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 32, Number 2

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INSIDE THIS EDITION

ONPS website: www.oknativeplants.org
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Gaillardia email: thegaillardia@gmail.com

COPY AND ART DEADLINE FOR NEXT ISSUE IS July 31, 2016

* On June 11 at 10:00 am there will be an ONPS Executive Board Meeting in the Helmerich Center at the Tulsa Rose Garden.
*Save the dates of October 7-9 for the ONPS annual meeting which will take place at the beautiful Wichita Mountains Wildlife Refuge.

Upcoming Events/Activities

(check the ONPS website for more details)

Fabulous Wildflower Fridays, at 5:30, third Friday of each month at Panera, 41st St and Hudson Ave, Tulsa.

The Wichita Mountains Wildlife Refuge annual invasive plant round -up Saturday, June 4 from 9:00-11:30. Lunch provided for all participants. Those interested in attending should RSVP to 580-429-2110

Central Chapter

June 4 Lexington Wildlife Management Area—see ONPS website for details
July 7, 7:00 OSU/OKC Hort Center 400 N Portland
August 4, 7:00 OSU/OKC Hort Center

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

1st Place Winner, Close-up, Tiger Swallowtail on Echinacea
Becky Sheets-Klinger

WELCOME TO THESE NEW MEMBERS

Lou Ann Gray, Bristow
Russell Hudgens, Park Hill
Jody Lesch, Edmond
Susan Prescott, Nichols Hills
Will Willis, Oklahoma City
Daniel Hayden, Norman
Kenneth Hovey, Newalla
Jennifer Reed, Oklahoma City

HARRIET BARCLAY AWARDEES FOR 2016 NAMED

Claire White and Cindy Pan are 2016 recipients of the ONPS-sponsored Harriet Barclay Awards. Participating in the annual Oklahoma State Science Fair held March 31 - April 1 on the campus of East Central University in Ada, Miss White was named Barclay winner for her presentation in the Junior High Division titled "Green to Mean: Using Eastern Red Cedar for Mosquito Abatement". Winner of the Senior High Division, Miss Pan chose "Influence of Increasing Salinity on Growth and Mortality of *Setaria viridis* (foxtail millet)" as her entry. Miss White is a student at Grove Middle School in Grove, Oklahoma. Her supervising teacher is Donna Deason. Miss Pan is a student at Deer Creek Senior High School in Edmond, Oklahoma. Kaitlyn Goodwin is her supervising teacher.

For her winning entry, ONPS is presenting Claire White a cash prize of $50.00 and a one-year complimentary subscription to the Society's newsletter, The Gaillardia. Her teacher, Donna Deason, receives a like cash prize and one-year complimentary subscription to The Gaillardia. For her winning entry, ONPS is presenting Cindy Pan a cash prize of $100.00 and a one-year complimentary subscription to The Gaillardia, with her teacher Kaitlyn Goodwin receiving a like cash prize and complimentary one-year subscription to The Gaillardia.

General Chairman of the Oklahoma State Science Fair is ONPS member Dr. Rahmona Thompson, with Dr. Michael Bay serving as Chairman of Judging. ONPS Vice President Dr. Sheila Strawn provided her expertise in judging entries in both divisions of the fair during which Harriet Barclay Award winners were selected.

President's Paragraph

Joe Roberts

These days there is something native plant related nearly every week, and after these events I always feel rejuvenated. The plants and nature always bring my spirits up, but, in addition, I like reconnecting with and meeting new friends at ONPS events. Plant people are pretty weird, and thank goodness! If we were "normal", we'd all be in the mall or watching TV on these beautiful spring days.

My kids have now filed protective orders on me with DHS, complaining that my constant quizzing about "old friends" we spot on the roadside or in the field constitutes some form of abuse. Took both kids and a friend of my daughter's to the SW Chapter's Wildflower Walk in the Wichita Mts. I half-jokingly told them all they would only get dinner when they had memorized 15 new plants on sight, which they did, and I'm happy to report they got fed. My daughter went to the park with her (ugh) new boyfriend the other day, and she later admitted that as they walked around she would mentally ID the plants she saw. Brainwashed! Success! Also, keeps her mind off her boyfriend, which pleases me *immensely*.

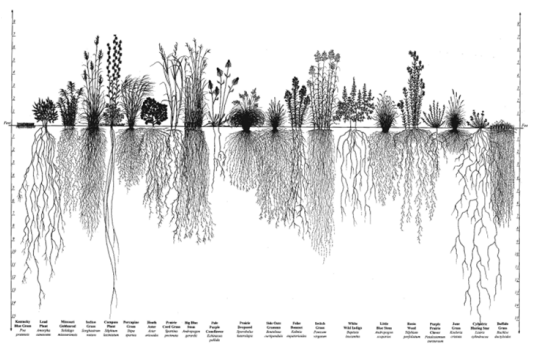
There's lots to do outside now. Grab a kid and go. See you out there.

Wanted

ONPS needs an IT person to update the ONPS website. If interested contact Joe Roberts at joerobertsl3@cox.net.

From the Editor

Below is a (tiny) copy of one of my favorite illustrations. That 2' Lead Plant has roots plunging 15' into the earth. As we head into summer it serves as a reminder of how our native prairie plants survive the heat and drought of summer and gives us another reason to appreciate these tough beauties. Hopefully we will have some summer rains, but if not, the natives will survive!



Botanist's Corner
Notice the Change: The Rest of the Story

Ron Tyrl

In the spring issue, I posed one of Jim McPherson's and my favorite final exam questions that we used in our field botany course. I invited you to answer it based on your knowledge of Oklahoma and plants seen on ONPS field trips. In the following paragraphs, I offer the information that Jim and I would expect to read in your answer. To improve readability, avoid awkward syntax, and reduce needless repetition, I write in first person as you likely would. I also use only common names (shocking for a plant taxonomist, I know).

I began my trek in McCurtain County in the southeastern corner of Oklahoma. At Site 1, I am likely standing on level sandy soils of the shore of an oxbow lake of the Red, Little, or Mountain Fork River as indicated by the presence of aquatic species—emergent bald cypress and southern wildrice, and free-floating duckweed and duckmeat. With the exception of cosmopolitan duckweed and duckmeat, the species about me are characteristic of the southeastern quarter of the continent. I also expect to see loblolly pine, another southeastern species reaching its northwestern distributional limits in the state.

I begin walking northwest and shortly find myself climbing moderate to high hills and ridges of folded Ordovician through Pennsylvanian aged sandstones and limestones of the Ouachita Mountains geomorphic province/ecoregion. I know that Site 2 is an upland site because of the presence of shortleaf pine, a dominant of the oak-pine forest vegetation type and also a species also characteristic of the southeastern quarter of the U.S. as are southern red oak and farkleberry. The climate of the ecoregion is humid and the annual precipitation ranges from 43 inches in the west to 57 in the east, the highest amount in the state. The sinuous west to east ridges are high enough above the valley floors for orographic precipitation to occur and windy enough for trees of the ridgetops to exhibit the stunted and misshapen growth reminiscent of the Krummholz phenomenon.

I continue walking northwest for quite some time and notice a change in the size of the trees and the species present. As indicated by the presence of post oaks and blackjack oaks, I realize that Site 3 is the eponymous forest that is a major component of the Cross Timbers ecoregion that occurs as a north–south swath across the state. In general, separating the oak-hickory and oak-pine forests of eastern Oklahoma from the grasslands of the state's drier western regions, this ecogregion is a mosaic of savannah, woodland, dense forest, and tallgrass prairie covering low hills, cuestas, and slightly sloping plains. Annual precipitation ranges from 36 inches in the west to 40 inches in the east.

As I continue my trek, I find myself in a tallgrass prairie. Covering the greatest area of Oklahoma, this vegetation type dominates the center of the state from north to south, except for the bisecting band of the Cross Timbers. I know that Site 4 is indeed representative of the tallgrass prairie because of the presence of the "big four"—big bluestem, little bluestem, Indiangrass, and switchgrass—perennial grasses that dominate and characterize this vegetation type. Numerous other perennial grasses and forbs are present and the absence of trees apparent. I note that the site is in "good" condition because of the presence of compass plant, leadplant, and roundhead lespedeza. These species, often referred to as ice-cream plants, are relished by cattle and decrease in abundance with heavy grazing.

Walking further in a northwesterly direction, I realize that I am now striding across the sandy soil of a river or creek floodplain as indicated by the presence of seven species characteristic of periodic disturbance and wet, barren soils at Site 5. Cottonwood and black willow are present as a gallery forest with distinct cohorts of different heights which reflect flood events of different severity. Their seed germination and seedling establishment require wet, barren soils at the time their short-lived seeds are being wind dispersed from their capsules. As its common name implies, sandbur thrives in sandy, disturbed soils, often forming large populations. Cocklebur likewise forms large populations in such conditions. Native to eastern Asia, saltcedar was introduced as an ornamental and for erosion control. Unfortunately, it has naturalized throughout much of the western half of continent. Strongly invasive, its seedlings typically cover sandbars and it may form dense stands and change the ecology of native riparian areas.

In contrast to the "natural" sites I have just encountered, Site 6 is obviously one created by human activity. It is either a construction site, feedlot, right-of-way, waste area, or the edge of a plowed field. The six species present are "weeds" that thrive in highly disturbed soils of such sites. Prolific seed producers, all typically form large, dense populations. A single lambsquarter plant, for example, may produce 75,000 seeds, Dispersal of seed in Russian thistle and summer cypress is facilitated by an abcission layer at the base of their primary stems and their "tumbleweed"

growth form. In contrast, the small achenes of horseweed with their pappus of numerous capillary bristles are widely dispersed by wind.

As I continue walking, I notice that the soil is rather loose sand and that I appear to be walking on a sand dune. I also note that I am on the north side of a major river, most likely the Cimarron, North Canadian, or Salt Fork of the Arkansas in the northwest quarter of the body of the state. I conclude that Site 7 is indeed a stabilized dune. As their common names imply, all seven species are sand-lovers. The vigorously rhizomatous giant sandreed and sand bluestem, and the thicket-forming sand plum play important roles in dune stabilization and succession. Sandreed is adapted to growth in deep sands and can withstand being partially buried or exposed. Forming dense stands, it typically holds the shifting sand in place and creates protected microhabitats in which other species can become established. Sand bluestem and sand plum likewise hold the sand, but generally follow sandreed in terms of establishment.

As I journey westward, I note that the topography has changed rather dramatically. I am now traveling across a relatively featureless, flat to undulating upland occasionally deeply dissected by rivers and major creeks. Playas are frequently seen. I am in the Panhandle of Oklahoma in the High Plains geomorphic province/ecoregion. The underlying strata are Tertiary deposits of sand, gravel, and clay deposited by ancient rivers draining the Rocky Mountains. When I stop at Site 8, I am in middle of a shortgrass prairie as indicated by the presence buffalograss and blue grama. Just as the "big four" species define the tallgrass prairie, these two shortgrasses define this prairie. Both are warm-season, C_4 photosynthetic species and well adapted to the low amounts of precipitation and high temperatures that characterize the region. They also are capable of withstanding close grazing by livestock, providing high quality forage when green, and curing well to provide nutritious winter forage.

I end my trek at Site 9 in Cimarron County in the vicinity of Black Mesa and Tesesquite Canyon. I am standing the midst of species characteristic of the West. One-seeded juniper and gambel oak reach their eastern most limits of distribution at the end of the Panhandle. I also spot piñón pine. Associated with these woody species are shortgrasses and herbaceous species such as beargrass that are typical of the xeric conditions present. Average annual precipitation is 16 inches or less. The topography and geology of this area is, however, quite different from the remainder of the Panhandle. I observe nearly flat, basalt-capped mesas and knobs dissected by deep canyons. The underlying strata are Triassic through Cretaceous in age.

As I made my way across Oklahoma from the southeast to the northwest, I moved along several ecogeographic gradients which are associated with the changes in vegetation that I observed. Gradients in climate—precipitation, precipitation effectiveness, and length of growing season—geological strata, physiography, and soils. Space constraints in this issue prevent me from giving a more complete review of them here.

How did you fare in answering the questions Jim and I posed? Have you strolled through such sites on ONPS field trips? Did memories of "old friends" or favorite habitats come to mind? I hope so! Even though I am long retired and no longer driving a busload of field botany students on weekend field trips, old habits persist. When driving, I still see "old friends" and the passing landscape. I still "Notice the Change". I hope that you will do the same on your next trip across Oklahoma.

BETTY KEMM AND THE BETTY KEMM SERVICE AWARD

This is the third in a series of articles in the GAILLARDIA highlighting the individuals for whom the four awards presented by ONPS are named.

Betty Kemm in her garden

A charter member and one of the true forces in the establishment of the Oklahoma Native Plant Society, on this our third opportunity to meet one of the individuals for whom the Society awards are named, we feature **Betty Kemm**. Betty served as first state president of ONPS, holding that distinction the first two years of the Society's existence.

When not presiding over the infant years of ONPS, Betty served for eight years on the State Executive Board as a Director-at-Large, four years as Co-Editor of our newsletter, the Gaillardia, and liaison between ONPS and a variety of educational, environmental, and advocacy groups. Betty was instrumental in the concept of geographically located chapters. She spearheaded the effort to establish the Northeast Chapter of which she was Chairman from 1991 through 1999. Her longevity in that position was due to the chapter's high regard for her leadership skills and therefore refused to elect a successor!

Betty received the then-named Service Award in 2002, the third outstanding member to have been nominated for the honor. The two individuals who nominated Betty, Ruth Boyd and Dr. Paul Buck, had themselves been the first and second winners of the Service Award. In their letter of nomination, Ruth and Paul stated, "Betty is well-known by each of us, is respected for her commitment, and held in high esteem by all within the ONPS familiar with her."

In her busy life as a true "mover and shaker", Betty Kemm assumed responsibility for tasks, large and small. She manned registration tables, scheduled program speakers and field trip leaders, coordinated vendors for annual meetings, planned a number of early Indoor Outings, held numerous planning sessions and discussions in her own home, and when called on, presented programs for a wide variety of organizations on the value of incorporating native plants in the home landscape. Active also in the Tulsa Garden Club and Tulsa Garden Center, Betty served as president of each organization.

At the time of her selection to receive the Service Award, Betty not only received the gaillardia-embossed plaque but Life Membership in the Society as well.

Betty passed away on October 25, 2013. The ONPS Service Award, originally inaugurated in 1999-2000 to honor exemplary service to the Society, became known in the Spring of 2014 as the Betty Kemm Service Award. Proposed by then State President Adam Ryburn, the State Executive Board voted unanimously their approval of the addition of Betty's name to the Service Award.

A quote from Ruth Boyd's and Dr. Paul Buck's Service Award nomination letter for Betty sums up in unmistakably accurate terms the impact which Betty Kemm had on ONPS: "....these selfless acts were made with the betterment of the ONPS in mind.....we are blessed to have (had) among us one who so willingly put her heart and soul into the ONPS".

Winners of the Service Award 2000 - 2013: Ruth Boyd, Dr. Paul Buck, Betty Kemm, Patricia Folley, Joanne Orr, Chadwick Cox, Tina Julich, Sheila Strawn, Mary Korthase, Lynn Michael, Gloria Caddell, Dr. Ron Tyrl, Alicia Nelson

Oklahoma Native Plant Record Report to Membership and to Administrative Board 2/ 6/16 OSU-OKC

Sandy Graue, Paula Shryock, Mark Fishbein, and I met with the new e-journal librarian at OSU. He explained new guidelines the Directory of Open Access Journals has implemented to show the journals listed in the directory are in line with publishing industry expectations. First, it requires OSU to permanently archive our journal off-site. They use "Lockss" for this. Second, we must state in our journal it is "open access", which we already do. Third, they require permanent identifiers for each article, which is already done through "ShareOK" an OU/OSU partnership. Fourth, they require access to each article's meta data, which he believes they can do using the permanent identifiers program they use. These moves will improve our, "Shirpa-Romeo" status, which is currently at its lowest level, so this will boost our readership. We are the first journal archived at OSU and will qualify for the new DOAJ guidelines. This upgrade is similar to being listed in "Biological Abstracts" of hardcopy fame. There will likely be no new charges for this upgrade, although it will be more work for OSU.

The move to a "continuous" electronic publication only, is anticipated, sometime in the next five years. There would be a more constant work flow, rather than a late fall rush and authors would benefit by having their work published several months earlier. A hardcopy could be collated and printed off at the close of the volume at the end of the year.

We are recruiting a new managing editor, reviewers, and proof-readers. We would like to allow these new staff members to learn the procedures over a year or two so there will be a smooth transition, as more authors submit their manuscripts online. Please consider stepping forward or encouraging someone else who has, or can develop the needed editorial skills, to fill one of the positions.

There are only twelve remaining copies of Volume 15 of the *Oklahoma Native Plant Record* to be sold, so order yours soon.

Respectfully,
Sheila Strawn, Managing Editor
Oklahoma Native Plant Record

Wonders of Wildflowers

Lynn Michaels

Our first annual Wonders of Wildflowers weekend in Idabel was a kaleidoscope of colors. On Saturday morning we were apprised of what to expect due to the geology of the area and its effect on the plants we would see. Programs were presented by Dennis Wilson, Brad Bain and Dr. Lewis Stiles. After a hearty snack we loaded into vehicles to carpool to our field trip sites.

We were immediately rewarded as our first stop at the Little River Park yielded Winecup mallow, resurrection fern and Indian pinks. At our second stop, the Herron Nature Center, we saw yellow Baptisia and a Cypress swamp.

Kent Roberts, the nine-year-old son of President Joe Roberts, proclaimed that dewberries were "nature's Skittles" as he munched his way along the fence line. Our third stop produced a dazzling display in a Limestone Prairie where over 50 species of plants were catalogued. Next, Dr. Stiles showed us his plants and the home of the first Choctaw Chief in Oklahoma.

Sunday morning David Arbour led us through the Red Slough and we saw many wetland plants and interesting birds as well. Plants in all colors of the rainbow greeted us during our weekend and we all saw new and amazing native species. Come join us next time!

Physostegia intermedia

False Dragonhead

Iris brevicaulis

Short Stemmed Iris

Spigelia marilandica

Indian Pink

Drosera breviflora

Sundew

Echinacea atrorubens

Reflexed Coneflower

Castilleja purpurea

Purple Prairie Paintbrush

Invasive Watch

Russell Studebaker

I have to admit that I am not the most fastidious gardener, but I do take pride in defending my home garden and refuse to be pushed around in my garden by an invasive green alien bully.

I am speaking of the newest Asian invader of our gardens, a highly invasive weed called the mulberry weed. Move over crabgrass, dandelions, oxalis, violets -- this invader is one of the most invasive, noxious and obnoxious of all weeds known.

But let's stop for a minute and think. Yes, we have many good and fine garden ornamentals and trees from Asia, but in North America we also have several invasive Asian plant thugs. To name a few, there is Japanese honeysuckle, sweet autumn clematis, Japanese knotweed, Amur or Tartarian honeysuckle, burning bush euonymus, creeping monkey grass (Liriope spicata) -- and don't forget the vine that ate the South, good old kudzu.

I have been at war against mulberry weed for a couple of years now in my garden. The mulberry weed is not our native mulberry tree. It's a weed that is a summer annual here, but may be perennial in Florida and other semitropical climates. Botanically named Fatoua villosa, it is (strangely) in the mulberry plant family.

It's not yet been given the due attention of a criminal on a wanted list, like the mug shots in the post office. However, if you use a search engine on your computer and type in either mulberry weed or its botanical name, you can access its rap sheet and mug shots from other state universities and state extension offices.

Mulberry weed is so named because it actually looks like a harmless small mulberry tree seedling. It has triangular leaves with toothed margins and alternate placement on the stems, and the older and taller plants have woody-like stems. But this weed differs from the mulberry tree seedlings in that it has slightly hairy stems and leaves when young, and the weed's flowers are small feathery purple clusters of about $^{3}/4$ an inch in diameter in the leaf axels even on short young plants.

It is a very smart weed. It will break off at its base or lower stem when it is being pulled and then regrow. This weed can hide below the leaves of desirable perennials or other plants and then show itself after it is sexually mature and active with seeds. I have had to keep a constant vigil and repeated weekly surveillance to discover and remove any germinated seedling of this pest before it adds its terrible and ever-multiplying progeny to the garden.

Mulberry weed invades landscapes, field nurseries, vacant lots, wooded areas, cultivated beds and containerized ornamentals. Its growth is rapid and it can grown in shade, sun, in turf grass or waste places. When larger, it does have a tap root and can grow to 3 to 4 feet in height and branch.

Mulberry weed can germinate over a wide range of temperatures and emerge throughout most of the spring, summer and even autumn seasons. Its seeds can germinate in less than five days, and it can produce viable seeds within 12 days after reaching its growth of two to three sets of leaves. This reproduction is even quicker than the benevolent Smoos of the Li'l Abner cartoons by the late cartoonist Al Capp.

The seeds are explosively dehiscent and some seeds are thrown as far as four feet from the mother plant. Within one season, it is possible for two to several generations of this weed thug to occur. Unfortunately, the greatest long-distance dissemination occurs in containerized nursery plants that have soil infected by plants or its seed.

T he earliest known herbarium specimen (these are dried and pressed plants kept in universities for study and research) in the United States is dated 1964, but mulberry weed was well established in Louisiana long before that date.

In 1998 more than 75 percent of nurseries scouted in the Southeast had mulberry weed, and this was up from 50 percent of the nurseries surveyed in 1997. This weed has now spread throughout the southeastern United States and north to Ohio and west into Texas and Oklahoma.

So just what can the gardener homeowner do to prevent, protect and control this weed pest? I have Russell's 12-Step Mulberry Weed Control Program to follow:

1. Do not purchase container-grown plants or receive plants, even from friend's gardens, where this weed is seen or is prevalent.

2. If you have a container-grown plant from an infected area, quarantine the plant in an area where you can easily observe and remove any seedlings that germinate. It is not yet known just how long these seeds may remain viable (some weed seeds can germinate decades later, when exposed to favorable conditions).

3. Eliminate these weeds just as soon as possible -- the smaller the better, since they can flower and set seed at the two- to three-leaf stage of growth.

4. Remove seedlings when the soil is wet or moist, even if it means watering the bed area before weeding. This helps to remove all the plant so it does not break off at its base and regrow.

5. Do not lay or place the pulled weeds on a soil surface, in the compost pile or on turf as they may be full of mature seeds. Place them in a plastic bag, tie it closed and place the bag in the garbage.

6. Hand-remove these weeds where you cannot safely spray with a post-emergent herbicide.

7. Where possible, spray weeds in the landscape with a post-emergent herbicide such as Round-Up, Finale or in turf with a 2,4-D herbicide. Always read and follow product directions and labels.

8. Mow vegetation around any propagation areas such as a greenhouse or potting bench that contains soil used for potting.

9. Check for the appearance of any new seedlings every week to 10 days in the landscape.

10. After thoroughly removing all existing weed seedlings, apply an organic mulch of a minimum depth of an inch and a half. Its seed requires light to germinate.

11. Use a sterile potting medium and do not use garden soil for transplanting and potting any container-grown plants. Many potting media are on the market, and I like the Pro Mix BX.

12. Check **constantly** for this weed's appearance. Infestations occur not only in flower and shrub beds but also in lawns and areas where you are not actively growing plants. This weed pest is not a respecter of location; it will grow in sidewalk cracks, drainage holes at the bottom of pots and containers, in lawns, and any other weird place where its seed lands and it can get a toe hold.

Forgive me if I have sounded overly paranoid or neurotic about this pest, but it is only because I have seen it absolutely take over and ruin beautiful planted gardens, nurseries and landscapes. Fortunately, this year I have had the time and have been able to keep up with its removal and have it almost under control -- but not completely eliminated -- in my garden. I would not wish this pest on anyone.

Cross-Timbers Chapter Report

co-sponsored the Plants, People and Beyond Library Botany Lecture Series at the OSU Library on April 8th. The speaker was Dr. Carlos Cordova of the OSU Geography Department. His topic was “Crimea: Environmental Change from the Ancient Greek Colonies to the Putin Era.”

The evening of the 8th, the Cross-Timbers Chapter held a potluck dinner at the OSU Botanic Garden Education Building for ONPS members and members of the OSU Botanical Society. Dr. Cordova was gracious enough to speak to us again. His topic was "Vegetation change around Hall’s Cave, south-central Texas, from the last glacial to late prehistoric times: pollen, opal phytoliths and other microfossil proxies.”

Southwest Chapter Report

On April 30 twenty-one folks came along on a beautiful, sunny and mild day to look for wildflowers in Comanche County on the granite of the Wichita Mountains and the limestone of the Slick Hills. Species found on the limestone but not on the granite were lazy daisy (*Aphanostephus skirrobasis),* Texas star daisy (*Lindheimera texana*), and tall wine cup (*Callirhoe digitata*). Species found on the granite but not on the limestone were stone crop (*Sedum pulchellum*), antelope horns (*Asclepias asperula*), and spiny star cactus (*Escobaria vivipara*).

Connections

Milkweed is all over the news and social media these days. The steep decline in population of the iconic Monarch butterfly is blamed in part on the loss of their larval host plant-Milkweed. Like many insects Monarchs require a particular plant on which to lay their eggs. Monarch larvae can *only* eat plants in the Asclepias family, moved to another plant they will die.

Monarchs are the poster child for all butterflies, but by protecting them on the milkweed many other insects get a chance to live. I once heard that every native plant is used by 42 animals and while I can't find a source for that statistic, for the milkweed community it is certainly true. Moths, butterflies, beetles, flies, wasps, spiders, ants and walkingsticks are just a few in this extensive food web.

Of all the species of milkweed, the most familiar- and loved- is probably the orange flowered *Asclepias tuberosa*, commonly known as butterfly weed. Also known as Canada root, Pleurisy Root, Chigger Flower, Rubber Root, Silkweed, Indian Nosy, Swallowwort and Fluxroot, it has been used medicinally by Native Americans and early settlers for pleurisy, swollen glands, sores and wounds, diarrhea, snow blindness and tapeworms. While *Asclepias tuberosa* has less of the cardiac glycosides (found in all milkweeds) which are toxic to livestock and humans it still has enough to help protect the Monarch from predators and make it unsafe for human consumption.

During WW2 when the military's access to the kapok used in life preserver filling was cut off they turned to milkweed and called on schoolchildren to collect the milkweed floss. Children received 15 cents for each onion sack filled with pods. About 2 **million** pounds of floss was collected each year.

Taylor's An Annotated list of the Ferns, Fern Allies, Gymnosperms and Flowering Plants of Oklahoma lists twenty five *Asclepias* species and eight species of vine milkweeds native to Oklahoma.

Central Chapter Report

The Central Chapter of the Oklahoma Native Plant Society met April 7, 2016, at the OSU-OKC Horticulture Building, Oklahoma City. Jessica Blackhand, who is with the Great Plains Conservation Cooperative, a partnership for resilient landscapes gave the evening's presentation. She discussed the Landscape Conservation Corp Network and its work on coproducing knowledge with land managers to address specific problems and prelisting conservation as alternatives to regulation. The PowerPoint included a map showing ecological systems and classification of ecosystems and plants. The map showed multiple agencies' climate change modeling. She also spoke of partnerships with various organizations, what they had accomplished and some future plans. We then talked of the planned Monarch Waystation implementation at the Martin Park Nature Center in OKC.

Several members of the Central Chapter met at the Martin Park Center on April 30th. A variety of native species were planted to establish the Monarch Waystation.

We have several activities planned for the summer, come join us. Hope to see you there.

"If it lives, it lives. If it doesn't make it , it must not be happy in your garden. Try a different plant."

Betty Kemm

Across

2) ironweed
3)aphids
6)sandplum
7)Christmas
9)Cardinal
11)sneezeweed
12)violet
13)passionflower
14)switchgrass
15)compass
16)rattlesnake
17)botanist
18)milkweed
19)mint

Down

1)deadhead
4)parsley
5)bluestem
7)coneflower
8)seedling
9)Chasmanthium
10)honeysuckle

Winner of the Spring 2016 Puzzle Contest is Barbara Shirley. Barbara will receive a copy of Life Cycles of Butterflies.

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*.

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____ Family ($25)

____ Life Individual ($300)

____ Family Individual ($350)

____ Student ($10) (free with faculty sponsor.

Email: oknativeplants@yahoo.com for details)

Chapter affiliation:

____ Central (OKC area)

____ Northeast (Tulsa area)

____ Crosstimbers (Stillwater area)

____ Southwest (Lawton area)

____ Mycology (statewide)

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

Add $5 ____ to cover cost of copying and mailing a complete ONPS directory if desired.

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