

# News and Notes

## Himes Donation Funds Overlook



Thanks to the generous support of Dr. Richard H. and Susan Himes, a structure overlooking the Kansas River Valley will be constructed at KSR this fall.

University of Kansas architecture students under the direction of Drs. Nils Gore and Shannon Criss will design and construct an overlook that will be integrated as much as possible into the surrounding environment. The overlook will accommodate about 20 people and will include benches and low-profile informational signs. This overlook will be the destination for a walking/nature trail, funded by the Sunflower Foundation (see right), that will follow the southern edge of the Rockefeller Native Prairie.

When asked why they decided to contribute to this project, Mrs. Himes indicated that they wanted to preserve natural areas for future generations to enjoy. Dr. Himes added that it is important not only to preserve these areas but to open them to people who want to experience them. The overlook should be finished before spring 2009, when visitors will have an opportunity to see the Rockefeller Prairie in bloom as well as a stunning view of the landscape.

Pictured below is the view from the overlook construction site, facing north towards Lawrence, over Kaw Valley.



## Sunflower Foundation Walking/Nature Trail

Through the assistance of the Sunflower Foundation, KSR is now appropriately funded to begin construction on a 2,689 ft long, 6 ft wide, concrete public walking/nature trail that will connect two natural trails and provide access to featured locations.



Site for the future walking/nature trail where it borders the Rockefeller Prairie.

This handicapped-accessible trail will lead from the Rockefeller parking area, near the south side of the Rockefeller Native Prairie, to the Kaw Valley overlook.

The Sunflower Foundation supports people and communities, helping them achieve and maintain optimal health by improving access to health care and information, eliminating barriers, emphasizing prevention and promoting healthy environments that enable and support personal responsibility for health.

## Student Receives Grant for Oak Survival Research

Alexis S. Reed, a Ph.D. student conducting research at KSR (advisor: Dr. Sharon Billings), was awarded \$995 from the Kansas Academy of Science to continue her research on "Oak survival at the prairie/forest ecotone with climate change: ring-width chronologies and stable isotope evidence of drought responses." Alexis is studying Burr Oaks and Northern Red Oaks and how they have survived throughout the last 50 years at the edge of their

range in dry conditions in Kansas. Scientists can use the results of this research to help predict forest composition related to future climate changes.



# Osher Lifelong Learning Institute Wildflower Walk

On June 20, 2008, KSR hosted a walking tour of Rockefeller Native Prairie and Fitch Natural History Reservation for the Osher Lifelong Learning Institute. Led by KSR staff and guest naturalists, the tour began at the Rockefeller Native Prairie, where guests were able to explore the land and learn about the native plants that live there. The tour moved on to the Fitch Natural History Reservation, where guests learned about the natural habitat of that area. The Osher tour is only one example of many educational opportunities hosted by KSR throughout the year. Many new improvements are planned at KSR that will greatly enhance these educational opportunities for a wide range of groups.



## A Note from the Director

How are global climate changes affecting Kansas grassland ecosystems? Researchers at KSR are part of a team of scientists at KU and Kansas State University working to find out.

Kansas grassland ecosystems provide critical ecosystem services including food, fuel, and clean water. They also recycle nutrients, preserve biodiversity, and protect the region from invasive species and emerging diseases. Understanding and predicting the effects of global climate changes will help sustain the grassland ecosystem services needed to preserve the quality of life and economic prosperity of the state.

With grants from the National Science Foundation's Experimental Program to Stimulate Competitive Research (EPSCoR) and from the Kansas Technology Enterprise Corporation, more than 100 faculty, students, and staff at KU and KSU have formed a multi-disciplinary collaboratory to investigate what happens to the biodiversity, soil, rivers and streams in the grasslands as weather patterns change, and how human use of the land affects the aquifers beneath the grasslands. The resulting predictive models will provide new tools to natural resource managers, land planners, farmers, ranchers, public health workers and biosecurity officials who need to make decisions about possible future scenarios.

The ecological diversity of mixed prairies and woodlands at KSR, combined with their proximity to human activity north and east of Lawrence, make KSR an ideal location to study environmental change in contrast with the native tallgrass ecosystem of K-State's Konza Prairie.

Edward A. Martinko, Director

# Current Research Project by Dr. Helen Alexander

My work focuses on the population biology of wild annual sunflowers (pictured right). Wild sunflowers are related to crop sunflowers that are a source for seeds and oil. Since both the annual and crop sunflower are the same species, pollen from crop plants can pollinate wild sunflowers and produce "hybrid" seeds. We have received funding from the U.S. Department of Agriculture (USDA) to better understand hybridization between crop and wild sunflowers. The USDA is interested in "crop-wild hybridization" because it is a process by which crop genes can be incorporated into wild species, and potentially could lead to the evolution of "weedier" wild plant species. For example, crop genes that confer resistance to insects or diseases could be transferred to wild plants through hybridization. Our work is being done both at Ohio State University, where my collaborators work on the genetics of sunflowers; and at KSR, where we do our field studies. We are studying the survival, growth, and reproduction of individual plants from germination through seed production to better understand differences between wild and hybrid individuals. Our study is unusual in its integration of genetics and ecology, and its focus on studying plants under competitive field situations. Ultimately, our studies will allow us to better understand the risks and benefits of new agricultural approaches.



*Helianthus annuus*

## Summer Projects and Enhancements at KSR...

- Funding has been acquired to begin work on a public walking/nature trail and for an overlook of the Kaw River valley toward Lawrence.
- Construction has begun on a new bridge over an intermittent stream on the McColl Nature Reserve. The bridge is being constructed by the Westar Energy Green Team, with help from the KSR staff, and should be finished in Fall 2008.



For additional information, please contact Scott Campbell, Kansas Biological Survey, 2101 Constant Ave., Lawrence, KS [swcamp@ku.edu](mailto:swcamp@ku.edu), 785-864-1502