



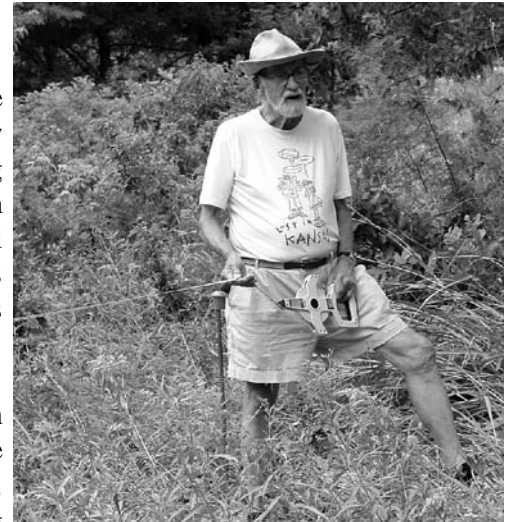
“The Newsletter for Docents and by Docents”

## SLTER Expands Kings Creek Research

By Dr. Valerie Wright and Dr. Tim Keane

Stream geomorphology is nothing new to KEEP docents. Several are involved in the student activity we have been offering for the last few years along with the inventory of stream macro-invertebrates. Studying the geology and changes in the stream banks, gravel bars and bottom was suggested to us by Dr. Walter Dodds, one of the principal investigators for the LTER program, when the SLTER program was first searching for long-term ecological activities. The two photo stands on Kings Creek have recorded changes for the last six years.

This fall a new geomorphology activity is being added. Along with Dr. Tim Keane of KSU’s Landscape Architecture Department, we have developed a protocol for students to measure stream characteristics, which will give a 3-D picture of the stream and show how it is changing over time.



Clyde Ferguson lends expertise.

Kings Creek is considered a typical reference reach stream for the Flint Hills hydrophysiographic province. Streams are defined by the climate, geology and hydrology of their region. In general, Flint Hills streams are not stable but are moving toward stability at some future point in time. Tim and his colleagues are studying the “behavior” of stable streams in Kansas for the EPA. Three years of data have been collected and will be available through the State Conservation Commission next year. The data will be used to help design future projects for the restoration of impaired streams. Human and non-human activities, like cutting trees, breaking ground, drought and floods have changed the streams in Kansas, causing downcutting and instability. Stream geomorphology is a relatively new science. The U.S. Geological Survey began taking data only 20 years ago.



Docents creating “stable points” along Kings Creek.

The methods used include survey techniques and simple measurements from stable points or “monuments” on the stream bank. Our measurements have been simplified from the professional protocols but will give enough information for students to see the cross section, longitudinal profile and sinuosity of the stream. Graphs of the data help the children understand what the stream looks like at a moment in time and allows a comparison with data taken at other dates. High water events like the one in July this year can drastically change the stream. The water level, velocity and temperature change with the seasons and local conditions making an interesting shorter-term data set as well. A new camera stand will be added at the geomorphology site, which is located downstream from the Nature Trail bridge.

# Prairie Patter

by **Dr. Valerie Wright, Environmental Educator and Naturalist**

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Since your last Gazette there has been more than a “patter” of things to talk to you about. It’s more like a downpour! So let me concentrate on some big items. We have a new Phenological List on the web site ([www.ksu.edu/konza/keep](http://www.ksu.edu/konza/keep)) for animals. This appeared at the urging of **Clyde Ferguson**, expert birder and overall excellent observer, who felt plants should not be the only notable living things in our view. The list is called “Who’s Here?” to match the “What’s Blooming?” plant list. The animals on the list include birds that migrate (and therefore arrive in the spring or leave in the fall), a few mammals, reptiles and amphibians that emerge from hibernation, butterflies and moths that break out of winter places or migrate from the south and other insects of note. To join in the fun of watching for phenological (first) events, start this fall with some disappearances, for example, of Upland Sandpipers or the last call of a nightjar. Then next spring we’ll start again with the earliest events, such as the flight of a Question Mark butterfly on a warm February afternoon as it seeks sweet sap on a wounded tree. Did you know there are butterflies that overwinter as adults?



**The Painted Lady is a migrant to Konza Prairie.**

The Phenological Plant List has brought in some interesting early dates for blooms this year, thanks to the diligent work of several docents (especially **Nancy Goulden** and **Earl Allen**) and the sharp eyes of groups on the trails. Fifty per cent of the 180 species reporting in so far this year are at least 2 days ahead of other years and most of these are 4 or more days earlier to bloom than previous years. The good rains helped produce some spectacular displays as well. With Big Bluestem heads already an easy six feet off the ground and still growing, this fall may turn out to be spectacular for the tallgrass. Next year will be our fifth for observing first blooms.

This summer KEEP made a major change in organization. With **Verlyn Richards** stepping down as Docent Coordinator and **Annie Clark** working fulltime to take over scheduling docents, as well as setting up reservations, we are hoping for a smooth run through September and October. It may take a bit of patience on your part, if we hit some snags along the way. But I am optimistic that with Annie’s super organization skills and a little backup from Verlyn and **Loren Alexander**, if needed, everything should be fine.

As you have seen from Annie’s e-mail messages, September is full of classes, workshops, docent training, the FOKP Annual Meeting, Docent Graduation and, the big event--Visitors’ Day. We hope most of you will help us make visits to Konza Prairie, memorable and educational for the public this fall. Annie and I look forward to seeing you on the prairie!

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## Mark Your Calendar –

**September 9 to 11:** A Tallgrass Prairie Workshop sponsored by KACEE will be held at Konza Prairie. Docents are welcome with advanced notice. Part of the workshop will be a prairie hike on Godwin Hill and Shane A along with the docents-in-training and experienced docents, Saturday morning, 9 a.m. to 12 noon. This hike is already on your fall schedule. Meet at the 12<sup>th</sup> Avenue gate #8.

**September 19:** Last October we had the First Annual Fall Docent Roundup and Hokanson Homestead Workday. This year the same activity will be held earlier to spruce things up for September. We will be giving tours to the Hokanson Homestead for Visitors’ Day. Some of the activities on **Sunday afternoon, Sept. 19**, will include spreading chips on the Homestead Trail, organizing more shelves and storage space in the shed, putting up the bird feeders for winter, and much more. Everyone is invited, whether you plan to work or not. Bring your favorite outdoor chair to relax in and visit with others enjoying the afternoon as well.

Good weather and refreshments are guaranteed!

### Tallgrass Gazette Editors:

Gordon Cunningham - [cunningham@networksplus.net](mailto:cunningham@networksplus.net)

Gerry Snyder - [gsnyder@oznet.ksu.edu](mailto:gsnyder@oznet.ksu.edu)

## **SPOTLIGHT! on Verlyn Richards** *By Annie Clark and Verlyn Richards*

Verlyn Richards graduated from the KEEP docent program in 1999 and has been a docent coordinator since 2000. He is an integral part of docent training, as well as a committed docent and Friend of Konza Prairie. August 1, 2004, Verlyn stepped down as docent coordinator.

Verlyn grew up in Culver, Kansas, a small farming community where his dad operated the local grain elevator. He has an older half brother (deceased) and sister, and a fraternal twin brother. Verlyn received a B.S. in Accounting and a M.S. in Finance-Accounting from Kansas State University, and his Ph.D. in Finance from the University of Illinois. During his college career, he was in the Army ROTC and then the Army Reserves for the next 8 years. For nearly 30 years, Verlyn was a KSU finance professor helping to develop a comprehensive finance program, as well as serving as the finance department head before retiring in 1993.



**Verlyn Richards**

Verlyn enjoyed teaching and working with students and faculty at KSU, but after a career behind a desk he was ready to spend more time outdoors. His love of the environment and people is evident through his involvement in Friends of Konza Prairie and Friends of Sunset Zoo. He is actively involved on the board of directors for both organizations, serves as treasurer for Friends of Sunset Zoo as well as serving as a docent. Verlyn puts in over 800 volunteer hours combined for Konza Prairie and Sunset Zoo each year. He enjoys working with 8<sup>th</sup>-12<sup>th</sup> grade students because he feels he can relate to them better than younger students. His favorite subject at Konza Prairie is Native American history, especially Kansa Indian heritage. He has just completed a six-year term on the Friends of McCain board of directors and currently serves as president of the Manhattan Library Association.

Verlyn also enjoys the outdoors through bicycling, photography and travel. Each year he participates in “Biking Across Kansas.” In eight days, he travels 500 miles from the Colorado line in the west to the Missouri River on the eastern border. His bicyclist’s philosophy is “life is better in the slow lane” where he can see so much more as opposed to seeing it from a car window. Verlyn travels throughout the states exploring new bike paths, as well a throughout the world. He especially enjoys the Elderhostel educational travel programs as evidenced by the eight European biking ventures and two mountain hiking trips among the thirty Elderhostels he has attended. He has also gone on a 60-day South America circumnavigation cruise and is planning a 32-day cruise from Rome to Ft. Lauderdale in November.

Hats off to Verlyn Richards!

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## **Hulbert Center Library Reorganized**

Throughout the spring and summer, several docents have been hard at work reorganizing the Hulbert Center Library. Previously the library housed separate shelves for KEEP books and Konza Research Library books. With permission from KPBS Director, Dr. David Hartnett, Annie Clark, Nancy Goulden, Sue Hunt, and Terri Mangiaracino categorized and cataloged all the books. In doing so, it was discovered there are 496 books within eighteen categories in the library.

Each shelf is labeled with a category, and the library books have color-coordinated stickers on their binding that correspond to each specific category. This will make re-shelving easy. Terri and Annie worked together to create a complete list which can be sorted by author, title, date, or category. Several lists are available for use in the library, and more will be distributed for the Docent Handbook at the January Docent Round-up.



**Wildflower Walk helpers**



***Locust. The Devastating Rise and Mysterious Disappearance of the Insect that Shaped The American Frontier.* Jeffery A. Lockwood. Basic Books, 2004.**

This is a popular and entertaining account that reads at times like a detective story about the grasshopper that virtually wiped out farmers in several Midwest states in the 1870s, and then completely disappeared in the course of a few years without an apparent cause. The Rocky Mountain locust or grasshopper was once the most abundant insect on the Great Plains and in years of peak populations was estimated to rival pre-settlement bison populations in both biomass and consumption of forage. Before settlement of the plains by homesteaders, these periodic immense swarms of migrating locusts were part of the natural rhythms of the grasslands particularly during years of drought.

However, by the mid 1870s much of the Great Plains was occupied by farmers and ranchers. A drought of several years triggered a massive outbreak of locusts that swept over several states destroying much of the agricultural production and bringing starvation conditions to many settlers. Pioneer accounts of the day the locust invasion arrived at their farms tell of dark storm clouds of countless insects blotting out the sun, and glittering like snowflakes as they descended out of the sky. The farmers tried desperately to save some of their crops and drive the locusts off with smoke or other devices but with little success. The locusts arrived in waves from the more northern regions of the plains during July and August devouring everything in their path and laying eggs in the soil for next year's generation. The Rocky Mountain locust was considered at the time to be the greatest obstacle to farming this region. Then the wetter climatic cycles of the 1880s brought about a decrease in locust invasions, and even more surprising was that the last live specimens of this once major pest were collected around 1900.

The Rocky Mountain locust is now considered to be an extinct species and thus began one of the great entomological mysteries of how this once most numerous insect disappeared forever in only a few years. Several theories have been advanced to explain the cause of the extinction, but none were totally convincing, or could be refuted by new evidence. One of the most interesting was that the ecology of the locust was somehow interlinked to the great herds of bison, and that the extermination of the latter from most of its range brought about the extinction of the former. These two major and competing grazers had coexisted on the plains for thousands of years, so the idea was advanced that the bison somehow altered the ecology of the grasslands to favor reproduction and survival of the locust. The author finds flaws in all such connections and over a period of years of study of all the available evidence, including expeditions to remote glaciers in the Rocky Mountains to collect locust specimens preserved in the ice, has



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Konza Prairie Office  
Division of Biology  
Ackert Hall  
Kansas State University  
Manhattan, KS 66506-4901  
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