



*Badlands* NATIONAL  
MONUMENT • *South Dakota*



# Badlands



NATIONAL MONUMENT • SOUTH DAKOTA

UNITED STATES DEPARTMENT OF THE INTERIOR, HAROLD L. ICKES, *Secretary*

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AS EARLY AS 1847, nearly 30 years before the white man came to the Black Hills of South Dakota in search of gold, important scientific discoveries had been made in the Badlands region. Since that time exploratory parties have come by hundreds to search for fossils in the magnificently eroded layers of Badlands deposits. Bones of thousands of prehistoric creatures have been found, carefully removed, and prepared for display in various museums. Since the area was proclaimed a national monument in 1939, however, indiscriminate removal of fossils and other objects from the monument has been prohibited.

To the Dakota Indians and their neighbors this barren labyrinth was "makosica" (bad land), signifying that they considered the area hard to travel through, due to its rugged surface features and the complete lack of water. The French-Canadian trappers called it "mauvaises terres" in their language, and the settlers who came later made it "Badlands."

Some of the animals that once roamed the flat, swampy grasslands of the region were the three-toed horse, the saber-tooth tiger, and the ancestors of the hog, the camel, and the rhinoceros. A museum has not yet been established in the monument, but the State School of Mines at

Rapid City, S. Dak., has, through years of research and exploration in the Badlands, accumulated a remarkably fine exhibit which includes all of the species mentioned and many others. Marine fossils of creatures which lived in the seas covering this area in the Cretaceous period, long before the Badlands clays were laid, were also found.

Even more interesting to most people who visit the Badlands are the breathtaking views that can be experienced at many points along the monument highway between Cedar Pass and Pinnacles. Parking overlooks are being built where visitors may stop their cars and look out and down into billows and peaks of delicate banded colors—ceaselessly changing hues of red, white, and gray that show a different aspect at every hour of the day. Visitors find that the most enjoyable times of day in summer are in the evening and early morning. At those times the rising and descending sun casts shadows upon the myriads of peaks and valleys that give the scene an eerie beauty not seen during the middle of the day. Then, too, although

temperatures during the day are high, and the reflection from the white soil is almost blinding, the mornings and evenings are cool and comfortable, and the sunlight is softer.

On bright moonlight nights the region takes on an unearthly beauty that almost persuades the observer that he has suddenly been transported to another planet. The knife-edged ridges and castellated spires, lighted by the moon, are set off by jet-black shadows that give a strange, sharp, two-dimensioned effect, as if the skyline was cut from cardboard.

### Geologic History

The great mass of Badlands deposits which still extends across southwestern South Dakota was once of far greater extent but has been reduced tremendously by erosion in the centuries that have passed since the materials were laid down. It is now a well-established concept that layer after layer of silt and mud was washed down from the higher elevations of the Black Hills during the Oligocene epoch of

the Tertiary period, some 40 millions of years ago. Muddy, flooding streams fanned out across the flat, marshy plains on all sides of the Black Hills region, depositing layers of the clay, sand, and mixed materials, cross-sectioned by erosion in the Badlands today. As the climate gradually changed from moist to semiarid, the silt-loaded streams slowed down and finally stopped flowing, after having deposited over 2,000 feet of material over this area. This transition had a powerful effect on the abundant animal life of that day. Huge creatures like the Titanother, king of the grass eaters, who combined characteristics of the modern elephant and rhinoceros, were robbed by this climatic shift of the great quantities of vegetation needed to feed their enormous bodies. They literally starved to death, and the record of their existence was miraculously preserved in the successive layers of silt and sand. Other less highly specialized animals were able, either by migration or by adapting themselves to changing conditions, to survive to become the ancestors of our modern animals.

Toward the end of this period of deposition, wind became an important agent in the transportation and deposition of soil. Volcanic activity, associated with the Black Hills doming and the uplifting of the Rocky Mountain front, ejected and hurled into the air great quantities of finely fragmented material, which the prevailing westerly winds bore eastward and spread as an ashen blanket over what is now the Badlands. Approximately 1,000 feet of the original deposits have been removed by erosion, and the process is continuing with every rain that falls. Little by little the Badlands are disintegrating, their silts carried in the gullies and draws to the White River—from there to the Missouri and the Mississippi, until they reach the Gulf of Mexico, the ultimate destination of all of the eroded soils of the midcontinental States.

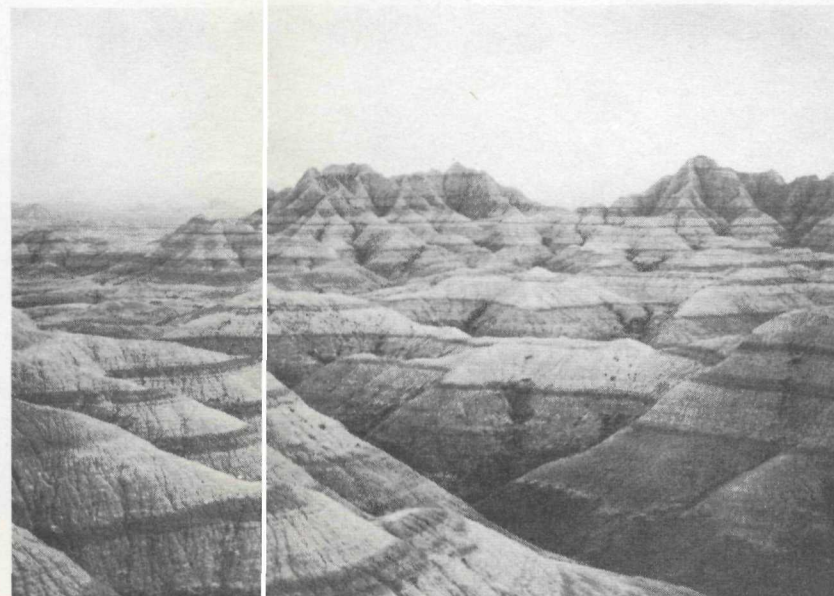
### Wildlife

A surprising variety of small wildlife exists in the Badlands in spite of distances from a dependable water supply. Chip-

*Pinnacles Pass*



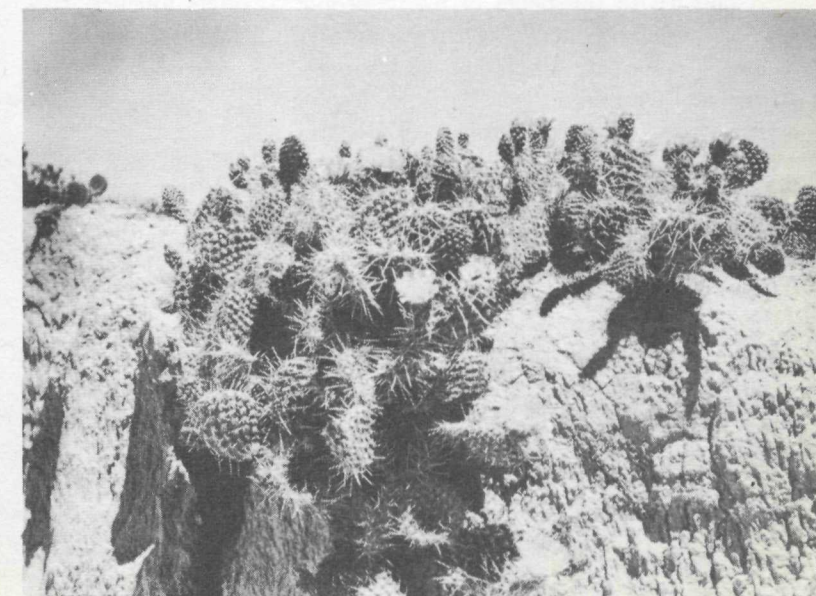
*Simentary Banding in Dillon Pass*



*The Evening Primrose, or Gumbo Lily, Seems to Thrive in Barren Clay*



*Prickly Pear Cactus Helps To Hold Back Erosion*



munks, similar to those found in the Black Hills, are common, as well as all of the common prairie rodents such as skunks, prairie dogs, ground squirrels, and mice. Porcupines and badgers are frequently seen; and raccoon are occasionally found along the White River. The coyote makes his living on the cottontails and jack rabbits that abound in the area.

Birds are present in fairly large numbers, especially on the grass-covered tablelands. Practically all of the prairie and mountain birds are represented. One individual is rather uncommon, the golden eagle. He nests and is frequently seen in the vicinity of Sheep Mountain.

No large animals, such as deer or elk, are found in the Badlands, but several types were present there before the country was settled. The now extinct Audubon bighorns were seen near Sheep Mountain less than 30 years ago. Buffalo herds surely grazed on the grassy mesas before 1880, and deer, elk, and antelope are known to have occupied the region in certain seasons of the year.

### *Wild Flowers*

Contrary to the belief of many people who have not visited them in spring and early summer, the Badlands are normally bedecked with wild flowers at that time of year. First to appear are the crocus and ground phlox, then the evening primrose, the wallflower, and the yellow sweet pea, followed by the other members of the pea family and the loco. In June, the Mariposa lily appears by the thousands along the roadsides and grassy meadows. Scarlet mallow makes patches of vivid color on the road shoulders. White, blue, and purple pentstemon are common, with the blue variety growing in bushes 24 to 30 inches high. Perhaps the most beautiful sight of all is the prickly pear cactus in

full bloom. Fields of it stretch as far as the eye can see, each plant with its clusters of waxy, brilliant, red and yellow blooms. The yucca, or Spanish dagger, is in bloom in late June and is no less interesting than the others. Visitors are requested not to pick flowers or dig plants in the national parks and monuments. Picking and digging of these beautiful and distinctive plants would soon produce a barren roadside.

### *General Information*

Badlands National Monument, embracing 150,103 acres, is administered by the National Park Service of the United States Department of the Interior, and the representative in charge of the monument is the acting custodian, whose address is Wall, S. Dak.

### *Accommodations*

At Cedar Pass, where development of a headquarters area is in progress, cabin accommodations, lunches and meals, curios, and supplies are obtainable at Cedar Pass Lodge. At Pinnacles, a park operator offers lunches, curios, and related visitor supplies.

### *Nearby Points of Interest*

To the traveler from the East who is on his way to Yellowstone and other western national parks, a route through South Dakota on Highway 16 has many advantages. He can visit Badlands, which is the first of the park areas he will encounter; continuing westward he may include the entire Black Hills region, from Spearfish on the north to Hot Springs on the south; Devils Tower National Monument; the Bighorn Mountains; and a choice of entrances into Yellowstone.

### *Wind Cave National Park*

Wind Cave, the largest and most easily accessible limestone cave in the Black Hills, is located 20 miles off Highway 16 south of Custer, S. Dak., on Highways 85A and 87, and 123 miles from Badlands National Monument. Trips through the cave are available at every hour of the day from June to September. The park has herds of bison, antelope, and elk.

### *Jewel Cave National Monument*

Jewel Cave National Monument is located 14 miles west of Custer on Highway 16 in the heart of fine stands of virgin ponderosa pine. The cave is small but contains magnificent examples of calcite crystal.

### *Custer State Park*

The Needles Drive, Mount Rushmore Memorial, Iron Mountain Drive, and Harney Peak are only a few of the many beautiful features of the park. It can be reached best over Highway 16 out of Rapid City.

### *Devils Tower National Monument*

Devils Tower is a remnant of an ancient volcanic plug, rising 600 feet above the surrounding country, testifying to the violent forces which once were at work in the Black Hills region. It is located in eastern Wyoming, 70 miles west of Spearfish, S. Dak., on Highway 14, and may be reached through Newcastle and Moorcroft, Wyo., on Highway 16. A museum at the base of the tower contains interesting exhibits, and Park Service employees are available for lectures and information.

*Sunlight Through a Rift in Storm Clouds Makes a Vivid Badlands Scene*

