



KANSAS NATIVE PLANT SOCIETY

VOLUME 44, NUMBER 1

NEWSLETTER OF THE KANSAS NATIVE PLANT SOCIETY

JANUARY 2022



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KNPS 2022 KANSAS WILDFLOWER OF THE YEAR

Dotted Blazing Star | *Liatris punctata*

— BRAD GUHR

Dotted blazing star (*Liatris punctata*) is the Kansas Native Plant Society 2022 Kansas Wildflower of the Year (WOY).

Found throughout Kansas, this erect perennial from the sunflower (*Asteraceae*) family grows with multiple, stiff, unbranched stems up to 2.5 feet tall. Its preferred habitat is well-drained, dry upland prairie where it thrives best when in lower competition from tall grasses. Extreme drought tolerance is thanks to a perennial taproot that can reach a depth of fifteen feet. One report from J.E. Weaver's 1968 book, *Prairie Plants and their Environment* documented that a dotted blazing star root crown ring count showed it was 35 years old.

The purple inflorescences of dotted blazing star are among the most stunning wildflowers of late summer. Clusters of four to eight rose-purple flowers blooming in August and September consist of only disk florets, with ray florets absent. Pollinated flowers create black, ribbed ¼" conical-shaped achene fruits with a parachute-like pappus to aid in wind dispersal.

"Blazing star" is named for the spike of purple flowers and "dotted" is in reference to the small glands dotting the leaves and bracts of this species. "Punctate" is a botanical term for translucent dots.

Nectar from these flowers attracts many species of butterflies, bees, and flies. The blooming of dotted blazing star is notably timed with the annual southern migration of the nectar-seeking

— CONTINUED ON PAGE 2

OUR MISSION

The mission of the Kansas Native Plant Society is to encourage awareness and appreciation of the native plants of Kansas in their habitats and in our landscapes by promoting education, stewardship, and scientific knowledge.

The Kansas Native Plant Society Newsletter is published quarterly: Winter (January), Spring (April), Summer (July), Fall (October). Readers tell us how much they enjoy the newsletter in paper format. Contributions help us continue to produce a publication of this length in this form.

You may send your gift to KNPS at:

Kansas Native Plant Society
R. L. McGregor Herbarium
University of Kansas
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MIKE HADDOCK PHOTOS

Dotted Blazing Star

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monarch butterfly. The leaves and stems of dotted blazing star are palatable to cattle and this species becomes greatly reduced on prairies that are heavily grazed.

The showy flowers of dotted blazing star make this species an easy choice for planting in any full-sun flower bed. The purple splashes of color pair nicely with the yellows of goldenrod in late summer. *Liatris punctata* also has the appealing landscaping traits of a short stature to fit in smaller gardens, non-aggressive seed reproduction, a different flowering time compared to other popular garden *Liatris* species including *L. aspera* and *L. pycnostachya*, and an attractive fluffy, wand-like stem texture in fall before seeds begin to disperse.

The drawings and most of the information above are from Dwight Platt and Lorna Harder’s 1997 publication *Growing Native Wildflowers*. To see more *Liatris punctata* photos by Michael Haddock and a detailed species description, visit kswildflower.org.



Liatris punctata — flower



Liatris punctata — seed with pappus

— LORNA HARDER ILLUSTRATIONS

STATEMENT OF EDITORIAL POLICY

The Kansas Native Plant Society (KNPS) Newsletter is published quarterly each year. It features writings, photography, and illustrations to fulfill the Society’s mission: to encourage the awareness and appreciation of the native plants of Kansas in their habitats and in our landscapes by promoting education, stewardship, and scientific knowledge. Newsletter content embraces the activities of the Society and includes articles relating to current conservation and ecological developments. The Newsletter accepts manuscripts, photographs, and illustrations for publication that relate to the Kansas Native Plant Society’s mission and activities. To assure journalistic independence and integrity, KNPS Newsletter editors exercise sole editorial control over submissions; editors retain the right to make changes and consult with the author(s) as needed. KNPS reserves the right to reject a submission even after it is accepted if it becomes apparent that there is inaccuracy in its scientific content, or KNPS publishing policies are violated.

President’s Message

KRISTA DAHLINGER

Welcome to a new year! Here is a brief update for KNPS activities for 2022. KNPS is planning to meet in Miami County, south of Kansas City, for the Spring/Summer Board Meeting. A long-time KNPS member has offered to host KNPS visits on remnant prairie lands on private property. We look forward to discovering plant diversity in early summer in northeast Kansas. The 2022 Annual Wildflower Weekend is set to occur in the Flint Hills of central eastern Kansas. We are checking our resources and contacts so that we can plan fun and educational events in September. Look forward to outdoor tours at both events, as well as taking in local dining along with cultural and historical places of interest. Dates for both events have not been determined at this writing, stay tuned.

We are at the beginning of a new year at a time when most native plants are chilling and biding their time for longer days and warmer temperatures. Seeds I collected in 2021 have been stashed in outdoor pots or in the refrigerator to stratify. This spring I hope to see American Plum and Button Bush seedlings push up out of their wintertime pots. There is a great deal of satisfaction in enabling successful germination when new plants emerge. Common Milkweed plants in one of the “pollinator patch” gardens I planted have been increasing in number and height for about five years, producing many hundreds of seeds and easily hosting a couple of dozen Monarch caterpillars during the past year. Compass Plants in these gardens are about seven years old and put out their first blooms in 2021. Big Bluestem, Little Bluestem and Indian Grass were already growing in this area of a rural yard set aside as the pollinator patch garden. Seeing large yellow and black Argiope garden spiders and hearing the summer buzz of many insects in this garden always gives me a sense of abundant life in natural places.

I collected and am attempting to stratify Pawpaw seeds, but I do not have the proper forested canopy to offer them should they grow. If germination occurs and plants grow, they will have to live on someone else’s land and leave me the satisfaction of seeing them succeed there. Plans for garden and landscape design must take into consideration the type of soil and habitat available for growing plants. Anyone who gardens knows the appeal of adding a few more plants each year — take the time to inventory the soil, sunlight duration and wet or dry conditions that are available to additional plants before heading out to plant sales in 2022, and choose wisely. With increasing demand, plant nurseries are increasing their capacity, and new nurseries are opening up. Shoot for a wide diversity of plants in your landscape.

KNPS will announce the Wildflower of the year in this issue. The KNPS Plant A Prairie school gardens have been distributed for a second year and we look forward to learning how children are interacting with the plants. Online learning presentations through the Dyck Arboretum in Hesston, and PlanItNative in Kansas City, to name a few, are well attended and will continue to provide easy access to native plant learning.



FROM TOP & L TO R Buckbrush (*Symphoricarpos orbiculatus*); Wahoo (*Euonymus atropurpureus*); American bittersweet (*Celastrus scandens*); and Bristly greenbrier (*Smilax tamnoides*).

KRISTA DAHLINGER PHOTOS



What is a Master Naturalist?

— PATTI RAGSDALE

When I attended the first session of the three month training program to become a Master Naturalist, I was nervous. I thought I would need to bring some exceptional nature skills and knowledge. Instead I discovered that everyone who joins the program brings the needed skills and knowledge. Surprisingly, being super nature-smart is not required (although, there is plenty of that). Rather, all I needed was a sense of wonder about nature. And, like most native plant folks, my curiosity got me started and carried me through. Fortunately, as a Master Naturalist, pursuing my crazy nature obsession is encouraged!

So let us just say it out front and loud: native plants are a big part of nature.

I am often asked because of my plant-focus, “How is a Master Naturalist different than a Master Gardener?” Both the Extension Master Naturalist (EMN) and the Extension Master Gardener (EMG) programs are sponsored by K-State Research and Extension. And both EMNs and EMGs volunteer their time supporting the K-State Research and Extension mission to provide research-based education, outreach, and service to Kansas communities. The focus of each group is a little different though. The Master Gardeners focus on horticulture (think flower and vegetable gardens). Master Naturalists, on the other hand, focus on natural resources like grasslands, forests, streams, and the animals inhabiting them.

Given that plants are a big part of nature, discovering and teaching others about native plants could hardly be more important. That is especially true in Kansas where we have the largest contiguous expanse of one of the rarest ecosystems in the world: Tallgrass Prairie. But because prairie no longer exists everywhere, I spend most of my time teaching folks about native prairie plants where they are easily accessible...in urban gardens and spaces. So it is easy to see why many Master Naturalists are also Master Gardeners and why the distinction between the two might not be that obvious.

There are only a few Master Naturalist programs in Kansas. I am part of the Johnson County EMN program. There is a similar program in Reno County through K-State Research and Extension. These programs provide training and have a variety of projects available to their trained volunteers. A third program run by Jill Haukos at Konza Prairie is a bit more focused. Her program was developed specifically for the folks who are “docents” at the prairie located near Manhattan. She offers training every three years.

In Johnson County, application for the EMN program is offered annually. Trainees attend weekly classes taught by natural resource professionals and local experts. The classes cover a variety of topics including my favorites: botany and forestry. But trainees also learn about mammals, birds and reptiles. And, best of all, there are no tests!



ABOVE Master Naturalists Patti Ragsdale and Mariruth Gruis at the Pollinator Prairie reviewing the 2021 plant lists.

The Johnson County K-State Extension Master Naturalist program has about 140 members focused on five main projects: The Pollinator Prairie (where I spend most of my time), Blue Bird Stewards, Land Stewardship, Water Quality (focused on monitoring Mill Creek stream way), and Junior Extension Master Naturalists.

Matt Garrett, Johnson County Parks and Recreation Field Biologist, says that EMNs are critical to extending the reach of his natural resource goals. He adds, “Collecting rare native seed, monitoring hundreds of bluebird boxes, removing invasive plants, and educating citizens could not be done without this amazing volunteer asset in the community.”

Although my chapter is focused in Johnson County, we also volunteer time outside of Johnson County and some of us even live in surrounding counties. Courtney Masterson, ecologist at Native Lands, LLC, does restoration work with non-profits organizations like Friends of the Kaw and Grassland Heritage Foundation. EMNs have supported her work both in Johnson County and Douglas County. She says EMNs have volunteered, “... with the restoration work at Black Jack Battlefield and Nature Park. They’ve also helped at our Eudora boat ramp planting.” EMNs also helped collect data for her Master’s degree research project.

In short, as an EMN, I am connected to knowledgeable people and current information. Not only do I get to know local experts like Matt and Courtney and regional experts at K-State and KU, but there are expert members within our group like entomologist Betsy Betros, author of “A Photographic Field Guide to the Butterflies in the Kansas City Region.” And, perhaps most importantly, as our native landscapes become increasingly urbanized and developed, I am honored to help connect friends, neighbors, and constituents to some of the natural wonders of Kansas...like those awesome prairie plants and landscapes.



TOP, OPPOSITE, L TO R KC Wildlands Seed Team. Master Naturalists go through training to help KC Wildlands collect seed from local prairies for use in restorations.

Extension Master Naturalist Ann Manzardo collecting seed at Black Jack Battlefield and Nature Park.

EMN Dave Shackelford explaining the benefits of native plants to visitors at one of our public events at the Pollinator Prairie.

ABOVE KC Wildlands Seed Saver workshop.

TECH TIP

Make the KNPS Events Calendar your go-to site for native plant and nature based outdoor activities and online programs. You can add nature based events to the Events Calendar. Bookmark the page:

www.kansasnativeplantsociety.org/events



Butterflies as Botanists and Native Plant Specialists

— LENORA LARSON

People frequently ask me to identify a caterpillar without a photo. As they start to describe the critter, I interrupt and ask, “What was it eating?” If my questioner knows (in my fantasy world, they will know the plant) I can often identify the caterpillar unseen because the lepidoptera, especially butterflies, are highly host-plant specific. And because the caterpillar of each species has a specific food plant requirement, a butterfly’s presence is a botanical guide to the neighborhood. For instance, if you see a Giant swallowtail, there must be a member of the citrus family within flying distance. We have two native citrus trees in Kansas; *Ptelia trifoliata* and *Zanthoxylum americanum*. (Google if you wish to peruse the many stupid common names that do not reflect their membership in the citrus family). Note that the garden herb Rue, *Ruta graveolens*, is also a citrus, so many herb gardeners are helping to support this amazing butterfly, which is the largest in North America and a Kansas native.

Likewise, if you see a Zebra swallowtail, there must be the native paw paw in the area because the caterpillars can eat no other plant in the Midwest. Willows are the caterpillar food for Viceroy, the famous imitator of the Monarch. And Cherry tree leaves also host Viceroy and Red-spotted purples, which resemble a tailless Black swallowtail. While the adult butterflies are very different in appearance, the caterpillars are almost identical and share the same native host plants. Lepidopterists now consider Viceroy and Red-spotted purples to be different morphs of the same butterfly, but the butterflies already knew that.

Plant Identification

Butterflies smell with their antennae and taste with their feet. These abilities allow for accurate identification at the molecular level. All insects live their lives in response to the absence or presence of chemical stimuli. When plants ‘breathe’ (transpiration)

ABOVE, LEFT A Pipevine Swallowtail releases her eggs on our native Pipevine, (*Aristolochia tomentosa*). She found the vine by its smell as captured by the olfactory receptors in her antenna. She confirms the plant’s identity “by taste” using the chemical receptors in her feet. This double molecular confirmation system avoids identification errors.

ABOVE, CENTER An exception to host plant exclusivity, Painted Lady caterpillars feed on over 100 species of plants so their presence gives no botanical clues.

ABOVE, RIGHT Because Monarchs migrate north throughout their spring and summer breeding season, their presence is not necessarily an indicator of Milkweeds. DNA research indicates that 40% of the Monarchs tested at their winter roosting site in Mexico have eaten our native Common Milkweed (*Asclepias syriaca*), as a caterpillar.

they emit chemicals into the air. We can detect some of these chemicals, like the fragrance of mint or roses. Butterflies “smell” with their antennae and are far more efficient at detecting these airborne molecules because each antenna houses over 16,000 olfactory receptors. This makes them superb botanists when an airborne host plant molecule slams into an antenna’s chemical receptor. The female butterfly is like a heat-seeking missile, following the trail of that plant’s molecules back to its caterpillar’s potential food. The males of many species of butterflies guard territories over their species’ host plant because that is where they will meet the ladies, so they too monitor the molecular signature of host plants.

The gravid female “tastes” the host leaf with her feet and when the chemical receptor on her foot and the plant molecule connect like a lock and key, she lays an egg. Closely related imported ornamentals and hybrids will also be used if they have the essential molecule that prompts butterflies to lay their eggs. For example, Black swallowtails evolved with native parsleys and other members of the carrot family such as the gorgeous Golden Alexanders, but they have adapted and even prefer domesticated dill, parsley and fennel. Butterflies are not ideologs and do not care about a plant’s origin.

If butterflies had to depend on gardeners for their caterpillar foods, they would be long extinct. Fortunately, many native plants, especially trees, are caterpillar foods. Fall is the best time to plant trees, so let us review some tree/butterfly matches:

Tree or Shrub	Caterpillar Food Plant for:
Paw-Paw (<i>Asimina triloba</i>)	Zebra swallowtail
Tulip Tree (<i>Liriodendron tulipifera</i>)	Eastern tiger swallowtail
Hackberry (<i>Celtis occidentalis</i>)	Hackberry and Tawny emperors, Mourning clock, Red-spotted purple, American snout
Cherry tree (many <i>Prunus</i> species)	Tiger swallowtail, Viceroy, Red-spotted purple
Hoptree (<i>Ptelia trifoliata</i>) and Prickly Ash (<i>Zanthoxylum americanum</i>)	Giant swallowtail, Eastern tiger swallowtail
Spicebush (<i>Lindera benzoin</i>) and Sassafrass (<i>Sassafrass albidum</i>)	Spicebush swallowtail

For more information on each tree, simply Google the botanical name and a wealth of knowledge and nursery sources immediately appears.

I anticipate your objection. “But Lenora, I have a small yard — I don’t have room for a big tree.” Cutting trees and shrubs to the ground each winter, AKA “stooling”, offers a solution to limited space with the esthetic advantage of larger, more colorful foliage. Butterflies agree with this strategy because caterpillars prefer the tender leaves of the newly stooled growth to the tougher leaves of an adult tree. And I do not have to get a ladder to visit my caterpillars, which are now at eye level.

Our winged botanist, a gravid butterfly, will identify your tree or shrub and lay her eggs. And you can confidently identify the charming caterpillars by her plant choice.



ABOVE You know that a Hackberry Tree (*Celtis occidentalis*), is in the neighborhood if you spot this Hackberry Emperor or its cousin the Tawney Hackberry. Hackberry Trees host many other species of butterflies, so they are an excellent choice for your property. Stooling will control their size and prevent their over-zealous seeding.

FEATURED NATIVE PLANT

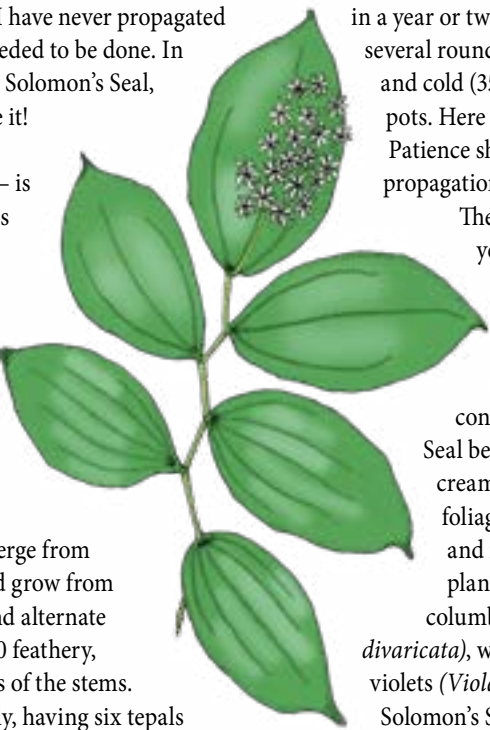
False Solomon’s Seal | (*Maianthemum racemosum*)

— LORNA HABEGGER HARDER

It started with seed collection. Throughout this past spring, summer, and fall, I have been collecting seed for propagation of native seeds, seeds to be shared with the Dyck Arboretum, and seeds for our prairie restoration. So when I gazed out the window earlier this fall and noted the scarlet berries of False Solomon’s Seal hanging from spent stems, I collected them. I have never propagated this species from seed, so clearly, research needed to be done. In that process, I have learned more about False Solomon’s Seal, and I have also come to more fully appreciate it!

False Solomon’s Seal (*Maianthemum racemosum*) (formerly *Smilacina racemosa*) — is an herbaceous perennial, native to woodlands throughout North America. The common name reflects its similarity to Solomon’s Seal, but False Solomon’s Seal is easily distinguished by the flowers and later berries that are produced at the ends of the stems. Indigenous people have variously used the spring shoots, rhizomes and leaves for medicinal and food purposes; and deer will also browse on it.

In spring, False Solomon’s Seal stalks emerge from fleshy rhizomes. Stems are slightly zigzag and grow from 18–36 inches in length. Leaves are smooth and alternate with parallel venation. In late spring, up to 80 feathery, quarter-inch flowers are produced at the ends of the stems. The flowers are characteristic of the lily family, having six tepals (look-alike petals and sepals), with six stamens surrounding the central pistil. They are fragrant and attract a variety of pollinators including small native bees, flies, and beetles. The berries that form contain a few seeds each. Initially they are green with purple spots, ripening to crimson. Seeds are dispersed to new sites when berries are eaten by mice or birds.



False Solomon’s Seal prefers moist, rich, well-drained soils and full to partial shade. The fibrous roots can be divided and transplanted, but it takes several years to fully reestablish in a new location. When grown from seed, False Solomon’s Seal can be sown directly into the soil in autumn for spring germination in a year or two. When propagating indoors, seeds require several rounds of alternating warm (room temperature) and cold (35-40° F) moist stratification before planting in pots. Here again, germination may take up to two years. Patience should definitely be included as part of the seed propagation protocol for this species!

The False Solomon’s Seal I planted nearly twenty years ago has flourished along the western side of the house. It receives light shade most of the day, but it also gets blasted by late afternoon summer sun, demonstrating this species’ ability to also tolerate drier, more exposed conditions. Over the years, the False Solomon’s Seal bed has filled in and reliably produces panicles of creamy white flowers each spring, graceful arching foliage in summer and bright red berries in fall; and it continues to serve as an elegant companion plant for Jack-in-the-Pulpit (*Arisaema triphyllum*), columbine (*Aquilegia canadensis*), prairie phlox (*Phlox divaricata*), wild ginger (*Asarum canadense*), and yellow violets (*Viola pubescens*). Slow starter though it is, False Solomon’s Seal is hearty, pollinator- and wildlife-friendly, easy to care for, long-lived, and attractive throughout the growing season – perfect for your native shade garden!

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<https://plants.usda.gov/home/plantProfile>
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— LORNA HABEGGER HARDER ILLUSTRATION



BRIAN L. MARTIN PHOTOS



FEATURED NATURAL AREA

Cedar Bluff Wildlife Area

— CYNTHIA RHODES

On a sunny, warm, late-October day this past fall, Brian and I drove to western Kansas to pick up an order of wildflower and grass seeds from a seed company. Driving south on highway 147, we drove alongside and then finally on top of the Cedar Bluff Reservoir dam. Interested in the history and geography of the area, we decided to linger and explore for a future botanizing excursion. We were glad we stopped as we found a beautiful, maintained natural area with some excellent wildflower possibilities. In case you are interested, here is what we found.

Cedar Bluff Reservoir and Cedar Bluff Wildlife Area are owned by the Bureau of Reclamation and are managed by the Kansas Department of Wildlife and Parks (KDWP). The management area currently encloses around 13,800 acres (9300 acres of land surrounding a 4500-acre reservoir). The state park is divided into two unique regions along the shorelines of the reservoir. The Bluffton Area is on the north shore and provides nearly 350 acres for visitors. This area is the most developed and provides a variety of facilities to meet the outdoor enthusiasts' needs. The Page Creek Area is on the south shore of the reservoir and is nearly 500 acres in size. This area is not quite as developed but provides some of the finest primitive camping in the state with large shade trees and sandy shorelines. This area is a favorite for those who seek a little more solitude when relaxing outdoors.

Construction of the reservoir began in 1949 with the intention of providing flood control, irrigation, and recreation, and was completed and filled in 1951. The area quickly became a popular recreational destination with current annual visitation consistently over the 250,000 mark. Access to the reservoir is via the Smoky Valley Scenic Byway, a sixty mile loop through the Smoky Hill River Valley. Brian remarked that the terrain is "more canyon than hills." The state park is actually a gateway to a canyon noted for its historic significance. Threshing Machine Canyon, which is accessible by a road west of the park, was the site of a station on Butterfield's Overland Despatch (BOD) or the Smoky Hill Trail, called Buffalo Station. Travelers along the trail carved their names in the nearby limestone bluffs. Many of the inscriptions were carved by the "Pike's Peak" in 1859 and U.S. cavalrymen in 1865, and some are still visible today.

Curious, we drove along AA Road in the War Buck area on the south side of the reservoir. This road allows the visitor to drive right up to the top of a limestone bluff where there is a dramatic overlook atop the chalky cliffs and down onto the watery shoreline, and to our most-pleasant surprise and delight: abundant wildflowers were everywhere! Of course it was late October and the wildflowers were long past their colorful prime, but here are a few of the seed heads and dried plants that we were able to easily identify. We noted evidence of Western ironweed (*Vernonia baldwinii*),

TOP The "Cedar Bluffs" soar 100 feet above the south shore at Cedar Bluff Reservoir.

LEFT Indian grass (*Sorghastrum nutans*) along the hiking trail.



LEFT Chalk lily (*Mentzelia decapetala*) at the top of the bluffs.

ABOVE Smooth sumac (*Rhus glabra*) in its vibrant fall color.

Stenosiphon (*Stenosiphon linifolius*), Downy goldenrod (*Solidago petiolaris*), Maximilian sunflower (*Helianthus maximiliani*), Slender greenthread (*Thelesperma megapotamicum*), Black Samson echinacea (*Echinacea angustifolia*), Chalk lily (*Mentzelia decapetala*), Dotted blazing star (*Liatris punctata*), Missouri evening primrose (*Oenothera macrocarpa* ssp. *fremontii*), Fendler's aster (*Aster fendleri*), Yellow-spine thistle (*Cirsium ochrocentrum*), and Oval-leaf bladderpod (*Physaria ovalifolia*). We decided this area is a definite must-return area to botanize in the springtime.

We continued our exploration of the south shoreline by parking in the lot near Scout Cove and walking on the asphalt-paved path that is wheelchair accessible. Extending west from this paved path about halfway along is a mowed gravel path to another bluff overlook accessible by this hiking path. Both paths were mostly well-maintained, and there was a bench in a shady area along

the paved path. In this area, we identified seed pods of White penstemon (*Penstemon albidus*), Hoary vervain (*Verbena stricta*), and an abundance of goldenrod, as well as several types of grasses such as Hairy grama (*Bouteloua hirsuta*), Indian grass (*Sorghastrum nutans*), and Switchgrass (*Panicum virgatum*). Nearby is a handicap accessible parking area, picnic tables close to the shoreline, and a vault toilet for public use.

By this time, we had to resume our trek to pick up the seed order, and we left Cedar Bluff Reservoir behind us. But we vowed to return to this beautiful area next spring or early summer to check the accuracy of our wildflower and grasses list, and then add to it most definitely. For some stunning views, historic sites, and wildflowers galore, might we suggest that you go visit Cedar Bluff Reservoir and Wildlife Area sometime soon and see for yourself!

PAUL WILLIS, 1929 – 2021

Paul Marcus Willis, 92, of Salina, formerly of Topeka, passed away on Sunday, July 11, 2021.

He was born April 25, 1929, in Cherryvale, Kansas, the son of Ulysses Grant and Josephine Atwater (Rairdin) Willis. He was a graduate of Elk City High School, Independence Junior College, and Kansas State Teachers College at Pittsburg, Kansas. He was drafted into the U.S. Army during the Korean War. After discharge from the Army, he received a Master's of Science degree from Kansas State University.

Mr. Willis taught Biology at Highland Park High School and Shawnee Heights High School for thirty-two years. He retired in 1989.

He was a life-long member of the United Methodist Church. He was a member of Topeka Audubon Society, Kansas Wildflower Society, Shawnee and Saline County Master Gardeners, and



participated in Senior Olympics, Silvertones Singing Group (Salina), and many other groups. He had also served on the USD 450 School Board.

Paul married Lillian Maxine "Lil" Curry on August 12, 1951, in Prescott, Kansas. She preceded him in death on June 17, 2010. He married Barbara Harris on November 26, 2011, in Salina. She survives in Salina. Other survivors include

children, stepchildren, grandchildren, step-grandchildren, great-grandchildren, and one step-great-grandchild.

Paul loved spending time with family, especially his grandchildren. He enjoyed bird watching, gardening, wildflower studies, and humbly sharing his knowledge with people.

Obituary excerpt taken from Dove Cremations and Funerals of Topeka.

Information provided by Kansas Native Plant Society, see more events on our website: www.kansasnativeplantsociety.org
Please share this information and contact us about additional events to note. Thank you! email@KSNPS.org
Sturdy shoes, long pants, a hat, insect repellent, sunscreen, and water are recommended for outdoor events.
Mark your calendar now and plan to attend some fabulous happenings!

Before you travel, use the contact information to confirm an event is still happening and not cancelled or rescheduled.

JANUARY | 25

DYCK ARBORETUM VIRTUAL WINTER LECTURE via Zoom, 7-8:30 pm. "Conserving Oak Ecosystems" by Gerry Steinauer. **To register:** dyckarboretum.org.square.site. Cost is \$5.00. **More info:** 620-327-8127

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NATIVE PLANT SCHOOL WINTER ONLINE CLASS: "Site Analysis to Guide Planting Decisions" with Scott Vogt at 7-8:30 pm. **To register:** dyckarboretum.org.square.site. Cost is \$5.00. **More info:** 620-327-8127

FEBRUARY | 10

NATIVE PLANT SCHOOL WINTER ONLINE CLASS: "Rethinking Native Plant Maintenance" with Scott Vogt at 7 to 8:30 pm. **To register:** dyckarboretum.org.square.site. Cost is \$5.00. **More info:** 620-327-8127

FEBRUARY | 22

DYCK ARBORETUM VIRTUAL WINTER LECTURE via Zoom, 7-8:30 pm. "Little Things in the Hidden Prairie" by Chris Helzer. **To register:** dyckarboretum.org.square.site. Cost is \$5.00. **More info:** 620-327-8127

MARCH | 3

NATIVE PLANT SCHOOL WINTER ONLINE CLASS: "Seasons of Color" with Katie Schmidt at 7-8:30 pm. **To register:** dyckarboretum.org.square.site. Cost is \$5.00. **More info:** 620-327-8127

MARCH | 8

NATURE BOOK CLUB, hosted by Lawrence Public Library, Lawrence. Join us to talk about fiction and nonfiction connected to the natural world. New book recommendations from co-leaders Jake Vail and Shirley Braunlich and other book club members. Meet 6:30-8 pm. **Contact Shirley to RSVP:** sbraunlich@lplks.org, 785-843-3833

MARCH | 15

"YOUR BRAIN ON NATURE" by John Gallagher, Wichita Audubon Society Program, 7 pm. Learn more about connections the natural world makes with our brains. Location: Great Plains Nature Center, 6232 E. 29th St. N., Wichita. www.wichitaudubon.org 316-683-5499

MARCH | 22

DYCK ARBORETUM VIRTUAL WINTER LECTURE via Zoom, 7-8:30 pm. "The Restorative Potential of Native Plants in Urban Settings..." by Katie Kingery-Page. **To register:** dyckarboretum.org.square.site. Cost is \$5.00. **More info:** 620-327-8127

MARCH | 24

NATIVE PLANT SCHOOL WINTER ONLINE CLASS: "Nativars, Cultivars and Adaptables, oh my!" with Brad Guhr at 7-8:30 pm. **To register:** dyckarboretum.org.square.site. Cost is \$5.00. **More info:** 620-327-8127

MARCH | 28

"GARDENING WITH NATIVE PLANTS" by Lenora Larson, Jayhawk Audubon Society Program, 7-9 pm. "Lenora is a Miami County Master Gardener and member of local chapters of both the Idalia Butterfly Society and Kansas Native Plant Society. She is on a mission to demonstrate to other gardeners that you do not have to compromise on beauty and function when you invite wildlife to share your garden. Lenora channels her inner butterfly to combine science and entertainment." ~credit Kansas City Gardener Magazine. Location: TBA. **Contact Pam Chaffee.** **More info:** jayhawkaudubon.org

APRIL | 7-10

THE FIRST ANNUAL PRAIRIE-CHICKEN FESTIVAL, hosted by Audubon of Kansas is in Hays. The main attraction will be viewing Greater and Lesser Prairie-Chickens. These two species have unique breeding displays where males gather in a small area to attract mates. They are declining throughout most of their range, but populations are stable or increasing in western Kansas. Their populations overlap in only a few counties in western Kansas, so this is a unique opportunity to see both species. aok@audubonofkansas.org 785-537-4385

APRIL | 22-25

FLORAKANSAS: GREAT PLAINS PLANT BAZAAR at Dyck Arboretum of the Plains, Hesston. This plant sale features hard-to-find native perennials plus classes and tours. Member's only

sale April 21; 10% members discount on all days. Admission charge is by donation. <https://dyckarboretum.org/arboretum-event/florakansas-fall/arboretum@Hesston.edu> 620-327-8127

MAY | 23

JAYHAWK AUDUBON SOCIETY'S 50TH YEAR ANNIVERSARY DINNER & PRESENTATIONS. Location: Maceli's Banquet Hall, 1031 New Hampshire St., Lawrence. **Info at:** jayhawkaudubon.org

MAY | JUNE

KNPS MINI-AWW MEETING: Miami County south of Kansas City. Come for a day of botanizing on remnant prairie fields on private property. Watch for the date and more information coming soon. **Contact:** email@ksnps.org

JUNE | 13

NATURE BOOK CLUB, hosted by Lawrence Public Library in Lawrence. Join us to talk about fiction and nonfiction connected to the natural world. New book recommendations from co-leaders Jake Vail and Shirley Braunlich and other book club members. Meet 6:30-8 pm. **Contact Shirley to RSVP:** sbraunlich@lplks.org 785-843-3833

JULY | 24-28

THE 2022 NORTH AMERICAN PRAIRIE CONFERENCE will take place in Lincoln, Nebraska. **Learn more:** <http://www.northamericanprairie.org/>

SEPTEMBER

KANSAS NATIVE PLANT SOCIETY'S 43RD ANNUAL WILDFLOWER WEEKEND (AWW) in the Flint Hills. Enjoy a full weekend of outings, board meeting, membership meeting, programs, silent auction, photo contest, local dining, and socializing! Come and Join Us! Watch for more details coming soon. **Contact:** email@ksnps.org

Join the KNPS email list to receive the latest event announcements: www.kansasnativeplantsociety.org/email_list.php

NEW MEMBERS FROM 9/19/21 TO 12/10/21

Mike & Dru Clarke – St. George
Veronica Coons – Great Bend
Eli Hartung – Vineyard, UT
Kathleen Hess – Westwood

Bob Hoopes – Marion
Patricia Johannsen – Leavenworth
Courtney King – Lawrence
Denise Lundin – Mayetta

Richard Piezuch – Paola
Nancy Smelser – Mc Louth
Juliet Swedlund – Topeka

MEMBER RETURNING AFTER A HIATUS

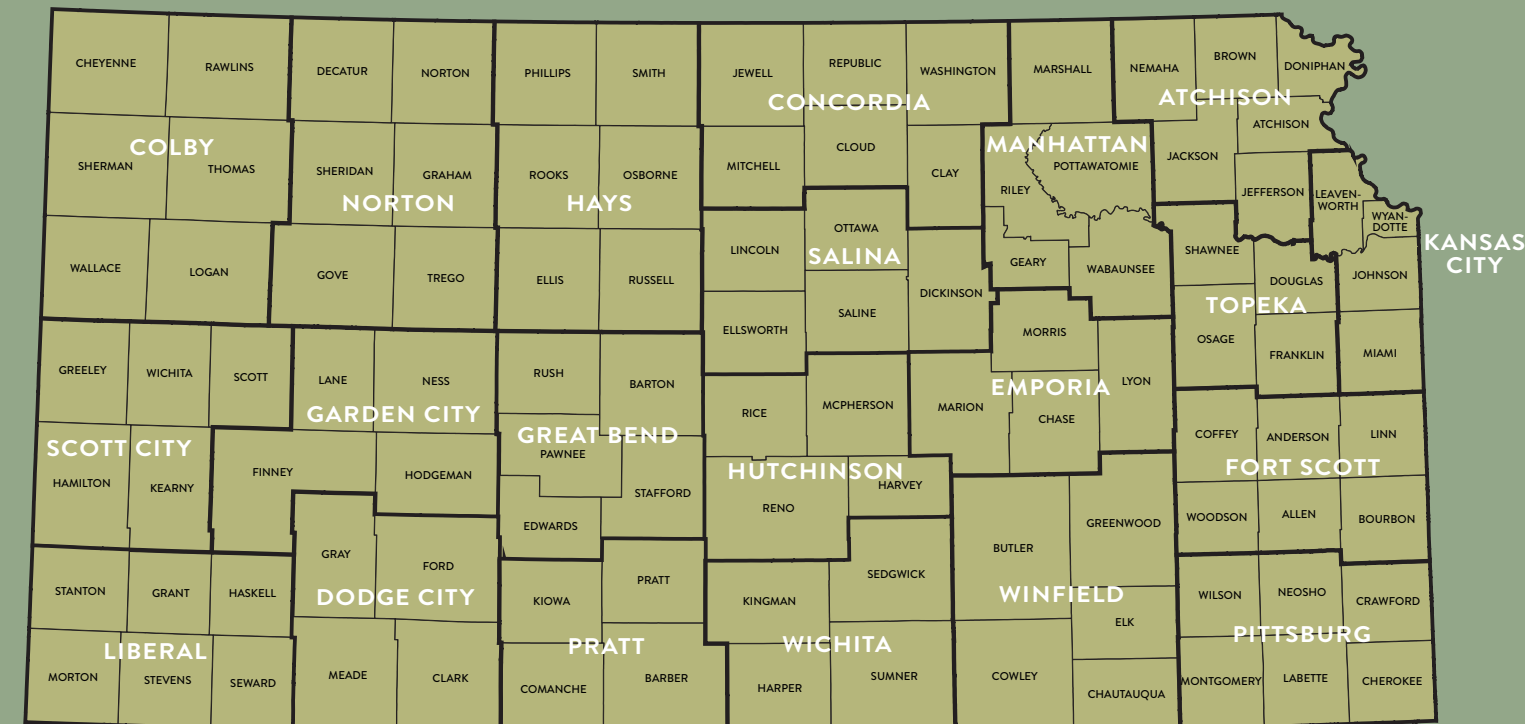
Brad Williamson – Lawrence

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MEMBERSHIP REGIONS





ABOVE, TOP TO BOTTOM Osage orange tree; fruit and seed; fruits in November.

ABOVE, RIGHT Champion Osage orange tree in Olathe, KS



The Tree that Saved the Prairie

— KEN O'DELL

America's Osage orange tree is one of the grandest trees Mother Nature ever produced. The Osage orange is also known as the hedge apple tree, bodark, bois d'arc and hedge tree. The name bois d'arc is French for wooden bow as the Native Americans use this wood for their hunting bows. The same bois d'arc term was corrupted into the name Ozark for the mountains where the tree is often found. The early Native Americans observed this tree growing naturally in the four corner areas of Arkansas, Louisiana, Texas, and Oklahoma well before the Europeans arrived. It was later reported to be found in other areas including the Texas Big Bend country.

Before the turn of the nineteenth century, the tree called Osage orange was unknown outside Native American communities. However, Lewis and Clark changed that. In 1804, Meriwether Lewis wrote to Thomas Jefferson about the explorers' discovery of a new species of tree he called the Osage apple. Over the next few years this tree was given eight different scientific names. Today, *Maclura pomifera* is the accepted scientific name: *Maclura* in honor of William Maclure (1763-1840) the father of American geology, and *pomifera* meaning "apple-bearing."

The Osage orange tree is in the same family as the mulberry: the Moraceae family. It is a tough, ragged, drought-resistant tree growing to forty feet tall or higher. Trees are male or female with the females producing the large round fruit commonly called hedge apples. In early autumn, we see the grapefruit-sized fruits of their labor scattered on the ground beneath their strong, rugged, thorny limbs.

Currently, at eighty-one feet tall, sixty-two feet wide, and nearly seventeen feet in circumference, the Kansas state champion Osage orange tree is in Olathe. This grand old tree racks up 298 points and is listed by the Kansas Forest Service (Kansas State University) "Champion Trees of Kansas" list as the state champion (find out how points are determined at the website: www.kansasforests.org).

Mature trees have dark, one-inch thick, brownish-grey bark. This colorful wood is desired by woodworkers because of its dark



CLOCKWISE FROM ABOVE Osage orange leaves; female fruit; male fruit; outer bark; inner bark; and osage orange fence posts for sale at stockyards.

golden heartwood which is highly resistant to insects and decay. The straight young branches are smooth but become crooked and irregular with age. The roots of the Osage orange have layers of a papery thin, bright orange covering similar to the thin peeling bark of a birch tree. Thorns on the younger, smooth branches are dropped from the older branches.

Split a fully mature hedge apple in half and you will find a hundred or more tiny seeds, smaller than the seeds of a grapefruit. The inside of the hedge apple has a sticky, milky juice. Seeds are a creamy-white color. Squirrels, quail, raccoons, deer, rabbits, and skunks eat the seeds and sometimes the pulp. If you plow up part of the root of the Osage orange it will be of a nice orange coloring. The bark on the root will be very spongy when you squeeze it as it absorbs moisture and nutrients as well as any tree Mother Nature ever produced.

In 1865, a publication called *The Kansas Farmer* recommended planting Osage orange trees to create hedge rows. In 1867, the Kansas legislature gave two dollars for every forty rods of hedge (that is 660 feet, or an eighth of a mile). Before the 1960s, Kansas was shipping as many as three million Osage orange fence posts a year on box cars to all points in America. The farmers and ranchers of the Great Plains needed fences, but so did the railroads as the government passed a law that the railroads must fence their tracks to keep from killing livestock.

In our Kansas soil and climate hedge apple will grow about three feet a year. Cut to the ground, a sapling will produce twice as much new growth to fence post size in three years. Thus, the fence post business was thriving. Livestock farmers needed to build pens that were "horse high, bull strong, and pig tight." To do this they would sometimes plow a furrow, put a solid row of hedge apples in the bottom, and run the wagon wheels back and forth to break up the seed balls. The furrow of crushed up seed balls was covered and Mother Nature did the rest.

Hedge rows provide food and shelter for creatures such as birds, rodents, snakes, hedgehogs and rabbits. The greatest value of all — sheltering from wind — had yet to be recognized, but the Dust Bowl of the 1930s would soon increase the planting of the Osage orange to monumental numbers. Between 1865 and 1939, farmers and ranchers in Kansas planted 39,000 miles of Osage orange hedge row. An excellent book about the dust bowl days is *The Worst Hard Time*. Start reading it and you will not put it down. Another great Osage orange book is titled *Wood Eternal* by Fred Tarpley of Texas A & M. A more recent book, *Trees, Shrubs, and Woody Vines of Kansas* has valuable information about this exceptional tree on pages 222-223.

I like to look at old Osage orange fence posts still standing on Kansas farms and ranches. These fence posts are tough and durable with the weathered age of the post adding indescribable beauty for the eye. This quote from our friend, Carolyn Oroke, describes an old hedge fence post perfectly "Aged to the hardness of steel, weathered with a patina created by nature, functional for decades past and present, this Osage orange fence post is as vital today as when cut and installed decades ago." Indeed, the Osage orange tree is one of Kansas' everlasting beauties.

KEN O'DELL PHOTOS





Caring for Common Ground Institute

— LORNA HABEGGER HARDER

In early 2019, Brad Guhr and I received an email from Cheryl Bauer Armstrong, Greg Armstrong, and Claire Bjork, the University of Wisconsin Earth Partnership Program leaders. Would we be interested in participating in a weekend institute that connected land restoration with spirituality? We responded with a resounding “YES!” Then COVID arrived, and the institute was postponed. We waited (im)patiently. The arrival of Summer, 2021, brought a new email announcing plans to schedule the Caring for Common Ground Institute in early October. Our calendars were immediately cleared and registrations and reservations were sent. We were ready to go!

October arrived and the Kansas team set out for Madison on a bright fall morning. Kansas team leader Brad was doubly thrilled as he could also reconnect with long-time University of WI friends. We all anticipated a weekend of listening and learning, of conversation, of gaining new insights into the personal values that have uniquely guided each of us in restoring land.

However, before the opening of the Caring for Common Ground Institute, there remained one important stop — a visit to our “Mecca,” the Aldo Leopold Foundation in nearby Baraboo. The Leopold Foundation is “...a conservation organization that works to inspire an ethical relationship between people and nature through Leopold’s legacy.” (<https://www.aldoleopold.org/>). Thus we spent our first Wisconsin morning exploring this special place. The LEED certified Leopold Center blends seamlessly into the Wisconsin landscape around it, surrounded by native woodlands, savanna, and prairie. It serves as headquarters, visitor center, and meeting facility for visitors, researchers, and groups from around the world.

There were a number of heart-tugging and defining moments during our visit.

- Our pilgrimage to the beating heart of the Leopold Foundation, Aldo Leopold’s Shack. A rebuilt chicken coop, the Shack served as setting for Aldo Leopold’s *Sand County Almanac*, its rustic presence eloquently embodying the Leopold family’s life and work;

- Our walk to stand at the site of “The Good Oak,” and to read again Leopold’s words that recognized the value of the good oak’s life and service to the land; and

- Contemplative time, time to experience this restored landscape of woodlands, savanna, prairie, and marshland, time to walk the banks of the Wisconsin River flowing nearby, time to hike the uplands above the river, and time to consider the impact of one man giving voice to the practice and the ethics of land community restoration.

Later, with Leopold’s life and legacy still fresh in our minds, we joined fellow attendees to begin what would be an inspiring two days of Institute at the Holy Wisdom Monastery (<https://holywisdommonastery.org/>). The Monastery is in itself an extraordinary place, an ecumenical Christian community deeply committed to spiritual growth, environmental sustainability, and interfaith hospitality. Also LEED certified and surrounded by 130 acres of former farmland restored to prairie and savanna, the Monastery provided a quiet, nurturing space that encouraged participation, dialogue, and mindfulness.

Our introduction began with welcomes and blessings offered by the Monastery sisterhood, and by a member of the Ho-Chunk nation. Subsequent Institute programming connected practices of land restoration — seed collection, site analysis, planning, planting, and celebrating — with the spirituality and ethics of land restoration. Interfaith and indigenous perspectives were presented, perspectives that asked each of us to examine our personal values, the moral underpinnings that inspire and guide us in our restoration efforts.

Throughout the Institute, time was given to walk slowly, to make contact with Earth, to listen carefully, to observe closely, to feel the life around us, to be still. Time was given to engage with our inner selves, to listen to each other, to participate in thoughtful dialogue. Time was given to extend and receive forgiveness, to reciprocate, to express gratitude, to live respectfully, and to celebrate the land community of which we are a part.



Our final Institute conversations and reflections focused on next steps. How might we bring Caring for Common Ground to our respective local communities? What forms might it take? Who might be our collaborators? For the Kansas team, a lively conversation ensued as we drove across Iowa and Missouri. By the time we reached the Kansas border, we had formulated a skeletal framework of two basic ideas that we would further explore: weekend institute offerings for interested groups, and a several-months-long class for interested individuals. Kansas team meetings and an upcoming meeting with our fellow attendees, the Garrett Theological Seminary team, will help us refine programming and curriculum under consideration at the Dyck Arboretum for 2022-2023. To that end, we remain inspired and committed to the possibilities ahead, and to the opportunities to communicate what we intuitively know already, that our knowledge and skills in the practice of land restoration are in synchrony with the spiritual compasses that guide and inspire us.

For further reading:

Kimmerer, Robin Wall. 2013. *Braiding Sweetgrass*
 Leopold, Aldo. 1949. *Sand County Almanac*
 Leopold, Estella B. 2016. *Stories from the Leopold Shack*
 Meine, Curt. 2010. *Aldo Leopold: His Life and Work*

OPPOSITE PAGE, L TO R

Greeting the morning in the Holy Wisdom Monastery prairie
 Kansas Team outside of Aldo Leopold’s shack

ABOVE, CLOCKWISE

Collecting seed for the oak savanna planting
 Brad Guhr in the Shack
 Seeding in the oak savanna restoration
 Celebrating an oak savanna restoration planting



— LORNA HABEGGER HARDER PHOTOS

KANSAS NATIVE PLANT SOCIETY

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MEMBERSHIP APPLICATION/RENEWAL FORM

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