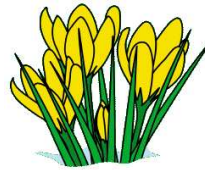




Kansas Native Plant Society



Spring Newsletter

Volume 34 Number 2
April 2012

Botanical Prints Highlight Prairie and Celebrate Voyage of Discovery

by Brad Guhr

"I ascended to the top of the cutt bluff this morning, from whence I had a most delightfull view of the country, the whole of which except the vally formed by the Missouri is void of timber or underbrush, exposing to the first glance of the spectator immense herds of Buffaloe, Elk, deer, & Antelopes feeding in one common and boundless pasture."

— Meriwether Lewis, April 22, 1805

During their three-year expedition to "find the shortest and most convenient route of communication between the U.S. and the Pacific Ocean,

Meriwether Lewis and William Clark mapped

ecosystems along the Missouri and Columbia Rivers and wrote the first scientific descriptions for hundreds of plants and animals, including their use by the American Indians they met along the way. More than a year of their voyage was spent studying the Great Plains.

While reading about Lewis and Clark's epic journey in Undaunted

Courage by Stephen Ambrose in the spring of 2004, Hesston College environmental biology professor and former KNPS board president, Lorna Habegger Harder's imagination was captured by this account of a rich and biologically diverse landscape.



Rough blazing star (*Liatris aspera*)

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IS THIS YOUR LAST NEWSLETTER?
Check the first line of you address on the back page. If the date is 12/31/2011 your membership has expired and this will be your **LAST** newsletter. Renew your membership now to continue receiving the **KNPS** newsletter. You can renew online at ksnps.org and click "membership".

The Kansas Native Plant Society Newsletter is printed four times a year: Winter (January), Spring (April), Summer (July), Fall (October). Readers tell us how much they enjoy the newsletter in color and in the 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, 2045 Constant Avenue, Lawrence, KS 66047-3729.

Corrections: We apologize for misspelling two names in the January newsletter. The correct spellings are: Lorraine Kaufman and Mark Neubrand."



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.

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President's Message

by Mickey Delfelter

Every cover page of the KNPS newsletter proclaims our wonderful organization's mission statement: *"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."* Let's take a closer look at how KNPS fulfills this mission with its wide variety of programs throughout each year.

Encourage awareness and appreciation. If you have ever attended one of our outings, you have surely admired the beauty of the native prairies and woodlands. The spring woodland walks reveal a variety of plants such as Dutchman's Breeches or White Fawn Lily, which may be unfamiliar to some of us. If you attend a May prairie outing, it will be a much different experience than a walk at the same location in August. Our Annual Wildflower Weekend hopefully inspires you to visit a part of the state and an ecosystem you have never visited before. And through the entire year, the KNPS leaders (and attendees!) share their knowledge with each other.

Education. In addition to the outings, KNPS can be found educating our members and the public year round in a variety of ways. The Wichita region recently hosted a plant and nature photography workshop. The Kansas City region is organizing several workshops this year, including programs on pollinators and growing wildflowers from seed. The Topeka region is found every year at the Topeka Lawn and Garden Show, the public library's green fair and at Wakarusa Eagle Days in Lawrence. These events, and dozens more around

the state, enable us to reach thousands of people who may not otherwise be exposed to native plants.

Stewardship. We recognize the importance of caring for native plants* and animals, in addition to preserving what precious little remains of their original environment. KNPS has prepared a position paper on roadside management that encourages protection of native plants that you can find on our website, and we have worked with various government agencies to promote our position. By providing annual scholarships, we also support the Kansas Grazing Lands Coalition range school for ranchers and others interested in grassland ecology.

Scientific knowledge. Each year, the KNPS Awards committee distributes up to \$1000 in scholarships to graduate research students enrolled in a Kansas college or university. In the past, these awards have supported research on little bluestem, combatting invasive salt cedar, and the reproduction of Mead's Milkweed, just to name a few. We take great pride in knowing that our support will help these students excel in their projects as they attempt to overcome some of the problems faced by our native ecosystems.**

Although we list our objectives separately, they are really part of a greater whole. A person can't be a good steward without education, awareness and scientific knowledge. And if you have the education, awareness and scientific knowledge, you will almost certainly be a good steward of the land and its inhabitants. We feel that with your involvement, we can work toward these core values and continue to make the Kansas Native Plant Society a great organization of which to be a part.

*See article on page 9, Heritage Walk

**article on page 5, report of study by 2011 student recipient Jacob Olsen.



Landscaping: Black-Eyed Susan by Jeff Hansen

With spring fast approaching, most of us are enthusiastically awaiting blooming plants. One of my favorites is the Kansas native, black-eyed Susan (*Rudbeckia hirta*). The genus *Rudbeckia* gets its name from Olaf Rudbeckia, a Swedish botanist. The species *hirta* refers to the stiff hairs found on the leaves and stems.

Black-eyed Susan acts as an annual in my garden, even though it is listed as biennial and perennial.

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Black-eyed Susan (*Rudbeckia hirta*)
Photo by Jeff Hansen

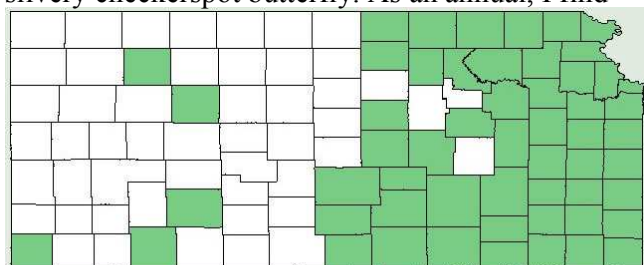


Landscaping: Black-Eyed Susan

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As is typical of annual plants, it puts all of its energy in producing flowers. The “flowers” are yellow with a dark center. As a member of the Aster family, its flowers (inflorescence) are actually composed of many individual flowers. The ray flowers are the yellow petals, while the disk flowers make up the dark center and lack showy petals.

I love the floriferous nature of this plant. Its yellow blooms really brighten up a flowerbed. The plants do become gray and unsightly after they bloom. Don’t get in a hurry to “clean up” your flowerbed and remove the spent blooms, as they are necessary to set seed to produce plants for next season. The blooms of the plants provide nectar for many of our native pollinators. An added bonus is the leaves of the plant are a food plant for the silvery checkerspot butterfly. As an annual, I find



PLANTS
Database

RUH12

Kansas Black-eyed Susan habitat map

it best to start the plants from seed. You can find packets of the seeds at KansasNativePlants.com.



Field of Black-eyed Susans in bloom
Photo by Mike Haddock

Kansas has other members of the *Rudbeckia* genus. They are: clasping coneflower (*R. amplexicaulis*), rough coneflower (*R. grandiflora*), cut-leaf coneflower (*R. laciniata*), sweet coneflower (*R. subtomentosa*), and brown-eyed susan (*R. triloba*). Clasping and rough coneflower are found in the southeast part of the state. Sweet coneflower prefers soggy soils of prairies in the northeast and southeast. Cut-leaf coneflower and brown-eyed Susan are restricted to our eastern woodlands. All of them have very showy flowers and also are recommended for our landscapes.

Orange coneflower, *Rudbeckia fulgida*, is a common garden plant. It is not a Kansas native, but is well adapted here. Its native range is the eastern United States.



KNPS TECH CORNER- Where We Keep You Informed About KNPS Technology Happenings by Mickey Delfelder

According to the KNPS webmaster, there are over 400 KNPS members who have email addresses, but who are not on the KNPS email list. If you aren't on the list, you run the risk of missing out on special event notifications or upcoming events.

It's easy to sign up for the weekly emails. Visit the KNPS website and click on “Email List” in the left-hand column to sign up today. After you click “subscribe,” you will receive an email message that you have requested membership in the group. To be confirmed as a member of the group, you must reply to that email message.



SAVE THE DATE FOR AWW 2012!!

Plan ahead for the 34th Annual Wildflower Weekend! The dates are Friday, Sep 21st, 2012 to Sunday, Sep 23rd, 2012. Location is Winfield, in Cowley County. Mark your calendar and reserve the dates!



Botanical Prints Highlight Prairie and Celebrate Voyage of Discovery

Continued from Page 1



Lorna Habegger Harder

“They provided the records to help us imagine what America was once like,” Lorna said. With a passion for the prairie and a skilled hand in botanical illustration, she was inspired to begin sketching different plant species that Lewis and Clark had documented during their time in the prairies of Kansas and Nebraska.

During the process, Lorna and her husband Bob, set off on a trip that summer to explore many of the highlighted locations of the Voyage of Discovery in Kansas, Nebraska, the Dakotas, Montana, Idaho and Washington. Highlight stops on their trip included many places in the Dakotas, Great Falls, Beaverhead Rock (Sacagawea’s Shoshone home place) and Pompey’s Rock (featuring William Clark’s signature in sandstone) in Montana, and Lemhi Pass (highest point of the journey) on the Idaho/Montana border. Lorna enjoyed viewing the landscape and its features through the lens of a time 200 years ago “when information traveled at the speed of wind, water, and muscle.”

Lorna does love the West, and she and Bob return to many of their favorite notable Lewis and Clark stops during summer



Plains coreopsis (*Coreopsis tinctoria*)



Indian blanket flower (*Gaillardia aristata*)

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Botanical Prints Highlight Prairie and Celebrate Voyage of Discovery

Continued from Page 4

camping trips. But they always love to return to their Kansas home where they care for the land with prairie restoration practices and where Lorna continues to share her enthusiasm for the prairie through her classes and her botanical drawings.

When viewing Lorna's art, one will appreciate the meaning in her words: "When I first started seeing the prairie, it was like seeing a crowd of strangers. But now I know a few faces in the crowd, and it was changed my whole experience and perception of the prairie." William and Meriwether would most certainly agree.

Lorna's 32 framed drawings were first displayed in recognition of the Bicentennial Celebration of the Voyage of Discovery at the Dyck Arboretum of the Plains in Hesston where they can still be viewed and purchased.



Aromatic aster (*Aster oblongifolius*)



Gas Exchange and Leaf Anatomy of Big Bluestem Populations and Sand Bluestem Across a Precipitation Gradient

By Jacob Olsen, Fort Hays State University, Lead Author and Recipient of Mary A. Bancroft Memorial Scholarship, 2011*

Climate change has the potential to increase temperatures and reduce rainfall in the Great Plains. This could result in severe droughts throughout a large portion of the Great Plains. Big bluestem (*Andropogon gerardii*) is a dominant grass throughout tallgrass and mixed-grass prairies and can comprise up to 80% of biomass in some areas (Knapp et al. 1998). A shift in the rainfall regime, coupled with an increase in temperatures, could reduce the dominance of this important grass. Big bluestem has excellent forage value for wildlife (Griffin et al. 1982) and a shift in big bluestem distribution might influence the distribution of wildlife. In addition, recent research shows big bluestem could be used for bioconversion to ethanol (Weimer and Springer 2007). Being a perennial and self-sustainable, big bluestem could eliminate the need for water and fertilizer inputs for biomass production. This would reduce agriculture-related pollution and help conserve irrigation water. Sand bluestem (*Andropogon gerardii* var. *hallii*) is closely related

to big bluestem but occurs mostly in sandy soils (Barnes and Harrison 1982), rather than in loamy soils where big bluestem typically grows.

The Great Plains exhibits a west-east precipitation gradient with low rainfall in the west and high rainfall in the east (Lauenroth et al. 1999). Big bluestem is a prominent grass over most of this precipitation gradient and large differences in its appearance are observed across populations. The goal of our study was to investigate the response of big bluestem and sand bluestem to drought and discover which characteristics are environmentally controlled and which are genetically controlled. Seeds from three populations of big bluestem were gathered from Hays, KS, Manhattan, KS, and Carbondale, IL. All populations, plus sand bluestem and a cultivar of big bluestem, were planted in four common gardens in Colby, KS, Hays, KS, Manhattan, KS, and Carbondale, IL. The Colby, KS site was added to investigate the response of big bluestem and

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2012 Kansas Area Native Plant and Wildflower Events

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!

 **April 7:** Early Spring Walk With Wildflowers of Wyandotte County Lake Park, 1-4pm. Join us for a walk in the spring woodlands of Wyandotte County Lake Park as we search for and identify a variety of spring woodland wildflowers, from Dutchman's breeches and spring beauties to bloodroot and violets. Naturalist and Educator Craig Hensley from Mr. & Mrs. F.L. Schlagle Library & Environmental Learning Center will lead the walk. Members of the **Kansas Native Plant Society** are welcome to attend. Please note that some of the hiking will be on narrow trails with inclines. Sturdy hiking shoes are recommended. Participants should plan to meet at the Schlagle Library & Environmental Learning Center, 4051 West Dr Kansas City, KS (in the park) and we'll carpool. [<http://www.kckpl.org/documents/WyCoLakeWildflowers.pdf>] To register for this walk, please contact: Craig Hensley [chensley@kckpl.org] (913) 299-2384

 **April 14:** **Kansas Native Plant Society** Spring Board Meeting, 1-3pm and Outing starting at 3pm. The meeting will be held at the Great Plains Nature Center, 6232 E 29th Street North in Wichita, KS. After the meeting, we will tour the trails of the GPNC through the prairie, woodland and wetlands areas. This is a good opportunity to meet other members in the Wichita area. Meet at 3pm inside the GPNC. For more information contact Krista. Everyone is welcome to join us. Contact: Krista Dahlinger [kskld@hotmail.com] (316) 258-6341

 **April 15:** Overland Park Arboretum Wildflower Tour, 1pm-3pm. Lynda Ochs and Ken O'Dell will lead the Kansas City Region of The **Kansas Native Plant Society** on a tour of the woodlands at the Overland Park Arboretum. A large wooded area is ripe with millions of spring woodland plants. Meet at the Visitors Center and we will leave at 1pm sharp. Both dirt and mulched pathways, some hills to climb. Plants we will see include Yellow Buckeye, Wild Ginger, Jack-in-the-Pulpit, Pawpaws, Bittersweet vines, Wild Geraniums, Bluebells, Mayapples, Jacob's Ladder, Solomon Seal, False Solomon Seal, Elderberry, Bloodroot, several varieties of wild violets in yellow, blue and purple. Sponsor: **Kansas Native Plant Society**. 8909 W. 179th. St. Contact: Ken O'Dell 913 837-5112

 **April 20:** Master Gardener Woodland Wildflower Tour at Overland Park Arboretum, 1-3pm. Lynda Ochs and Ken O'Dell will lead the Douglas County Master Gardeners on a tour of the woodlands at the Overland Park Arboretum, 8909 W. 179th. St. This large wooded area is ripe with millions of spring woodland plants. Meet at the Visitors Center and we will leave at 1pm sharp. A FREE Wildflower booklet and KNPS brochure will be available for those attending. KNPS members are welcome to attend. Contact: Ken O'Dell [ken@springvalleynursery.com] (913) 837-5112

 **April 20:** Screening of *Green Fire: Aldo Leopold and a Land Ethic for Our Time*, 6:30pm. The Kansas City Region of the **Kansas Native Plant Society**, Schlagle Library & Environmental Learning Center, and West Wyandotte Public Library are pleased to present the movie *Green Fire*, a movie about legendary conservationist Aldo Leopold. Aldo Leopold and his writings are as important today as they were when he penned them many decades ago. Leopold advocated a conservation philosophy known as the land ethic, a belief that natural resources are shared by all forms of life, not just for human consumption and exploitation. Excerpts from Leopold's book *A Sand County Almanac* will be read prior to the movie; from 6:30 to 6:50 pm. Refreshments will be available. Seating is limited so please call the library to make your reservation. Contact: Craig Hensley [chensley@kckpl.org] (913) 299-2384.

 **April 21:** Volunteers are needed for prairie maintenance and preservation projects. The Grasslands Heritage Foundation Groundhogs meet on the third Saturday of every month except December. [www.grasslandheritage.org]. Wear appropriate clothing. No special skills or tools needed. For details, please contact Frank Norman, **Kansas Native Plant Society** Board Member [fjnormal@sunflower.com] (785) 887-6775 (home) or (785) 691-9748 (cell).

May 11-14: FloraKansas Great Plains Plant Bazaar. Sponsored by Dyck Arboretum of the Plains, Hesston, KS. [www.dyckarboretum.org] [arboretum@Hesston.edu] (620) 327-8127

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Kansas Area Native Plant Wildflower Events— Continued

 **May 12:** Barber County Wildflower Tour. Meet at the Medicine Lodge High School, 8:30am. Enjoy continental breakfast and slides of flowers we expect to see. Buses will provide transportation. Morning participants will return to the school at noon. Full-day participants will enjoy a delicious lunch and entertainment at a tree-shaded country park. Ride through the beautiful gyp hills to a second site. Refreshments will be served before we return to the school around 3:30pm. Co-sponsored by Barber Co. Conservation District and Kansas Native Plant Society. Pre-paid reservations due before May 9th, \$8 half-day, \$15 full day. Barber Co Conservation, 800 W. 3rd Ave. Medicine Lodge, KS 67104-8002, Courtney Pilkington [pilkington@ks.nacdnet.net], phone (620) 886-3721, ext. 3.

 **May 12:** Late Spring Walk With Wildflowers of Wyandotte County Lake Park, 1-4pm. Unbeknownst to many, Wyandotte County Lake Park is home to a carpet of native woodland wildflowers each spring. Naturalist and Educator Craig Hensley will lead this wildflower walk in search of showy orchid, wild geranium and jack-in-the-pulpit, among others. This walk, co-sponsored by Mr. & Mrs. F.L. Schlagle Library & Environmental Learning Center and the KNPS Kansas City region, is open to the public. Please note some of the hiking will be on narrow trails with inclines. Wear sturdy hiking shoes. Participants meet at the Schlagle Library & Environmental Learning Center, 4051 West Dr Kansas City, KS (in the park) and we'll carpool. [http://www.kckpl.org/documents/WyCoLakeWildflowers.pdf] To register, please contact: Craig Hensley [chensley@kckpl.org] (913) 299-2384

 **May 19:** Grassland Heritage Foundation Groundhogs prairie maintenance and preservation projects. See April 21 info.

 **May 19:** A walk on the tallgrass prairie in the heart of the Flint Hills at the Tallgrass Prairie National Preserve on the second Saturday of each month, beginning May 19, from 8 to 10 am. We meet at the Bottomland Trailhead, which is about 2 miles south of the headquarters. Take the dirt road at the cemetery on the east side of hwy 177 about 2 miles south of the Preserve HQ buildings. This will be a leisurely informal walk to enjoy the wonders of the prairie and identify native flora. Glenn Fell is the official "guide," but everyone's knowledge will be called upon. This is a KNPS Emporia Region event. Please RSVP Glenn if you plan to attend. Contact: Glenn Fell [glennfell13@gmail.com] 620 794 8478

 **May 19:** The KNPS Kansas City Region will host its spring meeting at Mr. & Mrs. F.L. Schlagle Library & Environmental Learning Center in Kansas City, KS at Wyandotte County Lake Park. The Library's Lead Education Specialist and Naturalist Craig Hensley will present a talk entitled: "The Natural History of Kansas Milkweeds." This presentation will focus on both milkweed identification and the variety of insects and other arthropods that benefit from these important plants. Milkweeds are not only important nectar sources for a host of insects, but also are homes to a variety of arthropods from monarch butterflies and beetles to aphids and crab spiders. All members of KNPS are welcome as is the general public. Schlagle Library is located in Wyandotte County Lake Park at 4051 West Drive, Kansas City, KS. Contact: Craig Hensley [chensley@kckpl.org] 913.299.2384

 **June 1-30:** June is Kansas Native Plant Appreciation Month! Each year Kansas Native Plant Society makes a formal appeal to the Governor for June to be proclaimed as Kansas Native Plant Appreciation Month. This opportunity promotes greater appreciation for the diversity, value, and beauty of Kansas native plants and their habitats. [www.kansasnativeplantsociety.org]

June 2: Spring Wildflower Tour at Maxwell Wildlife Refuge, McPherson County, KS. Board the tram for a tour of the prairie with wildflowers and buffalo, 10am. There is also a self-guided walking tour with flowers flagged. The Refuge is located 6 miles north of Canton, KS. [http://www.cyberkraft.com/maxwell/] (620)-628-4455

June 3: Friends of Konza Prairie Annual Wildflower Walk, 6:30 pm, Konza Prairie Biological Station, 100 Konza Prairie Lane, Manhattan. Wildflower walks of about one mile will be led by Konza Environmental Education Program experienced docents. This year we are adding slide shows and activities in the renovated barn (Konza Meeting Hall). Call 785 587-0441 for a reservation or go to the Wildflower Walk link [konzaed@k-state.edu]. Please state the number of persons in your party. \$10 for non-members/free to FOKP members. Join FOKP and enjoy other free events at Konza Prairie! Contact: Valerie Wright [konzaed@k-state.edu] 785 587-0441

 **June 16:** Grassland Heritage Foundation Groundhogs prairie maintenance and preservation projects. See April 1 info.

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🌸 Kansas Area Native Plant Wildflower Events— Continued 🌸

🌸 **June 16:** Chase County Tallgrass Prairie Walk • Chase County. See May 19 info.

🌸 **July 14:** Kansas Native Plant Society Summer Board Meeting and Outing. The location and time have not been finalized. Please contact KNPS for more information. [email@KSNPS.org] (785) 864-3453

🌸 **July 21:** Grassland Heritage Foundation Groundhogs prairie maintenance and preservation projects. See May 19 info.

🌸 **July 21:** Chase County Tallgrass Prairie Walk • Chase County. See May 19 info.



Gas Exchange & Leaf Anatomy Study

Continued from Page 5

sand bluestem to increased drought in an area where big bluestem is not commonly observed. Gas exchange was measured with a Li-Cor LI-6400 photosynthesis machine, and leaf anatomy was analyzed by light microscopy.

Clear differences in gas exchange and leaf anatomy were observed among big bluestem populations at each site. This indicates populations have adapted to local conditions, and population differences are not purely the result of environmental differences. The population from Hays, KS was well adapted to drought through an ability to keep stomates open in arid conditions, thereby maintaining higher photosynthesis rates. Leaf anatomy evaluation indicated leaves from the Hays population were generally shorter, thicker, and narrower than the Manhattan, KS or Carbondale, IL populations. These adaptations reduced total leaf surface area and surface area to volume ratio, resulting in less water loss through transpiration compared to their counterparts from wetter environments. In addition, the Hays population and sand bluestem were found to have fewer bulliform cells (cells that facilitate leaf folding and rolling) and smaller midribs compared to big bluestem populations from wetter environments. This was contrary to our expectations that the drought-adapted Hays population would have more bulliform cells and result in more leaf folding than the populations from wet environments. Leaf folding and rolling reduce leaf surface area, thereby reducing both the amount of sunlight a leaf receives and the surface area from which water is transpired. However, among big bluestem it appears short, thick, narrow leaves coupled with smaller proportions of bulliform cells were more efficient under drought than were large proportions of bulliform cells. In contrast to the Hays, KS population, the Carbondale, IL population of big bluestem had long, wide, thin leaves with thick midribs and a large proportion of bulliform cells. The Carbondale

big bluestem performed poorly in the arid Hays and Colby environments. Despite a large proportion of bulliform cells for leaf rolling and folding, the Carbondale population was poorly adapted to drought due to large evaporative surface areas of leaves.

Although climate change could pose a threat to big bluestem dominance in some areas of the Great Plains, the Hays, KS population is an indication big bluestem can adapt to reduced rainfall and will continue to be an important grass throughout much of this region.

* Additional Contributors: R.K. Goad and M.L. Mendola, Southern Illinois University, Carbondale, IL; H.M. Tetreault, and L.C. Johnson, Kansas State University, Manhattan, KS; S.G. Baer, Southern Illinois University, Carbondale, IL; B.R. Maricle, Fort Hays State University, Hays, KS.

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KNPS Supports “Heritage Tree Walk” at Sterling College

The Sterling College “Heritage Tree Walk” on Sterling’s campus is one of the Non-profit Funding projects given financial support by KNPS in 2011. Jonathan Conrad who wrote their application, explains this exciting project is centered around a diverse collection of mature native trees already in place such as: Eastern Redbud, Shmard Oak, Sycamore, Northern Hackberry, Black Walnut, Cottonwood, Bur Oak, Catalpa, Eastern Red Cedar and Honey Locust. The purpose of the funding is to purchase and plant up to five additional trees, not currently on campus such as a pecan and paw paw. In addition to the KNPS funded trees, it has been proposed that alumni be given the



Flowering Black Walnut branch

opportunity to “sponsor a tree” so additional species can be added.

The walk itself is primarily integrated into the existing pathways and sidewalks. In order for the college community, school children, and visitors to appreciate and learn more about native trees, identification markers with the common and scientific names of the trees will be created and placed at the base of each tree. It is planned that walkers on the self-guided walk will have access to a “tree guide” to lead them from tree to tree and give them some basic knowledge about the special features of each tree. The “new” trees will be planted this spring, and it is expected that everything will be in place prior to May 15.

When asked why the label “Heritage Tree Walk” was chosen, Jonathan shared the thinking behind for the choice. “We chose the title ‘Heritage Tree Walk’ to emphasize the historical and biological significance of the native trees on campus. The trees are part of the story of the campus throughout its history and the benefits that we derive from the trees today are based on the foresight of individuals in the past. In essence the outstanding diversity of native trees on campus constitutes an important part of our biological heritage that should be preserved and celebrated.” This is a project that is obviously in perfect harmony with the mission of KNPS.

Growing Plants from Seed: **Bee Balm (*Monarda fistulosa*)** Text and Photos by Ken O'Dell

One of those wonderful native plants that grows from one side of America to the other and is of historical importance as well as great ornamental value is Bee Balm. The common name “Bee Balm” was given because a poultice was made out of the flowers and used to lessen a bee sting. Native Americans also used it for tea, and because it was growing in great abundance around Oswego, New York, it was given the common name of “Oswego Tea.” The botanical name of *Monarda* was named for Dr. Nicholas Monardes of Spain, who wrote about it in 1571. He gave it the common name of “Bergamot” because it looked similar to Italian Bergamot with which he was familiar. The colonial settlers used Bee Balm for their tea, and it was reported that Oswego Tea really caught on when the other tea was dumped in the harbor at the Boston Tea Party.

Of the several species of *Monarda* in America, one of the most important and beautiful is *Monarda fistulosa*. This Beebalm thrives in the eastern half of Kansas. We have many naturally



Bee Balm blooms
Monarda fistulosa

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Growing from Seed

Continued from Page 9

growing clumps of this Bee Balm on our farm in Miami County, Kansas. It grows to about 3 feet tall, with 50 or more stems in each older clump, which are about 2 feet wide. The plants prefer full sun or very light shade and are reported to need some moisture. However, the ones on our farm are in poor soil and on a slope that drains well. It gets bone dry in the summer time in these natural areas. I have planted some of these Bee Balm in a rich flower bed with amended soil where I added about 2 inches of sphagnum peat moss and tilled the soil to about 9 inches deep, and the Bee Balm loves it there also.

Monarda fistulosa has lovely lavender flowers and starts showing color in early July and continues for a couple of months. It makes a great plant for the back of the flowerbeds where height is needed, and they are great for naturalizing areas. The leaves are very aromatic when crushed or cut, and we use these for cut flowers and bring them into our house in the summer. A good cut-flower clump of this Bee Balm will stay fresh in water for a week or more. We change the water every couple of days and also wash off the cut stems when we change the water. If *Monarda* finishes flowering in the summer, take hedge shears and clip the top of the stems back about 6 inches, and they will flower again in a short time.

I gather the seed when dry, which is usually in late September or at least by mid-October. I use 3 and sometimes 4 sieves and shake the seed



Monarda seed

vigorously in each one, sometimes crushing it with my hand in the sieve. I start with the sieve with larger openings first and work my way down to the smaller sieve to get some of the chaff and trash from the seeds. You will never get them completely clean, and I have planted just roughed-up *Monarda* seed heads and had some fair results. Store the seed in a fridge in a paper envelope. If you want to plant the seed in your outdoor beds, prairie, roadside or fields, throw the seed out in early spring and let nature help it grow. If planted in a pot, plant the seed in mid-March to early April in a good well-drained potting soil and place the seeded pot in full sun. The sun should not be hot on the pot in the springtime. Keep lightly moist. It will grow. All seed has an advantage, and that is it wants to grow, and if we give it just a bit of help, it will grow. The fact that we sometimes grow it in artificial soil, under artificial lights, in plastic pots (not in the ground) with chlorinated water is something that we each need to work with in our plantings.



Featured Plant: Butterfly Milkweed: *Asclepies tuberosa*

Text by Lorraine J. Kaufman, Illustration by Lorna Habegger Harder

From May to August, the native butterfly milkweed *Asclepies tuberosa* provides, without doubt, the brightest highlights you'll see in the prairies of the eastern two-thirds of Kansas.

Butterfly milkweed is a small bush with red-orange flower clusters two to four inches in diameter with hairy stems nearly two feet tall. The flower clusters contain many individual hourglass-shaped florets with five petals below and five erect petals above. The florets have a special "nectar holder" that attracts many butterfly species, particularly Monarchs, giving the milkweed its name. A perennial forb, it grows in full sun and dry, sandy soils. Its sap is clear, unlike the "milky" sap that characterizes most "milkweeds." It produces numerous three to five inch long seedpods that contain numerous seeds with tufts of white hair at their tip at maturity.



Butterfly Milkweed Umbel Structure

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Featured Plant

Continued from Page 10

The milkweed plant contains potent chemicals that were recognized by Native American tribes for their medicinal value. Early settlers also used the dry roots. Butterfly milkweed was listed in the US Pharmacopoeia from 1820 to 1905 and in the National Formulary from 1916 to 1936. Monarch butterflies rely on these chemicals for protection

while dining on the leaves during their caterpillar phase. The milkweed compounds incorporated into the caterpillars' bodies are toxic to predators, especially birds.

Planted in your garden, these showy plants will brighten your landscape with colorful flowers and beautiful, hovering butterflies. In the summer, look for the inspiring myriads of butterflies congregating on *Asclepias tuberosa* and enjoying their "lunch" at their own special prairie "McDonalds!"

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

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