when both were biology majors at UCO. She planned to be a med tech: her aunt was a nurse, and an 8th grade test had advised med tech. Steve wanted to be a field biologist, but after they got their BAs and married during the Viet Nam war he enlisted in the military, trained as a med tech, and stayed with that career for 12 years. The military moved them around a lot: South Carolina, Connecticut, San Antonio, and more. But both were gardeners, and "home" was where the garden was. Meanwhile they hiked everywhere, especially in national parks they visited en route to visit family back in Oklahoma.

Sheila and Steve have been living in Midwest City since Steve retired from the military in 1981. She was a charter member of ONPS' Central (OKC) chapter in 1994. She served as ONPS president from the fall of 1998 through the fall of 2000 (the year the service award was initiated) and helped start the Mycology chapter.

Sheila decided she wanted to help Oklahoma science teachers at rural land grant schools. She got a PhD from OU in 1995 in grassland ecology, choosing to do research "where you are in the landscape" and, realizing that grasslands weren't covered much at the time in ecology texts: this was a hole she could fill. But teacher professional development contracts didn't support her company, Science Teaching Professionals. By 2004 her tax accountant kindly explained that three schools didn't pay enough to count as a business...

In 2000 Pat Folley and Sheila had begun working as co-editors on ONPS' Native Plant Record. Volume 1 debuted in 2001. Sheila started studying lichens in 2001 thanks to Pat's recommendation of Irwin Brodo's *Lichens of North America*. Lichens tied in well with her ecology interests, found everywhere although they are a fairly late step in evolution: each "species" of lichen is the commensal combination of an alga and a fungus. There were no lichen experts in OK -- another unique hole she could fill! In 2002 she started working on *Lichens of Oklahoma*. Sheila and Steve traveled to Maine, Ohio, Tennessee, and Georgia to learn from other lichenologists. Her *Lichen Study Guide for Oklahoma and Surrounding States* was published in 2017, and *Lichens Field Guide for Oklahoma and Surrounding States* was published in 2021. (*Editor's Note: Her books can be ordered through Botanical Research Institute of Texas*)

Sheila has participated in many ONPS field trips, and every Oklahoma Bioblitz. As the unofficial photographer for Bioblitz, she accompanied all the groups and found that each has distinctive techniques for collecting, which she enjoyed learning.

After teaching 7 years at Shawnee High School, from 1983 to 1991, she taught biology one year at St Gregory's University and then two years at Oklahoma Baptist University, carefully saying "natural selection" instead of "evolution." She retired from teaching three years ago, after teaching 20 years at the University of Central Oklahoma, and is glad to have avoided teaching on-line.

For joining or renewing use this form

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____ 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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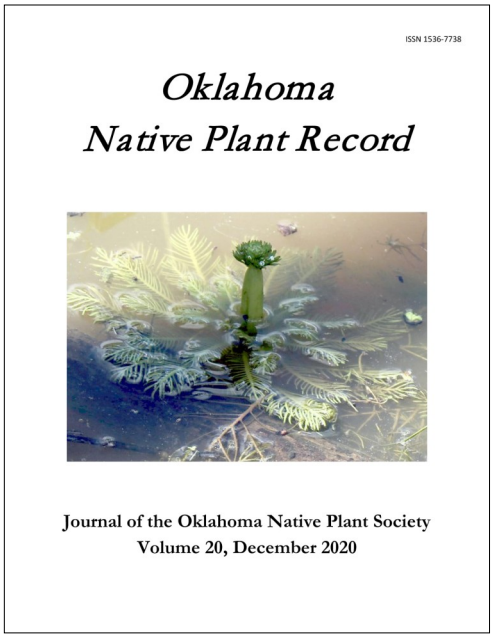

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https://ojs.library.okstate.edu/osu/index.php/ONPR/article/view/7893/7285

Gloria Caddell, PhD

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Winter 2021 Issue

DUES ARE DUE. If 2022 dues are not paid by March 1st, this could be your last Gaillardia.

ONPS Spring Field Trips:

Field trips are being planned for every Saturday in April, 2022. Of course, the last Saturday of that month will be our awesome Wonders of Wildflowers weekend. Some of the places under consideration are Okmulgee/Dripping Springs State Park, Skiatook Lake, Bluestem Falls and Lake, and Pawnee Lake. If you have a favorite spot you would like us to consider, send an email now. Full dates and locations will be in the spring newsletter.
Email Lynn Michael at zebraweeds@sbcglobal.net to register

Chickasaw National Recreation Area, Nov. 17, 2020
Photo by Lynn Michael

Deciduous holly, *Ilex decidua*
photo by Lynn Michael

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