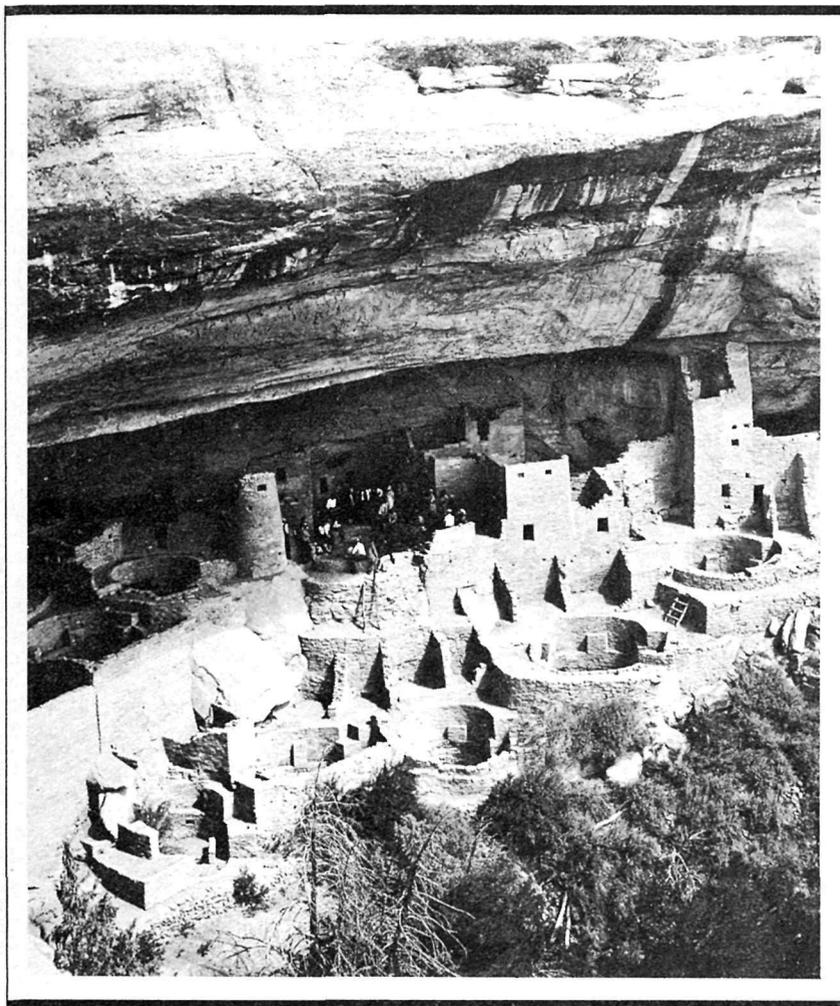


MESA VERDE NATIONAL PARK

✦ *COLORADO* ✦



*UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE*

UNITED STATES DEPARTMENT OF THE INTERIOR

HAROLD L. ICKES, Secretary

NATIONAL PARK SERVICE

ARNO B. CAMMERER, Director

MESA VERDE

NATIONAL PARK

COLORADO



SEASON FROM MAY 15 TO OCTOBER 15

UNITED STATES .
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1935

RULES AND REGULATIONS

Automobiles.—Drive carefully; free-wheeling is prohibited within the park. Obey park traffic rules and speed limits. Secure automobile permit, fee \$1.00 per car.

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. By all means do not use your axe 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.

Noises.—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 of 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.

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

IMPORTANT EVENTS IN MESA VERDE'S PREHISTORY AND HISTORY

- 1000 B. C. Occupancy of the Cliff Palace cave by first agricultural Indians of the Southwest. Date represents archeologist's approximation of the earliest known use of the caves of Mesa Verde by man.
- 500 B. C. Estimated date of the second agricultural people. Their habitations extended over the entire Mesa Verde and their culture excelled in the introduction and perfection of many arts.
- 1066 A. D. Earliest date established for cliff-dweller culture. Beam section from Jug House.
1073. Construction of Cliff Palace.
1776. Expedition of Padre Silvestre Velez de Escalante to southwestern Colorado. Party camped at 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 attacked 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.
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. Entrance road completed. First automobile in Spruce Tree Camp. Extension of park boundaries to include valuable ruins and archeological remains.
1914. Construction of the Prater and Morfield Canyons road and first wagon road to ruins.
1915. Sun Temple excavated by Doctor Fewkes.
1916. Far View House excavated by Doctor Fewkes.
1917. First Government-constructed trails to Spring House and Soda Canyon.
1918. First hotel service operated at Spruce Tree Camp.
1919. Square Tower House excavated.
1921. Establishment of superintendent's office and home at Spruce Tree Camp.
1925. Park museum constructed from donated funds.
1926. Excavation of Step House Ruin and discovery of very early occupation of cave by Basket Maker III culture predating the cliff dwellers by several hundred years.
1928. Exclusive jurisdiction of park tendered to the United States and accepted by act of Congress April 25.
1934. Completion of deep water well (4,200 feet).

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.
5.0 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, 8,575 feet above sea level; 2,200 feet above the Montezuma Valley. View into four States—Colorado, New Mexico, Arizona, and Utah.
16.0 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.
20.0 miles—Park headquarters. Park ranger will meet your car and give information.

THINGS TO DO WHILE ON THE MESA VERDE

MOTOR TRIP TO RUINS—DAILY. USE YOUR OWN CAR. NO CHARGE FOR GUIDE 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 TRIP TO PARK POINT—DAILY. USE YOUR OWN CAR

6:30 or 7 p. m.—Time of leaving will vary to arrive at Park Point to view colorful sunset. Ranger in charge will discuss the flora, geology, and scenic points. Distance 24 miles.

CAMPFIRE LECTURE—DAILY

8 p. m.—In circle at park headquarters. Archeological story of the Southwest.

9 p. m.—Ceremonial dance by Navajo Indians.

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. View of 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, and meals. General store and curios. Free Government camp grounds. Firewood and water furnished.

MESA VERDE NATIONAL PARK

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 valley of the Mancos River on the south. Into this valley open a number of small 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 small canyons are some of the best-preserved cliff dwellings in America. In winter it is wholly inaccessible on account of the deep snows; in some months it is dry and parched, but in July and August, when rains come, vegetation is in full bloom, the plants flower, the grass grows high in the glades, the trees put on their bright new garments of green.

The Mesa Verde is attractive in all seasons of the year and filled with interest for those who love the grandeur and picturesqueness of mountain scenery.

“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. 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 jack 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 road to the ruins 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 8 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 8,575 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 Lukachugai and Tunichas of New Mexico.

In the midst of this great mountain-inclosed, sandy plain, which, seen from the mesa, resembles a great 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 for all the world 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 12 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 thereon.

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 mesa 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

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 the spectacle breaks on their astonished vision.

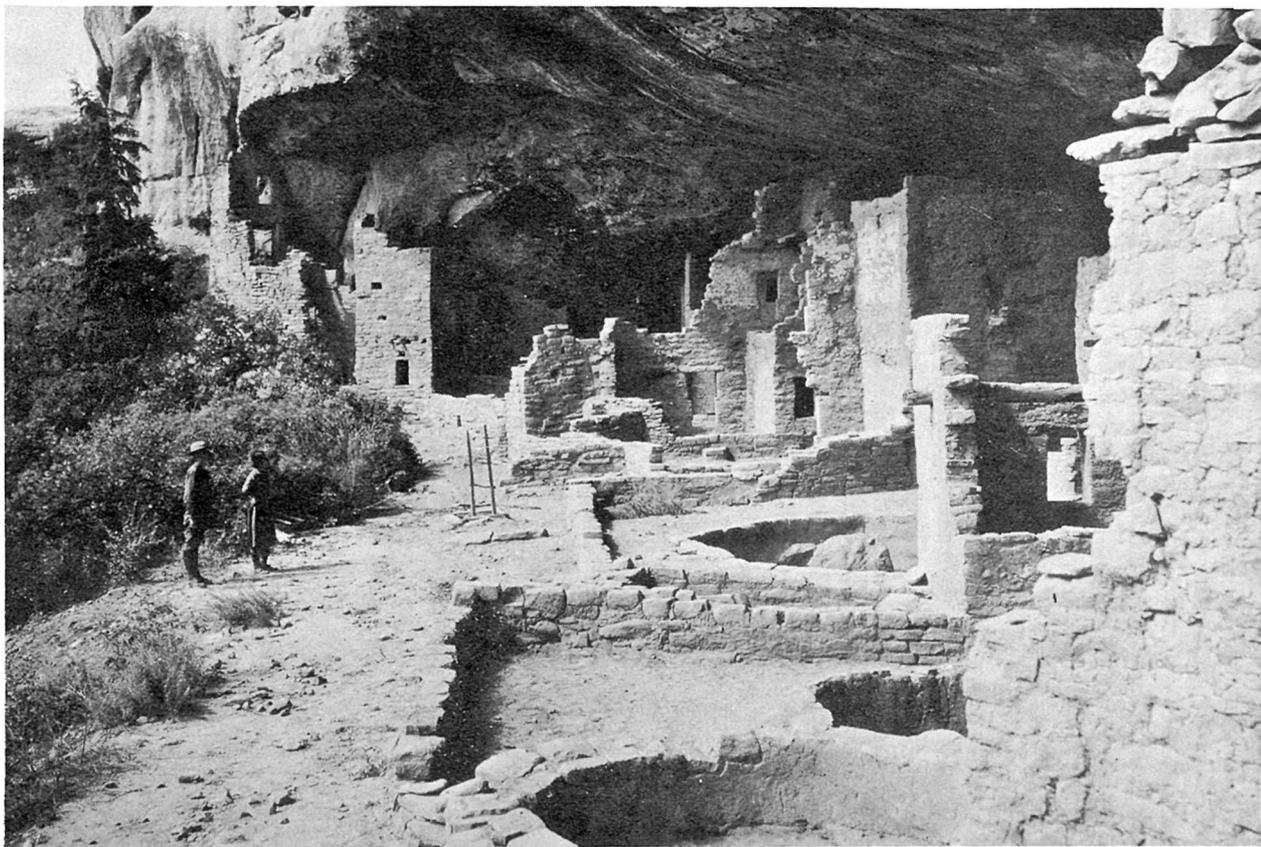
Later these two men explored this ruin and gave it the name of Cliff Palace, an unfortunate designation, for it is in no respect a palace, but a community house, containing over 200 dwelling rooms, former abodes of families, and 23 sacred rooms or kivas. They also discovered other community dwellings, one of which was called Spruce Tree House, from a large spruce tree, since cut down, growing in front of it. This had 8 sacred rooms and probably housed 300 inhabitants.

The findings of these two ruins did not complete the discoveries of ancient buildings in the Mesa Verde; many other ruins were found by the Wetherills, and others which need not now be mentioned. They mark the oldest and most congested region of the park, but the whole number of ancient habitations reaches into the hundreds.

Only a few of the different types of ruins that have already been excavated and repaired and are now accessible to the visitor are considered herein. This excavation and repair are 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. Many others await the spade of the archeologist and the road maker, being now only accessible on foot or horseback by means of trails.

SPRUCE TREE HOUSE

The total length of Spruce Tree House is 216 feet, its width at the widest part 89 feet. There were counted in the Spruce Tree House 114 rooms, the majority of which were secular, and 8 ceremonial chambers or kivas. Spruce Tree House was in places three stories high; the third-story rooms had no artificial roof, but the wall of the cave served that purpose. Several rooms, the walls of which are now two stories high, formerly had a third story above the second, but their walls have now fallen, leaving as the



Spruce Tree House, a community dwelling of 114 rooms.

only indication of their former union with the cave, lines destitute of smoke on the top of the cavern. Of the 114 rooms, at least 14 were uninhabited, being used as storage and mortuary chambers. If we eliminate these from the total number of rooms we have 100 inclosures which might have been dwellings. Allowing 4 inhabitants for each of these 100 rooms would give about 400 persons as an aboriginal population of Spruce Tree House. But it is probable that this estimate should be reduced, as not all the 100 rooms were inhabited at the same time, there being evidence that several of them had occupants long after others were deserted. Approximately, Spruce Tree House had a population not far from 350 people, or about 100 more than that of Walpi, one of the best-known Hopi pueblos.

CLIFF PALACE

Cliff Palace lies in an eastern spur of Cliff Canyon, under the roof of an enormous cave which arches 50 to 100 feet above it. The floor of this cavern is elevated several hundred feet above the bottom of the canyon. The entrance faces the west, looking across the canyon to the opposite side, in full view of a great promontory, on top of which stands Sun Temple. The floor of the recess in which Cliff Palace is built is practically covered with buildings, some of which, especially those at each end, extend beyond the shelter of the cave roof. The total length of the Cliff Palace is approximately 300 feet.

The underside of the roof of rock arching over Cliff Palace is comparatively smooth, exhibiting horizontal cleavage and plane surfaces. A break in this cleavage extends approximately north and south, forming a ledge a few feet in breadth. On its edge the ancients constructed a long wall, thus making a passageway between it and the solid cliff. Although now inaccessible from the ruin below, in ancient times this passageway could have been entered from the roof of one of the houses through a doorway which is still visible. Similar ledge rooms are common features in Mesa Verde ruins.

The floor of the cave in which Cliff Palace was built had practically one level, determined no doubt by a layer of comparatively hard rock, which resisted erosion more successfully than the softer strata above it. This floor was strewn with great angular boulders that in the process of formation of the cave had fallen from the roof. These were too large to be moved by primitive man and must have presented to the ancient builders uninviting foundations upon which to erect their structures. The spaces between these rocks were better suited for their purposes. These were filled with smaller stones that could be removed, leaving cavities which could be utilized for

the construction of subterranean rooms. The upper surfaces of the large rocks, even those which are angular, served as foundations for houses above ground and determined the levels of the plazas. From the bases of these rocks, which formed the outer edge of the level cave floor, a talus extended down the canyon side to the bottom. The rooms forming the front of the ancient village were constructed in this talus, and as their site was sloping they were necessarily situated at lower levels on terraces bounded by retaining walls which are marked features in this part of Cliff Palace. At least three different terraces indicating as many levels are recognized. These levels are indicated by the rows of kivas, or ceremonial rooms, which skirt the southern and middle sections of the ancient village. At the southern end, where the talus is less precipitous and where, on account of the absence of a cave roof, the fallen rocks are smaller, the terrace with its subterranean rooms is on the level of the floor of the cave, having the same height as the foundations built thereon. At the western extremity the buildings were erected on the tops of huge rocks fallen from the roof of the cave. Here the talus is narrow or wanting, and no rooms were constructed in front of these rocks. Thus the terrace rooms on the lowest level are found along the middle section of the cave, where the floor is highest and where the great fallen rocks still remain in sheltered places.

Fortunately, the configuration of the cliffs above the ruins makes it possible to get a fine birdseye view of Cliff Palace from the rim of the mesa. Views obtained from the trail are most striking and should be enjoyed as a preliminary to closer examination and study of the rooms in Cliff Palace.

ENTRANCE

Deep under the debris which covered the lower terrace of Cliff Palace there was brought to light by excavation an ancient way, hitherto unknown, which leads by a gradual slope to the center of the village. This pathway extends parallel with the high front wall of kiva O, and, passing to a large rock in which foot rests were cut, enters Cliff Palace through a narrow court between high walls. From this court ascent to the level of the cave floor was accomplished by means of a ladder, which could be drawn in when danger necessitated. The floor of the main entrance was hardened adobe, the outer edge of which was held by a roughly laid retaining wall resting at the lower end on logs still well preserved. This main entrance may have led formerly to the village spring in the canyon below, now dry, and along it no doubt in ancient times toiled the weary women with jars of water on their heads.

A similar recess in the front wall is found in the pueblo Far View House, in the cliff dwelling Square Tower House, and in the specialized religious building, Sun Temple.

GROUND PLAN OF CLIFF PALACE

An examination of the correct ground plan of Cliff Palace shows that the houses were arranged in a crescent, the northern extension of rooms corresponding roughly to one point. The curve of the village follows, generally speaking, that of the rear of the cave in which it was constructed. There is little regularity in the arrangement of the rooms, which, as a rule, are not crowded together; most of the subterranean chambers are situated on terraces in front of the secular rooms. There is one passageway that may be designated a street; this is bordered by high walls over which a passer-by could not look. No open space of considerable size is destitute of a ceremonial chamber, and the largest court contains five of these rooms. It is not possible to count the exact number of rooms that Cliff Palace formerly had, as many upper stories have fallen and a considerable number of terraced rooms along the front are indicated only by fragments of walls. Roughly speaking, 200 is a fair estimate.

It is instructive to note that although Cliff Palace is about three times as large as Spruce Tree House, judging from ceremonial chambers, it has no more than double the number of secular rooms.¹

CEREMONIAL ROOMS

The majority of the ceremonial rooms in Cliff Palace are accompanied by rectangular chambers, but one of the former, situated about 50 feet from the western end, has no rooms near it. The ceremonial rooms naturally fall into two types: (1) Subterranean kivas having banquettes around their sides, separated by roof supports called pilasters; (2) kivas destitute of banquettes or pilasters. Twenty ceremonial rooms have been referred to the first type; two or three to the second. The isolated kiva resembles in many particulars the other examples of the second type. The shape of the kivas varies from circular to square, with rounded corners. Their architecture varies somewhat, and their depth is not uniform. The walls are well constructed and generally show signs of plastering often blackened with smoke. One of the kivas is painted yellow; the lower part of another is red, with triangular decorations on the upper border.

Similar decorations occur likewise on kiva A of Spruce Tree House and on the inner walls of the third story of the Square Tower. They are found also on the walls of Fire Temple and Painted Kiva House.

¹ This is explained on the theory that Cliff Palace is more ancient than Spruce Tree House, the kivas being the older rooms and probably more strictly limited to the use of clans, while at Spruce Tree House they are more in the nature of fraternity rooms, the membership of the priesthood occupying them being drawn from several clans.

SECULAR ROOMS

Secular rooms in Cliff Palace may be classified as follows: (1) Living rooms; (2) storage rooms; (3) mill rooms; (4) granaries; (5) dark rooms of unknown use; (6) towers, round and square; (7) round rooms not towers. The highest rooms have four stories. There are several of three stories, many of two, but the majority have only one. Walls projecting at right angles to the foundations in front of the ruin on a level below the cave floor indicate that in this part Cliff Palace was terraced, consisting of several-storied houses and terraces at different levels. There is little uniformity in size, shape, or character of the walls of secular rooms. In rare instances they extend to the roof of the cave, a feature sometimes shown by markings or fragments of masonry on the rock surface.

ROUND TOWER AND ROUND ROOMS

The most prominent and picturesque building in Cliff Palace is the Round Tower, situated about midway in its length on a high angular rock, which raises it in full view above all the terraces. This tower is not the only round room in the ruin, for there are foundations and walls of two other circular rooms not far from the Speaker Chief's House at the north end of the "street." These are inconspicuous because hidden far back in the cave behind more lofty walls.

The Round Tower, formerly two stories high, was entered from the north side. It was little damaged during the centuries elapsing since Cliff Palace was abandoned and needed little repair. The walls show most beautiful examples of aboriginal masonry, perhaps the finest north of Mexico. Almost perfectly symmetrical in form, the stones that compose the walls are skillfully dressed, fitted to one another, and carefully laid. This tower was evidently ceremonial in function, or it may have served as an observatory, for which purpose it is well situated. The presence of small peepholes through which one can look far down the canyon supports the theory that the tower was a lookout, to which theory its resemblance to other towers in the Mesa Verde region likewise contributes.

SQUARE TOWER

This building also is one of the picturesque and prominent structures at the southern end of Cliff Palace. It is four stories high, the walls reaching from the floor to the roof of the cave. The walls of the third story are painted white and red with decorative symbols, as triangles, zigzag lines, and parallel lines, perhaps representing feathers. When work began on this tower the whole northwestern angle had fallen and the wall of the "painted

room" was tottering and in great danger of falling. The repair of this section was dangerous as well as difficult, one whole corner having to be rebuilt from the bottom of an adjacent kiva.

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 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 numerous 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 very 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 strong tower, 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 too rough 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 walls, which rise to the roof of the cave. The second story has a balcony along the wall just mentioned. The joists between the two stories project about 2 feet. Long poles lie across the projecting joists parallel with the walls, covered with cedar bast on which is laid dried clay. This balcony was used as a means of communication between the rooms of the upper story and served as a terrace. A low, thick wall built on the edge of the precipice encloses the outer side of the court.

Judging from the excellent masonry of Balcony House it is presumed that this ruin is one of the more recent, probably belonging to the same period as Spruce Tree House. Its special features are the remarkable defensive site and the extra works built to increase its inaccessibility. The well-preserved balcony has given a name to the ruin, but other cliff houses show the same structure. The fund for the excavation and repair of Balcony House was largely furnished by the Colorado Cliff-Dwellers Society, an

organization founded and directed by Mrs. Gilbert McClurg, of Colorado Springs, Colo., for the original purpose of stimulating interest in legislation for the preservation and protection of the prehistoric remains of the Mesa Verde, which led to the creation of this national park in 1906.

SQUARE TOWER HOUSE

Square Tower House is situated on an eastern spur of Navajo Canyon nearly opposite a great bluff called Echo Cliff. An ancient approach to the ruin was from the canyon rim. It was used by the natives, but is almost impassable for white visitors. Foot holes for ascent and descent had been cut by the Indians in the cliff at a point south of the ruin which enabled them to reach the level on which the ruin is situated. Along the top of the talus there runs to the ruins a pathway which bifurcates into an upper and a lower branch. The former, hugging the cliff, passes through the "Eye of the Needle"; the latter is lower down on the cliff.

The Square Tower House cave is shallow, its rear perpendicular, with roof slightly overhanging. At the extreme eastern end of the ruin the vertical face of the 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. One end of a log, extending from a wall of one of these rooms, rests in a hole cut in the side of the cliff, a well-known method of cliff-house construction.

Some rooms in Square Tower House were devoted to secular, others to ceremonial purposes. The former have angular corners; the latter are circular. The rectangular rooms were constructed above ground; the circular were subterranean. These rooms do not differ radically from those of Spruce Tree House and other cliff dwellings. They have similar windows, door openings, and supports of balconies. There is little difference in the size of the stones used in the masonry at different heights. The absence of a cave recess in the rear of the building is significant, as it allowed the cliff to be used as the back wall of the rooms.

Square Tower House 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, and no open spaces except in the kiva roofs. The rooms are continuous and compactly constructed. Excepting the spaces above the kivas, the walls are united from one end of the cave to the other. The foundations of the secular rooms are constructed on two levels, an upper and a lower. These rooms occupy the intervals between the kivas, never in front of them.

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.

On a projecting rock on the west side above the tower is the wall of a small, inaccessible room which may have been used as a lookout or as an eagle house.

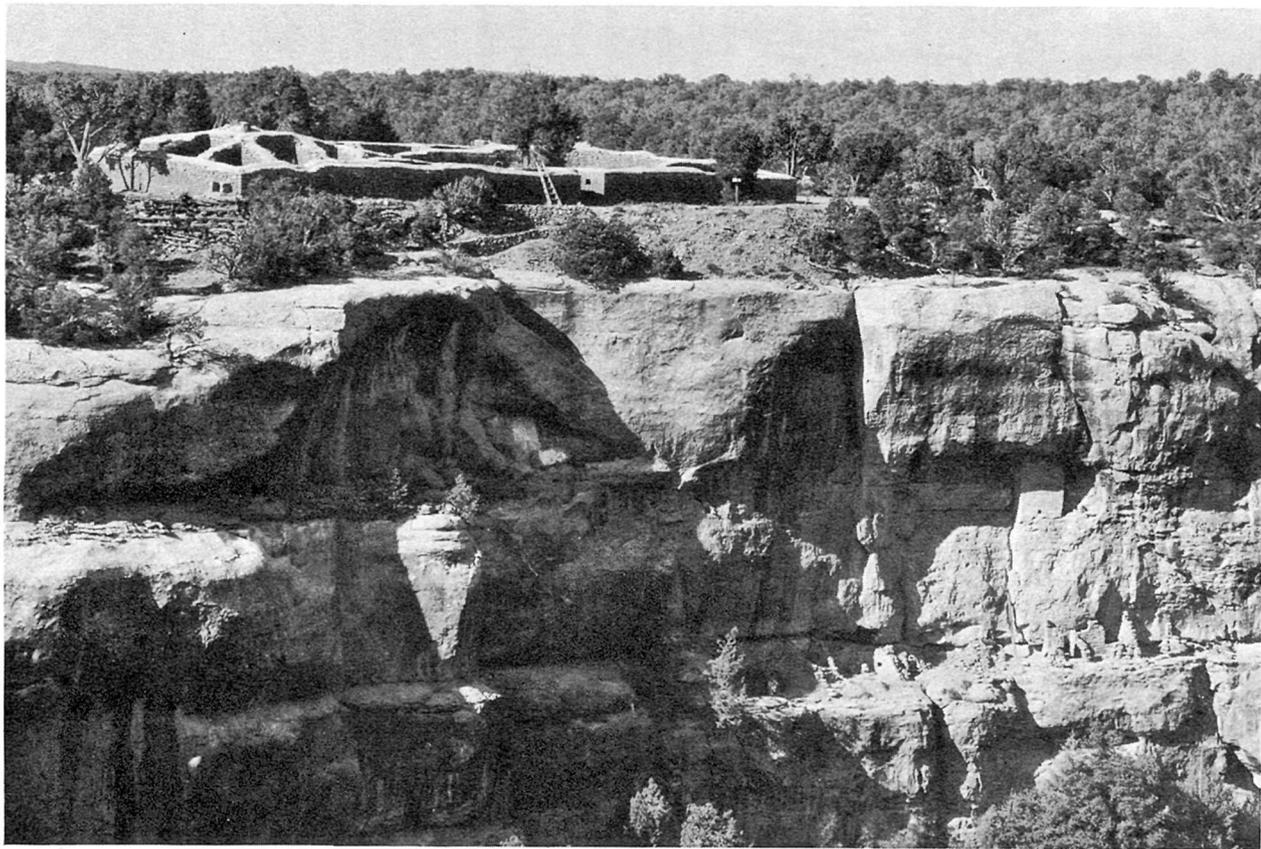
The lowest story of the tower is entered from plaza B, and on the east side there are three openings, situated one over another, indicating the first, second, and third stories, but on the south side of the tower there are only two doorways. The roof of the lowest room is practically intact, showing good workmanship, but about half of its floor is destroyed. The upper walls of the second-story room have the original plaster, reddish dado below and white above. Although the third and fourth stories are destitute of floors, they are plastered.

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 alternate black and 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 sipapû. 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.



Sun Temple, a most mysterious form of ruin.

PETROGLYPHS

The perpendicular cliff back of Square Tower House has several different forms of incised petroglyphs. From the fact that these naturally occur on the cliff above the kiva roofs, they may be regarded as connected in some way with a religious symbolism. A few pictographs are also found on stones set in the walls of the rooms.

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 repair 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

The cliff houses considered in the preceding pages are habitations. There are also specialized buildings on the Mesa Verde which were never inhabited but were used for other purposes. Two of these are supposed to have been devoted to religious purposes and are known as Sun Temple and Fire Temple.

Sun Temple is situated west of Cliff Palace, across Cliff Canyon on a high cliff at the entrance to Fewkes Canyon. Up to the year 1915 the site of Sun Temple was a mound of earth and stones, all showing artificial working or the pecking of primitive stone hammers. This mound had a circular depression in the middle and its surface was covered with trees

and bushes. No high walls projected above the ground nor was there any intimation of the size or character of the buried building. It was believed to be a pueblo or communal habitation. Excavation of this mound brought into view one of the most instructive buildings in the park.

Sun Temple is a type of ruin hitherto unknown in the park. The building excavated shows the best masonry and is the most mysterious form yet discovered in a region rich in so many prehistoric remains. Although at first there was some doubt as to the use of this building, it was early recognized that it was not constructed for habitation, and it is now believed that it was intended for the performance of rites and ceremonies; the first of its type devoted to religious purposes yet recognized in the Southwest.

The ruin was purposely constructed in a commanding situation in the neighborhood of large inhabited cliff houses. It sets somewhat back from the edge of the canyon, but near enough to present a marked object from all sides, especially the neighboring mesas. It must have presented an imposing appearance rising on top of a point high above inaccessible, perpendicular cliffs. No better place could have been chosen for a religious building in which the inhabitants of many cliff dwellings could gather and together perform their great ceremonial dramas.

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, inclosing a central core of rubble and adobe. They are uniformly well made.

The fine masonry, the decorated stones that occur in it, and the unity of plan stamp Sun Temple as the highest example of Mesa Verde architecture.

The walls were constructed of the sandstone of the neighborhood. Many stone hammers and pecking stones were found in the vicinity.

THE SUN SYMBOL

On the upper surface of a large rock protruding from the base of the southwest corner of the building a peculiar impression was found, inclosed by low wing walls on the north and south sides. The ancient cliff dwellers were nature worshipers, and a natural object resembling the sun would powerfully affect their primitive minds. Probably for this reason the impression was inclosed as a shrine.

ARCHITECTURAL FEATURES

There are three circular rooms in Sun Temple which prove their form may be identified as ceremonial in function, technically called kivas. Two of these, free from other rooms, lie 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 was found to be almost completely filled with spalls or broken stones. Possibly this was the place where the stones were hewn into shape before they were laid in the walls.

The kiva that is situated in the west section of Sun Temple has a flue attached to the south side, recalling the typical ventilator of a Mesa Verde cliff kiva, and there are indications of the same structure in the two circular chambers in the court. These kivas, however, have no banquettes or pilasters to support a vaulted roof, as no fragments of roof beams were found in the excavations made at Cliff Palace. East of Sun Temple, where formerly there was only a mound of stone and earth, there were found the remains of a circular tower.

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

Not only pits indicative of the stone tools by which the stones forming the masonry of Sun Temple were dressed appear on all the rocks used in its construction, but likewise many bear incised symbols. Several of these still remain in the walls of the building; others have been set in cement near the outer wall of the eastern kiva. It is interesting to record that some of the stones of which the walls were constructed were probably quarried on the mesa top not far from the building, but as the surface of the plateau is now forested, the quarries themselves are hidden in accumulated soil and are difficult to discover.

AGE

Sun Temple is believed to be among the latest constructed of all the aboriginal buildings in the park, probably contemporary with Balcony House, Spruce Tree House, and Cliff Palace.

Because of the absence of timbers or roof beams it is impossible to tell when Sun Temple was begun or how long it took for its construction or when it was deserted. There are indications that its walls may never have been completed, and from the amount of fallen stones there can hardly be a doubt that when it was abandoned they had been carried up in some

places at least 6 feet above their present level. The top of the wall had been worn down at any rate 6 feet in the interval between the time it was abandoned and the date of excavation of the mound. No one can tell the length of this interval in years.

We have, however, knowledge of the lapse of time, because the mound had accumulated enough soil on its surface to support growth of large trees. Near the summit of the highest wall in the annex there grew a juniper or red cedar of great antiquity, alive and vigorous when excavation work was begun. This tree undoubtedly sprouted after the desertion of the building and grew after a mound had developed from fallen walls. Its roots penetrated into the adjacent rooms and derived nourishment from the soil filling them.

Necessarily, when these roots were cut off the tree was killed. It was then cut off about a foot above the ground, but the stump remains. A section of this tree at that point was found by Gordon Parker, supervisor of Montezuma National Forest, to have 360 annual rings; its heart is decayed, but its size suggests other rings, and that a few more years can be added to its age. It is not improbable that this tree began to grow on the top of the Sun Temple mound shortly after the year 1540, when Coronado first entered New Mexico, but how great an interval elapsed during which the walls fell to form the mound in which it grew, and how much earlier the foundations of the ruined walls were laid, no one can tell. A conservative guess of 350 years is allowable for the interval between construction and the time the cedar began to sprout, thus carrying the antiquity of Sun Temple back to about 1200 A. D.

UNITY OF CONSTRUCTION

The argument that appeals most strongly to many in supporting the theory that Sun Temple was a ceremonial building is the unity shown in its construction. A preconceived plan existed in the minds of the builders before they began work on the main building. Sun Temple was not constructed haphazard nor was its form due to addition of one clan after another, each adding rooms to a preexisting nucleus. There is no indication of patching one building to another, so evident at Cliff Palace and other large cliff dwellings. The construction of the recess in the south wall, situated exactly, to an inch, midway in its length, shows it was planned from the beginning.

We can hardly believe that one clan could have been numerous enough to construct a house so large and massive. Its walls are too extensive; the work of dressing the stones too great. Those who made it must have belonged to several clans fused together, and if they united for this common

work they were in a higher state of sociological development than a loosely connected population of a cliff dwelling.

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 at night, after they had finished work, to their homes. 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.

The argument that cliff dwellers in the neighborhood built Sun Temple and that incoming aliens had nothing to do with its construction seems very strong. The architectural differences between it and Cliff Palace are not objections, for the architectural form of Sun Temple may be regarded as a repetition, in the open, of a form of building that developed in a cliff house; the rounded north wall conforms with the rear of a cave and the straight south wall reproduces the front of a cliff dwelling. The recess midway in the south wall of Sun Temple could be likened without forcing the comparison to a similar recess which occurs at the main entrance into Cliff Palace.

Sun Temple was not built by an alien people, but by the cliff dwellers as a specialized building mainly for religious purposes, and, so far as known, is the first of its type recognized in the Mesa Verde area.

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 the head of the same, 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. 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 inclosing the east and west ends, where there was a banquette, apparently for spectators. 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.

About 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 rectangular rooms.

In the central fire pit fire was kept burning during the elaborate fire dances of the natives, and possibly also a perpetual fire was conserved in this pit from one act of kindling the new fire to another. The function of the rectangular enclosures lying one on each side of the circular enclosures is unknown. The new fire was kindled in the middle of the three rooms of the lowest tier west of the main court. This is a painted room, and on its walls there still remain in fair preservation a row of five symbols of fire, numerous pictures of mountain sheep and other animals.

Just west of Fire Temple there is a group of rooms which were evidently habitations, since household utensils were found in them. One of these rooms has in the floor a vertical shaft which opens outside the house walls like a ventilator. The former use of this structure is unknown. Although the Fire Temple was not inhabited, there were undoubtedly dwellings nearby.

NEW FIRE HOUSE

A hundred feet east of the Fire Temple there are two low caves, one above the other, in which may have lived those who once made use of this sanctuary. The ruin is the New Fire House proper, or the habitation of the fire priests and their families. 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; a specimen worthy of exhibition with the best in any museum. 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, in place of a deflector and ventilator shaft, a small rectangular walled enclosure surrounded by a wall, recalling structures on the floor of the kivas of Sun Temple. The meaning of this departure from the prescribed form of ventilator is not apparent.

CEDAR TREE TOWER

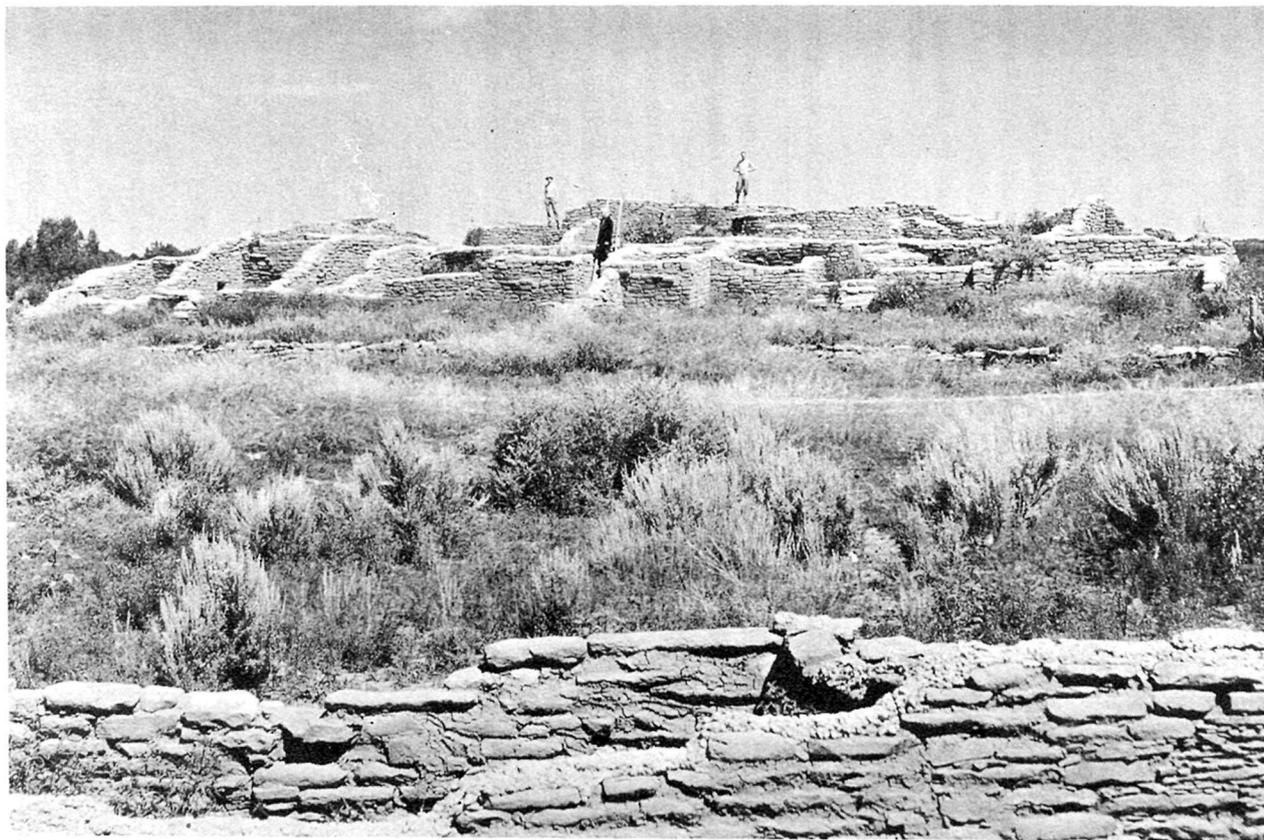
Hidden in the timber about one-half mile east of the main entrance highway, and a mile north of Spruce Tree Camp, are a tower and kiva of especial interest. The associating of the two, without dwellings accompanying them, is unique and leads to many conjectures as to their use and purpose.

The masonry is excellent and the massive character of the walls and the beautiful workmanship indicate some important use, for a large amount of labor was expended in the construction of the buildings of this group. Some of the stones are so large that it is difficult for one man to handle them. The components are beautifully dressed, especially those which form the rounded corners of the tower on the inner and outer boundaries. The walls of the tower are uniformly 2 feet in width, and at the highest point they still stand to the height of 15 feet.

FAR VIEW HOUSE, A MESA VERDE PUEBLO

Archeological investigations have shown that the later cultures of the Mesa Verde built compact pueblo-style structures on the open mesa land separating the deep canyons. Lacking natural protection of the caves and cliffs of the canyons, a closely knit and compact structure was necessary for defensive purposes. Not having to conform to the irregular contours of the cave as in the cliff-house type, the structure assumed a roughly rectangular shape in the open, with the kivas within, protected by the adjacent outside living and storage rooms. The roofed-over kivas formed small open courts within the higher outside walls. Structurally, there is but little difference between the cliff house and the pueblo; undoubtedly they are homogeneous.

Four and a half miles north of Spruce Tree Camp the park road passes through 16 major and many minor mounds. This is the so-called Mummy



A Mesa Verde surface pueblo. Far View ruin.

Lake group, a misnomer, since the walled depression at the crest of the slope above the group was never used as a reservoir, although in the spring of the year water is still conducted thereto by the drainage ditches constructed by the early cowmen in the park in their efforts to impound sufficient water for their stock. And, again, mummies are never found where the least dampness occurs.

The first unit of this group to be excavated was named Far View House because of the wonderful panorama of diversified terrain that is visible in Colorado, New Mexico, and Arizona from the walls of the ruin. At the beginning of the work, this mound appeared very much as any of the other adjacent major mounds, no sign of standing wall appearing above the even contour of the ruin. Heavy growths of sagebrush covered the whole area. Three months' time was devoted to the excavation in revealing the rectangular pueblo, 100 by 113 feet in size, now seen. The slow crumbling of the heavy dirt-covered roofs and the walls, together with the annual deposit of wind-blown sand from the San Juan country early each spring, gradually filled the rooms to the level of the standing walls, after which destructive elements and forces can little change the contour of any ruin.

The external features of Far View House are apparent as we approach its walls; mounting to the top of the highest wall we can best observe the general plan. This pueblo is rectangular in shape, consisting of concentrated rooms with a court surrounded by a wall annexed to the south side. On its southeast corner, a little less than 100 feet away, lies the cemetery from which have been taken skeletons of the dead with their offerings of food bowls and other objects, such as was the custom of these people to deposit in the graves of their dead.

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 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 birdseye view shows that all the rooms, now roofless, fall into two groups.

In the center of this mass of rooms there is a circular chamber 32 feet in diameter, resembling a well, around which the other rooms appear to cluster. Three of these surrounding rooms are circular and much smaller than the central, arranged with two on the left and one on the right side. In

structure these rooms are identical with that of the large central room. They have mural banquettes and pilasters that once supported a roof. These circular depressions are ceremonial rooms to which is applied the word kiva, taken from the Hopi language. All four kivas of Far View House are identical in construction with the kivas of Spruce Tree House and Cliff Palace.

The rooms surrounding these circular ones vary somewhat in form but are, as a rule, rectangular, the shapes of those near the kivas being triangular to fill the necessary spaces. The contents of the rectangular rooms show that they were inhabited. 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 dwelling in Spruce Tree House.

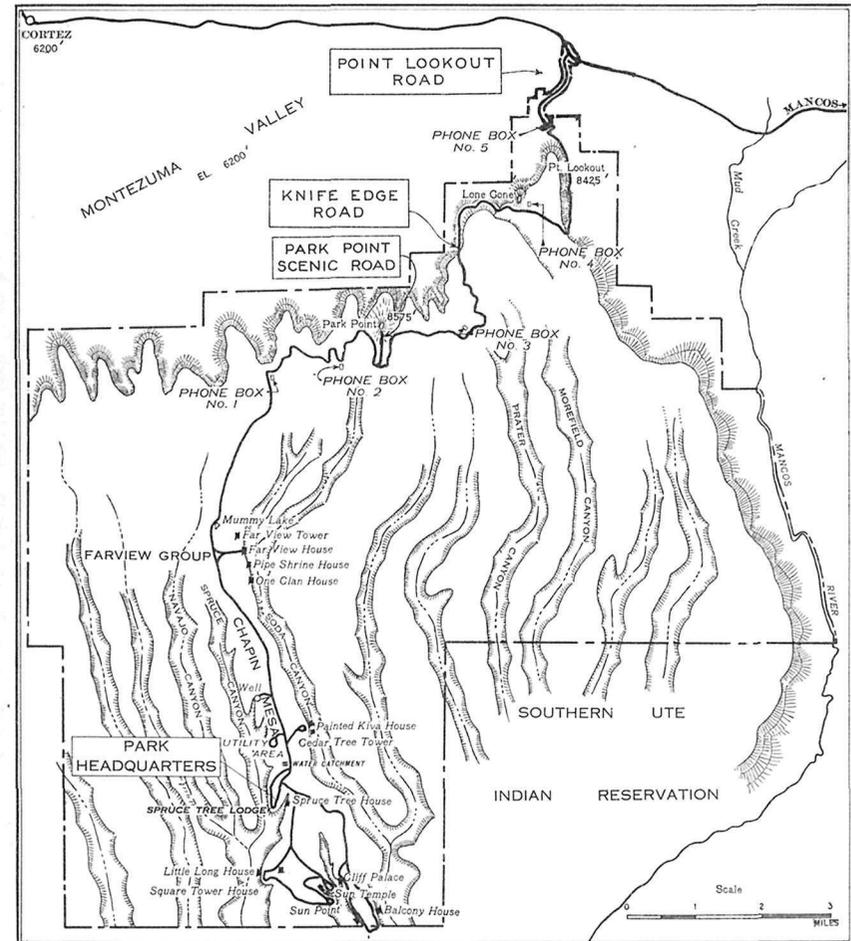
The court added to the pueblo on its south side is inclosed by a low wall. Here were probably performed, in ancient times, the many religious dances and festivals.

Far View House is but one of the 16 pueblos in the Mummy Lake group, and at the period of maximum development could have housed a large population. To the north and east, where the two branches of Soda Canyon join, another large village or group has been located, and one can almost trace the trail across the west fork of Soda Canyon to the neighboring village and imagine the dusky visitors going from one to the other in prehistoric times. Each narrow tonguelike mesa of the Mesa Verde has its ruins of either isolated pueblo structures, or adjacent groups, denoting the widespread distribution of the mesa pueblo builders.

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.

The aborigines who lived near these ruins when discovered in 1874 belong to the Utes, a Shoshonean stock who disclaimed all knowledge of the people who constructed these buildings. They avoided them as uncanny and even now can only with difficulty be induced to enter them. They have dim legends of conflicts between the earliest Utes and cliff dwellers.

Unfortunately, however, such legendary evidence is not reliable, as the general mythology of these people has been much distorted due to foreign contacts.



Road map of Mesa Verde National Park, showing important ruins on Chapin Mesa only.

OTHER RUINS NEAR FAR VIEW HOUSE

During the season, 1922, excavation and repair work, in the vicinity of Far View House, was carried on simultaneously. The following ruins were excavated: Pipe Shrine House, One-clan House, Far View Tower, Megalithic House, and Late Basket-Maker Site A.

DATES FOR MESA VERDE RUINS ESTABLISHED BY THE
TREE-RING CHRONOLOGY ²

Dr. A. E. Douglass, director of Stewart 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 and weather in turn the trees of the arid Southwest, as elsewhere, and that such affects 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 diaries of one dovetailed the outer entries of its predecessor, and in turn overlapped the diary 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 timber was the year of actual use in construction, the following dates have been established for the major cliff dwellings:

Jug 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 23 years.

² The Secret of the Southwest Solved by Talkative Tree Rings, by A. E. Douglass: National Geographic Magazine, December 1929.

DISCOVERIES OF RECENT YEARS

During the season of 1923 Roy Henderson and A. B. Hardin, while searching for a lost horse, quite accidentally located the largest and finest isolated circular watch tower yet found in the park. It is 25 feet in height, 11 feet in diameter, and partially supported by the cliff against which it is built. Loopholes at various levels command the approach from every exposed quarter. The masonry is comparable to that of the finest of the noted Hovenweep National Monument towers to the west.

Over 200 prehistoric cliff dwellers' dams have been found within a few miles of Spruce Tree Camp. They are of rough masonry construction, varying in size from a height of a few inches to 5 feet and in length from a few feet to nearly 40 feet. The interval between dams varies with the gradient of the slope of the drainage and the height of the dams. These dams impounded and conserved the melting snows of spring and the sudden downpours of summer. This impounded water seeped downward through the porous sandstone and was intercepted by a shale seam about 100 feet beneath the surface. At this lower level the water was again made available as it seeped from the exposed shale seam in the head of the canyon. The sandstone acted as a sponge and continued to give up this ice-cold filtered water weeks after the reservoirs above were dry. This basic principle of the ancient cliff dwellers has been utilized in gaining spring water for the park headquarters from the rim rock area at the head of Spruce Tree Canyon.

All excavation, restoration, and repair work in the ruins of the Mesa Verde National Park is now carried on under the direction of park officials by authority of the Secretary of the Interior.

During the winter of 1924 the north refuse space of Spruce Tree House was excavated. The early pothunters on the Mesa Verde failed to disturb this site because of darkness and dust. Funds were provided by an enthusiastic friend of the park.

Two burials, both of children, were found in the course of the excavations, one of which was partially mummified or desiccated. It was wrapped first in coarsely woven cotton cloth, then enclosed in a netting of yucca fiber cord, and finally covered with a large piece of basket weave matting. The other burial, skeleton only, was accompanied by a mug, a ladle, a digging stick, and two ring baskets filled with food.

Several corrugated storage or cooking jars of various sizes were found, together with much miscellaneous material, which are displayed in the museum. The space has been used primarily for the storage of food and as an enclosure for turkeys, compact strata of turkey droppings over a foot in thickness being found in the darkest portions of the cave.



Many ruins await the spade of the archeologist.

During January and February of 1926, when snow was available as a water supply, excavations were again carried on by park forces under the direction of Jesse L. Nusbaum. Nearly a month was spent in excavating the apparently barren section of Step House Cave where Nordenskiöld found many fine burials in 1890, and which in 1892 and until this area was made a national park had been the scene of much commercial digging and pothunting. Nearly 4 feet below the old compacted cave floor level, floors of three circular subterranean rooms were found, 15 to nearly 17 feet in diameter between the upright sandstone slabs which formed low confining walls. Stiff clay had been pressed down and molded on the tops of the upright slabs to form an even surface, or extended outward to form a narrow ledge about the room. The remains of charred poles protruded from the earth about a foot above the ledge or molding and at an angle that would cause them to intersect at a height of approximately 5 or 6 feet above the floor, indicating the method of roofing. In the two largest rooms four upright poles set in quadrangular fashion within the circular floor show the method of bracing the larger and heavier roofs. One room has a fire pit similar in location, size, and form to that of the cliff-dweller kiva.

These three rooms are the first concrete evidence that the "late basket-maker culture", probably contemporaneous if not antedating the beginning of the Christian era, inhabited the Mesa Verde. Heretofore ruins of this type had not been reported from this area.

In Fewkes Canyon, just opposite from the New Fire House, a cave roof had fallen, practically blocking off the rear portion of the cave. Cliff dwellings at one time had been built on the fallen slabs, but later were removed. To excavate this cave artificial lighting was necessary. In the very restricted area far back in the cave some excellent "late basket-maker" material was uncovered, indicating a wide distribution of this early culture on the mesa. Among the interesting objects found were two large tapered cylinders of crystallized salt. Imprints of the molders' hands are still evident.

In the great cave north of Cliff Palace, called Buried House because it was supposed a great cliff ruin was buried underneath the rock fall, trenching through the barrier proved this supposition to be wrong. A cliff-dweller kiva and several attached rooms built in the rear of the cave back of the rock fall were cleared out, and, again, in the depths of the cave potsherds of "late basket-maker" origin were found.

Although the even earlier "basket-maker culture" has been found in the same general localities in which the "late basket makers" lived, a single sandal found in the park and now in the museum is the only evidence at present that they too may have sought shelter in the caves of the Mesa Verde.

During March 1927 Bone Awl House, so named because of the excellent series of bone awls found in one of the three unique square kivas at this site, was thoroughly investigated. In addition to miscellaneous materials, one large fine coiled and indented cooking or storage jar with one cover and one large decorated water jar or olla were found. This site was mapped and photographed.

A very thorough examination was made of a small cliff dwelling near the head of an unnamed canyon, about two thirds of a mile to the south and east of Hemenway House. This ruin consisted of 3 small rooms, 1 kiva, the remaining half of a 2-story detached tower, 9 corn-grinding bins in a continuous line near the rear, and a protective or defensive wall along the front of the west half of the cave. Early pothunters had pitted over much of the debris, which was very deep in the central portion of the ruin.

The ruin is reached from the south rim of the canyon by a spectacular series of 104 hewn-out footholds in the face of the nearly perpendicular canyon wall. The upper or late cliff-dweller debris was dry, and in it was found many objects of large coiled and indented storage jars, one of which was filled with shelled corn; many varieties of cliff-dweller sandals; six stone axes; and a well-preserved mummy or desiccated body of a new-born child, with wrappings complete. In the lower depths at the 4-foot level, in damp debris, an adult burial was found, accompanied by a very fine black-on-white decorated bowl of the early pueblo period, in which had been placed three fine so-called fleshing tools of bone and one bone awl, while inverted over the head was a finely decorated bowl of a little later period.

In the circular depression just to the east of the standing half tower in which the other half had fallen, deeper excavation revealed a series of slabs on edge forming, with short intervening sections of crudely laid horizontal masonry, approximately one half of a circular inclosure of about 12 feet original diameter similar in many respects to the post basket maker home site. At the 2-foot depth a fine large slate ax was found, and at the 4-foot depth the first evidence of the undisturbed shale of the original cave floor. Potsherds of the very early and comparatively late period were both found in this pit. The site was completely mapped and photographed as the work progressed.

During March 1928 a further examination was made of ruins Nos. 11 to 19, inclusive, on the west side of the Wetherill Mesa. With the exception of the badly disturbed front terrace section of Long House, next in size to Cliff Palace, this group has been most diligently excavated and searched for artifacts.

Camp was established in the snow just above Long House and the whole series studied from this base. Collections were made of representative

potsherds from each site, the abundance of which from ruin No. 16 permitted a retroweling of all debris in this ruin to regain all postsherds therein, as well as those on the partially snow-covered talus below the ruin. The same process was followed in certain more favorable kivas in other of the ruins. One partially excavated kiva in Jug House (No. 11) and one in ruin No. 12 constituted the sole new excavation. In ruin No. 11 a rather remarkable bird pendant of hematite with eyes of small bits of rock crystal set in drilled sockets with piñon gum was found in one of the upper level rooms. From the many potsherds collected, it was possible, by restoration, to add 42 bowls and jars to the museum display from ruins not hitherto represented. Some of these are among the finest in shape, design, and workmanship so far recovered in this park.

In 1929 work was conducted in the same sites as in 1928. It resulted in the collecting of much miscellaneous material and sherds, along with a number of burials. Because of dampness, all burials were in poor condition and accompanying artifacts had been removed by early pothunters.

For several weeks during the summer travel season of 1929, Harold Gladwin, Mrs. Winifred MacCurdy, and associates of Gila Pueblo, Globe, Ariz., assisted by Deric Nusbaum of the park, conducted an archeological survey of small-house ruins on Chapin Mesa and in the more gently sloping valley heads adjacent to the North Rim on the east. This reconnaissance covered 250 sites. The location, general surroundings, and surface features of each ruin or site were described. From each site and ruin, 100 broken fragments or sherds of pottery were collected, one half of which were placed in the park museum for permanent reference and study purposes. Sites examined in this survey included sherd areas, subsurface foundations, small houses of from 1 to 10 rooms, unit-type houses as well as the larger pueblos of 50 to 75 rooms, and in range, from late basket-maker to the classical cliff-house or pueblo period. No attention whatever was directed to the major cliff dweller ruins in this survey.

PREHISTORIC INHABITANTS OF THE MESA VERDE

The so-called "Mesa Verde cliff dwellers" were not the first of the prehistoric southwestern cultures, nor were they the first human occupants of the natural caves that abound in the area of the park. Centuries before the cliff dweller civilization, with its complex social organizations, agriculture, and highly developed arts of masonry, textiles, and ceramics, it is thought that small groups of primitive Mongoloid hunters crossed from the northeastern peninsula of Asia to the western coast of Alaska. The Bering Strait, with but 60 miles of water travel, offered the safest and easiest route.

Just when these migrations to the east had their origin and how long they continued cannot definitely be said, but it is thought the earliest Mongoloid hunters were in northwestern America about ten or twelve thousand years ago. When Columbus "discovered" America the continent was inhabited from Alaska to the Strait of Magellan and from the Pacific to the Atlantic coasts.

For perhaps several thousand years following the first migrations little of great significance developed. There undoubtedly was cultural progress, but it was slow, and in the long perspective of time its evidences are hardly discernible. With the knowledge and benefits of agriculture, which was probably developed first in Mexico, hunting gave way to husbandry, nomadism to sedentary life, and there followed a great period of change and advancement. The introduction of corn or Indian maize into what is now the southwestern United States may be called the antecedent condition for all advanced cultures of the area.

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 on the west side of the park 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 now included in this national park, and they constructed their roughly circular subterranean rooms not only in the sandy floor of the caves but also in the red soil on the comparatively level mesas separating the numerous canyons. Late Basket Maker House A, formerly known as Earth Lodge A, is an excellent example of this early type of structure. Up to this time excavations have failed to uncover a single house structure of this type not destroyed by fire.

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. The course of this invention can be traced from the crude sun-dried vessel tempered with shredded cedar bark to the properly tempered and durable fired vessel.

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 and earlier type; and gradually the single-room structure was grouped in 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. This later period represents the intermediate era of development from the crude Late Basket Maker dwellings to the remarkable structures of the "Cliff House Culture."

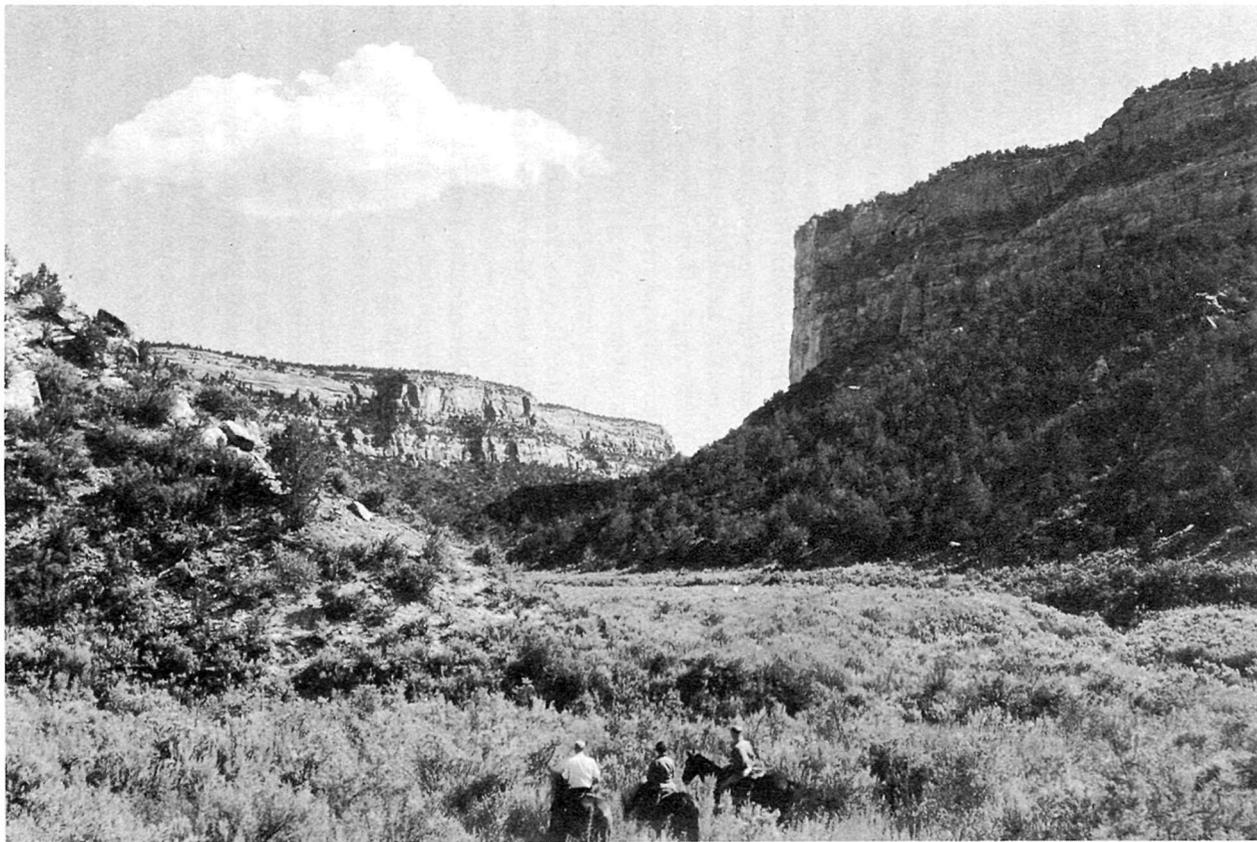
During this period of transition new people penetrated the area. The Basket Makers throughout the course of their development were consistently a long-headed group. The appearance of an alien group is recorded through the finding of skeletons with broad or round skulls and a deformed occiput. These new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

The cliff dwellers were not content with the crude buildings and earth lodges that satisfied as homes during earlier periods of occupancy. For their habitations they shaped stones into regular forms, sometimes ornamenting them with designs, and laid them in mud mortar, one on another. Their masonry has resisted the destructive forces of the elements for centuries.

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, although generally neighboring rooms were distinguished from one another by their uses. Thus, each clan had its men's room, which is ceremonially called the "kiva." Each clan had also one or more 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.



Many high-walled canyons lead to the Mancos River.

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. When necessary, because of limited space or other conditions, kivas were also built far back in the cave and inclosed by a double wall of masonry, with the walls being spaced about two and a half to three feet apart. The section between the walls was then backfilled with earth or rubble to the level of the kiva roof. In that way the ceremonial structure was artificially made subterranean, as their beliefs required.

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 gourds. This limited selection was perhaps augmented by piñon nuts and yucca fruit—indigenous products found in abundance. Nevertheless, successful agriculture on the semiarid plateau of the Mesa Verde must have been dependent upon hard work and diligent efforts. 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 they worshiped the sun as the father of all life and the earth as the mother who brought them all their material blessings.

From Dr. A. E. Douglass's tree-ring chronology the earliest date so far established for the Mesa Verde cliff dwellings is 1066 A. D. and the latest date 1274 A. D. While it should not be imagined that these are the all-inclusive dates representing the total time of the cliff-dweller culture, it is interesting to note that this same tree-ring story tells us that a great drought commenced in 1276 and extended for a 23-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.



A yucca plant in fruit (Yucca baccata).

The so-called "Aztec ruin", which is situated on the banks of the Animas River in northwestern New Mexico, substantiates this hypothesis of the voluntary desertion of the cliff dwellings. In this ruin is found unmistakable evidence of a secondary occupation which has been definitely identified as a Mesa Verde settlement.

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.

ADMINISTRATION

Mesa Verde National Park is under the exclusive control of the National Park Service of the Department of the Interior, which is authorized to prescribe such rules and regulations and to establish such service as it may deem necessary for the care and management of the park and for the preservation from injury or spoliation of the ruins and other relics of primitive 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 of its natural and historic features by a number of park rangers. The present superintendent is Ernest P. Leavitt and his post-office address is Mesa Verde National Park, Colo.

The park season extends from May 15 to October 15, complete lodging and meal accommodations and automobile stage service being available from June 15 to September 15, with informal lodging and meal accommodations 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 will be phoned to addressee at the camp. The post-office address for parties within the park during the park season is Mesa Verde National Park, Colo.

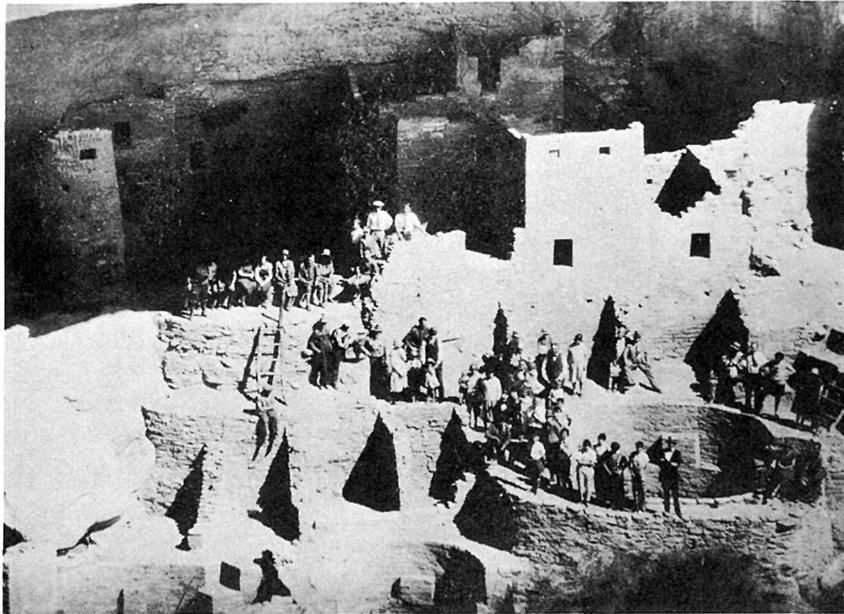
FREE PUBLIC CAMP GROUNDS

The public camp grounds are located under the piñons and juniper cedars on the rim of Spruce Canyon, one of the most beautiful canyons of the park, and but a few hundred feet from Spruce Tree Lodge and park headquarters. Individual party camp sites have been cleared on both sides of the loop road serving it, insuring a certain amount of privacy. Fine cool water from the old cliff-dweller spring at the head of Spruce Tree Canyon is piped to several convenient locations on the grounds, toilet facilities have been installed, and firewood is provided without cost to campers. A ranger is detailed for duty on the camp grounds.

The camp-ground facilities at Mesa Verde have been greatly improved and expanded through the work of the Civilian Conservation Corps.

Leave your camp site clean when you have finished with it.

Provisions for campers are obtainable at reasonable prices in any of the nearby towns. Groceries, gas, and oil can be purchased at Spruce Tree Lodge.



Competent ranger-naturalists accompany visitors to the ruins.

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.

EDUCATIONAL SERVICE

Educational service, carefully planned to provide each visitor with an opportunity to interpret and appreciate the superlative features of the Mesa Verde, is provided by the Government without charge. This service is directed by the park naturalist, assisted by a staff of ranger guides who conduct visitors through the ruins and give information about the ancient people who once dwelt in them.

RANGER-GUIDE SERVICE TO RUINS

During the season visitors will be provided with competent park ranger guides *without cost*, to accompany them from the park museum to the various ruins. Visitors will not be permitted to inspect the ruins unless so accompanied.



A party off for the less-frequented trails.

TRAIL TRIPS

Visitors who view the Mesa Verde from the automobile roads gain but an inkling of the weird beauty and surprises which this area holds for the more adventurous. Trail or hiking trips along the rim rock bordering the deep canyons lead to spectacular ruins not seen from any of the roads.

The large Wetherill Mesa and Rock Springs groups of ruins can be reached only by trail. Likewise, the ruins of the Mancos Canyon, perched on presumably inaccessible cliffs, hundreds of feet above the bed of the river, or the Holmes Tower, Sandal House, and Double Walled Tower on the floor of the valley, are reached only by trail.

Each turn and twist of the trail reveals entrancing vistas of rugged canyons, sheer cliffs, great caves, hidden ruins, distant mountains, tree-covered mesas, or open glades.

MUSEUM AND REFERENCE LIBRARY

The park museum houses a very fine collection of cliff-dweller and basket-maker artifacts obtained by excavation, loans, and gifts. This material is so arranged as to tell a comprehensive story of the prehistoric inhabitants and their environment.

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

The park museum building, the major portion of the equipment, reference library, and funds for the purpose of excavation to obtain more material, have been gifts of friends of the park.

CAMP-FIRE TALKS

The evening camp-fire talks at the Camp Fire Circle at park headquarters are informal affairs. The superintendent, the park naturalist, and the rangers give talks on the history, geology, archeology, topography, and flora and fauna of the park. Visiting scientists, writers, lecturers, and noted travelers usually contribute toward the evening's entertainment. At the conclusion of the "talks", six of the best singers and dancers among the Navajo Indians employed at camp can usually be persuaded, by modest voluntary contributions on the part of the visitors, to give three parts of the sacred Yebitchai ceremony.

HOW TO REACH THE PARK

BY AUTOMOBILE

Mesa Verde National Park may be reached by automobile from Denver, Colorado Springs, Pueblo, and other Colorado points. Through Pueblo one road leads to the park by way of Canon City, from where one may look down into the Royal Gorge, the deepest canyon in the world penetrated by a railroad and river. This road passes through Salida and on through Gunnison and Montrose, and then south through Ouray, Silverton, and Durango. This route passes through some of Colorado's most magnificent mountain scenery. Another road leads south from Pueblo through Walsenburg, across La Veta Pass, on through Alamosa, Del Norte, Pagosa Springs, and Durango, crossing Wolf Creek Pass en route. Both roads lead west from Durango to Mancos and on into the park.

Motorists coming from Utah turn southward from Green River or Thompsons, crossing the Colorado River at Moab, proceeding southward to Monticello, thence eastward to Cortez, Colo., and the park.

From Arizona and New Mexico points, Gallup, on the National Old Trails Road, is easily reached. The auto road leads north from Gallup through the Navajo Indian Reservation and a corner of the Ute Indian Reservation. At Shiprock Indian Agency, 98 miles north of Gallup, the San Juan River is crossed.

Shortly after leaving the agency tourists get their first view of Mesa Verde, the summit of which is about 8,000 feet above sea level and 2,000 feet above the surrounding country.

The road continues northward, through the fertile Montezuma Valley, to Cortez, and 10 miles east the park is entered at an altitude of about 7,000 feet.

After leaving the dry-land farms and gentle piñon- and juniper-covered slopes that border the road to the north park entrance, where automobile permits are secured, the 3-mile ascent of Point Lookout begins. Meandering back and forth up the abrupt slope, the first extended view of the Montezuma Valley is had from Windy Point. Swinging eastward, there is suddenly unfolded from the lower altitudes a most enchanting vista of the fertile Mancos Valley nestling at the foot of the sharp, rugged, snow-clad La Platas, the beauty and extent of which seems to increase proportionately with increase of altitude. Suddenly again, a great deep cut shuts off the world below; one is crossing the head of Morefield Canyon, with Lone Cone on the right, to traverse the great abrupt north slope of the Mesa Verde by the Knife Edge section of the entrance highway, from which equally unobstructed and magnificent views may be had of the great Montezuma Valley, Sleeping Ute Mountain, the distant Blues, the La Sals, Lone Cone, and the great north escarpment of the Mesa Verde.

The new Prater Grade then ascends for over 2 miles to a second abrupt north cut and thence upward again to the final crest on Park Point, from which descending grades lead through the forested areas to Spruce Tree Camp, park headquarters. Grades do not exceed 7 percent at any point. The roads are safe; the driver should be careful and heed all warnings.

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 lines through Montrose and Durango; from the south via the main transcontinental line of the Santa Fe Railroad through Gallup, New Mexico.

The lines of the Denver & Rio Grande Western System traverse some of the most magnificent scenery of the Rocky Mountain region, a fact which gives the journey to Mesa Verde zestful travel flavor. Two main-line routes are provided to the Grand Junction gateway. The Royal Gorge Route goes through the Grand Canyon of the Arkansas, now spanned by an all-steel suspension bridge, 1,053 feet above the tracks in the Royal Gorge. This route crosses Tennessee Pass (altitude, 10,240 feet) and

follows the Eagle River to its junction with the Colorado River at Dotsero, thence to Grand Junction. Service was inaugurated in June 1934 via the new James Peak Route of the D. & R. G. W., utilizing the Moffat Tunnel (altitude at apex, 9,239 feet), 6.2-mile bore which pierces the Continental Divide, 50 miles west of Denver. This route follows the Colorado River from Fraser, high on the west slope of the continent, through Byers Canyon, Red Gorge, Gore Canyon, and Red Canyon, thence over the Dotsero Cut-off to Dotsero, where it joins the Royal Gorge Route. The new line saves 175 miles in the distance from Denver to Grand Junction.

Entrance to Mesa Verde from the south through Gallup, N. Mex., is growing constantly in convenience and popularity. Its El Navajo Hotel, operated by Fred Harvey, offers excellent accommodations. Other principal points of departure from the south are Santa Fe, N. Mex., and Winslow, Ariz., the latter also on the Santa Fe main line. Both cities have exceptionally fine hotel accommodations in La Fonda and La Posada, operated by Fred Harvey.

BY AIRPLANE

Fast-scheduled airplane service from all points in the United States to Albuquerque, N. Mex., is available through T. W. A., Inc., which operates the latest type Douglas twin-engined equipment connecting with other air lines and transport media in its New York to Los Angeles service. Varney Speed Lines and Wyoming Air Service connecting with United Air Lines' transcontinental service at Cheyenne have service available to Pueblo and Las Vegas, which also affords persons of limited time a splendid opportunity to see the park.

MOTOR TRANSPORTATION

The Rio Grande Motor Way, Inc., of Grand Junction, Colo., from June 15 to September 15, operates a daily motor service from Grand Junction, Delta, Montrose, Ouray, Silverton, Durango, and Mancos, Colo., to Spruce Tree Lodge in Mesa Verde National Park. This auto stage leaves Grand Junction at 7:15 a. m., via the scenic Chief Ouray Highway, stopping en route at the other places mentioned, crossing beautiful Red Mountain Pass (altitude, 11,025 feet), arriving at Spruce Tree Lodge at 7 p. m. The stage leaves the park at 7 a. m., arriving at Grand Junction at 5:40 p. m.

The round-trip fare between Grand Junction and the park is \$26.56 if four or more persons make the trip, and increases as the number of passengers decreases.

Hunter Clarkson, Inc., from headquarters at El Navajo Hotel, Gallup, N. Mex., operates tri-weekly motor service from Gallup, a station on the

main line of the Sante Fe Railway, to Mesa Verde National Park. Cars will operate from Gallup to the park on Mondays, Wednesdays, and Fridays, during the park season, for two or more passengers. The all-expense over-night trip to Mesa Verde and return is \$46.50; children under 12, \$23.25.

ACCOMMODATIONS AND EXPENSES

At Spruce Tree Lodge, situated among the piñons and junipers overlooking Spruce, Spruce Tree, and Navajo Canyons, cottages and comfortable floored tents may be rented at prices ranging from \$0.75 to \$2 per day a person for accommodations only, and from \$4.50 to \$5.75 per day including meals. Meals, table d'hote and a la carte, at reasonable prices. Children: No charge under 3; half rates from 3 to 8. A charge of 50 cents is made for baths available at a detached bath house. The official season for Spruce Tree Lodge is from June 15 to September 15, but informal accommodations are available as early as May 15 and as late as October 15.

The company also operates, for visitors who do not care to use their own cars or are without private transportation, automobile service to various ruins for \$1 each, round trip. A special evening trip to Park Point to see the spectacular sunset from the highest point in the park is \$1.50 per person.

Pack trips.—Complete camp outfits are obtainable from the Mesa Verde Pack & Saddle Co for parties accompanied by registered guides of the company. The horses are especially trained for mountain work. A slicker, canteen, and lunch bag are included as equipment with each saddle horse. Divided skirts may be rented for 50 cents a day.

One-day trips should be arranged for the previous evening. For parties of 3 or more, the cost for each person is \$3.50; 2 persons, \$4 each; 1 person, \$6. Saddle horses may be rented for \$1 the first hour and 50 cents for each additional hour. This includes guide service. Longer 1-day trips for experienced riders only are available at \$2 per person more than the rate for the shorter 1-day trips.

Nonscheduled trips to more distant parts of the park may be arranged (2 days' notice is required) at prices ranging from \$9 a day each for parties of 5 or more to \$15 a day for 1 person. This includes a guide-cook with horse and furnishes each person 1 saddle horse, 1 pack animal, bed, tent, canteen, slicker, and subsistence for the period of 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 of the Interior are on file with the superintendent and park operator.

REFERENCES ¹

- CHAPIN, F. H. The Land of the Cliff Dwellers.² 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 1929.²
- FARIS, JOHN T. Roaming the Rockies. Farrar & Rinehart, Inc., New York. 1930. Illustrated. 333 pages. Mesa Verde on pp. 193-203.
- FEWKES, J. WALTER. Antiquities of the Mesa Verde National Park: Spruce Tree House.² (Bureau of American Ethnology Bull. 41, 1909. 57 pages, illustrated.) (Out of print.)
- Antiquities of the Mesa Verde National Park: Cliff Palace.² (Bureau of American Ethnology Bull. 51, 1911. 82 pages, illustrated.) (Out of print.)
- Excavation and Repair of Sun Temple, Mesa Verde National Park.² (Report of the Secretary of the Smithsonian Institution. 1916. 32 pages, illustrated.) (Out of print.)
- A Prehistoric Mesa Verde Pueblo and Its People.² (Report of the Secretary of the Smithsonian Institution. 1917. 26 pages.) (Out of print.)
- Prehistoric Villages, Castles, and Towers of Southwestern Colorado.² (Bureau of American Ethnology Bull. 70. 1919. 79 pages text, 33 plates.)
- GILA PUEBLO, Globe, Arizona. A Survey of Early Culture of Mesa Verde.² 1930. (Report on archeological reconnaissance of small-house ruins in 1929, not previously reported.)
- HOLMES, WILLIAM H. Report on Ancient Ruins in Southwestern Colorado Examined During Summers of 1875 and 1876. (Geological and Geographical Survey of the Territories (Hayden), Tenth Report, 1876, pp. 381-408, illustrated.)
- INGERSOLL, ERNEST. Reprint, first article. Mancos River Ruins, New York Tribune. Nov. 3, 1874; in Indian Notes, vol. 5, no. 2, April 1928, pp. 183-206, Museum of American Indian, Heye Foundation, New York.²
- JACKSON, W. H. The Pioneer Photographer.² World Book Co., 1929.
- JEFFERS, LE ROY. The Call of the Mountains. 282 pages, illustrated. Dodd, Mead & Co., 1922. Mesa Verde on pp. 96-111.
- KANE, J. F. Picturesque America, Its Parks and Playgrounds. 1925. 521 pp., illustrated. Published by Frederick Gumbrecht, Brooklyn, N.Y. Mesa Verde on pp. 173-176.
- KIDDER, ALFRED VINCENT. An introduction to the Study of Southwestern Archaeology.² 300 pages, illustrated. Yale University Press, 1924. Mesa Verde on pp. 58-68.
- Beautiful America—Our National Parks. 1924. 160 pages pictorial views. Beautiful America Publishing Corporation, New York City. Mesa Verde views, pp. 58-68.
- MILLS, ENOS A. Your National Parks. 1917. 532 pages, illustrated. Mesa Verde National Park on pp. 161-174; 488-490.
- NORDENSKIÖLD, G. The Cliff Dwellers of the Mesa Verde.² 1893. 171 pages, illustrated.
- NUSBAUM, DERIC. Deric in Mesa Verde.² 1926. Illustrated. G. P. Putnam's Sons. Knickerbocker Press.
- QUINN, VERNON. Beautiful America. 333 pages, illustrated. Frederick A. Stokes Co., New York City. 1923. Mesa Verde National Park on pp. 254-260.
- ROLFE, MARY A. Our National Parks.² Book One. A supplementary reader on the national parks for the fifth and sixth grade students. Benj. H. Sanborn & Co. 1927. Illustrated. Mesa Verde on pp. 221-234.
- SMITH, JOSEPH EMERSON. The Story of Mesa Verde National Park. 1930. 16 pages, illustrated. The Denver & Rio Grande Western R.R., Denver, Colo.
- 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.

¹ For complete bibliography apply at the park museum or write to the Superintendent Mesa Verde National Park.

² Copies in Mesa Verde Museum Library.

I N D E X

	PAGE
Accommodations	41
Administration	35
Airplane service	40
Automobile service	38
Balcony House	9
Camp grounds	35
Camp-fire talks	38
Cedar Tree Tower	19
Cliff Palace	5
Dates for ruins	24
Discoveries of recent years	25
Educational service	36
Expenses	41
Far View House	19
History	III
Hospital	36
How to reach the park	38
Library	37
Medical service	36
Motor transportation	40
Museum	37
New Fire-House Group	17
Oak Tree House	13
Other Ruins near Far View House	23
Petroglyphs	13
Prehistoric inhabitants	29
Publications, Government	44
Railroad service	39
Ranger-guide service	36
Rates	41
Regulations	II
References	42
Routes, airplane	40
Routes, automobile	38
Ruins, The	2
Rules	II
Spruce Tree House	3
Square Tower House	10
Sun Set House	13
Sun Temple	13
Superintendent	35
Trail Trips	37
Transportation	38, 39, 40, 41
Tree-ring chronology	24
What to do	IV

NATIONAL PARK PUBLICATIONS

Glimpses of Our National Parks. An illustrated booklet of 92 pages containing descriptions of the principal national parks. Address the Director, National Park Service, Washington, D. C. Free.

Recreational Map. Shows both Federal and State reservations with recreational opportunities throughout the United States. Brief descriptions of principal ones. Free.

Fauna of the National Parks. By G. M. Wright, J. S. Dixon, and B. H. Thompson. Survey of wildlife conditions in the national parks. Illustrated. Superintendent of Documents, Washington, D. C. Price 20 cents.

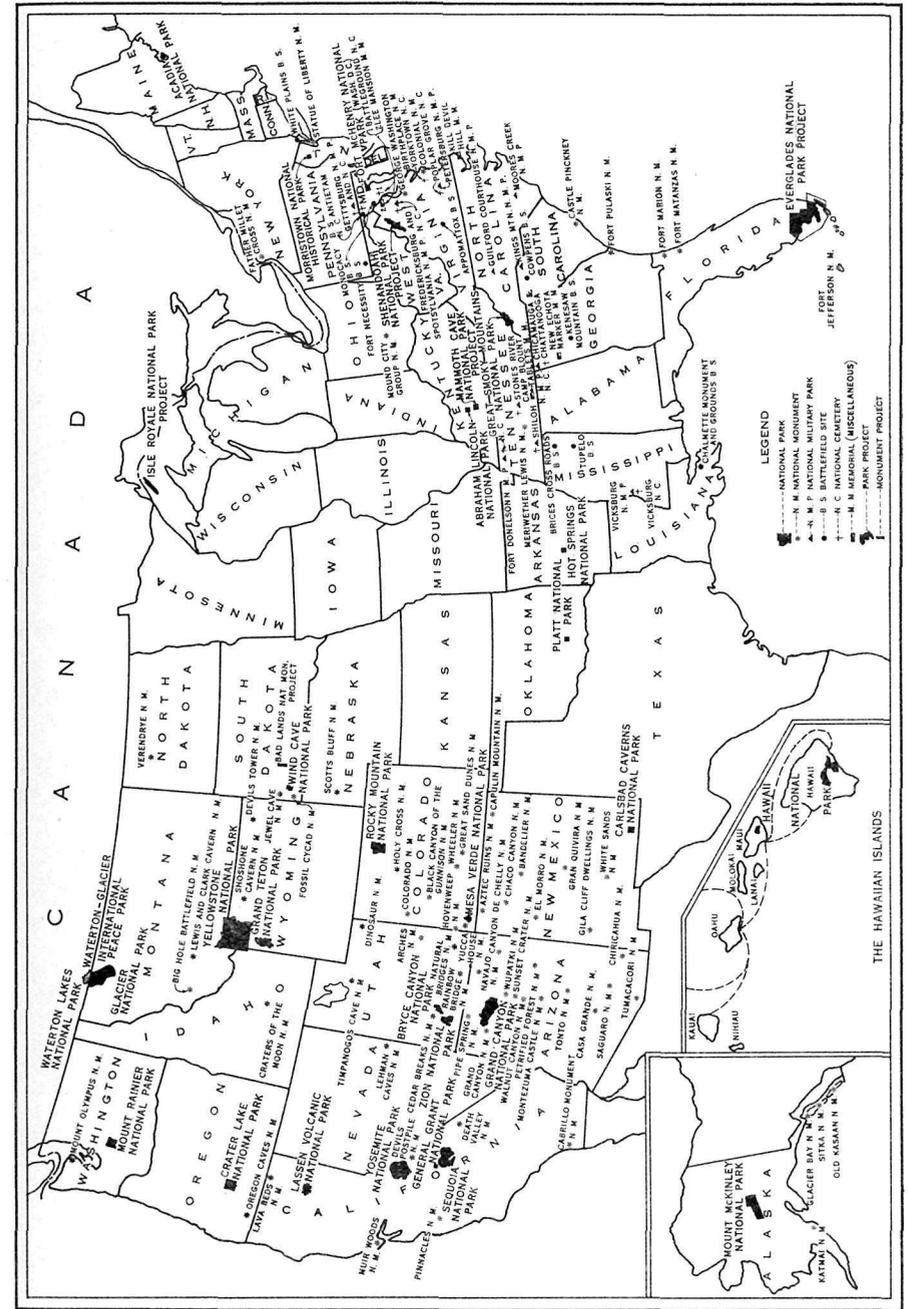
Map of Mesa Verde National Park; 43 by 28 inches; scale, one-half mile to the inch. United States Geological Survey, Washington, D. C. Price 20 cents.

Panoramic View of Mesa Verde National Park; 22½ by 19 inches; scale, three-fourths mile to the inch. Superintendent of Documents, Washington, D. C. Price, 25 cents.

National Parks Portfolio. By Robert Sterling Yard. Cloth bound and illustrated with more than 300 beautiful photographs of the national parks. Superintendent of Documents, Washington, D. C. Price \$1.50.

Booklets about the national parks listed below may be obtained free of charge by writing The National Park Service, Washington, D. C.

Acadia, Maine
 Carlsbad Caverns, N. Mex.
 Crater Lake, Oreg.
 General Grant, Calif.
 Glacier, Mont.
 Grand Canyon, Ariz.
 Grand Teton, Wyo.
 Great Smoky Mountains, 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



LOCATIONS OF 24 NATIONAL PARKS, 88 NATIONAL MONUMENTS, 10 BATTLEFIELD SITES, 2 NATIONAL CEMETERIES, AND 4 MISCELLANEOUS MEMORIALS ADMINISTERED BY THE NATIONAL PARK SERVICE.

