

# JEWEL CAVE

NATIONAL MONUMENT, SOUTH DAKOTA



Jewel Cave is small but beautiful. The walls of many of its underground chambers are lined with a solid coating of dogtooth calcite crystals which sparkle like jewels in the light. Because of this unique, colorful formation, the cave and a protective surface area of 1,275 acres were set aside as a national monument by Presidential proclamation on February 7, 1908.

## HISTORY

The area was originally recorded as a mining claim, known as 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 they had discovered a cave which would be of great interest to tourists in the Black Hills. They built a log house nearby for the accommodation of visitors. However, they were unable to attract enough people to make this venture 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 August 10, 1933, when, by Executive order, the President transferred the area to the National Park Service.

## GENERAL DESCRIPTION

Jewel Cave National Monument is located on a high, rolling plateau ranging from 5,200 to 5,800 feet above sea level. The plateau is broken by many gulches and ravines. The entrance to the cave is on the side of one of these ravines known as Hell Canyon.

The main passages of Jewel Cave are supplemented by side galleries and chambers of various sizes. The first chamber is of dense, fine-grained limestone, and somewhat resembles the Gothic style of architecture. About 500 feet from the entrance the walls and roofs of a number of galleries are lined with a thick crystalline calcite. The rooms and chambers 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 which stand in bold relief from the

ground mass. These attractive crystals range in color from light brown to deep chocolate. Clumps of crystals of various sizes and shapes are found in the walls and passageways.

## GEOLOGY

Jewel Cave is in a formation known as the Pahasapa limestone, of Mississippian Age. The formation is exposed in many places about the Black Hills and contains most of the area's caves. Earth forces which formed the Black Hills fractured the limestone and thereby provided channels for percolating water. This water, aided by gases from the air, dissolved the limestone from the walls of the fissures through which it flowed, thus forming the passages, galleries, and chambers of the cave. This process continued until the source of water became depleted or was diverted to other channels.

The formation of the jewel-like crystals was the last step in the development of the cave features. After the galleries had been formed, seeping water saturated with calcium carbonate appeared on the cave walls. Tiny projections of calcite, or of a similar mineral, acted as nuclei. On these calcium carbonate deposits grew as slender pyramidal crystals, their shapes suggesting canine teeth, hence the name dogtooth calcite or dogtooth spar.

## WILDLIFE

Wildlife found within the monument area includes common rodents, such as ground squirrels, marmots, and chipmunks. Porcupines, coyotes, and rabbits are also frequently seen. Occasionally, deer and elk are observed from the highway. Mammals found in the cave are two varieties of the little brown bat, the lump-nosed bat, white-footed mouse, and bushy-tailed wood rat.

Birds are abundant, especially on the timber-covered tablelands. Many prairie and mountain species are represented.

## PLANTS

The rough terrain is covered by an excellent forest of ponderosa pine with some trees

measuring more than 40 inches in diameter—well above the average for western pines of the Black Hills region.

Scattered clumps of boxelder and snowberry grow in several of the ravines. Mountain-mahogany and other shrubs thrive on the dry hillsides.

Wildflowers bloom profusely during the spring and early summer. The first to appear are crocus, shootingstar, and ground phlox, then the evening-primrose, horsemint, larkspur, monksblood, yellow sweetpea, 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, wild sunflower, New England aster, black-eyed-susan, yucca, ladies-tresses, green-headed coneflower, purple coneflower, and wild geranium may be seen.

## HOW TO REACH THE MONUMENT

The cave is in the Black Hills of South Dakota near the southwestern boundary of the State. It is accessible from the railroad stations at Custer, S. Dak., and Newcastle, Wyo., both on the Chicago, Burlington & Quincy Railroad. U.S. 16 crosses the southeastern section of the monument.

## ABOUT YOUR VISIT

*A park ranger is on duty at the monument during the summer. Several cave trips are made daily under the guidance of the ranger.*

A fee is collected under the provisions of the Land and Water Conservation Fund Act of 1965. This fee is waived for those under 16 years of age or members of educational groups and persons responsible for their safety and conduct.

A trip through Jewel Cave will appeal to those who wish to experience primitive cave exploration. Although ladders and steps are installed for safety and convenience, development has been kept to a minimum. There are no electric lights, but the ranger.

will provide gasoline lanterns. The trip is not recommended for those in poor physical condition. Old clothes and stout walking shoes should be worn.

No hotels or tourist cabins are located in the monument, but these facilities, as well as garages, can be found in towns nearby.

## REGULATIONS

The following regulations are designed for the protection of the natural features as well as for your comfort and convenience.

**Firearms.** The use of firearms is not allowed.

**Fires.** Light them only in designated places. *Extinguish completely before leaving camp, even for a temporary absence.*

**Specimens.** The removal of rocks, minerals, or cave formations, or the picking of flowers, shrubs, or other vegetation without written permission from the superintendent of Wind Cave National Park is not allowed.

**Trash.** Please help keep the area neat and attractive by carrying debris until you can burn it in camp or place it in a receptacle.

**Wildlife.** Since the monument is a wildlife sanctuary, you are requested to refrain from molesting wildlife in any manner.

## ADMINISTRATION

Jewel Cave National Monument is administered by the National Park Service, U.S. Department of the Interior.

The National Park System, of which this monument is a unit, is dedicated to conserving the scenic, scientific, and historic heritage of the United States for the benefit and enjoyment of the people.

The superintendent of Wind Cave National Park, whose address is Hot Springs, S. Dak., 57747, is in charge of the monument.

THE DEPARTMENT OF THE INTERIOR—the Nation's principal natural resource agency—has a special obligation to assure that our expendable resources are conserved, that our renewable resources are managed to produce optimum benefits, and that all resources contribute to the progress and prosperity of the United States, now and in the future.

U. S. DEPARTMENT OF THE  
INTERIOR



NATIONAL PARK SERVICE



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