



Mesa Verde

NATIONAL PARK • COLORADO

MESA VERDE

National Park
C O L O R A D O

CONTENTS

The Ruins	3
Spruce Tree House	3
Cliff Palace	6
Balcony House	9
Square Tower House	10
Oak Tree House	11
Sunset House	12
Sun Temple	12
New Fire-House Group	14
Far View House, a Mesa Verde Pueblo	18
Earth Lodge A	20
Dates for Mesa Verde Ruins Established by Tree-Ring Chronology	20
Discoveries of Recent Years	21
Prehistoric Inhabitants of the Mesa Verde	22
Geology, Fauna, and Flora	24
How To Reach the Park	25
Motor Transportation	27
Administration	27
Educational Service	28
Guided Trips to the Ruins	28
Campfire Talks	28
Park Museum	28
Reference Library	29
Free Public Campgrounds	29
Horseback and Hiking Trips	29
Hospital and Medical Service	30
Accommodations and Expenses	30
References	32
Events of Historical Importance	33
National Parks in Brief	35
Government Publications	36



UNITED STATES DEPARTMENT OF
THE INTERIOR • Harold L. Ickes, Secretary

NATIONAL PARK SERVICE • Arno B. Cammerer, Director

WHAT TO DO.

Things to See on Way from Park Entrance to Headquarters

- 3.5 miles—Top of first grade—Mancos Valley and La Plata Mountains.
- 5 miles—Knife Edge Road—Montezuma Valley and Sleeping Ute Mountain.
- 10.5 miles—Scenic road to Park Point, highest elevation within Mesa Verde National Park, 8,572 feet above sea level; 2,200 feet above the Montezuma Valley. Views into four States—Colorado, New Mexico, Arizona, and Utah.
- 16 miles—Pueblo III ruins on top of mesa—Far View House Ruin, Pipe Shrine House Ruin, Far View Tower Ruin.
- 18.5 miles—Cedar Tree Tower Ruin—road branches off to left.
- 20 miles—Park headquarters. Park ranger will meet visitors' cars and give information.

Things to Do While in Mesa Verde

Motor caravans to ruins—Daily. Use your own car. No charge for ranger service

- 8 a. m.—Earth Lodge A, Square Tower House, Little Long House, Sun Point, Fire Temple, Sun Temple. Return 11:15 a. m. Distance 6½ miles.
- 10 a. m.—A shortened trip of morning route to accommodate late comers. Return 11:15 a. m.
- 1:30 p. m.—Cliff Palace, Rim Drive, Balcony House. Return 4:15 p. m. Distance 7 miles.
- 3 p. m.—A shortened trip of the 1:30 route to accommodate late comers. Does not go through Cliff Palace but views this ruin from the top of the mesa. Return 4:30 p. m.

Motor caravan to Park Point—Daily. Use your own car

- 6:30 or 7 p. m.—Departure is timed to arrive at Park Point to view colorful sunset. Ranger in charge will discuss the flora, geology, and scenic points. Distance 21 miles.

Campfire lecture—Daily

- 8 p. m.—Campfire circle at park headquarters. Archeological story of the Southwest followed by ceremonial dances by Navajo Indians at about 9 p. m.

Things to Do—Not on Regular Schedule

- Museum—Open from 8 a. m. to 5:30 p. m. A splendid collection of material from the cliff ruins and other sections of the Southwest.
- Community building—A display of cut wild flowers. Porch, with comfortable chairs, overlooks Spruce Tree Ruin. Open at all times.
- Spruce Tree Ruin—Below park headquarters. May be visited at your leisure without guide. Ranger on duty in this ruin for information.
- Nature trail—The path to Spruce Tree Ruin has been prepared with a series of signs explaining the flora and rock formations.
- Horseback trips—Splendid trails lead in all directions. Large, unexcavated ruins, magnificent canyons and mesas off the beaten path unfold the charm of this primitive region. Rates are very reasonable.
- Hikes—To any section of the park can be arranged for with the park naturalist. If sufficient numbers enroll for such hikes, a naturalist guide will be provided.

Accommodations

- At park headquarters, 20 miles from entrance. SPRUCE TREE LODGE—Cabins, tents, meals, beverages, campers' supplies, and curios. FREE GOVERNMENT CAMPGROUND—Firewood and water furnished.

RULES AND REGULATIONS

[Briefed]

A COMPLETE copy of the rules and regulations for governing the park may be seen at the office of the superintendent.

Automobiles.—Secure automobile permit, fee \$1 per car. Speed limit 35 miles per hour on entrance highway, 20 miles per hour in headquarters area and on ruin roads. Drive carefully; free wheeling is prohibited within the park.

Fires.—Confine fires to designated places. Extinguish completely before leaving camp, even for temporary absences. Do not guess your fire is out—KNOW IT.

Firewood.—Use only the wood that is stacked and marked “firewood” near your campsite. In any event do not use your ax on any standing tree or strip bark from the junipers.

Grounds.—Burn all combustible rubbish before leaving your camp. Do not throw papers, cans, or other refuse on the ground or over the canyon rim. Use the incinerators which are placed for this purpose.

Hiking.—Do not venture away from the headquarters area unless accompanied by a guide or after first having secured permission from a duly authorized park officer.

Hunting.—Hunting is prohibited within the park. This area is a sanctuary for all wildlife.

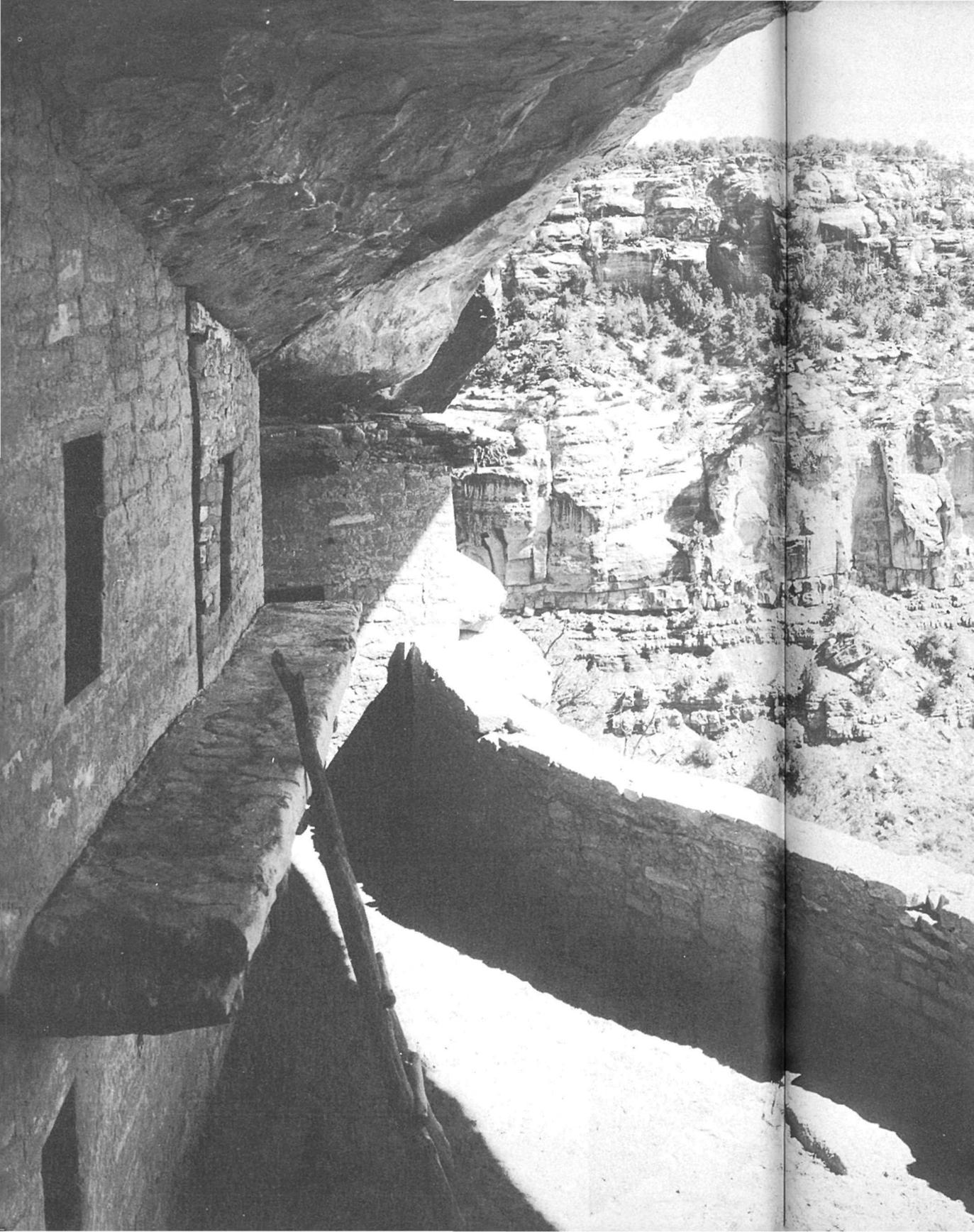
Noise.—Be quiet in camp after others have gone to bed. Many people come here for rest.

Park Rangers.—The rangers are here to help and advise you as well as to enforce regulations. When in doubt, ask a ranger.

Ruins and Structures.—Do not mark, disturb, or injure in any way the ruins or any of the buildings, signs, or other properties within the park.

Trees, Flowers, and Animals.—Do not carve initials upon or pull the bark from any logs or trees. Flowers may not be picked unless written permission is obtained from the superintendent or park naturalist. Do not harm or frighten any of the wild animals or birds within the park. We wish to protect them for your enjoyment.

Visitors.—Register and secure permit at the park entrance. Between travel seasons, registration and permit are arranged for at park headquarters.



The MESA VERDE, or green mesa, so-called because its juniper and piñon trees give it a verdant tone, is 15 miles long by 8 miles wide. Rising abruptly from the valley on the north side, its top slopes gradually southward to the high cliffs bordering the canyon of the Mancos River on the south. Into this valley open a number of large high-walled canyons through which occasionally, in times of heavy rain, raging torrents of water flow into the Mancos. In the shelter of the caves that have been eroded in the sides of these canyons are some of the best-preserved cliff dwellings in America, built many centuries ago by a tribe of peace-loving Indians who prized the security offered by the almost inaccessible caves. In order to preserve these cliff dwellings Mesa Verde National Park was created, but they are not the only attractions in the area. In the winter the park is closed to travel by deep snow, but in the early spring the blanket of snow is replaced by a mantle of flowers that change with the seasons, and to the story of the prehistoric inhabitants is added an absorbing story of nature that is peculiar to this mesa and canyon country.

“The Mesa Verde region,” writes Arthur Chapman, “has many attractions besides its ruins. It is a land of weird beauty. The canyons which seam the mesa, all of which lead toward the distant Mancos River, are, in many cases, replicas of the Grand Canyon of the Colorado” (on a smaller scale). “While the summer days are warm, the nights are cool, and the visitor should bring plenty of wraps besides the clothing and shoes necessary for the work of climbing around among the trails. It is a country for active footwork, just as it was in the days of the cliff dwellers themselves. But when

one has spent a few days among the cedars and pinon pines of the Mesa Verde, well named Green Table by the Spaniards of early days, he becomes an enthusiast and will be found among those who return again and again to this most unique of national parks to study its mysteries and its beauties from all angles."

The northern edge of the mesa terminates in a precipitous bluff, averaging 2,000 feet above the Montezuma Valley. The general slope of the surface is to the south, and as the main entrance highway meanders back and forth in heading each smaller canyon, many times skirting the very brink of the great northern fault line, tremendous expanses of diversified terrain are brought into view, first in Colorado and Utah, then in Arizona and New Mexico.

A new scenic road approximately 1 mile in length branches from the main highway at a point 10.2 miles beyond the entrance checking station and ascends to the crest of Park Point, the highest part of the Mesa Verde National Park, which attains an elevation of 8,572 feet above sea level.

From this majestic prominence the great Montezuma Valley, dotted with artificial lakes and fertile fields, appears as from an airplane, while to the north are seen the Rico Mountains and the Lone Cone of Colorado, and to the east, the La Plata Mountains. To the west the La Sals, the Blues, and Bears Ears of Utah dominate the horizon. Some of these landmarks are more than 115 miles distant. Southward numerous deep canyons, in which the more important cliff dwellings are found, subdivide the Mesa Verde into many long, narrow tonguelike mesas. The dark purplish canyon of the Mancos River is visible in the middle foreground, and beyond, above the jagged outline of the mesa to the south, the Navajo Reservation, surrounded by the deep-blue Carrizos of Arizona and the Lukachukai and Tunichas of New Mexico.

In the midst of this great mountain-enclosed, sandy plain, which, seen from the mesa, resembles a vast inland sea surrounded by dark, forbidding mountains, rises Ship Rock (45 miles distant), a great, jagged shaft of igneous rock, 1,860 feet high, which appears like a great "windjammer" under full sail. Toward evening the illusion is perfect.

The distance from Park Point to Spruce Tree Camp, the park headquarters, is 10.5 miles. The entire road from the park entrance to headquarters, 20 miles, is gravel surfaced and oil treated, full double width, and cars may pass at any point.

Although there are hundreds of cliff dwellings within the Mesa Verde National Park, the more important are located in Rock, Long, Wickiup, Navajo, Spruce, Soda, Moccasin, and tributary canyons. Surface ruins of a different type are widely distributed over the narrow mesas separating

the numerous canyons. A vast area surrounding the park contains more or less important ruins of these early inhabitants, most important and easiest of access from the park being the Aztec Ruins and Chaco Canyon National Monuments, New Mexico; the Yucca House National Monument, Colorado; and the Hovenweep National Monument, Colorado-Utah.

THE RUINS

Although the Spaniards were in the Mesa Verde region as early as 1765 and the Americans as early as 1859, it was not until 1872 that the first settlement was made. In that year the Mancos Valley, lying at the foot of the Mesa Verde, was settled, but because of the fact that the mesa itself was a stronghold of the warlike Ute Indians, many years passed before the cliff dwellings were discovered.

The ruins in the Mancos Canyon were discovered as early as 1874 when W. H. Jackson, who led a Government party, found there many small dwellings broken down by the weather. The next year he was followed by Prof. W. H. Holmes, later chief of the Bureau of American Ethnology, who drew attention to the remarkable stone towers also found in this region. Had either of the explorers followed up the side canyons of the Mancos they would have then discovered ruins which, in the words of Baron Gustav Nordenskiöld, the talented Swedish explorer, are "so magnificent that they surpass anything of the kind known in the United States."

The largest cliff ruin, known as Cliff Palace, was discovered by Richard Wetherill and Charlie Mason while hunting cattle one December day in 1888. Coming to the edge of a small canyon they first caught sight of a village under the overhanging cliff on the opposite side, placed like a picture in its rocky frame. In their enthusiasm they thought it was a palace. With the same enthusiasm the visitors of today involuntarily express their pleasure and surprise as they first view this spectacular ruin. Many other ruins were found by the Wetherill brothers and other early explorers. They mark the oldest and most congested region of the park, but the whole number of archeological sites may reach into the thousands.

Only a few of the different types of ruins that have already been excavated, repaired, and made accessible to the visitor are considered herein. This excavation and repair were the work of the late Dr. J. Walter Fewkes, formerly chief of the Bureau of American Ethnology, with the exception of Balcony House, which was done by Jesse L. Nusbaum. Hundreds of sites await scientific investigation, being accessible now only on foot or horseback.

SPRUCE TREE HOUSE

Spruce Tree House, located in a large cave just across Spruce Tree Canyon from the museum, has been made readily accessible by a short

winding trail. This is the only excavated cliff dwelling in the park that may be visited without going on a conducted tour, and is open to the public at all times. A ranger is always on duty to protect the ruin from vandalism and to give information to the visitors.

GENERAL DESCRIPTION

The total length of Spruce Tree House is 216 feet, and its greatest width is 89 feet. During the excavation of the ruin in 1907, Dr. Fewkes counted 8 ceremonial rooms, or kivas, and 114 rooms that had been used for living, storage, and other purposes. At least 14 seemed to have been storage and burial rooms so that probably not more than 100 were used as dwellings. If it is considered that a family occupied each room, the population would have been large, but it is doubtful if all of the rooms were occupied at one time. An average of 2 or 3 persons to the room, making a total of not more than 300 for the entire village, would no doubt be a fair estimate.

Two hundred feet north of Spruce Tree House the canyon comes to an abrupt box end. A splendid spring flows from the base of the sandstone cliff, and it was to this spring that the cliff-dweller women went for water, carrying it back to their homes in their big water jars. At the south end of the cave a trail, consisting of small toeholds cut in the cliff, led to the mesa top above. This trail was used by the men as they went to their mesa-top fields, where they raised corn, beans, and squash, and by the hunters as they went in search of deer and mountain sheep that lived in the forests above.

LIVING ROOMS

The rooms of Spruce Tree House are divided into two groups by a court or street running from the front to the back of the cave, at a point just south of the center of the village. The majority of the rooms are north of this street, and some of the walls show the finest work in the entire structure. The stones were well shaped and smoothed; the mud mortar was carefully worked into the crevices and compressed with thin stone wedges. Over many of the walls was spread a thin coat of reddish plaster, often decorated with paintings. These rooms, standing as when they were constructed 700 years ago, are mute evidence of the cleverness of the masons who built them.

Spruce Tree House has more walls that reach the top of the cave than any other ruin in the park. All through the central part the walls were three stories high, the top of the cave serving as the roof of the upper rooms. One- and two-story structures usually required a ceiling of heavy rafters, running lengthwise of the rooms. These were covered with a crosswise layer of small poles and withes as a support for an average 3-inch floor of

clay. Very often a small hatchway was left in one corner of the ceiling. A short ladder leaning in the corner of the lower room gave access to the room above.

Very few of the houses were equipped with fire pits. Most of the cooking was done in the open courts. Small fire pits can be found along the walls and in the corners of the courts and passageways.

CEREMONIAL ROOMS OR KIVAS

Spruce Tree House has eight of the circular, subterranean rooms that were set aside for ceremonial purposes. Similar rooms are still in use in the present day Pueblo Indian villages and are known as kivas.

Usually the kiva roofs have collapsed, but in Square Tower House two kivas have the original roofs almost intact. Following the plan of these original roofs, three of the kivas in Spruce Tree House have been reroofed. Details of construction may be noted by descending the ladder into one of these restored kivas.

Kivas in the Mesa Verde are always underground and generally circular in shape. The average diameter is 12 to 13 feet and the depth is such that the roof would clear a man's head. At a point about 3 feet above the floor is a narrow ledge running entirely around the room. This ledge is known as the banquette and its exact use is unknown. On this ledge were built six stone buttresses or pilasters, 2 to 3 feet in height, which served as roof supports. Short beams were placed from pilaster to pilaster around the room, and additional series of beams were laid to span the angles formed by the lower series. Normally five or six sets of beams extended this cribwork almost to the ground level. Horizontal beams were then placed across the top and the whole structure was covered with bark and earth. A small square hole in the center of the roof provided an entrance which also served for a smoke vent.

On the south side of the kiva the banquette is wider between two of the pilasters than anywhere else around the room. This deep recess is often referred to as an altar, although its exact use is not known. Just back of the wall of this deep recess is a vertical shaft that leads down to meet a horizontal shaft that opens into the kiva just above the floor. This is the ventilator shaft. The fire, burning in the small pit in the center of the room, sent the smoke up through the hole in the roof, and the fresh air was drawn down through the ventilator shaft. Between the ventilator and the fire pit a small wall, known as the "deflector," was constructed to keep the fresh air current from blowing on the fire.

Two or three feet from the fire pit, and in a straight line with the ventilator shaft, the deep recess, the deflector, and the fire pit is a small hole in the

floor of the kiva. This hole is usually about 3 inches in diameter and from 4 to 6 inches deep; its walls and bottom often covered with a smooth layer of mud. In the present-day kivas this hole is known as the "sipapu," and is considered to be the symbolic entrance to the underworld. The kiva was a combination ceremonial, club, and workroom for the men. Even in the present-day villages the women are rarely allowed to enter the kivas because of the fact that the men take almost entire charge of the religious work. It is believed that each clan had its own kiva. It may be noted that in almost every case the kiva is surrounded by a group of living rooms. The members of the clan no doubt lived in these rooms and the men held their ceremonies in the adjoining kiva. Two of the kivas in Spruce Tree House have side entrances that lead to nearby rooms. These rooms may have been the homes of the priests or dressing rooms for them.

DATE OF OCCUPATION

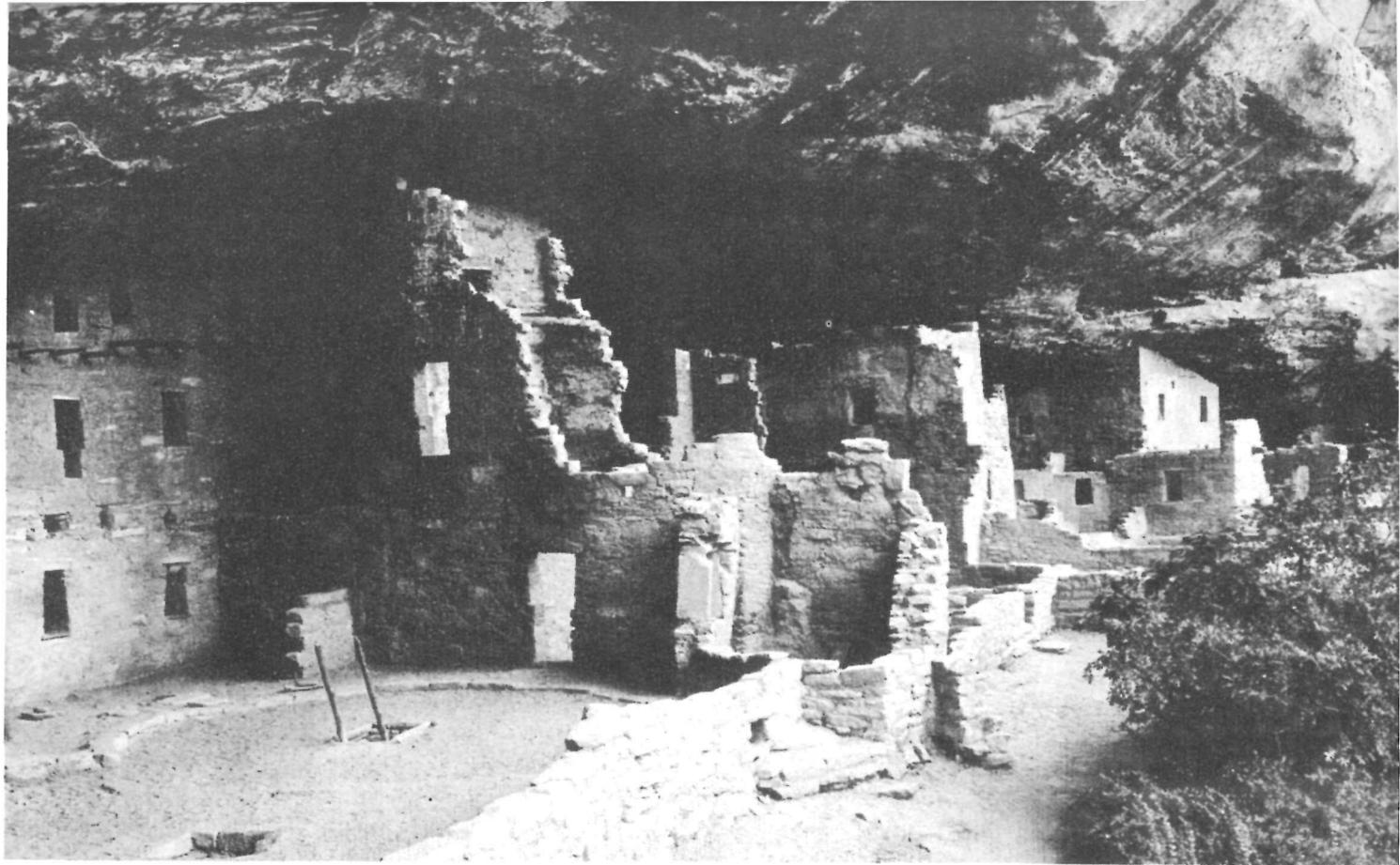
Twenty-one of the roof beams in Spruce Tree House have been dated by tree-ring chronology. These dates show that the houses were constructed during the years between 1230 A. D. and 1274 A. D. In 1276 A. D. a 24-year period of drought began that caused the cliff dwellers to move to regions where there was a more permanent supply of water. In those same regions are the homes of the modern Pueblo Indians and no doubt some of these people are the descendants of the cliff dwellers.

CLIFF PALACE

Cliff Palace lies in an eastern spur of Cliff Canyon under the roof of an enormous cave that arches 50 to 100 feet above it. The floor of the cave is elevated about 200 feet above the bottom of the canyon and is just under the rim of the mesa. The entrance of the cave faces west, toward a great promontory upon which stands Sun Temple.

The total length of the cave is over 300 feet and its greatest depth is just under 100 feet. The vaulted roof is so high that the cave is always light and airy, offering a perfect home site to the cliff dwellers who are seeking protection from the elements as well as from their enemies.

Fortunately, the configuration of the cliffs above the ruin makes it possible to get a fine bird's-eye view from the rim of the mesa. Views obtained from the heads of the two trails are most striking and give an idea of the setting and size of the building before it is entered for closer inspection. The most spectacular view of Cliff Palace is from Sun Temple, across the canyon. This is the only spot from which the entire ruin may be seen.



SPRUCE TREE HOUSE, A COMMUNITY DWELLING OF 114 ROOMS

LIVING ROOMS

Cliff Palace, the largest known cliff dwelling, has more than 200 living rooms still in evidence. To provide for an increasing population, second, third, and even fourth-story rooms were superimposed on the original single-story structures, which predominated during the original Cliff Dweller occupation of this site. Near the south end of the ruin is the tallest structure, a four-story tower that reaches the cave roof.

KIVAS

Twenty-two kivas are located in the cave and another, lying about 50 feet from the western end, and thought to have been used by men living in the cave, brings the total to 23. Twenty of these conform to the plan of the typical Mesa Verde kiva, but three seem to be of a different type. These three, instead of being round, are square with rounded corners. The banquette is missing as well as the pilasters or roof supports.

STORAGE ROOMS

Because of the fact that the inhabitants of Cliff Palace were forced to store enough corn each fall to last until the next harvest a great many storage rooms were constructed. Any small nook or cranny that was too small for a home was utilized for that purpose. Far back in the cave a number were constructed of large, thin sandstone slabs. These slabs were placed on end to form small rectangular rooms. When the door slabs were in place and all of the crevices were well chinked with mud the grain was safe from rodents. High up under the roof of the cave, at the back, was a long narrow shelf that was also utilized for storage space. A wall was built along the front of the ledge to the cave roof, and the space back of the wall was divided into 14 small storage rooms. A ladder on the roof of one of the houses below gave access to the ledge.

PAINTINGS

In the third floor room of the four-story tower is the finest painting yet found in the Mesa Verde. The entire inner surface of the four walls was covered with bright red designs on a white background. The designs are similar to those found on cliff-dweller pottery. The white color was obtained by mixing finely ground gypsum with water to form a smooth paste; the red was obtained by treating hematite, or red ochre, in the same manner.

THE ROUND TOWER

The outstanding structure in Cliff Palace is the two-story round tower that stands just south of the center of the cave. Every stone in this tower

is rounded to conform to the curvature of the walls and the graceful taper toward the top makes it one of the finest examples of masonry work in the region. When the early explorers first entered this tower the only object found was the most beautiful stone ax they ever discovered. Whether this tower was a home or whether it was constructed for some special purpose is a matter of conjecture.

POSSIBLE POPULATION

Because of the fact that Cliff Palace is the largest of all cliff dwellings, its population is of special interest. A close inspection of the rooms in the ruin shows that they are smaller, on the average, than the rooms in any of the other large cliff dwellings. When judged from our modern standards it is difficult to imagine more than a couple of people living in each one. Our modern ideas, however, will not help us in understanding the people who once lived in Cliff Palace.

More than anything else the cliff dwellers desired security from their enemies. Their next desire was safety from the elements. When it is considered that these were the motivating influences, it can easily be understood that such minor matters as space and comfort would receive little consideration. Since the inhabitants were an easy-going, peace-loving group it can be imagined that crowded living conditions would not be objectionable. In addition it must be considered that the rooms were used principally as sleeping quarters. All activities were carried on in the open courts and on the terraced roof tops. Even the cooking was done over open fires outside the houses.

An average of two to the room would give a population of 400; an average of three would place 600 in the cave. If every room were occupied at one time and if the average of two or three to the room is not too high, it would seem that a total population of 500 would not be too great for Cliff Palace.

BALCONY HOUSE

Balcony House lies in Soda Canyon about $2\frac{1}{2}$ miles southeast of Spruce Tree Camp, and is reached by a continuation of the Cliff Palace Road. It is one of the most picturesque of the accessible ruins in the park and occupies a better position for defense than most of the other ruins on the mesa. A few defenders could have repelled a large attacking force. Additional precautions have been taken at the south end of the ruin for the strengthening of its defenses, where the only means of reaching it is through a fortified narrow cleft. The south part of the ledge was walled up to a height of about 15 feet, the lower part of the wall closing the cleft being pierced by a narrow tunnel. Through this tunnel a man may creep on hands and knees

from the cliff dwelling to the south part of the ledge, which affords a footing, with a precipice to the left and the cliff to the right, for about 100 paces. The ledge here terminates in the perpendicular wall of the canyon. The ruined walls of a defensive structure, built to cut off approach on this side, may still be traced.

At the north end of the ruin the foundation gave the builders considerable trouble, but the difficulties were skillfully overcome. A supporting wall was erected on a lower ledge, to form a stable foundation for the outer wall of the upper rooms, where the higher ledge was too narrow or abrupt for building purposes.

South of the rooms fronted by this wall is a small open court, bounded at the back by a few very regular and well-preserved rooms which rise to the roof of the cave. The poles supporting the floors of these upper-story rooms project about 2 feet to provide support for a balcony. Split poles, laid parallel with the front wall, were covered at right angles with rods of cedar bast and generously plastered with clay to form the floor of the balcony, which served as a means of outside communication between the rooms of the upper story. A low, thick parapet wall built on the edge of the precipice encloses the canyon side of the northern court.

SQUARE TOWER HOUSE

Square Tower House Ruin is situated in an eastern spur of Navajo Canyon, opposite a great bluff called Echo Cliff. An ancient approach to the ruin from the canyon rim is visible to the south of the dwelling. Footholes for ascent and descent had been cut in the cliff by the Indians which enabled them to reach the level on which the ruin is situated. The footpath now used by visitors parallels the ancient trail. Along the top of the talus this pathway splits into an upper and lower branch. The former, hugging the cliff, passes through the "Eye of the Needle"; the latter is lower down on the talus and is used by the stouter and older visitors.

The Square Tower House cave is shallow, its back wall perpendicular, with roof slightly overhanging. At the extreme eastern end of the ruin the vertical cliff suddenly turns at right angles, forming an angle in which, high above the main ruin, there still remain walls of rooms. To these rooms, which are tucked away just under the canyon rim, with only their front walls visible, the name "Crow's Nest" is given. Logs, with their ends resting in notches cut in the rock actually support walls of masonry, as seen in the angle of this cliff. This is a well-known method of cliff-house construction.

This ruin measures about 138 feet from its eastern to its western end. There are no streets or passageways as at Spruce Tree House and Cliff Palace. The rooms are continuous and compactly constructed, the walls

being united from one end of the cave to the other, excepting for the spaces above the kivas. The absence of a cave recess to the rear of the ruin is significant as it allowed the cliff to be used as the back wall of rooms. Rooms in Square Tower House do not differ radically from those of Spruce Tree House and other cliff dwellings. They have smaller windows, door openings, and supports of balconies. The rectangular rooms were constructed above the ground; the circular rooms were subterranean. The former were devoted to secular and the latter to ceremonial purposes.

THE TOWER

The tower is, of course, the most conspicuous as well as the most interesting architectural feature of the ruin, being visible for a long distance as one approaches Square Tower House. Its foundation rests on a large boulder situated in the eastern section of the cave floor. This tower has three walls constructed of masonry, the fourth being the perpendicular rear wall of the cave. The masonry of the tower stands about 35 feet above the foundation, but the foundation boulder on which it stands increases its height over 5 feet.

KIVAS

Some of the best preserved circular ceremonial chambers (kivas) in the Southwest are to be seen in Square Tower House. The majority of the kivas belong to the pure type, distinguished by mural pilasters supporting a vaulted roof.

Kiva A is particularly instructive on account of the good preservation of its roof. Its greatest diameter is 13 feet 6 inches; or, measuring inside the banquettes, 11 feet 1 inch. The interior is well plastered with many layers of brown plaster. The pilasters are six in number, one of which is double. Two depressions are visible in the smooth floor, in addition to a fireplace and a sipapu. These suggest ends of a ladder, but no remains of a ladder were found in the room.

Kiva B is the largest ceremonial chamber in Square Tower House, measuring 16 feet 9 inches in diameter over all. This kiva is not only one of the best preserved, but also one of the most instructive in Square Tower House, since half of the roof, with the original cribbing, is still in place, extending completely around the periphery. It has six pilasters and as many banquettes. Where the plaster had not fallen, it was found to have several layers.

OAK TREE HOUSE

The ruin formerly called Willow House, but now known as Oak Tree House, lies on the north side of Fewkes Canyon, in a symmetrical cave, and

has an upper and a lower part. The two noteworthy features of Oak Tree House are the kivas and the remnant of the wall of a circular room made of sticks plastered with adobe but destitute of stone masonry.

Oak Tree House has seven kivas and may be called a large cliff dwelling. One of the kivas has a semicircular ground plan with a rectangular room on the straight side. There are no pilasters or banquettes in this kiva. The floor of another kiva was almost wholly occupied by a series of grinding bins, indicating a secondary use. The excavation work on Oak Tree House has not yet been completed, but a small collection of specimens at one end of the ruin shows the nature of the objects thus far found.

SUN SET HOUSE

Looking across Cliff Canyon from Sun Point one can see the fine ruin called Sun Set House, formerly known as Community House. This ruin, like many other cliff dwellings, has an upper and a lower house, the former being relatively larger than is usually the case. Although Sun Set House is accessible, it has never been excavated.

SUN TEMPLE

Sun Temple is situated west of Cliff Palace, on the promontory formed by the confluence of Cliff and Fewkes Canyons. Prior to its excavation in 1915, this ruin was comparable to other large pueblo ruins in the area—a high mound of earth and stone, covered with trees and sagebrush. Excavation, however, exposed a unique structure of a type hitherto unknown in this park. It is now believed that it was not constructed for habitation but was intended for the performance of rites and ceremonies.

The ground plan of the ruin has the form of the letter D. The building is in two sections, the larger of which, taken separately, is also D-shaped. This is considered the original building. The addition enlarging it is regarded as an annex. The south wall, which is straight and includes both the original building and the annex, is 131.7 feet long. The ruin is 64 feet wide.

There are about 1,000 feet of walls in the whole building. These walls average 4 feet in thickness, and are double, enclosing a central core of rubble and adobe. They are uniformly well made, and it is estimated that the volume of fallen stones, rubble, and earth would have increased the height of the walls by at least 6 feet. There are indications that the walls were never completed, and it is quite possible that these cored, unbonded walls proved unstable when carried to such heights.

THE SUN SYMBOL

On the upper surface of a large rock protruding from the base of the southwest corner of the building a peculiar depression, surrounded by

radiating ridges, was found. To primitive minds, this may have appeared as a symbol of the sun and, therefore, deemed an object of great significance, to be protected as a shrine. This natural impression may have prompted Dr. Fewkes in the naming of this ruin.

ARCHITECTURAL FEATURES

There are three circular rooms in Sun Temple which from their form may be identified as ceremonial in function, technically called kivas. Two of these, free from other rooms, are situated in the plaza that occupies the central part of the main building, and one is embedded in rooms of the so-called "annex." Adjoining the last mentioned, also surrounded by rooms, is a fourth circular chamber which is not a kiva. This room, found to be almost completely filled with spalls or broken stones, perhaps originally served as an elevated tower or lookout.

Most of the peripheral rooms of Sun Temple open into adjoining rooms, a few into the central court, but none has external openings. Some of



SUN TEMPLE, A UNIQUE FORM OF RUIN

the rooms are without lateral entrances, as if it were intended to enter them through a hatch in the roof.

AGE

Sun Temple, believed to be among the latest constructed of all the aboriginal buildings in the park, and probably contemporaneous with the construction of the major cliff dwellings, cannot be accurately dated because of the absence of incorporated wood beams. Fortunately, however, a large juniper growing vigorously from the mound at the highest point of the annex, provided a comparative index to the antiquity of Sun Temple. A section from the stump, left intact at the place of its finding, was technically examined, and found to have 360 annular rings, without allowance for decayed heartwood. An allowance of 350 years for the interval between construction, and the attainment of a sufficiently consolidated and earth-covered mound stage to support tree growth, would carry the antiquity of Sun Temple back to about 1200 A. D.

BUILDERS

On the theory that this building was erected by people from several neighboring cliff dwellings for ceremonies held in common, we may suppose that the builders came daily from their dwellings in Cliff Palace and other houses and returned to their homes at night after they had finished work. The trails down the sides of the cliffs which the workmen used are still to be seen. The place was frequented by many people, but there is no evidence that any one clan dwelt near this mysterious building during its construction.

NEW FIRE HOUSE GROUP

FIRE TEMPLE

Fire Temple is one of the most remarkable cliff houses in the park, if not in the whole Southwest. It is situated in a shallow cave in the north wall of Fewkes Canyon, near its head, and can readily be seen from the road along the southwest rim of the canyon. This ruin was formerly called Painted House, but when it was excavated in May 1920 evidence was obtained that it was a specialized building and not a habitation. The facts brought to light point to the theory that it was consecrated to the fire cult, one of the most ancient forms of worship.

The ruin is rectangular in form, almost completely filling the whole of its shallow cave, and the walls of the rooms extend to the roof. A ground plan shows a central court 50 feet long and about 25 feet broad, flanked at each end with massive-walled buildings two stories high. The walls of these rooms are well constructed, plastered red and white within and on the side turned to the court. The white plaster is adorned with symbolic

figures. The beams used in the construction of the ceiling of the lower room are missing, but the walls show clearly that the structure was formerly two stories high. No beams were used in the construction of the floors, the lower story having been filled in with fragments of rocks on which was plastered a good adobe floor.

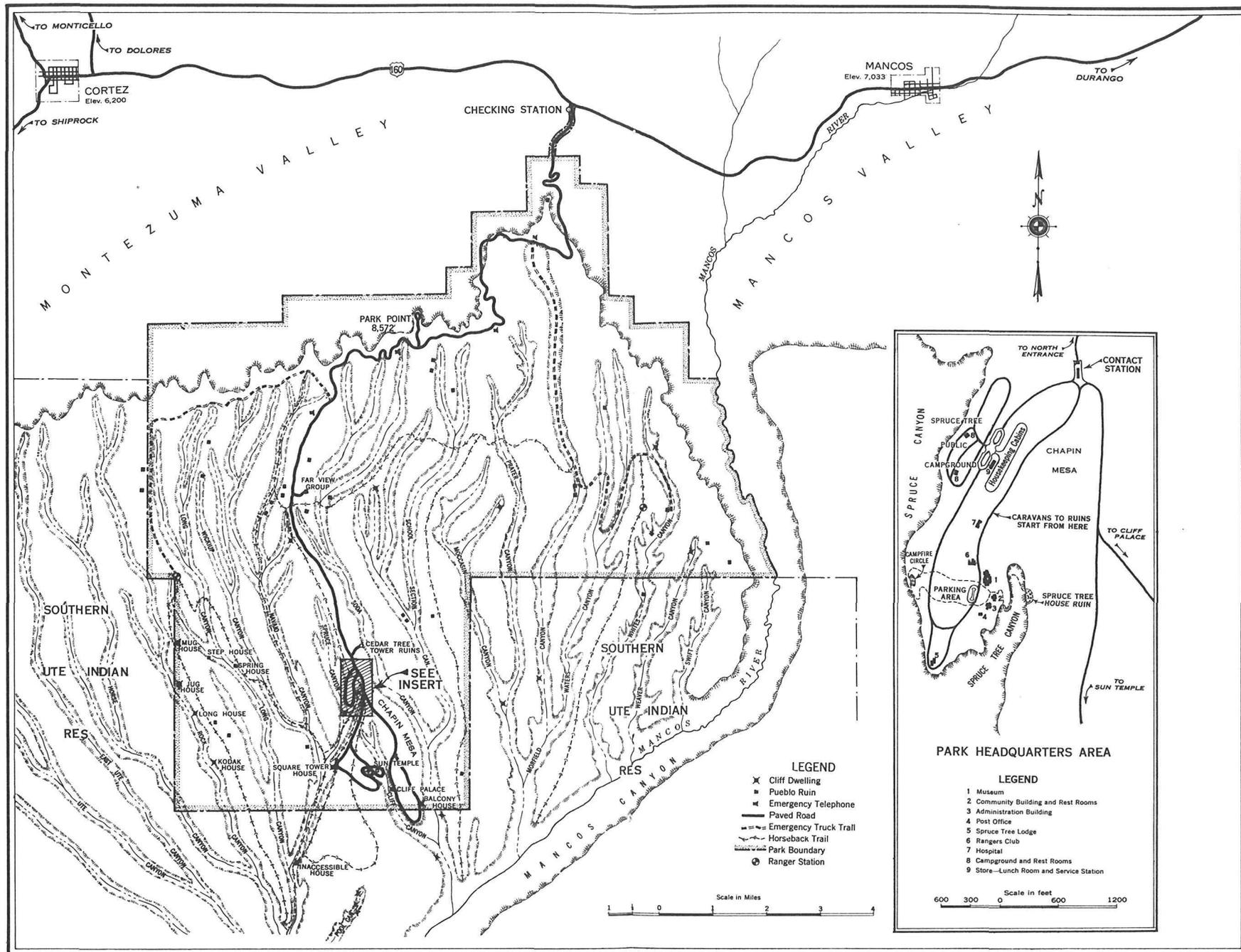
The court or plaza was bounded by a low wall on the south side, the buildings enclosing the east and west ends, where there was a banquette. The north side of the court was formed by the solid rocks of the cliff, but on the lower part a narrow masonry wall had been laid up about head high, projecting from the cliff a foot and less on the top. The wall was formerly plastered red below and white above, triangular figures and zigzag markings recalling symbols of lightning on the line of the junction of the red and white surfaces.

In the center of the court on a well-hardened adobe floor there is a circular walled fire pit containing an abundance of ashes, and on either side of it are foundations of small rectangular structures. The function of the rectangular enclosures, lying one on each side of the fire pit, is unknown. The middle room of the lowest tier of rooms just west of the main court has a number of painted symbols and zoomorphic figures upon its walls. These paintings, in red, still remain in a fair state of preservation, and consist of five symbols, supposedly of fire, and many pictures of mountain sheep and other animals.

NEW FIRE HOUSE

A hundred feet east of the Fire Temple there are two low caves, one above the other. This cliff dwelling is called New Fire House. The rooms in the lower cave were fitted for habitation, consisting of two, possibly three, circular ceremonial rooms and a few secular rooms; but the upper cave is destitute of the former. The large rooms of the upper house look like granaries for the storage of provisions, although possibly they also were inhabited. In the rear of the large rooms identified as granaries was found a small room with a well-preserved human skeleton accompanied with mortuary pottery. One of these mortuary offerings is a fine mug made of black and white ware beautifully decorated. In the rear of the cave were three well-constructed grinding bins, their metates still in place.

The upper house is now approached from the lower by foot holes in the cliff and a ladder. Evidences of a secondary occupation of one of the kivas in the lower house appear in a wall of crude masonry without mortar, part of a rectangular room built diagonally across the kiva. The plastering on the rear walls of the lower house is particularly well preserved. One of the kivas has a small rectangular enclosure surrounded by a wall in place of a deflector and ventilator shaft, recalling structures on the floor of the kivas of



MESA VERDE NATIONAL PARK, COLORADO

Sun Temple. The meaning of this departure from the prescribed form of ventilator is not apparent.

FAR VIEW HOUSE
A MESA VERDE PUEBLO

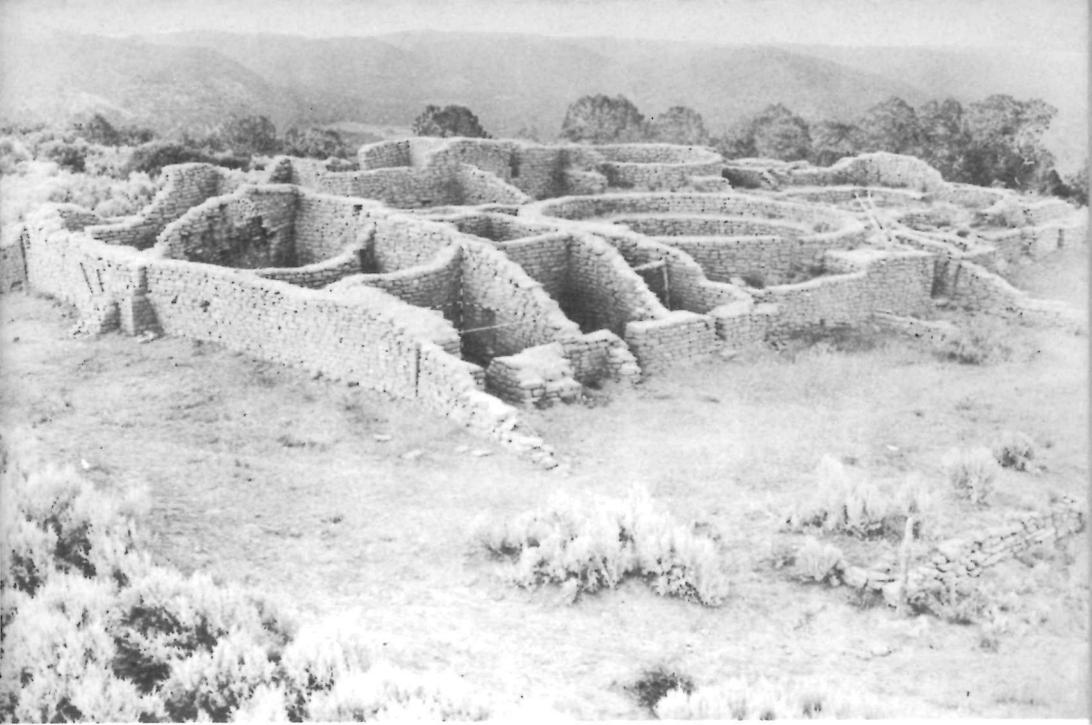
Four and a half miles north of Spruce Tree Camp the park road passes near 16 major and many minor mounds. This is the so-called Mummy Lake group, a misnomer, since the walled depression at the crest of the slope above the group was never used as a reservoir, and also since mummies are never found where the least dampness occurs.

The first unit of this group to be excavated was named Far View House. Situated on a commanding divide, approximately 1 mile north of park headquarters and one-half mile east of the entrance highway, this isolated pueblo of massive construction is of especial scientific interest, since it connects directly by a short, bifurcated, underground passage with a typical Mesa Verde type kiva and a small, squarish, subterranean room of undetermined usage. Excavations have yet to disclose a comparable underground association of kiva and watchtower in Mesa Verde. Presumably, the arrangement was designed to permit the conduct of kiva ceremonies by those assigned to watchtower duty.

At its highest point on the north wall the pueblo had three stories, but on the southern side there was but a single story. This building was terraced, one tier of rooms above another. In the corner of the interior of the highest room may still be seen the ancient fireplaces and stones for grinding corn, set in their original positions as used by the former inhabitants. There are no external windows or passages, except on the south side where midway in length is a recess in which was placed a ladder in order to be hidden from view. The inhabitants evidently used the roof of the lowest terrace for many occupations. A bird's-eye view shows that all the rooms, now roofless, fall into two groups.

In the center of this mass of rooms is a kiva 32 feet in diameter, and around it are three smaller kivas. The size of the large kiva is noteworthy. In the cliff dwellings the kivas were necessarily small because of the limited floor space, but in the surface villages, where unlimited space was available, they were often large. This arrangement of one large kiva and several small ones is common. It might indicate that each clan had a small kiva of its own but that in the major ceremonies, when all of the clans worked together, the large ceremonial room was used. The structural details of the large kiva are identical with those of the smaller ones. The only variation is in the size.

The rooms surrounding these circular ones vary somewhat in form but are, as a rule, rectangular, the shapes of those near the kivas being tri-



A MESA VERDE SURFACE RUIN. FAR VIEW HOUSE

angular to fill the necessary spaces. The contents of the rectangular rooms show that they were living rooms. Artifacts were found and indications of various industries as well as marks of smoke from their fireplaces appear on the walls. From the nature of this evidence there is no doubt that Far View House was once inhabited by the people living the same way as those who used the cliff dwellings.

Pottery is the best index as to the chronological sequence of the ruins in the Southwest, and in examining the pottery of some of the mesa-type pueblos it is found that some contain pottery antedating that of the cliff-house culture, while others contain similar types. Undoubtedly, they were simultaneously inhabited, in part at least, and the transitory period was of long duration; but the period in prehistoric time when they were built and later deserted has not been determined. We cannot say from data now at hand when this took place, documentary history affording no help.

OTHER RUINS NEAR FAR VIEW HOUSE

During the season of 1922 excavation and repair work in the vicinity of Far View House was carried on simultaneously. Among the ruins excavated were Pipe Shrine House, One Clan House, Far View Tower, and Megalithic House.

EARTH LODGE A

In 1922 one of the Late Basket Maker pit houses was excavated on the mesa above Square Tower House. This structure is known as Earth Lodge A. Although it once had a mud and pole roof almost as high as a man's head, nothing now remains but the underground part of the house. None of these pit houses have ever been found that have not been burned, and only a few pieces of charcoal remain as evidence of the former roof. The pit is 30 inches deep and 18 feet in diameter. In the center is a fire pit. In the floor are also four holes, forming a large square, in which the roof supports once stood. The walls of the pit were formerly plastered with a thick layer of mud, but only a few patches of this remain. Around the edge of the room at floor level were a number of small storage bins made of thin stone slabs. No side entrance was located during excavation. In some of the pit houses evidence has shown that entrance was often made by means of a ladder through the smokehole in the roof.

This was a typical home of the Late Basket Makers who were living in this region when the Pueblo Indians arrived about 700 A. D. These pit houses passed out of existence as soon as the masonry wall was perfected.

DATES FOR MESA VERDE RUINS ESTABLISHED BY THE TREE-RING CHRONOLOGY¹

Dr. A. E. Douglass, director of Steward Observatory, University of Arizona, established the tree-ring chronology for dating Southwestern ruins. This chronology is based upon the facts that solar changes affect our weather. Weather in turn affects the trees of the arid Southwest, as elsewhere, and that such effects are recorded in the variation of tree-ring growth during wet and dry years. Thus the tree-ring record of living trees has been extended into the past by arranging beams from historic pueblos in their proper sequence so that the inner rings of one match the outer rings of its predecessor, and in turn match the rings of the living trees. After completing the series from living trees and pueblos, of known dates, the record has been continued through the cross-sections of prehistoric beams of fir and pine that were chopped with the stone axes. The continuation of this chronology is only limited by the finding of earlier beams than those used in the established chronology.

The National Geographic Society tree-ring expedition took, in all, 49 beam sections from ruins within Mesa Verde National Park. During 1932 and 1933 further tree-ring research was carried on in this area and additional dates have been secured. Presuming that the year of cutting the

¹ The Secret of the Southwest Solved by Talkative Tree Rings, by A. E. Douglass: National Geographic Magazine, December 1929.

timber was the year of actual use in construction, the following dates have been established for the major cliff dwellings:

Mug House, A. D. 1066	Long House, A. D. 1204-11
Cliff Palace, A. D. 1073-1273	Square Tower House, A. D. 1204-46
Oak Tree House, A. D. 1112-84	Spruce Tree House, A. D. 1230-74
Spring House, A. D. 1115	New Fire House, A. D. 1259
Hemenway House, A. D. 1171	Ruin No. 16, A. D. 1261
Balcony House, A. D. 1190-1272	Buzzard House, A. D. 1273

Since considerable tree-ring material from these ruins remains yet to be examined, the dates given above are not final. On the basis of present evidence, Cliff Palace, the largest and most complex cliff house within the park, shows an occupancy of 200 years.

It is an interesting fact that all of the dates fall just short of the beginning of the great drought, which the tree-ring chronology shows commenced in 1276 and extended to 1299, a period of 24 years.

DISCOVERIES OF RECENT YEARS

Contrary to popular opinion, the full story of prehistoric human history and material culture of the Mesa Verde has been revealed and interpreted in part only, due to the fact that major ruins normally attract first public attention and scientific investigation. Primitive beginnings, which later led to classical development of cliff dwellings and pueblos, have not been comprehensively surveyed and studied, nor have the full archeological resources of this area been scientifically determined. It is seldom a year passes without adding its increment of new knowledge and of new cultural material to that garnered in the past. New exploration, the process of erosion, the course of a forest fire, the turn of a stone or a spade full of earth may reveal new evidence of importance.

Briefly to summarize major chance and scientific discoveries of recent years, the largest known circular watch tower in the Mesa Verde was not found until 1923. During mid-winter slack periods from 1924 to 1930, a series of expeditions, supported by private contributions, engaged, under the supervision of Superintendent Jesse L. Nusbaum, in the examination and occasional excavation of cave sites on Wetherill, Chapin, and Moccasin Mesas for the purpose of gaining new scientific data, as well as cultural materials for museum exhibits. Although work was necessarily restricted by snow conditions to cave sites, most of which had been diligently searched by early "pot hunters," important new data were assembled, and museum collections significantly enriched. Deep excavation in the barren section of Step House cave, on Wetherill Mesa, first established the characteristics of

house types and material culture of the Mesa Verde Basket Maker III inhabitants, whose homes antedate those of the Cliff Dwellers by more than three centuries. Subsequently, this new information was supplemented by cave excavations on Chapin and Moccasin Mesas.

In 1929, Director and Mrs. Gladwin, of Gila Pueblo, assisted by Deric Nusbaum, conducted an archeological survey of small house ruins on Chapin Mesa, and canyon heads on the North Rim. Two hundred and fifty individual sites were studied in this limited survey. The great forest fire of 1934 revealed two previously unknown watch towers and many new pueblo sites. The ruins stabilization work of 1934-35 likewise encountered and recovered many archeological specimens in the course of repair and preservation activities. Also, in 1934, the skeleton of an old woman, undisturbed through more than seven centuries, was found on the bare floor of a small cliff ruin, within less than one-fourth mile of park headquarters.

PREHISTORIC INHABITANTS OF THE MESA VERDE

Evidence has not yet been established that the first of the maize-growing Indians of the Southwest were permanent occupants of the Mesa Verde. Nevertheless, in the Cliff Palace cave, well below the horizon or floor level of the cliff dwellers, archeologists have found a yucca fiber sandal of a distinctive type which is associated only with the first agricultural civilization. From this evidence it would be reasonable to assume that the caves of Mesa Verde at least offered temporary shelter, if not permanent homes, to the people of this period.

The earliest culture so far definitely identified as having permanent habitation on the Mesa Verde is the Basket Maker III or the Second Agricultural Basket Maker first found in Step House cave below the debris of the latter cliff-house occupation. Recent excavations and archeological surveys furnish conclusive evidence that the second agricultural people were most numerous in the area.

These early inhabitants made basketry, excelled in the art of weaving, and it is believed were the first of the southwestern cultures to invent fired pottery.

Then followed a long development in house structure, differing materially from this earlier type. Horizontal masonry replaced the cruder attempts of house-wall construction; rectangular or squarish forms replaced the somewhat circular earlier type; and gradually the single-room structures were grouped into ever-enlarging units which assumed varying forms of arrangement as the development progressed. The art of pottery making improved concurrently with the more complex house structure.

During this period of transition new people penetrated the area. The

Basket Makers throughout the course of their development were consistently a long-headed group. The appearance of an alien group is recorded through the finding of skeletons with broad or round skulls and a deformed occiput. These new people, the Pueblos, took over, changed, and adapted to their own needs the material culture of the earlier inhabitants.

The Pueblos were not content with the crude buildings and earth lodges that sufficed as homes during the earlier periods. For their habitations they shaped stones into regular forms and laid them in mud mortar.

The arrangement of houses in a cliff dwelling the size of Cliff Palace is characteristic and is intimately associated with the distribution of the social divisions of its former inhabitants.

The population was composed of a number of units, possibly clans, each of which had its more or less distinct social organization, as indicated in the arrangement of the rooms. The rooms occupied by a clan were not necessarily connected, and generally neighboring rooms were distinguished from one another by their uses. Thus, each clan had a room for its men, which is called the "kiva." Each clan had also a number of rooms, which may be styled the living rooms, and other enclosures for granaries. The corn was ground into meal in another room containing the metate set in a stone bin or trough. Sometimes the rooms had fireplaces, although these were generally in the plazas or on the housetops. All these different rooms, taken together, constituted the houses that belonged to one clan.

The conviction that each kiva denotes a distinct social unit, as a clan or a family, is supported by a general similarity in the masonry of the kiva walls and that of adjacent houses ascribed to the same clan. From the number of these rooms it would appear that there were at least 23 social units or clans in Cliff Palace. Apparently there is no uniformity or prearranged plan in the distribution of the kivas. As religious belief and custom prescribed that these rooms should be subterranean, the greatest number were placed in front of the rectangular buildings where it was easiest to construct them.

In addition to their ability as architects and masons, the cliff dwellers excelled in the art of pottery making and as agriculturists. Their decorated pottery—a black design on pearly white background—will compare favorably with pottery of the other cultures of the prehistoric Southwest.

As their sense of beauty was keen, their art, though primitive, was true; rarely realistic, generally symbolic. Their decoration of cotton fabrics and ceramic work might be called beautiful, even when judged by our own standards. They fashioned axes, spear points, and rude tools of stone; they wove sandals, and made attractive basketry.

The staple product of the cliff dwellers was corn; they also planted beans and squash. This limited selection was perhaps augmented by piñon nuts,

yucca fruit, and other indigenous products found in abundance. Without running streams irrigation was impossible and success depended upon the ability of the farmer to save the crop through the dry period of June and early July.

Rain at the right time was the all-important problem, and so confidently did they believe that they were dependent upon the gods to make the rain fall and the corn grow that their prayers for rain probably developed into their most important ceremonies.

As previously mentioned from Dr. A. E. Douglass's tree-ring chronology it is apparent that a great drought commenced in 1276 and extended for a 24-year period to 1299. It may logically be presumed that the prehistoric population was gradually forced to withdraw from the area as the drought continued and to establish itself near more favorable sources of water supply.

It is thought that certain of the present-day Pueblo Indians are descendants, in part at least, of the cliff dwellers. Many of these Indian towns or pueblos still survive in the States of New Mexico and Arizona, the least modified of which are the villages of the Hopi, situated not far from the Grand Canyon National Park.

GEOLOGY, FAUNA, AND FLORA

Mesa Verde is important geologically as the type locality of the Mesa-verde formation and Mancos shale of the Upper Cretaceous series. The Mesaverde formation, capping the plateau, consists of the Cliff House sandstone, the lignite layers and carbonaceous shales of the Menefee and the Point Lookout sandstone, named in descending order. It is underlain to a depth of more than 2,200 feet by the shale, sandstone, and limestone strata of the Mancos formation. All strata are extensively exposed within the park. Near the close of Cretaceous times, these formations were uplifted thousands of feet, and tilted to the south. Igneous dikes that pierce the formations are indicative of the volcanic processes which also affected the area. Through millions of years, surface waters, aided by heat, cold, chemical action, and wind, have produced through the process of erosion the series of precipitous canyons and adjacent plateaus for which the Mesa Verde area is noted. Protection afforded by shelters or caves found in the canyon walls, and access to water seepages which appear in the sandstone above the Menefee shales were the primary attractions to the prehistoric inhabitants.

The fauna and flora of Mesa Verde National Park are particularly interesting to visitors, as here is seen a mingling of types from the lower more arid country to the south with types from the high mountains to the north.

Rocky Mountain mule deer are often seen, their numbers varying greatly with the season. Occasionally, a black bear is reported. The predators, represented by the cougars or mountain lions, coyotes, bobcats, and foxes, are part of the wildlife of the park. Many of the smaller animals, such as rabbits, porcupines, prairie dogs, squirrels, and chipmunks are abundant.

More than 100 varieties of birds have been recorded. The species range from the majestic golden eagle, the largest bird, down to a variety of dainty humming birds. Game birds are represented by the dusky grouse. No wild turkeys are now to be found in the park, although they were once prevalent and were domesticated by the cliff dwellers.

Among the interesting animal residents of Mesa Verde are the reptiles. The lizards are represented by the horned lizards, the collared lizards, the striped race runners, utas, and the swifts. The common snakes are the bull snakes, the smooth green snakes, the western striped racers, the prairie rattlesnakes, and the western garter snakes.

The dense forest comprises piñon pine, juniper, Douglas fir, ponderosa pine, and scrub oak. Seasonally, the green of the piñon-juniper forests is relieved, and the beauty of the park is enhanced, by the colorful changes in the luxuriant covering of shrubs and wild flowers. Mountain mahogany, service berry, choke cherry, fendlera, Oregon grape, and mariposa lily, Indian paint brush, pentstemon, lupine, wild sweet pea, and a great variety of the Compositae family are well or profusely represented.

HOW TO REACH THE PARK

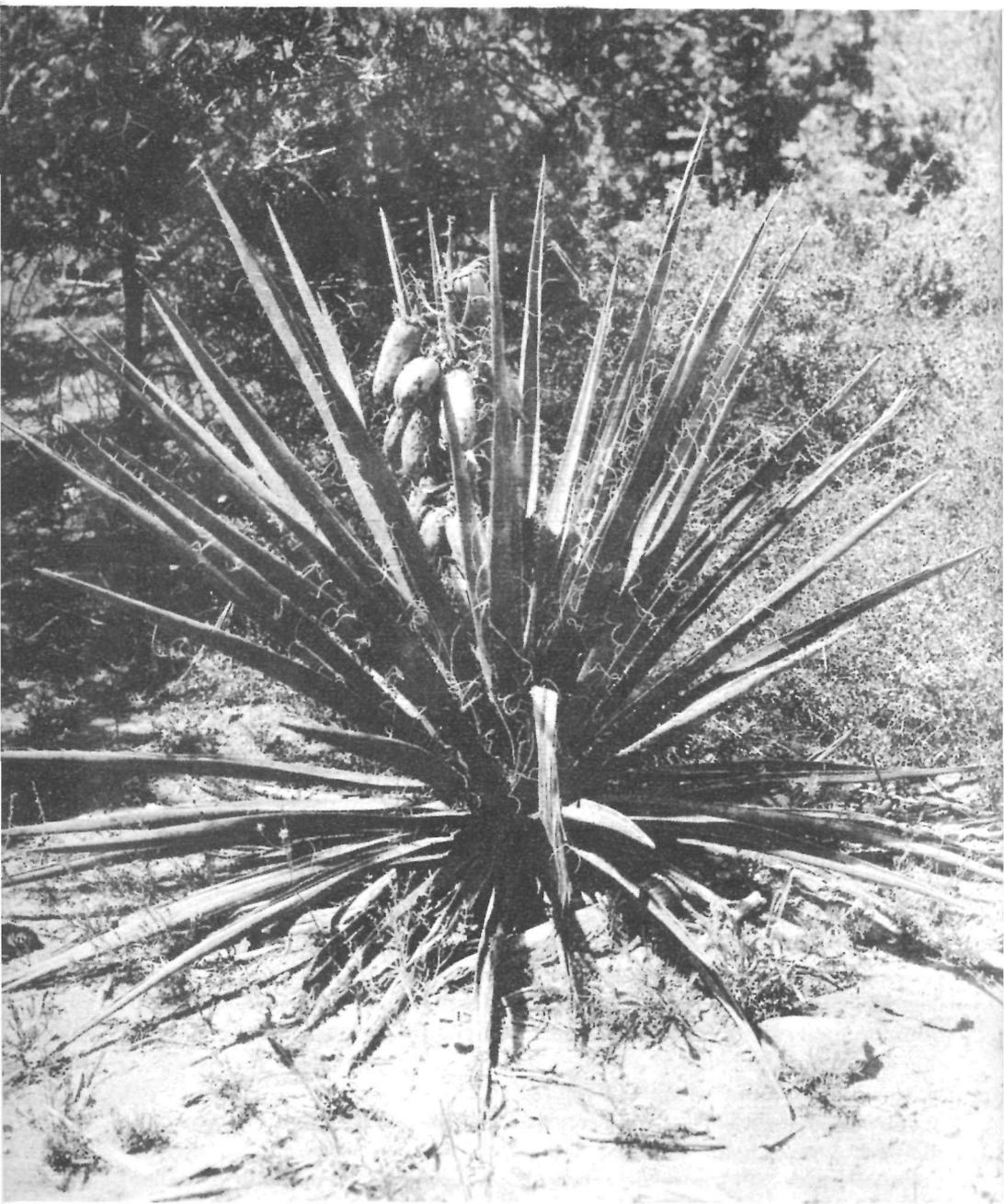
BY AUTOMOBILE

Roads approaching Mesa Verde National Park from all directions offer motorists a great diversity of spectacular western scenery. Those from the north and east cross not only the Continental Divide but a number of the most magnificent mountain ranges of western Colorado. Those from the west and northwest pass through the colorful mesa country of south-eastern Utah, while roads from the south cross the picturesque, semidesert areas of the Navajo, Ute, and Pueblo Indian Reservations of Northern New Mexico. All of these primary roads are improved highways with either gravel or oil surfacing.

The park entrance is located on United States Highway No. 160, midway between the towns of Mancos and Cortez, Colo.

BY RAILROAD

Mesa Verde National Park is approached by rail both from the north and from the south: From the north via the Denver & Rio Grande Western Railroad main transcontinental line through Grand Junction, and branch



A YUCCA PLANT IN FRUIT (*YUCCA BACCATA*)

lines through Montrose or Durango; from the south via the main transcontinental line of the Santa Fe Railroad through Gallup, N. Mex.

MOTOR TRANSPORTATION

The Rio Grande Motor Way, Inc., of Grand Junction, Colo., operates a daily motor service from Grand Junction, Montrose, Ouray, and Silverton to Durango, Colo., continuing to Mesa Verde National Park, from June 1 to October 15, when there are passengers. This motor bus leaves Grand Junction at 7 a. m., traversing the high mountain passes of the magnificent San Juan Mountains, and arrives at Spruce Tree Lodge at 6:45 p. m. The stage leaves the park at 7 a. m., when there are passengers, arriving at Grand Junction at 5:30 p. m. The round trip fare between Grand Junction and the park is \$18.65.

Entrance to Mesa Verde from Gallup, N. Mex., via the Navajo and Southern Ute Indian Reservations, is afforded, when there are passengers, by Hunter Clarkson, Inc., with headquarters at El Navajo Hotel. This company operates 2-day round trip light sedan service, leaving El Navajo Hotel at 8 a. m., and returning to the hotel at 6 p. m. the second day. This service permits the visiting of ruins in the park in accordance with established schedules. The round trip fare per person (360 miles) is \$25. A minimum of two passengers is required. Fare for children, 5 and under 12 years of age, is \$12.50. Meals and hotel accommodations en route or at the park are not included.

The Cannon Ball Stage bus leaves Gallup each day at 11:30 a. m., arriving at Durango at 4:45 p. m. Returning it leaves Durango at 8 a. m., and arrives at Gallup at 1 p. m. The fare from Gallup to Durango is \$5.40 one way and \$9.75 for the round trip. The round trip fare to the park from Durango via the Rio Grande Motor Way, Inc., is \$7.50. Connection is made at Gallup with the transcontinental busses of the Pacific Greyhound Lines and the Santa Fe Trails System.

ADMINISTRATION

The Mesa Verde National Park is under the exclusive control of the National Park Service of the Department of the Interior, which is authorized to make rules and regulations and to establish such service as it may deem necessary for the care and management of the park and the preservation from injury or spoliation of the ruins and other remains of prehistoric man within the limits of the reservation.

The National Park Service is represented in the actual administration of the park by a superintendent, who is assisted in the protection and interpretation of its natural and prehistoric features by a well-trained staff.

The present superintendent is Jesse L. Nusbaum, and his post-office address is Mesa Verde National Park, Colo.

The park season extends from May 15 to October 15, complete lodging and food accommodations and automobile stage service being available from June 1 to October 15. Informal lodging and meal accommodations are provided during the remainder of the park season.

Exclusive jurisdiction over the park was ceded to the United States by act of the Colorado Legislature approved May 2, 1927, and accepted by Congress by act approved April 25, 1928. There is a United States Commissioner at park headquarters.

Telegrams sent prepaid to Mancos, Colo., will be phoned to addressee at park office. The post-office address for parties within the park is Mesa Verde National Park, Colo.

EDUCATIONAL SERVICE

Educational service, carefully planned to provide each visitor with an opportunity to interpret and appreciate the features of the Mesa Verde, is provided, without charge, by the Government. This service is directed by the park naturalist, who is assisted by a group of ranger naturalists.

GUIDED TRIPS TO THE RUINS

During the season visitors are accompanied from the park museum to the various ruins by competent ranger naturalists. These men, well trained in the social and biological sciences, make it their duty to help the visitor understand the natural and archeological features of the Mesa Verde. Because of the need of protecting the ruins and the somewhat devious trails by which they are reached, no one will be allowed to enter any ruin except Spruce Tree House unless accompanied by a ranger naturalist.

CAMPFIRE TALKS

Each evening at 8 o'clock informal talks are given at the campfire circle near park headquarters. The superintendent, the park naturalist, and members of the educational staff give talks on the archeology of the region. Visiting scientists, writers, lecturers, and noted travelers often contribute to the evening's entertainment. After the talks six of the best singers and dancers among the Navajo Indians employed in the park can usually be persuaded, by modest voluntary contributions on the part of the visitors, to give some of their songs and dances.

PARK MUSEUM

The park museum houses very important and comprehensive collections of excavated cliff-dweller and basket-maker material, as well as restricted

collections of arts and crafts of modern Indians of the Southwest. These collections have been assembled through the conduct of excavations within the park and through loan or gift of materials by park friends or cooperating institutions. This material is arranged in a definite chronological order. By following through from the earliest culture to those of the present time a clear and concise picture of the former material cultures of the Mesa Verde and surrounding regions may be obtained.

One room has been set aside for natural history exhibits exemplifying the geology, fauna, and flora of this peculiar mesa-canyon country.

REFERENCE LIBRARY

A part of the museum is given over to an excellent reference library and reading room. This library consists of books on archeology and related natural history subjects pertaining to this interesting region. Visitors have access to these books on application to the museum assistant who is in charge. These books may not be removed from the reading room.

FREE PUBLIC CAMPGROUNDS

The public campgrounds are located on the rim of Spruce Tree Canyon only a few hundred feet from Spruce Tree Lodge and park headquarters. Individual party campsites have been cleared and a protecting screen of shrubbery contributes to their privacy. Each site is provided with a fireplace, a table with seats, and a level place for a tent. Good water has been piped to convenient places, and cut wood is provided without charge. Toilet facilities, showers, and laundry tubs are also provided. A ranger is on duty in the campgrounds and will gladly furnish information and help to campers.

*Leave your campsite clean when you have finished with it.
Do not drive cars on, or walk over, the shrubbery.*

Campers supplies—groceries, meats, etc., and gas and oil are obtainable at reasonable prices at the Spruce Tree Lodge store.

HORSEBACK AND HIKING TRIPS

Visitors who view the Mesa Verde from the automobile roads gain but an inkling of the weird beauty and surprises that this area holds for the more adventurous. Horseback and hiking trips along the rim rocks and into the canyons lead to spectacular ruins not seen from any of the roads. Such great ruins as Spring House, Long House, Kodak House, Jug House, Mug House, and Step House, as well as all of the ruins in the more remote canyons, can be reached by trail only. Each turn of the trail reveals entrancing



Grant photo

A PARTY OFF FOR THE LESS-FREQUENTED TRAILS

vistas of rugged canyons, sheer cliffs, great caves, hidden ruins, distant mountains, tree-covered mesas, and open glades.

In making these trips it is important that the hiker prepare himself with proper footwear, as the trails are very precipitous in places.

HOSPITAL AND MEDICAL SERVICE

There is an excellent hospital at park headquarters where medical and surgical service is provided to care for all emergency cases. Prices are regulated by the Secretary of the Interior.

ACCOMMODATIONS AND EXPENSES

At Spruce Tree Lodge, cottages may be rented at prices ranging from \$1.25 to \$2 a person per day, and comfortable floored tents at 50 cents to \$1 per day. Additionally, 20 new housekeeping cabins, in a detached area, should be available for occupancy by July 1. Meals, table d'hote, are served at the following reasonable prices: Breakfast, 50 to 75 cents; luncheon, 55 to 85 cents; and dinner, 75 cents to \$1.15. A la carte and lunch counter services are also available. Children: No charge under 3; half rates from 3 to 8. The official season for Spruce Tree Lodge is from June 1 to October 15.

The company operates a well-stocked store and a filling station adjacent to the lodge, with prices comparable to those of surrounding towns.

For visitors lacking transportation, the lodge provides automobile service to the various ruins for \$1 per person, round trip, and a special evening sunset trip to Park Point for \$1.50 per person.

OUT-OF-SEASON ACCOMMODATIONS

Pending completion by the Mesa Verde Co., in 1938, of new facilities for winter operation, informal accommodations only will be available to visitors prior to June 1. Cabins will be available at Spruce Tree Lodge and meal service, family style, at Spruce Tree Lodge or the Government Mess Hall at the following rates: Breakfast, 50 cents; luncheon, 65 cents; dinner, 65 cents.

PACK AND SADDLE ACCOMMODATIONS

Saddle horses, especially trained for mountain work, may be rented from the Mesa Verde Pack & Saddle Co. For short trips the rental is \$1 for the first hour and 50 cents for each additional hour. For short 1-day trips for three persons or more the cost is \$3.50 each; two persons \$4.50 each; one person \$6. Longer 1-day trips for experienced riders are available at \$2 per person more than the rate for the shorter 1-day trips. All prices include guide service, and a slicker, canteen, and lunch bag are provided with each horse. Arrangements should be made the evening before the trip is taken.

PACK TRIPS

Nonscheduled pack trips to the more remote sections of the park may be arranged (2 days' notice is required) at prices ranging from \$9 a day each for parties of five or more to \$15 a day for one person. This includes a guide-cook and furnishes each person with one saddle horse, one pack horse, bed, tent, canteen, slicker, and subsistence for the trip. Three days is the minimum time for which these trips can be arranged.

This booklet is issued once a year and *the rates mentioned herein may have changed slightly since issuance*, but the latest rates approved by the Secretary are on file with the superintendent.

REFERENCES²

CHAPIN, F. H. The Land of the Cliff Dwellers.³ W. B. Clarke & Co., Boston, Mass. 1892. 187 pages.

DOUGLASS, DR. ANDREW ELLICOTT. The Secret of the Southwest Solved by the Talkative Tree Rings, in National Geographic Magazine, December 1929.³

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Antiquities of the Mesa Verde National Park: Spruce Tree House.³ (Bureau of American Ethnology Bull. 41, 1909. 57 pages, illustrated.) (Out of print.)

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Excavation and Repair of Sun Temple, Mesa Verde National Park.³ (Report of the Secretary of the Smithsonian Institution. 1916. 32 pages, illustrated.) (Out of print.)

A Prehistoric Mesa Verde Pueblo and Its People.³ (Report of the Secretary of the Smithsonian Institution. 1917. 26 pages.) (Out of print.)

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GILLMOR, FRANCES, and WETHERILL, LOUISA WADE. Traders to the Navahos.³ Houghton Mifflin Co., Boston and New York. 1934. Illustrated, 265 pages. Describes discovery of cliff dwellings by Wetherill brothers.

ICKES, ANNA WILMARTH. Mesa Land.³ Houghton Mifflin Co., Boston and New York, 1933. Illustrated. 228 pages. Southwest in general. Mesa Verde, pp. 100-101.

KIDDER, ALFRED VINCENT:

An introduction to the Study of Southwestern Archaeology.³ 300 pages, illustrated. Yale University Press, 1924. Mesa Verde on pp. 58-68.

NORDENSKIÖLD, G. The Cliff Dwellers of the Mesa Verde.³ 1893. 171 pages, illustrated.

NUSBAUM, DERIC. Deric in Mesa Verde.³ 1926. Illustrated. G. P. Putnam's Sons. Knickerbocker Press.

YARD, ROBERT STERLING:

The Top of the Continent. 1917. 244 pages, illustrated. Mesa Verde National Park on pp. 44-62.

The Book of the National Parks. 1926. 444 pages, illustrated. Mesa Verde National Park on pp. 284-304.

² For complete bibliography apply at the park museum or write to the Superintendent, Mesa Verde National Park.

³ Copies in Mesa Verde Museum Library.

EVENTS

OF HISTORICAL IMPORTANCE

- 1st century⁴ The earliest occupation of Cliff Palace cave was probably before, or immediately following, the beginning of the Christian era. These earliest occupants, known to scientists as Basket Makers, were the first agricultural Indians of the Southwest.
- B. C. or A. D.
- 4th to 7th⁴ centuries A. D. By the beginning of the fourth century A. D., the early agriculturists were developing the art of pottery making. Later, their semisubterranean homes were spread widely over the Mesa Verde.
- 7th to 10th⁴ centuries A. D. During the three or four centuries preceding 1000 A. D., the Pueblo Culture on Mesa Verde was developing from modest beginnings toward its classical stage, which culminated in the building of the great cliff dwelling.
- 1066— Earliest date established for large Mesa Verde cliff dwellings. (Beam section from Mug House.)
- 1073— }
1273 } Construction of Cliff Palace.
- 1276— Beginning of 24-year drought, an important factor in forcing the cliff dwellers from the Mesa Verde.
- 1776— Expedition of Padre Silvestre Velez de Escalante to southwestern Colorado. Party camped on the Mancos River near the base of the Mesa Verde.
- 1859— Ascent of the north escarpment of Mesa Verde by Capt. J. N. Macomb, of the United States Army, and members of his party of geologists.
- 1874— Discovery of the ruins in the Mancos Canyon by W. H. Jackson, United States Geological Survey. Party harassed by Ute Indians.
- 1888— Discovery of Cliff Palace and other major ruins by Richard Wetherill and Charlie Mason.
- 1891— First organized archeological expedition to Mesa Verde, under direction of Baron G. Nordenskiöld.
- 1906— Mesa Verde National Park created June 29.

⁴ Approximate dating. Exact dating by the methods of tree-ring chronology is yet to be accomplished.

EVENTS

OF HISTORICAL IMPORTANCE

- 1907— Excavation of Spruce Tree House by Dr. J. Walter Fewkes, of Smithsonian Institution.
- 1909— Excavation of Cliff Palace.
- 1911— Excavation and repair of Balcony House by Jesse L. Nusbaum.
- 1913— First entrance road completed. First automobile in Spruce Tree Camp. Extension of park boundaries to include notable ruins and archeological remains.
- 1914— Construction of first wagon road from Spruce Tree Camp to principal cliff dwellings.
- 1915— Sun Temple excavated by Dr. Fewkes.
- 1916— Far View House excavated by Dr. Fewkes.
- 1917— First Government-constructed trails to Spring House and Soda Canyon.
- 1918— First camp accommodations established at Spruce Tree Camp.
- 1919— Square Tower House excavated.
- 1921— Establishment of superintendent's office and home at park headquarters.
- 1925— First unit of park museum constructed by donated funds.
- 1926— Excavation in Step House Cave and discovery of its occupation by Basket Maker III people more than 3 centuries in advance of cliff dweller occupation.
- 1928— Exclusive jurisdiction of park tendered to the United States and accepted by act of Congress April 25.
- 1934— Completion of deep water well (4,192 feet).
- 1936— Addition to park museum completed.

NATIONAL PARKS IN BRIEF

ABRAHAM LINCOLN, KY.—Birthplace of Abraham Lincoln. Established 1916; 0.17 square miles.

ACADIA, MAINE.—Combination of mountain and seacoast scenery. Established 1919; 24.91 square miles.

BRYCE CANYON, UTAH.—Canyons filled with exquisitely colored pinnacles. Established 1928; 56.23 square miles.

CARLSBAD CAVERNS, N. MEX.—Beautifully decorated limestone caverns. Established 1930; 15.75 square miles.

CRATER LAKE, OREG.—Beautiful lake in crater of extinct volcano. Established 1902; 250.52 square miles.

FORT McHENRY, MD.—Its defense in 1814 inspired writing of Star Spangled Banner. Established 1925; 0.07 square miles.

GENERAL GRANT, CALIF.—General Grant Tree and grove of Big Trees. Established 1890; 3.98 square miles.

GLACIER, MONT.—Unsurpassed alpine scenery; 200 lakes; 60 glaciers. Established 1910; 1,537.98 square miles.

GRAND CANYON, ARIZ.—World's greatest example of erosion. Established 1919; 1,008 square miles.

GRAND TETON, WYO.—Most spectacular portion of Teton Mountains. Established 1929; 150 square miles.

GREAT SMOKY MOUNTAINS, N. C.-TENN.—Massive mountain uplift; magnificent forests. Established for protection 1930; 643.26 square miles.

HAWAII: ISLANDS OF HAWAII AND MAUI.—Interesting volcanic areas. Established 1916; 248.54 square miles.

HOT SPRINGS, ARK.—Forty-seven hot springs reserved by the Federal Government in 1832 to prevent exploitation of waters. Made national park in 1921; 1.54 square miles.

LASSEN VOLCANIC, CALIF.—Only recently active volcano in United States proper. Established 1916; 163.32 square miles.

MAMMOTH CAVE, KY.—Interesting caverns, including spectacular onyx cave formation. Established for protection 1936; 54.09 square miles.

MESA VERDE, COLO.—Most notable cliff dwellings in United States. Established 1906; 80.21 square miles.

MOUNT McKINLEY, ALASKA.—Highest mountain in North America. Established 1917; 3,030.46 square miles.

MOUNT RAINIER, WASH.—Largest accessible single-peak glacier system. Established 1899; 377.78 square miles.

PLATT, OKLA.—Sulphur and other springs. Established 1902; 1.32 square miles.

ROCKY MOUNTAIN, COLO.—Peaks from 11,000 to 14,255 feet in heart of Rockies. Established 1915; 405.33 square miles.

SEQUOIA, CALIF.—General Sherman, largest and possibly oldest tree in world; outstanding groves of Sequoia gigantea. Established 1890; 604 square miles.

SHENANDOAH, VA.—Outstanding scenic area in Blue Ridge. Established 1935; 282.14 square miles.

WIND CAVE, S. DAK.—Beautiful cavern of peculiar formations. No stalactites or stalagmites. Established 1903; 19.75 square miles.

YELLOWSTONE: WYO.-MONT.-IDAHO.—World's greatest geyser area, an outstanding game preserve. Established 1872; 3,437.88 square miles.

YOSEMITE, CALIF.—Valley of world-famous beauty; spectacular waterfalls; magnificent High Sierra country. Established 1890; 1,176.16 square miles.

ZION, UTAH.—Zion Canyon 1,500 to 2,500 feet deep. Spectacular coloring. Established 1919; 134.91 square miles.

GOVERNMENT PUBLICATIONS

Glimpses of Our National Parks. Brief descriptions of national parks. Address Director, National Park Service, United States Department of the Interior, Washington, D. C. Free.

Recreational Map. Shows Federal and State recreational areas throughout the United States and gives brief descriptions of principal ones. Address same as above.

Fauna of the National Parks. Series No. 1. By G. M. Wright, J. S. Dixon, and B. H. Thompson. A survey of wildlife with recommendations for adequate protection. Illustrated. 157 pages. Superintendent of Documents, Washington, D. C. Price, 20 cents.

Fauna of the National Parks. Series No. 2. Wildlife management in the national parks. By G. M. Wright and B. H. Thompson. Illustrated. 142 pages. Superintendent of Documents, Washington, D. C. Price, 20 cents.

National Parks Portfolio. By Robert Sterling Yard. Cloth-bound and illustrated with more than 300 pictures of places of outstanding scenic interest. Superintendent of Documents, Washington, D. C. Price, \$1.50.

Illustrated booklets about the following national parks may be obtained free of charge by writing to the National Park Service, United States Department of the Interior.

Acadia, Maine.

Carlsbad Caverns, N. Mex.

Crater Lake, Oreg.

General Grant, Calif.

Glacier, Mont.

Grand Canyon, Ariz.

Grand Teton, Wyo.

Great Smoky Mts., N. C.-Tenn.

Hawaii, Hawaii.

Hot Springs, Ark.

Lassen Volcanic, Calif.

Mount McKinley, Alaska.

Mount Rainier, Wash.

Platt, Okla.

Rocky Mountain, Colo.

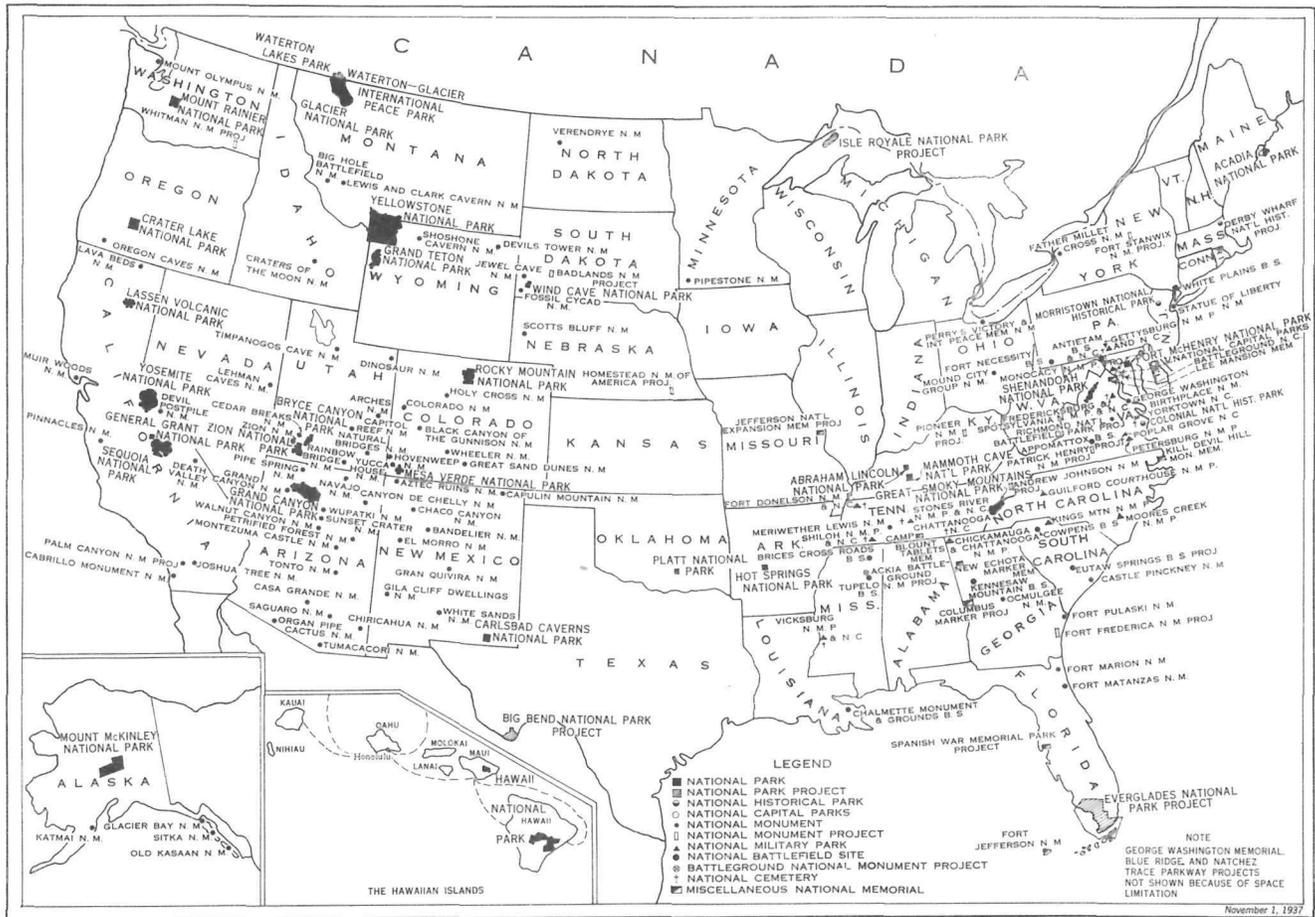
Sequoia, Calif.

Wind Cave, S. Dak.

Yellowstone, Wyo.-Mont.-Idaho.

Yosemite, Calif.

Zion and Bryce Canyon, Utah.



AREAS ADMINISTERED BY THE NATIONAL PARK SERVICE

November 1, 1937

