

NATURE

KANSAS

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Bison approaching the corrals at Wind Cave National Park before being sorted for transfer to Kansas © National Park Service

Bison Find a Home in Kansas

Herd preserves genetic diversity of national mammal

Alan Oborny met his first bison in 1989 and developed a special bond. He says when he released that first one onto his family farm in Rush County he knew they were special. He spent the next three decades raising them, first at home, then for a large commercial enterprise and now for The Nature Conservancy in Kansas. Stationed at Smoky Valley Ranch in Logan County, Alan is also responsible for the well-being of bison herds in Chase and Riley counties.

So he knew that the bison at Wind Cave National Park are one of only two public herds that haven't been blended with cattle. All modern testing shows they are as "pure" as they get when it comes to our national mammal. A few years ago, the Conservancy established several satellite herds to conserve their valuable genetics off-site. And when the National

Park Service asked the Conservancy to care for more, Alan jumped at the chance before the day was through. Last fall, he escorted 41 yearling and 2-year-old bison from South Dakota to Kansas, to make their new home at Smoky Valley Ranch.

They were here long before we were and hopefully they will be long after.

Alan Oborny, Bison Manager

According to Alan, the expansion of corrals, building of additional fence and juggling of logistics for interstate animal travel was all worth it. "These animals are the megafauna of this landscape. The land and bison evolved together over thousands of years. They were here long before we were and hopefully they will be long after."



© National Park Service

Pulling Hair to Protect Bison

These bison went through one extra step before they headed out to several Nature Conservancy preserves across the country—a quick sample was taken from their tail hair. Having samples of the bison's tail hairs allows researchers to analyze the animal's genetic makeup, so that we can ensure there's good diversity at each of the Conservancy's herds. Read more about the genetic testing at nature.org/bisonhairs

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Heron © Jeff Rumans; Robert Penner © The Nature Conservancy; American avocets © Tom Blandford

Q&A with Robert L. Penner

Cheyenne Bottoms & avian programs manager

What role does Cheyenne Bottoms play in the life of a shorebird? Cheyenne Bottoms is the largest marsh in the interior United States. It's been designated a Wetland of International Importance, a Globally Important Bird Area and countless other accolades—for good reason. Shorebirds travel as many as 15,000 miles from their arctic breeding grounds to wintering habitats in the south. It takes a lot of energy to make the long journey, so they stop at places like Cheyenne Bottoms to replenish their fat reserves along the way.

Just what is a shorebird anyway? Like the name implies, these birds are often found along the shores, from sandy or rocky ocean coasts to interior wetlands and mudflats. But many species also rely on prairie grasslands as stopover sites on their migrations.

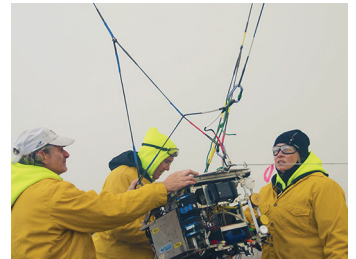
What's your favorite shorebird? Ruddy turnstone is the best looking. Buff-breasted sandpipers put Kansas on the map. And American golden plover is just all around cool.

What bird still eludes your life list? Well, the Eskimo curlew, but you can't count species that are most likely extinct. I'd like to add more birds found along the coasts.

What more are you doing to protect shorebirds? Shorebird conservation is an international issue and our work in Kansas plays a major role. I am also a member of the U.S. Shorebird Conservation Partnership Council. As a member of the council, I serve as the Western Hemisphere Shorebird Reserve Network's U.S. Committee chair. The council serves as the steering committee for overseeing the implementation of regional, national and international goals for shorebird conservation.

bird species were identified at Cheyenne Bottoms on one day in May 2017. Can we beat that this year?

The Science of Smoke



The research team loads smoke sampling equipment suspended by a helium-filled balloon during a controlled fire. © U.S. EPA

Recent burns at two Nature Conservancy preserves in the Kansas Flint Hills provided opportunities to learn more about the composition of smoke from controlled burns—also called prescribed fires.

Fire is an ecological necessity for prairies—like the tallgrass prairie of the Flint Hills—and as a way to keep trees and shrubs from encroaching. But more research is needed to develop better projections of how smoke will travel and alleviate downwind air quality problems that occur after the planned fires.

Smoke emissions sampled by the Environmental Protection Agency's office of research and development will be used to improve state smoke models that ranchers voluntarily consult to plan burns in ways that reduce excessive smoke concerns. More information about this approach can be found at www.ksfire.org.