Badlands

National Monument
South Dakota

National Park Service
U.S. Department of the Interior

The Badlands are a wonderland of bizarre, colorful spires and pinnacles, massive buttes, and deep gorges. The forces which carved these features have not only created a unique topography; they have given a strange beauty to an almost desolate land.

Nature's Quiet Accumulation

Out of the flanks of the prairie, wind and rain and water and frost have carved a world of sharp ridges, steep-walled canyons, gullies, pyramids, and knobs—a glimpse into the quiet action of millions of years.

At one time the land of the White River was a broad marshy plain crossed by sluggish streams from the highlands, or so the records here indicate. This plain existed 35 to 25 million years ago. As time passed streams laden with silt from the highlands deposited layer upon layer of sediment, burying deeper the bones of these lost forms. And gradually the scene changed.

Volcanic activity to the west, perhaps in the Yellowstone region, hurled great quantities of finely fragmented material into the air. The prevailing westerly winds bore the dust eastward and deposited it as an ashen blanket, to be washed by streams and spread as the whitish layers of today's badlands.

Over succeeding millions of years the climate also changed. With new dry winds from the north and diminishing rain, today's grasslands gradually replaced the swamps and silted marshes. Today the annual precipitation is about 41 centimeters (16 inches), and the prairies persist. Water still drains from the highlands, but now it cuts into the land. Tributaries of the White River carve away the soft, sedimentary layers into fins and expose them to the action of rain and water, creating spires, pinnacles, and saw-toothed ridges. Beneath a capping layer of sandstone, a deposit of clay may suddenly fall away, leaving a shallow cave. Or a section of several hectares may slump into a gully below. Few landmarks remain for many generations.

This raw, arid landscape supports little life. The water it receives sometimes comes in torrential storms that do little but tear away at its soft surface and at whatever small plants may be fastened there. Temperatures on sunny days frequently soar into the 30s C (90s F) or higher; chilly winter days may quickly become bitterly cold.

Yet for some animals and plants there are certain advantages here. Swifts and cliff swallows find the cliff faces fine for nesting, and rock wrens build in the crevasses. Golden Eagles occasionally nest on the high buttes. Junipers patch the canyons and passes with green; they seem to prefer the protected corners of the badlands. Yuccas thrive on the disturbed and broken slopes and valleys. Clusters of life have become established where water is adequate. Green islands of cottonwoods and wild rose are filled with birds and other small animals.

Here and there is a prairie dog town. And close by are badgers and coyotes that prey on the prairie dogs. Porcupines, chipmunks, and mice may also be seen. Jackrabbits and cottontails live here too, as do snakes—bullsnakes, racers, and prairie rattlesnakes.

Westward settlement in the 19th century doomed many large mammals of the plains, but some have returned. Deer and pronghorn are here again, and the National Park Service has reintroduced bison and bighorn in an effort to restore the scene of the 1800s.

French-Canadian trappers in search of beaver to the west were the first men to record their impressions of the badlands. They described the region appropriately as *les mauvaises terres à traverser* (bad lands to travel across). Indians in the area called it *mako sica* (bad land).

The Arikara was the first tribe of Indians to be noted on the western Dakota plains. By the mid-19th century, however, the Sioux ruled this area, and during the next century their culture, based on the hunting of the abundant bison, flourished. The westward movement of the growing United States brought in the army, the miner, the homesteader, and the face of the plains and the life of the native people changed. Forty years of intermittent warfare brought to an end the Sioux way of life and the beginning of the reservation system.

In a short time the cow replaced the bison and in some areas wheat replaced the native grasses. New values were found, too, for the Badlands. In 1939 Badlands National Monument was established to preserve the scenery of this unique area and to protect its great fossil resources. Large areas of native prairie were also protected.

The Land and Its Inhabitants

During the Age of Mammals—about 30 million years ago—the forebears of many animals we know today lived in this area. Camels and three-toed horses, all no bigger than a medium-sized dog, and sabre-toothed cats (see skeleton at left) were among these. Some became extinct. The oreodont, a small, cud-chewing creature, was common on this early plain, as was the titanothere, a gigantic rhinoceros-like beast. The hyaenodon was a flesheater, slightly smaller than the present black bear. As they died, their remains were either buried by the river sediments or sank into the ooze and decaying vegetation of the marshes. As time passed streams laden with silt from the highlands deposited layer upon layer of sediment, burying deeper the bones of these lost forms.

The Badlands are the scene of plant and animal life as varied today as in the past. From left to right the pictures show: a typical landscape, the bloom of a prickly pear cactus, a golden eagle, a black-tailed prairie dog, bison, and a pronghorn kid and doe.

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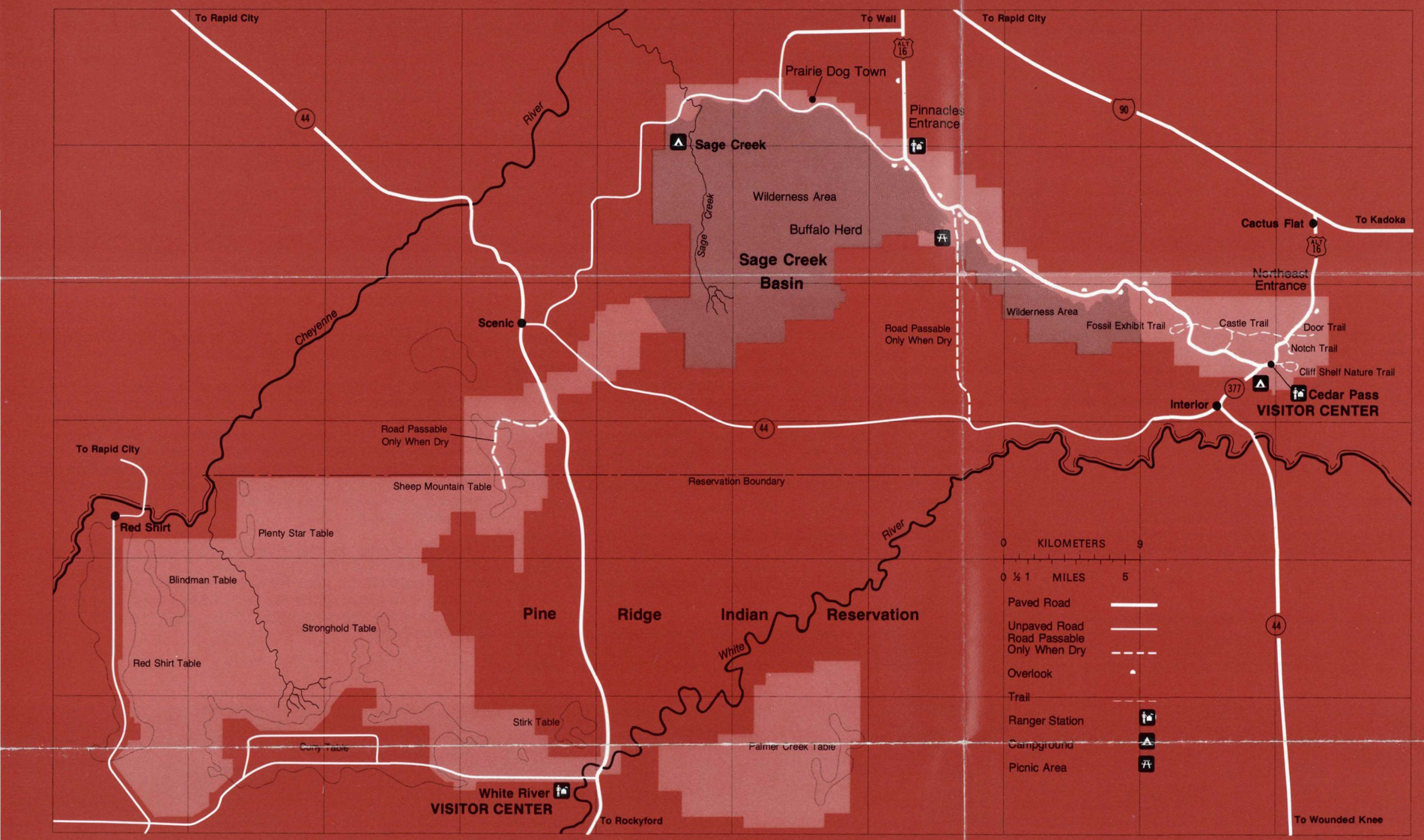

Visitor Information
The park is open all year, but the most popular seasons are summer, spring, and fall. A visit in winter when sharp peaks may be mantled in snow can also be rewarding, although blizzards may temporarily block roads.

Displays, exhibits, and slide programs in the visitor centers at Cedar Pass and White River will help you become acquainted with the area. Wayside exhibits along the park roads and self-guiding trails will add to your visit. In summer, guided nature walks are given during the day, and naturalist programs are held nightly at the campground amphitheater. Schedules of activities are posted in the visitor center and on campground bulletin boards.

In 1976 Congress set aside 25,996 hectares (64,250 acres) of the park as a Wilderness Area. This roadless area will be protected from all future development while leaving it available for hiking, backpacking, and many other recreational pursuits. Backpackers are urged to contact a ranger before camping in the backcountry.

Cabins, meals, soft drinks, and souvenirs are available at Cedar Pass Lodge from mid-May until mid-October. Other services and accommodations are available in nearby towns.

Warning
This park is an area in which you must accept nature on its own terms. Use care to avoid accidents which can spoil a trip. Climbing the Badlands can be dangerous on the steeper slopes. In the Badlands, changes in the weather can be sudden and drastic in all seasons. Summer storms frequently bring lightning, hail, and high winds requiring caution by both hikers and campers. Heat exhaustion in summer and exposure in winter can cause injury to the unprepared. We urge you to enjoy the park wildlife, but be sure to view and photograph animals from a safe distance.

Help Protect the Park
Do not drive off the road. Leave all rocks, animals, and plants just as you find them. Removal of fossils or any natural object is not permitted. Dogs must be kept on a leash at all times. All accidents and any hazards should be reported to park rangers.

Badlands National Monument
The park, in southwestern South Dakota, is administered by the National Park Service, U.S. Department of the Interior. The superintendent's address is Interior, SD 57750.

In 1976 new areas were added to Badlands National Monument, including certain lands on the Pine Ridge Indian Reservation. This new area to the south, which has doubled the size of the park, is relatively undeveloped. Future plans call for new overlooks in this spectacular portion of the White River Badlands and facilities interpreting the culture and history of the Oglala Sioux people. Stronghold Table in this new area was a site of important ghost dance ceremonies and strongly influenced Sioux and American history in 1890. Events there helped lead to the tragedy of Wounded Knee 40 kilometers (25 miles) away.

Because of construction projects and uncertain road conditions, visitors are asked to inquire at the White River or Cedar Pass ranger stations before visiting in the new area.

Return of the Badlands Bison

Travelers to the Dakotas in the early 1800s were astounded to find huge herds of bison darkening large sections of prairie. Herds were measured not in numbers of animals, but by the area they covered. One herd in 1862 measured 8 by 19 kilometers (5 by 12 miles). Another in 1839 covered an area 48 by 72 kilometers (30 by 45 miles). That is an area of bison a little larger than the State of Rhode Island.

Bison are well suited to living on the prairie. Winter blizzards, the bane of modern cattle, are little threat to bison, for they face squarely into the storm and patiently wait it out. Moving their massive heads back and forth they plow through snow to find the grass underneath. Vast seas of grass in the mid-section of America provided an endless food supply. When local droughts did occur, bison would move long distances to better grass and water. Always on the move, bison neither overgrazed nor damaged the prairie grasses.

A few bison graze today where millions once did. Fifty to sixty million of these larger-than-life animals were slaughtered for their hides in just a few years time.

As the largest North American land animal, bison had no real enemy except man. Indians hunted bison which provided them with meat, clothing, shelter, and tools. The plentiful bison were the cornerstone of the elaborate and advanced culture of the Plains Indians, who never killed any more than they needed.

The American settlers in their westward push converted much of the prairie into croplands and killed off the bison. By 1889 fewer than 1,000 bison survived out of a population once estimated at 60 million. Today, under the protection of state and national parks, bison have made a comeback.

Badlands National Monument has a herd of 300 bison in the Sage Creek Wilderness Area that can sometimes be seen from the Sage Creek road. For your protection enjoy them from a distance, for a large bull can weigh as much as a small car and run faster than a horse. Respect the bison in their natural environment.

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