

# Black Canyon of the Gunnison

NATIONAL MONUMENT • COLORADO

"Several western canyons exceed the Black Canyon in overall size. Some are longer; some are deeper; some are narrower; and a few have walls as steep. But no other canyon in North America combines the depth, narrowness, sheerness, and somber countenance of the Black Canyon."

These words of geologist Wallace R. Hansen, who mapped the geology of the Black Canyon region with the U.S. Geological Survey in the mid-1950's, best describe this area of southwestern Colorado.

Although about 53 miles long, only the deepest, most spectacular 12 miles of this gorge lie within Black Canyon of the Gunnison National Monument. Slanting rays of sunlight penetrate this deep and narrow canyon for only short periods, leaving the canyon's dark gray walls shrouded in heavy shadows most of the day—hence "Black Canyon."

The canyon's depths range from 1,730 to 2,700 feet. Its widths at The Narrows are only 1,300 feet at the rim and as little as 40 feet at the river. Elevation above sea level is about 8,000 feet along the rims.

This canyon of the Gunnison River is one of the few unspoiled ones remaining in the country. In the section protected by the park, only unimproved foot trails enter and leave this wild area.

The main road follows and is usually less than half a mile from the south rim of the canyon. Short foot trails lead to places on the rim where interpretive signs help you to understand the geologic story. Cedar Point, on the south rim, has a self-guiding trail, but at High Point, at the end of the road, there is a printed guidebook for the longer Warner Point trail.

During the summer, park rangers are stationed on both rims of the canyon to answer your questions and otherwise help you to enjoy your visit; nature walks are conducted, and campfire programs are given nightly on the south rim near the South Rim campground. Schedules of events are posted in visitor use areas, and further information about the park can be obtained at park headquarters at Gunnison Point.

## A SLOW CUTTING PROCESS

The first impression you get upon viewing this great gash in the earth's surface is that some cataclysm in the remote geologic past occurred here. Actually, the canyon's landscape was formed by a slow, but continuous process of erosion—scouring by the turbid, seasonally flood-swollen river, the rush of mud-laden side streams after heavy rains, occasional rockfalls from high cliffs, and the relentless creep of landslides. It took these agents of erosion about 2 million years to carve the canyon, and the excavating process is still in action, but at a slower pace because the river is dammed above the park.



Looking up Black Canyon from Flat Rock.

More rapid cutting by the Gunnison than by its smaller tributaries left many side valleys hanging high above the floor of the main gorge. Because the tributaries lacked the flow, gradient, and erosional materials with which to match the cutting power of the Gunnison River, their mouths were gradually sliced off and the canyons were left hanging.

Block "islands" and pinnacles are striking features of Black Canyon, especially in the eastern area of the park. They are created by the slow processes of weathering and erosion. The river assisted in producing some of them when the direction of its flow followed the joint planes and layers of less resistant rock.

You can stand on either the north or south rim and easily see that the sheer-walled canyon is cut into the floor of a broad outer valley with gentle slopes of stratified sandstone and shale. Ancient basement rocks of Precambrian age form this floor. These rocks, seen in the canyon walls, consist of dark, platy schist, coarsely banded gneiss (pronounced "nice"), and crystalline textured granite. Composed mostly of crystals of feldspar, quartz, and mica, the pegmatite forms a tracery of bands or dikes in the dark walls and light to pinkish-hued exposures along the rims. The sheer walls between Chasm View and High Point are carved from a gray granite-like rock called quartz monzonite. The weathered surfaces of schist, gneiss, and granite, streaked and stained by the elements, add variety to the chasm.

Lying upon the Precambrian rocks is a veneer of sedimentary rocks which becomes more evident to the south, west, and north. These sediments were laid down on the flat, eroded surface of the older rocks during Mesozoic times, about 180 million years ago. Then the area lay much nearer to sea level and the cutting of the canyon you now see had not begun. The sedimentary rocks underwent periodic erosion and then were covered by volcanic flows which subsequently were also eroded away. More recently, the sediments themselves have largely been removed by water.

The river had established its course on the soft volcanic rocks. As the area gradually rose, the river cut through these to the hard crystalline rocks of the present canyon. Its course committed, the stream had no alternative but to continue to cut through this once-buried hard core.

Porcupine feeding on the inner bark of a pinyon pine.



## LIFE ON THE RIMS

On the rims of this narrow park, life is much the same as on the Fruitland and Inclinado Mesas to the north and Vernal Mesa to the south.

Most of the rim acreage has a cover of mountain brush which is predominately Gambel oak and serviceberry, though the higher sections support well-developed stands of pinyon-juniper woodland. *Gnarled old pinyons and junipers on the rims add rugged grace and a sense of time to the canyon scene. Some of the pinyons on the south rim may be from 460 to 740 years old.*

Associated with the rim woodlands is an abundant shrub growth, mostly fenderbush, serviceberry, wild rose, mountain mahogany, rock spirea, snowberry, gooseberry, chokecherry, and wax currant.

In this shrub and open woods environment, mule deer find a natural habitat and are numerous. Coyotes, bobcats, and gray foxes are the common carnivores, preying upon smaller mammals such as marmots, rock and ground squirrels, woodrats and chipmunks and other animals that inhabit the rocky woodlands. On rare occasions a black bear or cougar may be seen.

Most of the mammals are shy or nocturnal and therefore not easily seen. The freshly gnawed bark of pinyons indicates that porcupines have been feeding, but you may not see them because, during daylight hours, they sleep under rocky ledges at the top of the canyon or in the upper branches of trees.

Birds are much more in evidence than mammals. Among those you may see in the mesa woodland-shrub environment are the plain titmouse, the juncos, chickadees, pinyon and scrub jays, golden and bald eagles, black-billed magpie, turkey vulture, and the red-tailed hawk. You also may see a few reptiles on the rims, such as the garter and gopher snakes, and various lizards sunning themselves or racing across the rocks.

## LIFE IN THE CANYON

The other notable environment of the park is, of course, the Gunnison River and its canyon. Because its walls are so steep and its canyon so narrow, the sun warms them for such a short time each day that very little plantlife can flourish. Therefore, most animals cannot make their homes in this stark environment. However, various lichens and mosses grow on the rocks in many places, and oakfern and woodsiafern have been found under damp overhangs. Also two trees, Douglas-fir and aspen, grow in some parts of the canyon where conditions are more moist and cooler than those above.

In the river are brown and rainbow trout, flannel-mouth sucker, and squawfish. You may fish in the river, but be sure to have a Colorado State fishing license.

## ADMINISTRATION

Black Canyon of the Gunnison National Monument is administered by the National Park Service, U.S. Department of the Interior. A Superintendent, whose address is P.O. Box 1648, Montrose, CO 81401, is in immediate charge of the monument.

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

### MAN AND BLACK CANYON

We know little about the existence of prehistoric and pre-Columbian man in southwestern Colorado. South of the park, in the Uncompahgre Valley, Folsom spear points have been discovered and ancient pictographs and petroglyphs can be seen in the surrounding valleys—signs that indicate prehistoric man lived near Black Canyon.

Spanish explorations of the Colorado region were few and unproductive. Coronado's abortive search

for the Seven Cities of Cibola had brought him to the area in 1541. His report described a country so uninviting to the Spanish mind that 200 years passed before the Spanish governor of New Mexico ordered Juan Maria de Rivera to visit this area of Spain's empire in 1765. He was followed by the Franciscan friars Dominquez and Escalante in 1776.

The Spanish found the Ute Indians, the dominant tribe in the area, to be valiant warriors who laughed at their religion and had no inclination to become docile vassals of the King of Spain. Thus Colorado was not suitable for colonizing and exploitation.

An independent Mexico showed even less interest. Americans, however, had long shown an interest. Trappers and traders were familiar with this country north of Santa Fe, an important market town that was their destination when it was under the rule of Spain and later of a free Mexico.

After America's war with Mexico ended in 1848, the whole area became territory of the United States. Capt. John W. Gunnison led an expedition through the region in 1853. Though the river is named for him, he carefully avoided the inhospitable canyon, bypassing it to the south and west. It was not until 1874 that an expedition of the Hayden Surveyors followed the length of the north rim and established several survey stations within the present park.

After 1900 there was increasing recognition of the scenic value of the Black Canyon by local conservationists and civic leaders. In the late 1920's, citizens of Montrose, led by the Rev. Mark Warner, began efforts to have the canyon preserved as a national monument. Finally, on March 2, 1933, a Presidential Proclamation established Black Canyon of the Gunnison National Monument.

The awesome Black Canyon that was a barrier to early explorers, a place to be avoided, has become a challenge for experienced rock climbers, and these sportsmen work the sheer walls in ever-increasing numbers.

The river trip has always been more a matter of portaging and rock climbing than of floating.

In the winter of 1882-83, the first successful though partial survey of the canyon took place. The Denver and Rio Grande Railroad sent one of their engineers to survey the lower part of the Black Canyon to determine whether it would be practical to extend the railroad downstream below Cimarron. Bryan H. Bryant and his crew climbed down into the canyon and, working as far as they could, climbed out again, only to scramble down to the river at the next draw. In this way they managed to complete a survey from Cimarron to Grizzly Gulch in 68 days.

This team decided that a railway could not be extended below Cimarron but that it would be feasible, by means of a tunnel, to divert water to the Uncompahgre Valley for irrigation purposes.

Probably the most famous trip is that of William W. Torrence and A. Lincoln Fellows who made a perilous but successful trip through the gorge to the point where the river leaves the canyon at the junction of the North Fork. The data accumulated on this trip made possible the Gunnison Diversion Tunnel to provide irrigation water to the Uncompahgre Valley.

Since that time, parts of the canyon have been traveled by many parties, but it still is dangerous and not suitable for float trips. All who have tried to run the river through the park agree they have done more climbing, scrambling, and rock scaling than they have floating and fighting white water.

Other than trips in and out of the canyon, human impact within the park has been minor. Upstream, the Crystal Dam, the Morrow Point Dam, and the Blue Mesa Dam store water for irrigation and provide water for power generation. These dams have made and will make many changes in the river, its canyon, and the ecology of the surrounding lands.

No longer will huge floods flush out the accumulating talus; water temperature will change with the depths of releases from the turbine outlets. Man can make changes in his environment to suit his needs but never can he do this without paying a certain price. Reams have been written and hours have been invested in debate of these costs versus the gains, and perhaps only time will give us the answer.

### CAMPGROUNDS AND OTHER FACILITIES

The park has two campgrounds—one on each rim. Campsites are available on a first-come, first-served basis. Water must be used sparingly because it has to be hauled by tank truck. Each campsite has its own fireplace or charcoal grill, and a table. A limited supply of free firewood is furnished. We suggest you bring charcoal and water with you.

Light lunches, sandwiches, and souvenirs are sold during summer at the Rim House on the South Rim. A limited amount and variety of camping supplies also are sold there.

No overnight lodgings are within the park, but they are available in nearby communities. You will also find medical facilities, groceries, auto repair and service stations in these towns.



### PROTECT YOUR PARK

**Fire** is Black Canyon's greatest peril. Do not build fires outside of designated campgrounds. Use only the firewood provided, or your own charcoal. Before leaving, extinguish the last spark with water. Don't take any chances—be sure your fire is out!

**Hunting** in this sanctuary or the use of firearms for any purpose is not permitted.

**Fishing** must conform with Colorado state regulations on season, hours, and fishing and baiting methods. A state license is required.

**Natural features** must not be disturbed. Please do not pick wildflowers, collect rocks, or damage plants; leave them for others to enjoy.

**Pets** must be kept on a leash or under physical control at all times for the protection of plant and animal life. Pets may not be taken down into the canyon.

Much energy, time and money is used to keep this park clean for your enjoyment. Your help will be appreciated.

### FOR YOUR SAFETY

**A single stone** thrown or rolled from the rim could cause fatal injuries to people below you. People on paths at the bottom of the canyon are not visible from above on the rim.

**Stay on the trails.** Many places along the rim are not protected by guard rails and are a serious hazard because of the weathered condition of the rocks. Keep your children under very close supervision; view the canyon from behind the railings at the designated overlooks.

**Hikes into the canyon and river trips** should not be attempted before contacting a ranger who can provide you with information that can make your trip enjoyable. You should register at a ranger station before starting any inner canyon activity.

### HOW TO REACH THE PARK

You can drive to both rims of the canyon. The south rim is open to traffic all year; the north is closed to traffic in winter. From Montrose, Colo., the distance to the south rim entrance is 11 miles—6 miles east via U.S. 50 and 5 miles north over a hard-surfaced road. You can reach the north rim from Colorado 92, just east of Crawford over a 14-mile graded road.

Continental Trailways and Frontier Airlines serve Montrose, Colo. However, there is no regularly scheduled public transportation from Montrose, to the park. Cars can be rented from various

agencies in Montrose and at Grand Junction, Colo., 62 miles northwest of Montrose. Grand Junction is close to Colorado National Monument, and is also served by Continental Trailways and by United and Frontier Airlines.