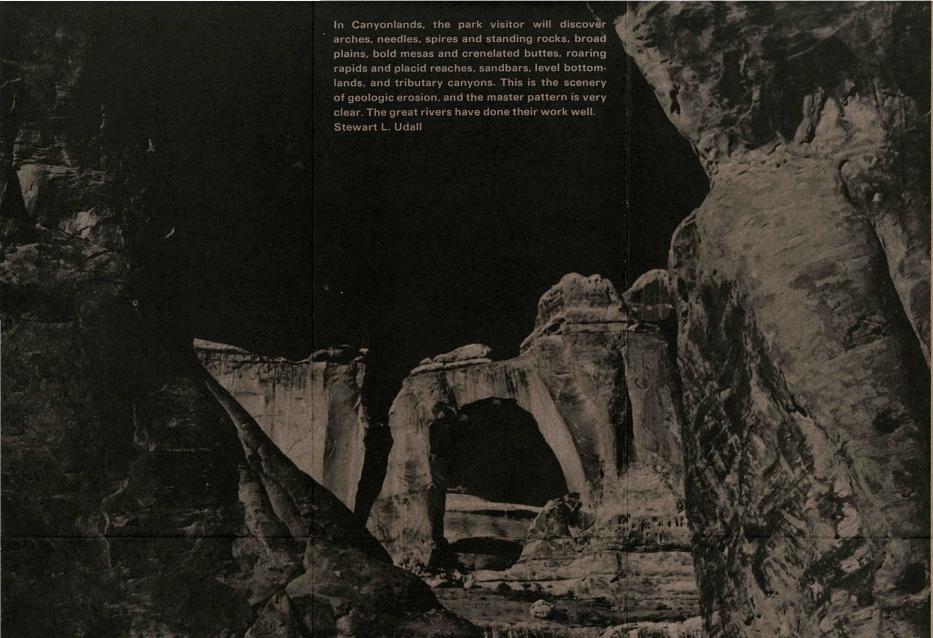
## Canyonlands

NATIONAL PARK • UTAH



The outstanding quality of Canyonlands is its variety of form and color-the combined effects of substance, time, and erosion.

First, look at the substance of this great plateau: sandstone from oceans, winds, floods, and eroded mountains, in layer after layer, each with its own past. It is upon this substance that all the forces of nature have worked for about 300 million years to produce a remarkable landscape.

The Colorado River, with its tributaries, is the greatest force in this colorful land. The Green River merges with the Colorado here to form the wildest river on the continent. Both rivers are entrenched in twisting canyons, and below their confluence, the waters roar into the echoing depths of Cata-

Pure salt, 29 layers and 3,000 feet thick, is another great shaper of this country. The salt is an undependable support for a 1-mile thick overlay of accumulated rock and sand. As underground water dissolves and carries away salt, blocks of overlying sandstone slowly settle into the spaces once filled by that salt, thus forming long, narrow, straight canyons (called grabens by geologists) in the Needles district.

Salt pressing up beneath the surface has created Upheaval Dome, a salt dome in the northwest corner of the park. As rock layers bulged upward, erosion stripped away much of the top and interior of the bulge, leaving a circular structure of upturned strata enclosing a mile-wide crater 1,500

The salt denosit formed after ancient mountains blocked the outlet of an inland sea about 300 million years ago. Through evaporation the trapped waters became more and more briny, and this concentrated brine eventually formed salt layers. The salt was buried by layers of debris from eroding mountains, windblown sand, and limestone forming in later and lesser seas.

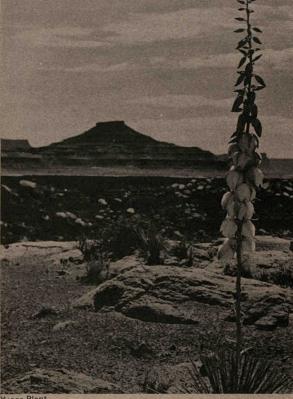
Erosion gnaws constantly at the land as today's natural forces destroy and reassemble what other natural forces created in the distant past. Variations in the hardness of the ancient rock layers affects the rate of erosion today. A bed of resistant rock, such as the White Rim sandstone or the Rico limestone, protects underlying beds from erosion and so tends to form wide, relatively level

benches. Where a hard layer lies on top of a much softer rock deposit and both are exposed along a canyon wall, the soft material will erode from beneath the resistant layer and leave the harder rock as a great overhanging ledge. Rock hardness is a major factor in the development of scenery. Hard, slowly eroding rocks form cliffs, for example, while softer layers erode more quickly to form slopes.

Here, the Green and the Colorado, grinding into bedrock, have established conditions and drainage patterns that have brought about all that you see today. The rivers have carried away many cubic miles of sand and silt and have carved more than 100 miles of canyons about one-half mile deep.

From this brief geological account, you can see that the landscape is not static; it is in constant change. The spires, towers, and arches are simply the leftovers of a different landscape, most of which has been removed by erosion.

While you are here, discover the mesa tops and canyons and delve into the area's history and prehistory. The roads and trails were once ridden by cowboys and sheepherders, trampled by their herds, or cut by prospectors' jeeps. Your campsite may well have been an Indian camp 900 years ago.





Go to The Needles district, where a bristling forest of fantastic spires rings Chesler Park, and east of it, Salt Creek and Horse Canyon expose their graceful walls. Within these canyons, rock filigree and color abound in surrealistic excitement.

Island in the Sky, the north district of Canyonlands, is an altogether different world. It overlooks the remarkable array of landforms to the south, and encompasses the 40-mile wide erosional basin of the Green and Colorado Rivers. From here, 6,000 feet above sea level, canyon walls drop in giant 1,000-foot steps to the rivers which seem to be buried in their intricate canyons.

The Maze district, lying west of the Green and lower Colorado Rivers, is the most remote and inaccessible portion of the park. Here even the approach to the park demands a four-wheel-drive vehicle. "The Maze" is exactly that: sheer walled canyons twisting and winding, dividing and redividing in a totally confusing manner. The district includes the Land of Standing Rocks and Horseshoe Canyon, a detached unit of the park. Within The Maze district are pictograph panels that represent the finest ancient Indian rock art in North America.

### PARK SEASONS

This is desert country; annual precipitation is from 5 to 9 inches, much of which falls as late-summer thundershowers and winter snow. Annual temperatures vary from 20° below zero to 110° above, but the normal temperature range in any one area is generally much less.

Since clear desert skies and lack of dense vegetation tend to encourage very rapid cooling at nightfall and rapid warming in the morning, a daily range of 25°- 30° is not unusual.

Nights are fairly cold from December through February, but daytime temperatures are generally pleasant even in mid-winter. The winter season is usually short, with very little snow. Spring and autumn tend to be long and very pleasant, except that high winds accompanied by sand or dust storms are common in spring.

#### PLANT AND ANIMAL LIFE

Canyonlands has been the subject of very little study or research, and much remains to be learned. In recent years, formerly unknown species of flowers, insects, and microscopic animals have been discovered here or nearby. The isolation of high mesas and deep canyons, and obstacles like broad rivers and sheer cliffs affect the distribution of plants and animals just as they affect man's movements in the area. Near The Neck, a small stand of Douglas-fir grows in the shelter of the cliffs, apparently isolated for thousands of years from other stands of Douglas-firs.

The desertlands look desolate and empty but are very much occupied by plant and animal life. Bighorn sheep, mule deer, cougars, bobcats, coyotes, foxes, and pronghorn are present, as well as rodents in great variety and numbers, various kinds of other small mammals, and some reptiles. Along the rivers are beaver, shorebirds, ducks, and other wetland animals.

Birdlife in Canyonlands is especially diverse because of the wide range of habitats. Totally different conditions may occur within very short distances, and birdwatchers find a rich variety of species throughout the year.

Many animals avoid the rigors of their surroundings by moving or changing their habitats, but some also have evolved methods of conserving or even manufacturing water. Some plants also have evolved elaborate ways to collect and conserve water in the arid environment of Canyonlands.

#### TRAVELING IN THE PARK

Like everything else at Canyonlands, travel conditions vary greatly. Depending upon which parts of the park you visit and upon the type of motor vehicle you are driving, you may be traveling on paved roads, dirt roads suitable to any type of vehicle, easy four-wheel-drive routes, or steep, rocky, and hazardous four-wheel-drive trails. Each year, thousands of people travel through the park by boat or raft. Hundreds take the thrilling raft trip through Cataract Canvon.

Island in the Sky's dirt roads, dusty and a little rough but suited to any vehicle, end at overlooks of a vast expanse of canyons, gorges, spires, towers, and buttes. From these viewpoints, you look down at the White Rim 1,000 feet below, and catch glimpses of the rivers 1,000 feet below the White Rim. The road to Upheaval Dome provides easy access to a remarkable craterlike feature caused by movement of salt far below the surface.

The White Rim Trail offers more than 100 miles of easy four-wheel-drive travel to backcountry enthusiasts. Shafer Trail, for which a four-wheeldrive vehicle is advised, is a thrilling route, but it involves some hazardous driving.

You will travel about 30 miles through magnificent canvon country to reach The Needles district. All passenger cars must stop at Elephant Hill, a 40percent grade traversable only by four-wheeldrive vehicles. You can hike miles of trails or take concession-operated jeep tours from nearby towns. or rent four-wheel-drive vehicles at a resort immediately outside the park. Visitors to Chesler Park, Salt Creek, and other areas in The Needles district travel into the canyons amid the remarkable erosional features that give the area its name.

You can see much of The Maze district by fourwheel-drive vehicle, but can get into The Maze itself only on foot. Travel to the Maze Overlook, Horseshoe Canyon, and the Land of Standing Rocks can provide a severe test for even the best four-wheel-drive vehicle. Because it is remote and lightly traveled, parties visiting The Maze district should include at least two vehicles.

For many, the ultimate recreational experience at Canyonlands is a float trip down either the Green or Colorado River and through Cataract Canvon. It is a never-to-be-forgotten journey. Commercially operated float trips, led by licensed guides, are the most popular. Private groups with proper equipment and experience may attempt the trip after obtaining a permit from the superintendent.

### GENERAL INFORMATION

The park is open all year. Spring and autumn are best for hiking and exploring. Rooms and meals are not available. Monticello, Moab, Green River, and Hanksville are nearby towns providing a full range of services. Canyonlands Resort, near The Needles entrance, offers fuel, snacks, limited supplies, and scenic flights over the park.

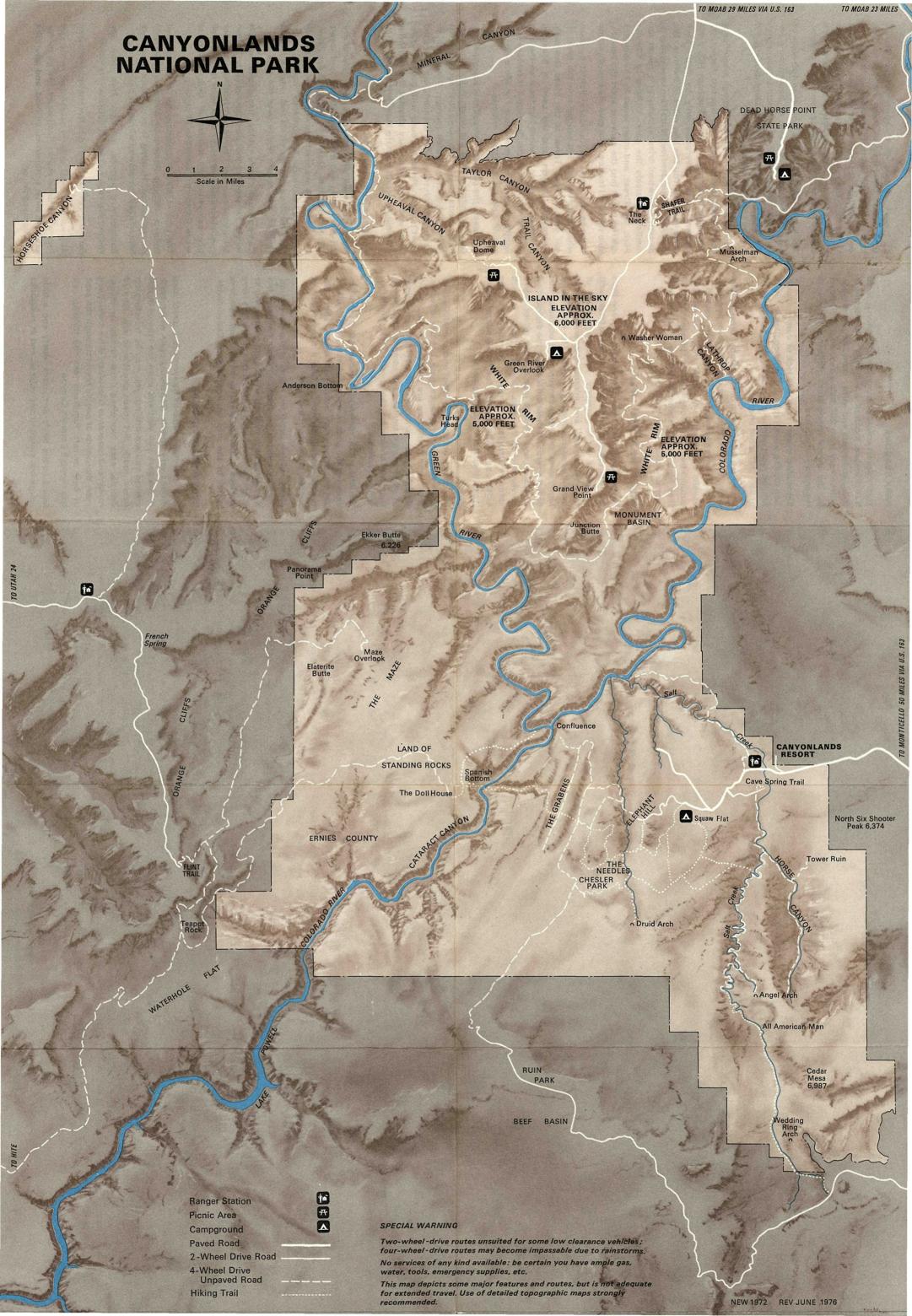
Campgrounds have tables, fireplaces, and pit toilets. Firewood cannot be collected in the parkbring your own fuel. There are no hook-ups or other special facilities for trailer or camper units. Primitive campsites are located in four-wheel-drive areas. Camping is limited to 14 days.

The park is also a sanctuary for all plants and animals. Picking flowers or collecting plants is not permitted. Hunting is prohibited; therefore firearms are not allowed within the park.

Backcountry permits, available free from any ranger, are required for all backcountry travel.

Do not bury trash; carry it to the nearest trash can.

ALL vehicles must stay on established roads and four-wheel-drive routes. Trail bikes, like all motor vehicles, must be licensed, muffled, and operated by a licensed driver.





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Piped water is available near Squaw Flat Campground in The Needles district, but nowhere else in the park. YOU MUST PROVIDE YOUR OWN WATER FOR BACKCOUNTRY TRIPS.

The Antiquities Act protects the park and prohibits the damage, destruction, or removal of ancient objects. Irreplaceable ruins, pictographs, petroglyphs, and other evidence of ancient cultures can be easily damaged. They are of immense scientific interest, and much of their value can be destroyed simply by disturbing the soil in or near a ruin, for example. Please help us protect them.

Canyonlands National Park is administered by the National Park Service, U.S. Department of the Interior. A superintendent, whose address is Canyonlands National Park, Moab, UT 84532, is in immediate charge of the park.

As the Nation's principal conservation agency, the Department of the Interior has basic responsibilities for water, fish, wildlife, mineral, land, park, and recreational resources. Indian and Territorial affairs are other major concerns of America's "Department of Natural Resources." The Department works to assure the wisest choice in managing all our resources so each will make its full contribution to a better United States-now and in

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