

Fort Riley's Prairie Partnership

by Alan Hynek



Examining a greater prairie-chicken.

Much of the valuable training soldiers receive at Fort Riley supports the dynamics of the prairie. Native grasses that evolved from repeated disturbance by herds of bison, deer, and frequent fires are able to withstand heavy mechanized training and occasional wildfires.

As Lewis and Clark made their way up the Missouri River in 1804, they traversed the northeastern corner of Kansas and came upon something unexpected: the end of the deciduous forest and the beginning of the vast tallgrass prairie.

At that time, bison, elk, and white-tailed deer migrated over large tracts of land in search of newly grown grass. Their intensive grazing would annihilate large areas of prairie vegetation, and the occasional wildfire would scorch thousands of acres at a time. The prairie grasses and forbs that evolved from the repeated disturbance of fire and hoof gave rise to a resilient plant community that thrived under repeated stress.

But soon, settlers arrived and broke the soil, divided the land, and began suppressing wildfires. Later, urbanization further whittled away at what was once called an endless sea of prairie. Today, less than one percent of the original tallgrass prairie remains in good condition,

mostly in the Flint Hills region of Kansas and northeastern Oklahoma.

Fort Riley is located on the northern edge of the Flint Hills, where tallgrass prairie and America's Army have coexisted for more than a century. It is currently home to four species listed under the Endangered Species Act. Fortunately, their presence does not severely affect military training. The Topeka shiner (*Notropis topeka*) resides in five Fort Riley streams, but these habitats account for less than 5 percent of the installation's acreage. The other three species—bald eagle (*Haliaeetus leucocephalus*), least tern (*Sterna antillarum*), and piping plover (*Charadrius melodus*)—inhabit boundary areas where little training occurs. Species of concern, such as the greater prairie-chicken (*Tympanuchus cupido*), Henslow's sparrow (*Ammodramus henslowii*), dickcissel (*Spiza americana*), regal fritillary butterfly (*Speyeria idalia*), and prairie mole cricket (*Gryllotalpa major*) also reside on post. As today's military mission faces difficult challenges regarding conservation on training lands, Fort Riley is looking into the future to minimize these risks.

Prairie Reclamation

The Flint Hills receives about 30 inches (76 centimeters) of rain per year, enough to support trees in the absence of fire. Even though Fort Riley has been aggressive with the use of prescribed burning, some areas do not receive the frequency needed to keep woody plants in check. To prevent woody vegetation from choking prairie habitats, Fort Riley initiated a prairie renovation campaign in 2002.

Over the past three years, thousands of hours have been spent cutting trees



Photos by Gibran Suleiman

on the prairie. Areas that are near known prairie-chicken leks (open sites where the birds perform their elaborate courtship displays) and trees that fragment prairie fields were the first priority. Now, with many of those areas renovated, Fort Riley is targeting potential leks and smaller meadows. The restoration effort is already paying off; prairie-chickens have begun to reinhabit adjacent grasslands.

Partnerships

Because it was soon evident that just limiting efforts to inside the installation boundary would have a minimal effect, base personnel began to reach out to neighbors across the Flint Hills. In 2003, we formed the Fort Riley Prairie Partnership. We made a concerted effort to work with neighbors who owned at least 80 acres (32 ha) of tallgrass prairie. These efforts culminated in agreements with four adjacent landowners through the U.S. Fish and Wildlife Service and its Partners for Fish and Wildlife program.

In 2004, Fort Riley received Legacy Resources program funding to study the effects of "patch burning" in the Flint Hills. Patch burning aims to leave approximately one-quarter of a pasture as unburned prairie, leaving behind essential residue for nesting that year. To date, partners have treated nearly 50,000 acres (20,000 ha) in the Flint Hills with good success.

The partnership process really began to blossom in the fall of 2004 when Fort Riley began drafting its own Army Combatable Use Buffer (ACUB) program. Fort Riley's ACUB proposal is to establish conservation easements around the installation to preserve habitat critical for several species of concern in addition to the endangered Topeka shiner. Landowner sentiment has been favorable, with several high-priority property owners expressing interest. The Fort Riley ACUB will likely be approved soon, with funding expected in late FY 2006.

Research

The greater prairie chicken has persisted in Kansas, largely because of the unbroken Flint Hills, including Fort Riley. Unfortunately, it has declined in this region due to changes in grazing and burning practices. In the spring of 2005, Fort Riley personnel initiated a multi-year study to determine habitat use, reproductive success, and spatial relationships of prairie-chickens in relation to military training activities.

Another current research project began in 2004 to determine specific habitat requirements for the Henslow's sparrow. The main focus is to determine suitable patch size required for reproductive success. Researchers survey various sizes and shapes of unmowed and unburned prairie during the bird's breeding season to determine specific habitat requirements. This project will have significant applications on private lands as well as on Fort Riley.

Two lesser known species, the prairie mole cricket and the regal fritillary butterfly, also occur on Fort Riley, and they require very specific habitats. Additional surveys are planned for 2006 to determine a more precise record of abundance.

Fort Riley is recognized as one of the Army's premiere training facilities, and its military population will nearly double by 2011. Significant and evolving challenges remain in the effort to conserve one of the last vestiges of tallgrass prairie while maintaining Fort Riley as "America's Warfighting Center."

Alan Hynek works at the Conservation Office, Building 407, Pershing Court, Fort Riley, Kansas 66442; (785) 239-6211.

