



MESA VERDE

N A T I O N A L P A R K

Colorado

Mesa Verde

NATIONAL PARK

COLORADO

SEASON—MAY 15
TO OCTOBER 15

Contents

Bird's-eye View of Cliff Palace	Cover
Prehistoric Inhabitants of Mesa Verde . . .	5
Discovery and Early History	8
The Ruins	9
Cliff Dwellings	11
Geology, Fauna, and Flora	21
How To Reach the Park	23

Motor Transportation	24
Administration	25
Educational Service	26
Free Public Campgrounds	27
Horseback and Hiking Trips	27
Hospital and Medical Service	28
Accommodations and Expenses	28
Out-of-Season Accommodations	28
References	30

RULES AND REGULATIONS

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

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

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

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

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. This precaution is necessary because of danger of getting lost and need of protecting ruins.

Noise.—Be quiet in camp after others have gone to bed.

Hunting.—Hunting is prohibited, since the park is a sanctuary for all wildlife.

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

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

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

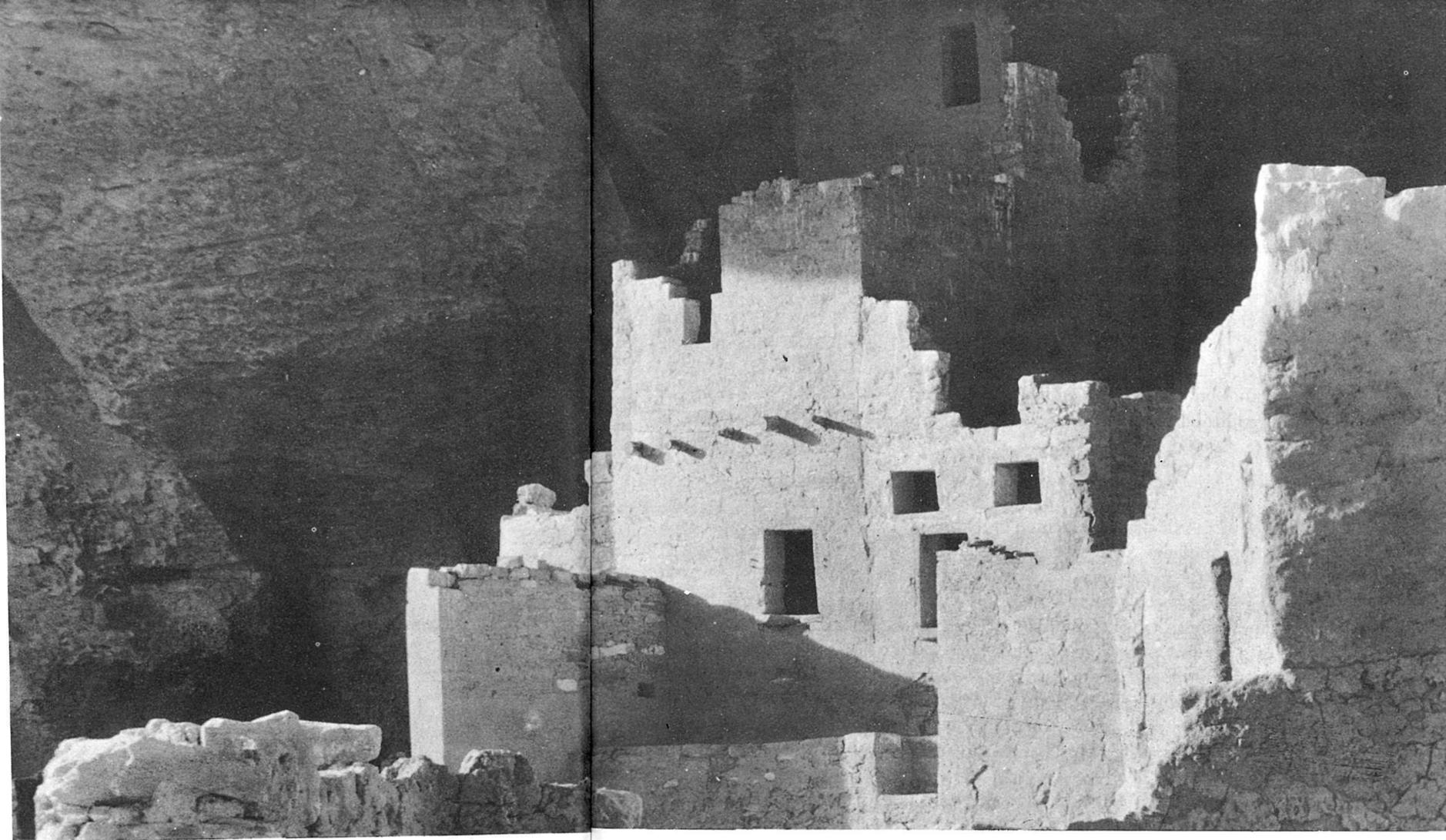


UNITED STATES DEPARTMENT OF THE
INTERIOR - - - Harold L. Ickes, *Secretary*

NATIONAL PARK SERVICE

Arno B. Cammerer, *Director*

THE
SPEAKER
CHIEF'S
HOUSE



THE Mesa Verde, or green tableland, so-called because juniper and piñon trees give it a verdant tone, is 15 miles long by 8 miles wide. Rising abruptly from valleys on the north, east, and west, its top slopes gradually southward to the high cliffs bordering the canyon of the Mancos River. Into this open a number of precipitous high-walled canyons through which occasionally, in times of heavy rain, raging torrents of water flow into the Mancos. In the shelter of caves eroded in the walls of these canyons are some of the best-preserved cliff dwellings in America, built many centuries ago by a tribe of peace-loving Indians who prized the security offered by the almost inaccessible homesites. Properly to protect this land of weird beauty and to preserve its notable cliff dwellings, and other resources of human pre-

history, Mesa Verde National Park, in extreme southwestern Colorado, was created by act of Congress, approved June 29, 1906.

PREHISTORIC INHABITANTS OF THE MESA VERDE

Mesa Verde is known to have been inhabited by two principal groups of sedentary prehistoric Indians. The first group, the Basket Makers, lived in the region from about the beginning of the Christian era until approximately 700 A. D. The Pueblo Indians came in at that time and remained until almost 1300 A. D. In order more readily to identify sequent stages of cultural evolution, each of these two major groups has been further divided into two periods or phases. Thus the prehistoric occupation of the Mesa Verde falls into four archeological periods.

THE BASKET MAKERS—1 TO 400 A. D.

These were the first farming Indians to live in the Mesa Verde. Formerly hunters, they turned more and more to farming, raising corn and squash on the mesa tops. Only a few traces of these people have been found in the caves of the Mesa Verde as their remains are now covered by the cliff dwellings. The Basket Makers were short and slender and were, for the most part, long headed. In the beginning their culture was very simple. Pottery was unknown, and baskets served for all household purposes. The excellence of the baskets gave the name to the culture. The atlatl, or throwing stick, was used instead of the bow. The Basket Makers lived principally in the open caves, building small storage cysts in the cave floors. They showed remarkable ability to develop new ideas and traits. All through this period there is evidence of progress, and finally a new name is given to the people.

THE MODIFIED BASKET MAKERS—400 TO 700 A. D.

These were still the same people, but the culture was modified by certain new developments. The three most important additions were pottery, houses, and the bow and arrow. Pottery was of a plain gray type and it supplanted basketry for many usages, such as cooking and water carrying. The house consisted of a shallow pit covered with a head-high superstructure of poles and earth. Each house served as the home for a single family. The atlatl disappeared, and the bow and arrow, a superior weapon, took its place. All during the Modified Basket Maker period there is much evidence of cultural development. The people now depended almost entirely upon farming; beans, squash, and several colors of corn being grown.

The population seems to have grown rapidly and soon there were hundreds of villages on the mesa tops and in the caves all over the Four Corners region. Toward the end of the period new influences are apparent. Another group of Indians began to drift into the region. The Modified Basket Makers began to disappear, to be replaced by a new group of Indians whom we call Pueblos.

THE DEVELOPMENTAL PUEBLO PERIOD—700 TO 1000 A. D.

The new people were of a different physical type, being short and heavy-set. Most of them had broad, deformed heads. Because of a tendency to construct their houses in large compact groups, they are called Pueblos, the Spanish name for small village. The term Developmental merely means that the Pueblo culture was going through its formative stages.

These people picked up where the Modified Basket Makers left off; but soon new houses developed, rectangular structures with vertical side walls and flat roofs. Several types of walls were built; mud, mud and poles, stone slabs topped with mud, alternating layers of mud and stones, and finally walls of horizontal masonry. The houses were joined in long rows, and in the courts in front were one or more pit houses that eventually became kivas, the men's secret ceremonial rooms.

Pottery improved during this period, and many different types of well-decorated wares were made. The turkey was domesticated, and the weaving of turkey feather blankets and cotton cloth began. This was a period of great expansion. Thousands of farming villages dotted the entire region, the population increased rapidly, arts and crafts improved, later to establish the great classical period.

THE GREAT OR CLASSIC PUEBLO PERIOD—1000 TO 1300 A. D.

During the eleventh century a large portion of the Pueblo Indians of the Mesa Verde moved into the most desirable caves and built the cliff dwellings. Those remaining on the mesa tops gathered in groups and built large, stone pueblos. All evidence points to their having been harassed by more warlike nomadic Indians. During the period arts and crafts reached the peak of their development. Walls were of fine horizontal masonry, and the villages were terraced structures ranging from only a few to as many as 200 rooms. Some of the houses reached a height of four stories. Kivas were constructed in open courts, one single village having as many as 23 of these ceremonial rooms. The pottery was the finest made by these people, being well-shaped, carefully fired, and beautifully decorated with geometric and animal figures. The cotton cloth was often elaborately decorated. A rigid, matriarchal social structure developed, and a highly ritualistic religion evolved. This religion became so important in the lives of the people that separate buildings, designed solely for ceremonies, were sometimes constructed.

For a time the culture flourished, establishing a cultural peak, of spectacular archeological significance, the great or classic period of prehistoric pueblo civilization for the Mesa Verde region. In the late stages, however, there are evidences of decay. Conditions in the caves probably were not as sanitary as in the earlier villages on the mesa tops, and disease seems to have become more prevalent. Nomadic Indians harassed the peaceful farmers more and more, and the population began to dwindle.

The end came quickly. Beginning in the year 1276 A. D. drought struck the region. For 24 consecutive years precipitation was deficient. Year after year the crops failed, one by one the springs dried up, and soon the

people were in serious trouble. Their only escape was to seek regions with more dependable water supply. Village after village was abandoned, and long before the drought ended all of the Cliff Dwellers had left the Mesa Verde, never to return.

They drifted southward and eastward where today, along the Rio Grande in New Mexico, and on west to the Hopi country in northern Arizona, live the modern Pueblo Indians. Without a doubt some of the blood of the former inhabitants of the Mesa Verde flows in the veins of these people.

DISCOVERY AND EARLY HISTORY

Five hundred years after the disappearance of the Cliff Dwellers, white men first began to drift into the Mesa Verde region. During the intervening years the cliff dwellings stood unmolested. The later Indians, Navajo and Ute, seldom went near them because of a superstitious fear of the spirits of the vanished people.

In 1776 Father Escalante, Franciscan priest, in his unsuccessful attempt to explore a new route to the Pacific, passed through this region and, according to his journal, camped for a night on the Mancos River within a few miles of the plainly visible great Mesa Verde escarpment. Although the name is Spanish, it is not known who of later explorers named it, nor are there records of any having climbed to its top.

In 1859 the American soldiers came into the region. The first known mention of the Mesa Verde is in the report of Capt. J. N. Macomb, who explored the region just north of the mesa. In 1872 the Mancos Valley, lying at the foot of the Mesa Verde, was settled, but because the mesa was a stronghold of the warlike Ute Indians many years passed before the cliff dwellings were discovered. W. H. Jackson led a Government photographic survey party through the Mancos River Canyon in 1874 and explored some very small cliff dwellings in the side walls of this canyon. A year later Prof. W. H. Holmes, later chief of the Bureau of American Ethnology, passed through the Mancos Canyon and in his report mentioned remarkable stone towers he had seen. None of these explorers ventured into the numerous side canyons of the Mancos and they missed entirely the great cliff dwellings which, in the words of Baron G. Nordenskiöld, the noted Swedish archeologist, who explored the ruins in 1891, are "so magnificent that they surpass anything of the kind known in the United States."

In the late eighties cattlemen began to penetrate the Mesa Verde and to them goes the honor of discovering the large ruins. On a cold December day in 1888, two cowboys, Richard Wetherill and Charles Mason, were riding along a mesa top searching for lost cattle. Coming to the edge of a



FAR VIEW HOUSE

canyon they suddenly found themselves gazing upon a "great stone city" that stood in a great cave in the opposite canyon wall. This first ruin they named Cliff Palace, and subsequently it proved to be the largest of all cliff dwellings. In the years that followed, the five Wetherill brothers and their cousin, Charles Mason, discovered hundreds of the cliff dwellings, and equally numerous pueblo ruins on the mesa tops, excavating and removing collections from many of them.

In 1906, 18 years after the discovery of the ruins, the area was set aside as a national park and the period of research and development began.

THE RUINS

Visitors to the Mesa Verde should see at least one ruin of each type; earth lodge, pueblo, and cliff dwelling. These ruins, taken in order, show not only the type of house in which the various peoples lived, but also the amazing progress made by them during the time they lived in the Mesa Verde.

EARTH LODGE A

This is a typical example of the Modified Basket Maker houses. Although it once had a roof of poles and earth as high as a man's head, nothing remains but the underground part of the house. The pit is 17 feet in diameter and 30 inches deep, with a fire pit in the center. In the floor of the room, forming a large square, are four holes. In each of these the builders placed a post that stood as high as their heads. The top of each was forked. A small log, across the top of one post to the next, formed a square framework just above the builders' heads. Slender logs were leaned from the edge of the pit to this framework entirely around the room, and other logs

were placed across the flat top. When these logs were covered with brush or reeds and several inches of earth, a substantial roof resulted. Most of the earth lodges had low tunnel entrances under the south wall; in some the only entrance was through the smoke hole in the center of the roof. Small storage bins made of stone slabs were often built around the walls of the room.

Each of these houses probably served as the home of a single family. They were built in small groups both in the caves and on the mesa tops, and hundreds of the villages were scattered over the Mesa Verde region.

FAR VIEW HOUSE, A MESA VERDE PUEBLO

This large pueblo, adjacent to the main entrance highway 4½ miles north of the park museum, is an example of the villages that were built on the mesa tops during the Classic Pueblo Period. The Pueblo Indians who did not go into the caves during this period remained on the mesa tops and assembled in large groups for mutual protection. The pueblos they built, while structurally identical with the cliff dwellings, were in the open instead of in caves.

On the south side the building was only one story high but the rooms rose in terraces until a height of three stories was attained on the north side. In front of the building was a large walled-in court which served as a ceremonial dance court and as a place for daily activities.

Far View House, in common with the cliff dwellings, was made up of living rooms and kivas. The living rooms were rectangular and in them were found fire pits, grinding stones, pottery, and tools used by the women in their daily household routine. Each room was once covered with a flat roof of poles and clay. Many of the activities took place on these roofs.

In the center of this mass of living rooms is a kiva 32 feet in diameter and around it are three smaller kivas. This arrangement might indicate that each clan had a small kiva of its own, and in major ceremonies, in which all of the clans worked together, the large ceremonial room was used. These ceremonial rooms were used by the men, and since the ceremonies were of a secret nature the kivas were originally roofed over. Details of this roof construction are given in the description of Spruce Tree House that follows. Each kiva roof formed an open court and many activities were carried on there.

Near Far View House are a number of smaller excavated pueblo ruins: Pipe Shrine House, One Clan House, Far View Tower, and Megalithic House. Also nearby are at least 15 unexcavated ruins. This grouping of the villages indicates that the population was beginning to concentrate in the more favorable places. During the Classic Pueblo Period it seems that

some other tribe of Indians began to prey upon the peaceful, farming Indians of the Mesa Verde. Most of the inhabitants went into the caves and built the cliff dwellings, while those remaining on the mesa tops gathered in large groups and built the high-walled defensive type pueblos for protection from their enemies.

CLIFF DWELLINGS

SPRUCE TREE HOUSE

Spruce Tree House, located in a large cave just across Spruce Tree Canyon from the museum, has been made readily accessible by a short winding trail. This is the only excavated cliff dwelling in the park that may be visited without going on a conducted tour, and is open to the public at all times. A ranger is always on duty to protect the ruin from vandalism and to give information to the visitors.

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

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

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

Spruce Tree House has more walls that reach the top of the cave than any other ruin in the park. All through the central part the walls were three stories high, the top of the cave serving as the roof of the upper rooms. One- and two-story structures usually required a ceiling of heavy rafters running lengthwise of the rooms. These were covered with a crosswise layer of small poles and withes as a support for an average 3-inch floor of clay. Very often a small hatchway was left in one corner of the ceiling. A short ladder leaning in the corner of the lower room gave access to the room above.

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

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



SPRUCE TREE HOUSE, A COMMUNITY DWELLING OF 114 ROOMS

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

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

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

Two or three feet from the fire pit, and in a straight line with the ventilator shaft, the deep recess, the deflector, and the fire pit is a small hole in the floor of the kiva. This hole is usually about 3 inches in diameter and from 4 to 6 inches deep; its walls and bottom often covered with a smooth layer of mud. In the present-day kivas this hole is known as the "sipapu," and is considered to be the symbolic entrance to the underworld. The kiva was a combination ceremonial, club, and workroom for the men. Even in the present-day villages the women are rarely allowed to enter the kivas because of the fact that the men take almost entire charge of the religious work. It is believed that each clan had its own kiva. It may be noted that in almost every case the kiva is surrounded by a group of living rooms. The members of the clan no doubt lived in these rooms and the men held their ceremonies in the adjoining kiva. Two of the kivas in

Spruce Tree House have side entrances that lead to nearby rooms. These rooms may have been the homes of the priests or dressing rooms for them.

Twenty-one of the roof beams in Spruce Tree House have been dated by tree-ring chronology. These dates show that the houses were constructed during the years between 1230 A. D. and 1274 A. D. In 1276 A. D. a 24-year period of drought began that caused the cliff dwellers to move to regions where there was a more permanent supply of water.

CLIFF PALACE

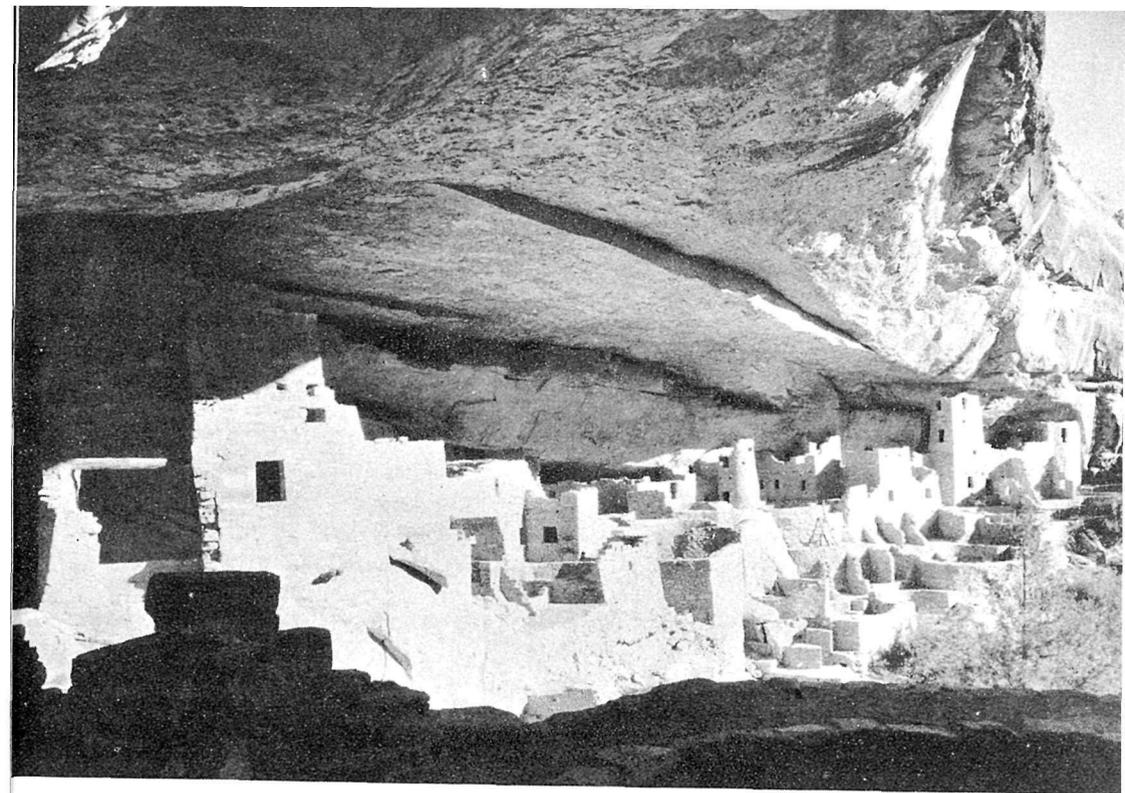
Cliff Palace lies in an eastern spur of Cliff Canyon under the roof of an enormous cave that arches from 50 to 100 feet above it. The floor of the cave is elevated about 200 feet above the bottom of the canyon and is just under the rim of the mesa. The entrance of the cave faces west, toward a great promontory upon which stands Sun Temple. The total length of the cave is over 300 feet and its greatest depth is just under 100 feet. The vaulted roof is so high that the cave is always light and airy, offering a perfect homesite to the Cliff Dwellers who were seeking protection from the elements as well as from their enemies.

Cliff Palace, the largest known cliff dwelling, has more than 200 living rooms still in evidence. To provide for an increasing population, second-, third-, and even fourth-story rooms were superimposed on the single-story structures that probably predominated at the beginning of the occupation of the cave. Near the south end of the ruin is the tallest structure, a four-story tower that reaches the cave roof. In the third-floor room of this tower is the finest painting yet found in the Mesa Verde. The entire inner surface of the four walls is covered with bright red designs on a white background.

Twenty-two kivas are located in the cave, and another is thought to have been used by the men living in the cave.

As the inhabitants of Cliff Palace were forced to store enough corn each fall to last until the next harvest, many storage rooms were constructed. Any nook or cranny that was too small for a home was utilized for that purpose. High up under the roof of the cave, at the back, was a long narrow shelf that was defensively walled off and used as storage space. The outstanding structure in Cliff Palace is the two-story round tower that stands just south of the center of the cave. Every stone in this tower is rounded to conform both to the curvature of the walls and their graceful taper toward the top. This tower is one of the finest example of masonry in the region.

Since Cliff Palace is the largest of the cliff dwellings, its former population is of special interest. A close inspection of the rooms in the ruin



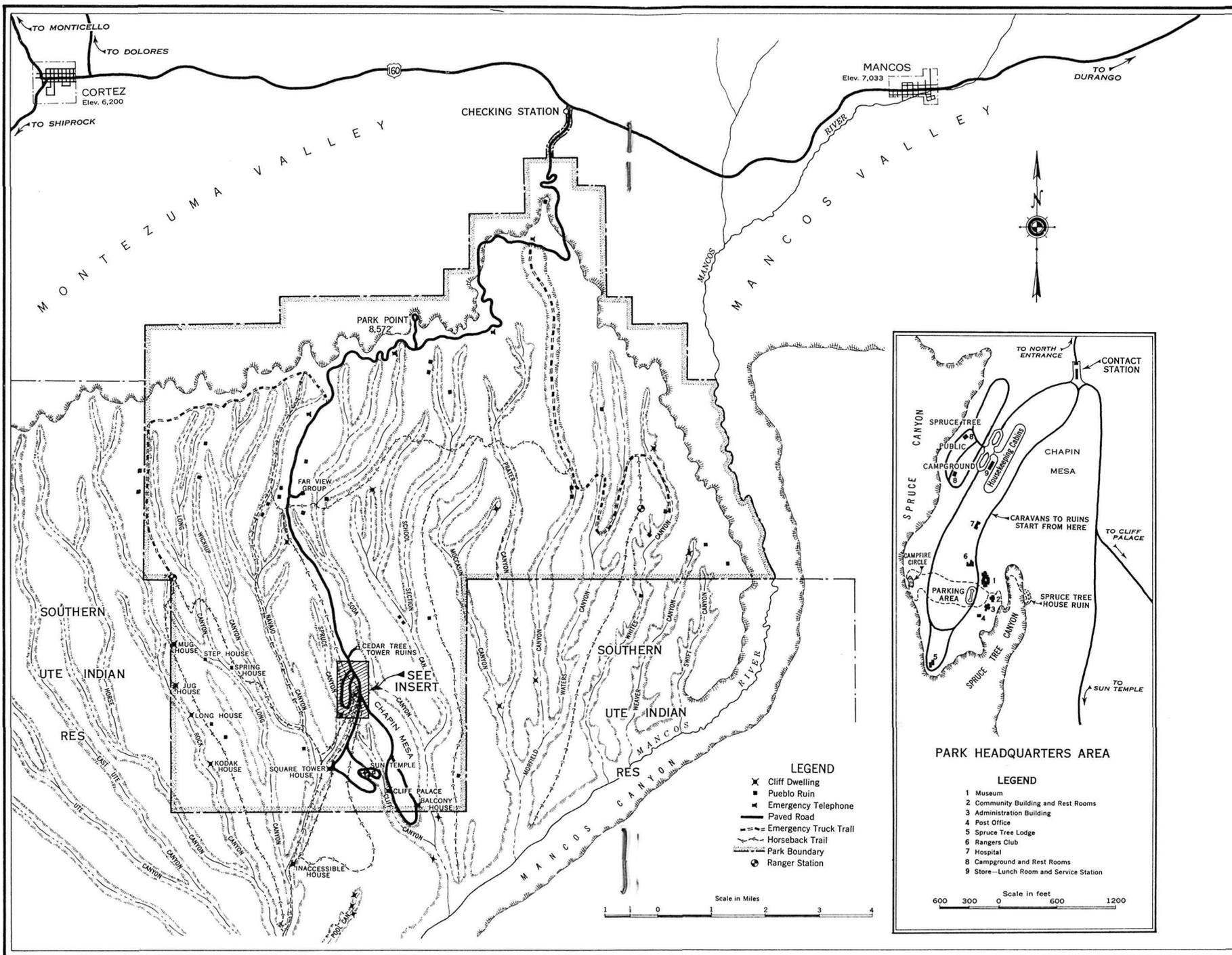
CLIFF PALACE

shows that they are smaller, on the average, than the rooms in any of the other large cliff dwellings in the Mesa Verde. An average of 2 to the room would give a population of 400; an average of 3 would place 600 in the cave. If most of the rooms were occupied at one time and if the average of 2 or 3 to the room is not too high, it would seem that a total population of 400 would not be too great.

BALCONY HOUSE

Balcony House is located in a high cave on the west wall of Soda Canyon. It is one of the most picturesque of the ruins and was one of the most nearly perfect villages developed by the Cliff Dwellers.

One of the outstanding features is the defensive location. The only entrance was a narrow ledge running several hundred feet along the face of the cliff. At one point the ledge passed through a long narrow crevice. The inhabitants built two high walls in this crevice, leaving only a small tunnel through which they crawled on hands and knees. Above this tunnel was a platform on which the defenders stood. Loopholes enabled



MAP OF MESA VERDE NATIONAL PARK

them to keep watch along the ledge and to shoot directly down on anyone attempting to crawl through the fortified tunnel entrance.

In addition to its defensive location, Balcony House has other interesting features. Many of the walls are of exceptionally good masonry, and several of the original roofs are in perfect condition. The balcony, from which the ruin was named, is the finest that has been found. Along the front of the northern court was a low parapet wall that protected the children from falling over the sheer cliff in front. In the rear of the cave was a spring that gave the inhabitants an abundant flow of good water.

Balcony House was not a large cliff dwelling, comprising only 33 living rooms and 2 kivas. However, it was one of the most perfect of all when considered from the viewpoint of its inhabitants.

SQUARE TOWER HOUSE

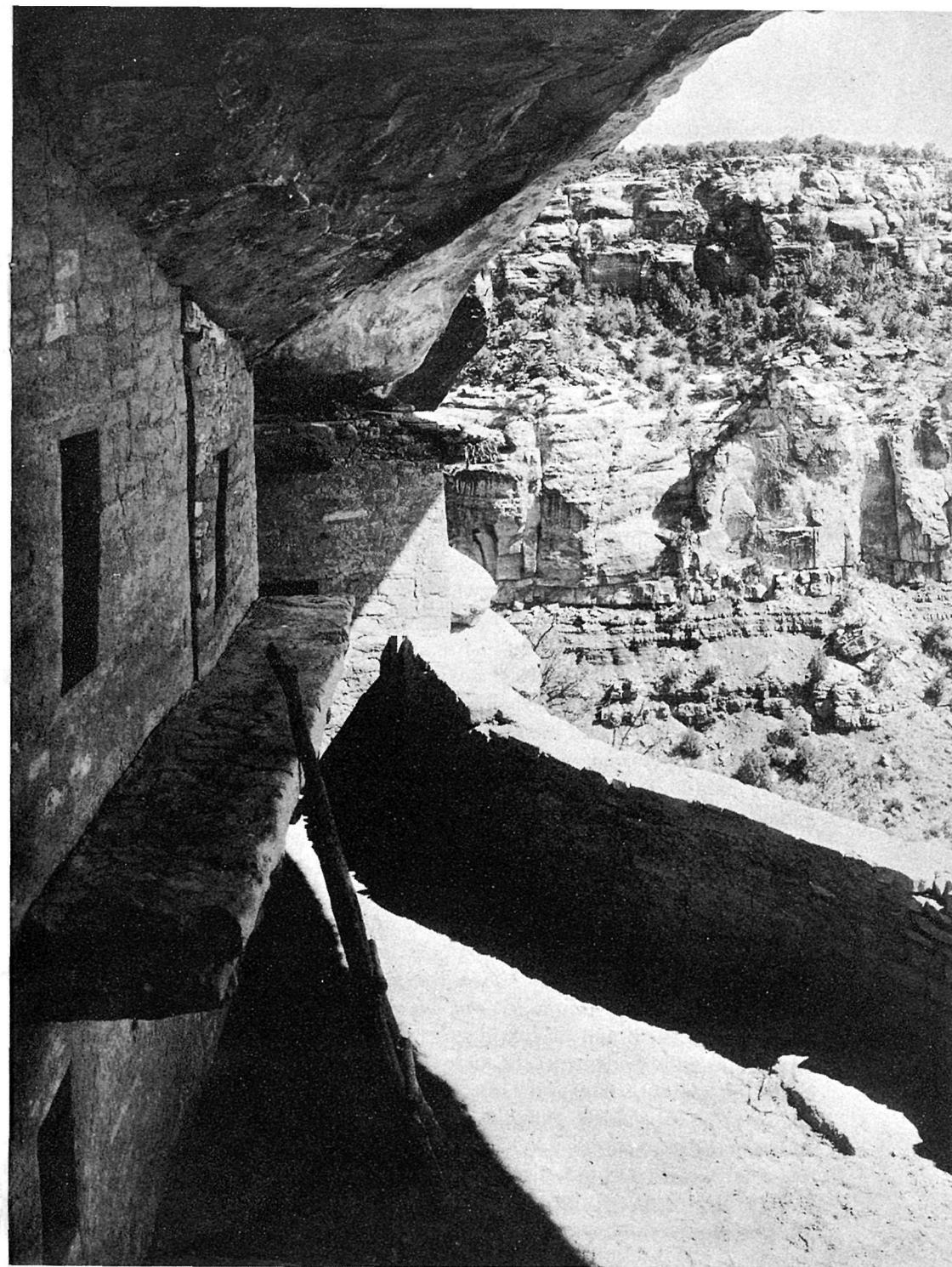
Square Tower House is situated in a shallow cave on the east wall of Navaho Canyon, opposite the prominent point that is called Echo Cliff. It formerly contained about 50 rooms and 6 kivas and is particularly interesting because of its high tower and the remarkable state of preservation of two of its kiva roofs.

The tower, rising to a height of four stories, is the most conspicuous feature of the ruin. It is built against the almost perpendicular rear wall of the cave, the cliff forming the back wall of the tower. Towers of this type were not at all unusual in the cliff dwellings. As the population grew, the people were forced to add upper stories. This tower consisted of four living rooms, one above the other. Two of the kivas in Square Tower House are remarkably preserved. Not only are the stone work and plaster in good condition but over one-half of the original roof of each is still in place. These original roofs provided the pattern for the reconstructed kiva roofs in Spruce Tree House.

FEWKES CANYON RUINS

Four interesting cliff dwellings are located in this small spur of Cliff Canyon. Near the head of the canyon is Fire Temple, which is one of the most remarkable of the ruins. Because of its symmetrical plan, its wealth of paintings, and its lack of pottery, grinding stones, tools, and other artifacts usually found in dwellings, Fire Temple was obviously erected for ceremonial purposes. Certain of its arrangements and paintings reminded Dr. Fewkes, who excavated the ruin, of features he had observed in the Modern Hopi fire ceremonies, so he called it Fire Temple.

Only a short distance from Fire Temple is a small cliff dwelling called New Fire House. It is composed of two caves, one above the other. In



BALCONY HOUSE

the upper cave were a number of living rooms and in the lower, a few living rooms and three kivas. Down the canyon a short distance from this ruin in a deep, well-arched cave is Oak Tree House, a ruin of about 30 living rooms and 7 kivas. South of this building, and directly under Sun Temple, is Mummy House. Although this cliff dwelling once contained a large number of rooms it is now badly fallen because the shallow cave does not protect it from the elements. One small, well-preserved tower was built high up on the face of the cliff. The finding of the well-mummified body of a small child caused the excavators to name it Mummy House.

SUN TEMPLE

Sun Temple is situated west of Cliff Palace on the promontory formed by the confluence of Cliff and Fewkes Canyons. It is a unique structure believed to have been constructed not for habitation but for the performance of rites and ceremonies. Presumably it was a cooperative enterprise, for it is within a half mile of 14 cliff dwellings, and trails up the cliffs indicate that the people of these villages and adjacent pueblos built and used Sun Temple.

The building seems to have been constructed in two sections. The main part is in the shape of the letter D. Just inside the outer wall, and separated from it by a narrow passageway, is a paralleling wall that forms an inner D. This main part of the structure shows careful planning, the entrance recess, the two kivas, and the arrangement of small rooms in the surrounding passageway forming a symmetrical structure. Added to the west end of this main building is a third kiva surrounded by a dozen oddly shaped rooms. The addition was made in such a way that the D-shaped form was perpetuated.

The ruin is 131 feet long and 64 feet wide. The walls average 3 feet in thickness and range in height from 3 to 12 feet. It is believed that all of the walls except those of the first two kivas were 12 or 14 feet high. No part of the building was ever roofed over, and nothing was found in it except two stone axes. Dates for Sun Temple can not be obtained because of the absence of roof beams. When discovered the building was entirely covered with earth and on the highest wall grew a 380-year-old juniper tree. This gives evidence of the antiquity of the building.

On the upper surface of a large rock protruding from the base of the southwest corner of the building a peculiar depression, surrounded by radiating ridges, was found. To primitive minds, this may have appeared as a symbol of the sun and, therefore, deemed an object of great significance, to be protected as a shrine. This natural impression may have prompted Dr. Fewkes in the naming of this ruin.

OTHER MESA VERDE RUINS

In addition to the ruins described above, visitors to the Mesa Verde see many others, including Echo House, Little Long House, Sunset House, Many Windows House, Hemenway House, and a score of unnamed cliff dwellings. They comprise only a small part of the four or five hundred cliff dwellings of the Mesa Verde. Not more than half of these ruins have been visited since they were first discovered and entered by the cowboys 50 years ago. Some of the more distant canyons have not been thoroughly explored, and it is probable that careful search will reveal hitherto undiscovered cliff dwellings.

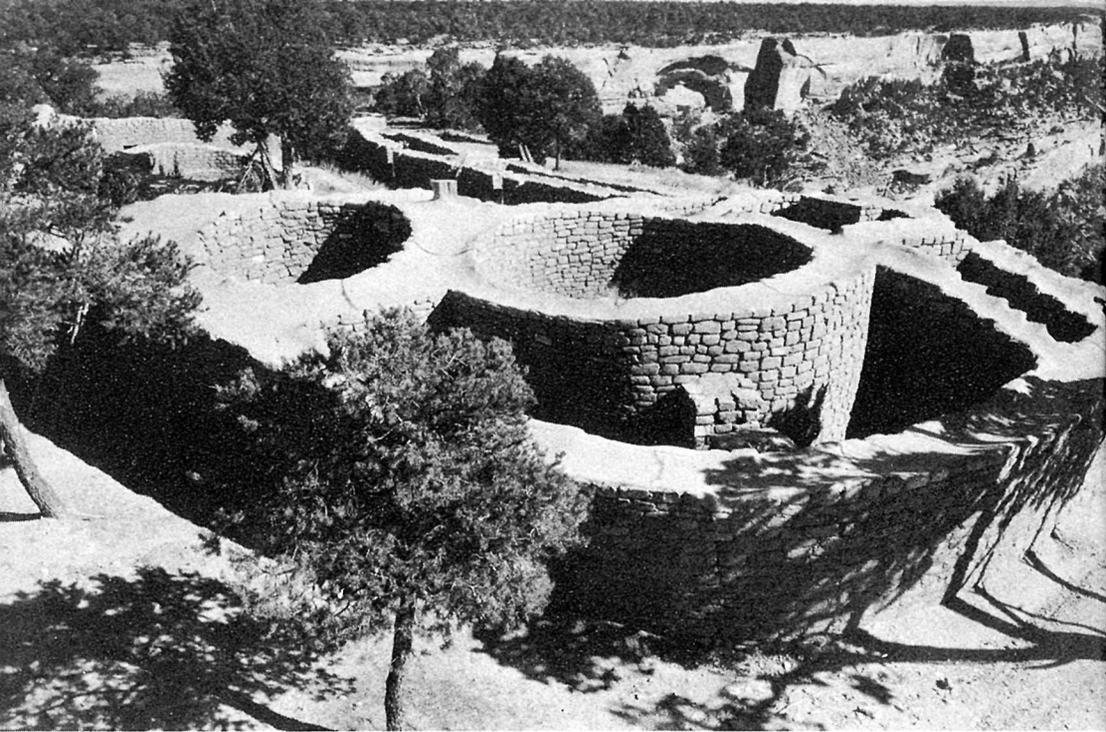
In addition to the ruins in the caves, many hundreds of pueblo ruins stand on the mesa tops. These usually elude the eye of the uninitiated visitor, as most are now covered by mounds of earth on which trees and shrubs are growing. The exact number of these ruins is not known, but if those of both the Developmental and Classic Periods are considered, an estimate of 1,500 for the Mesa Verde is not too high. After the great forest fire of 1934 had consumed vegetative growth, many of these ruins were seen for the first time. Two especially fine watch towers were also revealed by the fire.

Of the Modified Basket Maker sites there are untold hundreds; no possible estimate can be made. In the caves they are now hidden by the superimposed cliff dwellings, but on the mesa tops can be detected the evidences of hundreds of ruins that lie just below the surface.

Relatively few of the ruins have been excavated. Early explorers did considerable sporadic digging, and in 1891 Baron Nordenskiöld partially excavated a few. Since the area was created a national park, 4 Modified Basket Maker houses, 7 pueblos, and 20 cliff dwellings have been excavated.

GEOLOGY, FAUNA, AND FLORA

Mesa Verde is important geologically as the type locality of the Mesa-verde formation and Mancos shale of the Upper Cretaceous series. The Mesaverde formation, capping the plateau, consists of the Cliff House sandstone, the lignite layers and carbonaceous shales of the Menefee and the Point Lookout sandstone, named in descending order. It is underlain to a depth of more than 2,200 feet by the shale, sandstone, and limestone strata of the Mancos formation. All strata are extensively exposed within the park. Near the close of Cretaceous times, these formations were uplifted thousands of feet and tilted to the south. Igneous dikes that pierce the formations are indicative of the volcanic processes which also affected the area. Through millions of years, surface waters, aided by heat, cold,



SUN TEMPLE

chemical action, and wind, have produced, through the process of erosion, the series of precipitous canyons and adjacent plateaus for which the Mesa Verde area is noted.

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

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

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

Among the interesting animal residents of Mesa Verde are the reptiles.



NARROW LEDGE FURNISHED DEFENSIVE HOME SITES FOR LITTLE LONG HOUSE

The lizards are represented by the horned lizards, the collared lizards, the striped race runners, utas, and the swifts. The common snakes are the bull snakes, the smooth green snakes, the western striped racers, the prairie rattlesnakes, and the western garter snakes.

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

HOW TO REACH THE PARK

BY AUTOMOBILE

Roads approaching Mesa Verde National Park from all directions offer motorists a great diversity of spectacular western scenery. Those from the north and east cross not only the Continental Divide but a number of

the magnificent mountain ranges of western Colorado. Those from the west and northwest pass through the colorful mesa country of southeastern Utah, while roads from the south and west cross the picturesque, semidesert areas of the Navajo, Ute, and Pueblo Indian Reservations of Northern New Mexico. All of these primary roads are improved highways with either gravel or oil surfacing.

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

BY RAILROAD

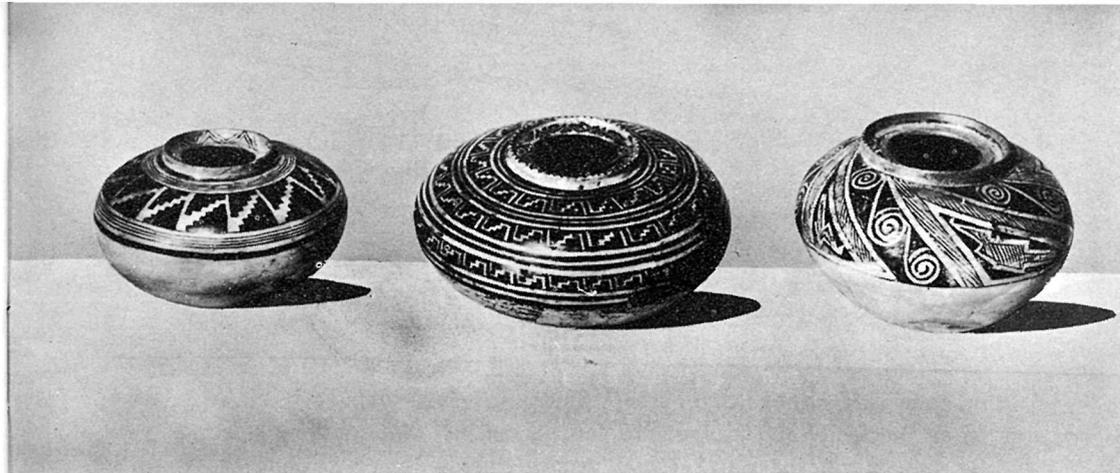
Mesa Verde National Park is approached by rail both from the north and from the south: From the north via the Denver & Rio Grande Western Railroad main transcontinental line through Grand Junction, and branch lines through Montrose or Durango; from the south via the main transcontinental line of the Santa Fe Railroad through Gallup, N. Mex.

MOTOR TRANSPORTATION

The Rio Grande Motor Way, Inc., of Grand Junction, Colo., operates a daily motor service from Grand Junction, Montrose, Ouray, and Silverton to Durango, Colo., continuing to Mesa Verde National Park, from June 1 to October 15, when there are passengers. This motorbus leaves Grand Junction at 6:30 a. m., traversing the high mountain passes of the magnificent San Juan Mountains, and arrives at Spruce Tree Lodge at 6:45 p. m. The stage leaves the park at 7:30 p. m., stopping overnight at Durango and arriving at Grand Junction at 4:55 p. m. the following day. The round-trip fare between Grand Junction and the park is \$18.65.

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

The Cannon Ball Stage bus leaves Gallup each day at 1 p. m., arriving at Durango at 6 p. m. Returning it leaves Durango at 7:30 a. m., and arrives at Gallup at 12:45 p. m. The fare from Gallup to Durango is \$5.40 one way and \$9.75 for the round trip. The round trip fare to the



KIVA SEED JARS OF CLASSIC PUEBLO PERIOD

park from Durango via the Rio Grande Motor Way, Inc., is \$7.50. Connection is made at Gallup with the transcontinental busses of the Pacific Greyhound Lines and the Santa Fe Trails System.

ADMINISTRATION

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

The National Park Service is represented in the actual administration of the park by a superintendent, who is assisted in the protection and interpretation of its natural and prehistoric features by a well-trained staff. The present superintendent is Jesse L. Nusbaum, and his post-office address is Mesa Verde National Park, Colo.

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

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

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

EDUCATIONAL SERVICE

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

GUIDED TRIPS TO THE RUINS

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

CAMPFIRE TALKS

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

PARK MUSEUM

The park museum was developed to promote broader understanding and interpretation of progressive stages of Indian civilization in the Mesa Verde region.

Its primary exhibits are designed and arranged to illustrate chronologically the story of prehistoric Indian life, habits, and arts, and to present the results of research thereon.

The notable collections have been assembled through the conduct of excavations within the park and the loan or gift of materials by friends and cooperating scientific agencies.

REFERENCE LIBRARY

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



HORSEBACK PARTY IN MESA VERDE

FREE PUBLIC CAMPGROUNDS

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

Leave your campsite clean when you have finished with it.

Do not drive cars on, or walk over, the shrubbery.

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

HORSEBACK AND HIKING TRIPS

Visitors who view the Mesa Verde from the automobile roads gain but an inkling of the weird beauty and surprises that this area holds for the more adventurous. Horseback and hiking trips along the rim rocks and into the canyons lead to spec-

tacular ruins not seen from any of the roads. Such great ruins as Spring House, Long House, Kodak House, Jug House, Mug House, and Step House, as well as all of the ruins in the more remote canyons, can be reached by trail only. Each turn of the trail reveals entrancing vistas of rugged canyons, sheer cliffs, great caves, hidden ruins, distant mountains, tree-covered mesas, and open glades.

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

HOSPITAL AND MEDICAL SERVICE

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

ACCOMMODATIONS AND EXPENSES

Spruce Tree Lodge, operated by the Mesa Verde Co., comprises a central service building, containing office, lobby, curio, dining room, and lunch counter facilities, and more than 50 cottages and floored tents, none of which are yet provided with running water and modern conveniences. However, the public comfort station and small public bath house are conveniently located.

Cottages may be rented at prices ranging from \$1.50 to \$2.50 a person per day, and comfortable floored tents at \$1 to \$1.50 a person per day. Meals, table d'hote, are served at the following reasonable prices: Breakfast, 25 cents up; luncheon, 65 cents up; and dinner, 75 cents up. A la carte and lunch counter services are also available. Children: No charge under 3; half rates from 3 to 8. The official season for Spruce Tree Lodge is from June 1 to October 1.

A well-stocked store and a filling station are adjacent to the lodge. Prices are comparable to those of surrounding towns.

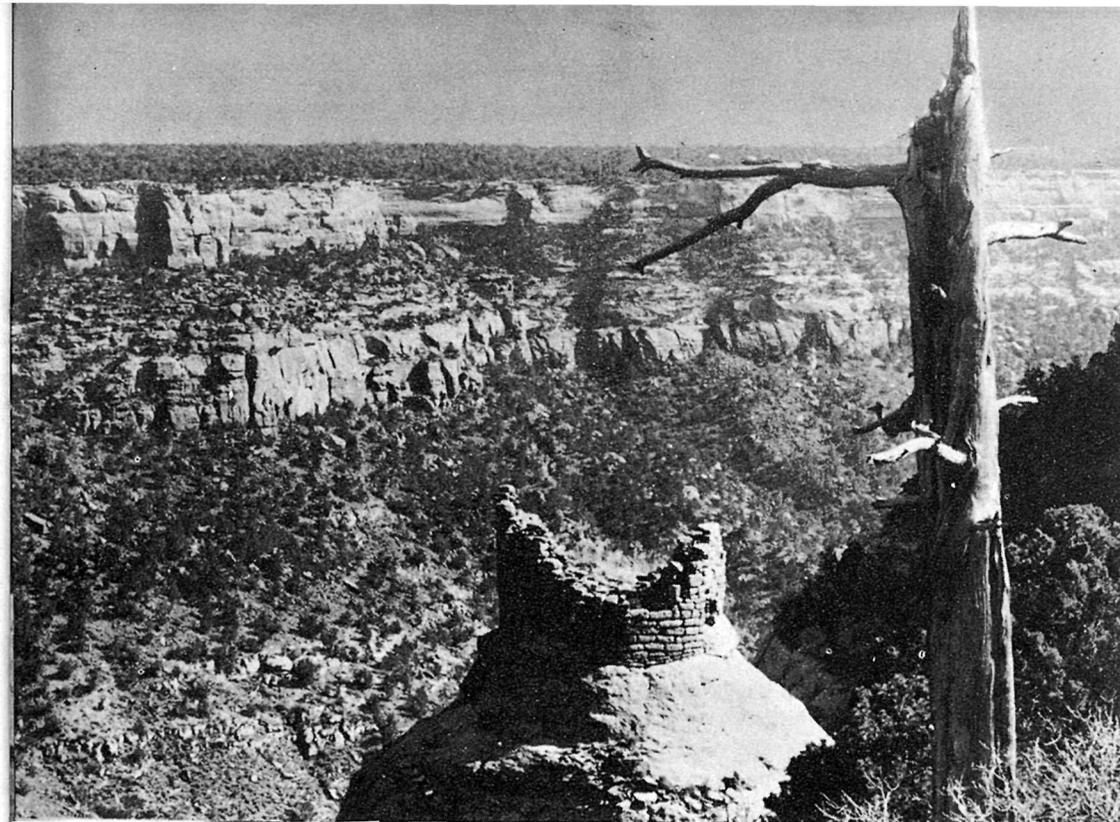
For visitors lacking transportation, the lodge provides automobile service to the various ruins for \$1 per person, round trip, and a special evening sunset trip to Park Point for \$1.50 per person.

OUT-OF-SEASON ACCOMMODATIONS

Pending completion by the Mesa Verde Co. of contemplated new facilities, informal accommodations only will be available to visitors prior to June 1 and subsequent to October 1. Cabins will be available at Spruce Tree Lodge and meal service, family style, at the Government Dining Hall at the following rates: Breakfast, 50 cents; luncheon and dinner, 65 cents each.

PACK AND SADDLE ACCOMMODATIONS

Saddle horses, especially trained for mountain work, may be rented from the Mesa Verde Pack & Saddle Co. For short trips the rental is \$1 per



THE NAVAHO WATCH TOWER FACILITATED DEFENSE

hour. For short 1-day trips for three persons or more the cost is \$3.50 each; two persons \$4.50 each; one person \$6. Longer 1-day trips for experienced riders are available at \$2 per person more than the rate for the shorter 1-day trips. All prices include guide service, and a slicker, canteen, and lunch bag are provided. Arrangements should be made the evening before the trip is taken.

PACK TRIPS

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

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

REFERENCES¹

- 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
- 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.)
- GILLMOR, FRANCES, and WETHERILL, LOUISA WADE. *Traders to the Navahos.*² Houghton Mifflin Co., Boston and New York. 1934. Illustrated, 265 pages. Describes discovery of cliff dwellings by Wetherill brothers.
- ICKES, ANNA WILMARTH. *Mesa Land.*² Houghton Mifflin Co., Boston and New York, 1933. Illustrated. 228 pages. Southwest in general. Mesa Verde, pp. 100-101.
- KIDDER, ALFRED VINCENT:
*An introduction to the Study of Southwestern Archaeology.*² 300 pages, illustrated. Yale University Press, 1924. Mesa Verde on pp. 58-68.
- 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.
- 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.

NATIONAL PARKS IN BRIEF

- ABRAHAM LINCOLN, KY.—Birthplace of Abraham Lincoln. Established 1916; 0.17 square miles.
- ACADIA, MAINE.—Combination of mountain and seacoast scenery. Established 1919; 26.01 square miles.
- BRYCE CANYON, UTAH.—Canyons filled with exquisitely colored pinnacles. Established 1928; 56.23 square miles.
- CARLSBAD CAVERNS, N. MEX.—Beautifully decorated limestone caverns. Established 1930; 15.75 square miles.
- CRATER LAKE, OREG.—Beautiful lake in crater of extinct volcano. Established 1902; 250.52 square miles.
- FORT McHENRY, MD.—Its defense in 1814 inspired writing of Star Spangled Banner. Established 1925; 0.07 square miles.
- GENERAL GRANT, CALIF.—General Grant Tree and grove of Big Trees. Established 1890; 3.98 square miles.
- GLACIER, MONT.—Unsurpassed alpine scenery; 200 lakes; 60 glaciers. Established 1910; 1,537.98 square miles.
- GRAND CANYON, ARIZ.—World's greatest example of erosion. Established 1919; 1,008 square miles.
- GRAND TETON, WYO.—Most spectacular portion of Teton Mountains. Established 1929; 150 square miles.
- GREAT SMOKY MOUNTAINS, N. C.-TENN.—Massive mountain uplift; magnificent forests. Established for protection 1930; 683.75 square miles.
- HAWAII: ISLANDS OF HAWAII AND MAUI.—Interesting volcanic areas. Established 1916; 248.54 square miles.
- HOT SPRINGS, ARK.—Forty-seven hot springs reserved by the Federal Government in 1832 to prevent exploitation of waters. Made national park in 1921; 1.54 square miles.
- LASSEN VOLCANIC, CALIF.—Only recently active volcano in United States proper. Established 1916; 163.48 square miles.
- MAMMOTH CAVE, KY.—Interesting caverns, including spectacular onyx cave formation. Established for protection 1936; 60.2 square miles.
- MESA VERDE, COLO.—Most notable cliff dwellings in United States. Established 1906; 80.21 square miles.
- MOUNT McKinley, ALASKA.—Highest mountain in North America. Established 1917; 3,030.46 square miles.
- MOUNT RAINIER, WASH.—Largest accessible single-peak glacier system. Established 1899; 377.78 square miles.
- OLYMPIC, WASH.—Forests of unusual density; rare Roosevelt elk. Established 1938; 1,012.5 square miles.
- PLATT, OKLA.—Mineral springs. Established 1906; 1.32 square miles.
- ROCKY MOUNTAIN, COLO.—Peaks from 11,000 to 14,265 feet in heart of Rockies. Established 1915; 405.33 square miles.
- SEQUOIA, CALIF. — Outstanding groves of Sequoia gigantea. Established 1890; 604 square miles.
- SHENANDOAH, VA. — Outstanding scenic area in Blue Ridge. Established 1935; 282.14 square miles.
- WIND CAVE, S. DAK.—Beautiful cavern of peculiar formations. Established 1903; 19.75 square miles.
- YELLOWSTONE: WYO. - MONT. - IDAHO.—World's greatest geyser area; an outstanding game preserve. Established 1872; 3,471.51 square miles.
- YOSEMITE, CALIF.—Valley of world-famous beauty; spectacular waterfalls; magnificent High Sierra country. Established 1890; 1,176.41 square miles.
- ZION, UTAH.—Zion Canyon 1,500 to 2,500 feet deep. Spectacular coloring. Established 1919; 138.04 square miles.

WHAT TO DO

Things to See on Way from Park Entrance to Headquarters

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

Things to Do While in Mesa Verde

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

- 8 a. m.—Earth Lodge A, Square Tower House, Little Long House, Sun Point, Fire Temple, Sun Temple. Return 11:15 a. m. Distance $6\frac{1}{2}$ miles.
- 10 a. m.—A shortened trip of morning route to accommodate late comers. Return 11:15 a. m.
- 1:30 p. m.—Cliff Palace, Rim Drive, Balcony House. Return 4:15 p. m. Distance 7 miles.
- 3 p. m.—A shortened trip of the 1:30 route to accommodate late comers. Does not go through Cliff Palace but views this ruin from the top of the mesa. Return 4:30 p. m.

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

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

Campfire lecture—Daily

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

Things to Do—Not on Regular Schedule

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

Accommodations

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