



A GOOD TIME IN MONTANA'S BADLANDS

Dinosaur bones, knockout scenery, mountain biking, Buzzard Day, and more—all amid some of the state's most spectacular surroundings—make Makoshika a must-see state park

BY BRETT FRENCH

SUNSET AT MAKOSHIKA STATE PARK BY CAROL POLICH



This is an otherworldly place. Gray ridges of hardened sand jut from the earth like shark fins. Tan boulders balance on weather-weakened perches. Orbs of stone, half buried, stare upward at the vast, eastern Montana sky. For much of the year sagebrush, Rocky Mountain juniper, and ponderosa pine provide the only touches of color in this otherwise buff world, though in spring, splashes of greenery highlight the hills and coulees, and with summer come wildflowers that dot the landscape.

Welcome to Makoshika State Park. At more than 11,000 acres, this largest of Montana state parks stretches for miles east from I-94 near Glendive, offering visitors

extreme solitude and a quiet found in few other places. A walk through the hills of this vast area is permeated with the sense that an ancient artifact or fossilized dinosaur bone may be found any moment protruding from the cracked, crunchy soil. It's a great place to take your imagination on vacation.

Eerie, quiet, mysterious. The Makoshika landscape seems both prehistoric and post-apocalyptic. Yet these same strange qualities account in large part for the park's tremendous allure. Carol Swanson of Glendive says that for visitors to appreciate the unique qualities of Makoshika they need an attentiveness not required in more glamorous parks, resplendent with their towering



CAROL POLICH

BURNED BARE: Geologists believe that Makoshika's dramatic erosion came after an ancient fire scorched the plain, exposing soil to the erosive effects of rain and wind.

mountains and glacier-fed rivers. There, the grandeur is obvious. "But here," says Swanson, who helped found a local volunteer group that supports the park, "you *discover* the beauty. Makoshika's grandeur requires more of the viewer, a personal interaction."

The park is right out the back door of Glendive, the seat of Dawson County in eastern Montana, and only minutes from the Yellowstone River. Its proximity to Glendive is one reason the park is so cherished by townsfolk, but not the only one.

Swanson visits often. She has hiked up gullies and to caprocks—large rock formations that look like giant mushrooms—sometimes showing off the spot to friends, who have compared the land to a lunar surface. At other times, Swanson visits the park alone, seeking solitude and rejuvenation.

"I go to the park as much as possible," she says. "There are certain places I like to go where the wind blows through you and the stress dissipates. There's something healing about it."

She also appreciates the history of the rocky terrain, and the secrets that it holds.

"It's like a huge open page of a book," she says of the exposed geologic features. "There's a sense of the primeval."

WEATHERED WONDERS

Makoshika—taken from the Lakota Indian phrase meaning "land of bad spirits" and pronounced Mah-KO-shi-kah—is to badlands landscapes what Florence, Italy, is to

Renaissance art.

"They are the most geologically spectacular badlands in the entire region," says park manager Dale Carlson.

Geologists speculate that one reason Makoshika's landscape is more eroded and defined than other badlands is that an ancient grass fire once charred the plain, exposing sand and clay soils to the weathering effects of water. Years of runoff have exposed two main sedimentary layers. The Hell Creek formation contains most of the

exposed rocks, and the Fort Union formation caps some of the eastern hills. It is in the Hell Creek soils, built up some 65 million years ago, that dinosaur bones have been found, while the Fort Union formation contains fossils of more recent reptile, fish, and mammal species.

According to Dr. R.W. Hiatt, a Glendive ophthalmologist who spent years studying the park and searching for fossils, most of the coulees in Makoshika are at the lower Hell Creek level. Visitors hoping to see fossils should focus their explorations on the park's coulees.

Makoshika's clay and sand soils, which hold everything from dinosaur to ancient plant fossils, built up millions of years ago.

"Most of the park's sedimentation was laid down when the area was a lowland tropical swamp environment with a fluctuating inland sea," says Carlson.

During that prehistoric time, this now-arid region was as humid and soggy as



GARY LEPPART



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ROCKS THAT SPEAK: Makoshika's landscape tells stories going back millions of years. Petrified dinosaur bones (above) are reminders of the area's prehistoric residents. Fossilized leaves (left) attest to a more tropical climate eons ago. Caprocks (right), formed when harder limestone sits above softer claystone, reveal the effects of elements over time.

Brett French is a writer living in Billings.

coastal Florida is today, containing large lagoons ringed by lush growth. Paleontologists have found fossils of palm trees and magnolia shrubs in Makoshika's soil. Succeeding ice ages erased most of that plant life, as well as the once-prolific dinosaurs.

STORIES IN STONE

Hiatt's list of fossil finds shows the area's diversity of plant and animal life millions of years ago. He has found parts of fish such as rays, amphibians such as the salamander-like habrosaurus, crocodiles and other reptiles, rare and extinct birds and mammals, and several species of "terrible lizards"—including pieces of the duck-billed hadrosaur (Montana's state dinosaur) and the hugely popular tyrannosaur.

One of the park's most spectacular fossil finds is now the centerpiece of its visitor center, which opened in 1995. The skull of a triceratops, a 20-foot-long rhinoceros-like plant eater with three horns and a wide bony plate around its head, is housed in the building for public display. The center, built to blend in with the park's natural landscape, also contains other fossils as well as interpretive displays, including kiosks that explain the park's unique geology, abundant

VOCAL LOCALS: Nearby residents voice their strong support for Makoshika at the annual March for the Parks and Buzzard Day celebrations.

wildlife, and varied history.

In the basement, another 1,000 or so fossils unearthed from Makoshika are locked up next to the park's paleontology laboratory. There, fossils are meticulously cleaned, repaired, and catalogued by scientists and volunteers for display. Currently, a duck-billed dinosaur's rib bone, several alligator teeth, and pieces from a triceratops and a tyrannosaur await future examination.

Though the park's wealth of dinosaur remnants attracts fossil fans from afar, visitors are warned they may not dig for, touch, or remove fossils. They can, however, report their fossil discoveries, the more unusual of which are then removed by experts.

"With significant finds, the Museum of the Rockies takes over," Carlson says.

Based in Bozeman, the museum is noted



MONTANA FWP

for its dinosaur displays assembled under the eye of famed dinosaur hunter Jack Horner. For less significant discoveries, the park oversees volunteers who labor to remove fossils before weather erodes the artifacts away. Last summer, says Carlson, three volunteers and an intern removed a juvenile triceratops skull that had been discovered four years earlier.

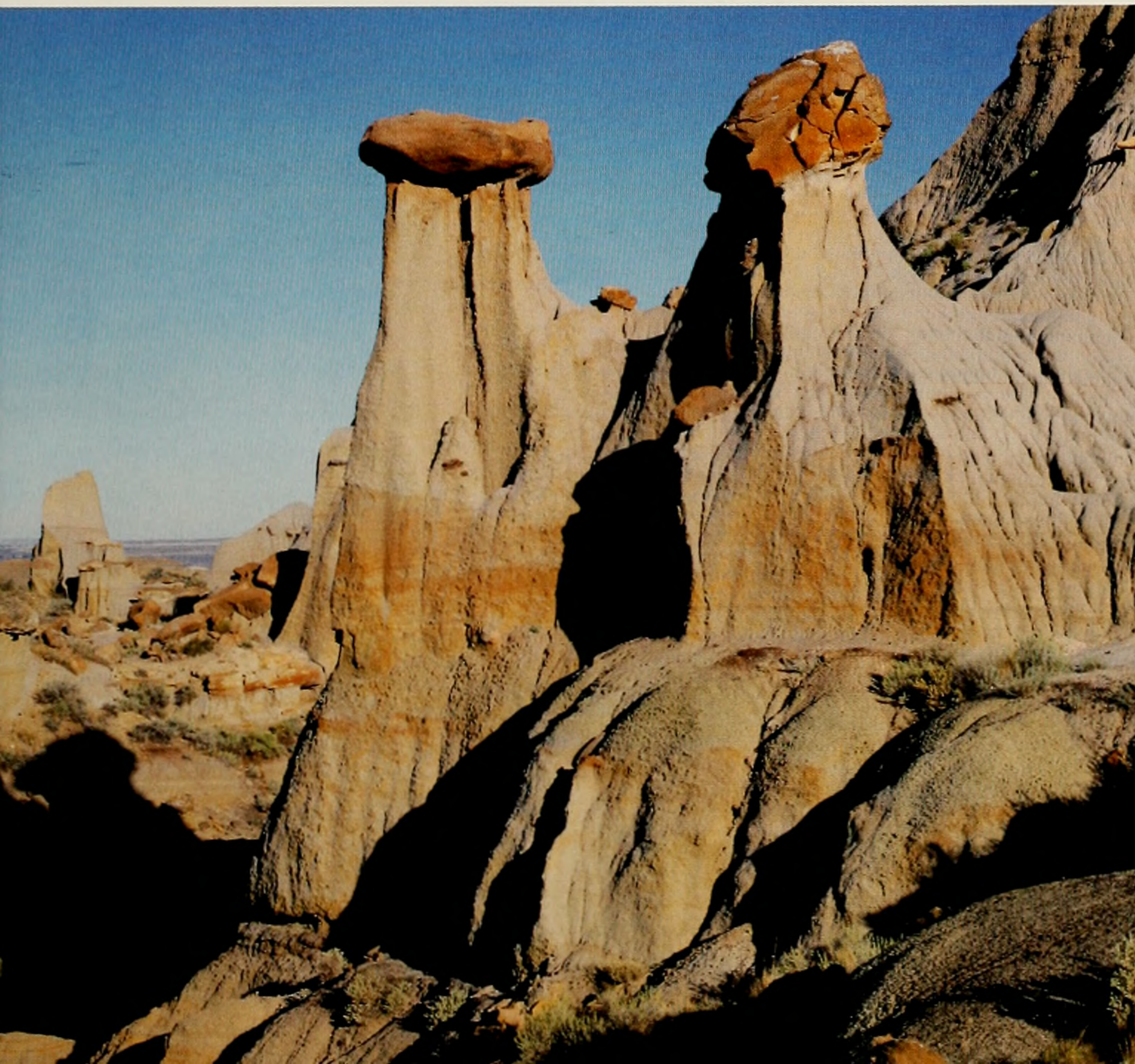
The delay, explains Carlson, was due to the park lacking staff to haul the heavy casts, which are placed around fossils to prevent them from breaking apart during transport.

"It takes a lot of money and time to excavate a fossil of that size," he says.

VISION REWARDED

Long before there was a Makoshika visitor center, or even many visitors, visionary eastern Montana residents recognized the uniqueness of the badlands and the need to preserve it. As early as 1892, citizens were advocating that the badlands be turned into a park. Though the federal government considered the land for a national park, and even built the first road into the area in 1939, it was the state of Montana that eventually preserved this rugged gem as a public site.

That was due in large part to lobbying by a local landowner couple, Catherine and A. J. McCarty. In the 1940s, the McCartys donated a portion of what is now the park to Dawson County with the provision that it be protected. But it wasn't until 1953 that Montana finally brought the area into the state park system, along with other nearby



BERT GILDART



CHUCK HANEY



JEFFREY RICH



PHIL FARNES

A NICE PLACE TO VISIT: Built in 1995, the visitor center was designed to fit into the park's stark, spacious landscape. The center houses a triceratops skull, other fossils, and information on Makoshika's famous geology. Displays also help visitors learn about resident wildlife such as the turkey vulture and short-horned lizard.

lands added through leases and easements. The year 2003 marks the park's 50th anniversary, just a flash in geologic time but a momentous occasion for park supporters.

A toy purple dinosaur resting on his truck's dusty dash, Carlson drives through the park while listing some of Makoshika's many attributes that make the park so popular:

- an 1,800-square-foot picnic shelter,
- public rifle and 3-D archery ranges,
- 6 primitive tent camping sites offering spectacular views,
- 15 recreational vehicle parking spots,
- an 18-hole folf (Frisbee golf) course,
- 40 bird species, and
- 150 plant species.

There's much more, says Carlson. Three designated hiking trails lead walkers to vast vistas of the plains, as well as to formations such as Natural Bridge along the Caprock Nature Trail and the whale-shaped hill named Moby Dick in the Sand Creek area. The park also features a 200-seat, wheelchair-accessible amphitheater nestled in the badlands. On the third weekend of each August, Theatre in the Park melodramas are held in the lighted amphitheater. In late April, the local sup-

port group, Friends of Makoshika, hosts the March for Parks walkathon fundraiser. Each Thursday throughout the summer, education programs expose children to the park's wildlife, dinosaur history, and environmental wonders. The state park even has its own video, *Makoshika: Crossroads to the Past*, narrated by former governor Marc Racicot.

More than 12 miles of improved and unimproved roads carry visitors to hundreds of spectacular vistas. Some roads are only recommended for high-clearance vehicles, such as pickup trucks. And when it rains, travelers in any vehicle are well advised to steer clear of the dirt roads, which turn slick as grease.

Those on foot should be prudent, too. Carlson says sink holes, cave-sized soft spots eroded in the ground, can swallow careless hikers. The holes serve a useful purpose for wildlife, providing dens, shelter, and shade for coyotes, mountain lions, and bobcats, but they're not places people want to dwell. A better way to see wildlife is to slowly and quietly hike the trails at dawn or dusk, scanning ravines for hidden critters. Visitors are more likely to see mule deer

than any other big game animal. The deer, which can be hunted in certain parts of the park during the fall season, dine on grasses along the roads and coulees during the morning and evening.

Another well-known Makoshika resident is the turkey vulture, which the park celebrates each year with Buzzard Day. Turkey vultures—identified by their trademark red head and wide, dark wingspan—return to the park each spring from southern wintering areas to nest and prowl the badlands for carrion. On the second Saturday of June, the park marks the migration back north of the 40 to 60 native buzzards, as they are commonly known, with events such as a 1-mile fun run and an 8-kilometer race up the park's switchbacks. Event proceeds help support the park.

NO LONGER JUST A LOCAL ATTRACTION

Buzzard Day is just one of many reasons a growing number of residents and nonresidents are visiting Makoshika. Though most travelers passing by on nearby I-94 have no idea of the wonderland just beyond the exit ramp at Glendive, Carlson says that Makoshika's reputation as a great place to

explore has been spreading. Visitation was up in 2001 nearly 10 percent from the year before, from roughly 42,000 visitors to 46,000. Those visitors give a big boost to Glendive's economy, making Makoshika the town's top tourist attraction.

Both the local chamber of commerce and the state of Montana advertise the park's attractions to out-of-state visitors. The marketing appears to be working. Though half the visitors are Montanans, license plates from Minnesota, North Dakota, and Washington increasingly fill the parking lots. Some come to search for fossils, others to hike the unusual landscape. Like the locals, some come for the summer events or just to camp out for the weekend.

"We're also seeing more mountain bikers every year," Carlson says.

With its many trails and usually vehicle-free roads, the park is a great place to cycle. Alaskans Todd and Cyndy Fisher have

stopped at Makoshika with their son, Greg, on a 50-state tour. Todd and Greg quickly take advantage of the park's paved roads to cycle and exercise their road-weary muscles.

Afterward, Todd extols the virtues of Makoshika's unusual landscape.

"This place has a whole different appeal to me," he says, standing outside his RV as late-afternoon shadows lengthen. With a background in the oil business, he's especially intrigued by the exposed bluffs and their prehistoric layers. "The stratification in the rock exposed here is miles beneath the ground in Alaska," he says.

As the setting sun finally disappears over the horizon, brown rock is brushed red, and then a soft pink, before the light ebbs. And all the time, as it has for thousands of years, the wind blows in a hushed voice, as if in reverence amid this rocky, otherworldly cathedral. 🐾

This year Makoshika State Park celebrates its 50th anniversary. The public is invited to join the festivities on July 20, when the park plans to provide food, music, and history talks. For details, call (406) 377-6256.

TIME TRAVEL: A walk through Makoshika is like going back 100, 1,000 or even 1 million years in time. It's a place, say park supporters, where prehistory is always present.



IF YOU GO

Open: All year.

Visitor center hours:

Memorial Day–Labor Day: 10 a.m.–6 p.m.
Labor Day–Memorial Day: 9 a.m.–5 p.m.

Information: (406) 377-6256 or (406) 232-0900; fwp.state.mt.us/parks.

Activities: Picnicking, hiking, wildlife viewing, photography, camping, archery and rifle shooting, Frisbee golf, children's games, and the study of geology, paleontology, and archaeology.

Features: Visitor center, nature trails, picnic sites and shelter, outdoor amphitheater, shooting range, 3-D archery range.

Services: Campsites, barbeque grills, leashed pets allowed, gift shop, access for the disabled, books, maps, RV parking, public restrooms, water.

Directions: Follow I-94 east to Glendive. Makoshika State Park is located one-quarter mile southeast of Glendive on Snyder Avenue. Follow the state park signs or dinosaur tracks through town.

2003 Events: March for Parks, April 26; Buzzard Days, June 14; Makoshika 50th Anniversary Celebration, July 20; Theatre in the Park, August 15–16.

East Montana Badlands: 56,000 acres.

Makoshika State Park Size: 11,531 acres.

Elevation: 2,374 feet.

Ecosystem: A semi-arid, short-grass prairie steppe environment. Less than 20 inches of yearly precipitation.

Established: 1953.

Fauna and flora: 40 bird species and 150 plant species.

Paleontology: Fossils of ten dinosaur species have been excavated.

CHUCK HANEY