



KANSAS NATIVE PLANT SOCIETY

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NEWSLETTER OF THE KANSAS NATIVE PLANT SOCIETY

JANUARY 2020

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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
2045 Constant Ave.
Lawrence, KS 66047-3729

KNPS 2020 WILDFLOWER OF THE YEAR

Blue Wild Indigo – *Baptisia australis* var. *minor*

— BRAD GUHR

Blue wild indigo (*Baptisia australis* var. *minor*) is the Kansas Native Plant Society 2020 Wildflower of the Year (WOY). It is also known by the common name blue false indigo.

Found in roughly the eastern 2/3 of Kansas, this one to four-foot tall, stout and erect perennial with smooth, waxy stems/leaves thrives in prairie to open woodland habitat with soils ranging from limestone to clay. The recognizable pea-like flower and three-leaflet compound leaf help cue that this species is a nitrogen-fixing legume in the bean (*Fabaceae*) family.

— CONTINUED ON PAGE 2

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KNPS NEWSLETTER STAFF

Cynthia Rhodes cynrhodes@gmail.com
Copy & Assignment Editor

Brian L. Martin
Design & Layout Editor

Phyllis Scherich
Proofreader

KANSAS NATIVE PLANT SOCIETY

R. L. McGregor Herbarium
University of Kansas
2045 Constant Ave.
Lawrence, KS 66047-3729

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Contact us by email at email@ksnps.org
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Wildflower of the Year — CONTINUED FROM PAGE 1

The name derivation for Baptisia comes from the Greek word bapto meaning “to dye” and for australis, the Latin meaning is “southern”. The variety name minor (Latin for “small”) refers to the smaller leaves when compared with eastern varieties. The flowers when squeezed yield an indigo-colored dye, and the name false indigo makes reference to the color being an inferior substitute for true indigo (genus *Indigofera*) in making dyes.

The April to early June flowers of blue wild indigo make it an attractive landscaping plant. Its six-foot root system develops slowly and new plants need roughly five years of establishment before flowering. Ripe seeds become loose in the pods that resemble a baby rattle.

Baptisia flowers attract bumblebees as pollinators, the vegetation is a host plant for the wild indigo duskywing butterfly, and a *Baptisia* seed pod weevil lays its eggs in the seed pods where larvae hatch and feed on the seeds. All parts of the plant contain poisonous alkaloids and cattle tend to avoid eating it.

The ripe bean seeds develop a hard coat that wears down slowly. To greatly improve seed germination success of hardened seeds, scarify them with medium sandpaper or soak in hot water before applying cold, wet stratification. Collecting pods a bit green before seed hardening occurs has been shown to allow germination without any treatment.

To see these photos by Michael Haddock and a detailed description of Baptisia australis var. minor, visit kswildflower.org.

Past KNPS WOY Selections			
2019	Woolly verbena (<i>Verbena stricta</i>)	2006	Blue sage (<i>Salvia azurea</i>)
2018	Cobaea penstemon (<i>Penstemon cobaea</i>)	2005	Rose verbena (<i>Glandularia canadensis</i>)
2017	Plains coreopsis (<i>Coreopsis tinctoria</i>)	2004	Missouri evening primrose (<i>Oenothera macrocarpa</i>)
2016	Golden alexanders (<i>Zizia aurea</i>)	2003	Large beardtongue (<i>Penstemon grandiflorus</i>)
2015	Green antelopehorn (<i>Asclepias viridis</i>)	2002	Fremont’s clematis (<i>Clematis fremontii</i>)
2014	Blue-eyed grass (<i>Sisyrinchium</i> species)	2001	Thickspike gayfeather (<i>Liatris pycnostachya</i>)
2013	Little bluestem (<i>Schizachyrium scoparium</i>)	2000	Maximillian sunflower (<i>Helianthus maximilliani</i>)
2012	Lead plant (<i>Amorpha canescens</i>)	1999	Butterfly milkweed (<i>Asclepias tuberosa</i>)
2011	Prairie coneflower (<i>Ratibida columnifera</i>)	1998	Black-sampson echinacea (<i>Echinacea angustifolia</i>)
2010	Catclaw sensitive briar (<i>Schrankia nuttallii</i>)		
2009	Prairie larkspur (<i>Delphinium virescens</i>)		
2008	Fringed puccoon (<i>Lithospermum incisum</i>)		
2007	Purple poppy mallow (<i>Callirhoe involucrata</i>)		

President’s Message

BRAD GUHR

A Fresh Perspective

One may think that winter is the time to forget about the Kansas outdoors, but I beg to differ. While December, January and February may be the dormant months for our flora, exploring the Kansas landscape and its native plant communities in winter can be just as rich and interesting as in spring, summer and fall.

Winter walks highlight the contrasts of the prairie grasses and forbs that are more visible. The bright, eye-candy colors of the growing season are no longer present to dominate my attention. The waning purples, yellows, reds, and greens of fall have served their purposes of pollinator attraction and energy production and given way to the variously rich shades of brown in winter. These remaining warm frugal hues now allow me to see more easily the prairie shapes against itself and the sky.

With the sun on my back, I observe any fleeting remnants of color left in the highly visible vegetation stems before me. I reverse my perspective to take in the prominent shadows, and see how the glancing sunlight erases color and highlights texture. The new look of the same goldenrod and little bluestem plants now give a glow – they are obviously full of seeds with extended hairy pappus that will soon catch the wind and alight to a new location. This is good reminder that anything can look vastly different with just a change in perspective.

I see the ever more relaxed seed head of grey-headed coneflower and wonder how many seeds will be food for some bird or small mammal or eventually become future seedlings. I observe the shiny reddish-brown coat of Illinois bundle-flower seeds ready to drop and wonder how many years that coat will lock away germination secrets.

The skies are more noticeable to me this time of the year. I enjoy winter for its blazing sunsets, hedgerow silhouettes, and daily migrations of long blackbird ribbons that wave over the SC Kansas landscape. These months that bring us the winter solstice graciously offer shorter days, a slower pace, and more time for reflection.

I am excited about what 2020 will bring for KNPS and its members. The spring mini AWW (Annual Wildflower Weekend) in SW Kansas and the fall AWW in SE Kansas will respectively offer the vastly different perspectives of shortgrass prairie and tallgrass prairie/oak savanna/oak woodlands at the bookends of the growing season. But before that on the day of our winter board meeting in Emporia on Saturday, January 25, we will offer a chance to walk the winter prairie of the Flint Hills. Consider joining us for a 9:00 breakfast that morning at Keller Feed and Wine Company in Cottonwood Falls followed by a hike at nearby Tallgrass Prairie National Preserve.

Enjoy the dormant times of the winter landscape while you can, as the interfering colors of spring will be here soon enough.



Little bluestem



Grey-headed coneflower



Illinois bundle-flower

BOOK REVIEW

Diverse Environmental Leaders Bring Hope for a Paradigm Shift

— SHIRLEY BRAUNLICH

“It is not our differences that divide us. It is our inability to recognize, accept and celebrate those differences.” — Audre Lorde

Greater wildlife and plant biodiversity in the natural world creates stronger and more resilient responses to stresses in an ecosystem. Humans are a part of the natural world; with more diverse people involved in environmental work comes more creative responses to ecosystem needs.

I have written before about my hope for exponentially more diverse advocates for the natural world, inspired especially by Dr. J. Drew Lanham. Lanham is a terrific ambassador to connect more people to the natural world while also recognizing the empowerment shared by people with similar cultural experiences. Reflecting this hope, Angelou Ezeilo has written a new book with strategies to move diversity forward in environmental work. Her book is titled *Engage, Connect, Protect: Empowering Diverse Youth as Environmental Leaders*. Angelou Ezeilo shares expertise as the Founder and CEO of Greening Youth Foundation (GYF). GYF has connected more than 25,000 diverse children and young adults in environmental curriculum and career paths, from third grade elementary students to college internships in national parks and outdoor retailers, since they began in 2008.

AN INTERVIEW

Angelou Ezeilo, Change Maker and Author

— SHIRLEY BRAUNLICH

I am celebrating my newest shero, Angelou Ezeilo. The environmental advocate and author of a new book will be speaking in Lawrence on February 20, 2020. Everyone concerned about diversity in our environment will want to learn from this experienced advocate. As the Founder and CEO of Greening Youth Foundation, she is creating career pathways for diverse youth into environmental stewardship work. Angelou Ezeilo's new book is *Engage, Connect, Protect: Empowering Diverse Youth as Environmental Leaders*. She took time to answer some of my questions below and I am looking forward to learning much more during her visit.

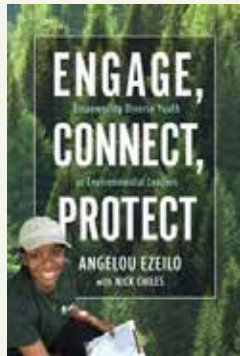


SB: In your book, you shared an experience with someone yelling at you; it felt like a racist attack at you and a companion and you needed to travel back home to feel safe. Would you share some of your strategies to ensure the young

people you send to remote or less diverse areas are safe?

AE: That incident you mentioned is why our organization implements a buddy system. As most of the places we send our interns to across the country typically do not have a large constituency of diverse people, we send them in pairs of two so that they are not alone. As we know, difference often promotes fear which leads to ignorance and bigotry. As such, when interviewing young adults for these positions we first determine whether they

The optimism and practical knowledge Angelou Ezeilo presents in this book is insightful and necessary. She shares personal and professional stories of connecting and advocating for the natural world and dispels society's mythology that people of color are not connected or concerned with our environment. Ezeilo also reveals wisdom such as effective mentoring with youth of color requires culturally relevant curriculum as well as role models of color to help kids to visualize themselves doing similar work when they grow up. The wealth of resources in appendixes of the book includes environmental organizations led by people of color, historically Black colleges and universities and Hispanic-serving colleges and universities. Haskell Indian Nations University is included in an appendix with different American Indian tribal colleges and universities.



Review reprinted from November 1, 2019 Lawrence Public Library blog page

have a strong character because we know that they will be on the frontlines at some parks/forests/refuges and in many cases will be diversifying the site. Our project managers mentor the interns and provide as much support as possible in addition to multiple site visits.

SB: Do you plan to visit any natural areas during your visit to our area? My recommendations:

- We have a large area of restored wetlands in town, including wetlands at Haskell Indian Nations University and the adjacent Baker Wetlands that attracts a high diversity of wildlife and offer plenty of walking trails that make this area fairly accessible.
- Other habitat options in the area include a 7-acre tallgrass prairie at the Prairie Park Nature Center and even more natural areas are within easy reach.
- Also Brown V. Board of Education National Historic Site is nearby in Topeka with the Landon Nature Trail.

AE: I would love to! Your recommendations sound amazing.

Engage, Connect, Protect is Angelou Ezeilo's debut book. This thought-provoking and practical book has heartfelt personal and professional stories of connecting and advocating for the natural world.

Meet author Angelou Ezeilo in Lawrence on February 20, 2020! Find out more about the event at the following site: <https://lawrence.bibliocommons.com/events/5daf2d3066a9f12300fb3f82>



ANDREW MITCHELL PHOTOS

FEATURED NATURAL AREA

Wilson State Park & Recreation Area

— ANDREW MITCHELL

In the early summer of 2018, KNPS members gathered for the Spring/Summer meetings in Wilson. During that weekend, I found a new place to botanize and explore. Even though I grew up in Cloud County, just an hour and a half drive from Wilson Lake, I had never been there. It is an amazing place to spend time looking at plants, watching wildlife, fishing, or spending time with family.

Wilson Reservoir is a 9000 acre water feature in the Smoky Hills, which has the highest density of native flora of any region in Kansas, even more than the Flint Hills. The landscape of the Smoky Hills changes from north to south and east to west, and the flora changes with it. Around the reservoir is approximately 8000 acres of hunting ground including parks, shorelines, campgrounds, timber, cropland, and a waterfowl refuge. You could camp and spend a week there enjoying all the wonders.

To get to Wilson State Park from Salina, go west on I-70 to Exit 206, then north on KS-232 N Highway. KS-232 N follows around the reservoir dam and you can turn off on Land Lane or other roads to enjoy different areas of the lake.

I found quite a number of native species I was not familiar with around the lake on the north side off Land Lane, as well as along the highway south of the dam. I am hoping to get more familiar with the area in the coming year; I know my kids would love to spend time there!

There is a wide variety of plants around the lake, but I was very interested in seeing my first paintbrush (downy) and bastard toadflax (*Comandra umbellata*). These along with new penstemons, cacti, scutellaria, and scarlet globe mallow really got me excited for a return trip.

See you out there!



TOP Wilson State Park & Reservoir
ABOVE Bastard toadflax (*Comandra umbellata*)
ABOVE RIGHT Downy paintbrush (*Castilleja sessiliflora*)
RIGHT Tuber false dandelion (*Pyrrophappus grandiflorus*)



Native Trees a Vital Part of Urban Canopy

— JOAN MANOR

Wichita, Kansas is undergoing significant change in its downtown and river corridor, sparking great interest in urban development. Yet, it is the quality of life in quiet neighborhoods, parks, and natural open spaces that continue to make residents and visitors satisfied with their city. These natural green resources make a significant contribution to an earned high livability rating.

A study of forests in Kansas cities (USDA Urban Forest Study 2010) indicated that trees in both rural and urban settings contribute mightily to the quality of life and health of Kansans beyond just aesthetic value.

In urban settings, Kansas trees store and sequester carbon with a total pollution removal financial impact of \$11,900,000 annually. In addition, trees reduce ground water pollution, reduce energy costs, reduce heat stress, increase safety of neighborhoods, reduce crime, provide wildlife habitat, and provide buffers for noise pollution. In general, trees are a good investment as a part of the city infrastructure. They must be maintained, preserved, and renewed, just as other environmental structures within the city.

In a 2018 Wichita-Forest Service partnership, a tree canopy survey specific to Wichita was conducted to gain an overview of the tree canopy of the city to assist in planning for the maintenance, preservation, and renewal of urban tree assets. The total area within the city limits is approximately 170 square miles, with twenty-three percent of that area covered by tree canopy, according to that 2018 Kansas Forestry survey.

The study utilized “The Urban Tree Canopy Assessment” to assist Wichita in a base-line survey of canopy. Gary Farris, Wichita city tree arborist, indicated that Wichita is now losing as many as 5000 trees yearly, and like many major cities has a mature and over-maturing tree canopy with many dying trees that need removal. The Kansas Forest Action Plan of 2014 indicates that nearly half of the urban tree population is in “fair to poor condition and thirty-eight percent in three species – silver maple (*Acer saccharinum*), Siberian elm (*Ulmus pumila*), and hackberry (*Celtis occidentalis*)”. Survey results of the Urban Tree Assessment would help Wichita plan by measuring, monitoring, and improving tree cover over time, as

well as to combat threats that cause tree canopy loss. That city shares the same concerns as other urban centers.

According to the 2014 Forest Action Plan, exotic invasive plants threaten the health and biodiversity of Kansas forests. The main three threats include bush honeysuckles (*Loricera maackii* and *Lonicera x bella*) in the eastern third and tamarisk (*Tamarix ramosissima*) and Russian olive (*Elaeagnus angustifolia*) in the south central and southwestern parts of the state.

In addition to the problems caused by invasives, urban canopies also fight the threat of insect and disease, in particular Thousand cankers disease, an imminent threat to black walnut with the potential to create over \$160 million dollar loss to the Kansas economy and a loss of environmental benefits. Emerald ash borer is a threat to white and green ash and three counties are under federal and state quarantines. Pine wilt has killed thousands of Scotch pines and to a lesser extent Austrian since 1979 and is now present in the eastern half of Kansas.

Gary Farris indicated that in years past, department efforts went to dead tree removal due to staff limitations and the severity of the damage caused by drought early in the decade. However, after the survey outlined the severity of the problem, the department was able to add staff and services. Now the department has four crews working on tree removal, hires some contract services, and has an additional crew to respond to emergency tree problems. Additionally they have developed a systematic approach to pruning trees and a plan for planting.

In an interview with Gary Farris, Craig Beaver, and David McGuire, Superintendent of Forestry and Maintenance, they explained that the department has a seedling program, and although limited, has provided some small trees. At this time, they propagate about 200-500 male cottonwoods a year. They are careful to plant these in selected areas along greenways and parks and avoid planting near walkways due to root uplift. Farris indicated that they also purchase bundles of balled and burlap trees which include a proportion of native trees and these are planted as needed in the overall plan which will total some 1800 trees annually. They also plant some native hackberry, but are careful where they plant them, as over a fifty year period of time their roots tend to spread, resulting in a weak tree. Their main goal, he stated, is that what is planted will remain strong over the long term. In the near future, they hope to conduct an additional survey that would provide species information of the tree canopy.



Osage Orange hedge rows remain in many neighborhoods



Maple trees Line Streets Adding Diversity

The required trees may be clustered along a particular façade or boundary of the project. Trees need not be spaced evenly, although it is permissible to do so, provided adequate distance is maintained between individual specimens. Minimum spacing for ornamental trees is recommended to be fifteen (15) feet and forty (40) or more feet for shade trees. The trees shall be selected from a list of tree types that are commonly known to grow in the Wichita area and are listed in the publication prepared by the Kansas Forest Service and titled “Preferred Tree Species for South Kansas” or the Wichita Landscape Ordinance Guidebook. The planting of Siberian elm (*Ulmus pumila*) and female or cotton-bearing cottonwood trees in required landscape areas is not allowed.

In the 2015 thirty year comprehensive plan, three principles guide the cities growth: the quality of life of the area, improved maintenance of what already exists, and balanced growth with added focus on local neighborhoods. The city continues to rely on the plantings of homeowners to select and plant suitable trees that will add to a strong canopy. They refer the public to the Sedgwick County Extension Service for a listing of appropriate and “water-wise” trees and to the Kansas State Listing of Preferred Trees. Further information is also available on the KNPS site. All are listed below.



Street-side damage after ice storm

<https://www.sedgwick.k-state.edu/gardening-lawn-care/documents/Water%20Wise%20Plants%202015.pdf>

http://www.kansasnativeplants.com/guide/plant_search.php?grp=tree

<https://www.sedgwick.k-state.edu/gardening-lawn-care/documents/SC%20Pref%20Trees-2016%20Final.pdf>

2019 Kansas State Eco-Meet

— LORNA HABEGGER HARDER

On November 7, nearly one hundred science-minded students from seventeen Kansas high schools converged at the Dyck Arboretum of the Plains in Hesston for the 21st annual Kansas Eco-Meet State Finals competition. To reach the finals, more than 500 students had participated in nine regional Eco-Meet competitions statewide to determine the teams who would be representing their respective regions in the state finals.

This year's Eco-Meet featured four challenges: the habitat challenge tested teams' integrated knowledge of Kansas Woodlands; the focus challenge tested teams' knowledge of ornithology; the scavenger hunt challenge tested teams' ability to locate and identify native plants; and an interpretative challenge tested teams' ability to communicate their knowledge of plants and animals by creating and performing an entertaining, informative skit. Energetic students were undaunted by clouds and cold, as they competed in the challenges throughout the day. Lunch at Hesston College allowed a bit of time for conversation with some of the teams. Several first-time members of the Dodge City team remarked at the thrill of being able to represent their region in the finals.

The Kansas Eco-Meet state finals underscore the Eco-Meet mission that seeks to challenge and inspire interest, appreciation, and understanding of the natural sciences and the Kansas environment through interscholastic competition. The competition offers opportunities for qualified high school students to demonstrate their knowledge of Kansas' wildlife and plants. Winning teams, as well as individuals, receive both well-deserved recognition and scholarships. This year, a total of \$3000 in scholarships was awarded to eleven students in the top three overall teams, and to four top-scoring students in individual events.

The Kansas Native Plant Society is one of fourteen organizations that helped sponsor the 2019 Eco-Meet. Our organizational sponsorship of the Eco-Meet helps us fulfill our mission also: ... 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. Through our support, KNPS continues to encourage the next generation of Kansas scientists and citizen scientists who will know and care more for this prairie landscape we call home.

Additional information about the Kansas Eco-Meet organization can be found at the following site: <http://kansasecomeet.org/ecomeet/> or by contacting Mike Rader at: mike.rader@ks.gov or (620) 672-0708.

BRAD GUHR PHOTOS



How a Power Company Helps Save the Monarch Butterfly

— MICHAEL KAYE

One spring morning, a middle school science teacher in Garden City, Kansas, reviews the day’s lesson plan and the pollinator garden the class will be planting. In Beloit, a county weed director, before work, starts his pickup truck for his morning route scattering wildflower and milkweed seeds along roadsides to attract monarch butterflies. In Topeka, biologists at Evergy, an electric utility with 31,000 miles of powerline rights-of-way (ROW) across Kansas prepare a report on nearly 20,000 acres of monarch and other pollinator habitat the company works to conserve: a landscape of native grass and wildflowers nourishing some of the millions of monarchs migrating through North America to the mountains of central Mexico and back.

Monarch numbers are steeply declining. A 2017 study by universities and federal agencies concluded that 125 million acres of monarch habitat in the U.S. must be restored to support a winter population in Mexico large enough to avoid extinction. The study identified 10.7 million acres of utility transmission ROW’s. Conservation on these land corridors could yield enough milkweed for more than 12 million monarchs: about 5% of a fully recovered population.

Nationwide efforts of educators, agencies, conservation groups, utility companies, and individuals to protect monarchs include Evergy Corporation and conservation-minded employees like Evergy biologists Eric Johnson and Pam Tennison Rindt.

Eric represents Evergy on the National Rights-of-Way as Habitat Working Group and Monarch CCAA Development Partnership Advisory Team. Previously a biologist at the Kansas Department of Wildlife, Parks and Tourism he worked with industry to reduce impacts to wildlife through property siting and mitigating unavoidable impacts. Pam has 16 years of experience at Evergy performing biological assessments for threatened and endangered species. She represents Evergy on the Kansas Monarch Conservation Task Force and leads its Rights-of-Way sector group.

Evergy strives to shield monarchs from loss of nourishing milkweed and habitat, and effects of climate change. Evergy serves more than 1.6 million customers across Kansas and Missouri: an area stretching 316 miles west to east and 325 miles north to south. It services 700,000 residential, commercial, and industrial customers in the eastern third of Kansas. Evergy’s Green Team of employees, retirees, and other volunteers commits to improving environmental protection and resource sustainability. They complete 50 to 70 projects per year by joining conservation groups, agencies, and educators to promote public understanding of the environment, improve natural habitat, and support public access to environmentally important areas.

The monarch migration passes through Kansas and across Evergy’s transmission lines and near distribution substations. Due to the high numbers of monarchs, Evergy is concerned about the effects upon power transmission lines of increased governmental protection of monarchs. It also wants to avoid unnecessarily harming monarchs crossing Evergy lands and ROW’s.

In addition to the miles of powerline ROW Evergy manages, Evergy owns and manages approximately 12,000 acres of native Kansas grassland around power generation sites. Using agricultural leases, Evergy works with farmer and rancher lessees to follow proper fire and grazing practices. Among the thousands of acres of monarch habitat beneath its powerlines, much of Evergy’s managed habitat is at power generation sites like Jeffrey Energy Center, St. Marys, and Wolf Creek near Burlington, both in Kansas.

Evergy tries to avoid unnecessary conflict between increased federal regulation and Evergy’s efforts to deliver a reliable network of transmission lines and support structures for its customers. Evergy is one of the first electric utility companies and power transportation and distribution companies to design a conservation plan to reduce the negative impact of additional federal regulation of land users should monarchs be listed for protection under the Endangered Species Act. The plan is contained in a proposed Nationwide Candidate Conservation Agreement with Assurances for the Monarch Butterfly on Energy and Transportation Lands (CCAA) subject to approval by the U.S. Fish and Wildlife Service.

Listing monarchs as an endangered species can affect utility companies’ land management. To ensure electricity reliability, mitigate risks from outages, and reduce wildfire risks, electric utilities need to control vegetation near power lines. New restrictive regulations can limit a utility’s right to properly manage its lands, affect mowing practices, vegetation control, and location choices for new transmission lines and infrastructure.

The U.S. Fish and Wildlife Service tracks monarch population trends and evaluates conservation strategies to restore the threatened species to a sustainable level. Petitioned to provide monarch protection under the Endangered Species Act (ESA), the Service will announce by December 2020 whether the monarch will be listed as an endangered species.

Under the ESA, Candidate Conservation Agreements with Assurances are defined as voluntary agreements between the Service and land users called enrollees. Before agreeing to a CCAA, the Service determines that benefits of the proposed conservation measures would preclude a need to list the covered species. CCAA agreements give land users incentives for proactive conservation. In return, if the species is listed as endangered, contracting parties who adopt beneficial conservation measures are exempt from further land, water, or resource use restrictions beyond those agreed to in the CCAA. The Service issues “Enhancement of Survival” permits allowing enrollees to “take” covered species as long as the level of taking is consistent with the level agreed upon in the CCAA. “Taking” means occasional damage to protected species incidental to otherwise lawful land use activities.

CCAA participation avoids costly delays and unpredictable last-minute disruptions to enrollees’ construction and maintenance work due to new species listing requirements. Enrollees retain flexibility in choosing conservation measures. Moreover, conservation measures approved in the CCAA reflect current practices in the energy and transportation sectors. With their own pre-approved conservation plans, enrollees can create new habitat, maintain and modernize infrastructure, and transmission and distribution lines on lands they own or manage. Benefits must outweigh costs of incidental damage to monarch populations.

Under their CCAA, participants may have to change vegetation management practices and monitor habitat. However, CCAA conservation practices, such as reduced mowing and targeted herbicide treatments, may produce cost savings and free staff to address other needs.

Conservation efforts voluntarily undertaken before a species is imperiled increase the use of simpler less expensive measures, provide land use flexibility, and can prevent listing a species as endangered. Enrollees’ conservation measures under a CCAA agreement may include: minimizing harm to monarchs during ROW operations, maintenance, and modernization activities; creating and improving habitat; and adjusting the timing of mowing and other vegetation management practices to reduce impacts on monarchs. Enrollees agree to modify and reduce herbicide use in order to promote growth of milkweed and other flowering plants; they also agree to use local seed mixes to promote variety. Each year enrollees must dedicate a minimum proportion of enrolled lands to monarch habitat. Monarch habitat must be monitored during the term of the agreement.

Under Eric’s leadership, Evergy helped design the Nationwide Candidate Conservation Agreement with Assurances for the Monarch Butterfly on Energy and Transportation Lands. The University of Illinois at Chicago (UIC) Energy Resources Center led in developing this CCAA Agreement: an unprecedented effort in cross-sector participation and geographic scope. It is administered by UIC subject to oversight by the Service.



Solar energy site at Baldwin City to be restored in the next several years

The Agreement is a landmark pact between the Service, UIC, and over forty entities from the energy and transportation sectors: a common effort among energy providers, transportation and distribution companies, and state transportation departments to protect monarch butterflies. It embodies shared beliefs in the value of energy- and transportation-owned lands and easement-based rights of way to monarch conservation. Enrollees agree to preserve or enhance monarch habitat on up to eighteen percent of their transmission line ROW’s and easements by adjusting vegetation management practices. The agreement spans 1.8 million acres in 45 states.

Evergy continues to work with the Service and the Monarch CCAA Advisory Group finalizing the agreement at the national level. The CCAA is targeted for completion by January 2020. Meanwhile, Eric, Pam, and Evergy staff, in consultation with Evergy leadership, are reviewing company lands and ROW’s in Kansas and Missouri for inclusion in the CCAA.

Besides everyday vegetation management, Evergy will work with conservation groups in Missouri and Kansas to identify places that may lack suitable habitat, and, if Evergy has property in those areas, staff will consider places to be restored for habitat creation: e.g. substation land and idle land around power plants. For example, Evergy is currently restoring a solar energy site in Baldwin City, Kansas, in partnership with City management. Solar panels have been installed and Evergy, with pollinators in mind, will drill, then broadcast a shortgrass native seed mix on the site later this winter.

Eric and other staff are developing a working group across Evergy departments to implement conservation actions and facilitate communication. Many actions benefitting Monarchs and other pollinators already are being implemented on Evergy lands and ROW’s. Furthermore, CCAA enrollment will not significantly impact Evergy’s vegetation management strategies, but will help improve company strategies benefiting monarchs, and lead to improved habitat assessment on Evergy territory.

¹ How Can the Power Industry Help the Monarch Butterfly? <http://eprijournal.com/wp-content/uploads/2019/04/2019.03->



ERIC JOHNSON PHOTOS

Monarch habitat in a native hay meadow at Wolf Creek Power Plant

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!

JANUARY | 25
KANSAS NATIVE PLANT SOCIETY WINTER BOARD MEETING at Emporia State University in Emporia. Meet in Science Hall, Room 156 from 1-3 pm. Inclement weather date is February 1. Science Hall is on Merchant Street (K-99) and contains the Schmidt Museum of Natural History. **Contact Michael Heffron, mheffron@butlercc.edu, 620-750-0324**

JANUARY | 29
“CHAMPION TREES OF THE OVERLAND PARK ARBORETUM” presented by Jim Earnest. Most of us love big trees. Ken O'Dell and Jim Earnest have walked the trails and gardens at the Arboretum and measured more than 200 trees over the past three years. The largest of twenty-four species have been selected for this one-hour presentation at 1 pm. Jim will show and discuss the largest of 24 species, including giant cottonwoods and hickories, along with many others. He will also show you where to find these special trees at the Overland Park Arboretum and Botanical Gardens. Location: 8909 W. 179th, Overland Park. **Contact: Jim Earnest, jimearnest@me.com, 913-636-9303**

FEBRUARY | 15
“THE HEALING GARDEN: IN A POT OR A PLOT” WORKSHOP at Good Earth Gatherings, 10am-12:30pm in Baldwin City. Instructor Twila Fairbanks will share her “must-haves” — those easy-to-grow plant allies for making tinctures, salves, and other natural remedies. She will also share invaluable tips, stories, seeds, and sources, empowering you to plan and plant your healing garden this spring! \$19 enrollment, information at www.GoodEarthGatherings.com, location: Good Earth Gatherings, 858 E. 1500 Rd, Baldwin City. **Contact: Tamara at goodearthgatherings@gmail.com, 785-691-5914**

FEBRUARY | 20
ANGELOU EZEILO, author of the book *Engage, Connect, Protect: Empowering Diverse Youth as Environmental Leaders*, will speak in Lawrence. Ezeilo is Founder and CEO of the Greening Youth Foundation, www.gyfoundation.org; creating career

pathways for diverse youth into environmental stewardship work. Sponsor: Elizabeth Schultz Environmental Fund. Meet and learn from Angelou Ezeilo at 7pm at Liberty Hall, 644 Massachusetts St., Lawrence. **Contact: ksoper@lplks.org, 785-843-3833**

MARCH | 4
“TREES, SHRUBS AND WOODY VINES OF KANSAS” WITH CRAIG FREEMAN at 7pm at Lawrence Public Library. Dr. Freeman and Michael John Haddock are co-authors of the revised edition of *Trees, Shrubs, and Woody Vines in Kansas*. **Contact: Jake, jvail@lplks.org, 785-843-3833**

MARCH | 7
BOOK DISCUSSION of Angelou Ezeilo's new book: *Engage, Connect, Protect: Empowering Diverse Youth as Environmental Leaders*. This debut book is thought-provoking and practical with heartfelt personal and professional stories of connecting and advocating for the natural world. Reserve your spot, borrow a copy of the book, and join us (3 to 5 pm) for a discussion at Lawrence Public Library, co-lead by Jake Vail and Shirley Braunlich. **Contact: sbraunlich@lplks.org, 785-843-3833**

MARCH | 18
NATURE BOOK CLUB 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 at Lawrence Public Library, 707 Vermont St, RSVP is helpful. **Contact: sbraunlich@lplks.org, 785-843-3833**

MARCH | 24
JOY HARJO, U.S. POET LAUREATE, to Read and Perform at K-State in Manhattan. Harjo is an acclaimed saxophone player. In a statement, Librarian of Congress Carla Hayden said Harjo's work “powerfully connects us to the earth and the spiritual world with direct, inventive lyricism that helps us reimagine who we are.” Harjo, a member of the Muscogee (Creek) Nation of Oklahoma is the first Native American U.S. Poet Laureate. Alumni

Center Ballroom, 1720 Anderson Ave, Manhattan, 5:30 to 7 pm. **Contact: 785-532-6011**

APRIL | 5
WAKARUSA WETLANDS CELEBRATION at Haskell Indian Nations University, 2 to 4 pm. Arrive early, we will begin with a special land recognition at the Medicine Wheel Earthwork. Meet Dr. Daniel Wildcat and more local authors and artists as they share connections of their creative work to the wetlands and the outside world—enhancing our connections to nature, a sense of place and community. Dr. Wildcat is a Yuchi member of the Muscogee Nation of Oklahoma. Feel free to bring a lawn chair or blanket; we will be outside. If there is inclement weather, we will cancel. **Contact: sbraunlich@lplks.org, 785-843-3833**

APRIL | 18-22
CELEBRATE THE 50TH ANNIVERSARY OF EARTH DAY! Watch for info locally or make your own plans and share the news!

MAY | 29-30
KANSAS NATIVE PLANT SOCIETY SPRING BOARD MEETING AND OUTINGS IN WESTERN KANSAS. The Board meets Friday afternoon, followed by interesting botanizing in the area. Saturday's botanizing tours will feature more unique plant communities and geologic features. **Contact Anthony Zukoff, azukoff@gmail.com, 620-290 2411**

SEPTEMBER | 25-27
KANSAS NATIVE PLANT SOCIETY'S 42ND ANNUAL WILDFLOWER WEEKEND (AWW) IS IN PITTSBURG. Enjoy a full weekend of outings, Board Meeting, Membership Meeting, programs, a silent auction, photo contest, lunch, and socializing—join us! **Watch for updates soon!**
Join the KNPS email list to receive the latest event announcements: www.kansasnativeplantsociety.org/email_list.php

Kansas Native Plant Society welcomes everyone to participate in these events and join our membership. Read our full Statement of Diversity, Inclusion, and Non-Discrimination Policy on the website, ksnps.org.

NEW MEMBERS FROM 9/09/19 TO 12/14/19

- Zenzele Asante – Wichita

Sierra Blevins – Wichita

Katie Bosman – Stilwell

Sara Downing – Salina

Peyton Harrington – El Dorado

Richard Head – Tonganoxie

Linette Hinckley – Wichita

Sheridan Hixson – Haysville

Dennis Jones – Herington

Karen Lairmore – Hutchinson
- Lenexa Linot – Augusta

Arianna McElwee – Augusta

Bret Menard – Wichita

Helen Morse – Lawrence

William Murphy – Overland Park

Ali Owens – El Dorado

Jamie Parrott – Belle Plaine

Ashley Prentice – Augusta

Wendy Schrag – Newton

Matthew Schurr – Wichita
- Adia Sena – Wichita

Mary Shanklin – Yates Center

Tamara Sparks – Paola

Valerie Stone – Gardner

Paul Stoner – Neodesha

Kallie Swisher – El Dorado

David Trotter – Overland Park

George Trujillo – Derby

Cydney Weidner – Derby

Anna Wilson – Pittsburg

Winter Gardens
— MICKEY DELFELDER

It is the fifth year of my native plant garden which I have chronicled in previous KNPS Newsletters. I was excited this spring because, for the first time, the garden looked “mature” as in verdant and full of plants and a wide variety of spring blooms. Then the rains came, heavy and weekly for three months, and the garden exploded into a jungle with fifteen-foot sunflowers.

When I started my garden, I had this (naive!) vision of a pristine native garden, a near Utopia if you will, of well-behaved plants covered with insects and birds. Hah! Along with the rains, I spent the summer working on controlling weeds (both native and non-native).

Thankfully, the garden got off to a good start. At the outset, I was able to rid the space of Bermuda and zoysia grass and it has stayed clear of those beasts. Just recently, the lawn weed creeping Charlie (*Glechoma hederacea*) moved in from the neighbor's and has set up camp in one corner of the garden. On the plus side, it seems to be beneficial for several species of bees, but I would still like to find a way to keep it in check.

As I discussed before, sunflowers and showy milkweed (*Asclepias speciosa*) are a nuisance. Although I made no effort to control them this year, I will definitely have to tackle them next spring. I will leave a few milkweed, but the rest will be transplanted to a nearby prairie (or possibly eaten — I hear they taste like asparagus when picked as young shoots). The sunflowers will be pulled and composted, but I will likely leave a few from year to year.

Somewhat surprising, some of the most egregious offenders are tree and shrub seedlings. I have not had a redbud in six years, but it must have a hearty seed bank because I still get a lot of seedlings each year. Oak seedlings (darn you squirrels!) and burning bush (darn you neighbor!) seedlings must be tackled all year long. I found rose-of-Sharon seedlings in my garden this year, despite my shrub being nearly forty feet away. The rose-of-Sharon mother plant has since gone away and I will replace it with prickly ash and eastern wahoo in the spring.

My dreams of Utopia have been busted, but with due diligence I can stay on top of the aggressive plants and unwelcome invaders to continue providing a home to insects and wildlife that call my garden home.



MICKEY DELFELDER PHOTOS



TOP Showy milkweed with Purple milkweed in the background
ABOVE Outrageously large Willowleaf sunflower



KEN ODELL PHOTOS



FROM TOP Black Locust in September; flowers of black locust; blue-green leaf of black locust

Black Locust, the Native American Tree

— KEN O'DELL

History tells us, and science shows us, that as recent as fifteen thousand years ago, our great black locust tree was native in only a small portion of the Appalachian Mountains and in the Ozark Plateau region where Missouri, Arkansas, and Oklahoma touch corners. Today, our native black locust tree (*Robinia pseudoacacia*) is the one tree native only to North America that is more widely planted in the entire world than any other native only to America tree.

The wood of the black locust is hard, strong, and rot resistant. By the year 1492, at least eight million Native Americans lived in what is now the United States, and they had built their America “on the backs” of this great black locust tree. Native Americans used the black locust to build pole houses, teepees, and grain bins. They picked seed and planted seed, and the black locust moved into the central and eastern parts of North America. Early European settlers landing in Virginia in the 1600's found ample black locust forests growing along the east coast as this tree had been spread by Native Americans, and seeing how the Native Americans used this tree, the new settlers naturally started using this hard, tough wood to construct some of their houses and bins.

Carl Linnaeus gives credit to Jean Robin as the man who planted the first black locust in Europe when it was brought from America in the 1600's. The genus *Robinia* now carries his name. The Europeans noticed that the growing conditions in Hungary and several adjoining countries were perfect for the black locust tree. By the 1700's, the European country of Hungary had started planting black locust in plantations and as a forest tree, and as of the year 1990, had over 600,000 acres of black locust forest. The hard, rot resistant wood makes great furniture, posts, and firewood, and the millions of fragrant white flowers make some of the world's finest honey.

The black locust prefers to grow in full sun with dry to medium, well-drained soils. A member of the Fabaceae family, the black locust tree has superb ornamental value with long panicles of fragrant white wisteria-like flower clusters and clean blue-greenish leaves. Each leaf is made up of from nine to twenty-three leaflets with the odd leaflet on the tip of the leaf. The blue-green leaves have a yellow coloring in the autumn. Many city parks have strong specimens of this wonderful tree.

The fragrant white flowers in mid-spring produce three to four inch long pea-like pods with several seed ripening in early autumn. Pick the seed before it drops in late autumn, store it in the fridge at 37 degrees until mid-January, and then plant it in a cold greenhouse that is kept just above freezing. Germination will be completed within four to six weeks; transplant the baby black locust at the end of April. The revised and expanded edition of *Trees, Shrubs, and Woody Vines in Kansas* on page 154 shows colored photos and gives good information on this great tree. If you have a black locust tree in your community that you are proud of, send a photo and a general idea of the location to Ken O'Dell.

FEATURED PLANT

Oklahoma Phlox

PHLOX OKLAHOMENSIS

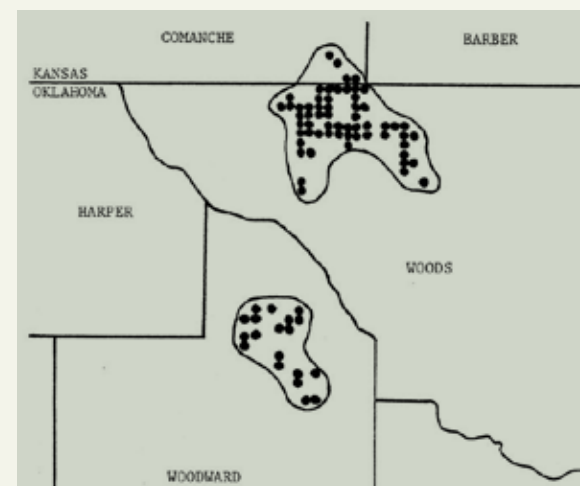
— JIM MASON

Several years ago (cannot recall when exactly) I asked Craig Freeman if there was anything I could do in south central Kansas to serve the botanical needs of the Kansas Biological Survey. He responded with the challenge of revisiting all the known localities of Oklahoma phlox to see if it was still there and how it was doing. The sites he provided for this inconspicuous, early-blooming member of the phlox clan were only in the southern Flint Hills and the Gyp Hills. The large geographic separation of the known populations immediately piqued my curiosity. Armed with county road maps and the occurrence data, I took some enjoyable roadside survey trips the following March and April. In my travels I found the species at nearly all the known sites and located a few more.

Oklahoma phlox flower petals are typically white, but sometimes bluish specimens are seen. It has a low, sprawling growth habit compared to later-blooming Phlox species, which must grow taller to be noticed by pollinating insects. I believe it was fragrant, but do not recall for sure.

Typical sites were somewhat barren, with shallow soils and many surface rocks. The largest patch I saw, in Cowley County, was on a north-facing slope. It began in the roadside ditch and extended well into the adjacent pastureland. I did not find as many populations in the Gyp Hills as in the Flint Hills.

Since I was on roads along our southern border, I also drove down into the adjacent areas of Oklahoma, but I found it much more abundant in Kansas than in Oklahoma. I visited the type locality of the species, which is a highway right-of-way north of Mooreland, but did not see any at all there. Field research done by Timothy Lynn Springer at O.S.U. in the early 1980s found many populations in Woods County Oklahoma (Figure 1). My visit may well have been too superficial or poorly timed. Springer stated the increasing prevalence and regularity of April pasture burns was deleterious to the species' survival since that was its peak reproductive time. Now that the large Ted Turner ranch in the Gyp Hills is being grazed by bison, it would be interesting to know if that has been a good thing



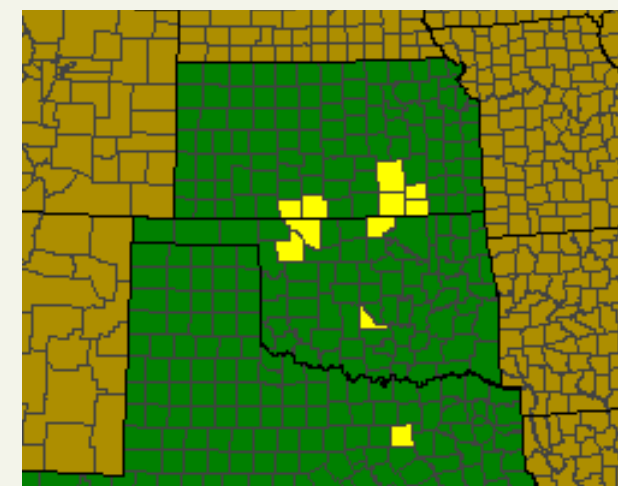
(Figure 1)



— LORNA HABEGGER HARDER ILLUSTRATION

for Oklahoma phlox. The species is at risk, as shown on NatureServe, where it has an S1 rank for Oklahoma (critically imperiled) and S2 for Kansas (imperiled). The Biota of North America Program website (bonap.net) indicates it is also known from Collin County, Texas and Cleveland County in central Oklahoma (Figure 2). These outlying populations further pique my curiosity!

A March or April visit to the Gyp Hills or southern Flint Hills is a good way to fight spring fever. Both areas make for delightful day trips even if you strike out looking for Oklahoma phlox. But be sure to record any sightings if you do!



(Figure 2)

Flowers on Fabric

— IRALEE BARNARD

Well over 800 people came to see the wildflower quilt display at Tallgrass Prairie National Preserve over the 2019 Labor Day holiday weekend. Saturday was a beautiful day. The historic barn was filled with magnificent quilts depicting wildflowers, many of them sunflowers. There was also live music and dancing.

Visitors got to vote for their favorite quilt. The winning entry was produced by Louise Scott from Cottonwood Falls. Louise made all of the twenty-nine exquisite prairie wildflower designs and hand-embroidered them. Her quilt was then sold for a benefit auction. Louise loved the wildflower quilt so much; she made another one exactly like the first. The second wildflower quilt is owned by her niece, Sue Smith. Louise turned 103 years old this summer.

Vicky Taber was the runner up with her bright and colorful sunflower quilt. Third place was taken by Sue Ann Brown who designed a unique three-dimensional quilt using many types of fabrics.

One of the hand-embroidered quilts has quite a history. The lovely flower quilt blocks had been rescued from a dumpster at an Emporia estate sale auction in 2018. The fourteen rescued blocks were given to Sue Smith of Cottonwood Falls. Eventually nineteen additional matching blocks were discovered, and the quilt was completed by Sue. It may be seen at Calico Rose Fabric and Quilt Shop at 319 Broadway Street in Cottonwood Falls.



KEN BARNARD PHOTOS



ABOVE & RIGHT 1st place Louise Scott
LEFT 2nd place Vicky Taber
BELOW 3rd place Sue Ann Brown



TOP LEFT Rose Quilt
MIDDLE ROW Sample of 2018 "rescued blocks" quilt
BELOW State Flowers



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MEMBERSHIP APPLICATION AND RENEWAL GUIDELINES

Annual dues are for a 12-month period from January 1 through December 31. Dues paid after December 1 are applied to the next year. Note to new members: the first year of annual membership is effective from the date of joining through December 31 of the following year. See upper right of mailing label for expiration date.

Please complete this form or a photocopy. Send the completed form and a check payable to the Kansas Native Plant Society to:

Kansas Native Plant Society
R. L. McGregor Herbarium
University of Kansas
2045 Constant Ave.
Lawrence, KS 66047-3729

A membership to the Kansas Native Plant Society makes a great gift for friends and family members. Recipients of gift memberships will receive notification of your gift membership within two weeks of receipt of your check. The Kansas Native Plant Society is a 501(c)(3) non-profit organization. Gifts to KNPS are tax deductible to the extent provided by law.

MEMBERSHIP APPLICATION/RENEWAL FORM

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Membership Category

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