



Broken Kettle Grasslands (©Carl Kurtz)

Western Iowa's Loess Hills rise 200 feet above the Missouri River valley, snaking in a narrow band of wrinkled bluffs that cover 650,000 acres along the state's western border. The Loess Hills run for 200 miles from north of Sioux City, South Dakota south into northwestern Missouri. The base for this region, which is rich in oak woodland and prairie landscapes, was created when advancing glaciers during the last Ice Age pulverized boulders into flour-like silt which was then picked up by westerly winds and deposited in drifts over 200 feet deep. These deposits of silt are called "Loess." China and the Rhine River Valley are the only other places in the world with loess deposits of this depth. These loess deposits were then carved into an intricate and rugged landscape by precipitation over the last 20,000 years.

Today, the steep and rugged terrain of the Loess Hills supports the best examples of loess prairie in the five state Central Tallgrass Prairie ecoregion. Dry, grass-covered ridges fall off steeply into shady, moist ravines where leafy plants and mosses thrive.

The area once was periodically swept by wildfires and grazed by bison and elk, but today the historical fire regime drastically has been altered. The elimination of fire as a natural disturbance is increasing the infiltration of brush and trees that shade out the fire-tolerant native prairie and oak woodlands. This alteration – along with increased residential development, incompatible land use and fill dirt mining – threaten to harm the area's fragile natural communities. Loess Hills prairies are home to many species typical of the western Great Plains, including yucca, cowboy's delight and prairie rattlesnakes. Migrating raptors follow the ridgelines. The upland sandpiper, a declining species, lives in the grasslands in the northern hills. Native plants include side-oats grama, skeleton weed and prairie moonwort, a rare fern discovered here in 1984. Many other varieties of prairie grasses and wildflowers abound.

### *Broken Kettle Grasslands, Folsom Point Preserve*

The core of The Nature Conservancy's protection efforts in the Loess Hills is a 3,000-acre preserve just north of Sioux City in Plymouth County known as Broken Kettle Grasslands. This grassland landscape forms the largest native contiguous prairie

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### For More Information

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Bobolink (©Frank Oberle)

in Iowa, is home to Iowa's only known population of prairie rattlesnakes and recently was designated a Bird Conservation Area by the Iowa Department of Natural Resources. Nearby Knapp Prairie, a 25-acre tract also owned by the Conservancy, is an important prairie butterfly conservation area. The Conservancy's 281-acre Folsom Point Preserve protects one of the largest contiguous prairie remnants in the southern Loess Hills. Located just south of Council Bluffs in Pottawatomie and Mills counties, Folsom Point provides habitat for reptiles such as the ornate box turtle and the rare Great Plains skink, as well as several types of prairie butterflies.

### *Conservancy Initiatives*

Our long-term vision for the Loess Hills is to work with partners to conserve 100,000 acres through acquisition and conservation easements. The Conservancy and our partners have protected 18,000 acres, including more than 3,000 acres of privately owned land protected with conservation easements.

The Conservancy is using science-based conservation in the Loess Hills to restore and maintain healthy habitats for prairie plants and animals. For example, approximately 4,000 acres are blackened by controlled fire each year.

However, scientific analysis indicate the need for burning five times that amount, or 20,000 acres per year.

Another prairie management is controlled burning. Working with landowners and government agencies, the Conservancy has established a fire initiative. The Conservancy is also working with cattle producers to develop sustainable grazing practices to mimic historic grazing patterns. As part of that initiative, the Conservancy plans to reintroduce bison at Broken Kettle Grasslands.



Prairie Rattlesnake (©Daniel Fogell)