

EVENTS

Fall Native Plant Sales

Cottin's Farmers Market

1832 Mass. St, Lawrence KS

Thursday Sept. 9 and

Thursday, Sept. 16 4–6:30 PM

Seed Collection at Paintbrush Prairie and Leadplant Prairie

Saturday, Oct. 23 Leadplant Prairie at 11 AM
and Paintbrush Prairie at 1:30 PM

RSVP at

www.grasslandheritage.org/seedcollection

Prairie Restoration at Black Jack Battlefield and Nature Park

163 E 2000 Rd, Wellsville KS

RSVP at www.grasslandheritage.org/blackjack

Seed Collection

Tuesday, Sept. 14, 6-8 PM

Saturday, Oct. 16, 10 AM-12 PM

Restoration Workday

Thursday, Sept. 23, 6-8 PM

Saturday, Oct. 30, 1-4 PM

Wildflower Planting

Saturday, Oct. 9, 1-4 PM

Art with Invasive Species

Hosted by KACEE with GHF sponsorship

Oct. 19, 4–5 PM

Register at: <https://www.kacee.org/event-details/honeysuckle-art>



Fill Your Fall with Prairie. It's a Busy Event Season!

We are excited to announce three plant sales in Lawrence this fall! We'll be at Jungle House, a locally-owned houseplant shop on Sept. 4, and two sales will be at Cottin's Hardware Farmers Market- see events listing at left for dates and times. At all three sales, GHF will have about 15 species of locally-grown, neonicotinoid-free Kansas natives. The plant list will be posted on GHF's website about a week before each sale.

These plant sales are critical fundraisers for GHF that allow us to do important prairie conservation and education work. Help support GHF and find some great natives for your yard!



Seed collecting for Black Jack Battlefield and Nature Park restoration

Also, we're hosting seed collection days at Paintbrush Prairie and Leadplant Prairie in Anderson County. During the events, led by GHF Program Director and Preserve Manager Kaitlyn Ammerlaan, attendees will learn how to collect and store seed and identify common prairie plants. All of the seed collected will be used for GHF's restoration projects.

GHF's prairie restoration project at Black Jack Battlefield continues in 2021 with Native Lands LLC, Jayhawk Audubon Society and Black Jack Battlefield and Nature Park. At this National Historic Landmark just outside of Baldwin City, KS, we have been working hard for the past year and are excited to welcome volunteers back to the site. This fall we will be planting hundreds of native plants and grasses, collecting seed from the nearby Ivan Boyd Prairie, and removing invasive and woody species from our prairie sites. This project is a great opportunity to join a wonderful volunteer community and help protect and restore our local ecosystems! All ages are welcome and no experience is required.

We will be hosting a total of seven events at Black Jack this fall- see dates and times at left. RSVPs are requested! For full event descriptions, the RSVP form, and more information about volunteering at Black Jack, please visit www.grasslandheritage.org/blackjack.



Grassland Heritage Foundation is a non-profit 501(c)(3) membership organization dedicated to prairie preservation and education.

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Preserve Manager
Kaitlyn Ammerlaan**

A Note from the President

We are sad to share the news of the passing of Martha Wagner on July 30th. Martha was the widow of Lawrence Wagner, a founder of the Tallgrass Prairie Foundation, which later became Grassland Heritage Foundation. The Wagners were an integral part of the story of protecting prairie in Kansas. While Martha had her own career, she was a vital supporter of Larry through the years.

In 1963 R.C. Wagner and his son, Larry bought what is now the Prairie Center from George Algire, who had farmed parts of the land and built the stone structures there still. They chose to protect and manage the virgin prairie on the site, restore prairie to farmed areas by replanting native species, and added a lake and ponds. CedarCliff or Wagner Farm was open to visits by thousands of scouts and school children. During the financial crisis of the 1980's the foundation stepped up to raise money and purchase the property to keep it from being sold and inevitably divided for subdivisions. The Wagner family has continued to support our efforts, even after the Prairie Center was eventually transferred to the state of Kansas in a bargain sale in 1990. We still managed the site for several years before total control was assumed by the state. For many years Alaine Neely Hudlin worked in education for KDWP and managed the site, working to balance preservation and the need to use the site as a state park.



GHF's bee box with view of the Prairie Center to the west

There are changes taking place at the Prairie Center as the Parks division is taking charge of the management of the site. There was a gap when very little was being done, but we worked up at our parcel today and noted that the state has been hard at work. Large fire breaks had been mowed, and both sericea lespedeza and woodies (sumac and dogwood) had been treated. They even worked on our parcel. We have given the state the right to manage it along with their property, but until recently not much had been done. It was great to see dead sericea and sumac, when I was expecting to work on that.

GHF still owns 2+ acres, our Roulund-Wagner prairie, which lies at the edge of the Prairie Center. Steve and I go and work when we have time and weather permits, but there is always more to be done. I'd like to thank Ted Abel who has worked this summer rehabbing the storage shed on the property. He also trimmed some trees that were overgrown. We're

looking for other volunteers that live close to west Olathe that might be willing to go and mow, cut woody invasives, treat sericea and Johnson grass, maintain the bee house and bluebird box, etc. This property was kept aside to give GHF a permanent location of our own, so we need to be sure to be good stewards. Please let me know if you'd have some time to help.

Sue Holcomb sholc2003@yahoo.com



Sneezeweed, Helenium autumnale, from my garden, one of the easiest yellow composites to identify this time of year.

Management Evolves at The Prairie Center in Olathe

One of GHF's proudest accomplishments has been the protection of The Prairie Center in west Olathe. Since it was transferred to Kansas Department of Wildlife and Parks (KDWP), GHF has continued to own the Roulund-Wagner Prairie at the northwest corner of the property, and we monitor the management of The Prairie Center.

Longtime manager Elaine Neely Hudlin retired this year. Jeff Bender, KDWP's Region Supervisor assumed management of the Prairie Center on July 1. GHF's Mike Campbell asked

Bender about the agency's next steps at the preserve.

Bender said that KDWP will be hiring a Coordinator position for the Prairie Center and improving equipment available for maintenance. They're recognizing that the park has some maintenance needs. Bender is mowing firebreaks in preparation for additional controlled burns to address woody invasions. KDWP started spraying sericea lespedeza, and they expect to continue into the fall.

Goated Into Service: Can Non-Chemical Weed Control Work?

In Lawrence, bush honeysuckle has overtaken the woods surrounding the city's tallgrass remnant at Prairie Park and vining honeysuckle is creeping into the prairie. In July, the city hired a herd of 50 goats for a few days to reduce honeysuckle in a small area as a trial run of chemical-free weed control. Later in the season, goats will return to eat additional and re-sprouted honeysuckle. The goats captured public attention and increased awareness of the problem of invasive honeysuckle. Weeds like honeysuckle, callery pear, and teasel are a widespread problem, and the city of Lenexa is also using goats for weed control this September in Sar-Ko-

Par Trails Park. Long-term, effective control may require either removal by the roots or chemical application. It will be worthwhile to observe the results of the goat crews and future park management decisions. Matt Garrett, Field Biologist, Johnson County Parks and Recreation advises: "Before undertaking any invasive removal project, define success and a timeline to a stabilized functioning ecosystem. Initial removal of invasive plants via goats, volunteers, or contractors is the easy part. Develop a calendar of activities for 3-5 years and decide the most effective way to use your limited time and budget. Stay the course!"



Monarch on milkweed at Little Prairie Community Garden, left



Stiff sunflower at Leadplant Prairie, right

GHF Activities Report

In May, we successfully held our annual Spring Native Plant Sale where we sold over 3,500 plants—our largest sale to date! It is exciting to think about all of the gardens, yards, and porches that have become a slice of native habitat in our community.

We also made great progress on our Little Prairie at Little Prairie Community Garden, GHF's newest native plant demonstration garden. We hosted three workshops this spring, ending with the planting of the garden in June. While the garden is still a work in progress, quite a few plants have become well established and the garden is now a great place to spot monarchs! We have been meeting regularly to help maintain the current garden and prep and plan for the future

of the space. This fall we plan to transplant more natives into the garden and build on the work we have completed so far.

After a warm summer, GHF is finally back to hosting volunteer events! This August, Kaitlyn led a few seed collecting events- two at Ivan Boyd Prairie for our Black Jack Battlefield Prairie Restoration Project, and one in Anderson County at Paintbrush Prairie and GHF's Leadplant Prairie. Lots more events are scheduled for this fall!

At GHF's Snyder Prairie in Jackson County, contractors have completed two rounds of sericea lespedeza spraying.

Volunteers met in June at Leadplant Prairie in Anderson County to pull teasel and spray for other invasives.

Effects of Prescribed Burn Season on Tallgrass Prairie Forb Communities and Reward Investment

A research report from Rachel Snyder Memorial Scholarship recipient Bethany Robertson

Prescribed burns replicate the historic fires that played a key role in maintaining prairies. Spring-applied burns are commonly employed for grazing and brush control and, therefore, much is known about their effects. However, prairie plants may be sensitive to the historically variable timing of burns and thus respond differently to when prescribed burns are applied, an aspect that remains poorly understood. Our study focused on how different seasons of burn may impact the plant community and the corresponding pollinator community. Studying these effects is important because of the drastic declines that prairies and pollinators are experiencing. We



Collecting nectar from butterfly milkweed. Photo: Bethany Robertson

hope that this research will further expand upon prairie restoration knowledge to better understand how to promote plants and pollinators in these habitats.

We performed our research at the Ross Natural Histo-

ry Reservation (RNHR) in Americus, Kansas (managed by Emporia State University) during the summers of 2019 and 2020. Our experimental plots utilized three seasonal burn treatments (summer, fall, or spring) in tallgrass prairie. Our study site consisted of 18 plots, each about an acre in size, with six plots allotted for each burn treatment (three of which are burned in odd years and the other three burned in even years). We used this site to examine: i) the abundance and diversity of flowering prairie plants, ii) how individual milkweed plants (*Asclepias spp.*) invested in nectar to recruit pollinators, and iii) the downstream effects on milkweed reproduction.

To address our three main objectives, we used a variety of methods. For our first objective, we carried out plant surveys in each plot where we noted the species and abundance of all flowering and budding forbs. This was to give us an idea of what floral resources were available to pollinators and to also observe any differences in plant diversity and flowering lengths between the burn treatments. We focused on two milkweed species, green antelopehorn (*Asclepias viridis*) and butterfly milkweed (*Asclepias tuberosa*), for our second and third objectives because they have high volumes of nectar and are dependent on insects for pollination and reproduction. For the second objective, we collected nectar and measured the sucrose concentration to quantify each plant's investment in attracting pollinators. Essentially, the higher the sucrose concentration, the more attractive that nectar reward is to a visiting insect. Finally, for our third objective, we collected seed pods from our two milkweed species in all the plots and performed seed viability assays to see if there was a relationship between pollinator investment and downstream effects on reproduction.

In our first field season, we found that burn timing did not affect flowering forb abundance but did impact flowering forb diversity. Diversity was lowest following spring burns, whereas summer and fall-burned plots were more diverse. Spring burns also delayed the flowering times of many plant species. Nectar su-

crose concentrations in milkweeds, however, were not affected by the timing of burns and seemed robust in their investment to recruit pollinators. In terms of reproduction, we did not find any differences between the burn treatments for either seed mass or seed viability.

In our second field season, we found that plant abundance and diversity was similar across our burn treatments, and that nectar sucrose concentrations were once more unaffected by season of burn. However,



Fall plot one year post-burn Photo: Bethany Roberton

sucrose concentrations were significantly higher than our first field season of data collection. We believe the higher concentrations in the second field season are more likely due to abiotic aspects of the growing season itself, such as soil moisture, humidity, or temperature. In terms of reproduction, we did not observe any effect of the burn treatments on green antelopehorn, much like the first field season in 2019, and butterfly milkweed did not produce any seed pods. For both years, we had also carried out pollinator surveys on butterfly milkweed. The data from

these surveys are still being analyzed, but we observed fewer pollinators during the second field season which may have affected the reproductive efforts of butterfly milkweed.

In summary, the timing of prescribed burns seems important in promoting flowering forb diversity in the first-year post-burn, which could have important consequences on the diversity of pollinators and other animal communities. It appears that in this first year following a prescribed burn, summer or fall burns may be more beneficial to the pollinator community than a spring burn because they can provide a more diverse array of species early in the season. We did not observe notable differences in diversity the second year following a burn, but there may potentially be differences in species composition as we continue to analyze our data. Finally, although reward investment and reproduction seem relatively unaffected by the timing of burns, these characteristics are still useful to analyze because of their importance to maintaining prairie habitat and may be affected over several years as climate change continues to create unpredictable patterns. As previously mentioned, we observed fewer pollinator visits to butterfly milkweed in 2020, which in turn may also affect plant reward structure and reproduction in the future.

I would like to thank Grassland Heritage Foundation for the generous scholarship provided. I was able to use the funds to purchase supplies and help support two technicians for our 2020 field season. Hiring the technicians was particularly helpful because it allowed me to collect from more plots and perform more plant and pollinator surveys than the previous year.

I am now a Ph.D. student at North Dakota State University studying the effects of different grazing regimes in tallgrass prairies on native bee communities and floral reward structure. I carry out bee and flowering forb surveys to assess reward availability and usage as well as collect nectar and pollen resources from various forb species. Additionally, I am also experimenting with non-lethal bee identification and pollen collections. I can be reached at bethany.roberton.ndsu@gmail.com.

A Queen Bee's Guide to Fall Garden Prep!

By Jessica Butters

Cooler mornings and the subtle shortening of days have us excited for fall! The break from searing heat and the anticipation for beautiful autumn colors has a stirring effect, with some people, and insects, seeming to become more active!

One insect that is particularly busy this time of year is the queen bumble bee. These fuzzy teddy bears of the insect world have worked hard to pollinate our gardens throughout the year, and now it is time for the bumble bee queens to drink their last few meals of nectar and pollen, and search for a cozy spot to overwinter.

Out of the 400-ish species of native bees in Kansas, about seven of them are bumble bee species! Bumble bee hives are not like honey bee hives, as the entire hive dies each year except for the new queen, who hatches later in the year (she is called a "foundress"). Near the beginning of fall, the foundress leaves the dying hive and goes

in search of a safe and warm place to hibernate for the winter. As gardeners and flower lovers, there are two main steps we can take to ensure these queens find a cozy spot to land so that in the spring, they can start their new hives and come back to pollinate our gardens!

Step 1: Floral Resources! We need to provide food resources to ensure bumble bee queens, and native bees in general, have access to pollen and nectar during a time when most plants are going dormant or dying. Some fall native plants to add to your garden right now are sages (blue flowers also known as *Salvia* at garden centers), along with goldenrods



Blue sage at Boyd Prairie
Photo: Kaitlyn Ammerlaan

and sunflowers. We can also plant seeds and bulbs now to provide early flowers in the spring, when the bees wake up hungry! Some plants to consider are indigo, blue bells, and nonnative flowers such as irises and ornamental onions.

Step 2: Nesting Resources! Bumble bee queens, and other native bees, need a cozy place to nest over winter. They look for quiet, undisturbed areas covered with leaves, brush, and anything else insulating against the cold. Other kinds of bees, such as leafcutter bees, like to overwinter in flower stems! To

provide some cozy spots for bees this winter, consider leaving any desiccated flower stems uncut until mid to late spring. For ground nesting bees such as bumble bees, try to find a quiet place in your yard to create a "Cozy Corner", where you don't mind things looking a little untidy.

To create a Cozy Corner for bumble bee queens, try the following!

1. Find a quiet area with low foot and machine traffic
2. Rake in a few inches of leaf litter, and even some dead grass from mowing, on the ground in your Cozy Corner to create a warm, insulating layer for nesting bees
3. Add any brush/fallen limbs that you don't want elsewhere in your yard on top of the insulating layer to further protect queens from the coming winter weather

If you don't have space for a Cozy Corner, try leaving leaf litter in small areas or spreading it over your gardens to create a natural and nutritious mulch for your plants! This, along with abstaining from tilling your garden, will also encourage bee nesting. Happy Fall Prep!

Honeysuckle: What's it Good For?

GHF is co-sponsoring a Kansas Association of Conservation and Environmental Education (KACEE) presentation by Dale Dufer on making art out of invasive bush honeysuckle on Oct 19. Dufer will discuss why he does this, how he uses art to strike up conversations about conservation and nature, and he shares his story of cultivating creative partnerships to help raise awareness. He will also speak to working with children and involving them in making art out of plants.

The presentation uses strengths of the plant itself to build ecological awareness and invasive species action. St. Louis artist and woodworker Dale Dufer invites participants into "fun with sticks" as a way to explore resourceful solutions.

Register for the event at <https://www.kacee.org/event-details/honeysuckle-art>

New Ways to Support Prairie Conservation

We love supporting local retail, but if you're shopping on Amazon, please select GHF as your Amazon Smile donation recipient!

Donations are essential to GHF's prairie conservation and education mission. Add other ways to contribute, and accomplish even more. Consider:

Estate Planning - Workplace donation matching

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We depend on your contributions!

Please help GHF protect prairie by sending your donation today.

The date of your last contribution is printed above your name on the mailing label.

Contribute online or send this form to: Grassland Heritage Foundation, PO Box 394, Shawnee Mission, KS 66201

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- ☐ Scholarship Fund
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- ☐ Education Programs
- ☐ Prairie Management

You can also send
membership renewals and
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www.grasslandheritage.org



Donations Since March 2021

Welcome to our new members: Rachel Allai, Nathan Anderson, Jenny Archibald, Mara Aubel, Lynette Beebe, Brenda Bennett-Pike, Hilary Casey, Kimberly Comstock, Mandy Stark Culbertson, Margaret Dyck, Anne Fluker, Leslie Gerstenkorn, Evan Haake, Jill Haukos, Nicholas Howard, Lynn Irvin, Natalie Jackson, Joseph M. Jarvis, Sally Kennett, Tania Kim, Betsey Lasister, Jane Medina, William Metcalf, Jonni Millington, Cindy Monshizadeh, Susan Myers, Michael Nelson, Diana Perry, Sarah Raser, Mary Roberts, Barbara Schwering, Suzanne Smith, Deborah Snyder, Sydney Stout, Mike Sweeney, Cindi Thomas, Clint Thrasher, JoAnn Wilcox, Colleen Winter, and Melanie Yoder

Returning members: Jan Armstrong, Evelyn Davis, Sylvia Rawlings, John & Patricia Solbach, and Lorie Vanchena

Education Fund: Rachel Allai, Mara Aubel, Lori Callow, Evan Haake, Ozark Wilderness Waterways Club (In memory of Rachel Snyder), Sandy Sanders & Frank Hoffman, and JoAnn Wilcox

Prairie Protection Fund: Dean & Lisa Goodell (In memory of Gary Tegtmeier), Jill Haukos, Jean Hiersteiner, Ozark Wilderness Waterways Club, Tyson Russell, Sydney Stout, and Kathy Witherspoon, Keith Fort (in memory of Martha Wagner)

Prairie Management Fund: Ozark Wilderness Waterways Club

Scholarship Fund: Mary Cottom, Tania Kim, Ozark Wilderness Waterways Club, Deborah Snyder

Gifts in Memory of Martha Lou Wagner: Lynette Beebe, Susan Myers, Keith Fort

In Memory of Joseph O. Berger: Byril Sanders

A special thank you to our members who have set up monthly or quarterly donations or automatic renewals. Thank you to anonymous Facebook donors.

'Thank You' to:

Black Jack restoration volunteers and partners: Native Lands LLC, Jayhawk Audubon Society, and Black Jack Battlefield and Nature Park.

Roxie McGee for her work at GHF's Little Prairie at Little Prairie Community Garden

Spring native plant sale volunteers: Mary Kowalski, Sue Holcomb, Steve Holcomb, Jane Medina, Helen Alexander, Roxie McGee, Jesse Belt, Megan Withiam, Mike Campbell, Ken Tillery, Ann Davin, Pat Kehde, Myron Leinwetter, Jennifer Delisle, Margaret Rose, and Andrea Repinsky

Kevin Bachkora for GHF's monthly financial statements

Jungle House and Cottin's Farmers Market for hosting GHF's fall native plant sales

Ted Abel for stabilizing GHF's shed and Sue & Steve Holcomb for caretaking at Roulund-Wagner Prairie

Jessica Butters, KSU, for sharing her fall garden prep article

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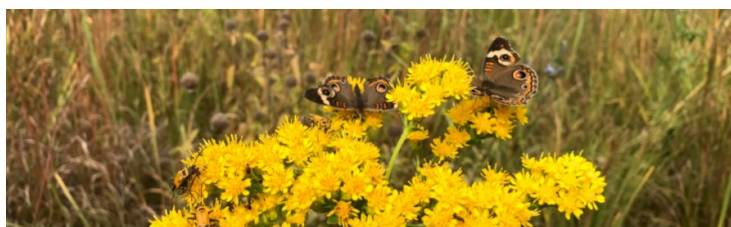
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Grassland Heritage Foundation *Fall Native Plant Sales*

Thursday, September 9, 2021
AND
Thursday, September 16, 2021
4:00 PM - 6:30 PM
At the Cottin's Farmers Market
1832 Massachusetts St, Lawrence, KS

Fall is a great time to plant natives! Pick up yours at the Fall CHF Native Plant Sale. About 15 species will be available at each sale. All plants are locally grown Kansas natives and are neonic free.

The cost for all plants is \$4.00. We cannot take advance member orders during the fall sales.

Visit www.grasslandheritage.org/fallplantsale for more information about our fall sales.



VOLUNTEERS NEEDED: BLACK JACK BATTLEFIELD PRAIRIE RESTORATION PROJECT

FALL WORKDAYS

Seed Collection

August 14, 6:30 pm - 8:30 pm
August 28, 8 am - 10 am
September 14, 6 pm - 8 pm
October 16, 10 am - 12 pm

Prairie Restoration

September 23, 6 pm - 8 pm
October 30, 1 pm - 4 pm

Wildflower Planting Event

October 9, 1 pm - 4 pm

