

Summer/Fall Edition August 2017







Grassland Heritage Foundation

2017 Fall Native Plant Sale

At the Cottin's Farmers Market

Behind Cottin's Hardware & Rental 1832 Massachusetts St., Lawrence, KS







Thursday, Sept. 14 and 21, 4:00-6:30 pm

Native wildflowers and grasses are **beautiful**, **hardy**, and can **thrive** in home landscapes - and pollinators love them! Fall is also a great time to plant natives so join us for our first ever fall native plant 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 sale. Contact us at grasslandheritage@gmail.com or 785-840-8104 for additional information.

President's Column

We have a lot of long-term goals, so it's always a good idea to celebrate successes along the way. I'm so glad that Kim Bellemere, GHF's Education and Membership Coordinator, helped KU professor Helen Alexander and Free State High School teacher Julie Schwarting celebrate four years of the Free State Prairie restoration and study site at Free State High School in Lawrence. Four years might sound like an odd milestone, but so much has hap-

Julie Schwarting, Helen Alexander and FSHS students present scrapbooks and plaques to Ben Posthelwaite, Westar and Beth Schultz for their support of the Free State Prairie project.



pened there to celebrate! Since the idea was conceived by Schwarting to turn an old football practice field to a prairie restoration site, it was implemented by Schwarting and Alexander, developing into a project that involved university and high school students growing prairie plants, monitoring change over time among three types of restoration plots, teaching younger students about prairie ecology, and much more. Science classes, art classes, and English classes have all used the outdoor classroom shelter built by Westar and the high school students. Most recently, Free State students completed summer internships to collect field data, funded by the Schultz Environmental Fund. I enjoyed meeting the students, especially to witness their complete passion for, and enjoyment of, the work they've been doing with the prairie. Good job, teachers! I expect to be seeing the benefits of the Free State Prairie project for a long time to come.

Andrea Repinsky

More information is at https://kars.ku.edu/geodata/maps/free-state-prairie/

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

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Kevin Bachkora

Upcoming Events

Monarch Watch Fall Open House 2021 Constant Ave., Lawrence, KS September 9, 9:00 am – 2:00 pm



Join Monarch Watch at the Fall Open House at Foley Hall (KU West Campus) to celebrate the arrival of migrating monarchs coming from the north. At the Open House you can learn about creating Monarch Waystations and see the magnificent butterfly and pollinator garden created and maintained by the Douglas County Master Gardeners. Weather permitting, you will see an abundance of butterflies and numerous other small but important pollinators. Refreshments will be served. There will be hands-on activities, games, videos, monarch tagging demonstrations, and, of course, monarch caterpillars, pupae, and butterflies!

Douglas County Conservation District: Compost Made Easy

Douglas Co. Fairgrounds, 2120 Harper, Lawrence, KS September 14, 2017, 1 p.m.

Uncover the basic processes behind composting and the keys to successful composting at home. We will explore the most common and easiest ways of creating your very own "black gold." Whether you're a first time composter or a veteran, the topics and perspectives will open your eyes to an unseen world right under our feet. Join the City of Lawrence Solid Waste Division as they share about compost and how to start or improve your compost system. www.douglasccd.com

Monarch Watch Tagging Event Baker Wetlands, 1365 N 1250 Rd, Lawrence, Kansas 66046 Sept. 16, 8:00 am – 12:00 pm

GHF "Divide and Multiply" Workshop KU Native Medicinal Plant Research Garden, 1865 E. 1600 Road, Lawrence, KS

Sept. 23, 2017, 9:00 a.m.

The fourth workshop in our four-part series on gardening with native plants, "Divide and Multiply" will feature prairie ecologist Courtney Masterson, who will demonstrate how to divide plants, collect seeds, and prepare the garden for winter. The workshop will also include a tour of the

Angie Babbit talks with attendees at the previous "Wildlife in the Garden" workshop.



garden. Space is limited and an RSVP is required. Contact Kim Bellemere *below*.

Kim Bellemere organizes GHF's educational outreach. Call her at 785-840-8104 or email grasslandheritage@gmail.com if you can assist at an event or would like to volunteer in some other way.

More Plants for Monarchs

Sue Holcomb

here's been a huge push to plant milkweeds Asclepias sp. to help the declining numbers of monarch butterflies. These native plants are necessary for the reproductive stages, where eggs are laid and caterpillars eat and grow. In the spring, during northward migration, these milkweeds are most necessary, as new generations of monarchs are produced. When the late summer and early fall

monarchs emerge they are biologically and behaviorally different from the previous generations. They won't mate or lay eggs until the following spring. Instead, they prepare for a strenuous flight south to Mexico. They need to feed on nectar plants to fuel their journey and help put on weight that will get them through the winter.

Migration comes to Kansas in mid to late September, depending on the weather. They will take advantage of cold fronts with northerly winds aiding their flight. By this time in Kansas, milkweeds are putting on seed heads, not flowering with nectar for the insects. Late flowering forbs will provide the needed sustenance. We can help by planting these plants, just as we plant milkweeds. Native flowers are best, when possible. Some of the later blooming species that you can grow in your gardens are New England Aster Symphyotrichum novae -angliae, Smooth Aster Symphyotrichum leave, Sky Blue Aster Symphyotrichum oolentangiense, Rough blazing star Liatris aspera, Blue Lobelia Lobelia siphilitica, Obedient plant Physostegia virginiana, Rigid Goldenrod Solidago rigida, Showy Goldenrod Solidago speciose, Ironweed Vernonia baldwinii, Blue Sage Salvia azurea, Joe Pye Weed Eupatorium purpureum, and late-blooming sunflowers.





As long as they're not invasive in your area, non-native fall nectar plants annuals and perennials may also be an excellent food source, filling in when native plants aren't available or in bloom. With proper deadheading, many will keep flowering until the first freeze. Annuals like zinnias, pentas, sunflowers, marigolds, lantana, cosmos, and petunias will all attract butterflies.

Late blooming mums often last well into winter. I got a beautiful one from Monarch Watch that has kept producing for years now.



There is some debate about planting tropical milkweed, but it doesn't seem to create the problems in our area that it does when growing year-round in the southern states. The one year I planted it, I had many monarchs feeding on it.

Another source of food in late summer is the fruit and berries that fall from trees. The fruit juice is full of the sugars butterflies need to prepare for winter. During the day, look for monarchs in areas with flowers. Toward evening, groups can be found in sheltered places that are cool and damp. Avoid pesticides on monarch host and nectar plants. In particular, steer clear of systemic insecticides such as neonicotinoids, which are taken up by the vascular systems of plants. This means butterflies and other pollinators can be exposed to poison long after a product has been applied by feeding on leaves, nectar and pollen.

Prairies and Climate Change

Kim Bellemere

HF is very excited to be a partner organization in the Climate and Energy Project's new program called the WEALTH Project. The WEALTH Project is funded through a grant from the Kansas Health Foundation and brings together several diverse organizations to explore the issue of health equity and climate change. WEALTH is an acronym for Water, Energy, Agriculture, Land, and Health. Other partners in the project are the Kansas Natural Resource Council, the Kansas Rural Center, Kansas Interfaith Action, and the Kansas City Chapter of the NAACP.

So why is GHF participating in a project that seems a little removed from our mission to preserve prairie? The answer is really three-fold. First, the WEALTH Project is a great opportunity to engage with organizations that we don't normally work with. We know that our climate is changing and any work to mitigate its impacts will require effort from different sectors and organizations. That means we all need to work together. Second, we need to better understand the relationship between prairies and climate change and how that relationship impacts our health and GHF's work. The WEALTH project gives us the time and opportunity to explore those issues. Third, it's a fantastic way to educate new audiences about the importance of the prairie ecosystem.

Because GHF hasn't been heavily involved in climate change issues in the past, we've spent the last few months learning all we can – and it has been a great education! We still have a lot to learn but what we've found so far has been fascinating.

To understand climate change, it's important to understand how the earth is warmed and the role of our atmosphere in that process. The sun's rays enter the atmosphere and warm the earth's surface. Much of that heat is radiated back toward space, however, the greenhouse gases in our atmosphere – mostly water vapor but also carbon dioxide, methane, and nitrous oxide - act as a blanket, retaining some of the heat and warming the planet (1). That's a good thing – it keeps the earth at a temperature which can support life. Over the last century, however, the amount of atmospheric greenhouse gases has increased which means we have more heat-trapping molecules in the atmosphere which are causing it to heat up and change our climate.

The vast majority of scientists agree that human activities are the most significant cause of the rise in greenhouse gases. Many of our activities, including the burning of fossil fuels and to a smaller extent the clearing of land, have increased the concentration of CO2 in particular, which is a major driver of climate change. Any mitigation or attempts to reverse the impact of climate change must include strategies to decrease the amount of carbon in our atmosphere.

What does this have to do with prairies? Potentially quite a lot. Here are three things we learned:

1. Prairies can sequester significant amounts of carbon below ground.

Carbon is stored or sequestered underground by plants. A plant takes in CO2 through respiration. Photosynthesis converts much of the carbon for use by the plant and what can't be used for energy and growth can be extruded through the roots. The soil fauna works with the plant to convert that carbon into a stable form (2), most of which stays in the ground until something exposes it to the surface. Soils under native prairies can contain over 10 tons of roots per acre – most of which can contribute to carbon sequestration. Decaying plants also contribute to soil carbon through the creation of humus.

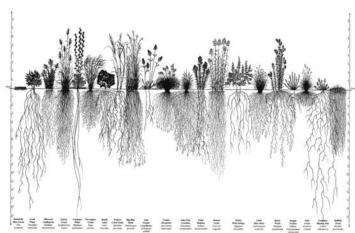


Image taken rom https://www.nrcs.usda.gov/Internet/FSE_MEDIA/nrcs141p2 028234.gif

Current research tells us that native prairie is in a generally neutral carbon state (J. Blair, personal communication, July 2017). Under appropriate management practices, over time native prairie will take in about as much carbon as it gives up through respiration and burning. Estimates of the amount of carbon stored vary and are highly dependent on many factors including temperature, plant species present and moisture levels. That said, one estimate from the USDA Forest Service puts the carbon storage amount at 22 tons per acre (native shortgrass prairie) (3). Other estimates on tallgrass prairie put the number much higher.

2. Restoring prairies and other degraded soils may play an important role in future carbon sequestration efforts.

Restored/reconstructed prairies can act as new carbon sinks because the amount of carbon stored increases over time. Recent studies on restored prairie carbon sequestration focus on the top 12-16 inches of the soil which stores a significant amount of carbon. However, because of the depth of prairie plant roots, carbon can potentially be stored deep underground and stay there for 100's of years. We know that carbon sequestration begins fairly quickly after conversion back to grassland (4) and it takes decades, even 50-100 years, for restored prairies to reach a steady state similar to that of a native prairie (5).

Prairies aren't the only place where we can sequester carbon in the ground. By implementing conservation agriculture practices (reduced tillage, perennial crops, winter cover crops), for example, we can sequester significant amounts of carbon in croplands.

Information from the Rattan Lal of Ohio State University indicates that "restoring soils of degraded and desertified ecosystems has the potential to store in world soils an additional 1 billion to 3 billion tons of carbon annually, equivalent to roughly 3.5 billion to 11 billion tons of CO2 emissions. (Annual CO2 emissions from fossil fuel burning are roughly 32 billion tons.)" (6). We don't have the technology to accomplish that goal today but it tells us that the potential exists to do great things with our soil.

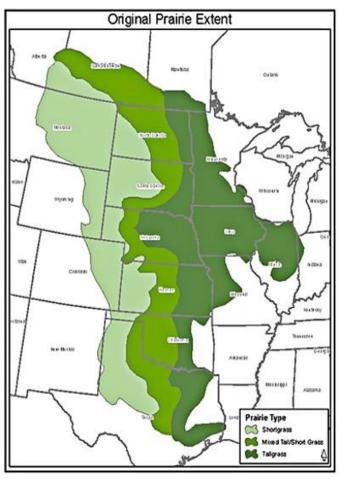


Image taken from http://www.tgp-docents.com/docentnews/DNL-201501/4-Prairie-Map.png

3. Preserving prairie helps keep carbon in the ground.

When a native prairie is tilled, at least 50% of the carbon stored below ground is released to the atmosphere over the next 50 years. We've lost over 96% of North America's original native tallgrass prairie and grassland acreage of all types continue to decrease. For example, a 2013 study from South Dakota State University showed that from 2006-2011, grassland to cropland conversion in 5 states (ND, SD, NE, MN IA) was equal to 530,000 hectares or over 1.3 million acres (7). Not all of that was prairie and we know that land managers may move land back and forth between cropland, CRP, and other uses but it does indicate that not all grassland is safe from conversion to cropland and/or development.

This is just the very beginning of our exploration into the relationship between prairies, climate change, and health and we have much more to learn. We'll continue to gather data about carbon sequestration as well as look at how climate change will impact the prairie ecosystem, what it means for land managers, and what all of this means for human health. We hope all our members will explore these topics with us. If you have climate change/prairie facts to share, please feel free to forward them to us at grasslandheritage@gmail.com and add to our growing library of information.

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-Map.png

Summer Burn Workshop

Rolling Hills Zoo, Salina August 3rd, 2017



Frank Norman attended a one-day workshop on growing season burns for prairie management at the Rolling Hills Zoo west of Salina. The workshop was sponsored by the OSU Natural Resource Ecology and Management Extension, Kansas Prescribed Burn Association, KS Prescribed Fire Council, KS Grazing Lands Coalition, Great Plains FireScience Exchange, and KS Natural Resources Conservation Services.

A 13-year burn study summarizing the results of growing season burns can be found at <u>fireecologyjournal.org/docs/</u>
<u>Journal/pdf/Volume13/Issue02/weir-310.pdf.</u>

Burning outside of the typical late winter to early spring burn schedule can provide more opportunities to complete all the burns needed on your property for that year. Spreading out the timing of your burns can reduce smoke impacts to urban areas downwind. In addition, it turns out that growing season burns appear to have positive effects on controlling woody plant encroachment, increasing forb diversity, reducing exotic grasses, and increasing native tallgrass species. These results challenge the current spring burning paradigm to maintain tallgrass prairie in the Great Plains.

A live burn was conducted to demonstrate the difference in fire behavior in summer versus spring burns. Norman is interested in applying later burns at Snyder Prairie.

Research Scholarships Still Available for 2017

Scholarships and grants for **up to \$1000** to be used for research into monarchs or pollinators or other prairie-related topics are available for either graduate or undergraduate students at Kansas colleges and universities. We haven't received any qualifying requests and would really like to award these funds.

Contact us at ghfscholarship@gmail.com if you are an interested researcher. Recipients will be asked to acknowledge the support and share the results of their work with our group.

We have previously given our scholarships through the Kansas Native Plant Society and will use a similar process.

Prairie Management-Groundhogs

GHF is busy at Snyder Prairie treating the invasive sericea lespedeza and brush hogging woody species like rough-leaved dogwood, honey locust, Osage orange, etc. It is a never-ending process in keeping the prairies on-site intact. In addition, staff is in the process of haying portions of prairie. Groundhogs, our volunteer group, went on hiatus for summer but before then we were removing red cedars and other trees along the edge of the woods.

If you are interested in volunteering, contact Frank
Norman, GHF's preserve manager, at 785-6919748 or fjnoman@sunflower.com as Groundhogs
will be back at it on Saturday, 9:00am, September
16, October 21, and November 18. Snyder Prairie is
located near Mayetta, Kansas about 20 miles north of Topeka.
Get on the volunteer list and be informed of work day activities.
Please don't show up without contacting us, as we may need to
cancel on a given workday. Always dress for the prairie with
long pants, gloves, a hat, and sturdy shoes or boots, and bring
along water.

Prairie Grass Appreciation

Sue Holcomb

Late summer is when the prairie grasses are really in their full beauty. Here are some photos of grasses I'm growing in my gardens that are very suitable for home plantings.



Big bluestem Andropogon gerardii



Sideoats gramma
Bouteloua curtipendula



Little bluestem Schizachyrium scoparium



Prairie dropseed Sporobolus heterolepis

We depend on your contributions! Please help GHF complete its mission by sending your donation

day. The date of your last contribution is printed above your name on the mailing label. <i>Send to</i> Grassland eritage Foundation, PO Box 394, Shawnee Mission, KS 66201.
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Send my newsletter by mail OR Send my pdf newsletter to the above email address
Contact me about volunteering
Gift in honor or memory of (mark which)
our contribution will be placed in the general fund unless you designate your donation for : Rachel Snyder Memorial Scholarship Fund
Prairie Protection
Education programs
Prairie Management

Special Donations

Land Protection: Travis Weller, Ron and Joyce Wolf, Wayne Morton, Jean Hiersteiner

Land Management: Pat Wittry

Special Donation: Paypal Charitable Giving Fund (when we closed our account we got a check from anonymous donations)

Monthly Donation Plan: Kenneth & Gayle Nicolay

GHF Members

New Members: Suzanne Alongi, Jill Ensley, Laura Gilbow, Susan Iversen, Elizabeth Patton, Catherine Schwoerer, Pauline Verbeek, Pat Wittry

Returning/Renewing Members: Helen Alexander, Fred & Nancy Coombs, Julia Cotter, Daniel Dannenberg, Julie Elfving, Dale Funk, Jean Hiersteiner, Susan Iversen, Duane & Cosette Kelly, Kathryn Lange, Cathy W. Lewis, Barbara Mason, Wayne Morton, Elizabeth Patton, Janet Roth, Catherine Schwoerer, Gary Tegtmeier, Ione Unruh, Travis Weller, Ron and Joyce Wolf

I'm still working on learning the new database and payment system. So, please bear with us if we made any mistakes.

Sue Holcomb

Thank you to

Volunteers for the GHF Spring Native Plant Sale:

Sue and Steve Holcomb, Ron and Joyce Wolf, Gary Tegtmeier, Frank Norman, Mike Campbell, Megan Withiam, Ann Simpson, Andrea Repinsky, Jennifer Dropkin, Jane Medina, Courtney Masterson, Tasha Wolff, Jamie Hofling, Roxie McGee, Jennifer Delisle, Jan Speigel, Ken Tillery, Pat Kedhe, Bitsey Patton, Staci Hendrickson, Nicole Rosaker, and Alan and Cathie Rhodes.

Though technically not a volunteer, we all thank *Kim Bellemere* for all the hard work she put in on this event.

Ann Simpson and Courtney Masterson for presenting at the first two workshops in the "How to Garden with Native Plants" workshop series. Thanks also to Roxie McGee and Kelly Kindscher for volunteering the KU Native Medicinal Plant Research Garden for use during the workshops and working with the event organizers.

Sharon Gan-Yang for layout for the newsletter

Kevin Bachkora for assisting with monthly accounting

Signs of Life and the Lawrence Public Library for meeting space

Upcoming Panel on Federal Farm Bill

Monday, September 25 7:30pm, Fellowship Hall of Trinity Lutheran Church, 1245 New Hampshire, Lawrence, Kansas.

Grassland Heritage Foundation will be a co-sponsor of a program about the next version of the Federal Farm Bill, which includes measures concerning wildlife habitat, land conservation, water quality and so much more. The Monday, September 25th program will feature a panel of three persons who are all well versed in the various sections of the Farm Bill: Paul Johnson, representing the Kansas Rural Center; Ron Klataske, representing Audubon of Kansas, and Donn Teske, representing the Kansas Farmers Union. The meeting will start at 7:30 p.m. in the fellowship hall of Trinity Lutheran Church at 1245 New Hampshire in Lawrence, KS.

Each panelist will present a brief overview of the Farm Bill from the perspective of each organization, followed by plenty of time for questions from audience members. GHF is pleased to be able to offer this opportunity to its members along with the other cosponsors: Jayhawk Audubon Society and the League of Women Voters of Lawrence/Douglas County.

The above listed items are crucial parts of the Farm Bill and how it is finally written will have significant effects on birds and other wildlife. It will also affect the reservoirs of eastern Kansas and how much silt will be carried to them from farm lands – more silt leads to less protection from flooding and less water for drinking or recreation. Other parts of the Farm Bill addresses viability of locally produced food and assistance for low-income families. The Farm Bill may contain language that may benefit struggling rural communities.

Part of the preamble of the Kansas Farmers Union helps explain how significant the Farm Bill can be for individual farmers: We believe family ownership of farm land is the basis for the world's most viable system of food and fiber production, and maintaining this family farm system will preserve our country's natural and human resources.

We believe this policy would develop farm programs that will diminish hunger, foster peace, justice, and the preservation and protection of our natural resources and local economies.

Paul Johnson has been a legislative advocate in Topeka on poverty, social services, energy conservation, environmental protection and local food issues since 1980. Paul is the lobbyist for the Kansas Rural Center (KRC) on regional foods, environmental protection and water issues. Paul writes weekly Policy Watch reports for the Kansas Rural Center and supporting groups during the Kansas Legislative session (January to May). Paul has been an organic market gardener since 1985 and a founding member of the Rolling Prairie Farmers Alliance CSA in 1994.

The *Kansas Rural Center* sponsors monthly conference calls on grazing options to promote sustainable agriculture. KRC has a pollinator project to promote farming practices to increase ecological balance. KRC has been active in promoting federal Farm Bills that support conservation practices on working farms through the Conservation Stewardship Program.

Ron Klataske, Executive Director of Audubon of Kansas (AOK), has been involved in advocating for wildlife conservation in many capacities. Having grown up on a diversified farm, and still involved in land management for AOK's sanctuaries and his own family land, Ron's priority has always been stewardship of the natural world. As a member of the USDA Kansas State Technical Committee since the mid-1990s, he brings his passion to improve policies and practices involving the Environmental Quality Incentive Program, Conservation Reserve Program, and easement programs designed to preserve grasslands, wetlands and other habitats.

Donn Teske is currently president of the Kansas Farmers Union and has filled that position for 16 years. He lives and works on a farm that has been in the family for five generations. Their farm is on the eastern edge of the Flint Hills, with about 2/3 in grass and about 1/3 in row crops. The terrain is rough and rocky with cropping done on the bottoms and very tops of the hills. The rest is native Bluestem grass and Brome grass. He raises Soybeans, Grain Sorghum, Red Clover, Wheat, Oats, etc. The grass is utilized through a cow/calf herd. Donn also serves at the VP on the National Farmers Union board of directors, which provides guidance to state chapters on various aspects of the federal Farm Bill. Additionally, he serves on several other boards related to ag issues. At a recent conference hosted by the KS Rural Center, Donn explained how this is a particularly challenging time for farmers because prices for commodities are so low that it's difficult to recover the costs: seed, fertilizers, pesticides, irrigation water, etc. And unless young farmers inherit the land, it is nearly impossible to start a new farming operation because the cost of land is so high.



To receive your newsletter in pdf form by email, contact Sue Holcomb, sholc2003@yahoo.com or 913-856-4784 (leave a message). Enjoy your newsletter in full color on our web site www.grasslandheritage.org.

Please let us know if you no longer wish to receive the GHF News. Thank you!