# National Monument

# SOUTH DAKOTA

ewel Cave

The walls of the underground chambers of Jewel Cave are lined with a unique solid coating of dog-tooth calcite crystals which sparkle like jewels in the light; hence the name, Jewel Cave. Because of this unique formation and attractive range of color, the cave and a small protective surface area were set aside as a national monument by Presidential proclamation on February 7, 1908. The National Park Service is responsible for its administration and protection. The cave is available for the visitor to see and at the same time it is preserved in as nearly a natural state as possible.

# HOW TO REACH THE MONUMENT

The cave is located in the Black Hills near the southwestern boundary of South Dakota adjacent to U. S. Highway No. 16 leading west to Yellowstone National Park. It is accessible from the following railroad stations: Custer, S. Dak., and Newcastle, Wyo., both on the Chicago, Burlington & Quincy Railroad.

#### HISTORY

Jewel Cave is a small but interesting cavern. The area was originally recorded as a mining claim, known as the Jewel Lode, after its discovery by two prospectors, Albert and F. W. Michaud, on August 18, 1900.

While out prospecting, the Michaud brothers were attracted by the noise of wind coming from a small hole in the limestone cliffs on the east side of Hell Canyon. In the hope of discovering valuable minerals, and locating the source of the wind, these men, in company with Charles Bush, enlarged the opening.

The Michaud brothers believed that they had discovered a cave which would be of great inter-



UNITED STATES DEPARTMENT OF THE INTERIOR J. A. Krug, Secretary NATIONAL PARK SERVICE, Newton B. Druty, Director est to tourists, hence built a log house nearby for the accommodation of visitors. However, they were unable to attract enough people to make this a financial success.

When the area was established as a national monument, the land was a part of the Black Hills National Forest. The area remained under the administration of the United States Forest Service until April 1, 1934, when by Executive order the President transferred the area to the National Park Service.

#### GENERAL DESCRIPTION

The main passages of Jewel Cave are supplemented by side galleries and chambers of various sizes, all coated with dog-tooth calcite crystals. The first chamber is of lithographic limestone and resembles the Gothic style of architecture. About 500 feet from the entrance the walls and roofs of a number of the chambers are lined with a thick crystalline calcite. The floor is composed of calcite and manganese.

The various rooms have different colors, ranging from a peculiar light green tint to darker greens and bronze.

Boxlike cavities along the walls and ceiling of the cave are covered with minute crystals and stand in bold relief from the ground mass. These attractive crystals have a color range from a light brown to a deep chocolate shade. Geodes, or clumps of crystals of various sizes and shapes, are found in the walls and passageways.

Jewel Cave is comparatively small, but beautiful. It presents interesting features not found in Wind Cave, the largest cave in this general area, in Wind Cave National Park.

#### GEOLOGIC HISTORY

Jewel Cave is the result of the dissolving of the Pahasapa limestone in an underground stream. This dissolving process may have taken place just below the ground water level. It is evident that a stream once flowed through the cave since the ends of some of the calcite crystals have been worn off, showing in cross section the lines of crystal growth. It is likely that the stream which now flows in Hell Canyon some distance below the level of the cave once cut into part of the cave when the stream was at a much higher level. As the surface of the valley deepened, the water abandoned the cave as a channel, leaving the cavern little changed since that time.

#### WILDLIFE

Wildlife found within the monument area includes common rodents, such as ground squirrels, skunks, marmots, and chipmunks. Bobcats, porcupines, coyotes, and rabbits are frequently seen. Occasionally deer and elk are seen from the highway. Mammals found in the cave consist of cave bat, Say's bat, pallid lump-nosed bat, Osgood white-footed mouse, and fuscous bushytailed wood rat.

Birds are present in fairly large numbers, especially on the timber-covered tablelands. Practically all of the prairie and mountain birds are represented.

#### PLANT LIFE

Jewel Cave National Monument is located on a high, rolling limestone plateau ranging from 5,200 to 5,800 feet above sea level and broken by many ravines. The rough terrain is covered by an excellent forest of ponderosa pine, some of which are more than 40 inches in diameter—well above the average in size for western pines of the Black Hills section.

Many herbaceous plants and grass species may be found. Scattered clumps of boxelder and snowberry grow in several of the ravines. Mountain mahogany and other brush types thrive along the dry hillsides.

#### WILD FLOWERS

Wild flowers bloom profusely during the spring and early summer. The first to appear are the crocus, shootingstar, and ground phlox, then the evening-primrose, the horsemint, larkspur, monkshood, yellow sweet pea, lupine, wallflower, bluebells of Scotland, Canadian anemone, early goldenrod, and fireweed. In early June the roadsides and grassy meadows are filled with Mariposa lilies, and scarlet mallow covers the road shoulders. Later in the summer the spreading dogbane, blue vervain, bull thistle, wild sunflower, New England aster, blackeyedsusan, yucca, ladiestresses, greenheaded coneflower, purple coneflower, and wild geranium may be seen.

#### ACCOMMODATIONS

No hotels or tourist cabins are located in the monument, but a good public campground with free wood and good spring water makes camping inviting near headquarters. There are good hotels, tourist camps, and garages at Custer, S. Dak., 14 miles east of Jewel Cave on U. S. Highway No. 16, and at Newcastle, Wyo., 21 miles west on U. S. Highway No. 16. This highway is one of the direct routes to Yellowstone National Park.

#### ADMINISTRATION

Jewel Cave National Monument 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 superintendent, Wind Cave National Park. His address is Hot Springs, S. Dak.

#### CAVE TRIPS

All trips through the cave are under guidance of competent park rangers. There is a fee of  $50 \notin$  a person for those over 16 years of age.

The cave is open to visitors every day during the months of May, June, July, August, and September, and trips through the cave are made every hour from 8 a. m. to 4 p. m.

#### NEARBY POINTS OF INTEREST

There are many advantages to following U.S. Highway No. 16 for the traveler from the east en route to Yellowstone and other western national parks. This route through South Dakota reaches Badlands National Monument, then continuing westward includes 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 is the largest and most easily accessible limestone cave in the Black Hills. It is located 20 miles off U. S. Highway No. 16, south of Custer, S. Dak., on U. S. Highway No. 85A and State Route No. 87, and 123 miles west of Badlands National Monument. Trips through the cave are available at every hour of the day from June to September. Herds of bison, antelope, and elk are an added attraction.

## MOUNT RUSHMORE NATIONAL MEMORIAL

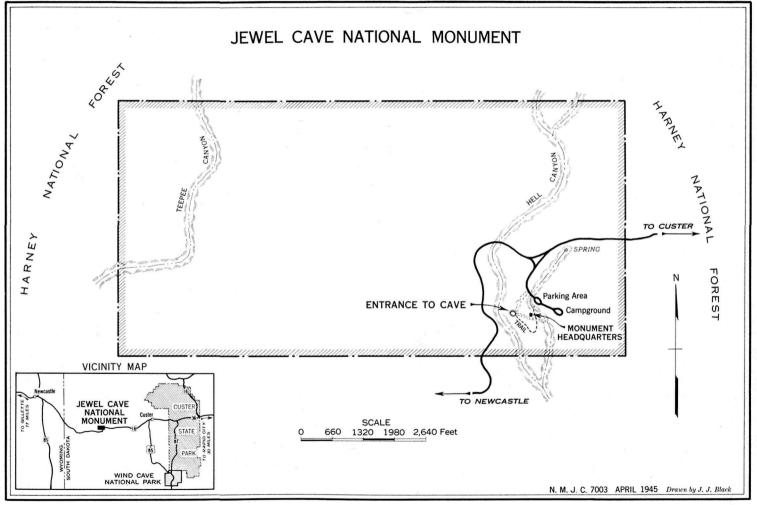
Mount Rushmore National Memorial, where on the summit of the mountain are carved the heads of Washington, Jefferson, Lincoln, and Theodore Roosevelt, can be reached over U. S. Highway No. 16 out of Rapid City, S. Dak.

#### CUSTER STATE PARK

The Needles Drive, Iron Mountain Drive, and Harney Peak are only a few of the many beautiful features of Custer State Park. Buffalo, deer, elk, and mountain sheep frequently are seen from the highway. The park can be best reached over U. S. Highways Nos. 16 and 79 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, an indication of the violent earth forces which once were active in the Black Hills region. It is in eastern Wyoming, 70 miles west of Spearfish, S. Dak., on U. S. Highway No. 14, and may be reached through Newcastle and Moorcroft, Wyo., on U. S. Highway No. 16. A museum at the base of the tower contains interesting exhibits.



U.S. Government Printing Office: 1947 O-F-739194