

Tallgrass Gazette

The Newsletter for Docents and by Docents



Fall 2012

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Calendar of Events

- January 12
 - Docent Roundup
- January 27
 - FOKP Winter Event
- February 16
 - New Docent Orientation

Committee Members

- Jerry Freeze, Chair
- Colleen Hampton
- Karen Hummel
- Clancey Livingston
- Ann Murphy
- Doreen Towne

The Newsletter for Docents and by Docents

By Annie Baker,
FOKP Publications Committee Chair

Welcome to the 35th and final issue of the Tallgrass Gazette, "The Newsletter for Docents and by Docents." Completing its 14th year of publication, the Gazette was the brainchild of then Docent Coordinators Phoebe Samelson and Janet Throne. First published in Fall 1999, the purpose of the Gazette was to keep Konza Prairie docents informed of ongoing activities and educated about ecological research that would be of interest and useful knowledge for tours. The inaugural six issues were designed and edited by docents Susan Bale and Tawnya Ernst. In 2001, docents Gordon Cunningham and Gerry Snyder took over as co-editors, and continued for 8 years. Gordon and Gerry were honored with the Docent Leadership Award for their service in 2005. In 2010, Dennis Toll replaced Gordon as co-editor with Gerry, and in 2012, Annie Baker took over for Gerry. These outstanding volunteer co-editors have continually produced a top-notch newsletter by always being on the lookout for current research topics and contacting these ecologists, recruiting fellow docents to submit articles or book reviews, and working closely with KEEP staff. Of importance to the success of the Gazette, docents themselves have always been active contributors of articles, photos, and ideas for future issues. Thank you to its many co-editors and contributors, who have made the Gazette a quality publication! Let's keep the tradition rolling!

Timmons Grant gives Homestead Plans a Headstart
Barn, spring house to be renovated

The stone barn and spring house at the Hokanson homestead stand quietly now, a reminder of Kansas' past.

Fastforward a couple years and picture a docent in period dress bringing that past alive to a group of school children. A \$3,000 grant from the Bess Spiva Timmons Foundation will help make that vision possible. The foundation awards grants to organizations west of the Mississippi River that emphasize programs that benefit minority groups, social services and ecology.

"It will allow us to broaden our educational scope," said Valerie Wright KPRNA Environmental Educator. Most people tend to associate science with the Konza, she said. "We want to bring in the social studies and history teachers. We want to move from a strictly scientific perspective into historical and cultural contexts."

The Timmons grant provides a starting point for renovation of the barn, spring house and shed, Wright said.

Renovation will expand the use of the homestead to include living history presentations, wildlife observation, a center for discussion of the relationship between people and the land and their effects on each other.

Most of the improvements will be done by volunteers. Over the coming months, Wade Walker, a 14-year-old Eagle Scout from Troop # 74 of Manhattan will be in charge of obtaining bids from contractors, organizing volunteers and drawing up a construction schedule.

Walker and his troop are participating in the project for a chance at the William T. Hornaday Award for Distinguished Service to Natural Resource Conservation. The award is designed to encourage scouts who design, lead and carry out conservation projects that are based on sound scientific principles and practices. Spring rainfall has caused damage to the barns structure which needs to be addressed. The barn will be refurbished so that it could be used as an educational center. Plans include for the barn to be re-roofed, its stone walls repointed and a concrete floor and new windows and doors to be installed.

The stone walls of the spring house will be stabilized. The spring box will be cleaned and the spring redirected into it.

The red wooden shed will be taken down and rebuilt to conceal a self-contained toilet system, perhaps a composting toilet, Wright said.

Paths around the site will be improved.

In addition, \$2,000 has been awarded from Outdoor Wildlife Sites (OWLS) to renovate the lean-to as a wildlife observation area.

Despite the changes, the homestead will look similar to the way it does today.

"We want to keep the historical nature of the place," Wright said.

—by Tawnya Ernst

Inside

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Beginning with the next issue, the Tallgrass Gazette's content will be merged with the FOKP newsletter, Bison & Bluestem. Our core "family", Konza Prairie docents and Friends of Konza Prairie members, often express interest in the same information, whether it's an update from Director John Briggs, new research findings, docent and visitor activity, or education training opportunities. Consolidating the newsletters into one will provide our "family" with consistent quarterly updates and broaden the information available for everyone. Expect your expanded Bison & Bluestem issue in January. Be sure to let us know what you think!

New KEEP Activity: "The Konza Experience"

KEEP has an exciting new activity that combines a trip to the Flint Hills Discovery Center (FHDC) with a visit to Konza Prairie. This new activity, "**The Konza Experience**," plays off the name of the Discovery Center's movie, "The Immersive Experience."

Groups participating in this activity first visit the FHDC and receive a two-sided worksheet. On one side has questions to be answered by moving through the Discovery Center's exhibits, and the second side has questions that will be answered after visiting and hiking on the Konza Prairie. Both sets of questions revolve around the biology and geology of the Flint Hills and Konza Prairie. After completing the Discovery Center's side of the worksheet, the group gets a chance to watch the Immersive Experience movie. A visit to the FHDC lasts 1.5 hours.

The group then comes out to Konza Prairie. Docents break the groups up into smaller clusters of 10-15 people and take the small groups out on a hike. Typical hikes last one hour and allow the visitors a chance to see the geology of the Flint Hills and a chance to climb a hill to see the "real" tallgrass open vista (just like the one seen in the movie at the FHDC). Groups then reconvene and sit down with their worksheets. Docents work through each of the questions and by answering them, visitors complete the activity with a good understanding of the tallgrass prairie and the Flint Hills.



KEEP docents, at the Flint Hills Discovery Center, recently received training in "The Konza Experience."

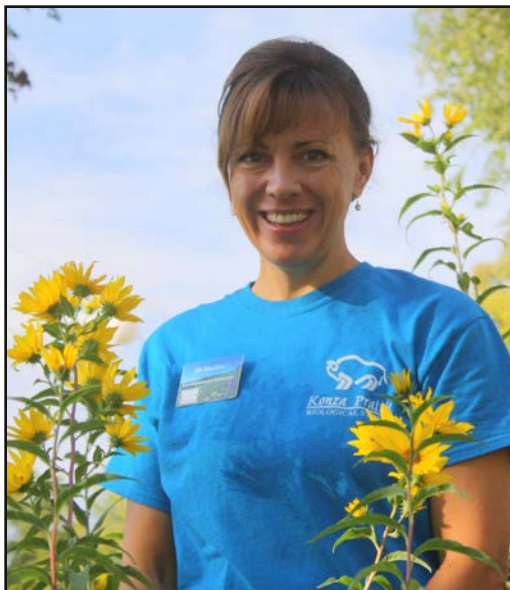
As of November 1, we've had two groups complete "**The Konza Experience**" and the feedback has been amazing. Most of the comments relate to the groups wanting to come back. We are letting this activity grow and develop slowly and have not been marketing it; groups are hearing about it by word-of-mouth. Even without active marketing we expect this to become a very popular activity.

Get Involved

Does this sound like something you might be interested in doing? Feel free to give us a call if you know you would like to participate. We've had one training session and are making plans for a second session. Keep an eye open for an announcement of upcoming training. If you are interested, but would like to see how it works first, feel free to come along with a group and observe.

From the Stone House

Jill Haukos,
Environmental
Educator



As I write, the bison roundup is officially un-

derway here at Konza Prairie, and the people working this event are bravely withstanding 20 mph winds and 40 degree temperatures. Everyone is bundled up in their winter coats, hats, and gloves. Yesterday the temperatures were in the mid 80's, and we were wearing shorts and t-shirts. This is just another example of our "**continental climate**" we mention frequently to school groups.

In case you're not familiar with the concept of the continental climate, let me explain. Since Kansas is smack in the middle of the North American continent we are about as far away from "big water" as a geographic location can be.



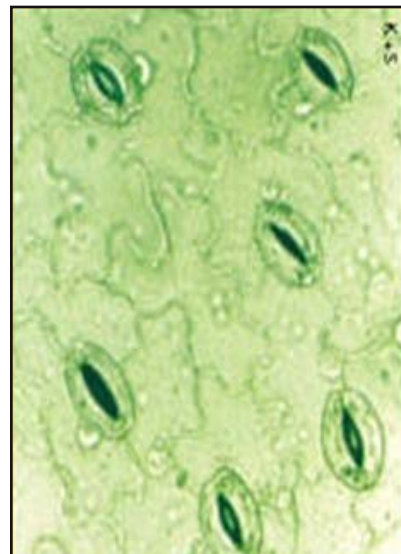
Communities that border large bodies of water such as oceans, seas, and large lakes have the luxury of having their climate tempered by the insulating nature of water. Water acts to moderate temperatures, making winter temperatures warmer and summer temperatures cooler. The further away one is from a large body

of water, the more extreme the potential range of temperatures.

One hallmark of a prairie is the continental climate. I tell school groups that organisms living in prairies have to be tough in order to survive our crazy weather. The kids usually agree with me.

Another concept frequently mentioned to Konza Prairie visitors is the difference between "**cool season**" and "**warm season**" plants, usually referring to grasses (but it includes broadleaf plants, too). The basic difference is how they process carbon dioxide (CO_2) during photosynthesis.

Photosynthesis uses energy from light (sun) to form new chemical bonds between CO_2 and H_2O (water) to form glucose (a simple, single-ringed sugar). Glucose is the basic fuel (food) for all living cells. All cells need fuel to function and some organisms, called **autotrophs**, can make their own food.



Plants, algae, and some bacteria are examples of autotrophs.

Plants get their water from the soil; they absorb the water with their roots and the water is transported up to the leaves. The leaves store the water inside and around the outside of the cells, which is why plant leaves are juicy!

Plants get their CO_2 from tiny holes in the underside of their leaves; these holes are called stomata (stoma – singular, means "mouth"). When the stomata are open CO_2 comes in but water has the chance to escape. It's a classic tradeoff (similar to leaving the front

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From the Stone House

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door of your house open in the winter) – the plant *must* have CO₂ for photosynthesis but *doesn't* want too much water to escape.

Cool Season Plants – C₃ plants: Approximately 95% of the plants on Earth utilize this type of photosynthesis. They are called “cool season” because they function best at temperatures of 60-75° F – temps we get in the spring and early summer.

Some examples of cool season plants on Konza Prairie:

Common violet	Western ironweed
Cocklebur	Death-camas
Moth mullein	Siberian elm
Catnip noseburn	Poison-ivy
Dandelion	Aromatic aster
Heath aster	Goldenrod (all)

CO₂ passively diffuses through the stomata into the inner tissue of a leaf. This is why it's good to talk to your plants; you exhale CO₂ and your plant absorbs it.

During photosynthesis C₃ plants combine three molecules of CO₂ together to make an intermediate, 3-carbon molecule (“C₃”). Then a second group of CO₂ is hooked together to make another 3-carbon molecule (“C₃”). Then, those two 3-carbon molecules (C₃ + C₃) are hooked together to make a single 6-carbon molecule = glucose!

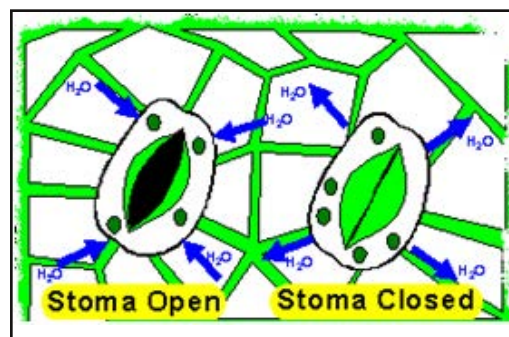
Warm Season Plants – C₄ plants: These plants (about 3% of all plants on Earth) take longer to turn green in the spring and tend to go dormant quicker in the autumn. However, they're able to thrive in summer heat that would otherwise fry the cool-season plants – 80 - 95° F. They also require only a fraction of the water that cool-season plants use – because they can function even when their stomata are closed!

Some examples of warm-season plants on Konza Prairie:

Big bluestem	Buffalo grass
Side-oats grama	Bermuda grass
Switch grass	Little bluestem
Indiangrass	Blue grama
Eastern gamma grass	Common purslane
Yellow nut-sedge	Prostrate mat-spurge

The C₄ plants have a molecule that actively moves throughout the plant cell gathering up CO₂. The molecule picks up a CO₂ and forms a 4-carbon intermediate

(C₄). The gathered CO₂ is very efficiently delivered to the photosynthesis sites and dropped off allowing for a rapid rate of photosynthesis. In this case, the process of photosynthesis doesn't have to wait for the CO₂ to passively diffuse to the right site within the cell, CO₂ is directly delivered.



When a plant is stressed for water the cells surrounding the stoma become deflated/flaccid and effectively close the pore thus stopping the damaging loss of water from the leaf. When C₃ plants become stressed for water the stomata close AND the supply of CO₂ stops AND photosynthesis stops. When a C₄ plant becomes stressed for water, the stomata close BUT photosynthesis doesn't stop. They have the ability to gather up stray CO₂ laying around and can keep photosynthesis going even though the incoming supply of new CO₂ has stopped. In this case, C₄ plants can keep doing photosynthesis and can keep growing even though it is hot and dry. This is why C₄ plants are particularly successful in hot and dry climates, like the prairie.

Big Day for Visitors at Konza Prairie



Clockwise from above: Docent Charlie Given gives a tour of the Hokanson Homestead. Visitors enjoy a hayrack ride. The line was long for Bison Loop tours. Joe Mosier and Duane Miksch set up the activity tables. Konza Prairie fire crew members Patrick O'Neal and Shelly Ricketts explain their work to some young visitors. New KEEP docent Alysha Soper and Nancy Goulden discuss a grasshopper with a young visitor.



Saturday, September 29th dawned clear and warm. It promised to be a great day. The early morning harbinger rang true as the day was simply amazing. We were busy from the very beginning of the event at 8:00 a.m. straight through to 4:00 p.m. Well, actually straight through until around 5:30 p.m. when the last of our visitors left.

Since we only hold Visitors' Day every two years it seems like the members of the community look forward to coming to the site and getting a look around. We had over 100 volunteers and over 1,500 visitors! Volunteers who had signed up to do two hayrack rides ended up doing five, and buses ran the Bison Loop continuously with a waiting line that never seemed to shorten.

In all, Visitors' Day 2012 was a roaring success. Many people indicated that they had a wonderful time visiting Konza Prairie and learning about the tallgrass prairie. We look forward to doing another one... in two years. Many thanks to all of the volunteers and community sponsors - we couldn't do this event without you!



Docent Profile: *Doreen Towne*

1. What motivated you to become a Konza Prairie docent?

Several years ago my husband Gene provided wildflower walks for the UFM. I always attended and soon was able to identify a few prairie plants. Then once our children were grown, I needed an outlet from my job to release stress and what better way than to become a docent.

2. What are some of your hobbies & interests?

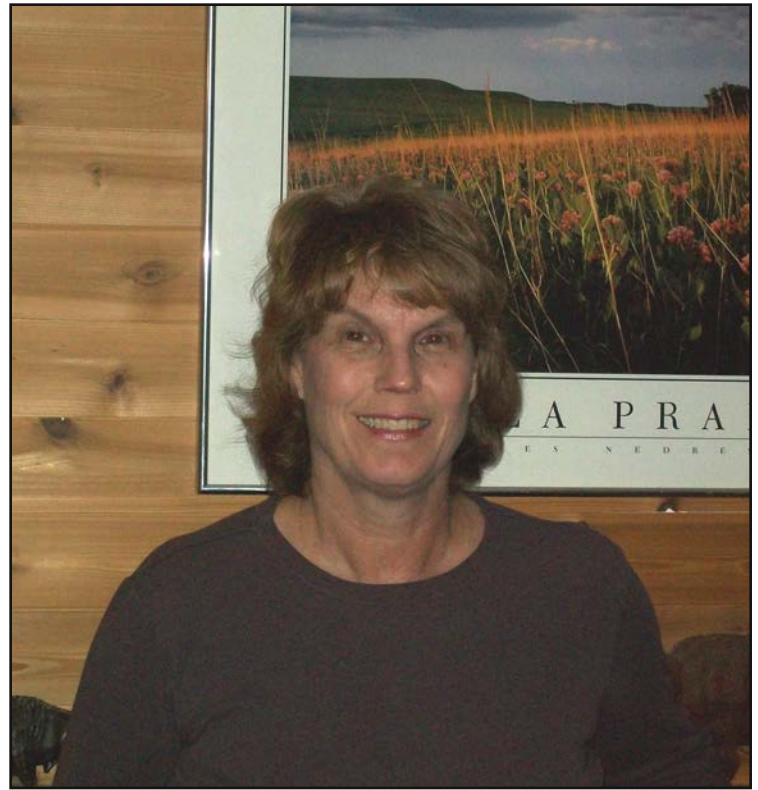
I enjoy the outdoors and my adventures on the prairie. After I finished the docent training in 2010, I teamed up with docents Earl Allen and Nancy Goulden. We've discovered plants and places on Konza Prairie that I never dreamed existed in Kansas.

3. What has been the best part of being a volunteer at Konza Prairie?

Experiencing and learning something new every time you go out. It could be catching grasshoppers with middle school kids, learning that I really don't like to handle a drip torch, collecting bison fecal samples with Gene, or just making new docent friends with similar interests. Whatever it might be, I love it.

4. What brings you the most joy in your life?

Spending time with Kale, our 2 year old grandson. Every day is a new discovery for him, and I want to be part of it. It won't be long before he can go hiking with grandma and gain an appreciation for nature and the outdoors. I also enjoy watching the bison herd; listening to their grunts and watching the new calves play and kick up their little hooves. It makes me smile to see such innocence.



Doreen Towne has been a part of the Manhattan community for 38 years.

5. Briefly describe your "life story."

I am a native Kansan, born and raised in Butler County. My dad was an avid arrowhead hunter and collected rocks and minerals for many years. My grandparents had a dairy farm, and grandma and I would pick wildflowers as we brought in the cows. Being outdoors was a part of my childhood. Gene and I moved to Manhattan in 1974 so he could finish his degree at K-State, and 38 years and three degrees later we're still here. Along the way, we raised two children, Steve and Paula.

Over the years I've learned a great deal about the prairie from Gene and have had the opportunity to hear his stories about the bison, burning, and where and when particular plants are blooming. I am sworn to secrecy for most of these stories and am only known to leak this "privileged information" to a few lucky docents. I've worked at the American Institute of Baking in Food Safety Education for 28 years and am looking forward to when I can retire and become a full time docent.

Saturdays on Konza

KEEP has a new program that began this fall. It's called "Saturdays on Konza" and it's a docent-guided walk on the Nature Trail that is open to the public.

Walks begin every Saturday morning at 9:00 a.m. and anyone who would like to come along is invited to be at the kiosk at the appointed time. Docents are able to sign up for this activity, just like any KEEP activity, by using the online calendar.

If you're interested in participating in this exciting new program, we invite you to either sign up or simply show up on Saturday mornings.

Program promotion: We're starting this program slowly with little-to-no publicity to allow it to grow and develop organically. We want docents to have a chance to get accustomed to the opportunity to participate in a regular Saturday morning activity. The next step will be to put up a sign at the Nature Trail kiosk. After that, we'll put something up on the KEEP website, and the final promotional act will be



Docent Donna McCallum leads a group on a Konza hike.

to send out a press release. Once the Press hears about the program, we will be committed to the program and can expect to have quite a few participants every week. We're going to give the activity a chance to put out some roots before publicizing it too much.

If you've been looking for a Saturday program – this is the one for you! Please take a moment and check the calendar and sign up. This activity will only survive and flourish if docents sign up and commit to being at the Nature Trail on Saturday mornings.

This activity is the brain-child of Jerry Freeze, KEEP Docent Committee Chairman. If you have any questions, feel free to contact him at jfreeze@wamego.net, (785) 456-5351, or Jill Haukos at konzaed@ksu.edu; (785) 587-0381.

Docent Roundup coming January 12

Use a big red marker to circle Saturday, January 12 on your calendars. That is the day of the Docent Roundup, which will be held from 9:00 a.m. to 12:00 noon, Saturday morning in the headquarters barn at Konza Prairie.

This year we'll be giving out ALL of our docent awards during this event. Here's a list of the awards to expect:

- Docent Trainee of the Year
- Docent of the Year
- Master Docent designees (new name for "Long-Term Docents")
- Quality Docent designees
- Other "special" awards!

As always, this event will be the perfect way to kickoff 2013 on Konza Prairie. Our guest speaker will be announced at a later date.

Enjoy Your Visit?

Help keep the trail clean and open to the public,
pay \$2 as a trail-use fee (white fee box at trail head) or

Join the Friends of Konza Prairie



What is Friends of Konza Prairie (FOKP)?

It is a nonprofit organization dedicated to the support of Konza Prairie. As a member your contributions are tax-deductible and are used to support Konza Prairie educational programs, facilities, and trails.

FOKP activities:

- Spring Wildflower Walk
- Fall Bison BBQ Potluck
- January Winter Gathering
- Invited speakers and special events
- Bison and Bluestem newsletter

Learn more about FOKP :
keep.konza.ksu.edu/friends



Face Lift for Nature Trail Kiosk

The Nature Trail kiosk received a makeover. A big **thank you** to Eagle Scout Noah Schmidt, docent Kristina Snyder, and KPBS LTER Information Manager Adam Skibbe. Noah, KPBS Director John Briggs' grandson, repainted the kiosk and overhauled the document tray area. Kristina and Adam helped design and produce new signs, which are now installed.

There is a new general "trail rules" sign (below) that is more easily seen by visitors as they approach the trail from the north side of the kiosk.

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Welcome Konza Prairie Nature Trails

The Konza Prairie Nature Trails are privately owned and operated.
Your adherence to these rules will help ensure that the trails remain open to the public:

- Our trails are for hiking only. Trails are not wheelchair or stroller friendly.
- NO smoking or open flame allowed, including inside buildings.
- NO dogs, horses, or other pets.
- NO bicycles or motorcycles.
- NO camping or overnight parking.
- Take ONLY photos. DO NOT collect or remove flowers, rocks, feathers, or other materials.
- Remain on designated trails and roads at all times.
- Pack it in, pack it out. Trash cans and picnic areas are NOT available on the trail.
- Advance reservations are required to enter the Konza Prairie Biological Station headquarters. Call: (785) 587-0441
- A trail maintenance fee = \$2



Konza Prairie Trails



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There is also a new sign displaying a topographic map of the Nature Trail with additional distance information.



Total Distance:
Nature Trail: 2.5 miles
Nature Trail and Kings Creek Loop: 4.4 miles
Nature Trail, Kings Creek Loop, and Godwin Hill Loop: 6.0 miles

KEY:
Loop Name
Elevation (meters)
Section Distance (miles)

FOKP Winter Event January 27

Have you ever wondered what it meant to be Friends of Konza Prairie? Many docents are already members of FOKP, but not everyone. Here is a chance for FOKP members to get together and enjoy an afternoon at Konza Prairie with music and refreshments.

Docents who are not members are also invited to attend and learn more about this important association that supports educational and public outreach programs at KPBS.

The event will be held Sunday, January 27 in the headquarters barn from 3:00 to 5:00 p.m. If you plan to stay for the soup & bread, please R.S.V.P. to Barb Van Slyke at bvs@ksu.edu or call (785) 587-0441 by January 24.



Docent Training Begins February 16

If you know anyone that wants to become a docent, or if you are interested in reviewing your own docent skills, then the 2013 New Docent Orientation is the perfect opportunity.

Invite a friend and come to the Hulbert Education Center on Saturday morning, February 16 from 9:00 a.m. to 12:00 noon. New Docent Orientation gives an introduction to Konza Prairie Biological Station and the Konza Environmental Education Program. Come find out about the Docent Program, preview program materials and the upcoming training schedule, meet experienced docents and Konza Prairie staff, and view a presentation about Konza Prairie.

KEEP Welcomes 15 New Docents

At the FOKP Fall BBQ, 15 new, energetic docents graduated into the Konza Environmental Education Program.

Ximina Cibils – A K-State Entomology graduate student. She enjoys working with the grasshoppers and going on the Bison Loop.

Mark Edwards – Recent retiree from a 30+ year career with the Iowa Department of Natural Resources, Fish and Game Division. He is interested in all aspects of KEEP and is available during the week.

JD and Janel Koons – A young married couple who enjoy walking the Nature Trail. They work during the week, but are excited about helping with activities on the weekend.

Donna McCallum – Visited Konza Prairie for years as a bus driver. She has a Master's Degree in Public Relations and enjoys working with senior groups. Donna enjoys doing Bison Loops (naturally!) and has begun to dip her toe into Nature Trail walks.

Duane Miksch – Large animal veterinarian who recently relocated to Manhattan from Kentucky. Loves to walk the Nature Trail and is interested in giving Bison Loop tours.

Keith Miller – A K-State Geology professor. He enjoys leading Nature Trail and Butterfly Hill walks and sharing his knowledge of the Flint Hills geology on weekends and during the summer.

Caitlin Molenaar – A K-State Architecture major. She is very enthusiastic and loves to work with groups when she has a free moment. She is available on weekends.



New KEEP docents – from left to right: Keith Miller, Michael Vega, Ximina Cibils, Alysha Soper, Dana Nelson, Mark Edwards, Duane Miksch, Donna McCallum, Don Phillippi, Andrea Schwagerl, Janet Phillippi. Not pictured: JD and Janel Koons, Caitlin Molenaar, and Lori Spiker.

Photo by Chod Hedinger

Dana Nelson – A K-State Wildlife Biology major. She is also very enthusiastic and energetic. She was very helpful on Visitors' Day and is available most weekends to help with any type of program.

Don and Janet Phillippi – Another married couple. They have a lot of knowledge and energy to lead groups on hiking trails and Bison Loop tours on weekends.

Andrea Schwagerl – A K-State Wildlife Biology student. She enjoys working with the SLTER activities and comes out to help KEEP with a wide variety of activities.

Alysha Soper – A K-State graduate student in Entomology. She enjoys working with the grasshopper activity.

Lori Spiker – Local business owner (massage therapist). She enjoys doing the SLTER activities and the Konza Experience.

Michael Vega – A K-State Geology student. Michael loves the geology of the Flint Hills and sharing his knowledge with tour groups.