

BADLANDS

national
monument
south
dakota

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 window to the quiet accumulation of millions of years.

At one time the land of the White River was a broad, marshy plain crossed with sluggish streams from the highlands, or so the records here indicate. This plain existed from 35 to 25 million years ago, during what geologists call the Oligocene Epoch.

The Oligocene was part of the Age of Mammals—more importantly, it was that period when there was a tremendous increase in both kinds and numbers, among them the forebears of many of those we know today: a camel and a three-toed horse, each no bigger than a medium-sized dog, and a sabre-toothed cat. Some, like the dinosaurs 25 million years before them, 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 sometimes were buried by the river sediments or sank into the ooze and decaying vegetation in the marshes.

Gradually the scene changed. From those same highlands, streams laden with silt and sand deposited layer after layer of sediment, burying deeper the bones of these lost forms.

Volcanic activity to the west (possibly part of the growth of the Black Hills) hurled into the air great quantities of finely fragmented material. This the prevailing westerly winds bore eastward and deposited as an ashen blanket, also to be washed by streams and spread as the distinct gray or 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, grasslands replaced the swamps and silted marshes.

The Miocene followed the Oligocene. Most of it has been lost to erosion. (About 210 miles to the southwest of the visitor center, at Agate Fossil Beds National Monument, the Miocene record is as rich as that of the Oligocene here.)

Today the annual precipitation is nearly 16 inches, and the prairies persist. Water still drains from the highlands, but now it cuts into the land. Tributaries of the White River, which carve away the soft, sedimentary layers into fins, expose them to the action of rain and water, creating spires, pinnacles, and sawtoothed ridges. Beneath a capping layer of sandstone, a deposit of clay may suddenly fall away, leaving a shallow cave. Or a section of several acres may slump into a gully below.

A feature here today may be literally gone tomorrow, should there be tonight one of the infrequent cloud-bursts of the region. Few landmarks remain as such for many generations. The landscape will surely be altered by the time your children return with their families, although it will present the same rugged exterior.

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 adventurous plant may be fastened there. Temperatures on sunny days frequently soar into the 90's or higher; chilly winter days may quickly become bitter cold.

Yet, surprisingly, 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, largest bird of the Badlands, is occasionally seen on the high buttes.

Here and there 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.

Most animal and plant life of the monument you will also find in the neighboring prairie, all part of the northern Great Plains. Throughout the monument are wet areas where clusters of life become established. Green islands of cottonwoods and wild rose are filled with birds and other small animals. Here and there is a prairie dog town—and the badgers and coyotes that feed on the prairie dogs.

You may also see porcupines, chipmunks, and mice. Jackrabbits and cottontails live here, as do snakes—bullsnakes, blue racers, and prairie rattlers.

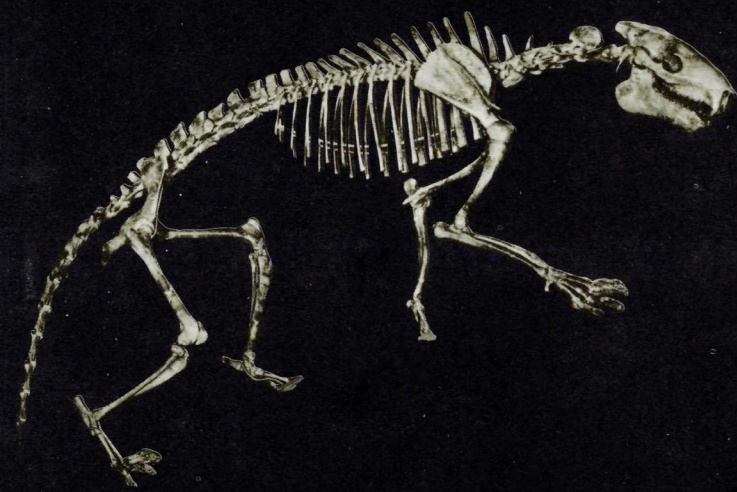
Westward settlement in the 19th century doomed many large mammals of the plains but some have returned; deer and pronghorn are here again. The National Park Service has reintroduced the bison and the bighorn in an effort to restore the scene of the 1800's.

MAN

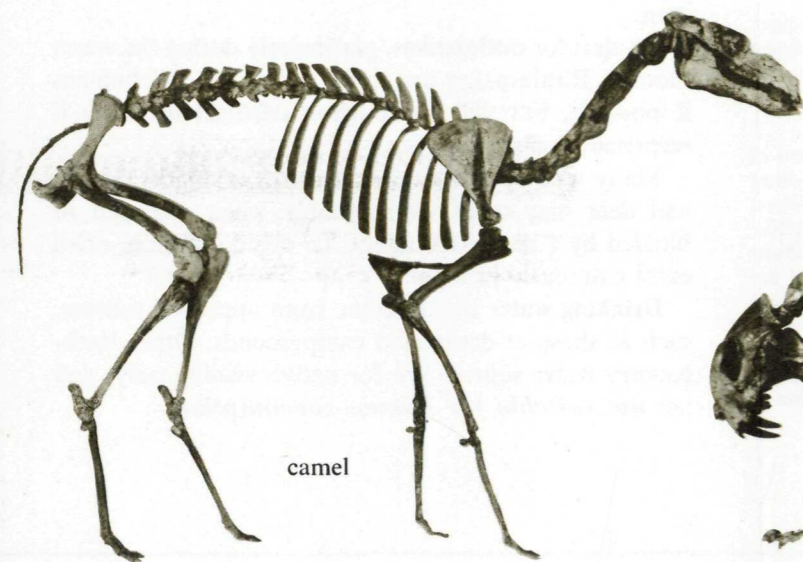
French-Canadian trappers in search of beaver were probably the first white men to see the Badlands. They described the region appropriately as "les mauvaises terres à traverser" (bad lands to travel across). The Indians called it "mako sica," which means roughly the same. Indians roamed over much of this part of the country—weapon points, knives, scrapers, stone chips, and other camp refuse have been discovered.

Congress authorized Badlands National Monument in legislation approved in 1929. With the cooperation of South Dakota, the monument was officially established on January 25, 1939.

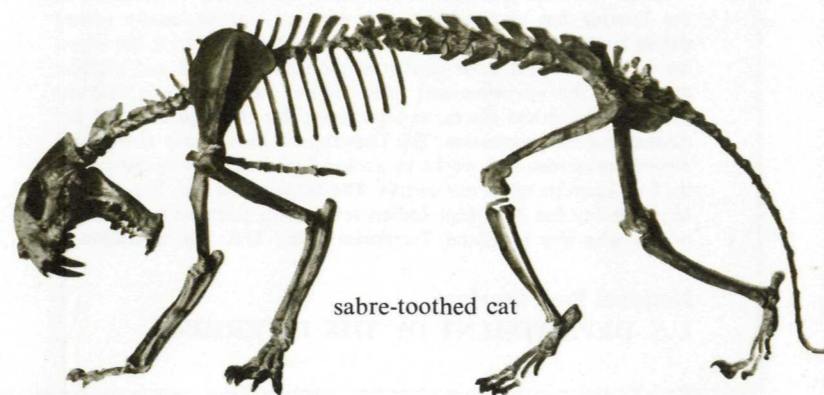
Photos courtesy of South Dakota School of Mines and Technology and Princeton University.



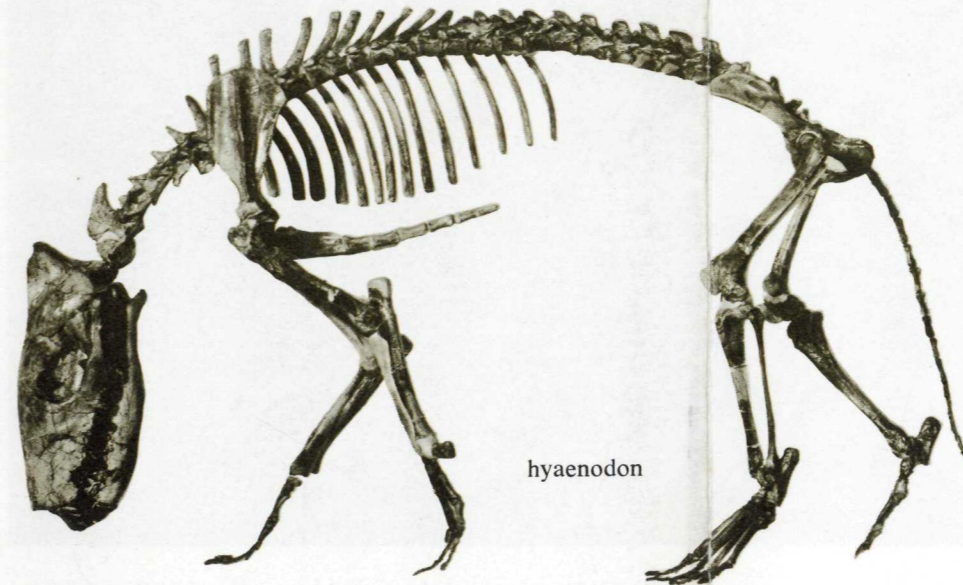
camel



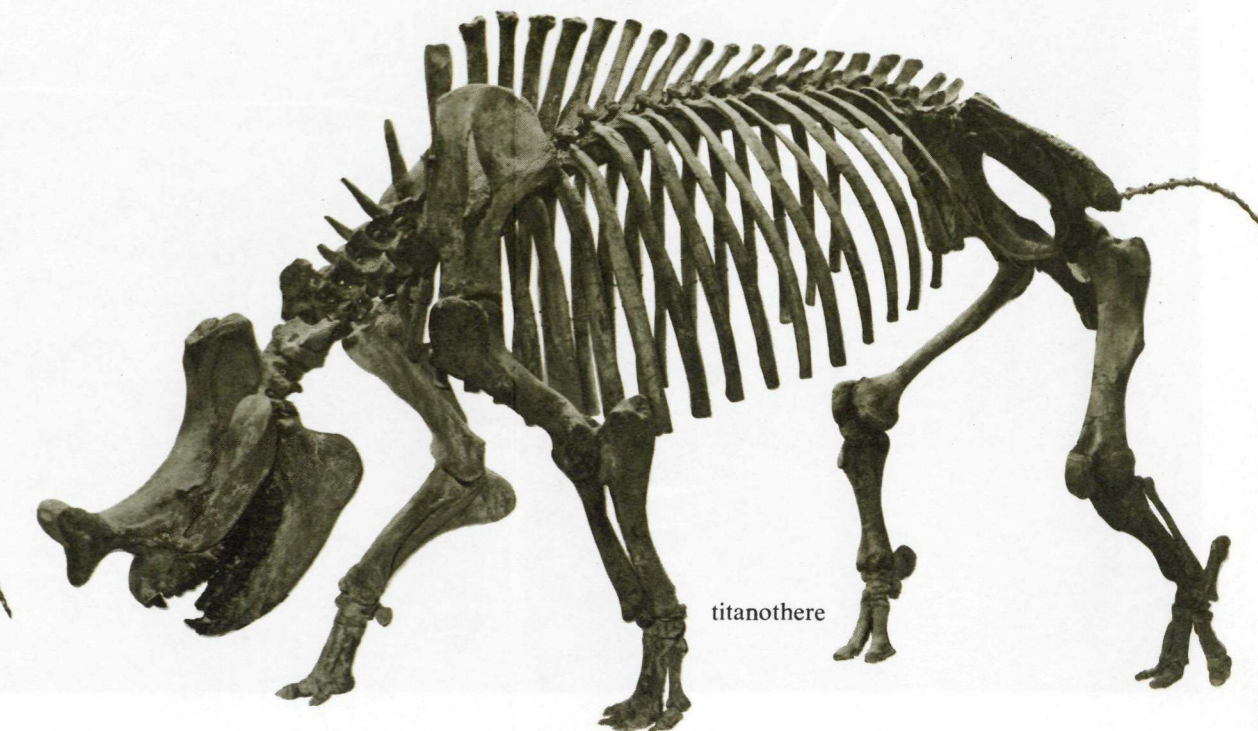
sabre-toothed cat

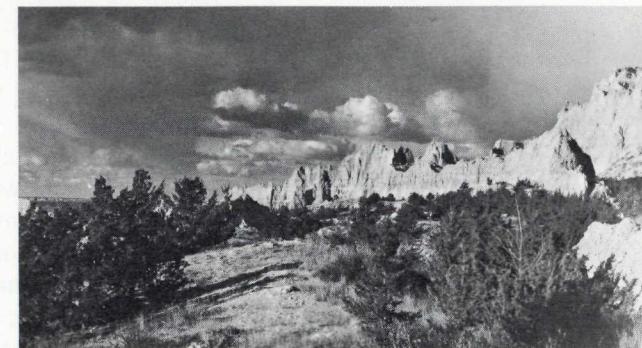
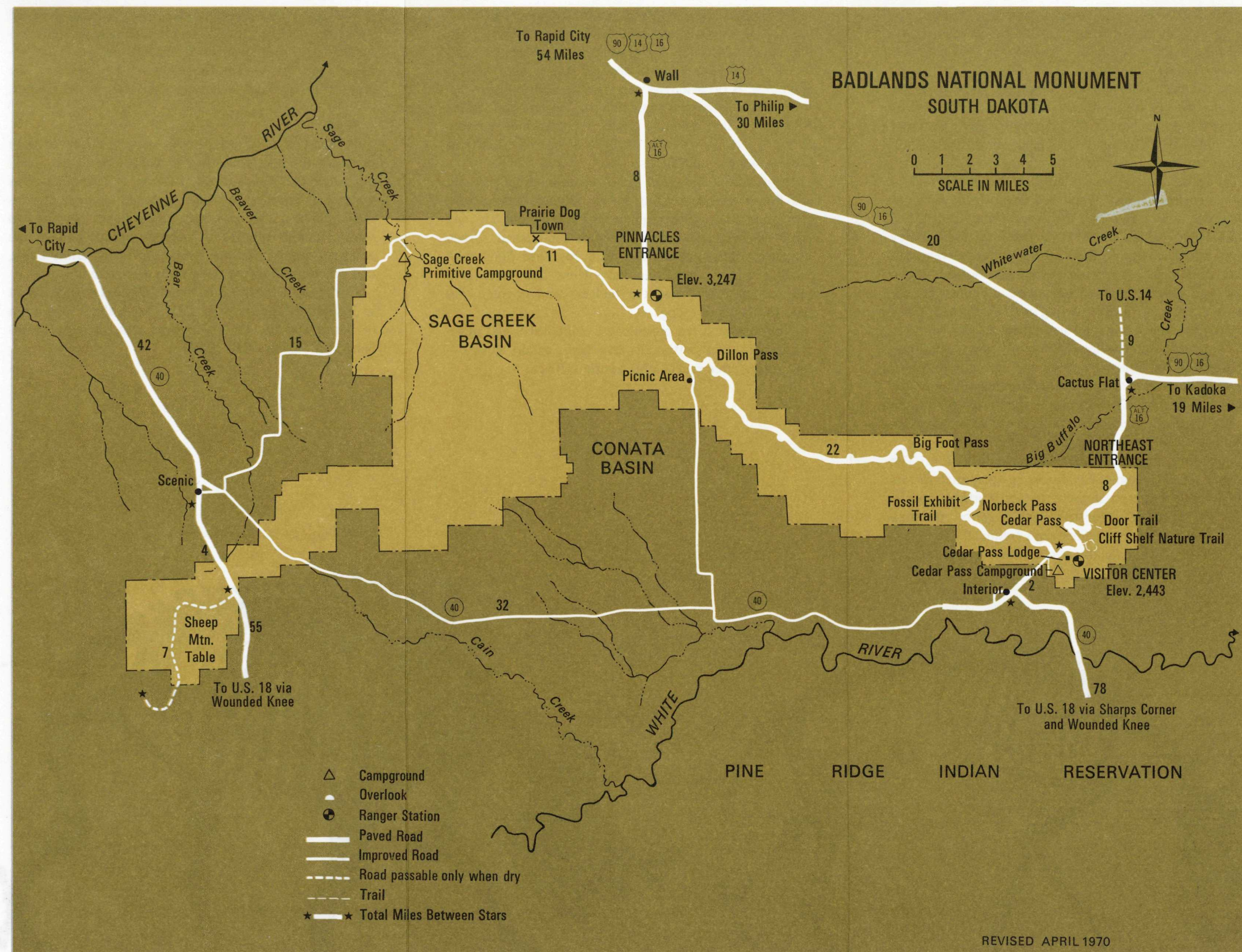


hyaenodon



titanothere





ABOUT YOUR VISIT

The monument is open all year, but the most popular seasons are summer, spring, and autumn. A visit in winter when sharp peaks may be mantled in snow can also be rewarding, although blizzards, characteristic of the northern Great Plains, may temporarily block roads.

Displays, exhibits, and recorded slide programs in the visitor center near Cedar Pass will help you become acquainted with the area. There are wayside exhibits along the monument road and along the self-guiding trails. Evening campfire programs are given at the Sholly Memorial Amphitheater in summer; if you have any questions about these or other naturalist programs, ask a park ranger.

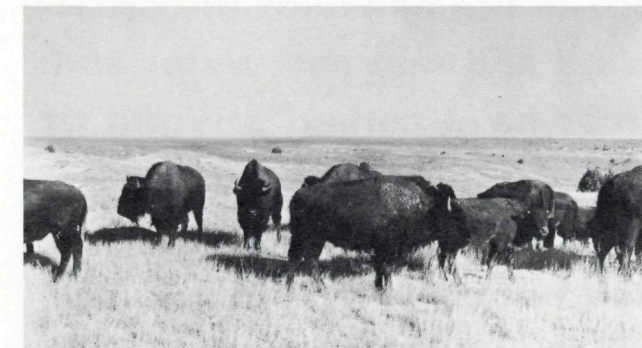
Cabins, meals, soft drinks, and souvenirs are available at Cedar Pass Lodge from mid-May until mid-October. Other services and accommodations are available in nearby towns.

Administration

Badlands National Monument, covering more than 170 square miles, is administered by the National Park Service, U.S. Department of the Interior. A superintendent, whose address is Interior, SD 57750, is in immediate charge.

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

National Park Service
U.S. DEPARTMENT OF THE INTERIOR



WARNING

To avoid accidents, please follow these few words of caution and keep close watch on your children.

View and photograph animals from a distance. The **buffalo** may appear tranquil, having lost much of their natural fear of man, but they still are wild and dangerous. They may attack if provoked. Do not get too close.

Prairie dogs can inflict a painful bite if you tease or attempt to feed them. Like all warm-blooded animals, prairie dogs can transmit serious, infectious disease to man.

Be alert for **rattlesnakes**, particularly during the warm months. Rattlesnakes are timid and will avoid humans if possible, but will strike *often without warning* if surprised or disturbed.

Many wild species are most active at night. Buffalo and deer may react unpredictably when confused or blinded by a motorist's lights. To avoid collision, drive extra cautiously at night.

Drinking water should come from approved sources, such as those at designated campgrounds. Other back-country water sources are for native wildlife only, and are *not suitable for human consumption*.



In the badlands, changes in the **weather** can be sudden and drastic. Summer storms frequently bring lightning, hail, and high winds. Even on mild days, prolonged exposure to an innocent shower can lead to hypothermia, a potentially fatal reduction of body temperature. So dress adequately and avoid open areas during electrical storms.

Climbing is discouraged on the steep, barren slopes where moist, slippery clays and soft sediments may suddenly yield under foot. Hikers can best avoid falls by staying on designated trails.

Contact a park ranger for current information on local conditions, and if you need emergency assistance. All accidents and any hazards you may encounter should be reported so that park rangers can take corrective action.

HELP PROTECT THE MONUMENT

By observing these regulations, you make it possible for others who will visit the park to see its features in the same natural, unspoiled condition.

Please do not drive over the grasslands. Leave all rocks, animals, and plants just as you find them. Removal of fossils or any natural object is not permitted.

Be sure that matches and cigarettes are entirely out. Prairie fires are devastating.

The roads were designed for viewing scenery—not high-speed driving. Speed limit is 45 mph and lower in some posted zones. Drive carefully.

Please use trash containers in the parking areas. Don't be a litterbug.