This report was prepared to fulfill the requirements of RSP-H-2a which called for the documentation of all available park administrative records for the purpose of guiding "future management, avoid past mistakes, and prevent duplication of effort and experimentation, especially as regards interpretation and protection." As the table of contents suggests, the report covers most of the range of park activities that fall within the scope of an administrative history. The availability of source material is reflected in the extent to which different subject matters are discussed. Most of the research involved selecting, summarizing, and arranging the source material in a topical and chronological form.

The different chapters and sections into which the text is divided make the report a quick source of reference for management. Emphasis has been given to certain crucial problems which have afflicted the different administrations since the park was established in 1906. Some of these problems are water resources, road construction, interpretation, visitors' impact on the ruins, general conservation, boundary problems, relations with the Ute Indians, ruins stabilization, protection, and others. In the field of archeology we provide a sort of check list of the most important excavations and discoveries made in the park since 1908.
Many persons contributed to the preparation of this report.

In Mesa Verde National Park, Superintendent Meredith M. Guillet and Park Archeologist Gilbert R. Wenger and their staff provided excellent cooperation during my two-week stay in the park. While in Mesa Verde I met and talked with Don Watson, former park naturalist and archeologist of Mesa Verde for about 30 years; Al Lancaster, connected with the park as archeologist and in charge of ruin stabilization for almost 40 years; Herrick Carr, of Mancos, who was seasonal ranger in 1916 when Dr. J. Walter Fewkes was excavating Sun Temple.

In Santa Fe, New Mexico, I had the pleasure of spending a day with Mr. and Mrs. Jesse L. Nusbaum. Archeologist Nusbaum was superintendent of Mesa Verde on three different occasions—a total of about 17 years. During more than five long hours Nusbaum shared with me his vivid recollections of his park administrations.

Other persons provided some aid for the completion of the report: George C. Cattanach, Richard P. Wheeler, and Lucy P. Wheeler, gave encouragement and answered many questions about the Wetherill Mesa Project; Anna C. Toogood, during her visit to Mesa Verde, selected and transferred some park records to the History Division on a loan basis; these records are the best source of information for the first 15 years of park history.

Special thanks go to the following persons: David Clary proofread the manuscript and checked many sins of style and grammar.
Anne W. Besselman and Mary Rose Moore typed the introduction, chapters one and five, and part A of chapter two; Beatrice B. Libys typed the remainder of the long manuscript.

Plates 9-10, and the front cover are reproduced by courtesy of the National Geographic Society.

For the location of the most important roads, trails, canyons, mesa-top ruins, and cliff dwellings mentioned in this report, the reader can refer to the three maps located after Plate 10.
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INTRODUCTION

By Act of Congress approved on June 29, 1906, certain tracts of land in Montezuma County, southwestern Colorado, were set apart as a public reservation known as Mesa Verde National Park. This land, many years past inhabited by Pueblo Indians, embraced the most extensive concentration of prehistoric cliff dwellings in the United States. The park was placed under the exclusive control of the Secretary of the Interior who was authorized to prescribe such rules and regulations and establish the necessary service for the care and management of the same. Specifically provided by the rules and regulations would be the preservation of the ruins and other works and relics of prehistoric or primitive man within the park boundaries. Similarly protected by the Act were all prehistoric ruins situated within five miles of the boundaries of the park, on Indian and public lands not alienated by patent from the ownership of the United States. As in the Antiquities Act of 1906, the Secretary was authorized to permit examinations, excavations, and gathering of objects by persons duly qualified, but only for the benefit of reputable museums, universities, colleges, or other recognized scientific or educational institutions.¹

¹ See Appendix 1 for the text of the park bill.
Mesa Verde National Park, adjacent to the Southern Ute Indian Reservation, is a high plateau dividing the Mancos and Montezuma Valleys—among the fairest and richest of Colorado farm lands. This mesa or plateau is elevated above the valleys some 2,000 feet, and rises abruptly from their floors with precipitous cliffs similar to the walls of canyons. Point Lookout, the highest point of the terrace-like mesa, rises 8,600 feet on the north like the bulwark of a mighty ship.

Mancos River, the main stream of water in the area, cuts through the park from northeast to southwest and forms a canyon of from 1,000 to 2,000 feet deep. Mesa Verde proper, about 15 miles long and 8 miles wide, lies on both sides of this gorge, but largely on the northwestern part. Cut into finger-like shreds, the mesa is a labyrinth of narrow lateral canyons of great beauty that present successions of huge promontories, sculptured ledges, and bold, jagged cliffs. The surface of the mesa slopes gently southward and is drained by the Mancos River and its tributaries. Running in northerly and southerly directions, the deep canyons begin with small depressions at the north end of the mesa and become deeper as they approach the Canyon of the Mancos. In the high and almost inaccessible canyon cliffs a forgotten race erected the magnificent structures that the park was established to protect.

Mesa Verde receives considerably more rainfall than true
desert areas, and vegetation typical of the upper Sonoran or transition zone is moderately luxuriant. This heavy cover of vegetation, mainly piñon and juniper trees, accounts for the mesa's name, which means "Green Tableland."

Although the prehistoric remains are the most important resources of the park, the flora and fauna of Mesa Verde at the time of the cliff dwellers were just as much a part of their civilization as the artifacts and buildings, and so were the spectacular canyons.

A slow but powerful erosive process was responsible for the unique geographic features of canyons and mesas. Underlying the Montezuma Valley is a mass of soft clay or drab shale known by geologists as the Mancos shale, named for the town of Mancos, beneath which it is typically developed. Overlying this shale are several hundred feet of porous sandstone, coal bearing in the lower part and called the Mesa Verde sandstone. These relatively hard rocks formed at one time a continuous table, the plateau of which the present Mesa Verde is a remnant. As this table sloped gently southward, the streams gathered upon its surface drained in that direction until they joined Mancos River along the southern edge of the original plateau. Eventually, the streams etched through the massive sandstone capping and reached the soft shale which lay beneath. While the shale offered but little resistance to the erosive process, the canyons deepened with great rapidity.
until the conditions at present existing in the park were reached. The numerous canyons are rimmed by the edges of the more resistant overlying rocks, which form the encircling cliffs with sheer faces. Thus the ideal physical conditions were formed for the cliff dwellers to build their homes in the overhanging cliffs of the forbidding canyons.²

When the park was established the major mesas, canyons, and ruins were known already by particular names. There are hundreds of ruins in all the canyons of the park but the largest and most remarkable are located in Navajo, Cliff, Soda, Long, and Rock Canyons. These main ruins are largely distributed around two large mesas—Chapin, the largest, on the southeastern part of the park, and Wetherill on the southwest. Because of the geographical features of mesas and canyons, Wetherill Mesa has been more isolated, undeveloped, and less accessible than the popular Chapin. Of the largest and best known cliff dwellings, three are located in Chapin Mesa: Cliff Palace, Spruce Tree House and Balcony House. Less known but almost equally spectacular are Long House, Step House, and Mug House in Wetherill Mesa. Cliff Palace is the largest in the park while Long House is the second largest. Literally thousands of dwellings once stood on the mesas, without the protection of overhanging cliffs, and today are mounds of stone and earth.

Who were the cliff dwellers? Who they were, when and where they came from, and why they suddenly vanished are puzzling questions which still remain much behind a veil of mystery. It is known, however, that the cliff dwellings and mesa-top ruins unfold one of the most significant chapters in the story of prehistoric America.

For about 1,200 years the Mesa Verde region was occupied by agricultural Indians who began to drift into the area shortly after the beginning of the Christian Era. At first their culture was simple, but there was constant progress and by 1200 A.D. they had achieved a high cultural level. Then suddenly, by or shortly before 1300 A.D., the Indians abandoned their homes and drifted southward and eastward in search of more favorable locations.

After the abandonment by the Indians, the dwellings stood unmolested by man for many hundreds of years. It is of no consequence now to ponder about who was the first white man who saw the abandoned homes and when. What is relevant is what happened after they were "discovered."

It is generally accepted that the cliff dwellings were discovered by the Wetherill brothers, a family of five cowboys with a ranch in the Mancos Valley, around 1888. For some years they systematically explored the Mesa Verde canyons, excavated the major ruins, named most of them, and brought out an immense quantity of artifacts most of which today are found in private collections. Their reports about the fantastic ruins excited the interest of both scientists and pot hunters.
Although the general looting of archeological ruins began when people started moving into the Southwest, the heyday for Mesa Verde was after 1888. One ruin after another was subjected to wholesale commercial looting by pot hunters to meet increasing market demands for artifacts and comprehensive collections. This caused prodigious damage, destruction and loss of archeological sites and values. Fortunately, some of the cliff dwellings were perched in canyons so seldom visited that they were not found until some protection could be given. They were often almost impossible to reach except by ladder or toe and handholds cut into rock formations, some of them built in cliffs of scenic magnificence. Usually on flat land, the pueblos were easily reached, and they suffered more from vandals and of course from the elements. Only through the scientific excavations of the heaps of rubble and dirt, could the scientist delineate the outlines of the original structures.

There was some interest in the protection and preservation of the Mesa Verde ruins as early as 1891 but no definite or concrete action was taken. In 1897, however, the attention of the Colorado Federation of Women's Clubs was directed to the problem and a committee was named to spearhead the fight for the protection of the cliff dwellings. In 1900 the committee was organized into the Colorado Cliff Dwellings Association, an incorporated organization dedicated to the struggle for the preservation of the ruins. Mrs. Gilbert McClurg and Mrs. Lucy Peabody were the foremost leaders of the Association. It is
unique in the history of the National Park System that Mesa Verde National Park was created through the efforts of this private group of women.\textsuperscript{3}

I. DEFICIENCIES OF THE PARK BILL

A. Boundary adjustment

As originally established, Mesa Verde National Park was set aside for the purpose of preserving the prehistoric cliff dwellings. Unfortunately, the park contained about 42,000 acres of land which included almost none of the ruins it was supposed to preserve. Its southern boundary was located at a point just north of the present park headquarters, leaving the main ruins on Ute lands. Mrs. Virginia McClurg, of the Cliff Dwellers Association, compared the boundary blunder "with that of a play of Hamlet with the royal Dane left out."¹

To bring the crucial ruins to the park area, the Brooks-Leupp Amendment was added to the park bill. This Amendment provided that all prehistoric ruins that were located within five miles of the boundaries of the park, on Indian lands and on lands not alienated by patents from the ownership of the federal government, were placed under the custody of the Secretary of the Interior, and "shall be administered by the same service that is established for the custodianship of the park."² With the Amendment, more than 175,000 acres of land came under the administrative jurisdiction of the park.

¹ Colorado Cliff Dwellings Association, Biennial Address of the Regent General, Virginia McClurg (April 19, 1913), 9, MVPF.
² Appendix 1.
In the winter of 1906 the Secretary of the Interior called for an archeological survey of the Mesa Verde to determine what cliff dwellings and ruins situated on Ute Indian deeded lands should be embraced in the park and what should be the boundaries and acreage; the survey was to be made by the Smithsonian Institution. According to the Denver Post of August 11, 1907, the survey group consisted of Professor Edgar L. Hewett, Director of American Archeology, Archeological Institute of America; Dr. A. J. Fynn of Denver; Messrs. Morley, Kidder and Fletcher of Harvard University as assistant archeologists; and Jesse Nusbaum, Colorado State Normal School, photographer. Nusbaum was just beginning a distinguished career in the field of archaeology. The report prepared by this survey group provided the basic information needed for exchanging, with the Southern Ute Indians, any of their reservation lands on which most of the largest and best known cliff dwellings were located, for other lands of their selection. 3

In 1908 the Ute Indians expressed the desire to secure the Ute Mountain tract, situated at the far end of the Montezuma National Forest. They were willing to relinquish, for inclusion in the park, the portion of the 5-mile strip surrounding the park and lying within the Southern Indian Reservation. The Ute Mountain contained no merchantable timber; it was isolated

3. Talk by Nusbaum at Westerners Meeting, Colorado State Historical Society, 1964, typescript copy, MVPF.
from the remainder of the forest and was expensive to administer. For this reason the Supervisor of the National Forest recommended the elimination of the entire Ute Mountain division. The land within the 5-mile strip was rough, arid, and of little benefit to the Indians, and practically inaccessible from the west side of the reservation where most of them lived; this tract contained the largest and most important cliff dwellings, which could be easily administered to far greater advantage by their inclusion within the park proper. This strip which the Indians were willing to relinquish was worth something for pasture, but it was not used by the Indians for that purpose. They favored the Ute Mountain country which was of easy access to all and was much used as summer range. 4

Acting under authority of the Act of March 3, 1903, and Departmental instructions of April 20, 1911, Mr. F. H. Abbott, Assistant Commissioner of Indian Affairs, and Mr. James McLaughlin, United States Indian Inspector, entered into an agreement with the Wiminuche band of Southern Ute Indians, on May 10, 1911. This agreement, to be effective and binding when ratified by the Indians of that part of their reservation including and covering ruins and prehistoric remains in lieu of certain unappropriated public lands specifically described in the agreement.

4. Superintendent, annual report, 1909; John F. Shafroth, Governor of Colorado, to Secretary Richard A. Ballinger, June 8, 1909, NA-RG 79.
The lands to be received by the Indians were temporarily withdrawn from all forms of settlement, entry, sale or other disposition.⁵

In July the Assistant Secretary announced that it was the intention of the Department to request Congress, in the event that part of the Indian lands proposed to be included in the park were added to it, to enact a law rescinding the jurisdiction of the Department over the 5-mile strip surrounding the park.⁶

Prior to that the superintendent of Mesa Verde had recommended that all lands of the 5-mile strip, lying to the north and west of the park boundary, be released from the jurisdiction of the park, since this area contained no ruins of importance, and "geographically was no essential part of the park;" that portion of the strip east of Mancos Canyon be permanently attached to the park and incorporated in it. Later on the superintendent recommended the release of jurisdiction over all the 5-mile strip, except on the south, because it was difficult to police it properly.⁷

According to the agreement with the Wiminuche, the government would obtain 12,760 acres on the Southern Ute Indian Reservation and agree to give the Indians a tract lying west and within the park boundary containing about 6,000 acres and a second tract

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⁵ Secretary of the Interior to Commissioner of the General Land Office, May 25, 1911, NA-RG 79. Hereafter, the term Secretary will refer to the Secretary of the Interior, unless otherwise specified.

⁶ Assistant Secretary to Acting Superintendent Wright, Mesa Verde, July 25, 1911, NA-RG 79.

⁷ Superintendent, annual report, 1910; Acting Superintendent Wright to the Secretary, June 29, 1911, NA-RG 79.
lying just south of the Ute Mountain, containing about 19,000 acres. 8

The agreement was submitted to Congress in 1912 for ratification, but there were some unexpected delays. 9 Sometime after the agreement with the Indians was signed, the proposed land addition was surveyed by the Geological Survey and the proposed southern boundary was found to be still too far to the north, slightly north of Balcony House. 10 Therefore, the legislation was amended and resubmitted on January 22, 1913, adding an additional 1,320 acres of land to the southern boundary, to make a total of 14,520 acres; the Indians received a total of 30,240 acres. By the Act of Congress approved on June 20, 1913, the boundaries of the park were so changed as to include an aggregate area of 76.51 square miles, or 48,966.4 acres. 11

B. Concession law

Another defect of the act setting aside Mesa Verde National Park was that it did not grant authority to the Secretary for

8. Typescript copy of the Agreement, MVPF.


10. Acting Secretary to Chairman of the Senate Committee on Indian Affairs, February 21, 1912, NA-RG 79.

the leasing of sites for buildings or for providing accommodation facilities or other permits in or through the park. Portions of the park and the 5-mile strip consisted of fair grazing lands and coal deposits to be worth developing.

On March 25, 1908, Rep. Warren A. Haggoth introduced in the House of Representatives a bill prepared by the Department to amend the park bill; a similar bill was introduced in the Senate by Rep. Guggenheim on April 15. 12

As originally passed by the Senate, the Guggenheim bill contained provisions authorizing the Secretary, upon terms and conditions fixed by him, to grant leases and permits for the use of the lands in the park "for the development of the resources thereof." To make the idea more palatable to conservationists, the bill had a provision authorizing the Secretary to use the proceeds of the leases and franchises in the administration, protection, and improvement of the park, including the construction of roads. These provisions were similar to those relating to Yellowstone National Park. Thus framed, the bill would have materially aided the government in the administration of the park. It was broad enough to cover rights of way, coal mining, grazing, and the like, in addition to facilities for accommodation of visitors.

But leases for mining coal came up for discussion in the debates on the Guggenheim bill. There was some local demand.

12. 60th Congress, 1st Session, H.R. 19861; 61st Congress, 2d Session, S. 1751, Rogers.
for the opening of coal mines which had been in operation before the mining claims were invalidated by the reservation of the lands for park purposes. Representative Mondell of Wyoming explained that the park contained the only coal reserves for the general area and that a mine or two near the ruins would not hurt the park. Rep. Taylor of Colorado noted that the town of Cortez, the seat of Montezuma County, and all the main portion of the county had no railroad. For many years, he said, the inhabitants of the town and the farmers of Montezuma Valley had obtained their coal from five or six small openings just north of the Southern Ute Indian Reservation and within that county. By the park bill, all the workable coal veins or deposits in the country were incorporated in the park; that the Secretary had decided that neither by the park act nor by the general law had he any authority to allow the people to further procure coal for domestic use from any of those deposits within the park. The result was that they were compelled to purchase coal from outside--Hesperus or Durango--and have it shipped to the nearest railroad point and then hauled from 10 to 20 miles, making it very expensive and a great hardship upon the people of that county ever since the establishment of the park.

13. Superintendent, annual report, September 4, 1908, NA-RG 79.
14. John Ise, 166.
15. Report of Mr. Taylor, April 12, 1910, 61st Congress, 2d Session, to accompany S. 1751, Rogers.
When the Guggenheim bill was finally reported from the House Committee on Public Lands, it was so amended as to confine the granting of leases and permits to lands to be used for the mining of coal for local consumption in Montezuma County. On the floor of the House it was further amended by striking out that portion authorizing the use of the funds in the management of the park and providing that the money should be covered into the Treasury. As thus amended the bill passed both Houses of Congress. Upon the recommendation of the Secretary, President Taft vetoed it. In part, the Secretary had informed the President:

If the bill in its present condition should become law it will in no way assist, but, on the contrary, would undoubtedly impede this department in the administration of the park, as probably the entire appropriation...of the park, would be required to investigate applications for coal leases and permits and to supervise work under such leases and permits, thus diverting the appropriation from the purpose for which it was intended.

As the bill stands, it is a radical departure from other park legislation in that it requires moneys derived from privileges of the park to be covered directly into the Treasury and this department deprived of the use thereof, whereas the revenues received from permits and leases in other parks are available for the improvement and protection thereof.16

Again, on May 5, 1910, Senator Guggenheim introduced a bill to authorize concession leases and permit mining, the revenues to go to the park for improvement and not into the

United States Treasury. This bill passed the Senate, but got no further. Other efforts to permit mining and to make park revenues available for improvement likewise failed. On June 25, 1910, however, an amendment to the urgency act authorized the Secretary to grant leases and permits for the use of the land or development of the park resources, but the revenues had to be turned into the Treasury. This amendment, therefore, became the basic law that permitted grazing and mining operations in the park, and the concession for visitor facilities and services, like lodging, camping and transportation.

17. S. 8108, 61st Congress, 2d Session, Rogers.

18. S. 6818, 60th Congress, 1st Session; H.R. 21303, 63rd Congress, 3d Session; H.R. 4817, 64th Congress, Rogers.

II. LAUNCHING OF PARK OPERATIONS

A. Under the Ute Indian Agency

Prior to fiscal year 1907 no appropriation was made for Mesa Verde National Park, and for administrative purposes, it became necessary to designate the Superintendent of the Southern Ute Indian Training and Industrial School at Ignacio, Colorado, as Acting Superintendent of the park. William D. Leonard, Superintendent in charge of the Southern Ute Agency, was designated for the position on October 8, 1906.1

Leonard received orders to use all possible measures for the protection and preservation of the ruins, relics, buildings and other evidences of ancient civilizations located in the park.

As instructed, he visited the park in October to examine the general conditions of the area, determine what necessary work would be required for its administration, and to look over the grounds for a suitable location for headquarters. In Mancos he engaged the services of a guide and horses, and took eight and one half hours to reach the park. Here he spent one day viewing the principal cliff houses, and upon his return to Ignacio prepared a brief report about the general conditions of the park, suggesting measures for improvements.

Mesa Verde National Park, he noted, was isolated from civilization. Mancos, on the Denver and Rio Grande Southern Railroad, was the nearest and most accessible point for the public to outfit for the park; the distance from there to the boundary line was about 20 miles. From Mancos to the foot of the Mesa was 15 miles and all this distance could be traveled in a buggy or hack over a country road. To reach the top of Chapin Mesa one had to travel a very steep and dangerous pony trail, in most places from two to three feet wide, very winding, and generally traveled on horseback. He noted that the principal cliff houses--Spruce Tree House, Balcony House, and Cliff Palace--needed some masonry repairs, especially the first two which showed more signs of destruction and wear and tear.\(^2\)

About all that Leonard did for the protection of the park was to place typewritten placards informing the public about the penalty for destroying the ruins.

Leonard was transferred from the Ute School sometime in April 1907, and Charles F. Werner took his place as Superintendent of the School and Acting Superintendent of the park.\(^3\) He visited the park about the middle of August and prepared a report containing suggestions regarding the construction of roads, trails, and other means of access to the ruins, provisions for increasing the water supply, and other improvements.\(^4\)

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2. Leonard to Secretary, October 13, 27 and 29, 1906, NA-RG 79.

3. Werner to the Secretary, July 8, 1907; Acting Secretary to Werner, July 15, 1907, NA-RG 79.

4. Werner to Secretary, August 17, 1907, NA-RG 79.
B. Randolph's superintendency

On July 26, 1907, the Denver Post announced that Major George Randolph of the Colorado National Guard had been appointed the first permanent superintendent of Mesa Verde National Park. Randolph's selection, said the Daily News, was a matter for congratulations to those who wished to see the park beautified and improved and properly officered. The stupendous task was given to Major Randolph through the endorsement of the entire Colorado delegation in Congress and the scientific men of the country. He will carefully inspect the ruins in order that he may make proper recommendations to the next Congress for an appropriation commensurate with the task of improving the park and preserving in their natural environment the relics of the cliff dwellers.

To the timid traveler the wonders of the Mesa Verde have been, under present conditions, almost inaccessible, but the establishment of the national park will change the tortuous trail to a system of good roads and in time hotels and creature comforts, inasmuch as they do not destroy the picturesque effects of these sermons in stone, will be provided for the weary wayfarer.

One of the first things which Randolph will do is to make the ruins more accessible. The government intends to begin construction of wagon roads and trails both leading up to and within the boundaries of the park. 5

Not too many details are known about the selection of Major Randolph as superintendent, but it was a political decision that did more harm than good to the incipient park; the Smithsonian Institution sponsored its own candidate, and Mrs. McClurg, of the

5. Daily News, August 11, 1907. Randolph's commission as superintendent was transmitted by letter of Acting Secretary Jesse E. Wilson, on August 1, 1907, NA-RG 79.
Colorado Cliff Dwellings Association, wanted the positions to be given to her husband Gilbert McClurg. Randolph was the candidate of Mrs. Lucy Peabody, often referred to as the "Mother of Mesa Verde National Park." 

Randolph was instructed to put into effect the provisions of the park bill, and especially the preservation from injury or plundering of the ruins and other works and relics of prehistoric or primitive man within the park. He was to take the necessary steps to protect the reservation against the encroachment of unauthorized persons or their residence in the park; against the presence of anything that might tend to create a nuisance or affect the purity of the waters or streams; against the cutting or removal of trees, shrubs, sod, earth or rock, prehistoric or other ruins, or anything belonging to the reservation, unless such removal was for the purpose of beautifying the park or increasing its usefulness, and then only under the specific direction of the Secretary or his authorized representative; against all acts of vandalism on the part of curiosity hunters, malicious individuals, or other persons, who from thoughtlessness or design sought to deface any of the natural curiosities or ruins in the reservation.

Excavation work, preservation and repairs of the cliff dwellings and other prehistoric ruins would be under the immediate supervision of Dr. J. Walter Fewkes of the Bureau of American...
Ethnology, who would perform his duties and receive directions immediately from the Secretary. The sum of $2,000 was set aside from the 1907 park appropriation of $7,500 to enable Dr. Fewkes to carry on the scientific work delegated to him in the park. He was expected to reach Mesa Verde sometime in the spring of 1908, and at once enter upon the work of excavation, preservation and repair of the ruins.

Of the appropriated funds, $3,000 was alloted for the construction of roads, trails, and the superintendent's cabin; cleaning out springs; and providing a better water supply. After familiarizing himself with the park and its conditions, the superintendent would submit a tentative set of regulations. Meanwhile, the provisions of the act setting aside the park would be enforced.7

Randolph arrived in Mancos, a town of about 500 persons, and formally took charge on August 31, 1907. Because of the absence of any building for his accommodation in the park, his headquarters were established in the Bauer building in Mancos, and later in a building detached from the business houses of the town. At this point, the nearest to the park, commercial guides and saddle and pack horses were obtained.8

Following official instructions, his first work was to inspect the park and determine what service would be necessary for its

7. Acting Secretary to Randolph, August 16, 1907, NA-RG 79.
8. Superintendent, annual report, 1908-09, NA-RG 79.
administration. As nothing had been done toward the improvement and organization of the park, it was necessary to do some temporary work, pending the acceptance of permanent plans for its management and development. The park was "in a very disorderly condition—tin cans, papers and all kinds of rubbish. There having being no restraint on campers in the past it does not require much imagination to realize how very dirty it was." Workmen were employed to clear away the rubbish left by camping parties of previous years, and to put the grounds around Spruce Tree House in proper condition. This cliff dwelling had the best water supply of the Chapin Mesa and afforded the most agreeable camping place for travelers. A log cabin, which had stood for some years at this place, was allowed to remain for temporary use. All unsightly debris was removed and orders given that in the future no rubbish would be allowed to accumulate about camp or in the vicinity of the principal ruins.

It was found that the services of one park ranger would be needed; it was recommended, and appointment made as authorized. Later, two additional rangers were employed to assist in the care of the park and serve as guides to visitors during the travel season. A clerk was also employed for a short time to keep the office open during the absence of the superintendent.  

A survey of a practicable road from Mancos and through the park and the 5-mile strip to the ruins was entered upon by

9. Randolph to the Secretary, September 9, 1907, NA-RG 79.
10. Superintendent, annual reports, 1907-08, NA-RG 79.
George Mills, United States deputy surveyor, late in the fall of 1907, and was completed in the spring of 1908. The initial expense of opening the park by the construction of roads and trails leading to the many ruins, and providing for the prevention of fires and policing the area, was estimated to aggregate approximately $19,500, and an estimate in that amount was submitted to Congress. 11

C. A scandalous departure

Randolph's main park activity was the construction of the new wagon road that provided access to the park. In a sense, the construction of this road was responsible in great part for his scandalous downfall after almost four years as superintendent.

On October 27, 1910, a complaint was made from Denver with reference to the unsatisfactory administration of affairs in the park. On the strength of this complaint, the Secretary instructed one Mr. Andrew Kennedy to make an inspection of the portion of road built under the supervision of Randolph, and to make a preliminary investigation of the superintendent's management of other park affairs. Kennedy informed the Secretary that the superintendent had a drinking problem, was active in politics, and was involved in the factional banking rivalries of Mancos; that there was some evidence of graft in connection with park funds, but recommended to retain Randolph unless further charges arose. Some of the accusations were extremely serious. G. T. Cline, one of Randolph's accusers, was promoter of the Mancos National Bank

11. Superintendent, annual report, 1907, NA-RG 79.
and member of the party that opposed the superintendent. James A. Frink, Director of the bank, was one time temporary ranger of the park under Randolph, and according to his declaration, gave the superintendent about half of his salary; Frink was to receive in compensation grazing privileges in the park.\(^{12}\)

About the only friendly hand that was extended to Randolph was that of Dr. Hewett of the Smithsonian. On December 22, 1910, Hewett called upon the Secretary to tell him about his observations with regard to the management of the park. He stated that the superintendent was a very competent young officer and had rendered efficient services; that the complaints against his administration by Mr. Cline were personal and motivated probably because friends of Cline were not successful in being awarded certain contracts in connection with the wagon road recently built in the park. Hewett stated that, in his opinion, the road was well built and at a minimum expense, and that in the event any complaints affecting Randolph's integrity or management of the park were filed, he would be pleased to put his views in writing, if desired. However, he recommended a formal investigation anyway.\(^{13}\)

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12. R. A. Ballinger to Andrew Kennedy, November 28, 1910; Kennedy to the Secretary, December 21, 1910, NA-RG 79.

Mr. Cline persisted in having Randolph investigated and on February 11, 1911, Special Inspector Edward B. Linnen, of the Department, was investigating the management of the park.\textsuperscript{14}

On April 13 Linnen wired to Washington that the superintendent was desirous of resigning under existing conditions; that there was evidence of "padding pay-rolls" and other irregularities. On April 14 Randolph wired the Secretary "tendering his resignation, at his pleasure." On April 17 Linnen wired again:

Sworn evidence employees, giving portion their salaries to Superintendent, three so testify. Kimball, on wagon road pay-roll for hundred eighteen dollars, testifies never performed any road work but did paper and paint Superintendent's office. Other small irregularities pay-rolls, persons who did not perform work, prior political activity, and excessive drinking...

Two days later the Secretary wired Randolph saying: "Resignation declined. You are relieved from duty as superintendent park pending final consideration inspector report. Linnen will relieve you. You may file here any defense you may have."

By April 20 Linnen was in charge of the park. Randolph denied the serious charges against him, but Linnen's report was not favorable and the superintendent was fired.

Jesse Nusbaum, who knew him intimately at Mesa Verde, remembers that Randolph was a likeable and cooperative person, but was an out-and-out politician.

\textsuperscript{14} Kennedy to Mr. Carr, Assistant Secretary, February 2, 1911, NA-RG 79.
During the thirteen-week period of Randolph's administration while I was excavating and stabilizing Balcony House Ruin in the fall of 1911, Superintendent Randolph carried a revolver at all times because of personal threats against him, always placing it in ready reach in the top, right drawer of his desk in his Mancos office during day or night conferences, and on several occasions, to my knowledge, he had a stenographer concealed by a screen recording what was said. Local hostility culminated on the night that G. T. Cline, cashier of the Bauer Bank, attempted to shoot Superintendent Randolph on a Mancos street. Billy Miller, hardware dealer, fortunately grabbed Cline's gun at the critical moment and defeated his purpose.15

It was most unfortunate for the development of the park that the next two superintendents after Randolph were selected for political considerations also. Samuel Shoemaker (1911-13), 65 years old and a former employee of the Indian Service, was employed as manager of a brick yard in Durango, when he became superintendent.16 Thomas Rickner, a well-known man from Mancos, was running a butcher shop in town when he received the "political plum." His administration lasted eight years (1913-21) during which nepotism was rampant.

15. Comments for the Regional Director, Region Three, by Archeologist Nusbaum, July 26, 1946, MVPF; according to a personal interview at Santa Fe, August 1, 1970, Nusbaum said he believes some of the charges against the superintendent were trumpeted, hence, politically motivated.

16. Ralph S. Kelly, Special Agent Land Office, to Secretary, August 17, 1911. Before he took office on September 30, Richard Wright, of Denver, was acting superintendent from May 5 to September 30, MVPF.
III. DEVELOPMENT OF SERVICES AND FACILITIES (1908-21)

A. Roads and Trails

1. Access needs

After the park was established, the principal administrative necessities were the protection of the ruins and the improvement of trails in order to make the park more accessible to the public. Before the construction of park roads, at least two routes were feasible to reach the ruins from the town of Mancos. One could drive down Mancos Canyon at a point not far from the mouth of Webber Canyon and from there proceed on horseback along an Indian trail to the mouth of Cliff Canyon, and from there up to the top of the plateau to a point from which the principal ruins of the Chapin Mesa could be easily reached. One could also drive west from Mancos by the Cortez road to the top of the divide between the Mancos and Montezuma valleys, and, turning to the left there, pass around south of the base of Point Lookout, beyond which vehicles could no longer be used. From there one had to proceed on horseback or foot by a trail leading up through a gap in the rim of the mesa to the top of the plateau at the head of Prater Canyon. From there it was from three to four hours ride over an almost level mesa top to Spruce Tree House, from which Cliff Palace and Balcony House could be reached in a half hour's ride.

This last route was considered by Dr. Hewett to be the most feasible one for a wagon road. Its last part, that from Mancos to the base of Point Lookout, would require no expenditure by the
government since a great part of it was already a county road, and doubtless all that part leading up to the park line would be built and maintained by Montezuma County. That part of the road on top of the mesa would be very inexpensive since it was on an almost level table land, would pass around the heads of the canyons, and then along the top of the plain to Spruce Tree House. No canyons would have to be crossed and no bridges built. It was recognized that the expensive part of the road would be from the base of Point Lookout to the top of the mesa. The elevation to be overcome at Point Lookout was not known, but Surveyor George Mills, who ran the Ute Reservation boundary line, considered Hewett's route the most practical for a wagon road to the ruins.¹

During his trip to the park in 1906, Acting Superintendent Leonard made several observations about the existing trails leading to the ruins. From the top of the mesa to Spruce Tree House, about eight miles distant, there was a pony trail, nearly level all the way. Thick forest of cedar and piñon and their branches were for a great distance interlaced over the trail, "making travel on horseback very disagreeable, one having to dodge the branches constantly." From Spruce Tree House to Balcony House and Cliff Palace, a distance of about four miles, there was also a pony trail two or three feet wide, but rougher.²

1. Report of Dr. Hewett on Mesa Verde Ruins, 1908, typescript copy, MVPF.

2. Leonard's report, October 29, 1906, MVPF.
Acting Superintendent Werner favored the route for a wagon road suggested by Hewett and Mills, but went further and recommended a road on top of the mesa to connect most of the ruins. This road, down the edge of Spruce Tree and Navajo Canyons, would connect Spruce Tree House, Little Long House, Square Tower House, Casa Colorado, then across to Cliff Palace and Balcony House in Soda Canyon.  

No great number of visitors to Mesa Verde was to be expected until the park was made accessible by proper roads and trails. In order to prepare for travel during the season of 1908, the principal road trail leading to the ruins was repaired and improved. If the park was ever to fulfill the purposes for which it was created, informed Superintendent Randolph in his first annual report, it was absolutely necessary to build a road for carriages and other vehicles from the park boundary on the north to the principal ruins. Comparatively few travelers, he noted, were willing to undertake the long and difficult horseback ride, up a steep and dangerous trail, to reach the ruins. No matter how great might be their interest in the remarkable ruins of antiquity, they did not feel like undergoing the hardships and expense which had to be incurred to reach them. Because of lack of a suitable road, the expense of conducting the excavations, developing the water supply, and improvements of every kind, was

3. Werner report, July 30, 1907, MVPF.
very high. All supplies, tools, and materials had to be trans-
ported by means of pack animals.  

In the fall of 1907 Surveyor Mills, under contract with the Department, started to survey a practical route for a wagon road from the northern boundary of the park through the reservation and a portion of the 5-mile strip to the Spruce Tree House. The line of survey, completed in the spring of 1908, was along the center of the roadway, tied to section corners, when they were found, within half a mile of the section crossing or township line. It had sections at every 100 feet properly marked with numbered wooden pegs. Station 0 of the survey was located at Windy Point, atop the high ridge directly below Point Lookout, and from that point moved westward.

4. Superintendent's annual report, 1908, MVPF.

5. Acting Secretary to Randolph, October 25, 1907; George Mills to Randolph, October 31, 1907. Mills' route was described as follows: "from the north boundary of the park under Point Lookout up the west side of Point Lookout to the head of Morefield Canyon, around under the Knife Edge to the head of Prater Canyon, straight up over the ridge into the head of Moccasin Canyon, up over Moccasin Mesa, down around the head of School Section Canyon, up over Park Mesa and down around the head of Soda Canyon, up over the ridge and down around the head of the east fork of Little Soda Canyon, again up over the ridge and down around the head of the west fork of Little Soda and up onto Chapin Mesa between the west fork of Little Soda and the east fork of Navaho Canyons, thence down the ridge of Chapin Mesa to Spruce Tree Camp on the west rim of Spruce Tree Canyon." Ranger Wade, "Brief history of Mesa Verde National Park road system," undated. MVPF.
2. Wagon road and trails

C. B. Kelly, of Mancos, was contracted by Superintendent Randolph to build the wagon road. By the fall of 1908, six miles of carriage road following the Mills survey had been constructed north from near the northern rim of Spruce Tree House up to the top of Chapin Mesa. This portion of road was inexpensive and easily constructed since it passed through the almost level plateau. The principal work consisted of removing from the roadway the piñon and cedar trees with which the mesa top was covered, and doing a small amount of grading. To facilitate construction of this portion of the wagon road, and to transport materials and supplies to Spruce Tree Camp,

a wagon was disassembled at the park's small frame storehouse at the foot of Frink's trail ascending the abrupt north rim of the mesa, packed up the trail to road terminus at the head of Chapin Mesa, and reassembled there.

Subsequently, materials and supplies destined to Spruce Tree Camp, both for the park, for Dr. Fewkes' excavation camp, and for Charles Kelly, principal guide and packer, were transported from Mancos, Colorado, by wagon to the storehouse at the foot of the Mesa; then the driven stock was used as pack animals for the trail ascent to the north tip of Chapin Mesa where wagon transport was again available for the 6-mile downgrade haul to Spruce Tree Camp. When not in use, the wagon and harness were regularly left at the north terminus of this Chapin Mesa road. 6

6. Memorandum of Archeologist Nusbaum to the Superintendent of Mesa Verde, Santa Fe, September 24, 1948; Denver Post, October 11, 25, November 1, 29, 1907, May 8, 1908; Superintendent annual report, 1908; Assistant Secretary Pierce to Randolph, March 10, 1908, MVDF.
Also completed by the fall of 1908 was the portion of the road from the foot of the mesa up the west side of Point Lookout. Work continued during 1909 on the Point Lookout grade and by July 1911, three and one-half miles had been completed to the head of Morfield Canyon. By September, the government had completed a road from Station 0, on the north boundary of the park, to the head of School Section Canyon, a total distance of approximately seven miles from Point Lookout. This road, while not yet formally opened to tourist travel, was passable by wagon and afforded a scenic view of striking beauty. There remained to be constructed a little more than six miles of road to connect it with that portion of the road built northward from Spruce Tree Camp along Chapin Mesa. This break in the road was located nearly in the center of the wagon road route.7

Under Randolph, a trail system was also finished connecting Spruce Tree House, Cliff Palace, Square Tower House, and Balcony House. However, he suggested another carriage road wholly upon the mesa, touching the points of greatest scenic and historic interest. Because of the great depth of the canyons cutting the mesa from north to south, Randolph wrote, the expense of building a road to some of the most interesting ruins in the western part of the park was too great to be undertaken at the time. But trails could be

7. Superintendent annual reports, 1908-11; Acting Superintendent Wright to Mrs. McClurg, September 1, 1911, MVPF.
built from Spruce Tree House to the important ruins of Garfield (Rock) Canyon and its tributaries, and bring them within four hours' ride of the former ruin.\textsuperscript{8}

Heavy rains caused great damage to the constructed sections of the wagon road, and more particularly to those portions cut into the shale and soft soil on the more precipitous slopes of the mesa. Heavy slides of earth blocked the road at different places and huge boulders, falling from the heights above in some instances carried away parts of the road bed. Because of the condition of the roads and trails, it took an entire day to travel from Mancos to the ruins. Feed for the horses, water bags and food had to be carried on each trip.\textsuperscript{9}

It was utterly impossible to promote heavy tourist travel to the ruins under those circumstances. The Denver and Rio Grande Railroad had tentatively promised that excursion rates to the park would be made as soon as the main wagon road was completed and the running of excursion trains thereby justified. There was already talk about having adequate roads in the park to permit automobile traffic.\textsuperscript{10}

\textsuperscript{8} Superintendent annual report, 1908, MVPF.

\textsuperscript{9} Acting Superintendent Wright, to Secretary, July 21, 1911, MVPF.

\textsuperscript{10} Automobiles had been already admitted to Mount Rainier in 1908, MVPF. Proceedings of the National Park Conference held at Yellowstone National Park (U.S. Government Printing Office, 1912), September 11-12, 1911, 172-73.
There was some pessimism also about the worthiness of the road in progress and the future development of the park. During the first conference at Yellowstone of departmental officials and other persons interested in the development and administration of the national parks, R. B. Marshall, Chief Geographer of the Geological Survey, read the following speech about Mesa Verde:

There is nothing in this park to make it of national importance save the cliff dwellings. There is no opportunity for camping; the scenery is common to many of the Western States and needs no protection. The inaccessibility of the park, the long distance, and the miserable railroad accommodations make it, I think, out of the question to make this park popular to any degree in comparison with the other parks. The road which is under construction, particularly along the north face of the cliff, although of scenic value, is in the worst place possible to maintain it. It will, I estimate, require $50,000 to put these few miles in good order, and because of the slide rock and other material through which it passes that $10,000 a year will be none too much to keep it in safe condition.

There is practically no water in the park, and until water can be found the department is taking a big chance of wasting public money in building roads and accommodations where they may not be used by the public on account of lack of water....

Road construction continued at a rapid pace. The section of the road from the head of Morfield Canyon under the Knife Edge and over the ridge to the head of Moccasin Canyon was completed in 1911. This section of the road was referred to as the "Decker Road," since it was constructed by Nathaniel A. Decker, a contractor from Mancos.

11. Ibid., 115-16.

12. Superintendent, monthly report, July 1911; annual report, 1911, MVPF.
In July 1912 a road was completed from the north boundary
down the east side of the ridge extending north from under Point
Lookout to connect with the Mancos-Cortéz road, seven and one-half
miles west of Mancos. 13

Also, in 1912, construction was undertaken of the remaining
six-plus miles of road between the head of Moccasin Canyon and the
west fork of Little Soda Canyon. This section of the road was
completed by the middle of 1913, and on July 13, Jose R. Córdova,
of Bloomfield, New Mexico, drove the first 4-horse wagon load of
13 visitors over the new carriage road to the rimrock campsite
overlooking the head of Spruce Tree Canyon. 14 On November 17,
Superintendent Shoemaker wrote: "Since last August, by actual
count, there have been sixty vehicles, two and four-horse teams,
over the roads and into the first ruins." 15

3. Morfield Road - automobile traffic

Before the completion of the wagon road, Superintendent Shoemaker
had proposed a by-pass road to abandon about five miles of the former
which had very steep grades and was exceedingly dangerous on account
of the overhanging rim rock and the steepness of the hill on which
it was built. This meant that the scenic Knife Edge Road would be
abandoned. The by-pass road, started in 1913, would leave the park


14. Nusbaum, Santa Fe, memorandum to the Superintendent, Mesa
Verde, September 24, 1948, MVPF.

15. Shoemaker to Mr. Wadleigh, of the Denver and Rio Grande
Railroad, MVPF.
road at the head of Morfield Canyon, run south for four miles, then cross the divide into Prater Canyon, then climb up out of Prater Canyon and meet the park road at the head of Moccasin Canyon, a total distance of nine miles. This was the so-called "Spencer Road," from the name of the contractor, George Spencer, of Mancos.  

Morfield Canyon Road would make travel to the park safer, but the business interests of Mancos did not favor the by-pass. A committee was appointed by the Mancos Commercial Club to investigate the needs and changes in the existing road to the park. In a report sent to the Secretary, the committee members stated that the greatest need of the park was the completion of an adequate highway. Upon examination, they found that the appropriation of 1913 had been spent on the Morfield Canyon Road that made a detour of approximately nine miles from the Mills survey, thereby increasing the distance that visitors had to travel to reach the ruins by more than six miles. Of these nine miles of new road, only six were completed, and it would require the expenditure of a large amount of money and many weeks of work to finish the road. This new road, they argued, had no practical value as a scenic route. As a park highway it was not desirable because it followed "a dreary route along the courses of the canyons." The old road--Knife Edge--following Mills' survey,  

16. Superintendent to Secretary, May 8, June 1, 1913; Superintendent, annual report, 1913, NA-RG 79.
on the other hand, was an ideal parkway, and its value as a scenic route was unsurpassed.\textsuperscript{17}

About the same time that the Mancos Commercial Club was complaining about the new road, Congressman Taylor called the attention of the Secretary to complaints from visitors to Mesa Verde. Their main grievance was that it was an unjust hardship to prohibit travelers from entering the park in automobiles. Several of the prominent citizens of Cortez and Mancos had written Taylor about this matter. Superintendent Rickner favored the use of automobiles since the roads were in suitable condition. The Secretary answered Taylor that cars would be allowed as soon as the Morfield Canyon Road was completed. On May 25, 1914, Rickner informed the Secretary that the road was ready.\textsuperscript{18}

In preparation for the use of automobiles, the different portions of the main road were improved. The Decker Road was cleared and graded, but it was still very narrow and had some very steep grades. Others were widened and the curves straightened as much as the means at hand allowed.

On May 28, Superintendent Rickner made the first trial trip with automobiles to the park. It was successful in every way and demonstrated that cars could safely make the trip. Six cars--two Studebakers, two Fords, one Hupmobile, and one Reo--with 25 persons, went over the road from Mancos to Spruce Tree Camp using the

\begin{itemize}
\item 17. Report to the Secretary, January 20, 1914, MVPF.
\item 18. Hon. Edward T. Taylor to the Secretary, April 30, 1914; the Secretary to Taylor, May 5, 1914; Rickner to the Secretary, May 25, 1914, NA-RG 79.
\end{itemize}
Morfield-Prater Canyon by-pass. As frequent stops were made along the way to take pictures, no time was recorded for the incoming run, but the cars made the return trip in three hours.¹⁹

As other car owners and tourists were anxious to make the trip by auto, Rickner wanted to open the park to automobile travel as soon as possible. Team owners and liverymen feared that admission of autos would cause a decrease in the travel by horse power, hence their strong opposition to automobiles. A Mr. A. B. Hardin was a sort of spokesman for the group and wrote to the Secretary about the subject.²⁰

Park roads, to be kept in good shape, had to be dragged quite often. Portions of the road became filled with earth and boulders, making travel impossible, and putting all park people to work. Teams and saddle horses passing over the roads during a rain, or immediately after, cut up the roads very badly. In muddy places the wheels sank half way to the hubs. As a protection, all travel was prohibited over the park roads when they were wet or muddy; driving of loose stock in herds of more than 15 head was also prohibited.²¹

June 20 was the day set for opening the park to automobile travel with formal opening and celebration to be held on July 4.²²

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¹⁹. Rickner to the Secretary, May 29, 1914, MVPF.
²⁰. Rickner to the Secretary, June 6, 1914, MVPF.
²¹. Rickner to Secretary, June 13, 1914, MVPF.
²². Rickner to Secretary, June 16, 1914, MVPF.
Autos and motorcycles were admitted to the park and were allowed to make trips to the ruins via Morfield-Prater Canyon by-pass. A fee of $1.00 was charged for private automobiles for one trip or $5.00 for a season privilege; the season for motor vehicles was from May to November 1. The use of automobiles was governed by a set of regulations adapted from those of Sequoia National Park.23

A new road, to replace the old trails from Spruce Tree Camp to Cliff Palace, Balcony House, and Peabody House, was cleared of trees and brush and partially graded, and while a great deal of work was needed on this road, automobiles made the trip to all the important ruins, doing away with the necessity of taking saddle animals into the park.

The Knife Edge Road, more scenic and over six miles shorter than the Morfield-Prater Canyon Road, was repaired and continued to be used by the horse-drawn vehicles and saddle horses.24

In July, 66 persons registered at Spruce Tree Camp, and made the road trip as follows:

by autos (garage and private)  - 26 persons
by carriage                   -  8 "
on horseback                  -  8 "

66

Private cars                   - 28 persons
Mancos Garage                 -  8 "
Wagon                         -  8 "
Horseback                     - 25 "

146 total visitation25

23. Superintendent to Secretary, May 11, 1914; Superintendent, annual report, 1914, MVPF.
24. Superintendent, annual report, 1914, MVPF.
25. Total visitation included those who registered at the Camp and those who used the campground facilities. Superintendent, monthly report, 1914, MVPF.
After the introduction of automobiles, tourists began to crowd into the park's limited facilities; the machines made good roads essential. By 1916 automobiles were used by most of the visitors, though the horse still made the trip; some parties on horseback liked to follow the more romantic trails instead of the road. From July 1, 1915, to July 1, 1916, the number of visitors registering at Spruce Tree Camp was 1,170, almost double the number of the previous year. The opening of the road from Denver to the southern part of the state had brought many automobile parties from the East, and as this rough road became better, it was expected that many parties from eastern points would make the trip. Travel in the park, of course, depended on the conditions of the roads.  

4. **Point Lookout roads**

While the Morfield-Prater Canyon Road was used as the automobile by-pass route, Superintendent Rickner requested funds to maintain the Knife Edge Road in order to eliminate the long drive down Morfield and the steep three-mile grade out of Prater Canyon to the head of Mocassin Canyon. He thought the Knife Edge was too valuable as a scenic route to be abandoned.  

With the elimination of the Knife Edge Road, attention shifted to the Point Lookout grade. Built at a considerable expense, the
portion of the road that passed west of Point Lookout followed
the side of a clay erosion bank several hundred feet high, where
according to all indications the erosion was more rapid than at
any other place in the mesa. Under Point Lookout, the road was
cut out of a loose shale, and as the hillside was very abrupt,
the cut was deep. Dry weather loosened the shale, and a high
wind brought it down into the road. Rain loosened it also, and
a shower did the same. In fact, it was constantly moving down­
ward, causing the need for daily repairs. When one of the big
overhanging rocks did fall, great damage was done to the road.
So far the park had been very fortunate, but if the road was kept
up for travel, it was only a matter of time until some car or
wagon would be caught in a big slide.

From the top of the mesa, the road continued on the outer
side of the cliff that was an even more dangerous road than the
portion under Point Lookout. In 1914, a rock-slide carried the
entire road bed away for several rods. This section of the road
was also in the shale, the dangerous part with very threatening
rocks overhanging.

To go through the Point Lookout section of the road, noted
a distinguished park visitor, was a nerve-wracking experience:

When we got about half way up the ascent, we
met a man driving a herd of perhaps 50 head of
stock down the same road. The road was entirely
too narrow for a man to attempt to drive his
stock, which were of course somewhat wild, past
the three autos which were transporting our
party. There was nothing for him to do except
to turn around, drive his stock to the top of
the mesa again, and wait till our autos had
reached the summit before making any further
attempt to drive them down.
It was quite evident that as long as grazing was permitted on top of the mesa, a dual system of roads had to be provided by the park.

Thus a new road was proposed to ascend the mesa southeast of Point Lookout which would avoid the hazards of the other road and afford a route which would apparently cost considerably less to maintain. The proposed route was through a country covered by a growth of juniper, piñon and oak brush, all of which were a protection to the road. There were no overhanging rocks to come down, and the roots of the growth held the earth in place. This road would encounter no shale, and would reach the top of the mesa with a grade of no more than 6 percent.

It was also suggested that the portion of the road west of Point Lookout could be maintained at a comparatively slight expense as a trail for driving stock up and down the mesa, and the stock should be forbidden on the new road.28

Meanwhile, all the park roads were improved and kept in shape for automobile travel. Under Point Lookout, however, the road was a real problem due to heavy rains. These washed down earth and stones and often huge boulders that greatly damaged the roadbed. It required the use of gunpowder to remove them.29


It became necessary in 1916 to install a telephone control system at the Point Lookout grade, making this section of the highway a one-way road. The grade was so steep, the road too narrow and the curves too sharp to permit its use by automobiles going both ways at the same time. This arrangement was very cumbersome. At the foot of the hill, directly under Point Lookout, was a telephone box (No. 5), and the following sign: "Stop: All persons are forbidden passing this point without first calling the Superintendent's office, Phone No. 11." At the top of the hill there was a similar sign and another telephone box (No. 4). Anyone calling in at box 5, on his way into the park, was told whether he could proceed or not. If someone had already called in at the top of the hill (box 4), on his way out of the park, he was given the right of way, and the car at box 5 had to wait until the other car arrived at the foot of the hill and called up the office at Mancos to tell that he was off the road. Then the road was given to the car waiting at the foot of the hill and it was allowed to ascend the grade, calling at box 4. This was required of all passers, and saved the danger of two cars meeting on the grade. 30

Road construction was a problem in all parks. Yosemite and Yellowstone were the only parks with more than a few miles of good

30. Rickner to F. A. Wadleigh, June 8, 1916; Rickner to Marshall, March 31, 1917; Superintendent, annual report, 1917, MVPF.
roads. One problem with road construction was that Congress voted money in irregular driblets and the parks could build only piece-meal stretches, without any comprehensive plan. It meant poor and in the long run really expensive roads. 31

In his annual report of 1917 Director Mather stated that besides funds for excavation of more ruins and repairs of cliff dwellings, the other greater need of Mesa Verde was a new road for ascending the mesa. In rainy weather, he wrote, the road around Point Lookout was impassable. Rocks and debris from the mountain above were constantly sliding into the middle of the road. Engineers believed that it would never be possible to prevent blocking of the road by debris, and that as long as it was used, the cost of maintaining the park road system would be high; that by building a new road eliminating this ascent to Point Lookout, the cost of maintaining the park road system could be cut at least by one-half or perhaps three-fourths.

A new road to ascend the Mesa Verde from the east side of Point Lookout was authorized by Congress in 1917 and completed during the summer of 1919. It left the Mancos-Cortéz highway, passed along the eastern side of Point Lookout, and ascended the mesa by easy grades on the Mancos Valley side of the hill. Besides being free from the dangers of the old road, it gave the tourist a grand view of the Mancos Valley backed by the La Plata Range of mountains.

31. Ise, 202-03.
Popularly referred to as the "switchback," this new scenic entrance road crossed the "saddle" (Nusbaum Cut) below Point Lookout and joined the old road at the head of Morfield Canyon. Although frequent and heavy rains made repair work on the old road almost constant during the 1919 season, it was kept open to travel, most of the cars going into the park one way and returning by the other. This choice of roads, giving a different route each way, gave great satisfaction to tourists. Ascending the mesa by the old road gave a grand view of the country to the west and north, and the descent by the new road showed the Mancos Valley and the mountains to great advantage. The old road continued to be controlled by telephone. It was hoped that these routes could be used every year. In this connection, Director Mather said: "It ought to be our policy to maintain the old Point Lookout road in good repair if funds can be made available for the necessary work of upkeep of the highway and control the menacing slide." This section of the road was not abandoned until the construction of the present Point Lookout grade in the late 1920's. 32

Automobiles certainly changed the pattern of travel. By 1918 very few horse-drawn vehicles entered the park. The long, hard drive with team was now reduced to a few hours run with the car, and many parties made the trip to the park, visited a few of the principal ruins, and returned in one day. A larger number of cars

32. Reports of the Director, 1918-19; Superintendent, annual reports, 1918-19; Rickner to the Director, November 18, 1918, MVPF.
carried camping outfits than in former years, and a smaller number of tourists came in by rail. As time passed, a larger number of cars and travelers came from distant states, including New Jersey and New York. 33

For some unknown reasons, wrote Superintendent Rickner, the majority of tourists came to Mesa Verde with the idea that it was a desert land, and that the journey was hard and uninteresting, over an arid, barren country, with the ruins of the cliff dwellers the only points of interest. This erroneous idea prevented many from making the trip to the park, but, as more people were coming in each year, this false view was being gradually corrected. After a visit to the park all visitors carried away memories of a wonderful and beautiful journey. Once on the park road, the traveler turned his back on all signs of the improvements of civilization. He stepped at once into an unbroken wilderness where the road on which he was traveling was the only mark of man's handiwork.

As the road passed around the face of the cliff, noted Rickner, one looked across the broad

Montezuma Valley to the Blue Mountains in Utah, the Sierra La Salle, still more distant, and old Ute Peak in the middle distance. Looking backward one sees the snowcapped Rico Mountains and Lone Dome, not unlike an Egyptian pyramid on a mighty scale. From this vantage point one's gaze travels across space into four States, and the Four Corners can be seen, the only place where four States meet in one common point of boundary.

The new road takes one through forests of pinyon and juniper with open glades covered with silvery sage brush. Winding about tree-covered knolls, it ascends the mesa by a zigzag way, sometimes through tree-covered spaces and again out into the open.

33. Superintendent, annual reports, 1919-20, NA-RG 79.
hillside. From this road one sees the grand old La Plata Mountains with Hesperus, "the farthest west," dominating all, snow-tipped and rugged, lifting its scarred head to a height of over 13,000 feet. Nestled at the foot of the range is the town of Mancos, looking, from this distance, like a group of tiny dots upon a broad expanse of green. After climbing the mesa and passing over the Saddle, this road joins the old road at Station 64 at the head of Morefield Canyon.

From Station 64, the road leads down beautiful Morefield Canyon, its floor a carpet of green and bounded on either side by a rocky ridge that rises higher as one goes down. Across the ridge dividing this valley from Prater Canyon the road passes in easy grades to the floor of Prater, another grassy valley of picturesque beauty. Up the west side of Prater the road ascends to the head of Moccasin Canyon, and here one looks off over the edge of the mesa and sees again the Montezuma Valley and the mountain ranges bounding it. From here the road winds along the northern edge of the mesa, heading one canyon after another until, passing between Soda and Navajo Canyons, it reaches the head of Chapin Mesa. From these higher levels one looks away to the southward for many miles to the Carriso and Luka Chukai Mountain ranges, soft and blue in the distance, barely distinguishable from the sky. In the middle distance Shiprock stands out alone, looking like some monster ship upon an ocean of blue.

Down the crest of Chapin Mesa the visitor is carried past Far View House and Mummy Lake to Spruce Tree Camp and dinner. No one can make this drive and not be filled with admiration and wonder. If this is desert, then a desert is a thing of beauty, and something well worth a long journey to see and feel.34

5. Future roads

While the new portion of the entrance road was being constructed, other park roads and trails were opened, and existing ones improved. The roads from Spruce Tree Camp to the different ruins were widened and in many places regraded. A short road was constructed from

34. Superintendent, annual report, 1920, MVPF.
Sun Temple to a spectacular point on the rim of one of the nearby canyons, thus affording a most unusual view of the ruins, the canyon, and the forests. Three trails were built, all filling long-felt needs of the visitor who delighted in exploring the region. One trail led from Cliff Palace to Community House in Cliff Canyon. A trail to Square Tower House, which passed over a sloping ledge that projected over the canyon, was blasted out and a strong iron railing was placed along the outer edge to protect the tourist and open this interesting ruin to all. Up to this time, one desiring to visit this ruin could only do so by holding to a strong rope anchored above, while passing across this dangerous place. Another trail was located and cleared around the southern end of Chapin Mesa, by way of Navaho, Soda, and Cliff Canyons, to Inspiration Point. Still another one was being located from Spruce Tree Camp to the Rock Springs section, in the western part of the park.35

Several other important roads were suggested by Superintendent Rickner during this period. He suggested a road from Station 64, at the head of Morfield Canyon, to the top of Point Lookout. This would be a side trip, and would be taken by all, either on entering the park or on the return. The level space on the very outmost point of the hill would provide ample space for cars to turn, and the view obtained in all directions would be unobstructed. Many

35. Superintendent, annual reports, 1919-20, MVPF.
tourists left their cars at Station 64 and walked the short distance to the summit, "and no one should leave the park without having seen the view from this point."

Now that there was fairly convenient and safe access to the park, and other urgent improvements in the highway system had been completed, park officials were certainly justified in planning further development of the park by road extensions. The unique topography of the park and the scenic features of the Mesa Verde suggested two new highway routes if there had not been more prehistoric structures worthy of being made accessible to the public. However, both of these routes would also open exceedingly worthwhile exhibits of ancient architecture. Rickner explained both routes in his annual report of 1919:

A great many suggestions for the improvement of the park could be proposed, but as it will take years of well-directed labor and great expense to bring all the beauties and wonders of antiquity to a condition where they can be enjoyed only the most pressing needs will at present be considered.

Extension of the present road system and restoration of more of the ruins are among the most needed improvements. A road from Spruce Tree Camp to the southern boundary of the park to connect with the Cortez-Shiprock road, shortening the distance from the camp to Shiprock by about 76 miles, would be of great benefit to tourists who visit the park in automobiles. Most of the visitors to the park go from here to Shiprock and to do so have to return to the Mancos-Cortez highway, thence to Cortez, and on to Shiprock, a long distance, while the proposed road would be direct. For visitors from the west it would be of the same benefit.

36. Superintendent, annual report, 1918, MVPF.
A road from the present road in the park at a point near the head of Navajo Canyon, along the northern edge of Mesa Verde to Wetherill Mesa, down this mesa to Rock Springs and the many ruins in that vicinity, would open up a great deal more of the park to visitors. The ruins in the Rock Springs country are very interesting, some of them very large. This road would make it possible for tourists to visit and explore all the finest ruins in the park, many of which are now beyond the reach of any but the hardiest travelers. Another road that should be constructed at an early date is a short piece of road from Station 64, at the head of Morefield Canyon, to the summit of Point Lookout. The distance would be little more than a mile, and the view obtained from the point would compensate for many times the distance. It would be a side trip that would be taken by all, for the view embraces the mountain region in every direction.

In connection with the suggested roads, the Director wrote:

Both of these roads should be built in the very early future, and I am so thoroughly convinced of their importance in the advancement of interest in Mesa Verde Park that I am preparing estimates for funds to cover grading them next year. A third road that should be built soon is a short lateral to the summit of Point Lookout. It would be about one mile in length.

With or without these new roads, the trip to and through Mesa Verde Park is one that every American should take. The scenic railroad approaches cannot be surpassed in this or any other country, and the automobile highways leading to the park already built or in course of construction are equally impressive. The natural features of the park itself are distinctively scenic, and, of course, it is remarkably unique because of its ancient buildings and relics of a past civilization. Everything about the Mesa Verde combines to make it one of our finest parks, and hence worthy of the best attention of the Federal Government.

37. Report of the Director, 1919, MVPF.
B. Ranger Services

1. First rangers

Ranger services in Mesa Verde National Park were inaugurated in May of 1908 by Major Randolph, first regularly appointed superintendent. He formally took charge of the park on August 31, 1907. After inspecting the park he requested and was granted sufficient appropriations to employ one permanent ranger. He recommended Charles B. Kelly, of Mancos, the same man who received the first contract for building the wagon road to the park. According to Randolph, Kelly was a man of ability and integrity, and was "a loyal Republican, and had the support of the people of this county—Montezuma."¹

Kelly was the best known and most competent guide in the Mancos area and owned an outfitting business. He had been packing visitors into Mesa Verde for about 15 years. For the accommodation of the visitors he brought to Mesa Verde, he had constructed a two-room log cabin on the rim of Spruce Tree Canyon, just behind the location of the present day museum. He held the position of Park Ranger until March 31, 1911.²

¹ Randolph to Secretary James R. Garfield, September 9, 19, 1907; he was appointed effective October 1, MVPF.
² Superintendent, annual report, 1911, MVPF.
In May 1908 Randolph requested and was allowed the funds to employ two additional rangers to assist in the care of the park and serve as guides to travelers during the tourist season. Two other men from Mancos—Newton W. Samson and James A. Frink—were selected as the first seasonal park rangers. Besides the rangers, those who had transportation concessions were authorized to guide visitors through the ruins.  

Ranger-guided trips were provided for by the rules and regulations of the park, dated March 19, 1908:

Persons bearing archaeological permits from the Department may be permitted to enter the ruins unaccompanied after presenting their credentials to the Superintendent or other park officer. Persons without archeological permits who wish to visit and enter the ruins shall in all cases be accompanied by a park ranger or other person duly authorized by the Superintendent.

From 1908 on the Superintendent's monthly reports referred to the rangers, especially those employed for the summer season, guiding the tourists through the ruins. Their principal duties were stated to be to police the park and act as guides. With the exception of one seasonal ranger—Roscoe C. Husted—all the rangers selected, seasonal and permanent, between 1907 and 1921, 

3. Superintendent to Secretary, May 15, 1908; Superintendent, annual report, 1911; Acting Superintendent Wright to Smith, July 22, 1911, MVPF.
were local men from Mancos and a few from Durango. Most of them were cattlemen. The Frinks—father and son—were rangers in 1909 and 1910. They had established a trail leading to the park over the north rim, for moving cattle into the area. After the park was set aside they held grazing leases; Frink Trail is still visible and appears in the park topographical maps prepared by the Geological Survey.4

In 1911 Dr. Hewett complained that the Park Ranger saw very little of the park, his principal business being that of transporting travelers from Mancos to the ruins. "I would recommend," Hewett wrote, "that the business of transportation of passengers be conducted entirely by persons not connected in any way with the administration of the park."5

Hewett's reference to the Park Ranger was Charles F. Kelly. Under Randolph, Kelly was devoting part of his time to "conduct an outfit business and livery stable at Mancos," and hiring himself to persons as a guide, in violation of the Department's rules.6

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5. Hewett, Memorandum to the Secretary, January 7, 1911, MVPF.

6. Superintendent to Secretary, June 12, 1908. Assistant Secretary to Superintendent, June 16, 1911, MVPF.
In 1916 Rickner requested an additional ranger to cope with the increase of travel; in the previous year he had to act as guide for often there were more parties than the rangers could handle. Ranger Fred Jeep's wife was forced to act as guide in several instances, when a number of private cars and camping parties came to the park at the same time. All the drivers of the "garage cars" of Mancos were official guides, and they guided the parties they took into the park. Rickner was reminded by Mr. Marshall, Superintendent of National Parks, that rangers were employed to do trail and road work when necessary, enforce the regulations for the government of the park, and aid and assist in its administration in every way, "and not to act as guides except in case of pressing necessity." He suggested that Rickner hire qualified persons who desired to guide parties through the ruins, with permits issued by the Department.  

In winter time, all that the two permanent rangers could do was patrol the north end of the park in snowshoes. One ranger stayed in the park with his family until the snow drove him out. 

7. Marshall to Rickner, March 31, 1916; Mather was of the same opinion as Marshall, according to a letter of March 16, MVPF.  
8. Rickner to Secretary, November 26, 1915, MVPF.
2. **Ranger Station**

Since very early in the history of the park, it was recognized that the permanent presence of the rangers on the mesa was necessary for the proper protection of the ruins. In this connection Superintendent Randolph wrote in 1908:

> It is recommended that a house be constructed at Spruce Tree House so that a custodian may reside permanently near the ruins, and thus be enabled to give closer attention to their care, as well as to the comfort and convenience of travelers. Such a house can here be built most economically of stone. The greater part of the necessary material can be obtained on the ground.\(^9\)

Next year he wrote again:

> On account of the large amount of money that has been spent on the excavation and repair of ruins, it is now necessary that there be a resident custodian in the park during all except the coldest winter months. It is therefore recommended that the head ranger be provided with a suitable cabin and required to live at Spruce Tree House for nine months in the year until the carriage road is completed, after which he should remain there all the year around. Such a ranger should be paid not less than $90 per month. There should be another regular ranger at a salary of $75 per month to look after stock, guard the ruins from vandalism, and serve as a guide for travelers.\(^10\)

In 1911 the Secretary acknowledged that experience in the administration of the park had demonstrated the necessity of

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9. Superintendent, annual report, 1908, MVPF.

10. Superintendent, annual report, 1909, MVPF.
having a permanent park ranger on duty in the park, in the vicinity of Spruce Tree House and Cliff Palace, during the tourist season; that he had to live in the park permanently as soon as proper accommodations for housing could be supplied by the Department.\footnote{11}

What the rangers used around 1913 as a headquarters station, at Spruce Tree Camp, was a 12 by 18 feet frame shack of boards and tar paper. At this time the other buildings in the park were as follows: a government cabin at the head of Morfield Canyon, a meat house at Cliff Palace, a frame shack at the foot of Frink Trail, a frame cottage at Red Spruce Canyon, a frame barn at Red Spruce Station, and two windmills.\footnote{12}

Superintendent Shoemaker built a four-room cottage at Red Spruce Camp (School Section) as a house for the rangers employed in the park. Its location, however, was 12 miles from the ruins. During the summer season the work of the rangers was largely at the ruins, or near the entrance of the park, and the cottage was of no benefit. In the winter season heavy snows blocked this place up, and the only use of the cottage was as an occasional stopping place.\footnote{13}

\footnote{11. Acting Secretary to the Superintendent, March 17, MVPF.}
\footnote{12. Shoemaker to Secretary, May 15, 1913; Rickner to Secretary, December 24, 1913, MVPF.}
\footnote{13. Superintendent, monthly report, November 3, 1913, annual report, 1914, MVPF.}
After numerous requests and delays, finally, a new building for the use of the rangers was erected at Spruce Tree Camp in 1916. It was built of spruce logs with rough stone foundation. On the side overlooking the ruins of Spruce Tree House and the canyon there was "a broad piazza, and the building as a whole fits into the scene adding rather than detracting from the beauty of the spot."14 No residence for the Superintendent nor park office was build until 1921.

14. Superintendent, annual report, 1916, MVPF.
C. Concession Services and Facilities

When Congress approved the act creating the park, the cliff dwellings were virtually inaccessible to the general public, except scientists interested in explorations, pot hunters, the cowboys of the mesas, and straggling tourists. Although many people knew of the existence of the cliff dwellings and their ancient inhabitants, only a comparatively small number had a definite notion as to the location of the area or any concrete idea of the features it contained. Southwestern Colorado was relatively isolated by the lack of good access roads through the mountains and deserts surrounding it, and word of its many features was only beginning to reach the outside world.

Only a small hardy lot ventured to see the ruins. It required two days traveling south by railway from Denver to Mancos, the nearest point to the park. At Mancos, C. B. Kelly, the proprietor of a stable personally conducted the traveler and provided team, food and lodging for the trip, which required three days to make—one day to go, one at the ruins and one day returning. Kelly charged $15.00 per person, or $12.50 when there were two or more persons. The first 15 miles to the foot of the Mesa Verde was covered by wagon, and the last ten on horseback; the time required to reach the ruins was
approximately five and one-half hours—two and a half by wagon and three on horseback. Kelly had a cabin near Spruce Tree House, on the southern part of Chapin Mesa, where sleeping accommodations were provided.

Balcony House, Spruce Tree House and Cliff Palace were the ruins that tourists usually visited. Tourists were recommended to wear rough clothes and heavy shoes, as climbing about the ruins was very hard on wearing apparel. At the mesa the food was plain, the accommodations primitive, but there was no hardship for the spirited traveler. The trip gave him an opportunity to test the simple life, "with plenty of rough and heavy climbing thrown in."¹

In 1908, when Congress had not as yet passed a law authorizing the Department of the Interior to provide visitor services, Superintendent Randolph requested authority to permit park ranger Kelly to put up tents in the park during the travel season because there were no accommodations available on the mesa. A camping area had already been designated for travelers.²

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¹ The Daily News. Denver, Colorado, August 11, 1907.

² Superintendent, annual report, 1908; Randolph to the Secretary, January 13, 1908; First Assistant Secretary to Randolph, January 23, 1908, MVPF.
Randolph's request was denied because Kelly was a government employee. In 1911 the Superintendent was authorized to employ a temporary ranger for the tourist season, April through September. This ranger, the instructions read, should be a married man whose wife could cook and provide for tourists in the park; she was to be granted formal permission to provide meals to visitors in the park at a reasonable compensation.3

On March 31, 1911, Wesley A. Martin was appointed temporary ranger and his wife, Emma Martin, was given the first concession to "furnish meals and sleeping quarters to persons desiring to secure such accommodations and service within the metes and bounds of the Mesa Verde National Park." She was authorized to charge $.75 for meals and $.50 for sleeping quarters.4 Visitors were housed in tents and meals were "good and homelike." Mrs. Martin owned most of the tents, all the bedding, and camp equipment used. She could accommodate 12 persons at one time in the Camp at Spruce Tree.5

3. Acting Secretary to Superintendent, March 17, 1911, MVPF.

4. Acting Secretary to Superintendent, March 17, 1911; Secretary to Superintendent, March 31, 1911; Assistant Secretary to E. B. Linnen, Acting Superintendent, April 25, 1911, MVPF.

5. Superintendent Shoemaker to the Secretary, January 24, 1912; Assistant Secretary to Shoemaker, January 30, 1912; Shoemaker to Virginia McClurg, July 17, 1912, MVPF.
Mrs. Martin's concession lasted until 1912. In 1913 Mr. A. J. Ames had the concession for maintaining and managing a camp for tourists.6

Ranger Kelly resigned in 1911 for the purpose of operating again his Mancos livery stable and pack and saddle arrangement for visitors to the park. He was the only liveryman in Mancos, although Cortéz had at least two.7 In 1913 Kelly was granted the first concession for outfitting and transporting visitors to the park, something that he had been doing since the 1890s. He was given the privilege with the understanding that it was not an exclusive one. Kelly used one four- and one three-seated vehicle and five saddle and pack horses.8 After the opening of the wagon road in the summer of 1913, and the admission of cars in 1914, Kelly went into partnership with a man named French to operate the Kelly-French Stage, carrying

6. Shoemaker to Secretary, November 24, 1913. Ranger Martin had been fired on October 1, 1912, for drunkenness and insubordination, and this, apparently, ended his wife's concession, MVPF.

7. Acting Superintendent Wright to Mrs. Minnie H. Hechtman, Dolores, June 20, 1911; Wright to Mrs. Gilbert McClurg, September 1, 1911, MVPF.

8. Assistant Secretary to Shoemaker, January 10, 30, February 13, 1912; Chief Clerk of the Department to the Superintendent, April 11, 1912, MVPF.
visitors from the railroad at Mancos to Spruce Tree Camp until 1920.⁹

In 1914 Superintendent Rickner informed the Secretary that as conditions are at present, we may get some tourists, but only those deeply interested in antiquities will undergo the hardships of a trip to the Park, and the large majority of tourists will pass by a jaunt of such discomfort. The road to and through the Park is far from good, and makes the journey a tiresome one. This would not matter so much, and many would undertake the trip if there were rest and comfort at the journey's end, but add to the rigors of the road a camp without comforts, and camp fare, and we are virtually prohibiting all but the very hardy. It will be impossible to secure any one who will keep a good camp in the Park if they are forced to furnish their own equipment, nor could one really afford it.¹⁰

That same date he wrote a short letter to Congressman Edward T. Taylor, of Colorado, who had recently visited the park:

As you are aware, we have been put off, and put off, from year to year until the improvement of the park has become a joke, and people here are skeptical about anything being done to make the park what it should be.¹¹

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⁹. C. R. Beers operated the concession in 1920. Circular of General Information, MVPF.

¹⁰. For administrative reasons, the Department had refused to purchase camping equipment to attract concessioners; most of the inquiries about the park were concerning guest's accommodations. Rickner to the Secretary, March 25, 1914, MVPF.

¹¹. Rickner to Taylor, March 25, 1914, MVPF.
Rickner sent the Secretary an application for the camping concession in Mesa Verde, stating that the party was reliable and would expend considerable in improving the facilities, provided the superintendent was able to put in a pump to bring water from Spruce Tree Spring to the camp. What Rickner did not tell the Secretary was that the applicant was his daughter, Oddie Jeep, wife of Fred Jeep, park ranger. She was given a permit to operate the camp from May 1, 1914 to May 1, 1915; she held the concession until 1929. During the travel season of 1915 Mrs. Jeep had good accommodations near Spruce Tree House for 30 persons, all comfortably provided with new tent bedrooms, and excellent beds. She charged $3.00 per day for all ordinary parties but had special rates for large groups. An added facility for travelers was a telephone line from the park office at Mancos to Spruce Tree Camp, which was operated only during the travel season.12

Early in 1917 plans were prepared for building a hotel at Spruce Tree Camp.13

12. Rickner to Mrs. Francis La Follete, April 19, 1915; Superintendent, annual report, 1915, NVPF.

13. Rickner to Marshall, October 9, 1916, March 17, 1917; Superintendent, annual report, 1917, MVPF.
In the fall of 1917 Horace M. Albright, Field Assistant to Director Mather, visited Mesa Verde and suggested to Mrs. Jeep that each tent's equipment should contain, besides a bed, the following items: dresser, straight chair, washbowl and pitcher, a rocking chair, kerosene lamp, slop jar, drinking water pitcher, water glass, large rug, clothes tree or hooks with hangers for clothes, and the necessary towels, soap, etc. He also suggested the rearrangement of the tents, placing one row with the opening toward the canyon. Most of the above suggestions were followed by Mrs. Jeep and she was allowed to raise the rates for meals and accommodations.\(^{14}\)

Apparently Albright's suggestions had been prompted by a report of Inspector John A. Hill, who also visited the park in the fall of 1917, and made the following unfavorable comments:

The camp outfit is very crude. They are building a new house 26x38 to be used as dining room, kitchen, lounge and washroom, which will make an improvement over the shack which they are using at the present time.

The grounds of the camp are littered with logs, brush, road making tools, etc.

The 14 tents are furnished with the minimum equipment: a clean bed, chair, washbowl and pitcher, small rug and a candle.

\(^{14}\) Albright to Mrs. Jeep, May 24, 1918; Mather to Rickner, February 11, 1919, MVPF.
The Ranger Station, which is a two-room log house, is used as a bedroom for Mr. and Mrs. Jeep and as a laundry for the camping company and on the porch, lying in the open, are a great many curios taken from the ruins.

This is a family affair. The camp concessionaire being the wife of Ranger Jeep and a daughter of Supervisor Rickner. The meals are poor and the camp is more of a boarding house for road gangs who are served at the same time and in the same room with the guests, than a tent hotel for tourists.15

Improvements were made at Spruce Tree Camp in 1918. In his annual report Director Mather stated that the fiscal year was epochal in the history of Mesa Verde National Park. It had always ranked among the most important parks of the system, but it had now taken its place as one of the best improved reservations under the control of the National Park Service; that it boasted of almost every accommodation that any park offered for the traveling public except a hotel.16

Spruce Tree Camp, located on the west side of Spruce Tree Canyon, commanded a view of Spruce Tree House, one of the most visited ruins. The camp consisted of a building, referred to as a hotel, in which were located the dining and service rooms.

15. Hill to Albright, September 1917, MVPF.
16. Report of the Director, 1918, MVPF.
Nearby, on the brink of the canyon, was a picturesque log cabin with broad plaza overlooking the old ruin, giving a magnificent view to the south. This building contained a restroom, with ample fireplace and a room devoted to the display of relics from the ruins in glass cases. Three rows of 29 floored tents, on terraces, one above the other, were provided for accommodation of visitors. The entire camp was electrically lighted and the power plant pumped the water of Spruce Tree spring into a stone water tower above the hotel. Cedar benches were placed about the camp for the convenience of visitors. Sheds protected automobiles from the weather. A campground just across the canyon was maintained, where parties could pitch their tents and enjoy the pleasure of camping out. On a rising ground above the camp was a new four-room cottage used as a Ranger Station.17

That Spruce Tree Camp had improved visitors facilities can be seen from the following report of an inspection made in 1918:

The service is first class in every respect, exceptional in fact, when the difficulties of transportation are considered. The sleeping accommodations are clean and comfortable.

17. Superintendent, annual reports, 1918-20, MVPF.
The bedrooms are all located in tents 9 by 12 feet with board side walls up about four feet, and board floors, with rugs placed near beds. Clear cold spring water is supplied in each tent for bathing purposes. Pitchers and glasses are provided so that guests may obtain hot water from the main hotel building if desired. The dining room is in the main building, in which is located the office and registration facilities. The camp is in direct telephone connection with the railroad and the Superintendent's office in Mancos.

The meals served at this camp are worthy of special mention. The idea of the general quality of the service may be gained from the fact that fresh cream was served with the fruit and cereals. Fresh fruit was served as well. This is unusual, in a dry country so removed from rail transportation. The employees at the camp and throughout the park were competent and very courteous. Such little services as seeing that drinking water was available to returning hikers after visiting the cliff dwellings, etc., indicated a first class conception on the part of the management of what good hotel service is.18

18. Inspectors C. J. Brickfield and W. R. Mills, to Howard H. Hayes, August 20, 1918, MVPF.
D. Improvement of water resources

1. Scarcity of water

Water has been the life and death of Mesa Verde National Park. With the exception of the stream in Weber Canyon, the Mancos River is the only perennial stream that drains Mesa Verde. Except during and immediately after periods of precipitation, surface flow is very rare in the many canyons of the area. Springs and seeps are not numerous but do occur in some of the large canyons.¹

Both Leonard and Werner noted in their 1906 and 1907 reports the great need for development of the scarce water resources of the park, but especially a spring near Spruce Tree House. In connection with the making of improvements in the park, Superintendent Randolph was informed that the Department had been

advised the urgent necessity of providing an adequate water supply for tourists, stock, and for parties engaged in road construction and other work in the park in the very near future. Considering the importance of this question of water supply during the coming season, and the impossibility of doing much construction work on the road now under survey before the close of the fiscal year, when the unexpended balances would lapse into the Treasury, it is suggested that you go over

¹ The average seasonal precipitation varies from 15.84 inches at Cortez to about 18.73 inches in the park headquarters, MVPF.
the ground carefully and investigate all possible sources which could be utilized in providing an adequate water supply in the park and the strip, and submit a report to the Department, including estimates and cost in each instance, together with your recommendations in the premises. The approximate location of wells, etc., should be indicated upon a map accompanying your report.

In his first annual report of 1908, Randolph noted that the natural supply of water in the park was quite limited, and entirely insufficient for future use. Under the advice of a competent engineer and stone mason, he wrote, plans were prepared early in the year and submitted for improving and developing the water supply. Contracts were let for the building of a dam and spillway at the head of Spruce Tree Canyon to divert the rain waters which had up to that time run down the natural wash and flooded the spring, spoiling it for domestic use. In order to increase the supply of water for domestic purposes it was deemed advisable to conserve water by building cisterns just below the spring. These were included in the contract for the building of the dam and completed about the same time.

2. Assistant Secretary Pierce to Randolph, February 29, 1908, MVPF.
A trench was constructed under a separate contract for the purpose of conveying the water from the spring to the cisterns, and to catch the seepage from the canyon walls. The supply of water provided by these improvements appeared to be ample for all requirements at that time. From the cisterns the water was carried up the long and steep trail to the campground.  

In order to provide water in the northern part of the park, near the road leading to the ruins, a well was sunk 30 feet at the head of Navajo Canyon, and a good supply of water obtained. Wells were also dug and windmills erected in Prater and Ruin Canyons, along the route of the proposed carriage road. These would supply the water needed during the building of the road, and for the travel that would subsequently pass to the ruins. 

By the middle of 1911 the water supply at the government camp near the ruins was becoming of vital importance in connection with the general development of the park. The two springs in the vicinity—one at Spruce Tree House and

3. Superintendent, annual report, September 4, 1908; Rickner to Secretary, April 6, 1914, MVPF.

4. Randolph, annual reports, 1909-11, MVPF.
the other at Balcony House—supplied very excellent water. Robert B. Marshall, Chief Geographer of the Geological Survey, made a personal examination of the water supply and judged that it would be inadequate to supply the greatly increased number of travelers which would be expected there upon completion of the main wagon road. The reservoir that was constructed at Spruce Tree House did not hold water for any length of time owing to the nature of the rock bottom, which permitted rapid seepage. He recommended that the Geological Survey make an examination and determine the possibility and feasibility of developing sufficient water supply by the ruins.\(^5\)

During the progress of the road construction work, a well was sunk in Moccasin Canyon, "up to now supposed to be utterly dry, and very good water found at a depth of ten or twelve feet." This discovery, together with the supply developed from the government windmills constructed in Prater and Ruin Canyons, alleviated in great measure the inconveniences and hardships encountered in traversing the mesa on account of lack of water.\(^6\)

\(^5\) Acting Superintendent Wright to Secretary, July 21, 1911, MVPF.

\(^6\) Wright to the Secretary, September 22, 1911, MVPF.
2. **Survey of water resources**

On August 5, 1911, the Geological Survey was instructed to make an examination of the water supplies available in Mesa Verde National Park, and to report to the Department the result of the survey, together with the necessary recommendations for increasing the water resources if they were found to be inadequate. In response to this instruction, geologist W. C. Mendenhall was directed to make the required investigation. He visited the park on September 11 and prepared the first detailed report of the existing and future water resources of the area.  

According to Mendenhall, the geologic conditions which were the chief factors in producing the peculiar geography of the park affected very unfavorably the water supply of the higher portions of the dissected mesa. Already some wells had been sunk and a water supply developed in the heads of several of the canyons near the north edge of the park, but the wells were located several miles from the important ruins. Practically all the canyons examined

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7. Acting Director, Geological Survey, to the Secretary, September 27, 1912, MVFP.
near the Mancos River were susceptible to producing water by means of sinking wells. In intermediate narrower sections of the canyons, where erosion had just cut through the capping sandstone and had not broadened the canyon in the underlying softer shale, development of wells might prove unsuccessful. Anyway, he wrote, tourists will camp on the surfaces of the mesas and these consist everywhere of the porous sandstone into which the scanty rainfall of the region readily sinks, but will as readily be drained away by the numerous deep canyons which are never more than a mile from the traveler, even though he may be in the heart of the broadest of the most extensive mesa. The ribbon-like plateaus which lie between the canyons slope from 100 to 300 feet southward, so that their surface drainage is free, and storm waters therefore escape readily and little time is available for their absorption by the sponge-like sandstone immediately beneath the surface. It is little wonder, therefore, that practically no water is found on the surface of the mesa at any point except for brief periods immediately following heavy storms, when natural depressions may for a short time contain pools.

It was evident, asserted the geologist, that the cliff-dwellers required water for their existence. Presumably their dwellings were so located that this necessity could easily be secured. Indeed, he observed, of each of the three principal ruins, one—Balcony House—contained a spring; another—Spruce Tree House—was in the immediate
vicinity of the largest spring on the mesa; and the third—
Cliff Palace—laid just below a point where although no
"prominent spring at the present time existed," the early
dwellers probably had developed one. It was to be
remembered also that aboriginal requirements in the matter
of water supplies were much less than those of their
"white successors." Supposedly the aboriginal occupants
of the ruins of the Mesa Verde were prepared in times of
scarcity to carry their water supplies from wells or springs
in the canyon bottoms. 8

Officers of the park expressed the hope that artesian
waters might be developed to solve the water shortage on the
mesas, but the geologist was not too optimistic about this:

There is no hope that such water could be secured
under sufficient head to rise to the mesa surface.
Wells drilled in the bottom of the canyons through
the Mancos shale to the underlying sandstone of
the Dakota and Mc Elmo series might tap waters
which would rise to the bottom of the canyon or a
little above, but these would be of little value to
the temporary sojourners on the mesa top 1,000
feet above. Wells drilled in the mesa itself can
not hope to secure such flowing waters although
small supplies can probably be secured by drilling
a few hundred feet through the sandstone at
central points in the broader mesas to the top of
the underlying shales, where such waters as
penetrate the sandstone are stopped in their
downward course by the impervious clay beds.

8. "The Mokis, living far to the south and perhaps the most
closely related to the cliff-dwellers of any of the present Pueblos,
occupy high mesas to which they carry in earthen jars such water as
they need from springs one-half a mile or more away, and several hundred
feet below their dwellings," MVPF.
In his report, Mendenhall described the following springs and suggested means of improving and increasing the water supplies.

Spruce Tree House, of course, contained the principal and most accessible spring in the park. For this reason the opposite spur of the mesa top was selected as the headquarters camp for the park rangers and for tourist travel. The spring was located under a cliff a few yards north of the ruin. It was neither more nor less than a strong seep along a shale seam in the massive sandstone. This seep had been developed by drifting in four or five feet along the water-bearing seam and scooping out a shallow basin at the end of the drift. The water used for drinking purposes was dipped up from this little basin and carried to the camp above; the overflow was conducted by a shallow ditch to a cistern seven or eight feet square, and perhaps as many feet deep, under the cliff below the spring. The supply from the cistern was used for watering stock. Another crude reservoir was placed a little below it, and this received the overflow from the cistern. This supply was used for stock-watering also. In addition to these improvements a shallow natural tank above the cliff in the path of the flood channel from the mesa to the canyon was deepened and its capacity was increased by constructing a
wall on its lower side. In the blasting operations connected with this improvement a leak developed in the bottom of the reservoir, making it useless. If properly repaired to store storm waters, the reservoir would obviate the necessity of taking stock down under the cliff to the cistern at the spring, except during the particularly dry periods.

The flow from the Spruce Tree Spring was but a few gallons per minute, but it was reported to be permanent and the water of satisfactory quality. Probably, its flow could be increased slightly by extending a tunnel 25 or 30 feet along the water-bearing vein, thus concentrating the flow. Under the existing conditions a great deal of the water escaped because it came out for a distance of 50 or 60 feet along a deposit of rock and was lost. A longer tunnel extended to the northwest would intercept some of this escaping water and should add to the supply then available. Two or three additional well-constructed cement cisterns, reported the geologist, should be placed below the spring to store the water that was being lost during periods when there were no visitors at Spruce Tree House. Two such reservoirs with a capacity of 1,500 or 2,000 gallons each in addition to the cistern already in use would
probably enable the spring to meet all the demands of the camp for a number of years to come.

Balcony House occupied an almost unreachable shelf under an overhanging cliff on the west side of Soda Canyon. There was a small spring in this House that had been improved during the restoration of the ruin in 1911. During ordinary seasons it supplied sufficient water for the occasional visitors who journeyed to it from headquarters at Spruce Tree Camp. It was reported by those who were familiar with the region that the old shallow spring before improvement sometimes got so low that it contained drinking water enough for not more than two persons; this situation was greatly improved with the construction of a little reservoir that stored about 20 or 30 gallons of water. The flow of the spring was very slight, indeed scarcely enough to measure, but when the seepage was stored in the small reservoir a supply accumulated sufficient for such demands as were likely to be made upon it.

A similar spring of somewhat greater capacity existed one-half mile north of Balcony House, directly at the head of the side canyon which was tributary to Soda Canyon. This spring laid just below some of the ruins which had not been restored and the spring itself seemed not to have been
developed. Furthermore, it was still inaccessible because it was about 75 feet below the top of the cliff and the steep stone steps used by the cliff-dwellers probably were never practicable for white men, and had been worn away. A ladder 20 feet long over the steepest part of the cliff face, however, would make this spring water obtainable. If it were cleaned out and a small reservoir with a capacity of a barrel more or less constructed, it would supplement in a useful way the supply then available in the Balcony House itself.

At Cliff Palace, the most extensive of the ruins, there was no water nearer than at Balcony House a mile away to the southwest, or at Spruce Tree House two miles to the northwest. Four hundred or five hundred feet north of Cliff Palace, however, at the base of the sandstone scarp under which it was built, was a seep from which a spring could be developed that would probably be permanent, or if not absolutely permanent, would yield water except during the driest of the seasons.

The sandstone here, as at Spruce Tree House and Balcony House, is interrupted by narrow bands of shale and these shale bands, being impermeable, are followed to an outlet by the water that penetrates to them through the porous overlying sandstone. A few feet of tunnel at this point so placed as to be protected from the flood
overflow from the cliff above would develop a useful water supply. A temporary supply has been developed here by the workers who repaired the Cliff Palace, and a trail is already in existence that leads to this point. There is at present no urgent need for this water supply, and its development may will be postponed until a need develops and park funds are available. If the tourist travel shall ever become so great that the developments at Spruce Tree House are inadequate, or should the Department be able to afford this additional development at Cliff Palace, which would be a convenience rather than a necessity, it can then be carried out.

Mendenhall summarized his report by saying that conditions in the park were such that artesian supplies could not be secured at the surfaces of any of the mesas. They might be developed in the bottoms of the canyons but would be of little use here as a convenience to the public who would make use of the park. Wells drilled in the tops of the mesas as far from the edges as possible would doubtless develop a little water. Should there ever be so great a need that the other water supplies were inadequate, a well 400 to 500 feet deep, three-quarters of a mile southeast of Spruce Tree House and equipped with a powerful windmill would probably yield small supplies. Generally speaking, however, it was recommended that the spring at Spruce Tree House be improved and an additional reservoir placed there. It was believed that these improvements would fulfill all water requirements in that part of the park for many
years to come. Inexpensive developments at Cliff Palace and north of Balcony House might be carried out as conveniences as funds became available.⁹

In 1914 a new well was constructed at Red Spruce Station (School Section Canyon) and a good flow of water found. That same year a gasoline engine and pump were installed at the cisterns just below the springs of Spruce Treee House. The engine and pump were protected with a rough board shelter of irregular dimensions, as the wall of the cliff was used as part of the building. The water was pumped to a galvanized tank on the top of the cliff, above the Camp, and from there conducted in pipes to the Camp and to a watering trough for stock, eliminating the need of taking horses over the trail to Spruce Tree House. The spring at Balcony House yielded a constant flow of pure water, "as did the one at Cliff Palace."¹⁰

By 1915 wells in Morfield, Prater, Red Spruce, Soda and Navajo Canyons constituted the water supply for the northern portion of the park, while the springs at Spruce

⁹. Mendenhall report.

¹⁰. Superintendent, annual report, 1914, MVPF.
Tree House, Cliff Palace, Balcony House, and Rock Springs were the sources of supply in the lower part of the park.\textsuperscript{11}

As most of the water in the park came from springs and wells, the water supply varied from year to year. The spring at Spruce Tree House held out at all times and had so far furnished all the water required, though with building projects and the increased number of tourists the demand was greater than usual.\textsuperscript{12} In 1918 a water tower was built above the hotel, located high enough to give pressure to all parts of the Camp.\textsuperscript{13} Next year a fine spring was cleaned out at the head of Fewkes Canyon and it yielded an abundance of clear and cold water to the thirsty tourist. "The water sign used by these people of the long ago was found cut in the rock of the cliff, a sign by which anyone passing along the old trail would know that water was below."\textsuperscript{14}

In his annual report of 1921 the Director stated that one vital improvement that confronted the Park Service with full force was the development of a larger water supply in

\begin{itemize}
\item[11.] Superintendent, annual report, 1915, MVPF.
\item[12.] Superintendent, annual report, 1916, MVPF.
\item[13.] Superintendent, annual report, 1918, MVPF.
\item[14.] Superintendent, annual report, 1920, MVPF.
\end{itemize}
Mesa Verde. The spring at Spruce Tree Canyon could meet the needs of about 4000 visitors a year if properly conserved.

We must, however, expect a larger number of visitors from year to year. While a plan has been developed which promises to enlarge the water supply to double its present quantity, only needing funds to put it into operation, we can entertain only as many visitors as can be supplied with water at any given time.

The plan mentioned by the Director was suggested by Major Welch, general manager and chief engineer of the Palisades Interstate Park of New York, who was sent to Mesa Verde by Mather to go over the water problem with the Superintendent.¹⁵

¹⁵. Report of the Director, 1921; Superintendent, annual report, 1921, MVPF.
E. Origin of the log-cabin museum

In his report to the Department about the ruins of Mesa Verde, Dr. Hewett recommended not only the excavation and repair of the principal ruins, but also that all objects of antiquity obtained from the ruins be kept in a museum within the park for the purpose of illustrating the life of the cliff dwellers. Nowhere, he said, could these objects be so instructive as if restored to their proper places in the houses, or kept in a museum near at hand.¹

Dr. Fewkes began the excavation of the ruins in 1908. On January 29, 1909, the Secretary of the Smithsonian requested of the Secretary of the Interior that the objects found by Fewkes be "committed to the permanent custody of the United States National Museum, for incorporation in the large series of objects of a similar character belonging to the Government."² Three days later the Secretary of the Interior granted the Smithsonian the permission requested.³ After this decision, Mrs. Gilbert McClurg, of the Colorado Cliff Dwellings Association, whose

¹. Hewett's report, 1908, MVPF.
². Secretary Smith to Secretary of the Interior, MVPF.
³. Secretary to Secretary of the Smithsonian, February 1, 1909, MVPF.
husband was still an applicant for the superintendency of Mesa Verde, complained bitterly to Senator Hughes of Colorado of the fact that relics had been removed by Fewkes to the Smithsonian.\footnote{Hughes to the Secretary, March 20, 1909, MVPF.}

In his reports, Superintendent Randolph kept the idea of a museum in the park alive, but what really brought the subject to the fore was the pot-hunting incursions of Ranger Jeep, son-in-law of Superintendent Rickner.

On June 14, 1915, Rickner informed Mark Daniels, Superintendent of National Parks, that Jeep had discovered an unexplored ruin, "unless it has been entered from an air ship, and he will be there in a day or two now." He had reached a point from where he could see several fine jugs inside the building, and a room that seemed to be sealed. Rickner invited Daniels to come to the park and see the new ruin, which he called Daniels' House. Two days later Jeep reached the house and it proved to be untouched "since the ancient people left it ages ago." Sixteen bowls and jars, several fine stone axes, some bone tools and some wrappings were discovered. There was one room to which all doors and windows were still sealed, but the roof had fallen in, and
"under the debris there may be some more relics" worthy of preservation. Rickner requested a cabinet from Daniels to protect the pottery and to place it at the Ranger Station.¹

Not long after writing Daniels, Rickner informed Mather that he had a nice collection of relics at the Camp and needed a place to keep and preserve them; that he had a fine lot of jars and implements and would like to have money to build a proper place for them. He suggested to keep the collection in a cabinet at the Ranger Station.²

While cleaning up Painted House (Fire Temple) and Lane House (Oak Tree House), some very valuable relics were uncovered, wrote Rickner,

and now arises the question of to whom these articles belong. I have started a nice collection from the findings at Daniels House, and it is my desire to establish a museum at the Spruce Tree Camp. It has been a matter of wonder to tourists, and a disappointment to them, that there was no collection for them to examine, and I am very anxious to get a collection for that place. Please advise me what disposition you wish made of the findings of the work now being done.³

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5. Rickner to Daniels, June 14, 16 and 19, 1915. Daniels House is located in Long Canyon, MVPF.

6. Rickner to Mather, September 14, 1915, MVPF.

7. Rickner to Mather, September 27, 1915, MVPF.
In response to Rickner's request, Mather wrote that a similar question was presented at the time the Smithsonian was in charge of the excavation and repair of Balcony House in 1911, at which time the Colorado Cliff Dwellings Association desired to deposit in a suitable place in Colorado the relics found during the excavations. According to the Smithsonian, this arrangement was in conflict with terms of the Act of March 3, 1879, which authorized all collections of relics to be deposited in the National Museum.

Under this ruling, therefore, the relics collected in connection with excavations and investigations in the Mesa Verde National Park must be deposited in the National Museum. However, it is believed in case of duplicate specimens obtained, the Smithsonian Institution will permit of their being retained within the metes and bounds of the park. It is suggested this matter be taken up by you with Dr. Fewkes, who is in charge of the work of excavation, and ascertain from him whether there are any duplicate specimens, and if so, that a list thereof be forwarded to the Department so that the matter may be brought to the attention of the Secretary of the Smithsonian Institution. In case it is found practicable to permit duplicate specimens to be kept in the park, I have to request to be advised as to exactly how they are to be preserved, at what place and in whose custody. Also whether it would be possible for the present park force to have same properly marked and catalogued so that the traveling public in the reservation may know exactly what they are.

8. Assistant to the Director, to Rickner, October 20, 1915, MVPF.
Mr. D. W. Roper, a park visitor, was of the opinion that a museum at Spruce Tree Camp would attract many visitors. Mr. Jeep, he said, who was the guide and keeper of the park, had a collection of "pots, implements and skulls" that he had secured at various times from the cliff dwellings. It was only a very small beginning, "but he seems to be very much interested in securing relics and in caring for them".

On December 15 Mather sent the superintendent a copy of H. R. Bill 4817, making an appropriation of $50,000 for the construction of a public building at Mancos, to be used as an office and museum for the preservation of historic relics from the Mesa Verde National Park. Nothing came out of this bill.

Mather, in a special report to the Secretary, noted that many curios and rare objects of historic interest recently uncovered at Mesa Verde were being carried away by tourists because the park had no place to house and protect them; that a museum should be constructed in the park, and an effort made to recover some of the important relics that had been carried away. "If there is a building in which these objects may be

9. Roper to Mather, October 27, 1915, MVPF.

10. Mather to Rickner, December 30, 1915, bill presented on December 14 by Taylor of Colorado, 64th Congress, 1st Session, MVPF.
placed for preservation, in all likelihood many valuable relics will be voluntarily returned to the park.\textsuperscript{11}

A collection of relics, most of them from Cliff Palace, was offered for sale in 1916 for the "proposed museum" of Mesa Verde. This collection was owned by Mrs. B. W. Ritter of Durango, and contained "dozens of pieces of pottery, stone weapons and implements, bone implements, and possibly some musical instruments." For lack of funds it could not be purchased by the Department.\textsuperscript{12}

One influential visitor suggested even a cheap shed and some cases to enclose the relics and keep them from handling; that the splendid collection of artifacts in Denver was drawing the attention of many visitors and another collection in Mesa Verde would add greatly to the general interest in the cliff dwellers. Another wrote that any relics found in the future should be kept in the park instead of being sent to other museums.\textsuperscript{13}

On September 28, Rickner wrote Marshall, Superintendent of National Parks:

\textsuperscript{11} Mather, Assistant to the Secretary of the Interior, \textit{Progress in the Development of the National Parks} (U. S. Government Printing Office, 1916), MVPF.

\textsuperscript{12} Judge W. N. Searcy, Durango, February 23, 1916; Mather to Judge Searcy, April 4, 1916, MVPF.

\textsuperscript{13} Ellis Prentice Cole, Chicago, August 7, 1916, to Mather; from the Denver and Rio Grande Railroad Company, September 8, 1916 to Mather, MVPF.
I would respectfully ask authority to have a case for curios made and placed at Spruce Tree Camp. There are many good things of interest in the way of relics at the Camp, and every now and then something else is found, and all these should be protected, and yet be where they can be seen, for they are of great interest to the tourists. Last week Ranger Jeep found, way back under the cliff of one of the ruins, among loose stones and the dust of ages, a very good mummy of a small child. There are also some nice jars and other curios from Daniels House and other pieces that should be placed so that anyone desiring can see them, and yet have them protected from handling.

He asked funds to have a case made, with lock and glass front, 5' 8" width, 4' 8" deep, three shelves, native pine and stained; he was authorized to spend $22.00 for the case, which was built early in December of 1916. 14

To keep Marshall interested in his museum activities, Rickner sent him a little jar or mug and a brown stone ax; the little mug was found in Mummy House nearly under Sun Temple and the stone ax in Daniels' House, together with other relics. 15

In his annual report of 1917, the Director announced that a museum and gallery of pictures of the park would be established in the new log-cabin building originally constructed for a

15. Rickner to Marshall, September 25, 1916, MVPF.
Ranger Station. All relics of the cliff dwellings and pueblo ruins now in the park, he wrote,

and those that may hereafter be accumulated will be installed in this museum. The museum building has a broad veranda, where visitors may sit and contemplate the beauties of Spruce Tree Canyon. In this building Dr. Fewkes may lecture to the visiting public on the history of the Mesa Verde and on his archeological work in the park—provided, of course, that the continuation of his work is authorized. 16

In the fall of 1917 the Ranger Station was rehabilitated for museum purposes. Early in the spring of the following year, four large wall cases and one large floor case of archeological material and a multiplex display of 12 framed enlargements of Mesa Verde ruins and scenes were installed in the large room of the museum cabin. 17 This room would be used as a public gathering place and for lectures by the scientists in charge of the work of excavating and repairing the ancient buildings of the park. 18 Mesa Verde Museum, although small and of humble beginnings, was the first one established in a national park.

16. Report of the Director, p. 76, MVPF.

17. Rickner to Director, September 5, 1917; Acting Director Albright to Rickner, September 24; Acting Director Albright to Rickner, March 20, 1918; Rickner to Director, May 27, June 15, June 28 and June 30; Superintendent, annual report, 1918, MVPF.

18. Superintendent, annual report; Report of the Director, 1918, MVPF.
After the museum was open to the public the rangers did some more "excavating" and added to the museum "a nice lot of relics." The small museum became one of the most interesting features of the park and was thoroughly enjoyed by the traveling public. It was only "second in value of interest to the prehistoric dwellings themselves."

Director Mather wrote in his annual report of 1920 that the museum was growing in importance each year as new exhibits were added. When funds were provided to enlarge the structure and provide fire protection for valuable relics, he hoped that many of the Mesa Verde specimens stored in Washington or in private collections in different parts of the country would be restored to the park by gift or by loan.

Mather was very pleased with the museum when he saw it in 1920, but later he wrote the following note to Rickner:

I am fully convinced that no one should be permitted to excavate the ruins or remove articles therefrom unless he bears authority from the Department, and it should be made clear that anyone that does will be liable to prosecution.

19. Superintendent, monthly report, October 3, 1918, MVPF.
20. Report of the Director, 1919 and 1920, MVPF.
21. Mather to Rickner, December 10, 1920, MVPF.
IV. **ARCHEOLOGICAL PROGRAM (1908-22)**

In the summer of 1907 the Department of the Interior requested the Smithsonian Institution to assign Dr. Fewkes, of the Bureau of American Ethnology, to take charge of the excavation, preservation and repair of the cliff dwellings and other prehistoric ruins in Mesa Verde National Park. It was the understanding between the Department and the Smithsonian that Fewkes would have exclusive control of the work and be prepared to submit progress reports from time to time as requested by the Department. The Smithsonian would be permitted to publish the scientific results of the investigations made by Fewkes in the course of his operations in the park.¹

Fewkes had been strongly recommended by Dr. Hewett, who felt that his "masterly excavation" and protection of Casa Grande ruins would furnish a worthy standard for the archeological work that was necessary on the Mesa Verde cliff dwellings. These, as prey of treasure-hunters and unscientific collectors for many years, had suffered irreparable damage. Many important structures were completely demolished and in many cases walls partially destroyed and left in condition for further rapid deterioration. There was

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¹ Acting Secretary to Charles D. Walcott, Smithsonian; Acting Secretary of the Smithsonian to Acting Secretary of the Interior, August 12, 1907, NA-RG 79.
need for immediate repairs in major ruins like Cliff Palace, Spruce Tree House, Balcony House, and many others, to prevent the collapse of walls that had been left unsupported. The ruins were full of debris which had to be removed carefully in order to show the buildings in as nearly their original conditions as possible and the remaining artifacts of the ancient inhabitants brought to light. It was hoped that in the handling of the Mesa Verde ruins nothing short of the best scientific methods would be permitted.²

A. Spruce Tree House

During the months of May and June, 1908, Fewkes excavated and repaired Spruce Tree House, one of the largest ruins in the park. During the excavations, Hewett and ten students of the Archeological Institute of America "pursued studies among the ruins" of Mesa Verde.³

Although Hewett had suggested the excavation of Cliff Palace first, Fewkes chose Spruce Tree House for several practical reasons. It was located near the place where all visitors camped after their long and hard trip up the mesa, and it was the first large cliff dwelling which they saw. It was also

² Hewett's report, 1908, MVPF.
³ Superintendent, annual report, 1908, NA-RG 79.
easy of access, had the best nearby water supply, and was within a convenient distance of the other major ruins of the Chapin Mesa. Besides, he felt, the house contained all the important architectural features found in other ruins, and after properly cleaned and repaired, it would convey a good idea of cliff dwelling life and thus serve as a model for subsequent examination of other ruins, especially larger ones like Cliff Palace.

Spruce Tree House, filled with rubbish and about to fall rapidly into further decay, was completely cleared of all loose stones, dirt, and other debris. Walls that were found to be in dangerous condition were properly repaired and strengthened, and such restoration was done as seemed necessary for the protection of the buildings. This work was preceded by the construction of channels to turn the water from the ruin, the building of trails, labeling objects of interest, and grading the approaches to the house, which was almost inaccessible when work began.

Fewkes was extremely visitor-oriented. To make the ruins more attractive to visitors and increase their educational value was the thought that was always in his mind. His ideal of work in the house was to develop in the park a "type ruin" that would illustrate to the public the general features of prehistoric buildings. He planned to show the meaning of their different parts, the construction and essential features of the rooms,
Another ideal in his mind was to treat the ruin so as to make it an object lesson for archeological students, showing by this means how ruins should be excavated and repaired. Hitherto, with the exception of the work under the author's direction at Casa Grande, by the Smithsonian Institute, archeological field work in the Southwest has been devoted mainly to making collections of pottery and small portable antiquities. In the efforts to gather these minor antiquities the walls of ruins have been mutilated and left practically without any thought of protection from the elements. Architectural data has been sacrificed to obtain collections of those small objects which have a commercial value or will make an artistic impression when arranged on the shelves of a museum.

Repair work at the house, according to Fewkes, was a delicate task. The idea followed was to preserve the original character of the ruin as far as possible, using earthen or soil cement. Repair, not restoration, was the aim: prevention of further disintegration rather than any attempt to rebuild the ruins to their original conditions.

He excavated 114 rooms, the majority of which were secular, and eight ceremonial chambers or kivas. The rooms and courts had been thoroughly dug over by pottery seekers, but between 500 to 600 sepeciments were found, of which the most valuable were sent to the Smithsonian for study. A large number of the
duplicates and all the heavier objects were placed under lock and key in one kiva.  

B. Cliff Palace

In the summers of 1909 and 1910 Fewkes continued the excavation and repair program of the park ruins. This work was the continuation of the previous plan of operations at Spruce Tree House. It was limited to Cliff Palace, the largest and one of the most picturesque ruins in the park. Rooms, courts and terraces were completely excavated and the walls carefully repaired and strengthened.

To make the ruin more accessible from the mesa above, a new trail was constructed a short distance from the southern end of the Palace, following a rift between a huge detached rock and the side of the cliff. Near an ancient stairway of foot holes, four ladders were placed one above another, firmly attached to the rock. From the level of the ruin an easy pathway led through the woods to the main entrance, on a level with the lowest terrace.

Probably no cliff dwelling in the Southwest, wrote Fewkes, was more vandalized than Cliff Palace. Souvenir hunters camped

in the ruins for several winters, and it is reported that many hundred specimens therefrom have been carried down the mesa and sold to private individuals. Some of these objects are now in museums, but many are forever lost to science. In order to secure this valuable archeological material, walls were broken down with giant powder, often simply to let light into the darker rooms, floors were invariably opened and buried kivas mutilated. To facilitate this work and get rid of the debris, great openings were broken through the fine walls which form the front of the ruin. Beams were used for firewood to so great an extent that not a single roof now remains. This work of destruction, added to that resulting from the erosion due to torrents of rain, left Cliff Palace in a sad condition.  

Cliff Palace, about three times larger than Spruce Tree House, required a greater amount of masonry work. The problem of preservation was more complicated by its terraced front, but the method of preservation was essentially similar to the one used at Spruce Tree House. In some places the walls in front of the cave floor had to be rebuilt.

To permanently protect these sections of the ruin the top of the walls and the plazas were liberally covered with Portland cement, and runaways were constructed to carry off the surface water into gutters by which it was diverted over the retaining walls to fall on the rock foundation beyond. It would be impossible permanently to protect some of

these exposed walls without constructing roofs above them; at present every heavy rain is bound to cover the floors of the kivas with water and thus eventually to undermine their foundations.6

Although Cliff Palace had been vandalized thoroughly, a fairly good representative collection of artifacts was obtained. Unique specimens were deposited in the National Museum, but many duplicates, especially large objects, were left on the site. Large artifacts, such as metates and those jars that were embedded in the walls, as a rule, were left as they were found.

Vandalism, noted Fewkes, destroyed much of the data and greatly reduced the possibility of generalizations on the character of the Indian culture. Earlier excavations "might have illumined many difficult problems which must forever remain unsolved."7

Fewkes' archeological work increased greatly the interest in the park, and demonstrated that provision should be made for the early excavation and repair of other ruins on the Chapin Mesa to be followed later by similar work on the ruins of Rock Canyon, on the western part of the park.8

6. Ibid.


8. Superintendent, annual report, 1909-10, MVPF.
C. **Balcony House**

After the park was established the Colorado Cliff Dwellings Association remained active for many years in the work of preservation. In 1910 it raised the sum of $1,000 for repairs on Balcony House. Since Fewkes was engaged at the time in special archeological investigations on the Navajo Canyon National Monument in northeastern Arizona, the Smithsonian suggested that Dr. Hewett, Director of the School of American Archeology, be requested to assume charge of the excavation and repair of Balcony House; Jesse Nusbaum, also of the School of American Archeology, was assigned the actual job of excavation and repair.⁹

During the fall of 1910 Hewett and Nusbaum made a preliminary study of the conditions of Balcony House. It showed that the work of excavation would be comparatively small, but the work required to preserve the remaining walls from further deterioration would be very difficult. The principal remaining walls of the house had been badly shattered and weakened by shocks occasioned by stone falling from the roof of the cavern, as well as by the operations of vandals in years past. After fully considering the condition of these walls, they decided to secure the services of

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⁹. Acting Secretary of the Smithsonian to Secretary of the Interior, July 10, 1910, NA-RG 79.
a consulting constructor and an expert mason before proceeding with the actual work. It was not their intention to attempt to do more in the way of restoration than was absolutely necessary to prevent further deterioration. For the preservation of the walls that were in dangerous condition, the constructors agreed upon a system of angle irons. As the $1,000 was not enough to complete the job, the Department authorized the use of $500 from the $2,000 set aside for repair of ruins by Fewkes in 1911. The very few specimens found in the House were of little museum value, according to Nusbaum.  

D. Sun Temple

In his report on the field work at Cliff Palace in 1909 Fewkes called attention to a mound of stone and earth opposite Cliff Palace that suggested the location of a pueblo ruin. When funds became available in 1915 for the excavation and repair of ruins, Fewkes chose the mound for his operations. This mound, known as Community House, but later called Sun Temple by Fewkes, had the advantage that if properly excavated, it could be conveniently seen by visitors going to Cliff Palace. It was

10. Hewett to Secretary, September 8, 1910; Randolph to Secretary, October 14, 1910; Superintendent, annual report, 1911; Nusbaum to Mrs. McClurg, September 22, 1924, MVPF.
located only two miles from Spruce Tree House and a short walk from other large ruins. A more important consideration, wrote Fewkes,

was that it presented evidences that the buried building belonged to a unique type of ruin in the Mesa Verde, and gave promise of adding an important chapter to our knowledge of the prehistoric people who formerly made their home in the Mesa Verde National Park. These hopes were realized, and the results of three month's work on this mound were more striking than had been expected. There was brought to light a type of ruin hitherto unknown in the park, and, as was well expressed by a visitor, the building excavated shows the best masonry and is the most mysterious structure 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 this type yet recognized in the Southwest. 11

Water was the main cause of destruction of the mesa-top ruin. When it was abandoned by the Indians, the walls were exposed to the sky and unprotected from snow or rain. Water from the melting snow was particularly damaging, since it "percolated between the facings and the core of the wall, and subsequently froze, forcing

the facing of the wall away from the central core until it fell."

In repairing the exposed walls, the following method was used:

In order to prevent the water from melting snow from penetrating the walls, or the rain from percolating between the core of the wall and its facing, I placed a cap of cement on the top of all the walls. The inner facing of the outer walls, as a rule, stood a few courses of stone higher than the outer, and it was necessary to add masonry to bring the outer wall to the level of the core and inner facing. Having leveled the top of the wall, I covered it with small, angular fragments of stone, placing these fragments highest in the middle or over the core. Over this roof-like covering was spread a thick layer of adobe. The top of the wall was thus made in a way to shed water. Over this roof of adobe was spread a layer of Portland cement, 2 inches thick, mixed in proportion of 1 to 5, care being taken to use this cement freely in pointing the joints in the facing of the wall in order to prevent the entrance of water in the cracks. The roof shape of this covering or the fact that it is highest in the middle will shed the water and throw it away from the wall without harm.12

E. Oak Tree House - Daniel's House

This cliff dwelling, situated in Fewkes Canyon and under a perfectly arched natural roof below Sun Temple, was practically inaccessible. The rooms of this house were cleaned out by Fewkes in 1915, and the walls repaired and put in condition for permanent preservation. Ladders were placed in position

12. Ibid., 21-23. See also Superintendent Rickner to E. J. Henning, October 11, 1915; Rickner to Daniels, August 9, 1915; Robert S. Yard to Rickner, November 23, 1915; Superintendent, annual report, 1916, MVPF.
to afford descent from the rim of the mesa to a pathway made on the talus on which it stood. A small collection of artifacts was made in the course of the repair work.\textsuperscript{13}

F. Far View House

In June 1914 Superintendent Rickner called attention to Mummy Lake, a small artificial reservoir on the main road to Spruce Tree Camp. It was the first of the remains of the cliff dwellers' work seen by tourists on their way into the park. He thought the reservoir should be protected and preserved since it was the only "evidence found so far of storing water in the park." It had taken great care and skill in its construction, and there still remained traces of a long ditch which was used, presumably, in filling the reservoir. This reservoir, according to Rickner, was used lately in spring as a watering place for cattle. He was authorized to spend $200 or "as much as necessary, for labor and material required in preserving and restoring Mummy Lake."\textsuperscript{14}

In his 1916 report on the excavations of Sun Temple, Fewkes recommended the repair and excavation of the great mounds near

\textsuperscript{13} He visited the Wetherill Mesa and excavated Daniel's House also. \textit{Smithsonian Miscellaneous Collections} (Smithsonian Institution, 1916), LXVI, No. 3, pp. 84-95; LXXII, No. 15.

\textsuperscript{14} Rickner to Secretary, June 30, 1914, MVPF.
Mummy Lake. It was expected that work on the group would reveal important architectural features of new types of ruins and add much to the scientific information already known. Nine mounds were visible and excavation and repair work had to be distributed through several years.  

Fewkes devoted the months of July through September, 1916, to excavations and intensive studies of a ruined pueblo at Mummy Lake. The appropriated money was exhausted at the end of September, and he was forced to abandon the work. His plan was to excavate one of the mounds for the purpose of discovering the characteristics of the Mesa Verde pueblos, of which up to that time, "nothing was known." In one mound he uncovered a ruin which he called Far View House because of the distant outlook south of this pueblo. A considerable collection of objects, especially pottery, stone and bone implements, idols and ornaments, was brought to Washington for future study.  

Director Mather, in his annual report of 1917, commented that a few thousand dollars a year would make possible the excavations of the other mounds. Within a comparatively short time a great group of pueblos of the past could be cleared and


16. *Smithsonian Miscellaneous Collections*, 1917, LXVI, No. 17, pp. 86-87; Superintendent, annual report, 1917, MVPF.
restored. Sometime in the future, he wrote,

there may be a school of archeology in Mesa Verde Park, where students may gather from all our great colleges for a study of the institutions, customs, and characteristics of the vanished race that once inhabited the park. As the National Park Service encourages the use of the parks by students of the natural sciences, so does it invite students of archeology, anthropology, and related sciences to foregather in the Mesa Verde and its monuments of the Southwest, where the remains of a past civilization are preserved.17

G. Square Tower

From the summer of 1916 until 1919 no funds were available for the continuation of archeological investigations. While no excavation work was undertaken, repairs were made to several of the large cliff dwellings, including the reinforcement of the foundation of one of the big towers in the Cliff Palace. One of the kivas in Balcony House was repaired, where the water from the spring had undermined the walls.18

Another of the immediate needs was the preservation of Square Tower House, a fine example of prehistoric architecture. One of its most interesting features, a great four-story tower, was in danger of toppling over. The house was situated in a shallow

17. Report of the Director of the National Park Service to the Secretary of the Interior (U. S. Printing Office, 1917), 75-76.

18. Superintendent, annual report, 1918, MVPF.
cave at the head of a spur of Navajo Canyon. It was considered one of the most attractive cliff dwellings by tourists, but it was almost impossible to reach.

In 1919 funds were obtained and a great part of the field work was devoted to the excavation of the picturesque Square Tower House. A trail was made near the Indian foot holes of the cliff, around which was constructed a balustrade, with ladders conveniently set to aid those who wished to visit the ruin. Great gaps in the masonry of the tower had rendered it in danger of falling; when repaired, the tower was held to the wall of the cliff by iron bands. The interior of the ruin was obstructed by fallen stones and dust, but two months of excavations and repairs put the ruin in fine condition.19

H. Earth Lodge A

During the field work of 1919, some time was devoted also to two low prehistoric mounds situated among the cedars on top of the plateau. At least two new types of small-house ruins were discovered. Fewkes was assisted in his field work by Ralph Linton, a temporary assistant, who contributed much to the success of the work. Linton excavated two buildings, one

19. Superintendent, annual reports, 1918-19, MVPF. Report of the Director, 1918, pp. 73-74; Smithsonian Miscellaneous Collections, 1922, LXXII, No. 1, pp. 47-64.
of which was Earth Lodge A, about 50 yards south of the road leading to Square Tower House; a shed was built over it for its protection.20

I. Fire Temple

Archeological field work continued during June, August, and September, 1920, with funds provided by the National Park Service. Work was done at the Fire Temple Group and Oak Tree House, ruins in Fewkes Canyon, and at Cedar Tree Tower. In his work Fewkes was ably assisted this time by J. A. Jeancon, who made originals of the ground plans of the Fire Temple Group and Cedar Tree Tower.

In a cave of the precipice below Sun Temple there is a solitary and almost unreachable cliff house, and in a cavern not far up the canyon is Oak Tree (Willow) House, and a "mysterious dance plaza, called Painted House." Of those three ruins, Fewkes excavated and restored two during his field work of 1920.

Painted House had always been regarded as a dwelling house and received its name from the unusual number of ancient paintings found on its walls. Fewkes believed that this was the building

20. Typescript report by Linton, MVPF; Smithsonian Miscellaneous Collections, 1922, LXXII, No. 1, pp. 47-64.
in which the sacred fire was constantly kept burning. From this place fire was taken to relight extinguished ones in other houses of the community or to start entirely new blazes. This discovery prompted the change in name to Fire Temple. He also excavated what he called Annex or the New Fire Temple, a small cliff dwelling about a hundred feet to the east.

J. Cedar Tree Tower

After the excavation and restoration of Fire Temple, Fewkes excavated and repaired Cedar Tree Tower, a prehistoric ruin hidden among the cedars a mile north from Spruce Tree House. This ruin belonged to an architectural type very well represented in the area west of the mesa and with many examples on the top of the plateau. The purpose of the excavation was to determine the use of these towers. While certain of these towers were probably used as lookouts, the majority served a different purpose. After the excavation Fewkes believed that Cedar Tree Tower was a ceremonial building above ground.

K. Oak Tree House

Fewkes' last field work of the 1920 field season was at Oak Tree House, which he had already cleaned and repaired in 1915. In the process of excavation of this cliff dwelling, many interesting specimens and several human skeletons in a
good state of preservation were unearthed.\textsuperscript{21}

L. Far View Tower

In May and June, 1921, Fewkes was again in Mesa Verde for a brief season of field work financed with a small allotment from the Bureau of American Ethnology.

The Mummy Lake cluster of mounds was selected as site for field operations. Far View Tower, under a conspicuous and centrally placed mound not far from Far View House, was uncovered. This tower, like Cedar Tree Tower, "was devoted to some archaic cult, like fire worship," wrote Fewkes.

M. Painted Kiva House

He also excavated Painted Kiva House, a small cliff ruin situated a short distance north of Cedar Tree Tower, under the rim of the west side of Soda Canyon. Its approaches from the mesa were very precipitous and it became necessary to construct four ladders and improve the trail to enable visitors to see it. Many specimens were found in the rear chambers of this ruin.

Mummy House, a ruin located almost directly under Sun Temple, was cleaned out but not repaired. Willow Tree House, above it, was practically inaccessible. Ladders were put in place

\textsuperscript{21} Smithsonian Miscellaneous Collections, 1921, LXXII, No. 6, 75-94; Report of the Director, 1920, 56-57; Superintendent, annual report, 1920, MVPF.
connecting the trail up the canyon with Mummy House.  

N. **Pipe Shrine House (Mummy Lake Group)**

With small allotments from the Bureau of American Ethnology, Fewkes undertook another brief seasonal archeological investigation from May to August, 1922. He was assisted by W. C. McKern and J. H. Carter. One mound of the Mummy Lake group was chosen for excavation, located about 100 feet to the south of Far View House. This mound was covered by a dense growth of vegetation. Complete excavation revealed what appeared to be a ceremonial building, Pipe Shrine House.

O. **One Clan House (Mummy Lake Group)**

One mound south of Far View House was completely excavated and called One Clan House by Fewkes because it contained a central kiva surrounded by low walls. A well-worn trail, probably built by the Indians originally, connected Far View House, Pipe Shrine House, and One Clan House with Spruce Tree House. It was formerly used by early tourists who visited the ruins on horseback before the construction of roads.

P. **Megalithic House (Mummy Lake Group)**

Several mounds in the Mummy Lake area remained unexcavated, but their superficial appearance indicated types of ruins somewhat

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22. *Smithsonian Miscellaneous Collections*, 1922, LXXII, No. 15, pp. 64-74.
different from those already uncovered. One of the most unusual mounds, lying a few hundred feet north of the lake, was excavated. Because of the large stones used in the walls, this ruin was called Megalithic House. Numerous artifacts were collected from this ruin.\textsuperscript{23}

Fewkes' field operations of 1922 were his last archeological work in Mesa Verde National Park. With small and irregular allotments of money, he was able to carry on a considerable amount of excavation and repair work since 1907. While a fairly large number of ruins were excavated and repaired, there were still hundreds of others of all types in the park that had never been opened. His main archeological efforts centered around the area in which lies Spruce Tree House, Cliff Palace, Sun Temple, Square Tower House, Balcony House, Oak Tree House, and New Fire Temple. This area, of easy access from Spruce Tree House, was not only the most populous section of the park in prehistoric times but also contained the largest number of culture types. Fewkes realized that there was an almost endless amount of work to be done in the park and to make any progress on this gigantic undertaking a generous appropriation had to be made every year.

\textsuperscript{23} Smithsonian Miscellaneous Collections, 1923, LXXIV, No. 5, pp. 91-115.
V. NUSBAUM'S CRASH PROGRAM (1921-31)

A. A needed change

Not everything had gone well with the administration of Mesa Verde after the dismissal of Superintendent Randolph in 1911. Randolph and Shoemaker, his successor, demonstrated that they had no real appreciation of what a park should be. Rickner, while he did some good work with the limited amount of money he had, permitted many abuses in the park. Apparently Rickner practically turned over the park to Ranger Jeep, his son-in-law. Rickner probably had the best intentions of any superintendent prior to 1921, but it was not quite clear in his mind what the park required. ¹

In fairness to the early superintendents, however, it may be said that during the formative years of the park administrative machinery, very few persons really knew how the park should be developed. It is a very well-known fact that before the National Park Service was established in 1916, there was no central administrative machinery for the management of national parks, and the supervisory offices in Washington only gave the parks and monuments incidental attention. Several years after its establishment, the National Park Service followed a period of experimentation with ideas and concepts in park management.

¹ Jean Allard Jeancon, Curator of Archeology and Ethnology, State Museum, Denver, to Senator Lawrence C. P. Phipps, March 19, 1925, NA-RG 79.
A series of damaging complaints about the park administration forced Director Mather to take a closer look at Mesa Verde affairs. Probably it was Mr. D. W. Roper, a visitor from New York, who first warned Mather about nepotism and political influence in the administration of the park. "Perhaps you know," he wrote Mather in 1915, that Mrs. Jeep who runs the camp is the daughter of Mr. Rickner, the Superintendent of the park, and that the latter freely admits securing his position through political influence. The position is what is ordinarily called a political plum. However, Mrs. Jeep was entirely satisfactory to all of our party in her administration of the camp and the table. Mr. Jeep is a very competent and enthusiastic guide. He is able to stand an unlimited amount of tramping and climbing, and does not urge the visitors or even encourage them to go into dangerous places. When we approached a place of this kind, we were always advised of what we could expect and were asked to decide for ourselves whether or not we would go into the particular cliff dwellings.²

Horace M. Albright, Field Assistant to Director Mather, visited Mesa Verde in the fall of 1917 and found that the park was being administered in a very crude and unsatisfactory manner.

I found that the administration and protection of the park, as well as its operation as a tourist resort was very much of a family affair. I saw, however, that Mrs. Jeep was probably the only person who could be interested at that time in the operation of a tourist camp. Her husband impressed me as being a capable man, and interested in the park. At that time, Dr. Fewkes thought he was a man we ought to develop and keep in the Service. This is the way that Jeep impressed me. It seems, however,

² Roper to Mather, October 27, 1915, NA-RG 79.
that the young man has failed to develop in the right direction, and that he now has about the same attitude toward the park that his father-in-law, the Superintendent, has. Also, it appears that Jeep has been doing some excavating on his own account and has sold relics as opportunity offered.

I felt also, after my visit to the park, that the transportation business was not being handled right, and the records of the Service will show that I tried to interest outside parties in the establishment of a regular transportation line. The small patronage that the park enjoyed, however, made the proposition unattractive to investors. I think the condition still exists. There are not enough people visiting the park to make it a profitable venture for anybody to spend any large sum of money in improving hotel-camp and transportation facilities.  

Mr. Jean Allard Jeancon, another influential visitor who stayed at Spruce Tree Camp for over four months in 1920, saw many abuses in the park. According to him, people from Mancos and Cortez entered the park at all times without going through the procedure of reporting themselves or paying any attention to the rules governing the park. It was the customary thing to make Sunday a day of revelry in the park, with young people crawling over the walls of the repaired buildings, and willfully destroying such portions as had deteriorated and were frail. They also scratched and wrote their names everywhere. Dr. Fewkes and the visitor in question often

3. Albright to the Director, December 2, 1920, NA-RG 79.
remonstrated with these young people about swinging on the beams and walking on the weakened portions of the buildings, thereby jeopardizing the safety of the whole structure.

While he could not substantiate a definite charge against the Superintendent that he permitted unauthorized people to excavate, he knew of one or two cases, he said,

when I stood in the waiting room in the hotel and saw visitors enter with their arms filled with pottery and skeletal materials, which probably were turned over to Mr. Jeep, how he disposed of them later I do not know, but I have heard rumors that they were sent out of the park to the individuals who collected them. However, the fact remains that these individuals had no right to gather anything of that kind.

In the matter of campgrounds, Mr. Rickner's daughter, having the concession for the hotel, Rickner deemed it wise to move the campgrounds something over a mile from any water. There was no wood right at the camp and no place for the disposition of rubbish or trash of any kind. Toilet facilities were totally inadequate, and when the camper came to the mesa it was difficult for him to secure the services of a guide, and he was permitted to wander at random. There was no attempt made to take care of the tourists who did not stop at the hotel. In justice to Mrs. Jeep, I wish to say that I feel confident that she was not an active party in discriminating against auto tourists who camped.4

On September 23, 1920, the Denver Commercial published a letter written by Dr. Frank L. Bartlett, Chairman of the Roads and Traffic Committee of the Denver Civic and Commercial Association. In very

4. Albright to the Director, December 2, 1920, NA-RG 79.
strong terms, Bartlett criticized the whole park operation, especially the lack of protection for the ruins and inadequate visitor's services and facilities. He did not blame the superintendent entirely for the conditions of the park, and felt that the State of Colorado and Congress had neglected Mesa Verde. In the editorial page of the Rocky Mountain News, also of Denver, the accusation was made that Rocky Mountain National Park had received part of what was due to it, but Mesa Verde was forgotten.\(^5\)

In response to his complaint, Mather wrote Bartlett that the development of Mesa Verde National Park was definitely being studied.\(^6\)

Rickner's successor had already been tentatively selected when Mather wrote the following confidential letter to Roger W. Toll of Denver, former Superintendent of Mount Rainier National Park, who visited Mesa Verde with the Director in the fall of 1920:

> It seems that we will have to make a change in that park primarily because the present incumbent was a political appointee years ago; in the second place such a change is welcome to me, because I have long felt that we should have a man who is not only a good administrator, but also an archealogist. However, we want to be sure that the man we get to replace Mr. Rickner is the proper calibre.

\(^5\) Rocky Mountain News, September 27, 1920.

\(^6\) Mather to Bartlett, December 22, 1920, NA-RG 79.
He thought that the man who combined all those qualifications and who was highly recommended was Jesse Nusbaum. Senators Phipps and Nicholson, however, had been approached already on behalf of the appointment of three aspirants from Colorado, probably political candidates. 7

There were more than three applicants to replace Rickner. One was from Mancos. The people of this town felt that since the park headquarters was located there, a local man should have preference. This man was Jos. H. Jackson, a successful businessman, favorable to the railroad interests. Other candidates were a store owner, a preacher-farmer, and a wholesale lumber dealer. 8

Director Mather needed a new man for Mesa Verde in 1921, and on the recommendation of Arno B. Cammerer, Assistant Director of the National Park Service, the Director chose Nusbaum. Cammerer had met Nusbaum through Neil Judd of the Smithsonian Institution. Nusbaum was finally selected after a stormy hearing at the office of the Senior Colorado Senator. Mather, "very nervous and distraught," made it clear that he intended to administer the parks through qualified superintendents and not through political appointees. 9

7. Mather to Toll, April 28, 1921, NA-RG 79.


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In his annual report of 1921, the Director announced that the Mesa Verde National Park was entering an era of promising development. On May 23, he wrote,

Mr. Jesse Nusbaum, of Colorado, a young archaeologist of experience and reputation for successful work in the Southwest, was appointed to fill the vacancy caused by the resignation of Mr. Thomas Rickner, of Mancos, who had served as superintendent during the past seven years. In considering the requirements for a successor it was felt that the peculiar nature of the historical exhibits in this region and the necessity for their protection and restoration along approved scientific lines precluded consideration of anyone but a trained archaeologist. 10

10. MVPF.
B. Physical developments

1. Buildings program

Nusbaum's first move when he arrived in Mesa Verde National Park in June 1921, was to break away from the practice of previous superintendents of residing and having the park headquarters at Mancos. His new headquarters were located at Spruce Tree Camp, on the west rim of Spruce Canyon, and overlooking Spruce Tree House. It was a decidedly advantageous position both for administration and to serve the visiting public. Since the creation of the park in 1906, no superintendent had made his home in the park, neither had rangers ever spent a winter there, and nothing was ever accomplished in the park during the winter months. Since the only government building suitable for residence on the mesa was occupied by the ranger and his family, Nusbaum lived in a tent until a residence was built. His first office was a "paper letter file out under the shade of a piñon" until he got a tent for temporary quarters.¹

No real permanent physical developments had been accomplished in the park to provide visitor services and facilities. Just by looking at the unholy mess of temporary developments jammed within a small area overlooking Spruce Tree House, Nusbaum realized that with the complex problems of operating the park came the demand for functional arrangement of buildings to provide for administrative

¹ Cammerer to Nusbaum, May 26, 1921; Nusbaum to Mather, June 9, 1921; Nusbaum to Mather, August 9, 1922; Nusbaum to Ronnie Lee, Santa Fe, April 12, 1950, NA-RG 79.
and industrial needs. A group plan, not necessarily formal in character, must be worked out for the park. Most important, however, was the laying out of a well-designed general scheme along which all buildings and facilities of a permanent character should be constructed.

Without wasting time, Nusbaum developed plans for a suitable administrative center at Spruce Tree Camp, with the superintendent's residence as the first building to be built at the park headquarters. The site selected for the residence was the bench of a small rocky ledge directly south, about 200 feet from the line of the log-cabin museum, and just large enough to accommodate the planned house. It overlooked part of Spruce Tree ruins from one side--east--and Spruce Tree Canyon and Navajo Canyon from the south. Suggested by Dr. Fewkes, this site was not large enough for museum purposes and not suitable for administrative uses because of its relation to road connections, but it afforded privacy for a house and at the same time was near the main camp developments. As tentative arrangement, with regard to future buildings, a new museum would face Spruce Tree ruins, and be placed just north of the log cabin, on the same line; the park administrative headquarters would occupy the space just south between the museum and the superintendent's house.

In practically all details of construction, the design of the superintendent's house followed that of the older houses of the
Hopi Indians, the presumable descendants of the cliff dwellers who had inhabited the region of Mesa Verde. The materials to be used were largely available within the immediate vicinity of the camp. This type of architecture was selected because it was well suited to the environment of the park and all new construction would preserve and enhance the uniqueness of the park by preserving the atmosphere that it naturally created. By adhering to this type the final ensemble would be harmonious and attractive. By contrast, the existing buildings of the camp, ranging from a log cabin to a New England farmhouse, were not suitable, as they did not maintain the proper atmosphere.²

Begun during the later part of the 1921 travel season, the new residence was put under roof before snow fell, and was completed for habitation throughout the winter by the superintendent and his family. As it required three days by pack and saddle horses to make the round trip for mail and perishable supplies between headquarters and Mancos, winter administration of the park area involved some hardships. The furniture of the house, following the old style and method of construction introduced by the early Franciscan fathers, was built during the winter months; the construction of the house and furnishings was under Superintendent Nusbaum's supervision, and the work, in which he did the lion's share,

² Nusbaum to Director, August 13, 1921; Superintendent, Annual Report, 1921; Report of the Director, 1921, p. 85, NA-RG 79.
resulted in something worthy of approval. In fact, the residence and the handmade furniture, all designed to fit into the park atmosphere, proved such objects of attraction to the visitors that means had to be taken to arrange for special hours of inspection, as otherwise the superintendent would have been forced to give up living in the house.

Furthermore, a complete and interesting plan for future development of an administrative group at Spruce Tree Camp was worked out by Mr. and Mrs. Nusbaum during the winter and later approved by the Assistant Landscape Engineer after studies on the ground. This group included among various facilities, a new administrative building and checking station, a new museum, comfort station, and a plan for the physical development of accommodation facilities.  

Park headquarters at Spruce Tree Camp consisted in 1921 of a three-room frame ranger station, a log ranger station used as museum and restroom, a small water tank building, an automobile shed, an ice house, a frame shed for the light plant and seven farm-type toilets.  

All the physical improvements of the headquarters area were carried on during a ten-year period. The Landscape Engineering Division approved the plan of development and each year, as funds

3. Nusbaum to Director, April 9, 1922; Report of the Director, 1922; Nusbaum to Warren E. Boyer, Denver Tourist Bureau, August 11, 1922, NA-RG 79.  

4. Justification for funds, fiscal year 1924, NA-RG 79.
were available, and there was an excess of water over the needs of the camp and park visitors, one or two units were completed. Gradually Spruce Tree Camp assumed the form and appearance of the plans and sketches that Mr. and Mrs. Nusbaum had prepared during the winter of 1921. The layout was unique: the buildings in form and treatment followed an adaptation of the early modern Pueblo Indian style; the interior furnishings were in conformity with the earliest type of furnishings used in the Southwest, and were made for the most part by the park personnel from native materials at a minimum of cost to the government during spare time in the closed season.

It would be tedious to cover in detail the numerous buildings constructed during the ten-year period. There were, however, five developed areas, with the following structures at Spruce Tree Camp:

I. Administrative Group: administrative building, community building on the site of the old log-cabin museum, hospital.

II. Residential Group: ranger's club, 8 employee residences, 4 Navajo hogans.

III. Utility area: bunkhouse, mess hall, carpenter shop, ice house, stable and corral, storage shed, machine shop and garage, warehouse.
IV. Tourist facilities: main lodge building, cabins, tenthouses, public toilet, bath house.

V. Auto camp area: 2 frame comfort stations, one-room log cabin used as community building by campers.

2. Accommodations

Spruce Tree Lodge, the only hostelry in the park, was located on the west rim of Spruce Tree Canyon, overlooking the ruin from which the canyon took its name. This lodge consisted in 1921 of a permanent building containing the dining and service rooms, rows of floored tents on terraces looking into the canyon, nicely furnished for bedrooms, two rustic cottages also furnished for bedrooms, and a bathhouse. An electric plant in the rear furnished light for the entire camp.

The increase in tourist travel was accompanied by serious problems in sanitation. This may be more readily realized when it is understood that the largest increase in visitors was among those who came in their own cars and camped out in the open. Sanitary arrangements, particularly in regard to toilets, public and private, were distressingly bad. No attempt had been made to camouflage toilets in any way. They were so placed that there was not the least suggestion of privacy; they were not well kept, painted or screened, and were inadequate in size. Public toilets for men and women were very close together. From the dining room

4. Superintendent, Annual Report, 1921, MVPF.
of the lodge, people could be seen entering and leaving the toilet to the rear of the hotel, and at times the door was only partially closed. Lady visitors made many unfavorable comments about the toilet arrangements. Men were easily satisfied, but women were most exacting in such matters, and the existing country-type outhouse, with constant digging of new holes, moving of houses, etc., was neither pleasant nor efficient.

Since there was not sufficient water or funds for a sanitary water-carriage sewer system, Nusbaum proposed to construct a sanitary privy system as would meet the conditions required by the United States Public Health Service. In this manner the privies would be separated and camouflaged so that "one does not have to look ashamed when entering, and hold one's nose within."\(^5\)

One of the most effective improvements resulted when the old campground, situated a mile from the nearest source of water, and without toilets or conveniences of any kind whatever, was permanently abandoned. It was relocated with water lines and toilets on the rim of Spruce Tree Canyon, about 500 feet from park headquarters. The new location was also susceptible to more effective administrative oversight. When fully developed this new site would easily accommodate as many as 100 cars and occupants. The popularity of the new location with its wonderful views was fully attested by the increasingly large number of visitors that were...

\(^5\) Nusbaum to Mather, June 9, 1921; Superintendent, annual report, 1921; Nusbaum to Mather, 1922, MVFF.
attracted to it. By 1923 sixty percent of the visitors were using the campground facilities.\(^6\)

As visitation increased, the hotel needed expansion. Its capacity, particularly that of the dining facilities, was totally inadequate. Visitors had to eat in shifts at times. Early in 1923 the Spruce Tree Camp hotel, together with all its tents, cottages, service buildings, etc. was moved to a new location overlooking Spruce Tree and Navajo Canyons. Accommodations for the public could not be enlarged on the old site, and with the increased travel such enlargement and improvement was needed. Roads were constructed to the new location, and in laying out these roads additional space was added to the public campground facilities, which were maintained in a most satisfactory manner. In the new hotel, a fireplace was built in the lobby,

the building painted, and kalsomined, and much new equipment added, including fifty new chairs in the dining room. For the first time in the history of the park, good accommodations are provided for the public. Six new tents with fliees were erected on the Spruce Canyon side of the concession. A caustic treatment toilet building was erected which is a very decided improvement over the old pit type of toilet.\(^7\)

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6. Superintendent, annual report, 1921, Report of the Director, 1921; Wadleigh to Mather, July 21, 1921, MVPF.

7. Superintendent, monthly reports, April - September, 1923; November 1922-February 1923; Superintendent, annual report, 1923; Nusbaum to Director, August 13, 1922, MVPF.
In 1924 Mrs. Oddie Jeep, concessioner of the Spruce Tree Camp, added four new cottages, two with fireplaces. Two of the cottages replaced two tents which could not withstand the heavy winds from the canyon preceding storms. Three tents, floored and with flies, were also added. An Indian type of pergola was built across the front of the hotel. This was thickly covered with brush and formed a shaded area across the whole front of the building. Two rustic benches were placed under this, and vines and "hollyhocks" planted about the hotel. Rustic cedar flower boxes were placed under the hotel windows. This all added greatly to the appearance of the hotel building. Many minor improvements were inaugurated for the comfort of the visitors and for the betterment of the service to the public. Suggestions of Mrs. Nusbaum were followed in the interior decorations of the new cottages with most pleasing results. 8

Because of the potential increase of visitor use, the extension of the public campgrounds became necessary in 1926; the erection of a chemical-type comfort station in the lower section of the area replacing the old farmhouse types greatly added to the attractiveness of the site. The area was kept scrupulously clean at all times, a fact much noted by visitors. Additional rustic cedar fences, transplanted native flowers and shrubbery, and rustic benches, added to the charm of Spruce Tree Camp. The necessary enlargement of the public campgrounds was

8. Nusbaum, report, June-October, 1924, MVPF.
completed ahead of the demand by extending roadways and campsites northward along the rim of Spruce Tree Canyon.

Service to the public by the various operators was satisfactory in every way, but yearly the demand for a first-class hotel became stronger and more emphatic, and the increasing volume of traffic would soon warrant the investment. Visitors at first were happy to obtain a floored tent. Later the 24 cottages were always taken in preference to floored tents, and the requests for rooms with bath became more incessant. The Spruce Tree Camp Lodge operator increased sleeping accommodations in 1926 by erecting 14 comfortable cottage-type buildings\(^9\) and 6 floored tents, installed electric refrigeration and other service improvements, but still the dining room and kitchen facilities were not large enough.\(^{10}\)

Potable water was available only at headquarters and because of this fact only one public campground was maintained. Approximately 60% of all visitors made their temporary home there while in the park. Water was piped to convenient outlets, firewood for the convenience of guests regularly distributed, and sanitary facilities consisting of chemical toilets provided. A large log community house proved to be an added asset. All buildings within the area were electrically lighted. One ranger was assigned to patrol duty in the campground, which was maintained in scrupulous order at all times. Much favorable comment had been voiced by visitors on the

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9. To make a total of 24.

10. Superintendent, annual reports, 1925-26, MVPF.
appearance, cleanliness, and privacy of these grounds. It was contemplated, with the moving of the hotel, to also move the campground so that the one development for the accommodation of visitors would be centrally located. Furthermore, at its location on the rim of Spruce Canyon, space for development was too restricted, and with increasing visitation a larger and unrestricted area would be required.11

Licensed operators in the park kept improving their services to visitors by additions to facilities and better general supervision of details, all of which resulted in more satisfactory service to those using the public utilities provided.

But there was still an insistent demand for a modern hotel, conforming in architectural type to the new extended park headquarters buildings. Since early 1929 the Denver and Rio Grande Western Railway Company had been considering such a plan, and in the course of this period had inspected possible sites for such an operation conferred with Mrs. Jeep as to sale of existing utilities, and made formal application for a franchise to cover contemplated operations. The railroad company also proposed to take over the transportation franchise of the Mesa Verde Transportation Company

11. Superintendent, annual reports, 1929-30, MVPF.
operating from Mancos to the park, and the inauguration of one-day motor cruises of the Harvey-Car pattern from Montrose, Colorado, to Mesa Verde.\(^\text{12}\)

On December 31, 1929, the contract of Mrs. Oddie L. Carr, public utility operator, terminated. The hotel, with its equipment and supplies, was purchased by the Mesa Verde Park Company, a subsidiary of the Denver and Rio Grande Western Railway. There was still an insistent demand by park visitors for a modern hotel conforming in architecture to the new park headquarters buildings. It was tentatively agreed by the Park Service and the public utility operator to build a hotel when water had been gained in sufficient quantities to permit the construction and to insure to guests all modern conveniences. If, after the drilling of a well, enough water was obtained, the hotel would probably move to a new site which had already been chosen by the Director and other officials of the Park Service.

Also transferred to the Mesa Verde Park Company was the stage line operating between Mancos and the park.\(^\text{13}\)

Through 1931 the plans for expansion of facilities in Mesa Verde were held in abeyance pending the outcome of the Park Service plans to develop an adequate source of water supply. Once assured

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12. Superintendent, annual report, 1929; Superintendent, monthly report, January 1929, MVPF.

13. Annual report of lodge operator, January 2, 1930; Superintendent, monthly reports, April-May, '1930; Superintendent, annual report, 1930, MVPF.
of an ample supply of water, the Mesa Verde Park Company would be prepared to install new and much needed improvements. A new lodge with central structure and cabin units, all to conform to the pueblo architecture, were on this development program.  

3. Aileen Nusbaum Hospital

Of the buildings in the administrative group, the hospital was a congressional recognition of the efforts of Mrs. Nusbaum. When Mr. Nusbaum assumed his duties as superintendent in 1921, nothing had been accomplished toward housing or caring for sick or injured employees or guests. As the development of the park proceeded, a small community of workmen and employees sprang up at Spruce Tree Camp. More and more visitors came to the park. It was inevitable that accidents and sickness should increase and in every emergency it was the superintendent's wife who responded to the call for first aid treatment and nursing. She had been a nurse in the American Hospital in France during World War I and her experience well fitted her for the Red Cross role she was called upon to fulfill.

Mrs. Nusbaum immediately realized the needs of the park and during the summer of 1922 a large tent was purchased with two small donations by visitors; some medicines and a small ward were installed.

14. Director and Superintendent, annual report, MVPF.
In 1923 Mr. Nusbaum included in his annual appropriations request an extra ranger that would be a medical student of third or fourth year standing who could act as park doctor in emergencies and accident cases. This system of a tent and student doctor was satisfactory for a few years but as the park grew and both visitors and personnel increased, this small operation was no longer able to handle the demands made upon it.

In 1925 a congressional party visited Mesa Verde, headed by Congressman Crampton of Michigan. In line with their regular inspection of the park they saw the hospital tent and equipment and learned of the excellent work that Mrs. Nusbaum had accomplished in building up the small unit and by personally assisting the doctor in nursing and administering of anesthesia, and the like. Mrs. Nusbaum explained to the Congressmen her plans and ideas for an adequate hospital to be constructed of native sandstone rock, of the same type of architecture as the administrative headquarters, and of her own design.

In 1925 the Interior Department appropriation act passed by Congress contained an item of $7,500 for the construction and equipment of the "Aileen Nusbaum Hospital." During the summer of 1926 the hospital was constructed. The demand for the hospital may be appreciated when it is realized that during the five months' travel season of 1929 about 300 patients were treated, the majority of cases consisting of sprains, cuts, and minor injuries.
In 1930 the hospital equipment consisted of three wards of two beds each, one ward devoted to female cases, white; another to male, white; and the third ward to Navajo Indians. The operating room was complete with necessary equipment, including sterilizers, tables, and the like. Adjoining the operating room there was an accident room, to care for cases of minor character. Adjoining the accident room there was a medicine room and next to this the doctor's office.

The hospital was operated solely by the government and all employees of both the Park Service and the concessioners obtained free service by contributing a small sum each month toward its maintenance and upkeep. The patients were about equally divided between employees and visitors, but it was not the park intention to use the hospital for other than emergency cases.15

C. Roads and Trails

1. Road planning

Early in the season of 1921 Chief Civil Engineer George E. Goodwin and his assistant, Col. W. W. Crosby, spent time in Mesa Verde studying road conditions and making surveys of badly needed improvements and new road locations. This resulted in the preparation of estimates for improving the north entrance road into the park and for reconstruction of the abandoned road under the so-called Knife Edge. Examinations and preliminary surveys were also made for several cut-off roads along the west side of the mesa, and for grade and alignment changes in the existing road.

As in previous years, excessive rains during the travel season caused heavy washing of the roads, making it impossible for cars to enter the park for days. Constant dragging and repairs were necessary to keep the roads in good condition.

Attention given to the trails was necessarily limited to keeping the most important of them, from the main roads down over the cliffs to the chief ruins, in good repair. Improvements were made on these at difficult places, and signs posted for the guidance of the visitors. Several new trails were urgently needed, particularly for patrolling purposes along the park boundaries for the protection of ruins and wildlife.

Roads leading to the ruins needed great improvement. They were too narrow and winding for the safety of automobiles. Nusbaum suggested that the protection of the ruins could be greatly simplified
if a circle road were constructed leading to all the main ruins without the necessity of continually returning to within a mile to a mile and a half of Spruce Tree House each time to start for a new ruin. As routed, the main road led to Square Tower House, then nearly east across Chapin Mesa to Sun Point, thence back, heading Fewkes Canyon, to Sun Temple, up Sun Temple Road, heading Cliff Canyon, and down past "Buried House" to Cliff Palace, to Balcony House and then returning along the old road to Spruce Tree Camp. These roads made necessary a 15-mile trip for visiting those points.

A circled trip, as suggested by the superintendent, did not entail over two and a half miles of new road at the most, and cut the total distance travelled in seeing the same ruins by four miles at least. This system would do away with all the back tracking necessary on the existing roads beyond the junction of the Square Tower House and the Cliff Palace Road, with the exception of one-half mile returning to head Fewkes Canyon and one-half mile of Cliff Palace Road.

No time was wasted; the first road constructed was a short-cut road from just above Spruce Tree Camp, skirting the head of Spruce Tree Canyon; to the main road of the various ruins. The old road was closed off on the completion of the new one. Civil Engineer Goodwin, assisted by Col. Crosby, blazed the two new roads which the superintendent had proposed, between Square Tower and Sun Point Roads.
and Sun Point and Sun Temple Roads. When completed, these two
new roads would save an additional four miles of travel in
visiting the principal ruins.¹

2. Knife Edge, trails

Probably the greatest improvement in the park highways was
the reconstruction during 1922-23 of the old abandoned Knife Edge
entrance road. It eliminated five and one-half miles of uninteresting
road used before and did away with 2,000 feet of adverse grade. A
further section reconstructed on the east shortened the so-called new
road to the crest of the mesa by two miles and eliminated many
dangerous switchbacks and extreme grades. A serious problem was
encountered in this road construction, due to the fact that all
water used in the road-crew camps and for the steam shovel had
to be hauled in by truck from Mancos, a distance of 10 miles.

As a scenic road, the Knife Edge provided a spectacular
drive. It commanded tremendous expanses of diversified terrain
in the four adjacent states of Colorado, Utah, Arizona, and New
Mexico.

By the new construction of two short cut roads, a little
over a mile in extent, four miles of back tracking was eliminated
in visiting ruins about camp. All the other roads to the ruins

¹ Nusbaum to the Director, June 9, 1921; Superintendent,
annual report, 1921; Report of the Director, 1921, MVPF.
were practically rebuilt, stumps removed from the roadbed, dangerous curves rectified, culverts installed, and so widened and graded that cars could pass one another with ease.

New trails were also built; one from Cliff Palace, across Cliff Canyon, to Sun Temple; one from Square Tower House to Casa Colorado and "Inaccessible House"; and a third from Square Tower House to Little Long House. Most important of all was Rock Springs Trail from Spring House to Rock Springs and then to the wonderful ruins of Mug House, Jug House, Kodack House, Long House, "Double House," Ruin Sixteen, Step House, and Pinnacle Tower, including foot trails over the cliffs to the ruins. This long-awaited development opened up the greatest group of ruins on the park outside of the Chapin Mesa group and made it possible to patrol this almost inaccessible portion of the park.2

Mesa Verde had excellent dry weather roads, as far as surface was concerned because they were composed of admixtures of clay, red soil, soft disintegrated shale, and gumbo. Wet, they were very treacherous, and during long soaking rains became utterly impassable. Grades of up to 20 percent and switchbacks and hairpin turns needed correction and whole roads demanded widening and hard-surfacing to withstand the traffic imposed on them.

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2. Superintendent, monthly and annual reports, 1922-23; Reports of the Director, 1922-23, MVPF.
The roads from camp were all red soil and clay with the exception of a few short stretches where gypsum deposits were found. Dry and compacted, these materials made the finest dirt roads imaginable in dry weather, but the first dash of rain made them most treacherous. Chains on all four wheels were necessary for all but the experienced drivers who poked along in low and intermediate uphill and down and never proceeded over ten to twelve miles an hour under any conditions. If the rain was heavy or protracted, each car deepened the rut till the car rode so far down that the axle and pan scraped the roadbed. Brush and crushed sandstone was placed in the ruts to keep the pans from dragging and a grader was necessary since drags were useless for deep ruts.

There was not a level portion in the whole road system, and the average grade was about eight percent. There were portions in the roads of fifty miles that had gradients up to twenty percent, with many pitches of 15 to 17 percent. Much of the road was on the north rim of the mesa, where for considerable distances the cars passed around the north rim on a twelve to fifteen foot wide road, 1,500 to 2,250 feet above the valley, with not a vestige of a parapet to keep the cars from falling over the edge to the valley below. None of the roads were surfaced.

Particularly dangerous was the Knife Edge Road. A typical situation occurred during the travel season of 1924.
Heavy dry desert winds and lack of binding moisture started an extensive movement which increased gradually in intensity until at one time one 1,000-foot section of the road, nearly 1,800 feet directly above the valley, was reduced to less than 9 feet in travel width, even after the ditch line was filled. Cribs of 60-foot logs, and hundreds of loads of scrub-oak brush in the leaf were necessary to stop this movement. Seventy-five percent of the total fund for the maintenance of all roads for the year was expended in checking the movement and widening the road for safe passage of park visitors, nearly all of which could have been saved by one good soaking rain at the opportune time.³

3. North Entrance Highway

Automobiles demanded better roads every year. A few years back, Fords constituted over 50 percent of the cars entering the park, all loaded to the limit with passengers, household furnishings lashed to the running boards, fenders and back. Powerful, speedy, heavy closed cars, with few passengers, predominated in the 1920s, and in muddy weather tore the clay, red-soil, gumbo and slippery shale roads all to pieces in an hour's time. Hard surfacing and widening of the roads were great necessities.⁴

³. Nusbaum to the Director, August 29, 1924; Superintendent, monthly reports, June-October, 1924, MVPF.

⁴. Superintendent, annual report, 1925, MVPF.
In 1922 a new approach road was started up the east side of Point Lookout, to avoid and abandon the dangerous "Switchback Road." A two-way stretch of road from the park boundary to Windy Point, following very much the present road alignment at this section, was completed in 1925. This section joined the west Point Lookout grade.

From 1922 to 1930 there were constant changes and improvements in the entrance road alignment. For instance, in 1925 the road was realigned through what is now "B-cut" to eliminate the long and difficult grades over Moccasin Mesa from the head of the Moccasin Canyon to the head of School Section Canyon. In 1926 the road was further realigned through what is now "D-cut" eliminating the adverse grades over the ridge between the east and west forks of Little Soda Canyon.\(^5\)

In 1926 some progress was made in the reconstruction of the present East Point Lookout grade, but bad weather, line failure and constant maintenance prohibited its completion. This road was being built on a maximum of 6-1/4 percent gradient, which was a radical improvement over the narrow road ranging from 17 percent to a maximum of 26 percent in gradient. Graveling of this road would follow.

Roads leading from park headquarters to the ruins were somewhat widened, cuts and fills made to care for faulty drainage, trees carefully trimmed for better vision ahead, and at Square

\(^5\) Superintendent, annual reports, 1922,1925-26, MVPF.
Tower House a new loop road was constructed to accommodate the ever-increasing traffic and provide additional parking space. The Sun Temple road was likewise improved. Road work was done by force account, the park road crews being composed for the most part of Navajo Indians from the reservation just to the south. 6

A survey of the north entrance highway from the park boundary to Spruce Tree Camp--18 miles in length--was made by the Bureau of Public Roads in 1927. The road program contemplated a more direct entrance road without sacrificing scenic advantages, the elimination of dangerous curves and gradients, and the gravel surfacing of the whole route. 7 This survey of the north entrance highway was made under the agreement of the National Park Service and the Bureau of Public Roads for the improvement of roads in the national parks. More specifically, the Bureau surveyed the present Prater Canyon grade from the west end of Knife Edge to the head of Moccasin Canyon. Construction of this portion of road, to join onto the B-cut section, was completed in 1929.

Except for a final contract, the new north entrance highway was located, insofar as it was practicable, to obliterate the old roadway. At some points modern high standards demanded an absolutely new location, thus leaving the scar of the old abandoned road section in evidence. An allotment was made available just for landscape work.

6. Superintendent, monthly report, 1926, MVPF.

7. Superintendent, annual report, 1927, MVPF.

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When completed in 1931, the entire north entrance highway had been reconstructed so far as realignment and subgrade was concerned. Graveling was completed also at the end of 1931. In Mesa Verde, with long months of drought and severe windstorms, usually followed by periods of excessive precipitation, roads had to be treated well. For this reason the gravel used was a course of large, crushed material intended only for a base, and this foundation would be treated with oil later.  

A small road improvement that brought favorable comment from park visitors was a newly-completed short scenic road leading from the main entrance highway to the highest point of Point Lookout. From the terminus of the short road, an unexcelled view of the Mesa Verde region and the surrounding country was revealed. On a visit to the park in 1930, Director Albright and Thomas Vint, Landscape Architect, had enthusiastically endorsed the plans for the construction of this road.

Travelers to Mesa Verde no longer suffered the discomfort and hardships of the earlier years. In 1930 the park had 40 miles of unsurfaced but excellently maintained highways, 50 miles of improved pioneer and Indian trails, and 24 miles of telephone line.

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8. Superintendent, annual reports, 1928-31, MVPF.


10. Superintendent, annual report, 1930, MVPF.
D. Water development

1. A desperate need

An adequate water-supply system was among the park's greatest needs. Months without enough rain during the travel season of 1920 to cause enough water to flow into the reservoir above the seep of Spruce Tree Canyon, made the water question a serious one. Every use of water was curtailed or shut off pending rain. Just when water was scarcest, pumping from the cistern three times a day was necessary to keep going. All work was halted at this time on physical developments for fear of losing the little water that was gained. An additional cistern in the canyon head was dug out and enlarged and new water lines and a storage tank five times the size of the old one were installed. Water from the cistern was pumped to the tank above the camp and distributed by gravity. Farther studies for increased water supply were continuing, for travel to the park would be limited to the number of visitors who could be supplied with water at any given time.1

Again, in 1923, the lack of an adequate and unfailing source of water nearly resulted in the closing of the park at the beginning of the rush season. Construction work was stopped in an effort to supply the needs of visitors. A spring drought made the situation desperate.

1. Superintendent, annual report, 1922; Report of the Director, 1922, MVPF.
The discovery of nearly two hundred ancient cliff
dweller dams for the storage of flood waters in a small spur
canyon just below Cedar Tree Tower, and within a mile from
Spruce Tree, indicated the one successful method that the park
could follow in gaining water for the camp. Up to forty feet
in length and to five feet in height, the great number of these
dams showed that the quest for water in centuries past was just
as serious a problem as at the park in 1923. Two quick showers
furnished enough water to commence the construction of two modern
masonry dams on the rim rock at the head of Spruce Tree Canyon.
One and a half miles of drainage ditches were constructed to convey
flood waters to the reservoirs. Two cloudbursts in August filled
all three reservoirs. One new storage cistern of 4,500 gallons
capacity was also constructed in the head of the canyon. A
6,000-gallon storage and distributing tank was erected above head­
quarters in a masonry tower of the "cliff dweller watch tower type,"
and larger supply and distribution water lines run to various parts
of the hotel and campgrounds. Additional reservoirs were planned
to saturate the sandstone farther back from the seam where the
water was regained after a purifying process of percolation through
some 200 feet of sandstone. Still, it was felt that an emergency
concrete storage tank of at least 100,000 gallons capacity was
needed above headquarters to carry the park through protracted
periods of drought. This storage tank could be filled in early
spring when water was plentiful.
Some excellent dams were also found on the west side of the park and a great many more on small spur canyons in various parts of Chapin Mesa.²

Once again, in 1924, the lack of an adequate water supply had all but closed the park. Heroic work on the part of the park forces, and the realization of the desperate situation by visitors and operators, alone made it possible to keep the park open during the season. Despite the fact that funds as requested were provided for the development of additional water, development had not kept pace with increased attendance. It was an extremely desperate situation, wrote the superintendent.

Many nights during August there was less than 2 gallons of water available per visitor and employee for the following 24-hour period. Stock was watered as far as 8 miles from camp, the hotel bathhouse closed in early June, construction work entailing use of water stopped July 1 and water for laundry purposes was not available for protracted periods after June 30. Large signs were placed at each public outlet, personal appeals signed by me were posted over the camp, and during very critical periods, I personally appealed to visitors at the evening camp fire to help us keep the park open by using water most sparingly. Dams constructed this season increase the flood waters impounded by tenfold. The upper cistern now holds seven times the volume of water. A new pumping plant has been installed to replace the worn-out one.

Appropriations for water development have not been sufficient to keep ahead of the increase in attendance, and sufficient water for the

². Superintendent, monthly reports, May-September, 1923, MVPF.
conservative uses of visitors and park employees must be developed if Mesa Verde is to continue as a national park. August visitors alone amounted to over 50 per cent of the total registration during the past season, and each year the percentage of increase grows.3

There was no possibility of obtaining water by drilling wells, and it was not feasible to bring the water from other parts of the mesa even if it were available.

Water from the Morfield Canyon well was not fit for human consumption, and stock, other than cattle, would not drink it unless starved to that point where anything wet was drinkable. It was highly impregnated with gypsum and very bitter. There were three wells in Prater Canyon, on private holdings; one had strongly alkaline water, and in the other two, water was not permanent. In the two wells of School Section Canyon the water was not fit to drink. There was a seep in Moccasin Canyon about one-fourth mile from the head from which one could get the best potable water on the park outside of Spruce Tree Camp but only in the early spring. Water of the Little Soda Canyon well was very alkaline and bitter. A new well in the east fork of Navajo Canyon, constructed by the cattlemen, contained alkaline water, and was not permanent.

The total flow from all these wells could supply the park needs in part, but the cost of laying approximately 16 miles of pipeline and other equipment would be a great expense. Superintendent

3. Superintendent, annual report, 1924; Report of the Director, 1924, MVPF.
Nusbaum, who studied the water problem from every possible source, saw only one ultimate solution. He proposed a future supply of water by gravity line from the mountains above Mancos to the park, a distance of about 30 miles, at an approximate construction cost of $300,000.4

2. Catchment areas

In spite of building a 63,000-gallon steel tank and a 20,000-gallon underground cistern to impound rain and snow water from the roofs of the industrial buildings, the water situation continued to be desperate in 1925. This year extremely bad weather in the latter part of August and early in September made roads so trying that very few visitors entered the park during this time, thus preventing the closing of the park for lack of potable water.

Sometime in August, the Subcommittee on Interior Department Appropriations of the House Appropriations Committee together with the Interior Department representative of the Bureau of the Budget, spent three days in the park getting first-hand information. As a result of their investigation of the water situation, they wired the United States Geological Survey to send their best man in the water resources division to make a ground-water survey of the area and submit a report to Chairman Cramton of the committee as to the best method of obtaining an adequate water supply.

4. Nusbaum to the Director, December 23, 1924, MVPF.
O. E. Meinzer completed the water survey early in September. In his field work careful consideration was given to three alternative solutions:

1 - drilling, digging, or tunnelling for underground water,
2 - laying a long pipeline to bring in water from a distance,
3 - constructing rain catches and reservoirs to store the rain and snow water.

Meinzer reached the following conclusions:

1 - projects for developing underground water were uncertain as to quantity and quality, or both;

2 - a 30-mile pipeline carrying water from Crystal Creek, in the La Plata Mountains, would furnish a very satisfactory supply, but would cost too much in proportion to the small community that it was to serve;

3 - catching rain and snow water on specially prepared surface and storing it in underground reservoirs that would feed by gravity into the existing waterworks appeared to be a feasible means of providing a permanent supply of water at a reasonable cost.\(^5\)

Completed in the late fall of 1926, the new system of obtaining additional water for Spruce Tree Camp, as recommended by Meinzer, consisted of one acre of galvanized corrugated roofing, so set in a low framework as to gather all the precipitation fallen on it; the water then passed through a rapid sand filter to two steel

\(^5\) Superintendent, annual report, 1925; Meinzer's report, October 19, 1925, MVPF.
tanks holding 125,000 gallons each. The catchment area and tanks were located one-half mile above headquarters, and would supply approximately 400,000 gallons of pure rain water per year, with the average annual precipitation of 18.36 inches falling at this point. Whether the quality of the water impounded for six months to a year in steel tanks would be satisfactory for human consumption was an undetermined question. 6

For the first time in many years the park escaped a water shortage during the 1927 travel season due to the construction of the catchment system. 7 Even this supply, however, was insufficient to care for the growing needs of the park and it was necessary to install a second one-acre catchment unit with a rapid sand filter; this was placed in service for the first time in early January of 1929, although protective fencing and final completion was not had until well into June. In connection with this unit a reinforced concrete storage tank of 250,000-gallon capacity was built, as it was found that water standing in the steel tanks with the coming of warm weather acquired a slight taste from preservative paint used on the inside. Investigation showed that in nearly all catchment systems in which the water was stored for a considerable length of time, concrete tanks were used since they imparted no taint or odor to water.

6. Nusbaum to Chief Civil Engineer, March 27; Nusbaum to Acting Chief Engineer, May 24, 1926; Superintendent, annual report, 1926, MVPF.

7. Superintendent, annual report, 1927, MVPF.
Even the water in the concrete tanks acquired a slight taste due to the fact that pollen from the piñon trees was blown into the catchment. To obviate this difficulty with the drinking water another smaller concrete tank, with a capacity of 75,000 gallons, was installed underground; water was pumped to it from the spring at the head of Spruce Tree Canyon after filtering through 250 feet of sandstone. So, two types of water were now available in the major portion of the camp area—the soft rain and snow water for general purposes and the fresher and more potable old system water, for culinary and drinking purposes. The plan was to add another catchment when the travel figure passed the 20,000 or 25,000 mark.  

3. **Well drilling**

But the water problem was far from being solved, and so was reported by the Superintendent in 1929:

Even with excessive snowfall during the winter period, the gain from the two catchment areas with spring melting was comparatively light. Early this spring very heavy, drying winds coming from the Navajo Reservation evidently evaporated much of the water content from the snow, the evaporation progressing at greater speed than the melting process, thereby removing from catchment areas more than half of the water content that the Weather Bureau records would indicate was conserved there. At the end of June the total available water supply in storage was less than 104,000 gallons.

Beginning June 9 and continuing to the period of September 10, 9.48 inches of rainfall was recorded at park headquarters, thereby insuring far more

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8. Memorandum for the press, December 9, 1928; Superintendent, annual reports, 1928 & 1929; MVPF.
than an ample supply for this travel year. During the same period all available water was pumped to the lower reinforced concrete tank for storage of water from the older system. On September 10, 450,000 gallons of water of the two types were in storage, each of which is supplied separately to the main outlets within the headquarters area, thus providing an absolutely soft, general purpose water from the catchment units, and a fine, potable water from the old system, less flat, for culinary and drinking purposes. Much time has been devoted during the past season in study of future water development here to care for the greater needs of the immediate future when a greater and more modern camp development will require considerable greater volume of water for operation of modern conveniences and the sewage disposal system. Estimates and justifications for the 1931 fiscal year are in support of a deep drilling test water well as a means of caring for future requirements, based on the success of the Shiprock water well and wild-cat drilling in areas adjacent to the park in which water was encountered.

Both Nusbaum and Meinzer believed that the final solution of the water problem was a costly gravity line, but that in the meantime, experiments should be made with drilling a well.  

The site chosen for the well was selected after a careful study by Superintendent Nusbaum, members of the Geological Survey, and officials of oil companies operating in the surrounding territory. It became necessary to go to the north side of a great volcanic dike that had projected through the Mesa Verde sandstone at a distance about a mile north of Spruce Tree Camp. The site selected for the well insured gravity flow to existing storage facilities, and thence to the

9. Nusbaum to Director, April 11, 1929; Meinzer memorandum, October 17, 1929, MVPF.
administrative, industrial, and hotel areas. In connection with the water problem, Nusbaum wrote:

It is interesting to note here that archeological investigations tell us that for the past 3,000 years a desperate struggle for water has been waged by the inhabitants of this region. The Cliff Dwellers, at a time about 1276 A. D., were undoubtedly forced from the Mesa Verde because of a long period of drought, and evidence remains to-day of the innumerable dams which they constructed for impounding the rainfall. If man, with his increased knowledge and mechanical appliances, can produce water from the deep strata of Mesa Verde, it will bring to an end this struggle of many centuries.  

Actual drilling of the deep test well was begun on December 22 under the direction of L. E. Teague, Contractor, and Park Service officials. The experiment was an essential step in the development of the park, since if it resulted in striking sands bearing good water, major developments in hotel and other accommodations would follow. With the appropriation ($38,000) available, it was expected to drill to a depth of 3,700 feet.  

10. Superintendent, annual report, 1929, MVPF.  
11. Press memorandum, December 22, 1930; Superintendent, annual report, 1930, MVPF.
E. Archeological investigations

1. Policy statement

In his annual report of 1922 Superintendent Nusbaum noted that the cumulative damage of the excavated ruins done by the heavy mountain boots of thousands of visitors needed immediate attention. Seeping water and surface run-off had added to the damage and many exposed walls had to be protected if they were to stand. Careless tourists, although watched by rangers and guides, added to the yearly destruction. He thought that funds allotted for archeological work for the next fiscal year should be used entirely in repairing that damage before it was too late. "Unexcavated ruins last indefinitely," he said, "but excavated ruins cannot."

From $1,500 to $3,000 had been set aside nearly every year for archeological work. This covered the excavation and repair of the main ruins then visited by the tourists, and each year, the park had tried to have a sufficient amount left for the scientific excavation and repair of another ruin. In this way, interest in the park and its past inhabitants had been kept alive. This work had been done for the most part under the direction of Dr. Fewkes who was also allotted from the Bureau of American Ethnology some funds to supplement the work which the park would not accomplish.
Fewkes contributed a very good deal to the popularity of the park through his many seasons of archaeological work, lectures, campfire talks, numerous publications and the publicity that was given out to the press. However, because his work was excavation, he was not interested in repair work after a ruin had been excavated or open to the public; once a ruin was excavated, maintenance was supposed to be the responsibility of the park administration. According to Nusbaum, because of the nature of his assignment, Fewkes was involved in many park activities which had nothing to do with archeology; he had the last word about many things connected with park management. To accomplish his program, he built several roads and trails, left many ruins partially excavated and unprotected from the elements, gave poor supervision to the actual excavation and repair work, and gave little attention to the landscape features while clearing around an archeological site. As a result of Fewkes' program, all the ruins excavated by him, completely or partially, needed repairs immediately after 1922.¹

In 1923 the Director announced that while Mesa Verde offered a fertile field for exploration for years to come, it was considered advisable to postpone new archeological work and confine all efforts and small funds to repair and protection of those ruins which had been previously uncovered, that were to some extent...

¹ Nusbaum to the Director, March 1, 1923; Cammerer to Nusbaum, March 17 and April 2; Justification Fiscal Year 1924, NA-RG 79.
suffering from the ravages of the elements. This work would be performed under the supervision of Superintendent Nusbaum, a trained archeologist.  

One problem, however, was how to keep Fewkes out of Mesa Verde. In 1923 the Director kept him out by allotting all funds for archeological work to Nusbaum for repair work. In 1924 Fewkes had funds and was getting ready to undertake new excavations. In this connection, Acting Director Cammerer wrote:

"We've got to keep the doctor out of the Mesa Verde because he is impossible. He is approaching senility, and his petty meanness and professional jealousy creates an intolerable situation. I think we should speak to Dr. Walcott and ask him to forbid Dr. Fewkes going into the Mesa."  

Mather had two conferences with Dr. Walcott, Secretary of the Smithsonian, but the latter said that the Director had to take up the matter with Dr. Fewkes himself.  

Finally, Dr. Walcott received the following letter from the First Assistant Secretary of the Interior:

The Director of the National Park Service advises me that, in his opinion, no further excavations and uncovering of ruins in Mesa Verde National Park should be had during the coming year, on the ground that the funds and energies of the Park Service available for that park should be devoted to repairing and protecting ruins now uncovered and accessible to the public.

If exploration under the direction of your institution of the nature described can for the time being, and so far as this park is concerned, be suspended, it will be appreciated by the Park Service.

3. Memo to Mather and Albright, February 5, 1924, NA-RG 79.
4. Mather memo, February 18, 1924, NA-RG 79.
5. E. C. Finney, March 18, 1924, NA-RG 79.
2. Discoveries

No excavations were attempted by Nusbaum immediately after 1922, since government funds were only available for the repair and protection of ruins previously excavated. All ruins were maintained in the best possible conditions with the limited funds, but the increasing thousands who visited them yearly proportionally increased the cost of preservation.

New and important discoveries were made practically every year within the park without recourse to excavation, as the following examples will show.

In 1923 a fine, circular watch tower, still standing to a height of 24 feet, was discovered accidentally. It was built against the cliff in the unnamed ruin south and east of Spring House. Loopholes at various levels commanded the approach from every exposed quarter; its masonry was comparable to that of the finest of the noted Hovenweep National Monument Towers to the west. Very soon the tower crumbled because it was in the direct path of a waterfall over the cliff.

A fine series of pictographs were found in a spur of Navajo Canyon, not far from Spruce Tree Camp, and the point was named Pictograph Point.

Of all the finds of 1923 the most important was the great series of prehistoric dams, over 200, found in the late spring, and later made accessible to visitors by means of a foot trail. Found
within a few miles of park headquarters, the greater proportion of them were located in the bottom, and in the contributory drainage of the small canyon just south of Cedar Tree Tower. They were 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 varied 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. Since they were situated for the most part on bare sandstone, absorption was quite rapid. However, an impervious shale seam a hundred feet or more below the overlying sandstone cap of the mesa intercepted the water, "disappearing from the above and again made it available at the seeps and springs where the shale seam was exposed in the much deeper adjacent canyon." By this method a great area of sandstone was saturated as a sponge, and weeks later, when the reservoirs above were probably dry, perfectly filtered and nearly ice-cold water was available, even in periods of moderately continued drought. 6

3. Spruce Tree House

Superintendent Nusbaum followed very closely the policy of repairing ruins already excavated, in preference to carrying

6. Circular of information, 1932; Superintendent, annual report, 1924, NA-RG 79.
on exploration work. Under his supervision the ruins were put every year in the best condition that the funds permitted. Ruins regularly visited by tourists were generally maintained when water was available. Repair and maintenance of ruins was done by a small crew of workmen, which included masons. During winter the ruins received a thorough cleaning.

In 1923 a 50-foot slab from the roof of the Spruce Tree cave fell, but only one end did some damage to the ruin. The slab fell just outside the main parapet wall at the south half of the ruin, the space between the broken slab and the wall being but about two feet. This was not an unusual occurrence, being caused by extremely wet weather followed by a heavy frost.

With funds provided by John D. Rockefeller, Jr., Nusbaum and the rangers were able to excavate the north refuse space of Spruce Tree House during the winter of 1923-24. They had to use electric flood lighting units for illumination and automatic respirators for protection of the workers' lungs.

Because of darkness and dust, the early pot-hunters on the mesa failed to excavate this site. Two burials, both of children, were found in the course of the excavations, one of which was partially mummified or dessicated. It was wrapped first in coarsely woven cotton cloth, then inclosed 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 were displayed in the museum. The space had 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.7

4. Step House

Considerable archeological work was carried on in 1926 with the fund established by Rockefeller to enable the park to undertake intensive excavations during winters. These excavations were for the purpose of gaining additional information for campfire talks, and to increase and broaden the scope of the museum exhibits and collections.

During January and February when snow was available as a water supply, excavations were again carried on by park forces under the direction of Nusbaum. Nearly a month was spent in excavating the apparently barren section of Step House Cave, on Wetherill Mesa, the scene of much commercial digging and pot-hunting before the creation of the park.

The whole floor of the cave had been dug over and back filled, but by careful troweling of the previously handled earth

7. Superintendent, monthly reports, October 1, 1924 - March 31, 1925; Circular of General Information, 1932, NA-RG 79.
and debris, quantities of potsherds and many small objects were found. Nearly four feet below the old compacted cave floor level, floors of three circular subterranean rooms were found, 15 to 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 had 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. 8

An important collection was made at this site and one large case in the museum was devoted to its display.

5. Fewkes, Cliff, Soda, and Long Canyons

In Fewkes Canyon, directly across 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. 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 many interesting objects found were two large tapered cylinders of crystallized salt. Imprints of the molders' hands were 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.

A five-day exploration trip was made to the east side of the park, to a small cliff ruin in Soda Canyon. The work involved clearing out two square kivas which were most unusual in shape and which had been previously excavated by early pot hunters, as well as by former Ranger Jeep and his crew. Some articles of extreme value and importance were found which formed important additions to the museum display.

Excellent cliff dweller material was also found in a small cliff dwelling ruin in Long Canyon, on the western mesa of the park, previously excavated by John Wetherill in 1891.
The testing of several kivas and rooms previously excavated by pot hunters before Mesa Verde was created a national park indicated that much could still be regained by scientific excavation. Many excellent specimens of cliff dweller origin were found on the surface off from the trails by Deric, the superintendent's son and various park visitors; and were turned in to the museum for cataloguing and display.\(^9\)

6. **Moccasin Mesa**

During 1927 camp was established for a 22-day period in March on the rim of Moccasin Mesa on the east side of Soda Canyon just south and east of Balcony House. From this base, work for the first few days was centered in a small cliff dwelling one-fourth mile distant, subsequently named Bone Awl House because of the excellent series of bone awls found in one of the three unique square kivas at this site, two of which had been cleared of much previously disturbed debris during a 5-day period in January of 1926. In addition to miscellaneous materials, one final large coiled and indented cooking or storage jar with one cover and one large decorated water jar or olla were found. The balance of previously excavated debris was troweled over again with less success than normally. This site was mapped and photographed.

The balance of the period was devoted to a very thorough examination of a small unnamed cliff ruin, two-thirds of a mile east and south of Bone Awl House. This ruin consisted of three

\(^9\) Superintendent, annual report, 1926, NA-RG 79.
small rooms, one kiva, the remaining half of a two-story detached
tower, nine 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 pot hunters had pitted much of its debris,
which was very deep in the central part of the ruin. Many artifacts
were found in this ruin, which was completely mapped and photo­
graphed as the work progressed.\textsuperscript{10}

7. Consulting archeologist

Since 1921 Superintendent Nusbaum had been sending the
Secretary of the Interior reports of violations of the Antiquities
Act in the Four Corners region of Colorado, New Mexico, Arizona,
and Utah. In mid-1927 the Secretary of the Interior designated
Nusbaum consulting archeologist of the department with authority
in the field to conform with the provisions of the Antiquities Act.
He was to report any violation and in an emergency he could act
with the department in enforcing any prohibitions.\textsuperscript{11}

8. Wetherill and Chapin Mesas

Archeological investigations were continued by Nusbaum
during 1928. The work included excavations at an early pueblo
burial mound in the southern portion of Chapin Mesa and investi­
gations at Wetherill Mesa on the western side of the park. Over
40 restorable jars and bowls were uncovered at the two sites.

\textsuperscript{10} Superintendent, annual report, 1927, and a special
report on the archeological expedition, MVPF.

\textsuperscript{11} Superintendent, annual report, 1927; talk by Nusbaum
at Westerners meeting, Colorado State Historical Society, 1964, MVPF.
These were added to the museum collection after restoration. As in the past three years, the work was made possible by donations from Mr. Rockefeller.

In the burial mound at Chapin Mesa six undisturbed burials and three badly disturbed ones were uncovered at its edge before snow and frost stopped the work. Fifteen pieces of pottery of early pueblo type, mostly complete, were recovered from the six undisturbed burials.

Early in March Nusbaum and a party of seven proceeded to Wetherill Mesa by pack outfit. Here they spent about three weeks in further examination and study of ruins Nos. 11 to 19, inclusive. This group of ruins ranked second only to the regularly visited ruins of Chapin Mesa in size and importance. Unfortunately, because of the wealth of recoverable artifacts from these ruins, they were subjected to the severest exploitation by the early pothunters from 1889 to the creation of the park. With the exception of the badly disturbed front terrace section of Long House, next in size to Cliff Palace, this group had been most diligently excavated and searched for artifacts.

Camp was established in the snow just above Long House and the whole series of ruins studied from this base. Collections were made of representative potsherds from each site. The abundance of them from ruin No. 16 permitted a retroweling of all debris in this ruin to regain all its potsherds, 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 ruins. One partially excavated kiva in Jug House (No. 11) and one in ruin No. 12 constituted the new excavations. 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. On return to headquarters the many pack loads of potsherds were washed, stored, and classified. From those regained, on completion of the process of matching, mending, and preparation, it was possible to add numerous bowls and jars to the museum display from ruins not represented up to that time. Among those on display were some of the finest in shape, design, and workmanship "so far recovered in this area." Mapping, sketching, and photographing completed the daily record of the winter's expedition.12

Again in 1929, toward the middle of April, camp was established far south on the west rim of Wetherill Mesa, within a short distance of ruins 16 and 11. The purpose this time was to search again previously excavated debris from the early pot hunting expeditions. Many pieces of pottery were recovered.

Early pothunters had completely wrecked the few low walls and rooms in a deep, small cave just below ruin No. 12. Two previously unexcavated, depressed areas well toward the front

12. Superintendent, monthly reports, April-May, 1928, MVPF.
of the cave proved to be typical Mesa Verde kivas of the earlier type. Four child and one adult burials were found in the north kiva at varying levels well above the floor, all without accompaniments of any kind. A complete record, photographic and otherwise, was kept of the progress of the work.

Park museum exhibits benefitted handsomely from the tedious process of recovering the discarded sherds of early pot-hunting expeditions, followed by a second slow process of matching, mending and repairing, in preparation for exhibit. This method constituted the only possible means of gaining representative collections from the west side cliff dwellings which were so repeatedly excavated long before the area was created a national park.13

Because of the absence of Superintendent Nusbaum during the winter no field work or excavations were accomplished in 1930. However, some little research was carried on in the museum. Experienced masons, with Navajo helpers, continued the repairing and strengthening of ruins visited by the public. Each year the cliff dwellings were subjected to heavier traffic and the element of time alone was an important factor. In the near future it would be absolutely necessary for the park to maintain a consistent annual program for the repair and maintenance of all excavated major archeological remains. The fact that an unexcavated ruin

13. Superintendent, annual report, 1929, MVPF.
would stand indefinitely did not apply to ruins that had been excavated, since the wall-supporting earth was removed in the process.

As the department archeologist, the superintendent cooperated with other monuments in planning repair and preservation work. He rendered advisory service to all branches of the department, as well as to the scientific and educational institutions contemplating or engaged in archeological investigations on the lands of the public domain under its jurisdiction.14

9. Tree-ring chronology—Nusbaum on leave

In connection with archeological research, the superintendent wrote that Dr. A. E. Douglas, leader of the National Geographic tree-ring expeditions of the 1920’s, finally had succeeded in erecting an unbroken tree-ring chronology extending from shortly before the year 700 A. D. to modern times in Mesa Verde.

By means of this chronology pine and fir timbers, either sound or charred, found in ruins can be accurately dated if cut within the limits of the present chronology. Forty-nine beam cores or ends were collected from cliff-house structures within the park some years back. In his preliminary report, Doctor Douglass ascribed the date 1073 A. D. to the earliest beam of the series, one found in Cliff Palace, and the year 1262 A. D. to the latest, which was taken from Spruce Tree House, probably thus confining the

construction of the principal cliff-dwelling structures in the park within this period of time. This contribution of Doctor Douglass has been of particular and outstanding importance in the annals of southwestern archeological research.

In the fall of 1929 Earl H. Morris and Superintendent Nusbaum definitely established the fact that the ruin heretofore designated as "Earth Lodge A" was a typical structure of the Basket Maker III period or culture and not a distinct type of new structure as had been previously supposed. Incomplete excavation of the site years ago led to this erroneous conclusion. Other structures of like type were found adjacent thereto. Normally this type of home site is found scattered along the rolling ridges that divide the watershed of the more level mesa lands. There are literally hundreds of such remains within the park area.15

On January 4, the Secretary of the Interior approved a year's leave of absence for Superintendent Nusbaum, placing him on a per diem status. He was to assume the acting directorship of the Laboratory of Anthropology at Santa Fe, to which he had been unanimously elected, and still devote at least a fourth of his time to his work for Mesa Verde and the department. Under the new appointment, new headquarters were established at Santa Fe, New Mexico, and at the park. Chief Park Ranger C. Marshall Finnan was designated acting superintendent in the absence of Nusbaum.16

Public interest in southwestern archeology had grown rapidly during the decade of the 1920's. Mesa Verde, as a significant contributor to the story of prehistoric man in the

15. Superintendent, annual report, 1930, MVPF.
16. Superintendent, annual reports, 1929-30, MVPF.
Southwest had received constantly increasing attention, resulting in 18,003 visitors to the park in 1930, the greatest travel it had so far experienced. Santa Fe's Laboratory of Anthropology was the direct result of this public interest in prehistoric man.17

On March 16, 1931, Nusbaum resigned as superintendent of Mesa Verde to accept permanent appointment as director of the new Laboratory of Anthropology, established for the specific purpose of collecting and studying all data pertaining to the American Indian. The department retained his services as consulting archeologist.

In September, the new institution was formally opened in the presence of a number of the ranking archeologists and anthropologists of the nation. The one building completed was but the first unit of the vast laboratory that would be developed as time went on.18

Nusbaum did not stay away from Mesa Verde for a long time. He was superintendent again in 1936-39 and 1942-46.

17. Superintendent, annual report, 1930, MVPF.
18. Report of the Director, 1931, MVPF.
F. Education and interpretation

1. Museum development

   a. Mrs. Leviston's donation

   Directly connected with Nusbaum's archeological field work was the development of an adequate museum in Mesa Verde to replace the almost makeshift exhibits of the log cabin where some objects of the handiwork of the cliff dwellers were displayed. Each year the need for museums in the national parks became more urgent with the repeated and multiplying inquiries of visitors regarding the national features and objects of historical value found in the reservations. In certain cases museums showed what the parks had to offer and what could be seen by the observant visitor; in others they performed an even more important function of supplementing the attractions of the park themselves. Proper museum buildings, adequately equipped, were indispensable additions to developing the educational advantages of the parks.

   Mainly through Ranger Jeep's promiscuous pothunting activities a log-cabin museum had been established. Both Fewkes and Nusbaum had warned the ranger about this matter. Jeep did not realize, wrote Nusbaum,

   that specimens alone in a museum are worth nothing without the scientific data regarding them and he has never attempted to keep a notebook. Dr. Fewkes and his assistant, Earl Linton, two years ago, worked with Jeep in getting up a catalogue of his material and I will see that it is completed and the material properly prepared for exhibition, and do what I can to get the data which identifies it as to ruins, etc. etc.
Jeep has gotten together a very creditable collection of the cliff dwellers culture of the park, and it is the nucleus on which a bigger museum can be built, but frankly, Mr. Mather, his methods have been those of the pothunter and not of the scientist.... We want a museum here that can stand the acid test of the scientific man, and for that reason I have told Jeep that until further notice he is in no way to do more prospecting. Jeep is excusable, he didn't know the value of anything outside the specimens themselves. His interest in this work is most commendable and if rightly directed, will be of much value to us later.¹

A small improvement was made early in 1921 when the log-cabin was renovated. It was attractively furnished with heavy rustic cedar furniture and served as a very comfortable restroom and museum where visitors viewed the relics, wrote their letters and cards, or sat down in front of the fireplace and chatted. The broad veranda overlooking the canyon below was changed and improved, making it more attractive. Transplanted desert vegetation dispelled the barren appearance of the log building.

There was immediate need of a fireproof museum. Through the awakened interest all over Colorado in the park, the superintendent received many unexpected but highly pleasing offers of the return of much of the pothunting relics from those who owned them, provided that a suitable museum were constructed for their housing and display.²

¹. Nusbaum to Director Mather, June 9, 1921, NA-RG 79.
². Superintendent annual report, 1921, NA-RG 79.
Mesa Verde had no marked entrance where the road crossed the boundary, and visitors had no means of knowing when they entered upon park lands. This had been noted and commented upon by hundreds of visitors. One of these visitors, Mrs. Stella M. Leviston of San Francisco, suggested that an appropriate entrance be built, and asked the privilege of financing the undertaking, stipulating only that it should be something in harmony with the surroundings and substantial, regardless of cost.

In 1921 Mrs. Leviston offered to donate $1,000 for the purpose of erecting an entrance gateway to the park. Subsequently Superintendent Nusbaum suggested and Mrs. Leviston agreed to use the money as a contribution to a museum in Mesa Verde. Plans were drawn by Mrs. Nusbaum and submitted to Mrs. Leviston and met with her approval. These plans provided for building the museum in several units. The first unit was to consist of four rooms. Mrs. Leviston expressed a desire to pay for the first unit herself and at one time declared that she hoped it might be an incentive for others to continue the work. She thereupon gave $2,000 to be added to the $1,000 originally intended for the gateway. Sometime later she made other donations, bringing her total to $5,000.

b. Construction problems

Construction of the museum was begun in the summer of 1923 and it was expected that the building would be ready for use during the season of 1924. Considerable progress was made before the close
of the 1923 season but in the spring of 1924 certain conditions arose that caused postponement of the work. Still further delays resulted from subsequent developments.

The excessive rains of the 1923 summer made the roads impassable from time to time, so that a great deal of material destined for construction work in the park headquarters area could not be hauled in before the roads were closed for the winter. For this reason a large part of the construction work authorized by Congress for completion within the fiscal year ending June 30, 1924, had to be postponed until spring. As soon as the roads were open in the spring of 1924 all efforts had to be concentrated on this authorized work, comprising a warehouse, a shop building, a public comfort station, and clerk's quarters. The completion of these structures, together with the work of repairing roads and opening the park for the season, absorbed all the time and labor available during the later part of May and the month of June. Practically no work was done on the museum during these months.

Under ordinary circumstances work would have gone on rapidly after the first of July, but again abnormal weather conditions interfered. The season of 1924 was marked by an extraordinary deficiency of rainfall throughout the western part of the United States, and nowhere was this more apparent than in the park. The supply of stored water, even in normal seasons, was very limited and barely met ordinary requirements. The shortage
during 1924 was so serious that it was necessary to close the hotel bathhouse from the middle of June to the middle of September and to reduce laundry to a minimum. The only heavy rain during the midsummer was on August 3rd, and here again the extreme conditions characteristic of the region were illustrated when a cloudburst seriously damaged the water storage system. The shortage of water continued until after the middle of September. On top of all this, the travel to the park during the summer of 1924 surpassed all previous records.

No doubt the water supply at Mesa Verde determined inexorably the activities that could be carried on in the park. With barely enough water to provide for essential uses, there remained but little for construction, and such as there was had to be used for the repair of the water storage system. The principal work to be done at the museum was masonry requiring water for mortar, so that, with the exception of some carpentry, very little work was done during August. It was not until the later part of September that enough water could be spared to resume masonry work.  

After more trials and tribulations, the museum was completed and opened to visitors early in the spring of 1925. It was located on the cliff just west of Spruce Tree House,

3. Superintendent, monthly and annual reports, 1921-24; Cammerer to Nusbaum, June 24, 1922; Nusbaum to Director, August 13, 1922; Francis P. Farquhar, Report on Museum, September 25, 1924,NA-RG 79.
about 100 feet north of the log-cabin museum, and occupied the former site of the hotel.

The park museum, that is the first four rooms, formed the first unit of the administrative group, following the same style of architecture as the superintendent's home and the administrative building.

One of the most gratifying indications of the interest of visitors in the park was reflected in the help which they extended to it. Museum building was an activity that was not covered by congressional appropriations. With the exception of the fine old museum cases and a major portion of the archeological collection, Mesa Verde had its friends to thank for its fine large museum building, the furniture and fixtures and pictures therein, the acquisition of valuable archeological, ethnological, and historical records and exhibits, the large scientific reference library, and even funds to cover excavation projects to secure more material for exhibits. A voluntarily supported first-aid tent maintained at headquarters for the convenience of visitors and injured employees had more than supported itself. Financial assistance was also extended in helping defray the expenses involved in producing the wonderful ceremonial Indian plays. The value of gifts to the park during 1921 to 1925 was more than what Congress appropriated for its maintenance and improvements in 1921. Mrs. Leviston and Mr. Rockefeller, Jr., contributed $5,000 each.
The organization of the library was due to the indefatigable efforts of Mrs. Nusbaum who also contributed many hours of her time to the preparation of the exhibit material with the superintendent.  

**c. Collections**

In 1925 the Director announced that the newest phase of educational work in the parks was the museum service. It was not the policy of the Park Service, he wrote, to establish elaborate museums in any of the national parks, or to have them considered "show" places. Rather, they were to be regarded as places to stimulate the interest of visitors in the things of the great outdoors by the presentation of exhibits telling in a clear way the story of the park from its geological beginning through all branches of history up to and including the coming of man and his work. The national parks themselves were the real museums of nature, and the park museum in each park would serve as an index to the wonders that could be studied and enjoyed on the ground by the observant student of nature.

After the museum was opened to the public, the superintendent was running a kind of museum preparation school, with Mrs. Nusbaum and Park Ranger Finnan's wife matching pottery, mending, and preparing material for exhibits. The large, well-lighted exhibit rooms made possible the display of the park

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4. Superintendent, monthly reports, 1925-26, MVPF.

5. Report of the Director, 1925, MVPF.
collections that had been stored for lack of room. With the employment of Mrs. Finnan as a museum assistant to care for the collections and explain the exhibits, public interest in the museum was intensified. In the preparation of exhibits Nusbaum followed the methods of the new National Museum of Washington, the Museum of the American Indian in New York and the Museum of New Mexico. 6

In speaking of his visit to Mesa Verde, Crown Prince Gustaf Adolf of Sweden, a noted authority on museums and their installation as well as a most able archeologist, said that the park museum was one of the finest he had inspected in the United States. By contributions in cash and donations of collections the growth of the museum had been phenomenal. In 1926, for instance, funds had been pledged to the extent of approximately $9,000, covering enlargement of the existing building display cases for exhibit of material not yet on display, and to permit the continuation of the winter excavations.

Every park visitor was interested in the museum exhibits. Many called for particular subjects or publications in the reference library; some requested reading lists for future use; and others had become well known to the park personnel because of the time they spent in study in the museum. 7

6. Superintendent, monthly reports, February-March, 1926, MVPF.

7. Superintendent, annual report, 1926, MVPF.
Each year the extent and scope of the collections were enlarged by the winter excavations. The reference library was likewise growing from year to year. In 1929 there were already on display in the museum 14 large wall-type cases of archeological exhibits, mainly gained from the park area; four similar cases of ethnological exhibits, representing arts and crafts of the modern Indians of the reservations adjacent to the park area; and one case devoted to geology. The exhibits, together with minor display of other materials, occupied all available space in the museum building, with the exception of a portion of the largest room which had been temporarily partitioned off to provide storage and preparation space.

Never in the history of the park, wrote Nusbaum,

have so many scientists visited the area. Museum directors, curators, archeologists, ethnologists, paleontologists, geologists, botanists, as well as those working in associated sciences, have been coming and going all season, some coming for serious study in the area for several weeks at a time, others for inspection of park educational and museum activities, a few purely on annual vacation, while many from the archeological field in the Southwest have come to discuss their field problems, as their operations on the public domain, under the jurisdiction of the Department of the Interior, is regulated under permits granted by the Secretary on application previously referred to this office for consideration and report. 8

8. Superintendent, annual report, 1929, MVPF.
By 1930 so many new and important acquisitions had been gained that additional storage, preparation, and work space was desperately needed, particularly after the appointment in 1929 of a park naturalist who greatly advanced the scope of the museum and educational work. An addition to the museum building was contemplated for some time in the near future, with funds pledged by Rockefeller. In this latter connection Nusbaum wrote:

Although relatively small, the amount of Mr. Rockefeller's contributions toward museum development in Mesa Verde National Park is of notable significance to the Service, for here, in the absence of Federal support for museum development, we stimulated the cooperative interest in Service objectives which prompted him, for the first time, to contribute to the achievement of Service objectives; and which led, following his visit here, to his meeting Horace Albright, per my plan, and to his (Mr. Rockefeller's) proposal to support roadside cleanup in Yellowstone; and subsequently to his . . . similar proposal of a comparable cleanup program for Glacier.

Interest aroused in Mesa Verde in Southwestern archeology and the arts and crafts of Southwestern Indians led to Mr. Rockefeller's substantial support and establishment of the Laboratory of Anthropology at Santa Fe following several vacation periods largely spent in pursuing these interests in the Southwest along lines and persons suggested by me. The history of his most generous and substantial cooperation with the Service is well known to all personnel from this time on.

9. Superintendent, annual report, 1930, MVPF

10. Nusbaum memorandum to the Director, August 5, 1944, MVPF.
2. **Interpretive development**

The Mesa Verde museum was one of the obvious ways of doing educational and interpretive work in the park. Interpretive work, however, was really started by Fewkes before the log-cabin museum was established. During his excavation of Sun Temple in 1915, he was persuaded by Oddie Jeep, the lodge concessioner, to give campfire talks. These were delivered around a fire hole dug by Ranger Jeep in front of the lodge building which was located where the present museum stands.\(^{11}\)

In his long and informal campfire talks, Fewkes made an effort to explain the ruins and present related archeological problems. These talks were well attended; the audiences sometimes numbering 20 or 30 persons. Talks were generally given when there were 10 or 12 persons interested. In bad weather the talks were given in the small museum building.\(^{12}\)

Fewkes also made another interesting contribution to the field of interpretation. In 1918 he suggested planting a crop of corn on an area of about 30 yards in the vicinity of Mummy Lake for the purpose of experiment. He desired to show what might be done in the way of establishing ancient conditions in connection with the development of the ruins of the park. His suggestion was to plant Navajo corn seed or the Hopi corn.\(^{13}\)

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11. Nusbaum on Campfire, February 18, 1950, MVPF.

12. Excavation of Sun Temple, 1916, p. 31; personal conversation with Herrick Carr, July 28, 1970, who was seasonal ranger when Fewkes was excavating Sun Temple.

13. Fewkes to Albright, December 14, 1918; Albright, Acting Director to Rickner, November 18, 1918, MVPF.
Fewkes' suggestion was put into effect in May 1919, when the corn was planted. Many people, wrote Superintendent Rickner, had doubted the assertion that the corn found in the ruins was raised on the mesa without irrigation. Many specimens of corn had been found in the ruins, and the question naturally arose as to where it came from. A demonstration was made in 1919 that showed conclusively that corn could be raised on the mesa without irrigation. Two small areas were planted and an abundant harvest of excellent quality was obtained. A few potatoes were also planted as a test and they yielded good returns. Another crop of corn planted on the mesa gave the same excellent results.

When Nusbaum became superintendent of the park in 1921, he soon realized that it was essential to develop an educational and interpretive program, of which the museum was one of the essential features. Under Superintendent Rickner, the vital service of guiding visitors through the ruins, as an educational and protective measure, was completely neglected, becoming a business affair of the superintendent's family. According to Nusbaum, the chief ranger's eight-year-old son, Fitz Jeep, had a sign posted in the log-cabin museum stating that he was the best guide in Mesa Verde, and knew everything about archeology. Ranger Jeep maintained a string of five or six saddle horses,

14. Superintendent, monthly report, MVPF.

15. Superintendent, annual reports, 1919 and 1920, MVPF.
including packs, for rental to visitors. Only important people, government officials in particular, were guided through the ruins by him. Nusbaum corrected this situation by replacing the park ranger and other government employees who were not loyal to his administrative and management policies.16

Nusbaum's program of education and interpretation evolved through three different but integrated agencies or tools: first, a specially selected and instructed ranger-guide service which conducted all visitors to and through the major ruins; second, the park museum, with its associated activities; and last, the informal evening campfire talks conducted by the superintendent and rangers, covering the broader aspects of the work of the National Park Service and the prehistoric cultures of the Southwest.

As far as guide service was concerned, a schedule was established, morning and afternoon, when visitors driving their cars were conducted without charge on caravan trips, under ranger or official guides on interpretive trips. Both the seasonal rangers and the official guides were selected, trained and indoctrinated by the superintendent. Rangers selected were usually college students who were specializing in Southwestern archeology or some branch of archeology. This system of auto

16. Nusbaum to Freeman Tilden, April 1954, MVPF.
caravans was so successful and popular that it was adopted by Yosemite, Yellowstone, Sequoia, and Grand Canyon National Parks. 17

Regular campfire programs were inaugurated in the summer of 1921 after improvement of the old fireplace. In the center of Spruce Tree Camp a rustic cedar rail fence, supported by heavy cedar crotches, was constructed, forming a circle 75 feet in diameter. Within the center of this area a fire bowl, similar to one discovered by Fewkes in his excavation of New Fire House, was built for the campfire at night. The idea was to have regular campfire talks regarding the ruins, their inhabitants, and their culture. Native vegetation was transplanted in groups under the rails and at the entrances, and rustic seats arranged for the convenience of visitors. 18

Evening campfire talks soon became one of the most enjoyable and educational activities of the park. At first Nusbaum and Fewkes gave the talks, but later the rangers conducted them after the superintendent had "broken the ice" and given salient facts regarding archeology of the Southwest and compared the culture of the cliff dwellers with that of the earlier post-Basket Maker and Basket Maker people.

17. Nusbaum to Tilden, April 1954; Circular of General Information, 1928; Report of the Director, 1930, p. 22, MVPF.

18. Nusbaum on Campfire, February 18, 1950; Superintendent, annual report, 1921, MVPF.
Many noted educators, scientists and archeologists, together with other widely known visitors, were requested by the rangers and the superintendent to give short impromptu talks on any topic in which they were interested. Their talks were most enlightening and interesting to the visitors.

In their talks the rangers covered the more important points of interest in the park, touching on the geology, the flora and fauna, new discoveries, policy of the park administration in the care and preservation of the ruins, and general archeological interpretation.

Campfire talks were soon followed by a "Navajo Sing", given voluntarily after a little persuasion, by the Navajo employees working in and about Spruce Tree Camp. They appeared in their regular work clothes. Their number varied from 8 to 10 up to 50 - 60 or more on weekends. Subsequently, to improve the program and appearances, six or seven of the best singers and dancers were selected and persuaded to give two parts of the Yebeichai Dance Ceremony, and a Circle Sing in the white pants, velveteen shirt, and silk kerchief head-band which we furnished, with the understanding that they could pass the hat for voluntary contributions between the second and final parts of their program. On rare occasions, Dr. Fewkes, then an ailing elderly man, could be persuaded to give the archeological or ethnological talk.19

19. Nusbaum to Chief Historian Lee, March 15, 1950; Nusbaum to Warren E. Boyer, Denver Tourist Bureau, August 11, 1922; Superintendent, monthly reports, May-September, 1923, MVPF.
Occasionally noted singers delighted the visitors with impromptu concerts given from Spruce Tree House ruins, the cave acting as a great amplifier which made even the softest notes audible in camp.  

A ceremonial play--"The Eagle Woman"--was given in Spruce Tree House for the first time on June 28, 1924, in honor of the Brooklyn Eagle Party, and again on July 5, at the time of the visit of John D. Rockefeller, Jr.'s party.

Both in the mythology of the Navajo, as well as that of the Zuñi Pueblo Indians, the "Eagle Woman" was a most important and sacred character. Mrs. Nusbaum wrote a ceremonial play based on this mythology, designed for enactment in the ruins of Spruce Tree House. After gaining the confidence of the leading Navajos and a medicine man employed in the park, she gradually unfolded her plans to them, and they agreed to enact the various parts of the drama, including the songs and dances in costume within the ruins, which normally they would not enter. Costumes were designed and executed and 18 Indians trained for their various parts. The cave and the various parts of the ruins were lighted by red and green railroad flares, which were set and shielded to produce the striking lighting effects. The large crowd of visitors watched from the opposite rim of Spruce Tree Canyon.

20. Superintendent, annual report, 1924, MVPF.

21. Superintendent, monthly reports, June-October, 1924, MVPF.
Special significance was attached to the element of fire in the mythology, the folklore, and the ceremonies of both the Navajo and the Pueblo Indians. Since one ruin in the park was undoubtedly dedicated solely to fire worship, Mrs. Nusbaum conceived the idea of reenacting in Spruce Tree House a sacred fire ceremony, basing her story on the Hopi and Navajo fire ceremonies. She wrote the play, designed the costumes, secured the good will of the Navajo medicine men, and trained 40 Navajo men to their parts. The play was given on July 2, 1925, for a congressional group, and again on July 5. Approximately 700 persons attended the two performances, some cars making special trips from over 400 miles distant.22

The "fire" play of Mrs. Nusbaum was produced three times in the 1926 season as part of the educational work of the park. On October 4, while the national park superintendent's annual conference was in session in Mesa Verde, Mrs. Nusbaum gave the play to demonstrate the educational possibilities of such a production. On the evening of June 16, the play was again produced on the occasion of the visit of the Rockefeller's party in recognition of the intense interest Mr. John D. Rockefeller, Jr. and the Laura Spelman Rockefeller Foundation in National Park Service activities.

22. Superintendent, annual report, 1925, MVPF.
On July 19, the play was given for the last time during the season, in honor of the visit to the park of Crown Prince Gustaf Adolf and Crown Princess Louise of Sweden and their royal party. Approximately 800 visitors witnessed the three productions.  

Each year the direct and accumulated information of the park was presented to visitors in better manner through the three media of interpretation: museum, ranger-guide service, and campfire talks. In 1930, for the first time, an accurate check was kept on the number of people availing themselves of these services, and the very important fact was brought to light that the average visitor inspected the museum at least twice during his stay. A total of 20,964 people availed themselves of the conducted ruin trips; 8,961 attended the campfire lectures, and a total of 21,011 visited the museum. In all, a total of 50,936 visitors was served by the park rangers and naturalist. Apparently 1930 was the first time that educational and nature work was placed in the hands of a park naturalist--Paul R. Franke--who a few years later became superintendent.

One of the first contributions of the new park naturalist was the publication of "Mesa Verde Notes," a pamphlet edited by him and distributed without charge. This was an important new

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23. Superintendent, annual report, 1926, MVPF.

24. Superintendent, annual reports, 1929-30; Franke to the Library, Roosevelt Wild Life Station, May 22, 1930, MVPF.
step in the development and advancement of educational work in the park. The word nature was purposely avoided in the title of the pamphlet because the park people wished to cover the broader aspects of Mesa Verde and its prehistoric human inhabitants, as well as the natural features and phenomena. Every effort was made to obtain articles that carried some human interest and the story of the prehistoric peoples, the modern Indian, or wildlife of the park.  

Park Naturalist Franke also founded in 1930 the Mesa Verde Museum Association, known at first as Mesa Verde Library Association. The Mesa Verde Museum Association was designated as a cooperating scientific and historical association on April 1, 1937, and by letter of May 12, 1950, from Director Drury, was authorized to use space in government-owned buildings without charge as might be determined by the superintendent. Now the Association's activities are integrated with the interpretive program.

Today the four elements of interpretation that evolved through the first administration of Nusbaum--museum, guide-service, campfire talks, and the museum association--are still the kernel of the interpretive program of the park. If there are any differences between the old and the new programs it is a matter of degree and not of kind. In spite of some changes the programs are basically the same.

25. The first number of "Mesa Verde Notes" came out in October 1930, MVPF.

G. Administration

As a whole, what made possible the quality of visitors' services was the facilities provided by the headquarters complex and the increase of qualified personnel. With the exception of roads, trails, and telephone lines, all developments within the park area were centered at Spruce Tree Camp, where housing and other facilities were available to care for all park visitors and personnel, as well as administration, protection, maintenance, development, and other activities of the government in this area. As necessity arose, minor development of housing facilities for park workers was taking place in areas far distant from park headquarters.

In 1930 seven employees constituted the field organization: an archeologist-superintendent, chief clerk-special disbursing agent, assistant clerk-stenographer, park naturalist, chief ranger, permanent ranger, and park mechanic. During the open travel season this force was augmented by the addition of 15 temporary employees consisting principally of ranger guides to care for visitors and the other open season activities. All temporary rangers formed part of the education division of the park, and through these men the service was brought in direct contact with the visiting public, since, under the existing procedure, all the visitors to the ruins had to be accompanied by ranger guides. Except for skilled help, such as gradermen,
carpenters, and the like, Navajo Indians from the adjacent reservation formed more than 90 per cent of the labor force. They were excellent workmen and their employment was to the mutual benefit of the government and themselves. During winter the permanent force was occupied with general improvement work: archeological investigations and excavations; important museum work consisting of the preparation and installation of exhibits; small construction projects; the manufacture of equipment, particularly furniture for public buildings, which was designed by the superintendent and made in the carpenter shop at park headquarters; the overhauling and repair of all automobile equipment; snow removal and maintenance of the main park highway, and the regular office routine and administrative duties.¹

¹. Superintendent, annual report, 1929-30, MVPF.
VI. MINING OPERATIONS

A. Coal resources

In the fall of 1906 M. K. Shaler of the Geological Survey, at the request of the Department, prepared a special report on the coal resources of Mesa Verde. According to his report the rocks that contained the coal beds outcropped along the escarpment of the mesas and in the walls of the canyons. In the westward-facing escarpment the coal beds occurred at intervals throughout 400 feet of strata. Along the northern boundary of the coal land area there were two workable coal beds separated by an interval of about 200 feet. Although his report was based on work of a purely reconnaissance nature, Shaler concluded that the wide distribution of the observed outcrops of coal seemed to indicate clearly that all the park area, with the exception of the northern extension about Point Lookout, was underlain by one or more beds of coal ranging in thickness from two feet, three inches, to four feet, nine inches. If the coal were of poor quality, he observed, the minimum thickness mentioned above would not be considered workable, "but the appearance of the coal is good and without doubt it can be profitably mined, where conditions are favorable, down to a thickness of at least 2 feet 3 inches."

There were also workable coal mines underlying the portion of the
five-mile strip coinciding with the Southern Ute Indian Reservation upon which were located the principal ruins.¹

On February 17, 1908, Superintendent Randolph informed the secretary that coal was being mined on park lands by certain parties and sold to residents of the town of Cortéz, and requested instructions about the matter. He was informed by the secretary's office that the titles of the various coal land locations in the park were under investigation by the General Land Office; that as soon as a report was received by the Land Office, instructions would be issued by the department.²

George S. Todd, of Cortéz, had made a coal location in the park after the lands were reserved from entry. After the creation of the park he made application for patent, but his claim was rejected by the Commissioner of the General Land Office. With the aid of Senator Teller of Colorado, former Secretary of the Interior, Todd endeavored to secure legislation which would permit

¹ Shaler's report contained a map showing the distribution of the outcrops of coal. In October 1907 Superintendent Randolph and A. B. Frenzel, mineral expert from Denver, spent some time in Mesa Verde to ascertain if there were any valuable mineral deposits within the park limits. Denver Post, October 4, 1907, NA-RG 79.

² Randolph to James R. Garfield; Acting Secretary to Randolph, March 4, 1908, NA-RG 79.
him to enter the park under the coal-land laws of the United States.\textsuperscript{3} It was understood that the department did not favor the passage of such legislation. In the absence of authority in the park act of 1906 for the granting of privileges and leases, the department denied Todd his application for permission to work the coal lands claimed.\textsuperscript{4}

After the passage of the act of June 25, 1910, under which the secretary was authorized to grant leases and permits for the development of the park natural resources, Andrew Kennedy, a mining engineer of Seattle, Washington, was requested to advise the department about the possibilities of mining operations in the park. Upon his recommendation, the first two mining leases were prepared for John Jordan and George S. Todd, of Cortez, covering certain tracts in the western portion of the park.\textsuperscript{5}

B. Jordan-Jackson Mine

On October 28, 1910, William John Jordan made application for a mining lease. It was the purpose of Jordan to supply coal

\textsuperscript{3} S. bill 6818, 60th Congress, 1 Session, Rogers.

\textsuperscript{4} Superintendent, annual report, September 4, 1908, NA-RG 79.

\textsuperscript{5} Secretary Ballinger to Inspector Edward B. Linnen, February 11, 1911; Acting Superintendent Wright to the Secretary, May 18, 1911, NA-RG 79.
to the inhabitants of Cortez and in the Montezuma Valley. It was understood that the coal to be mined was of a grade superior to that located nearer to Cortez and that the mining operations would be a service that while relatively small would be a profitable venture. After some negotiations a lease was granted effective January 21, 1911, embracing an area of approximately 60 acres for a term of six years. The compensation to the government was fixed on the basis of a royalty of 10 cents per ton with a proviso that the total sum accruing to the government during the first year should be not less than $50 and for subsequent years not less than $100, which sums were to be payable in advance. No part of the claim contained ruins.6

Jordan, on December 28, 1911, assigned his interest in the lease to W. A. Jackson because the former had found it impossible to make a success of the operation. A new lease for five years, the unexpired term of the original lease, was granted Jackson on May 9, 1912. Jackson's lease was known as the Jordan coal mine. The coal was bituminous, as was all the coal found in the park, but very hard and clean and fine for fuel.7

6. Acting Superintendent Wright, annual report, August 3, 1911, NA-RG 79.

7. Shoemaker to Secretary, June 14, 1913, NA-RG 79.
J. C. Roberts, a mining engineer of the United States Bureau of Mines, made an inspection of the mines in the park on February 13 and 14, 1913, and recommended the following:

That the sum to be paid as advance royalty be reduced from $100.00 to $60.00. The total consumption of coal in the town and valley is 1200 tons per annum and should he divide the market with Mr. Todd, his sales would then amount to 600 tons per annum. There seems very little prospect of any increase in consumption of coal in the near future.  

By the act of June 30, 1913, the boundaries of the park were changed and all the land included in the Jackson lease was found to be outside of park jurisdiction. Jackson's mine was situated approximately 1,500 feet above the valley and some 3½ miles from the new west park boundary. A very small quantity of coal was mined under this lease. At no time was the amount of 10 cents per ton royalty sufficient to equal the advance payments of $50 in 1911, $100 in 1912, and $100 in 1913, a total of $250. While complete financial statements are not available about the operations, it is clear from some general reports that the operations were very small and the production of coal very limited. For example, in a report of December 26, 1912, Jackson certified that $4,950 had been spent in road construction and

8. Roberts to the Secretary, NA-RG 79.
mining operations and that 75 tons of coal had been mined under the lease. It is certain that at least up to 1913 these operations were conducted at a loss.9

C. Todd Mine

Records do not show when the Todd Mines were opened, but it seems that they were operating in a very small way when the park was established in 1906; at least 100 tons of coal had been taken out. Since Todd’s first application for a mining lease had been rejected in 1908, he again made an application which was granted on January 23, 1911, under substantially the same terms as specified in the Jordan-Jackson leases. However, after several years of operation the minimum amount payable was reduced, beginning with 1913, to $25 a year.10

The operations under the Todd lease were but a little more extensive than those under the Jordan-Jackson leases. Royalties in excess of the minimum prescribed by the lease were paid as follows:

$20.20 in 1911
$ 6.45 in 1912
$ 1.06 in 1916

10. Shoemaker to the Secretary, July 8, 1913, NA-RG 79.
The maximum production in any year was in 1912 when 1,064 tons were mined. In the latter years of the lease the production was around 250 tons a year. The total revenue derived by the government from these operations over a period of six years amounted to only $352.71.

The lease granted Todd in 1911 covered 80 acres of land in the park, 40 acres of which were, by the act of June 30, 1913, transferred to the Southern Ute Indian Reservation. His lease to mine within the park expired on January 23, 1917 and no further extension was granted. Apparently he did not open the mine on the park side because it required a tramway to get the coal to his wagon road, so that all his mine operations were evidently conducted on the Indian Reservation. It seems that the costs of production were too high to justify maintaining operations within the park area.11

D. McEwen-Walker Mine

On August 3, 1921, a five year lease was granted to George McEwen to operate a mine within the park on the same basis as the previous leases, except that the minimum yearly payment was to

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11. Superintendent, monthly reports, 1912-17, NA-RG 79.
be $50. The original area assigned to McEwen was in Section 20 but he very shortly found that this area could not be operated with success and then applied for and was assigned another area in Section 30. Later McEwen effected a partnership with Stephen A. Walker and on July 12, 1922, a new lease was granted the partnership to operate mines in Section 30; this lease was also for a period of five years from July 12, 1922. The operations of the partnership were unsuccessful and the government had considerable difficulty in securing reports with reference to the work being done under the lease, as well as making collection of the sums due. The total amount of the fees collected for the years 1921-1923 was $151.12

Superintendent Nusbaum advised that the operators had been "unable after considerable expense to find coal in sufficient quantities to make it practicable to mine same profitably" and the lease was accordingly canceled as of July 1924.13

None of the mines operated in the park could be considered to any degree profitable ventures because of the lack of coal in convenient locations or in quantities sufficient to make

12. Superintendent, annual reports, 1921-23, NA-RG 79.
13. Nusbaum to the Secretary, February 4, 1924, NA-RG 79.
mining satisfactory.

In 1931 Senate bill 196 provided for uniform administration of national parks and repealed clauses in original organic acts authorizing the use of parks inconsistent with one hundred percent conservation policy; section one prohibited mining in Mesa Verde National Park.\textsuperscript{14}

\textsuperscript{14} Telegram from Albright to Edward B. Rogers, Superintendent of Rocky Mountain National Park, NA-RG 79.
VII. GRAZING OPERATIONS

A. Early leases

For many years prior to the establishment of the park, the Southern Ute Indian Reservation was used by cattlemen as a winter range because water was plentiful and the grass thick. Mesa Verde, in turn, was the summer range, at a high altitude, where water was very scarce and grass grew only in the bottoms and lower sides of the canyons. By the time the park was established Mesa Verde was already over grazed.¹

No grazing was permitted within the confines of the park during the first years of its administration, but under the provisions of the Act of Congress approved June 25, 1910, providing for the development of the park resources, grazing permits were issued by the department at reasonable rates.²

On June 1, 1911, a cattle grazing privilege within the Southern Ute Indian Reservation was granted the Montezuma Stock Growers' Association for a period of seven months at the rate of $1.1875 per head. Acting Superintendent Wright was authorized to issue the first grazing permits, subject to the approval of

1. Nusbaum's talk at Westerners meeting, 1964, MVPF.

2. Acting Secretary to the superintendent, March 4, 1908; Superintendent, annual report, 1921, MVPF.
the department, but was permitted to reduce the price per head, when circumstances warranted it, but in no case below $.80 per head.³

Park operations were complicated by grazing within and outside of the park lands. Both in winter and spring the cattle and sheep belonging to owners of patented claims upon the mesa were moved through the park. One homesteader—Ray G. Waters—was grazing 600 sheep in what was known as Waters Canyon in the park. He moved the animals every three days to prevent the sod from being destroyed.⁴ Tentatively, pending receipt of permits from the department, Wright allotted grazing lands to three stockmen, including 630 cows at Morfield, Prater and Soda Canyon West, besides the 600 sheep at Waters Canyon. The grazing of the above stock had been carried on for years and the provisions of the regulations with regard to stock within the park had apparently never been enforced.⁵

³. Assistant Secretary to Wright, July 27, 1911, NA-RG 79.
⁴. Superintendent, annual report, 1909-11, NA-RG 79.
⁵. Wright to Secretary, August 2, 1911. General Regulations of March 19, 1908, stated (No. 11): "The herding or grazing of loose stock or cattle of any kind on the government lands within the park, as well as the driving of such stock or cattle over the same, is strictly forbidden, except in such cases where authority therefor is granted by the superintendent," NA-RG 79.
Besides their other numerous duties, the rangers were kept busy looking after the cattle and sheep leases. The people who had leases, as a rule, ran all the cattle and sheep they pleased, regardless of the number stipulated in the permits. This gave the rangers—never more than two—plenty to do. The only sheep lease on the park, Waters', caused more trouble than the others. His persistence in over-stocking his leased ground caused the superintendent to suspend his permit.6

When sheep leases were permitted in the park, in 1911 and the early Spring of 1912, the park officials observed that in their grazing over the steep hill sides, sheep destroyed much more grass than they consumed. As one sheep followed another, they formed small trails that became gullies, scarring the hillsides into water courses which in turn destroyed the grass, washing it out by the roots.

By letter of December 15, 1913, the secretary informed Superintendent Shoemaker that the "experience of the Department in the matter of permitting sheep on the reserve has been such as not to warrant it to allow any sheep grazing in any of the national parks."7

6. Chief Clerk of the Department to Superintendent Shoemaker, June 1; Shoemaker to Secretary, June 14, 1912, NA-RG 79.

7. Secretary to Shoemaker, NA-RG 79.
All superintendents prior to 1921 were avid defenders of the grazing interests. Before the park was set aside, three homesteads were established on the future park lands to control the best water and grazing resources, as follows:

1. Wm. F. Prater, 320 acres, Prater Canyon
2. Josiah J. Morfield, 160 acres, Morfield Canyon
3. Roy C. Waters, 160 acres, Waters Canyon

These homesteads became primary headquarters for grazing and controlling the grazing resources of adjacent public domain, through the water developments on the homesteads. Before the department was authorized to grant leases, Superintendent Randolph improved the grazing potentialities of the park by installing steel towers and windmills over wells on the three private holdings, by digging new wells, and installing windmills near the heads of East Navajo and the west fork of Little Soda Canyons. It is estimated that a minimum of 2,150 cattle and 600 to 2,400 sheep were grazed seasonably on park lands without permits or control, from 1906 through August 1911.  

It became the practice of the department to lease grazing lands to owners of patented lands within the park. The lessees

8. Nusbaum, Memorandum to the Director, September 4, 1942.

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were required to assist in maintaining order and protection against fires within the park. Prater, Frink and Armstrong, who obtained the first three cattle leases in the park in 1911, had owned land within the park boundary since the early 1900's. They had, besides, leased all of that territory lying south of the park and up to its southern boundary.9

By the National Park Service Act of August 25, 1916, the secretary and the Director of the Park Service were authorized, in their discretion, to permit grazing of livestock in the national parks, except Yellowstone, which was specifically excluded. In a policy letter of May 13, 1918, Secretary Lane informed Mather that he could authorize the grazing of cattle where there was no impairment of the natural features of the park or interference with tourist travel. The policy was that where the superintendent could conscientiously say to the Director that there would be no impairment of the natural features of the park, and no interference with its use by tourists, cattle would be permitted, but no sheep except under special consideration by Washington.10

9. Superintendent, annual reports, 1915-17; Shoemaker to Secretary, January 1 and November 24, 1913, NA-RG 79.

10. Minutes of the Sixth National Park Conference held in Yosemite National Park, November 13-17, 1922, MVPF.
Superintendent Rickner, who managed the park for about eight years like a homestead, saw no harm in grazing operations. On a grazing application of James A. Frink, who in 1919 owned all the patented land on the mesa, Rickner wrote the secretary that large herds along the road in the summer would be a nuisance to automobile drivers, but that there was no one feature of the drive that had caused so much favorable comment from tourists as the occasional glimpse of a bunch of cattle near the watering places. "More photographs have been attempted of cattle seen along the drive than almost any other feature of the park."\(^{11}\)

B. End of grazing

When Nusbaum visited Mesa Verde in 1907, as a member of Hewett's survey team, he noted that the effects of uncontrolled grazing were clearly evident on the land. On his return in 1921 as superintendent, the prodigious overgrazing of range cover had reduced the former conditions to a shambles. The destruction had been caused by the cattle of the small group of homesteaders who controlled and monopolized the water and grazing resources of the park. Besides the personal cattle of

\(^{11}\) Rickner to the Director, January 31, 1919, NA-RG 79.
former Superintendent Rickner, his friends and in-laws grazed without fee. Frank G. Stevens held a grazing lease with 1,230 head. Nusbaum recorded that "the cattle were eating the place up, trampling down shrubbery, browsing, trailing over muddy roads, jumping up the banks of road slopes, tearing them down, and rolling rocks into the road in the process."

The first step toward the elimination of grazing was taken in 1921 when the superintendent announced that he intended to terminate all cattle grazing on park lands within five years, and that the number of head grazed under permit would be reduced 20 percent each year. Grazing was first ruled out of Chapin Mesa and properly controlled by drying up Mummy Lake, where cattle concentrated for water. When the lessees ran out of cash to pay for the permit fee of $2.00 per head, Nusbaum accepted, with Park Service approval, a drift fence in lieu of cash to hold cattle southward of the entrance highway, and more rigidly from Chapin Mesa and park headquarters. The area west of Chapin Mesa was another shambles but grazing privileges had been ended there.

When the desired drift fence was completed, the so-called Water's Well holding of Stephens, McGalliard, and Teague was deeded to the government in lieu of cash for a year of grazing privilege of the then greatly diminished number of cattle. The end was in sight when they cut down to 250 head in 1928.
The grazing company failed right afterwards.

After grazing was terminated, Cline, president of the First National Bank of Mancos, tried to force the issue for himself and others with the argument that the tall matured grass constituted a fire hazard. His efforts were unsuccessful when the superintendent argued that the majority of fires during his administration were caused through the carelessness of stockmen and Southern Ute Indians.¹²

Nusbaum's action against grazing was in keeping with a resolution of the Sixth National Parks Conference held at Yosemite, November 1922:

Grazing is a commercial use of the park and therefore not desirable, and we do not want any recommendations that it be permitted unless absolutely necessary. We do not like grazing as it is not in accordance with the spirit of preservation of the park and presents administrative difficulties, taking rangers from their duty of protecting the game and taking care of visitors, and these privileges should be gradually reduced.¹³

The table below gives a general idea of the extent of grazing from 1906 to 1927:

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¹² Nusbaum on grazing, 1942; talk by Nusbaum at Westerners meeting, 1964. Superintendent, monthly reports, July–October 1928, MVPF.

¹³ Minutes of the Conference, MVPF.
<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Head</th>
<th>Total Acreage</th>
<th>Acres per Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>1906</td>
<td>Excessive in</td>
<td>42,376</td>
<td></td>
</tr>
<tr>
<td>1907</td>
<td>absence of</td>
<td>&quot;</td>
<td></td>
</tr>
<tr>
<td>1908</td>
<td>&quot;</td>
<td>&quot;</td>
<td></td>
</tr>
<tr>
<td>1909</td>
<td>&quot;</td>
<td>&quot;</td>
<td></td>
</tr>
<tr>
<td>1910</td>
<td>&quot;</td>
<td>&quot;</td>
<td></td>
</tr>
<tr>
<td>1911</td>
<td>600</td>
<td>&quot;</td>
<td>70.6</td>
</tr>
<tr>
<td>1912</td>
<td>825</td>
<td>&quot;</td>
<td>51.04</td>
</tr>
<tr>
<td>1913</td>
<td>972</td>
<td>48,966</td>
<td>50.4</td>
</tr>
<tr>
<td>1914</td>
<td>1335</td>
<td>&quot;</td>
<td>36.7</td>
</tr>
<tr>
<td>1915</td>
<td>1335</td>
<td>&quot;</td>
<td>36.7</td>
</tr>
<tr>
<td>1916</td>
<td>1465</td>
<td>&quot;</td>
<td>33.4</td>
</tr>
<tr>
<td>1917</td>
<td>1600</td>
<td>&quot;</td>
<td>30.6</td>
</tr>
<tr>
<td>1918</td>
<td>2008</td>
<td>&quot;</td>
<td>24.4</td>
</tr>
<tr>
<td>1919</td>
<td>1230</td>
<td>&quot;</td>
<td>39.8</td>
</tr>
<tr>
<td>1920</td>
<td>&quot;</td>
<td>&quot;</td>
<td></td>
</tr>
<tr>
<td>1921</td>
<td>&quot;</td>
<td>&quot;</td>
<td></td>
</tr>
<tr>
<td>1922</td>
<td>&quot;</td>
<td>40,880</td>
<td>32.2</td>
</tr>
<tr>
<td>1923</td>
<td>&quot;</td>
<td>&quot;</td>
<td></td>
</tr>
<tr>
<td>1924</td>
<td>400</td>
<td>21,994</td>
<td>54.9</td>
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<tr>
<td>1925</td>
<td>800</td>
<td>&quot;</td>
<td>27.49</td>
</tr>
<tr>
<td>1926</td>
<td>250</td>
<td>&quot;</td>
<td>87.98</td>
</tr>
<tr>
<td>1927</td>
<td>250</td>
<td>13,314</td>
<td>53.25</td>
</tr>
</tbody>
</table>

C. New grazing threat

In 1942 the Mancos Cattlemen's Association tried to force the issue of grazing in Mesa Verde, but Superintendent Nusbaum was prepared to defend the no-grazing policy of the park. Public grazing hearings were held at Glenwood Springs in November 1942, by the Senate Subcommittee on Public Lands and Surveys, headed by Senator Pat McCarran of Nevada. The Mancos Cattlemen's Association,

which had petitioned the department for opening the park to spring and fall grazing by 1,000 head of cattle, was represented by President Ira Kelly, and others. The policy of the park and the National Park Service with respect to grazing was successfully defended again by Nusbaum. In February 1943, Secretary Ickes approved the Director's recommendations to exclude commercial grazing from Mesa Verde, Great Sand Dunes and Black Canyon of the Gunnison.¹⁵

How grazing affected directly the preservation of the ruins was explained by Nusbaum in 1943: Generally, he wrote,

in southwestern areas and particularly in Mesa Verde, soil of areas surrounding pueblo sites, cleared of principal vegetation, including forest cover in many locations, at the time and during the period of occupancy, was significantly enriched by human occupancy and use, and as a result, normally provides more abundant grazing resources than areas not utilized by past civilizations.

In Mesa Verde, when cattle grazing was permitted, cattle tended to concentrate in such open areas, accelerating damage to ruins and other archeological features therein. The Navaho Indians regularly herd sheep and goats over ruin sites for the added increment of forage available on or about them, in most locations, as well as the water supplies available in some seasons in the depressions formed by kiva and subsurface room excavations. Here in Mesa Verde, the large and as yet

¹⁵. Nusbaum to the Director, July 21, 1942; Superintendent, monthly reports, August, November, December, 1942; annual report, 1942, MVPF.
unidentifiable depressions, one of which, in the Far View group of major pueblos, has been called Mummy Lake, were converted to earthen water storage tanks by cattlemen in early days, and laterals dug to intercept surface runoff and increase natural impoundment of water. This procedure, and grazing damage through the years, significantly altered archeological features and natural appearances of these sites for some distance about them.16

16. Nusbaum to Superintendent McLaughlin, February 23, 1942, MVPF.
A. Civilian Conservation Corps

For some years the Park Service officials at Mesa Verde had been confronted with the condition of overcrowding on the small space of Chapin Mesa formed by the bifurcation of Spruce Tree Canyon. That the existing improvements were no longer adequate to care for the ever-increasing number of park visitors was a recognized fact. Under the existing arrangement crowding had resulted to the point that all necessary development had to be stopped until corrections could be made to permit the required growth and enlargement of certain of the park facilities, most notably the hotel and the public campgrounds. The camp roads did not conform in alignment and standards to the system that was required to serve a proposed new and enlarged area. Roads in the Spruce Tree Camp were of but one-car width and had no structures for drainage.

To cope with the above problem, a six-year development program was prepared in 1932 in accordance with instructions contained in Public Act 612 and policies promulgated by the National Park Service. This program, keyed to a master plan, affected every physical development centered around the Spruce Tree Camp or headquarters area. During the preparation of the
development program park officials discovered much about destruction of the flora of this developed section of the park because of erosion and other natural causes, as well as destruction by carelessness or oversight on the part of visitors and employees. These details were mentioned under the six-year program simply to show the value of well-prepared advance planning.¹

It was fortunate that the park was able to benefit from the New Deal policies of President Franklin D. Roosevelt. Due in good part to various relief measures the park development program moved forward by leaps and bounds. It was fortunate also that there was a plan to guide park officials, as full advantage of the various relief works could not have been taken without a definite plan to follow. A hit-or-miss procedure would have resulted in dissipating much of the effectiveness of the park work. However, the park officials were in a position to coordinate these programs, with a result that much of the work contemplated in the park six-year plan was already well underway by 1933, including the water development program, landscape work, relocation of roads and

¹. Park Development Outline, October 1, 1932, prepared by Superintendent Marshall Finnan, MVPF.
trails in the headquarters area, translocation of the government utility area from the Spruce Tree Camp, and many other activities.  

The first Emergency Conservation Work Camp was established on May 27, 1933, and continued until November 1. It was located in the grass-carpeted floor of Prater Canyon, 3/4 mile from the main entrance highway, and almost midway between the park entrance and administrative headquarters. Ample water of a quality suitable for all purposes except drinking was available at the site. Drinking water was hauled from Mancos. The land on which the camp was located was privately owned, and was leased to the government without cost.

Facilities at the camp included an electric light plant furnished by the Park Service from surplus. All structures were frame, and included mess hall, recreation hall, shower bath, officer's and foremen's barracks, and administrative building. The Park Service constructed at the site a small frame warehouse and machinery repair shed. Personnel consisted of a commanding officer, first lieutenant (regular army); medical

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2. Superintendent, annual report, 1933, MVPF.
officer, first lieutenant (reserves); welfare officer, first lieutenant (reserves); one camp superintendent, two camp cleanup foremen, two miscellaneous foremen, two landscape foremen, one supervisory mechanic, one machine operator, two miscellaneous construction foremen. The original total enrolled strength of the camp was 233 men. On July 31 the enrolled strength was 217. Later two other camps were established at park headquarters.

Several federal agencies made possible the establishment of the camps around the nation. The Department of Labor directed the selection of the "enrollees"; the War Department set up the camps to house the men and care for their needs while they were not on the job; the Department of Agriculture and Interior planned projects and provided the necessary technical supervision.

Mutual objectives of the CCC and the National Park Service were realized signally in the conduct of the ECW program at the park. The primary needs of the park constituted a scope of diversified work projects that provided maximum opportunities for practical "on the job" vocational training and experience under competent and sympathetic supervision. Every effort was made to teach those enrollees who wished to learn some useful
trade or occupation. Enrollees engaged in all park activities under the supervision of responsible park personnel, including museum and educational service, and public contact work.\(^3\)

It is almost impossible to single out one park activity that was not affected by the help of Public Works, Emergency Construction and Emergency Construction Work money. Work of lasting and permanent character, amounting to thousand of dollars in value, and work that otherwise would have probably remained undone for many years for want of appropriations was completed in the park. The hand of the CCC was everywhere: road building, landscaping, furniture making, restoration of vegetation, pest control, development of camp sites, construction of buildings, electrical work; assisting as guides, store clerks, office clerks, mechanics, fire lookouts, fire fighters, museum work, ranger assistants, pump operators—all and a lot more were jobs performed by enrollees in the CCC—young men learning trades as they performed their work.

The extent and nature of the ECW can be seen by the resume of work done between 1933-37.

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3. Marshall Finnan to Director, August 24, 1933; Nusbaum on CCC, undated, NA-RG 79.
<table>
<thead>
<tr>
<th>JOB</th>
<th>UNITS KIND</th>
<th>MAN DAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housekeeping cabins</td>
<td>19 cabins</td>
<td>17731</td>
</tr>
<tr>
<td>Indian hogans</td>
<td>5 blgs.</td>
<td>4035</td>
</tr>
<tr>
<td>ECW utility area buildings</td>
<td>4 blgs.</td>
<td>1150</td>
</tr>
<tr>
<td>Park utility area buildings</td>
<td>3 blgs.</td>
<td>3078</td>
</tr>
<tr>
<td>Contact station</td>
<td>1 blg.</td>
<td>1346</td>
</tr>
<tr>
<td>Campground buildings</td>
<td>2 blgs.</td>
<td>2099</td>
</tr>
<tr>
<td>Engineer office</td>
<td>1 blg.</td>
<td>795</td>
</tr>
<tr>
<td>Other</td>
<td>14 blgs.</td>
<td>729</td>
</tr>
<tr>
<td>Additions for buildings</td>
<td>19 blgs.</td>
<td>5124</td>
</tr>
<tr>
<td>Buildings reconstructed</td>
<td>3 blgs.</td>
<td>1990</td>
</tr>
<tr>
<td>Maintenance of buildings</td>
<td>50 blgs.</td>
<td>5833</td>
</tr>
<tr>
<td>Underground power and phone lines</td>
<td>5.1 miles</td>
<td>3245</td>
</tr>
<tr>
<td>Water systems, pipe lines</td>
<td>8184 lineal feet</td>
<td>4543</td>
</tr>
<tr>
<td>Water line, maintenance</td>
<td>2070 lineal feet</td>
<td>278</td>
</tr>
<tr>
<td>Sewer line, construction</td>
<td>857 lineal feet</td>
<td>754</td>
</tr>
<tr>
<td>Sewer line, maintenance</td>
<td>290 lineal feet</td>
<td>78</td>
</tr>
<tr>
<td>Power and phone line, maintenance</td>
<td>11 miles</td>
<td>1726</td>
</tr>
<tr>
<td>Road, highway maintenance</td>
<td>36 miles</td>
<td>17395</td>
</tr>
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<td>Roads, minor</td>
<td>3.6 miles</td>
<td>4639</td>
</tr>
<tr>
<td>Trails, construction</td>
<td>18 miles</td>
<td>6771</td>
</tr>
<tr>
<td>Fences, range</td>
<td>5.5 miles</td>
<td>1710</td>
</tr>
<tr>
<td>Walks and Flagstones</td>
<td>5365 lineal feet</td>
<td>4010</td>
</tr>
<tr>
<td>Parking areas and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>overlooks</td>
<td>2417 sq. yds.</td>
<td>1850</td>
</tr>
<tr>
<td>Public Campgrounds</td>
<td>3 acres</td>
<td>1524</td>
</tr>
<tr>
<td>Landscaping</td>
<td>139 acres</td>
<td>2418</td>
</tr>
<tr>
<td>Landscaping, planting</td>
<td>16,789 plants</td>
<td>14978</td>
</tr>
<tr>
<td>Fine grading, landscaping</td>
<td>34,741 sq. yds.</td>
<td>3963</td>
</tr>
<tr>
<td>Grading for camp sites</td>
<td>6.5 acres</td>
<td>2063</td>
</tr>
<tr>
<td>Bank sloping</td>
<td>180,322 sq. yds.</td>
<td>25696</td>
</tr>
<tr>
<td>Obliteration, old roads</td>
<td>1.9 miles</td>
<td>4829</td>
</tr>
<tr>
<td>Survey, lineal</td>
<td>59.9 miles</td>
<td>1790</td>
</tr>
<tr>
<td>Survey, topographic</td>
<td>284.5 acres</td>
<td>994</td>
</tr>
<tr>
<td>Fighting forest fires</td>
<td>-</td>
<td>2218</td>
</tr>
<tr>
<td>Forest stand improvement</td>
<td>38.5 acres</td>
<td>1456</td>
</tr>
<tr>
<td>Fire hazard reduction</td>
<td>12.7 miles</td>
<td>1150</td>
</tr>
<tr>
<td>Insect pest control</td>
<td>14,742 acres</td>
<td>6371</td>
</tr>
</tbody>
</table>
General clean-up, other 212 acres 1456
Guide and contact - 1453
Pumping water - 1100
Guard rail, curbing 800 rods 6565
Ponds for game 1 pond 375
Obliteration of borrow (?) pits - 1477
Exhibit repair cases 12 cases 1043
File cases, construction 15 cases -
Furniture, signs, markers 210 pieces -
Wildlife, conditions - 57
Field planting and seeding 395 acres 355
Seed collections 434 pounds 102
Eradication of poison weeds 45 acres 88
Water fountains 5 fountains 47
Table and bench combination 96 tables 507
Check dams, temporary 1040 dams 504

CCC programs in national parks and monuments were park programs and not camp programs. It was the responsibility of the superintendent to maintain a balanced program of approved jobs and to limit the actual work to the funds which had been allotted to the park. Construction projects were not considered, according to ECW orders, unless they were shown on the master plan of the area, except in rare and unusual cases, or when justified as being in connection with master plan proposals, existing developments or development areas.\(^5\)

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Administrative matters of the park were, of course, complicated by the various programs being carried on simultaneously. The different projects and their coordination, combined with the extensive supervision entailed by work in progress over a wide area, demanded a great deal of time.

In August 1935 the administrative jurisdiction of Mesa Verde, previously including the Wheeler and Great Sand Dunes National Monument, was further extended by the director to the Colorado, and the Black Canyon of the Gunnison National Monuments, thus greatly increasing the administrative work and responsibility of the Mesa Verde office. Due to heavy developmental programs in progress at the Colorado and Black Canyon of the Gunnison National Monuments, Park Naturalist Paul R. Franke was appointment assistant superintendent on January 1936.6

B. Educational program

During the 1930s the educational department at Mesa Verde consisted of a park naturalist, who through the summer months was assisted by one museum employee and several temporary ranger

naturalists. This group interpreted for the visiting public the interesting archeological and natural features of the park. Their function was primarily that of public education and they were given immediate responsibility of the conducted field trips to the ruins; all museum work including files, records and cataloging, and the preparation and distribution of the publication known as "Mesa Verde Notes." After 1933 several enrollees of the CCC assisted in the guide and contact work during the tourist season. Several noteworthy additions were made to the educational program, but there was little deviation from the policy which had been gradually formulated by careful planning and study during the previous ten years. Appreciation of the educational program was attested to by the large number of letters received.

By the appointment of a park naturalist the scope of the educational activities was broadened. Collections of flora and fauna were made for display and research purposes, and while this phase of museum activity remained secondary to archeological exhibits, it nevertheless formed an important part of the educational program. For instance, a self-guiding nature trail was constructed in Spruce Tree Canyon, a location made ideal by the abundance and variety of flora and also by the fact that
visitors were permitted the leisurely inspection of the markers and the vegetation while they were making the trip into the canyon to visit Spruce Tree Ruin. Another unique educational service was the introduction of guided nature trips to Park Point Scenic Road, a 12 miles drive from park headquarters. A trail was used to reach the top of the great promontory. Along this trail the naturalist explained the habits of the many interesting plants, including everything from the tall, gnarled fendler to the beautifully delicate wild flowers that bordered the path. But the real thrill and climax, which was carefully arranged and timed by the naturalist or ranger in charge, came at the end of the trail. The party emerged from a dense oak thicket, through which the trail was purposely built in order to obtain the proper effect, to the clearing on top of Park Point just as the sun was setting. The reaction of the visitors to the beauty of the scene was interesting; literally it took their breath.

Another improvement was the new campfire circle completed in June 1938, constructed at its present location on the rim of Spruce Canyon, commanding a view southward into Navajo Canyon. Advantage was taken of a natural amphitheater, and with the weather-stained sandstone seats, the surrounding forests of juniper and pinon which were left undisturbed, and careful transplanting of vegetation, the entire layout was so fitted
into the landscape as to seem the result of the forces of nature, rather than the work of man. The whole atmosphere lent itself admirably to the campfire ceremonies and Indian dances which were held there each evening during the summer. Another desirable feature of this development was its isolation from the main roads in the headquarters area, and the resulting elimination of the noise of automobile and pedestrian traffic and other distractions which were annoying to speaker and listener alike.7

An integral part of the educational program was the museum. It made possible the visual presentation of the arts and handiwork of the prehistoric peoples, affording park visitors a full opportunity to understand and appreciate the high cultural development of the area. The education of the public, made possible through the ruins and other remains in place, was very incomplete without the vast amount of additional material contained in the museum. One supplemented the other, it being simply a case of observing in their natural surroundings the homes and architectural styles of the prehistoric peoples of the

7. Superintendent, annual reports, 1932-33, MVPF.
Mesa Verde, while in the museum one could see their woven materials, pottery, tools and implements, clothing, and the like.

The museum became a more important part of the educational program than before when the plan was adopted of having the ranger take his party, either before they went on the ruins trip or on their return, through the museum, where the exhibits were shown and explained, and questions answered. 8

An allotment of $35,000 was made in 1935 by the Public Works Administration for a substantial addition to the original museum. This was completed in June 20, 1936. 9

The enlarged museum was considered one of the finest museum structures in the Southwest. It included an entrance lobby, a reference library, six exhibition halls, an auditorium comfortably seating 175 persons, an office for the park naturalist, a classroom, two research studies, and a large basement, with adequate facilities for storage of archeological and other museum materials, for research and preparatory work on exhibits, and for photographic work. Central heating and ventilating equipment was also a feature. 10

8. Superintendent, annual report, 1934, MVPF.
9. Superintendent, annual report, 1936, MVPF.
10. Ibid.
The educational force acted as interpreters, but to them was also entrusted the care of the ruins. They had to conduct and control the park visitors in such a way that no damage could be done at any time. It became the practice to direct the visitors first toward the guided trips so they could develop an understanding and respect for these dwellings and then to permit them to visit as many of the undeveloped sections or unexcavated ruins as they wished. A written permit was issued and the visitor was asked to confine himself to certain specified areas. This permitted placing responsibility for vandalism and also assisted in the search for any parties that might become lost in the maze of canyons.

Guided trips began at the park headquarters area. The morning caravan and trail trip consisted of a drive of seven miles along the west of Chapin Mesa. It was necessary to do considerable walking and climbing over trails, adding about one mile to the trip. Cars were used up to the points of interest and then visitors had to go on foot. The purpose of this trip was to visit the major excavated ruins that faced towards the west and were therefore shaded from the hot summer sun in the mornings. This was a guided trip, ranger-naturalists conducting parties consisting of 50 or fewer visitors. There were two scheduled times of departure, 8 a.m. and 10 a.m., but these
could be scheduled at closer intervals thus taking care of a considerable travel increase. The ruins and flora and fauna encountered on the trails were the exhibits. Ruins seen and visited were Square Tower House, Earth Lodge A, Sunset House, Oak Tree House, Fire Temple, New Fire House, and Sun Temple.

In the afternoon the caravan and trail trip consisted of a drive of about 7 1/2 miles along the east side of Chapin Mesa. The climbing and walking required added about one mile to this distance. In general this trip was a sequel of the morning trip, the guides refraining from repeating the story as much as possible, and visiting ruins that were more or less shaded during the afternoon hours. Scheduled trips left at 1:30 p.m. and 3 p.m. Ruins visited were Cliff Palace and Balcony House, while views were obtained of about six other ruins.

There was a nature trail to Spruce Tree Ruin. This was a foot path leading to Spruce Tree House and about one third of a mile long. This was a self-guiding nature trail, supplying pertinent information to visitors. The nature trail was completely labelled and was in the care of a ranger-naturalist. He was also in charge of Spruce Tree House, answering all questions relative to it and the trails, and was on duty throughout the summer months.

11. Superintendent, several monthly reports, 1935-40, MVPF.
Another improvement was made in 1940 when a natural history museum was opened in the community building. The exhibits installed consisted of two wall cases, three table cases, three habitat groups and miscellaneous exhibits. These included common birds and trees of the area, fossils, insects, mounted animals, relief map, cross section of a 501 year old Ponderosa Pine, wall charts, table displays, and a special wild flower display of 24 species.¹²

In June 1941 a significant change was made in the interpretive program, dictated by the pressure of visitation. Under the revised system visitors did not have to be part of a guide-conducted motor caravan to be admitted to the ruin roads, but during the daylight hours could tour the roads according to their inclinations. A number of new view-point signs and trailside exhibits were installed, and visitors enjoyed the privilege of wandering about from one point to another, as they desired. Under the new program the only caravan trip was at 8:30 a.m. daily. Ranger-naturalists were stationed at Cliff Palace and Balcony House, and visitors were conducted through each of these ruins several times daily. This new arrangement

¹². Superintendent, annual report, 1940; Acting Superintendent Thomas J. Williams to the Director, July 17, 1940, MVPF.
functioned rather smoothly and at the same time relieved the jam and crowding caused by the old system during days of heavy travel. One of the reasons for changing the way of handling visitors was to spread out "use." Although the personal touch afforded by the old system of convoy was slightly reduced, the undesirable feeling of being continually herded was eliminated. 13

C. New water development

1. Sewage problem

Through the personal interest of members of Congress and officials of the Bureau of the Budget who made an inspection of Mesa Verde in April 1931, an appropriation of $22,000 was made available for the continuation of work on a badly needed well, previous drilling of which had been halted because of lack of funds. A copious flow of potable water at high pressure was encountered in the Navajo sands at a depth of 4,200 feet, on April 3, 1933. The importance of the success of this project cannot be exaggerated, as practically every development planned for the future of Mesa Verde was dependent upon the outcome of the

13. Superintendent, annual report, 1941, MVPF.
drilling operation. Analysis of the water was made by Harry Hommon of the Public Health Service.¹⁴

A reinforced concrete reservoir with a capacity of 84,000 gallons was constructed at the well site to hold the water pumped from the well, in order to keep a supply on hand, and to afford pressure for fire protection.

One of the immediate problems of Mesa Verde which had not been solved because of shortage of water was the sewer system. The sewage at the campgrounds was collected in chemical toilets. This type of toilet was also used by the Mesa Verde Park Company. There were also a large number of earth pit toilets and approximately eight cesspools, excavated in sandstone, used for taking care of the sewage from residences, ranger quarters and hospital. The wastes from the mess house were discharged into the canyon below. Those pumped from the cesspools and chemical toilets were foul smelling and costly to remove; it was necessary to haul them long distances. All the tourists who were guests of the Park Company used comfort stations with chemical toilets,

¹⁴. Superintendent, annual reports, 1931-33; Rocky Mountain News, July 23, 1933; Six Year Program of Employment Stabilization Projects, 1932, MVPF.
since there were no flush toilets or running water in any of the cabins. The cabins were scattered over an area where there were no driveways on account of trees and uneven limestone ledges, and there was no way of collecting the wastes from the slop jars in these cabins. It was necessary therefore to throw these wastes over the rim of the canyon at the rear of the cabins.

According to a sanitary engineer, the situation of collecting and disposing of sewage at Mesa Verde was the most serious problem existing in any of the national parks in relation to public health and sanitation. It was not only holding back the development of the park, but it was a serious potential health menace which had to be corrected at the earliest possible time.¹⁵

By 1935 the sanitary system was built and put into operation.¹⁶

Maintenance of an adequate water supply to ever-increasing needs continued to be the major operating problem of the park. The installation of modern plumbing and the new

¹⁵. H. B. Hommon, Sanitary Engineer, U. S. Public Health Service, to the Director, July 3, 1934, MVPF.

¹⁶. Superintendent, annual report, 1935, MVPF.
sewage system, the steady increase in tourist travel and park residents, and the necessity of meeting the needs of the CCC camps, the park operators, and contractors, taxed the available water supply to a point where a safe reserve could not be maintained for use in emergencies. A serious breakdown of the deep water well pumping system at any time during the summer travel season would create a critical problem. The proposed construction of a storage tank of 500,000 gallons capacity would materially aid in providing more storage, but could not be considered a solution of the water problem. 17

2. Health menace

The water supply system consisted of the deep water well, limited storage facilities and the catchment areas. Water from the catchments was dirty and fouled by birds and small animals. The reservoirs stored the waters under the most unsanitary conditions. On opening one of the reservoirs, dead rats, mice, lizards and birds in all stages of decomposition were found floating in the water and the outlet was choked with skeletons. Not less than 156 dead

17. Superintendent, annual reports, 1936-38, MVPF.
animals were removed. This was the water actually consumed by the Park Service families and served to a fortunately unsuspecting public.

The water from the well could not be called good. It had a temperature of 110 degrees and contained an appreciable amount of mineral matter. It clogged automobile radiators and killed plants in gardens. A single fire in one of the buildings would empty the reservoirs.

Two million gallons were required as a minimum for the area in serious emergencies, but even with this amount as a safeguard against fire, it meant exactly nothing with regard to safeguarding public health because the water was not fit to drink. Only the water from the seepage of Spruce Tree House, piped to the houses, was of good quality. Every year there was an outbreak of so-called summer complaint, a very weakening, persistent form of diarrhea. It was believed that this disease was traceable to pollen from an unknown source. Whatever the cause may have been, the fact remained that the government employees, the CCC and the public were exposed to serious risks.

Since there was no good water in any quantity found anywhere in or near the park, the only solution was to bring
it from the La Plata Mountains, where excellent water could be had in abundance. The investment would end, for all time, Mesa Verde's crying need. Without that, the park would always remain far below the accepted standards of public health and below the standards the public had a right to expect from its government. 18

3. **Jackson Gulch Reservoir Project**

Improvement of water treatment facilities was accomplished in 1939 with the construction of a chemical feeder house, a vertical pressure filter and a cooling tower. Improvement of pumping equipment was also accomplished, but the method of supplying water for the park was still extremely unsatisfactory and rapidly becoming inadequate.

Through the prompt action of the National Park Service Director in contacting the U. S. Geological Survey and the resultant cooperation of their well expert, serious consequences were averted when the deep water well pumping equipment broke down in the fall of 1938. Occurring as it did in the late fall when the number of park visitors had reached low ebb, the difficulties were not as serious as they might have been.

18. Dr. Meinecke's report to Director Cammerer, September 24, 1937, NA-RG 79.
The suggested 500,000 gallon-capacity concrete tank, proposed by Superintendent Nusbaum in 1936, was constructed with PWA funds to provide an adequate reserve for the summer travel period when demand exceeded the pumping capacity of the well. Excavation for a 1,000,000 gallon storage tank, also with PWA funds, was started late in 1938 by CCC forces and completed in June 1940. This tank increased water storage facilities to approximately 1,750,000 gallons.

During April 1939 a survey was initiated by the Bureau of Reclamation for a proposed water line from the La Plata Mountains to the park. This project was contingent upon the construction of a dam at the Jackson Gulch site in the La Plata Mountains, as part of a water conservation project to supply irrigation water for farmers and ranchers in the Mancos Valley. If the dam was authorized, the 22-mile pipeline to the park could be seriously considered. Farfetched though they were, these plans for a gravity-flow water supply for the park were the brightest spot on the park's horizon. The serious predicament of the park could be fully realized when it was pointed out that a cessation of pumping for any reason during the summer season would
necessitate closing the park and all its facilities.\textsuperscript{19}

In 1940 the President approved the Jackson Gulch Reservoir project. Next year the Bureau of Reclamation was authorized to construct the reservoir under terms of the Wheeler-Case Act, and the appropriation on June 28 of $75,000 to the National Park Service to begin construction of the water pipe line from the West Mancos River to the park. A CCC camp had been initiated in Mancos just prior to the end of 1940. This camp would participate in the construction of the pipe line, which it was estimated would require four years to complete by CCC forces.\textsuperscript{20}

The Mancos water project was the eighth "work relief" irrigation development approved by the President for construction by the Bureau of Reclamation. These work relief projects aimed at stabilizing the agricultural life of the regions where they were built. They employed WPA labor and CCC boys in their construction, and offered settlement opportunity for the landless and jobless.

The Mancos project was estimated to cost $1,600,000,

\textsuperscript{19} Superintendent, annual reports, 1938-39; Acting Superintendent William to the Director, July 17, 1940, MVPF.

\textsuperscript{20} A. van V. Dunn, Hydraulic Engineer, February 26, 1943; Superintendent, annual reports, 1940-41, MVPF.
of which $680,000 would be repaid by the farmers in not more than 40 annual installments. The cost of work relief irrigation projects was larger than the repayment ability of the lands to be directly benefited. They were partially reimbursable.

An unregulated and inadequate water supply had stifled the economic progress of Mancos Valley for years. The construction of the project, comprising 10,000 acres of land, would provide a dependable supplementary supply of storage water to protect the valley from drought and permit more diversified farming. Besides fostering community development and economic growth, a badly needed water supply would also be made available for the Mesa Verde National Park. 21

Everything was progressing almost too smoothly with the CCC aid when the Second World War interrupted the work at the end of 1941. At the same time the superintendent informed the director:

21. Department of the Interior, press release, October 26, 1940, MVPF.
One thing is certain - the only thing that saved Mesa Verde from closing down last summer was the abundant rainfall that we were able to turn to good use through the catchments, so the rain was a blessing in this respect although it raised havoc with the park roads.\footnote{22}

After many delays and crisis of water shortage, the West Mancos water supply system was completed in July 1951. For the first time in its history, the park obtained an abundant supply of fine water.\footnote{23}

**D. Road problems**

Road building was one of the park's most important and extensive activities. Construction projects were of the utmost importance to Mesa Verde, but they also did much to alleviate unemployment. The economic value of this construction activity to southwestern Colorado exceeded anything accomplished by local or state government or by private industry. It may be said that without the park program at Mesa Verde there would have been little or no work for labor in that section of the state during the Depression.

Park roads had received considerable improvement since

\footnote{22. McLaughlin to the Director, December 17, 1941, MVPF.}
\footnote{23. Superintendent, annual report, 1951, MVPF.}
1928, being transformed from steep, narrow, almost trail-like sections, to broad, sweeping highways of safe grade and alignment. The worst danger of the old roads was the last to be corrected in the new. This was the jeopardy of mountain roads that became very slippery when wet. The danger was removed with the completion of gravelling and paving of the 19½-miles of entrance highway during 1933-34.  

In 1932 the park public works program carried an allotment for the construction of roads and trails, removal of traffic obstruction, and the like, in the circulation system of the Spruce Tree Camp area, and splendid progress was made on this project. New circulating roads to serve the Spruce Tree Plaza were surveyed, cleared, and graded, and a spur road to join the ruin roads was constructed. Old roads which were unsightly and detracted greatly from the appearance of the headquarters area were eliminated and landscaping and transplanting of trees and other vegetation entirely obliterated all scars or other evidences of their former existence.  

24. Superintendent, annual report 1933; F. A. Kittredge, Chief Engineer to the Director, August 30, 1934, MVPF.  
25. Superintendent, annual report, 1932, MVPF.
There were eight major ruins on Chapin Mesa visited by the public. Serving these ruins was a road system approximately 9½ miles in length. Original construction was in the early days of the park, for the most part prior to 1921 when the vision of the builders did not exceed the maximum requirements of a few hundred cars per season. The present Cliff Palace-Balcony House loop road, following the rims of Cliff and Soda Canyons, was the one constructed in 1928. Plans were prepared in 1930 calling for the reconstruction and paving of the ruin roads to bring them to a standard comparable to the main highway. The work was imperative since the ruins were inaccessible during periods of rain while the headquarters could be reached over splendid graveled highways. By 1933 about five miles of the ruin roads had been rebuilt. Paving and gravelling of the headquarters loop and the ruin roads was done between 1935-37. 26

Since 1928 the Bureau of Public Roads had been handling major road engineering and construction projects on the north entrance highway of the park. In 1934, Resident Engineer Hill, of the Bureau of Public Roads, reported on an intensive study of slides and settlements on the Knife Edge section, on the basis

26. Superintendent, annual reports 1933-37; Six-year Program of Employment and Stabilization Projects, 1932, MVPF.
of which engineering plans were formulated and a contract awarded for major stabilization work during 1937 along a specified section.  

There had been some discussion about building an entrance road from the south of the park through Soda Canyon, to avoid the problems of the north entrance highway. Director Cammerer noted in 1933:

We have carefully avoided the south entrance to the mesa and we still believe that this should be avoided. It is quite evident that a difficult administrative problem would develop if there were provided any sort of an entrance from the Ute Preservation. Certainly poaching and grazing of stock within the park area would be augmented. It seems to us that it would be far better to accept some added expense in procuring gravel for road surfacing than to open up the southern end of the park for entrance from the Reservation.  

In 1938-41, the Bureau of Public Roads made a preliminary relocation survey for a by-pass of the Knife Edge section of the entrance highway. This proposed road was to lead down Morfield Canyon approximately one and one-half miles, thence through the ridge to Prater Canyon by means of a tunnel, up

27. Superintendent, annual report, 1937, MVPF.

28. Cammerer to the Superintendent, Mesa Verde, December 15, 1933, MVPF.
Prater Canyon to its head to join the entrance highway at the west end of the Knife Edge section. Due to World War II, the imperative need for a new water system for the park, and lack of funds, this road was not constructed until 1957.

Meantime, approximately 65 percent of the road maintenance money was being spent on the short section of the Knife Edge road. With each passing year, the road became more of a problem and it was quite evident that the proposed relocation was mandatory. An encouraging step toward the accomplishment of this relocation was the procurement of an option on the two tracts of privately-owned land in Prater and Morfield Canyons which so far had effectively blocked any possibility of relocating the road. Added comfort came with the inclusion of $2,700 in the 1942 appropriation for the purchase of these lands.\textsuperscript{29} At the present time the problems of the Point Lookout section of the road are quite similar to those which afflicted the Knife Edge section for so many years.

\textsuperscript{29} Superintendent, annual reports, 1937-42, MVPF.
E. Accommodations

With the removal in 1932 of utility buildings from the Spruce Tree Camp area to a new location north of park headquarters, the ground at the former area was cleared for the construction of a new cabin development by the camp operator. This concessioner had been previously rather reluctant to expand facilities in the park owing to the lack of an adequate water supply. Plans were made for cottage units, a cafeteria and lunchroom, community building, bathhouse, and the like. This development was much desired and had been demanded by the public for sometime as it would furnish less expensive accommodations.30

Very few improvements were made by the concessioner, the Mesa Verde Park Company. This subsidiary of the Denver and Rio Grande Western Railway continued to operate Spruce Tree Lodge until June 10, 1937, when the concession was taken over by a newly formed corporation operating under the name of the Mesa Verde Company. This new company was managed by Ansel F. Hall, former Chief of the Field Division of Museums and Education, National Park Service.31

30. Superintendent, annual reports, 1932-36, MVPF.
31. Press release, June 10, 1937, MVPF.
Campgrounds were greatly improved and expanded through the work of the CCC. For development and improvement of the campground the park followed the so-called "Meinecke plan". This plan provided space for an automobile, a fireplace, a tent, and a table, with privacy insured by adequate screens; and narrow, one-way roads of circulation, with the camp sites set off at a forty-five degree angle from the circulation roads. 32

32. Circular of General Information, 1934; Superintendent annual report, 1934, MVPF.
Mesa Verde is not rich in flora and fauna. A combination of desert types from the lower arid country and mountain types, usually associated with regions of higher rainfall, occur in the park. The desert types are highly specialized to cope with their environment, particularly the plants and smaller animal life. Among the animals seen by visitors or park employees during the early years of administration were black-tail deer, hares, plenty of coyotes, few wildcats, mountain lions, foxes, badgers, a wolf occasionally, ring-tails, porcupines, wild horses, cattle and burros, chipmunks, and squirrels. The first elk was seen in 1921, at the head of Navajo Canyon, the first bear in 1925, and one wild turkey in 1929.

Deer were seen more often than any other animals, but their number varied greatly according to season. Mountain lions preyed upon the deer and annually took a heavy toll from them. After 1918 it became necessary to initiate a program of predator control to protect the deer from the mountain lion, and sometimes against the coyotes and wildcats. Deer had to be protected also from the Southern Ute Indians who lived close to the park and killed them in and out of season without regard to game laws.

Game birds were represented by the dusky and scaled quail, both desert types.
Among the most interesting residents of the park were the lizards. Some of them were the horned lizards, the western spotted or earless lizards, the collared lizards, the striped race-runners, utas, rock swifts, and sagebrush swifts.¹

By contrast with Rocky Mountain National Park, the deer at Mesa Verde were unusually scarce. Only some few were year-around residents because of unfavorable water conditions. Besides they had no protection when they moved south to Indian lands.²

An animal that did not need protection was the porcupine. In the early 1930's control measures were established because of the damage they were causing to the trees of the park. There was no effective control of this species and there was no desire to eliminate it, but the number of porcupines had to be held in check for the good of the wildlife habitat, as well as protection for a few ruin sites.³

A program for the protection of the wildlife of the park was worked out in 1934 by the Wildlife Division of the National Park Service. It involved the acquisition of the privately owned lands in the park, with development of water supply and restocking of the park lands with the wild turkey and bighorn sheep that were former

1. Superintendent, monthly reports, 1908-30, NA-RG 79 and MVPF.


3. Superintendent, annual reports, 1930-50. Pinon trees were most affected by the porcupines, MVPF.
residents of the park. It also involved additions to the park area so that there would be natural boundaries in order to insure the park deer winter and summer ranges. This was necessary if they were to be given proper protection.4

Water was a limiting factor affecting the fauna of the park. Many seeps had dried up since the prehistoric dwellers lived in Mesa Verde. It was desirable to construct other reservoirs to take the place of those which had disappeared, to make possible re-introduction and maintenance, particularly of wild turkeys, and to increase grouse and deer populations.

The most desirable site for the re-introduction of Merrian's turkey within the park was at Morfield Canyon, which was privately owned and grazed. According to the program, the park was too small for a safe re-introduction of the Mexican bighorn, which would in all probability inhabit the canyon sides and cliffs of the park, drifting down out of the park toward the Mancos River Canyon in winter. In order to protect completely the wildlife of Mesa Verde, therefore, it was necessary to acquire the lands north and west of the Mancos Canyon.5

4. Superintendent, annual report, 1934, MVPF.

5. A. E. Demaracy, Acting Director, to Superintendent, July 20, 1934, MVPF.
In all national parks there was always same trespassing and Mesa Verde was no exception. Enforcement of the game laws was complicated since the rugged section of the mountain region was under three administrations: the state and its local law enforcing bodies which seemed to be lax in game law enforcement; the National Park Service at park headquarters, remote from the area; and the Indian Service at Ignacio, even farther away.6

In January and March of 1943, the Colorado Game and Fish Commission released a total of ten wild Merrian turkeys in a branch of Prater Canyon, where water, ground cover, forest and food conditions appeared especially favorable. The turkeys were trapped at the state's game refuge at Pine River.

Three years later the Game and Fish Commission released 14 head of Rocky Mountain bighorn sheep near park headquarters. This species of bighorn was an important element of the prehistoric wildlife of Mesa Verde, but was completely exterminated in the early 1900s.

Both experiments in restoration of extirpated species were successful.7


7. Superintendent, annual reports, 1944-47, MVPF.
X. GROUND COVER

Although Mesa Verde receives considerably more rainfall than true desert areas, vegetation is fairly sparse at the best and is generally of the arid type. Cacti of a number of varieties flourish but are conspicuous only in May and June when they bloom. Pinon, western yellow pine, juniper and Douglas fir represent much of the evergreens. The north-facing slopes and moist canyons contain quaking aspen and box elders, with willows and cottonwoods growing along the Mancos River. The heavy covering of scrub oak and mountain mahogany over the higher elevations of the park makes this region a most colorful one during the fall months. Many varieties of wild flowers are found and in the early summer the park is a blaze of color.

A. Fire protection

In the winter of 1929 a forestry policy was codified in Mesa Verde and it became the basis for future forestry activities in the park. Forest protection work was mainly devoted to the protection of the park trees against fire, insects, tree diseases, and other injury.

Fire was the greatest menace to the park. Each year at the very driest part of the whole season, usually at the end of the spring drought, the Utes fired the willow thickets in the bottom of Mancos Canyon in an effort to produce grassland and at the same
time permit easier access to the country above the willow thickets. These fires usually burned themselves out at the edge of the thicket and were not necessarily a serious threat because of the lack of vegetation to carry the fire to the rim rock and over it to the mesa.

On the western side of the park, just before the termination of the period of drought, the Utes gathered wild horses by forcing them into the heads of box canyons away from water, and in many cases started fires across the mouth of the canyon to gather them more easily. This was a dangerous practice on the forested upper mesa lands and had resulted in serious fires in the past, as evidenced by the fire kills in some of the canyons.¹

Up to early 1934 the park had not experienced large fires and there were no cooperating agreements with the Indian Service or the Forest Service.²

There were six fires in the park during the 1934 season, and two were the worst in its history. The Wickiup Mesa fire started on July 11, and burned 286 acres. The Wild Horse Mesa fire started on the Ute Reservation at the west side of the park.

1. Superintendent, monthly report, June 1928; annual report, 1929, MVPF.

2. Superintendent Leavitt to the Director, August 17, 1934, MVPF.
on July 9. It was promptly put under control, but broke away and burned a total of 4,492 acres of which 2,263 were on the Ute Indian Reservation and 2,229 acres within the park. This included the 286 acres of the Wickiup fire, as the two fires burned together.

The presence of CCC enrollees, located in a camp in Prater Canyon, and the cooperation of members of the Indian Service enabled the park staff to prevent more disastrous consequences. Citizens from Mancos and nearby communities offered splendid support in fighting the fire.

Approximately 1,000 persons were employed to fight the fire, which was a very hot one, and the burn was very deep and heavy. Practically all vegetation was killed.

According to the superintendent, the fire was an object lesson of what could happen under the right conditions. Fortunately the fire was kept from coming close to headquarters and was located in a region not often visited by the travelling public. Nevertheless, what happened on Wickiup and Wild Horse Mesas could easily happen on any other mesa of the park. If the fire had been on Chapin Mesa, the park and the developed areas would have been ruined. The fire emphasized the importance of having lookout towers, truck trails, and fire trails by
which men and equipment could be quickly moved from park head­
quarters to the various sections where the fires originated.\textsuperscript{3}  

E. P. Meinecke, forest pathologist of the U. S. Department of Agriculture, made several observations about the fire in 1935.

The fire, detected by a lookout on the Montezuma National Forest, started on Indian land and "admittedly it was of incendiary origin". In the park itself fires were extremely difficult to locate on account of very poor visibility on the table land and the unsurmountable difficulties of travel presented by the precipitous canyons. In the park there was no lookout.

Because the fire was extremely hot, it caused many spot fires in advance of the line. In the brush to the north the fire swept through with such intensity that the stems were killed and charred. In the forest all trees and shrubs were dead and many totally consumed. The ground was thoroughly burned and even the outcropping rocks cracked and scorched. In general, the aspect of thousands of acres was of utter desolation, black tree trunks and stems of brush sticking out of the ashes. A very large area had dropped in park value to nothing, and it would take many years before it could be lifted out of a stale, sheer

\textsuperscript{3} Press release, ECW, June 6, 1935; Mancos newspaper, August 3, 1934; Superintendent, annual report, 1934, NA-RG 79.
ugliness. The forest itself would not come back for centuries, and then only if erosion was promptly controlled and if it was protected from further fires.

Erosion had already set in at an alarming rate. There was strong evidence of heavy wind erosion; water erosion had already cut gullies which would be much deepened with subsequent rains. Loss of surface through erosion would retard recovery for many decades. Much of the land burned was rolling or hilly so the eroded soil was washed into the canyons and was irretrievably lost.

As Meinecke saw it, all efforts had to be bent on stabilizing the soil as a prerequisite to the establishment of some sort of vegetation. Once this was started, the process of rehabilitation would go on automatically.

The fire of 1934 has proved, quite definitely, that there exists a very real danger in Mesa Verde. There is plenty of evidence that Mesa Verde has been visited by many fires in the past. The many brush fields in various stages of ecological transition, as well as the islands of timber left here and there and the fringe of the old forest on the northern ridge, are so many pages in the fire history of the park.  

After the disastrous fire of 1934 the park placed great emphasis on protection work. CCC enrollee fire lookouts were stationed at Park Point and at the well tower. They not only detected and reported fires on park lands, but also on adjacent National Forest and Indian Reservation lands. Park Point became the common fire detection location for all Federal areas in the locality of Mesa Verde.5

Lightning-caused fires are a perennial threat to parched vegetation. From 1939 to 1969 the park forces extinguished 200 fires. As many as 16 fires were extinguished in both 1951 and 1962. In July 1959 lightning ignited a fire in Mýřífield Canyon that burned 3,043 acres of forest and brush. Of the 200 fires, 184 were caused by lightning and 16 by man. Fire as a byproduct of summer storms, therefore, has been an important ecological factor in the area.6

Recent studies of the relationship between the cliff dwellers and their total environment show that fire has had an important effect on the vegetation of Mesa Verde. According to the studies, fires

5. Superintendent, annual reports, 1935-50, MVPF.
6. Fourth draft master plan, 1969; Superintendent, monthly report, July 1959, MVPF.
have been more common in the higher, north part of the mesa than in the lower areas. Possibly the prehistoric Indians deliberately burned these upper parts of the mesa, which are of marginal farming value, in order to maintain the shrub vegetation, which supports a heavier game population than a pinyon-juniper forest approaching climax. Many fires, however, were undoubtedly started by lightning. The mountain brush vegetation in the North Rim area is relatively unstable. Pinyon reproduction has increased as a result of stringent fire-protection measures by the park, and the area is gradually becoming reforested.  

B. Restoration

Another important phase of conservation in Mesa Verde is the protection and preservation of the pinon forest, which is a vital and indispensable part of the typical pinyon-juniper forest of the park. In addition to possible forest fires, pinon trees in Mesa Verde have been protected against three active enemies: Leftographium, bark beetles, and porcupines.

During the early 1930s park officials became conscious of two kinds of landscaping which were related, in a broad sense, but nevertheless presented separate problems. One had to do with the landscaping which necessarily followed such activities as road and trail building, the erection of all types of structures, construction of power and telephone lines, or any type of

development and improvement which resulted in the destruction of the natural ground cover or that left unsightly scars which were undesirable in a national park. The other type of landscaping was the restitution to nature for the damages suffered either by man-made or natural causes, or the combination of the two. Prolonged drought, fires, the disturbance of the watershed, the concentration of large populations in comparatively small areas, and many other causes, simply tended to weaken the forest, which then became prey to natural diseases and insect infestations.  

From 1935 to 1941, inclusive, a total of 238,190 pinon and juniper seedlings were planted in the park, principally in the burned area of the 1934 fire. By 1943 survival had been negligible as a result of unsuccessful plantings. New test-planting plots were established in 1942, in cooperation with Region Three assistance, on Wetherill and Long Mesas. These test plots were guarded carefully, and regularly observed and checked to ascertain what methods of reforestation gave best survival results. Both loose and potted seedlings from two entirely different nursery

8. Superintendent, monthly reports, 1931-40, MVPF.
environments were used. It was planned to continue regular checking of these plantings for a five-year period, in order to ascertain best methods, stock, and the like, before resuming an extensive reforestation program. 9

Ground cover over the entire park was generally in fine condition by 1944. The recovery, growth, and spread of grasses, shrubs, and flowers was most gratifying, particularly in former burned areas and those subjected to excessive grazing by cattle prior to termination of commercial grazing in the late 1920s. Vegetative cover in the area of the 1934 fire had reached such density as practically to preclude further soil erosion, save along the trails. Only the top branches of fire-killed oak brush showed above the new, green growth in most locations. Over the greater part of the area the main ground cover—grasses, weeds, flowers—averaged knee to hip-high. Planting of piñon and juniper trees was initiated in 1945 and continued afterwards, but up to the present time the recovery of the forest has been painfully slow and limited. 10

9. Superintendent, annual reports, 1935-43; Department of the Interior press release, March 28, 1937; Thomas C. Davis, Assistant Engineer to Regional Director, September 7, 1943, MVPF.

10. Superintendent, annual reports, 1944-47, MVPF.
A significant change took place also around 1944 in the vegetative cover on the floors of Prater and Morfield Canyons, as far south as the lower well in Prater, where more favorable conditions and a high water table were gradually converting the valley floors from barren areas when cattle was terminated, to the present mountain-meadow character.  

Perhaps the most formidable argument against grazing in Mesa Verde was the slow and steady, but remarkable range recovery. Superintendent Rose's annual report of 1946 refers to the manner in which the park became a veritable showplace for scientific and educational personnel of other federal and state conservation agencies and of institutions of higher learning throughout the Southwest who were interested in range recovery and control. In 1946 a Range Training School sponsored by the U. S. Forest Service convened in the park and was attended by range examiners, training officers and forest supervisors from that agency's regional offices and field stations in Colorado, New Mexico, Arizona and Utah. It was significant that range conditions resulting from conservation policies of the Service became of such direct benefit

11. Superintendent, annual report, 1944, MVPF.
to other agencies and institutions who administered grazing to an extensive degree and who were interested in technical problems of range control and management, wrote the superintendent.¹²

¹². See superintendent, annual reports, 1944-47, MVPF.
XI. RUIN REPAIR AND STABILIZATION PROBLEMS

A. Nature of the problems

Wanted, by the National Park Service of the Department of the Interior: A clear, transparent waterproof solution that when sprayed on prehistoric masonry will preserve it from weathering without obscuring it from view.

The above statement came from a press release of the department, dated March 31, 1931, and illustrated just one of the vexing problems that faced the Park Service in its administration of the Southwest monuments—the preservation of the cliff dwellings and other pueblo ruins which many of the areas contained.

In preventing weathering, the practice was to use cement to good advantage after excavation, but this had the disadvantage of covering and hiding from view the original workmanship. The ideal solution, according to the press release, would be the preparation of a clear, transparent, waterproof coating which could be sprayed on the walls, thus making them weather proof and still leave the masonry open to inspection by the many thousands of people who visited the monuments every year. It was hoped that some national research and experimental laboratories would someday produce such a product. Meanwhile, the National Park Service would welcome suggestions regarding waterproofing material.
A brief review of conditions from 1906 to 1930 will give a better idea of the problems of preservation in Mesa Verde.

Prior to 1906 Mesa Verde was within the jurisdiction of the Indian Bureau. The area was difficult to reach and seldom visited except by cowboys and residents of adjacent communities. This condition was decidedly favorable to the preservation of the home sites, since the only damage resulting from the activities of man was occasional pot-hunting and promiscuous excavating. The work was not intensive and was distributed over the entire mesa, as those early diggers were endeavoring to skim the cream, as it were, of the archeological material to be found.

Beginning in 1908, under the direction of Fewkes, the Smithsonian started a program which at the time of its inception was comprehensive enough to embrace the excavation of the major archeological sites of the park. Until this time, natural conditions had contributed to what might be called the remarkable preservation of the ruins. When the home sites were abandoned, the upper stones sometimes crumbled and the fallen rocks were deposited around the base or lower section of walls. This accumulation of stones acted almost as a brace, or a very effective support. Drifting sand and fine earth was deposited around these loose stones and standing walls, until finally the entire structure was completely buried. Vegetation then spread.
over the mound, completing the natural protection.

In 1908 Spruce Tree House was excavated, and then Cliff Palace, Sun Temple, Square Tower House, Balcony House, New Fire House, Oak Tree House, Cedar Tree Tower, and the Far View Group, this work continuing until 1922. With the complete removal of the protective soil covering of the above ruins, walls were exposed to the elements, and in the intervening years considerable damage resulted from the destructive effects of water and wind. Added to this was the difficult problem of maintaining these ruins under the traffic of thousands of visitors a year. This made the park problem more complex, since the administration not only had to protect the ruins from the visitors but the visitor from the ruins, as well. Loose walls were a serious menace, and one dislodged rock could cause a fatal accident.

It was not until 1928 that the true extent of the damage of pedestrian traffic to the ruins was realized. Beginning in that year the park received an amount for ruin maintenance approximately sufficient to care for current annual damage. These appropriations were used to the fullest advantage, but they never permitted a really comprehensive repair program. As a consequence of this, much of the basic trouble remained unattended. The park people
veneered the surface by placing back walls that kept falling, or when possible strengthening them, while these surface conditions had really been the result of insecure foundations.

By the end of the 1933 heavy travel season, the impact of visitors' use on Cliff Palace was all too evident. It was necessary to close the major portion of the ruin to the public. Other sections open to the public would have to be closed within a year unless really adequate protective measures were begun immediately.

Moisture was the most destructive force to ruins of the Mesa Verde type, but especially mesa-top ruins. Capillary action took place very rapidly in the sandstone and adobe mortar. Moisture was pulled from the ground and rose sometimes several feet in the wall. Foundations and lower building stones disintegrated rapidly under this action. Late summer rains and early fall snows kept the lower portion of walls saturated. With freezing weather began the destruction, and that portion of the saturated wall was destroyed to the depth that the frost had penetrated. The affected outer rock disintegrated or crumbled away in a few months. Then the process repeated itself.¹

¹ The above observations were taken from the many monthly Superintendent and special reports of the period, NA-RG 79 and MVPP.
B. Morris' guidelines

Probably the most important activity in archeology in 1932 was the approval of a program for the stabilization and repair of the major ruins in the park and the PWA allotment of $16,500 to carry on this work. This enabled the park to take steps toward the preservation of some of the largest and most interesting cliff dwellings. In conjunction with the work of restoration an extensive program of surveying, mapping and photographing was to be carried on, so that in the event of destruction of the ruins from any cause complete data would be available for reconstruction or for scientific reference. The accurate map of the major archeological ruins of the park would be substantiated by a series of photographs that would permit the repair or restoration of an entire ruin or any of its sections, and the exact condition and dimensions which existed at the time of the surveying would be retained.  

A definite program of repair and protection was prepared in the fall of 1933. Considerable stabilization work would be required in two ruins, Balcony House and Cliff Palace. In the

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2. Superintendent, annual reports, 1932-33; Administrative Assistant, Public Works Program, October 28, 1933, to Cammerer; Tolson to Bilkert, November 3, 1933; Cammerer to Acting Superintendent, Mesa Verde, November 4, 1933, MVPF.
case of the former the problems were comparatively simple, and
the work not extensive. Balcony House was erected on a fill,
which the cliff dwellers managed to engineer by the construction
of an outside retaining wall. At its maximum height this wall
and fill was approximately twenty-five feet. Water was seeping
in from the back of the cave, and its flow was disintegrating the
retaining wall which held the fill, and as a consequence the
entire ruin would be lost if proper precautions were not taken
immediately. Repairing the damaged walls would be a rather large
job, as would restoration of one kiva which had been affected by
the flow of water. Braces would be needed on the lower walls to
tie this artificial fill into the cliff.

Cliff Palace, in the north and central portions particularly,
was moving and settling slightly on its foundations. All the
structures of this cliff dwelling rested on an insecure natural
fill that was formed by the disintegration of the cave roof.
Pedestrian traffic resulted in enough vibration to cause a
continuous settlement of this loose material. The damage from
this source was alarming. Concrete had to be used for a great
deal of this stabilization. In places, large boulders which
were cracking, and which supported room structures above, had
to be properly braced. In other places where loose fill was
settling concrete retaining walls had to be used. In several
instances reinforced concrete piers, anchored to the solid sandstone floor below the debris, would perhaps be the only effective means of controlling the settlement. The study of foundation protection had been usually overlooked in the past, since any further work accomplished on the surface would entirely depend on the stability of the foundations and the fills upon which they were constructed.

Walls requiring stabilization were numerous. The most notable cases included the four-story towers in Cliff Palace and Square Tower House, almost all walls of Far View and Pipe Shrine Houses, which had reached a state of dilapidation. In all, there were about 500 wall sections immediately in need of either strengthening or repair. This work would be done with iron braces where necessary, but preferably it would be accomplished by either springing the wall back into place and then strengthening it with masonry supports, or where absolutely necessary, by rebuilding the wall as nearly as possible to its original appearance.

Far View and Pipe Shrine Houses, Cedar Tree Tower and the outer or exposed portions of Cliff Palace, Balcony House, Square Tower House, and several other ruins were in urgent need of sufficient concrete capping to properly shed water.

To attempt a project of this sort with unexperienced or inefficient personnel would be to invite almost certain failure.
Earl Morris, field archeologist of the Carnegie Institution of Washington was chosen for the supervision of the work.\(^3\)

Survey was part of the project of ruin repair. The survey was in the hands of Stanley Morse, a young architectural engineer, and Robert Burgh and Gilbert Perkins, under Morse. Repair work was under the general supervision of Morris, who from May to November 1934, repaired Far View House, Cliff Palace, Square Tower House, Balcony House, Sun Temple and Oak Tree House. Funds available permitted only the survey work of Cliff Palace and Spruce Tree House.

Cliff Palace was made stable and secure against destruction from the elements and pedestrian traffic. Repair work was directed primarily toward strengthening Speaker Chief's House, a lofty castellated building constructed upon a huge block of stone which in some earlier age had fallen from the cavern walls. This building was so named from its construction and location, leading to the belief that perhaps from its platform in prehistoric times announcements of importance were made to the community. In the restoration work some 70 tons of stone and cement were used to construct beneath the stone foundation of

\(^3\) Superintendent Finnan to the Director, September 26, 1933; Director to Finnan, August 24, 1933; Cammerer to Dr. John C. Merrian, Carnegie Institution, November 24, 1933, MVPF.
Speaker Chief's House a foundation as durable and compact as the
great sandstone overhead. 4

Neither the ruin survey nor the repair work was completed
with the funds made available in 1934, but the project offered
valuable lessons for future work. Stanley Morse's survey work
was enthusiastically endorsed by such men as Nusbaum, Kidder,
Morris, Kittredge, and others. The survey method was carefully
designed with consideration for its usefulness from every angle.
Besides containing authentic source material for rebuilding, it
was presented in such a way as to be useful for exhibits and
as an information source for the educational division. It
established an accounting scheme for the repair work which was
done on the ruins from time to time by providing a means
through which the repairing accomplished could be kept track
of properly as part of the continuation of the record.

It was agreed by those connected with the 1934 project that
in the repair work or in future excavation, there should be a
satisfactory record to establish the identity of every ancient
detail before work could proceed. In a great many cases this
would be a matter of taking a few photographs. The time spent
in Cliff Palace distinguishing between ancient and rebuilt
walls would be unnecessary in future unexplored sites of this
policy were rigidly adhered to. The sooner the information was
obtained the more valuable it was bound to be.

4. Superintendent, annual report, 1934; Press release, August 7,
1934; Photographs of Ruin Repair, December 6, 1934; Estimates of
Public Works, Leavett, December 22, 1934, MVPF.
Morris' repair work, therefore, would serve as model for future repairing and rebuilding. While the work should be as nearly like the original as possible, it would be the practice to distinguish the ancient from the rebuilt in some manner no more evident than a slight discoloration of the mortar joints.  

Morris was of the opinion that repair and stabilization work called for qualifications that it was not easy to find in any specific person—practical common sense, intimate familiarity with and understanding of the materials used by the ancient builders, wide and penetrating observation of original methods of construction, a working knowledge of masonry technique, an eye to aesthetic effect, and intense interest in the work at hand. Obviously such a man, if found, could not be picked up at a moment's notice. The rational plan of procedure, he said, was to develop a stabilization crew in the park to continue repair and restoration on a permanent basis, the individuals to be given full-time jobs.

5. Superintendent Leavitt to the Director, November 13, 1934, MVPF.
The nucleus of such an organization exists at Mesa Verde. Al Lancaster and Raymond Dobbins constitute such a team as I have not seen elsewhere. While the work done during 1934 was nominally under my supervision, it was these two men who actually performed it, and as a testimonial to their skill and ability, Cliff Palace may be cited as an example, and that example speaks for itself. It would be highly desirable for them to continue with the ruins of the Mesa Verde until of those of consequence have been covered. The immediate objective, that is, the treatment of the excavated cliff houses which are commonly visited by tourists has been almost attained, but to my mind it is equally important that repair of the visible portions of the large number of cliff houses that have not been excavated, be carried on to the point that the features now existent will be preserved for future generations of visitors and for the scientists who at some time will investigate these remains. I am convinced that it would be an economy, both in money and in results accomplished, to put Lancaster and Dobbins on yearly salary, with a permanent assignment to repair and reconstruction.6

Thus began Lancaster's long career in Mesa Verde as the head of the stabilization crew and as archeologist. The park stabilization files bear out the remarkable record of Lancaster as an archeologist, but especially in the field of ruin stabilization.

6. Earl L. Morris to the Director, December 28, 1934, MVPF.
After 1934 the ruin stabilization program became a regular activity of park operations under Lancaster and a crew of Navajo workers. As the program moved along, more important became the need of following the method used by Morris in 1934.

During the stabilization program of 1942 the most annoying problem was the inadequate or complete lack of record of previous stabilization in the Fewkes Canyon ruins and Pipe Shrine House. In each case, ruins excavated prior to 1923 by Fewkes had been subjected to a general program of stabilization and reconstruction designed to make them into "show places" for the instruction of park visitors. As was common practice at that time, additions were often made to what remained of the original buildings. An authentic appearance was generally maintained by the re-use of original materials in which very few clues to the repairs were left. This practice, combined with the failure to properly record repairs and substitutions, made it especially difficult, often impossible, for the stabilization crew to determine the extent of previous repair work.7

7. Report on the Ruins Stabilization Program, September—November, 1942. This program was supervised by Kenneth J. Ross, Assistant Park Naturalist, who was advised by Acting Superintendent Nusbaum; the work was done by archeological Foreman James A. Lancaster; G. A. Moskey, Acting Director, Region Three, March 20, 1943, MVPF.
C. **Cliff Palace and Spruce Tree House**

Cliff Palace and Spruce Tree House have always presented special stabilization problems due to heavy visitor use and the effect of moisture on the stability of the cave roofs. Since 1934, when Morris stabilized Cliff Palace, continuous minor stabilization has been necessary. With increased visitation following World War II, it finally became necessary to close the main portion of Cliff Palace to visitor entry as the weight of the parties and the vibration of feet, added to the continual seepage along the back of the cave, was causing various prehistoric terraces to creep and even fall, producing major damage to unbonded room walls.

Drains were established in two places at Cliff Palace to carry excess moisture out of the fill along the terrace in front. This front terrace wall, which holds back the weight of the upper terrace, had given way in places several times and almost constant repair was necessary as the stones kept disintegrating from moisture. The moisture problem became acute in the upper ledge, built on a free standing arch, necessitating cleaning it of all debris to allow air circulation. The drains established in front were effective for a short time, but accumulated moisture called for better drainage than could be effected with regular stabilization.
On June 24, 1960, a slab fell from the cave roof, just under the lip of the cliff at the end of a long water streak from the rim rock above. The area bared by the slab was heavily water soaked, indicating that a maximum amount of moisture had been absorbed by the sandstone during spring run-off. It became necessary to build in 1961 a drainage tunnel on the back of the Palace to drain the ruin alcove of sufficient water to halt or at least radically step down the rate of cave formation. The tunnel has worked fairly well up to the present time but it is checked regularly by the stabilization crew because there is still evidence of seepage on the rear of the Palace.  

Spruce Tree House presented similar problems. In 1961 a copper lip was installed in the cliff face above the south end of the ruin to divert drainage away from the ledge under a large crack where a rock fall took place in March 1960. Small drainage channels were chiseled into the rock to carry as much water as possible away from the tar-paper-covered crack and divert it to the installed lip. This work was done by Al Decker of the stabilization crew.  

8. Superintendent Robert H. Rose to the Regional Director, March 22, 1948; Nusbaum, Santa Fe, to the Regional Director, April 8, 1948; Jean M. Pinkley, Park Archeologist, Memo for the Files, July 19, 1960; Superintendent, monthly reports, June 1960-61, MVPF.  

9. Superintendent, annual report, 1961, MVPF.
During the 1964 travel season Spruce Tree House, the best preserved and most accessible ruin in the park, presented a safety problem of the first magnitude. There were three rock falls from the narrow section of the pinned arch above the north end of the ruin, occurring on July 9, August 7, and September 25. An inspection revealed a new crack behind the grout approximately three feet from the lip of the cliff. Because of this condition, it became necessary to close the incoming trail and the entire north end of the ruin to keep visitors back a distance of at least 30 feet from any possible rock fall. Closing the ruin to all traffic would have had a critical effect on Cliff Palace and Balcony House as well as on the interpretive program. Spruce Tree House carried the heaviest traffic of any ruin in the park. For example, 166,000 persons visited this ruin in the 1963 season as compared with 98,000 at Cliff Palace and 50,000 at Balcony House.10

10. Superintendent, annual report, 1964, MVPF.
A. Discoveries - survey needs

During most of the 1930s the archeological program in Mesa Verde was mainly concerned with museum development. Under Naturalists Paul R. Franke and Don Watson, the museum program was further improved and steadily refined. Seldom a year passed without accidental discoveries made in different parts of the park, though there was no regular program of excavations.

In the stabilization work that was carried on under Lancaster numerous artifacts were found. A certain amount of debris had to be moved in order to strengthen weakened walls and slipping foundations, and this resulted in various finds. Axes, bone arrows, sandals, pottery, planting sticks, and similar articles were most common, but a few burials were also located. In August 1934 the undisturbed skeleton of an old woman was found on the bare floor of a small ruin just across the canyon from the public campgrounds. This skeleton, of particular importance because of fusion of the spinal column, had apparently remained exposed and undisturbed through more than seven centuries.

Because no detailed, comprehensive survey had ever been made of the archeological resources of the park, the accidental findings
of new ruins, artifacts, and human remains were more or less regularly reported at the museum.

An important discovery was made by the CCC boys of Company 825, stationed at Mesa Verde, during a highway improvement project. They found a grave containing two skeletons, one with the right hand and both feet missing and other with all the extremities gone except the right foot. The only artifacts found were two bits of pottery and a well made stone ax. The grave, discovered when a power shovel began cutting away rock in an embankment along the north entrance highway a quarter of a mile from park headquarters, was five feet long and four feet wide.

During the fight to check the 1934 forest fires a number of unknown ruins were found. In September 1934 Park Naturalist Franke, Museum Assistant Betty Yelm and Dick Franke visited Wetherill Mesa to locate and record new ruins which were disclosed by the fire of July 9-26. Eleven new mound ruins were located on a map, nine in the upper end of Long Canyon, and two on top of Wetherill Mesa, approximately one and a half miles

1. Superintendent, monthly report, August 1934, MVPF.
2. Press release, November 24, 1933, MVPF.
and one mile north of Rock Springs cabin, respectively. The ruins of Long Canyon were situated on finger-like spurs, extending a few hundred feet out from, and below, the sandstone cliffs. Type sherds and artifacts were collected.\(^3\)

On October 13, Mr. and Mrs. Franke, Bob Burgh, Morris Diamond, and H. Boyland went to the west side of the park. In the cave north of Mug House, three burials were excavated. This work had been begun the spring before by Lancaster, and permission had been obtained from Washington to complete the excavation. The three burials yielded one head with torso and limbs missing, and the body of a child. Artifacts recovered were one reed mat, one turkey feather robe, and one jug; the skeletal material was associated with Pueblo III textiles. Excavations were done by Lancaster and Burgh.\(^4\)

All these accidental discoveries of ruins and artifacts suggested that the great archeological wealth of Mesa Verde was far from being known. No survey of the unexcavated sites had been made, and the total number of ruins was a matter of speculation. While many ruins had been discovered, many more

3. Report by Naturalist Franke, September 1934, MVPF.
4. Park Naturalist Report, October 1935, MVPF.
would probably be found in the more remote canyons. Mesa-top
ruins far outnumbered the cliff dwellings and dozens of them
could be located in a half-hour walk over any of the mesas.

In 1935 Park Naturalist Franke proposed a special survey
of sites within the park. It would supply factual information
for educational work, for scientific investigations, and for
the administration and development of the area for the public.
The survey would locate, identify, and describe the archeological
resources of Mesa Verde. This survey was not accomplished for
lack of funds.5

It was unfortunate that the records of archeological sites
of the Mesa Verde were inadequate. The existing data on the
archeological resources showed, not the number or distribution
of sites, but rather only the significance of their occurrence.
One significant fact was derived from the collected data: that
on Mesa Verde there were preserved, in caves and in mounds, at
least ten centuries of history of the Indians of the Southwest.
It was distressing, in the light of such knowledge, that the
data concerning the sites themselves were so fragmentary and
scattered.6

5. Mr. Franke to superintendent, July 8, 1935; Mr. Franke to
Dr. H. C. Bryant, May 13, 1935; Mesa Verde Notes, August 1935, VI,
Number 1, MVPF.

6. Mesa Verde Notes, August 1935, VI, Number 1, MVPF.
In reviewing the master plan of the park in 1939, a Washington official made the following comment in connection with the lack of an archeological base map:

It is generally conceded that the physical development of Mesa Verde has far outrun the scientific study which appears desirable in so large and outstanding an archeological area. The museum is an exception to this criticism, but even here realization of a full story is not possible for lack of adequate knowledge and interpretation of the prehistoric resources of the Park.7

B. Tree-ring chronology

Prior to 1929, it was impossible to give anything more than a very rough estimate of the antiquity of ruins in Mesa Verde National Park. Estimates of age had varied as much as several hundred years, even when referring to the most recent of pre-Spanish ruins. Such estimates were based on more or less advanced elements of culture. Hence, statements regarding the chronological position of the various ruins within the park area were at best very inaccurate.

After 1929 the dating problem was solved by the system of tree-ring chronology established by Dr. A. E. Douglas, Director of Steward Observatory, University of Arizona. Major ruins

7. A. R. Kelly, Chief Archeologic Sites Division, August 29, 1939, MVPF.
throughout the Southwest from which beam sections could be obtained were thus accurately dated. From available pine and fir sections, Douglas established dates for the major ruins of the pueblo period of the Southwest, including many ruins in Mesa Verde National Park.

The tree-ring specimens which yielded the dates of several of the park ruins had been collected by the National Geographic Beam Expedition of 1923. Presuming that the year of the cutting was the year of actual use in construction, the following dates were established from selected beams in these major cliff dwellings:

- Cliff Palace A. D. 1073
- Oak Tree House A. D. 1112
- Spring House A. D. 1115
- Balcony House A. D. 1190-1206
- Square Tower House A. D. 1204
- Spruce Tree House A. D. 1216-1262

Until a thorough study was made it was impossible to ascertain the inclusive dates for the construction of a particular ruin and the time involved in its construction. From evidence gathered by Douglas, Cliff Palace was the oldest cliff house of the pueblo period. Spruce Tree House had long been held as one of the oldest structures.

From Douglas' record of tree-ring chronology, it was known that a great drought commenced in 1276 and extended for a 23-year
period to 1299. With no flowing water available, the effect of a 23-year period of drought on the inhabitants of the Mesa Verde plateau can be readily imagined. Undoubtedly the great series of prehistoric dams found within the park area indicated the desperate efforts made to meet the abnormal conditions prevailing at that time. It was logically presumed that the prehistoric population was gradually forced to withdraw from the area, as the period of drought continued, and establish themselves near more favorable sources of water supply.

Tree-ring research in the ruins within the park was begun again in the summer of 1932. During that summer season H. T. Getty of the University of Arizona, with the recommendation of Douglas, collected additional tree-ring material from the major cliff dwellings and surface ruins in the park, and from a number of the smaller ruins. As a result of the new research the dates for the Mesa Verde cliff dwellings were extended to cover the period from 1066 A. D. to 1274 A. D. inclusive.

Of special interest was the information obtained by this research relating to Cliff Palace. The one date of 1073 A. D. which had been given for Cliff Palace was supplemented by a concluding date of 1273 A. D., substantiated by a large number of intervening dates. This revealed the remarkable fact that this
cliff dwelling was inhabited and in a process of construction for a period of at least 200 years.

Again in 1933 tree-ring material was secured from test pits sunk in surface ruins—Far View House, Pipe Shrine House, and the like—in an effort to establish dates for the purpose of correlating these surface pueblos with the cliff dwellings and for use in the park educational program. This work was considerably handicapped by the difficulty of securing good, datable specimens, as the timber was for the most part deteriorated in the surface ruins. 8

In the fall of 1941, Gila Pueblo Archeological Foundation, Arizona, collected tree-ring specimens in the park and obtained new dates. 9

Tree-ring dates will never be definitely final as long as specimens can be found.

C. Research program

1. Pit House No. 1

After 1938 a program of research was carried out by the park staff to fill the many gaps of knowledge about the ruins

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and broaden the scope of interpretation. This was accomplished through emergency or salvage archeology and the selection of specific mesa-top ruins for excavation and stabilization. During the subsequent period of about 20 years, and under the guidance of Park Naturalist and later Archeologist Watson, the Mesa Verde museum and interpretive program became one of the best of the National Park Service.

Research was also accomplished by Gila Pueblo Foundation and the Department of Anthropology, University of Colorado. What follows is a summary of the major developments.

During the spring of 1939 the digging of a trench for a pipeline exposed a Developmental Pueblo pit house, the existence of which had not been suspected. No surface indications of the ruin had been discernible. It was located 100 feet south of the new 1,000,000 gallon storage reservoir. Excavation was done mainly by Ted Smiley, under the direction of Superintendent Franke and Park Naturalist Watson, in order to save anything of archeological value in the site. Since the pit house was in a very poor state of preservation no effort was made to preserve it as a public exhibit. Naturalist Watson summarized the importance of this accidental find as follows:
Although Pit House number 1 was not a large or important site its excavation has been of considerable value in the development of the archeological story of the park. It proves that Mesa Verde contains Developmental Pueblo ruins that are practically identical with those that have been excavated in surrounding regions by Morris, to the south and east, Martin, to the west, and Brew, in southeastern Utah.

No ruins of this type had been excavated in the Mesa Verde before this time and although their presence was indicated by surface pot sherds their exact details were not known. Since the pit house is so similar to those in other regions it can be assumed that the house structures as well are similar.

2. **Pit Houses B and C (Site 60)**

During the months of August through October 1941, excavations were carried on by Archeological Foreman Lancaster, under the supervision of Superintendent McLaughlin and Park Naturalist Watson, with a small crew of CCC enrollees. This was the first time that CCC labor was used in archeological work in Mesa Verde and the results were highly satisfactory.

The primary objective of the excavation was to gain knowledge of the Modified Basket Maker culture and obtain well-preserved ruins for presentation to park visitors in the form of exhibits. Only one excavated ruin of this culture—Pit Lodge A—was open to visitors and this was a

poorly-preserved ruin that had been excavated by Fewkes in 1919.

Two ruins were excavated, and designated Pit House B and Pit House C. Both were typical Modified Basket Maker structures and both contained artifacts characteristic of the period. In addition to their formal excavation, certain testing was done in order to determine the best sites for future excavations that would carry on the archeological story in chronological order.

Pit House B, located on the Square Tower House road, was a well-preserved ruin consisting of a large room with a smaller, connecting antechamber; Pit House C was located on the Cliff Palace road about one-fourth mile north of the latter, and also consisted of a main room with a smaller connecting antechamber. Artifacts were similar in both houses and consisted of manos, metates, cooking stones, work stones, hammer stones, problematical clay objects and pottery. Pit House C turned out to be a splendid example of a slab-lined pit house.11

11. Watson, "Excavation of Modified Basket Maker Ruin," December 15, 1941; report by Lancaster, 1941, on the same subject; Superintendent, annual report, 1941; Archeologist Nusbaum to Mr. Dotson, May 9, 1941, MVPF.
3. **Gila Pueblo excavations**

During 1947-48 Dr. Deric O'Bryan, Assistant Director, Gila Pueblo Archeological Foundation, excavated an extensive series of ruins at three different places: Twin Trees Site, about 200 yards south of Twin Trees Site, and on a steep hillside slope near the head of Soda Canyon. The following sites were excavated: one shallow pithouse, one deep pithouse, two slabhouse villages, two small pueblos, one large canyon-head pueblo. Building dates ranged from about A. D. 572 to about A. D. 1200.\(^\text{12}\)

O'Bryan's excavations were the first steps taken to provide visitors with a series of exhibits-in-place representing basic stages in the development of Pueblo architecture and culture.\(^\text{13}\)

4. **Sites 353 and 354**

During the construction of protective shelters at the Twin Trees Site excavated by O'Bryan, it became necessary to widen the road near the site for building a new parking area. Two pit structures were excavated by Lancaster in 1948 during the course of checking the parking area for

\(^{\text{12}}\) Superintendent, annual reports, 1947-48 MVPF; O'Bryan.

archaeological remains. Site 353 "was a square pithouse typical of early 8th century times; the second, Site 354, was an unusual type consisting of a small D-shaped pit adjacent to a circular clay-packed basin." Both sites were backfilled to widen the road.14

5. **Sun Point Pueblo**

In 1950 request was made to excavate several ruins on the Square Tower House—Sun Temple Road. When excavated, they would fill gaps in the archeological story, and in a two-mile section of the ruin roads, visitors would see ruins of seven types that covered a period of seven centuries.

Al Lancaster and Philip F. Van Cleave excavated a small pueblo near Sun Point, consisting of a kiva and a round tower partially surrounded by a number of large rooms. The kiva was of the standard Mesa Verde type and size; the usual features were present: six pilasters, bench, southern recess, ventilator shaft, wall niches, fireplace, deflector and sipapu. In addition the kiva had a tunnel leading to the round tower.15


6. **Site 16**

After the completion of Sun Pueblo, the excavation crew moved to a pueblo ruin in the Twin Trees area—Gila Pueblo Site 16. This excavation was done by Lancaster and Jean M. Pinkley. As excavations proceeded in the pueblo ruin, the site indicated a long occupation with ruins of three types sitting one on top of another. Further testing in the Twin Trees area revealed an early eighth century pithouse, that in both type and location fitted nicely into the architectural development sequence planned for the Square Tower House—Sun Temple road.16

7. **Basket Maker III Pithouses**

As part of the same research program, Lancaster excavated in June 1950 two deep pithouses dating about A. D. 700, located in the Twin Trees Site. Three of these pithouses had been excavated before but none could be used in the interpretive program due to their locations. One was

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excavated in 1939 by Smiley after it had been cut by a pipeline; a second was excavated by O'Bryan in 1948, located one fourth-mile south of the Twin Trees Site. A third pithouse of the same type had been partially excavated by Lancaster in 1948 during road widening operations at the Twin Trees Site.

The three excavation projects of 1950 closed a ten-year effort to excavate ruins in the proper sequence along the Square Tower House—Sun Temple road to show the various stages in architectural developments in the Mesa Verde.¹⁷

Both the pithouses and the pueblo ruins were integrated into the park's interpretive program. It then became possible for the first time to utilize a number of actual field sites in unfolding the story of approximately 1000 years of pre-cliff dweller Indian life. These new developments required alterations and additions to the museum exhibits to conform to the major changes in the archeological story of Mesa Verde.

Dr. J. O. Brew, Peabody Museum, Harvard University, inspected the newly excavated ruins and the artifacts

recovered from them. His interpretations were of great value to members of the park archeological staff.18

8. Fire Temple

During June-August 1951, field investigations were made at Fire Temple by Ranger-archeologist Francis E. Cassidy. This project was under the general sponsorship and supervision of the University of New Mexico field sessions in anthropology, directed by Dr. Paul Reiter, in cooperation with the Park Service. Lancaster directed much of the dirt removal from the structure and offered numerous suggestions concerning structural features of Fire Temple. Located in Fewkes Canyon, this ruin had been excavated by Fewkes in 1920, but he had not left notes pertaining to what he did in the way of stabilization. Several features obviously were rebuilt during the 1920 excavations. Since Fewkes had removed the bulk of fallen structural debris, there was little remaining to be uncovered in the 1951 excavations. Evidence showed that Fire Temple was a Modified Chaco-type of great kiva.19

18. Superintendent, monthly reports, February 1950-January 1951, MVPF.

19. Typed report by Cassidy, May 1952, MVPF.
9. **Sites survey**

In 1951 Park Archeologist Don Watson instituted an archeological survey of the entire park as a long-range program that still goes on today. Without doubt, it was one of the most important archeological projects undertaken up to that date. The eventual aim of the project was to locate, list, mark and describe all archeological sites: pithouses, pueblos, cliff dwellings, dams, canals and pictographs in the park. Especially important was the listing of the stabilization needs of all the ruins. Photographs and sherd collections were part of the program.

As planned, the survey would be a continuous project with various staff members, especially Lancaster, working on it whenever possible. The first efforts would be mainly concentrated on Chapin Mesa since it probably had more ruins than any other mesa and these ruins included all types known in Mesa Verde. A complete survey of the archeological sites in Chapin Mesa would provide an excellent cross-section of the entire Mesa Verde.

Whenever possible, the sites surveyed were tied to permanent road survey reference points. In areas where these were missing, additional permanent reference points were installed. Mesa-top ruins were marked with numbered steel
stakes. As a final result the survey would be an archeological base map showing all sites and a 5x8 card file containing all pertinent information.

During the survey a complete check was made of all sites surveyed by Dr. Harold Gladwin, of Gila Pueblo. In 1929, Gladwin surveyed 103 mesa-top ruins. According to Watson these were poorly marked and described and were difficult to find.

By May 1954 the park staff had already surveyed 724 sites:

- 38 cliff dwellings
- 661 mesa-top sites
- 18 group of dams
- 1 group of terraces
- 5 shrines
- 1 group of pictographs

10. **Site 80**

This site is located a short distance to the northeast of the Twin Trees Site. Following the salvage excavation of a refuse mound in Site 80 in September 1952, Lancaster examined a nearby shallow depression and exposed an unusual pit containing an even more uncommon pottery vessel.

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20. Park Archeologist report, November 1951; Superintendent, Monthly reports, July 1951, May 1954, MVPF.

11. **Site 391**

In the fall of 1954 Lancaster and Leland J. Abel undertook a test excavation of Site 391, located a short distance south of the Cedar Tree Tower road. This was a typical "burned rock area" on Chapin Mesa. The survey initiated in 1951 had turned up evidence of a considerable number of these sites. In this connection, Professor Lister, of the University of Colorado, noted:

> In view of the evidence from the testing of Site 391 and the surface indications at a number of similar appearing sites in the vicinity, it would seem that the "burned rock areas" are remains of an elementary type of habitation, and it is not beyond the realm of possibility that they may be of Basketmaker II age. The careful excavation of additional examples of this rather insignificant-looking sort of site will be necessary before more definite statements can be made about them.  

12. **Kiva E - Far View House**

Lancaster also excavated in April 1954, Kiva E at Far View House. This kiva, which had been missed by Fewkes in 1916, was discovered and partially excavated in 1934. Visitors were beginning to scratch in the unexcavated portion, so complete excavation was desirable. The kiva had been filled with trash during the latter part of the occupation.

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22. Lancaster and Abel, "Test Excavation of Site 391," *Emergency Archaeology in Mesa Verde*, 63-64.
of Far View House and the most important material recovered during excavation was several hundred turkey bones. The number and condition of the bones indicated definitely that turkeys were eaten by the Pueblo Indians of the Mesa Verde.\textsuperscript{23}

13. Site 52

Dr. Ralph Luebben, seasonal ranger-archeologist, assisted by other seasonal archeologists, excavated a small mesa-top ruin, Site 52, working in the evenings and on lieu days. This site was selected because it was a small pueblo which seemed to have a kiva. The ruin proved to be a baffling structure consisting of a number of very small, oddly-shaped rooms for which there was no sensible explanation.\textsuperscript{24}

14. Sites 1030 and 1066

In 1956 a considerable amount of testing was necessary along the Prater Canyon section of the new tunnel approach road. While only one ruin was actually cut by the new road, the grading did cut into large areas of refuse below

\textsuperscript{23} Archeologist, annual report, 1955, MVPF.

some talus sites. Test pits showed the trash to be as much as five feet deep in some places.

The steep slope between the Prater maintenance camp and the Knife Edge was searched for ruins, and when earth moving operations began the ruins of three houses (Site 1066) and a kiva (Site 1030) were found. Two of the houses were single-roomed structures of crude masonry, while the third had four rooms. All structures were Pueblo II period, the kiva having no masonry lining and a four post roof support. The various ruins were excavated, mapped, photographed and described, then destroyed to make way for the road.25

15. Site 981

During the summers of 1957 and 1958 an unusually situated pueblo ruin was excavated, on a site near the east rim of the mesa, about one quarter of a mile south of Cedar Tree Tower (Site 397).

A small Pueblo III structure had been built into, rather than on, the sloping mesa-top. Distinctive architectural features included partial subterranean construction, bedrock incorporated as part of some

25. Watson, Lancaster, and Abel, "Archaeological Salvage at Sites 1030 and 1066," Emergency Archaeology in Mesa Verde, 33-36; Park Archeologist, annual report, 1956, MVPF.
of the floor walls, crude massive stone construction, and floor level doorways. An elaborate petroglyph on a building stone was found in the site fill. The ruin possessed neither a kiva depression nor a trash mound.26

16. **Site 1060**

In September 1959 a trench for a new pipeline on the southern part of the Mesa, near Site 16, disclosed the presence of a buried site. Salvage excavations were done by Lancaster and Alden C. Hays. A Basket Maker III pithouse was excavated. After mapping and photographing the completed excavation, the pithouse was lined with heavy cardboard and backfilled.27

17. **Navajo Hill area**

A site in the parking area location of the present Navajo Hill Visitor Center was salvaged in 1963. It was a one-room masonry structure with a probable second room consisting of jacal walls with heavy slab bases. Possibly this was a partially walled-in work area. The site was apparently a maintenance hut for the terraces in the drain below.


Site 885 in the concession development on Navajo Hill was partially salvaged also. There were three or four rooms, a couple of storage rooms, a kiva and a large, curving wall starting at the southeast corner of the pueblo, extending east for several feet, that appeared to have served as a windbreak for the plaza area. Pottery was predominantly Pueblo III.28

Twenty-two ruins were located in the above Navajo Hill-Upper Chapin Mesa, many of which lie within the concession and Visitor Center areas. Furthermore, the most complex prehistoric water catchment system yet defined in the San Juan Anasazi area is located here. This is the feeder system for the Mummy Lake Reservoir located in the Far View area. The system consists of five main and several lateral feeder ditches which were used to drain the broad upper reaches of Chapin Mesa south of Navajo Hill itself into a concentration basin at the constricted neck of the mesa north of Mummy Lake. Here the water was channeled into a broad intake ditch leading to the reservoir which, it was estimated,

28. Superintendent, annual report, 1963, MVPF.
could have held over 660,000 gallons of water when full. The reservoir was constructed in such a manner that only when it was full would the surplus water overflow into still another ditch to convey it farther down the slope to the pueblos of the Cliff and Fewkes Canyons area, some five to six miles south of the concentration basin.

Although Richard Wetherill late in the 1880s, F. H. Chapin in 1890, G. Nordenskiold in 1891, and Fewkes during his excavations at Mesa Verde had seen remnants of reservoirs and ditches in the neighborhood of the large ruins, it was Superintendent Rickner who called attention to the broad intake ditch in 1914. In 1931-33 Lancaster rediscovered it when he was assistant director of the Alkali Ridge Expedition under the direction of Dr. John Otis Brew of the Peabody Museum of Harvard University.

For Brew, the reservoir and ditches were evidences of the fact that dry "farming, ordinary flood-water farming, and irrigation were practised by the ancient Pueblo inhabitants of the San Juan."29

Site 1914, located on the southeast side of Navajo Hill, was excavated in 1964 as a salvage project by Lancaster and Decker with the ruins stabilization crew. The ruin had been noted in 1962 after completion of the preliminary survey for the new road location. This ruin contained sixteen rooms, one kiva, a large circular firepit within the kiva fill and a series of low retaining walls. Architecture and artifacts indicated a late Pueblo II—early Pueblo III, or McElmo Phase, and dated about A.D. 1050 and 1150.  

18. University of Colorado excavations

An archeological program was undertaken by the Department of Anthropology of the University of Colorado during the seasons of 1953-56, under the direction of Dr. Robert H. Lister. In four sessions of fieldwork three sites were excavated: 499, 875 and 866. The clearing and pick and shovel work was accomplished almost entirely by students. Archeologist Lancaster assisted throughout the excavations.

Site 499, excavated in 1953, was located in the Far View area, at the northern end of the mesa. The site

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contained 12 rooms, two kivas and a round tower; it yielded six burials, several thousand sherds and a large number of bone and stone artifacts. This pueblo belonged to the Pueblo II-III period. As the purpose of the excavation was to use the ruin as an interpretive exhibit, the park staff stabilized the ruin after excavation.31

In August 1954 the students from the University of Colorado returned to continue the excavation program. Under the direction of Lister they partially excavated Site 866 in the Far View Group. Surface evidence indicated a small Pueblo III structure consisting of a one or two-room house of double-coarsed masonry and a kiva. Upon excavation, it was found to consist of one very large room and a six-pilastered kiva. Under this ruin was found an earlier ruin consisting of 10 single-coarsed masonry rooms and two kivas. This site was backfilled after excavation.32

Site 875 was tested in 1954, and excavated in 1955 and 1956. It was also located in the Far View group of ruins. It originally consisted of ten surface rooms built in a

31. Robert H. Lister, Contributions to Mesa Verde Archaeology: I, Site 499 (Series in Anthropology No. 9, University of Colorado, 1964); Superintendent, annual report, 1954, MVPF.

32. Robert H. Lister, Contributions to Mesa Verde Archaeology: III, Site 866 (Series in Anthropology No. 12, University of Colorado, 1966); Park archeologist, annual report, 1955, MVPF.
double-rowed unit, and three subterranean kivas. During the excavation the stabilization crew worked with the excavators in order to save leaning walls and loose stones and at the conclusion of the dig, the ruin was completely stabilized, to be used as an exhibit. 33

The work accomplished by the University of Colorado Field School more than met expectations and the research and interpretive programs received considerable benefits in making the Far View group an important interpretive area.

Two salvage projects were also undertaken by the university group in 1965.

Site 1088 is located in Morfield Canyon, near the newly established campground area. Its excavation was forced by the opening of the campground in 1965 and unauthorized digging by visitors in the trash mound of the area. Work at the site was initiated by Lancaster, working then as research archeologist of the University, with a crew of Navajo laborers. Later students supplemented the crew. At least seventeen surface rooms and two subterranean kivas were found in the site, which was occupied during late Pueblo II or early Pueblo III times. 34

33. Robert H. Lister, Contributions to Mesa Verde Archaeology: II, Site 872 (Series in Anthropology No. 11, University of Colorado, 1965); Park Archeologist, annual reports, 1955-56, MVPF.

34. Lister and Jack E. Smith, "Salvage excavations at Site 1088, Morfield Canyon," Emergency Archaeology in Mesa Verde, 5-32.
XIII. LAND PROGRAM

A. Land acquisition

Land problems of the Mesa Verde National Park have involved the acquisition of private holdings within the park, the protracted negotiations with the Ute Indians for the extension of the park boundaries, and lately, negotiations with the Indians for the preservation of antiquities and scenic areas in the Ute Mountain Reservation.

As in other parks, the situation with private properties came about through patents issued for lands in the Mesa Verde before they were considered for national park purposes. Naturally the owners were protected in their rights when the park was established in 1906. In the early days of park development, when visitors were few, the importance of eliminating such private holdings was already apparent. For instance, in 1916 there were three in-holdings totaling 720 acres of choice land on the mesa in the heart of the park and they were used for grazing.¹

¹. Superintendent, annual reports, 1908-16, NA-RG 79.
Some of the private holdings were obtained in the 1920s when Superintendent Nusbaum accepted them in lieu of cash payments for grazing permits, and others through purchase. At the present time there are only two private land inholdings:

<table>
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<th></th>
<th>Acres</th>
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<tr>
<td>Hindmarsh</td>
<td>232.14</td>
</tr>
<tr>
<td>Sheek</td>
<td>315.8</td>
</tr>
<tr>
<td>Total</td>
<td>547.94</td>
</tr>
</tbody>
</table>

Outside of the inholdings, two other parcels of land were added to the park through Congressional legislation. H. R. 15876, approved by Congress and signed by the President on February 26, 1931, permitted him to enlarge the existing boundaries of the park by proclamation. On May 27, 1932, the President added by proclamation a corridor 260 feet wide from the park boundary to the highway now designated as 160. By the Law of December 23, 1963, he was authorized to add approximately 740.52 acres to the park in the vicinity of the north entrance. Of this, 232.14 acres are still privately owned by Hindmarsh.

The bill limited to $125,000 the amount that can be spent for

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2. Hodges to Finnan, March 31, 1933; Finnan to the Director, April 22, 1933; Albright to Finnan, April 29, 1933; Report of Special Agent W. B. Burt, July 20, 1935; Superintendent, annual reports, 1942-43; Nusbaum to Arlo Taylor Robb, Mancos, January 5, 1943; Superintendent, monthly report, October 1969, MVPP. There is a fairly good amount of information about land acquisition, especially inholdings, but it is so contradictory and confusing that it is useless to try to present a clear and accurate picture of the different land transactions.
acquiring the private land. The total acreage of federal land in the park is 51,525.68.\(^3\)

B. Need to extend the park boundaries

As it was mentioned before in the first section of this report, by the agreement of May 10, 1911, the park added 14,520 acres of land on the south boundary; the park deleted 10,080 acres from the west boundary side. In addition, the Utes received 20,160 additional acres of public land around Sleeping Ute Mountain, bringing their total acquired land to 30,240 acres for the 14,520 they ceded the park.

During the 1930s great efforts were made again to extend the park boundaries at the expense of the Ute Indian Reservation. It was felt that the Mancos River was the logical boundary for the park on the south and east because it formed a more natural unit by segregating the section of the mesa north of the river from everything else of similar altitude and biotic character. It was virtually impossible to keep sheep-grazing and poaching out of the park with the existing arbitrary boundary skirting the Ute segment of the mesa plateau. Sheep watering tanks were found on the mesa so near the park boundary that it was impossible

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3. Superintendent, monthly reports, June 1932 and December 1963; Public Law 88-235; Cammerer to Superintendent, February 6, 1932, MVPF.
to tell whether they were inside or outside the park. Numerous signs of sheep grazing were evident within the park. The Ute section of Mesa Verde was valuable for domestic sheep pasture, but was unsuited to the Indian's continued utilization. The vegetation was not of the sod-forming type, so necessary to heavy utilization; it was of the bunch grass type, which disappeared within a few years and exposed the sandy soil to the erosive forces of nature.

According to the 1934 wildlife restoration plan for the park, every phase of wildlife preservation and restoration was contingent upon securing an adequate biological unit for the park.4

On the other hand, the Indians claimed that they needed the entire grazing area. According to D. H. Wattson, superintendent of the Consolidated Ute Agency, the Indians perhaps would be willing to consent to transfer the area in question to the park, "provided lands of equal value for grazing were received by the Indians in lieu thereof." Since no lieu lands were available,

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4. Ben H. Thompson, Wildlife Division, Berkeley, to the Director, October 24, 1933; Memorandum of May 11, 1934 by Superintendent Leavitt, Thompson, Park Naturalist Franke, and Ranger Markley, submitting Wildlife Restoration Plan; Thompson to the Director, May 11, 1934, MVPF.
Wattson saw no immediate way of changing the Indians' minds about the matter.  

The need to extend the south and east boundaries of the park brought to light the feasibility of extending the west boundary to cover the entire Mesa Verde plateau. This area was rich in cliff dwellings and archeological wealth and contained a few good springs of material benefit to wildlife. At one time the northern part of this area belonged to the park, but by the Act of Congress of June 1913, it was ceded to the Ute Indians as partial payment for the land added to the south boundary.  

During the various attempts to obtain new lands from the Indians, they presented certain grievances that made negotiations more difficult. They claimed that the park had for a number of years employed Navajo Indians on labor projects to the exclusion of Utes. These Navajo Indians were constantly encroaching upon the Ute lands with their sheep and horses; they established regular hunting camps on the Ute reservation in the fall and winter for the accumulation of venison and buckskin.  

5. Wattson to Commissioner of Indian Affairs, December 21, 1933; Assistant Commissioner of Indian Affairs to Cammerer, February 8, 1934, MVPF.  
6. Superintendent Leavitt to the Director, May 9, 1935, MVPF.
Late in 1934 the Ute council met with park officials to consider a grievance resulting from the 1913 exchange of public domain for Ute lands containing valuable ruins. Although the Utes received 30,240 acres in the exchange, they contended that the agreement gave them the whole of Ute Mountain, including certain springs. When they began to build a fence to shut out the Navajos, they found out that the most northerly third of the mountain with its much-needed springs was outside the territory they thought they had received in 1913.  

The park officials, in turn, had a grievance against the Indians who apparently exercised little if any control over their livestock. As things now stand, wrote Superintendent McLaughlin in 1941,

we should either give a few of the Indians grazing permits or go into an extensive driftfence construction program. We can not expect the cattle to know when they are in the park and apparently the Indians cannot or will not comprehend what the boundary means. Numerous times during the last few years rangers have either driven the livestock from the park or hunted up the Indians and requested that herds be removed. This procedure seems to get us nowhere, for it is only a matter of time until we go through the same routine with the same Indian or Indians.

7. Superintendent Wattson, Consolidated Ute Agency, to Commissioner of Indian Affairs, December 21, 1933; Charles W. Quaintance, report on wildlife, December 18, 1934 – January 18, 1935, MVPF.
Under these circumstances, said the superintendent, it was impossible to bring about a more harmonious relationship between the Ute Indians and the park. 8

The need for extending the eastern boundaries of the park to include Mancos Canyon was emphasized by a report prepared in 1939 by Park Naturalist Watson.

On September 9 he made an inspection of Mancos Canyon to determine the condition of the ruins in that area. This canyon is located directly south of the park and forms the southern edge of the mesa itself. The canyon contained a great many exceptionally fine pueblo ruins. In the past, some of these ruins had been pot-hunted. Lately the Ute Indian Service had built a road up Mancos Canyon and in 1939 it was being made into a highspeed highway. It was feared that with this added ease of access pot-hunting would be increased.

Watson reported that the condition of the ruins indicated evidence of considerable desecration. In a number of cases the road had been cut directly across ruins and trash heaps, sometimes to a depth of several feet. In no case was this necessary as the canyon bottom was wide and flat. Construction of the

8. McLaughlin to the Director, July 31, 1941, MVPF.
road around these ruins would have entailed no more labor
than cutting across them. Several trash mounds had been
pot-hunted, evidently by experienced diggers, as they dug
directly into graves. Only unbroken artifacts had been taken
away; human bones and broken artifacts were thrown away.
But the principal damage to the ruins had been done in the
course of the road building activities. It was expected that
with the improvement of the road more damage would be done and
pot hunters would be lured into the canyon.

This road through the canyon had been planned since 1934,
hence it could have been averted. The purpose of the road was
to open that region and make it accessible to the Utes for
grazing purposes.¹⁹

In April–June 1942, Erick K. Reed, regional archeologist,
performed salvage excavations at five ruins damaged by the road
construction in lower Mancos Canyon. Twenty-four other open sites
in the same section of the canyon were surveyed. Cliff dwellings
and other sites in side-canyons or mesas were not included.
The excavations were carried out on assignment by the National
Park Service under an inter-bureau agreement with the Bureau of
Indian Affairs for the protection and salvage of archeological
remains along Indian Service road locations.¹⁰

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9. Watson to the Secretary, October 19, 1939, MVPF.
10. Report by Reed, October 1942, MVPF.
By the act of June 28, 1938 (52 Stat. 1209), Congress provided that all lands and rights at any time belonging to the Utes should be considered as taken under eminent domain, and that the court of claims had jurisdiction to award compensation to any bands of Utes whose lands or rights might have been taken without just compensation.

In connection with the above act, Archeologist Nusbaum wrote in 1940:

I suspect that the rights of the Wiminuche Band of Southern Ute Indians, under the Act of June 28, 1938, will be presented before the Court of Claims in due course with respect to the southerly addition to Mesa Verde National Park of 10,080 acres, more or less, of Wiminuche Band lands, under the exchange agreement of May 10, 1911....

Within the past few years, the Office of Indian Affairs ascertained that the lands selected by the Wiminuche Band under the exchange agreement were deeded lands of the Wiminuche Band that had been temporarily withdrawn for some purpose or other, which in effect, constituted the contribution of 10,080 acres, more or less, of their deeded lands to Mesa Verde National Park for the privilege of reclaiming 20,160 acres, more or less, of their own deeded lands.

From time to time through a protracted period, the Utes have been informally protesting the exchange since the spring water supply, probably as a result of drought conditions, allegedly diminished and then largely disappeared.

11. Nusbaum to the Director, February 21, 1940, MVPF.
Thus through an error of either the Indian Service or the General Land Office, the National Park Service inherited a legacy of Indian mistrust in negotiations. They considered the agreement of 1911 an act of robbery.

Nusbaum was absolutely correct. In 1947 the Ute Indians took their claims to court for payment from the United States government for five million acres of land in southeastern Colorado and eastern Utah. In the largest claims, four suits for the confederated band of Ute Indians in Colorado asked compensation for three million acres, including the 14,520 acres added to the park by the agreement of 1911, and as approved by Congress in 1913.12

In spite of the Indians' claim against the U. S. government, the Utes and the park officials had periodic discussions about the possibilities of the park extending its boundaries. Informal negotiations in 1955 centered around an exchange of land. The areas considered were the southern portions of Chapin, Moccasin, Long, and Wetherill Mesas which would be added to the park in exchange for an equivalent acreage in the northeast corner of the park. This would be a distinct advantage to the park as

this area was very valuable from an archeological standpoint. It would also serve as an expansion area to meet the demands of ever-increasing visitors. Approximately 10,000 acres were involved.\textsuperscript{13}

In 1957 the informal negotiations with the Wiminuche Band for a land exchange to add the rich archeological area south of Chapin Mesa were indefinitely postponed. Explorations conducted late in 1956 indicated the possible presence of oil and gas beneath the area under consideration. The Indians were not interested in further talk of land trade at this time.\textsuperscript{14}

C. Management agreement

For the past several years boundary discussions with the Indians have dealt with the Chapin Mesa road at the south end of the park and the Wetherill Mesa road on the west side. Portions of both roads traverse the Ute Mountain Reservation lands. Since the park has not been able to obtain road rights-of-way, the existing right or authorization to use these roads may be revoked by the Mountain Tribe at any time.

However, all the solutions of problems relating to the Ute Reservation lands are definitely tied into an understanding

\textsuperscript{13} Superintendant, annual report, 1955, MVPF.

\textsuperscript{14} Superintendant, annual report, 1957, MVPF.
that Director Hartzog desires to reach with the Mountain Tribe. This understanding, covered in his meeting with Indian representatives on June 23, 1966, in Washington, included an intensive master plan study, not only for Mesa Verde, but including the Ute lands directly south of the park. The study would involve any road development along with appropriate tourist facilities, together with the stabilization and preservation of nationally significant ruins on Indian lands.

In the Washington meeting it was agreed by the Park Service and the Ute Mountain Tribe

that extremely valuable historic and prehistoric sites exist within the study area. It is the intent of the parties that these should be preserved and interpreted for all people, now and in the future, in a way that will not only protect the nationally significant values of these remains but also contribute in a creative way to the economic benefit of the Ute Mountain Tribe. Accordingly, it is the intention of the parties, if agreement is reached on a plan of management and development, that the parties shall proceed to conclude a cooperative agreement for the mutual interpretation and management of the nationally significant resources within the study area and Mesa Verde National Park. 15

15. Hartzog to Scott Jacket, Chairman, Ute Mountain Tribal Council, June 23, 1966; Daniel B. Beard to Superintendent, Mesa Verde, January 19, 1967, MVPF.
Although the Indians are interested in the possible development of lands that have archeological value and potential economic or tourist interest, the Tribal Council has voted down Hartzog's proposal several times mainly because of tribal misunderstandings. Superintendent Guillet and his staff still have high hopes that the Utes will some day accept the management agreement suggested by the director.16

It has been known for a long time that the Ute lands adjacent to the park contain prehistoric ruins that are of great scientific value. In 1968 a University of Colorado archeological team under contract to the Bureau of Land Management surveyed 967 sites south of Dove Creek and west of Cortez. Sites charted varied from simple campsites to large pueblos and from water control structures to areas with drawings and carvings of stone. They were dated from about 600 A. D. to 1300 A. D.

Although protected by the Antiquities Act, many of the larger sites had been badly damaged. According to the BLM the inventory would be used in a program to protect the scientifically and historically valuable sites during construction of pipelines,

16. Guillet to the Director, June 6, 1967; Charles J. Traylor to Guillet, October 9, 1967; Guillet to Regional Director, March 5, 1968, MVPF.
ditches, roads, or other facilities and during mineral explorations.\textsuperscript{17}

Chief Park Archeologist Gilbert R. Wenger stated on September 17, 1969, that the Ute Indian ruins needed immediate protection and stabilization.

Since stabilization techniques have never been applied to the ruins, many are in imminent danger of collapse from natural erosion or from visits from people. I am sure that members of the Tribe are aware that sonic booms, caused by high flying military aircraft, are causing some weakened ruins to collapse each year. Each year the stabilization needs are delayed, the less potential remains for development. I would strongly recommend that the Tribe take immediate steps to protect the ruins and to train personnel in stabilization techniques in order to save these important ruins for mankind and future economic interpretive use by the Tribe.\textsuperscript{18}

These ruins, besides being of great scientific and cultural value, stated Superintendent Guillet, are valuable for the economic development of Ute resources.

Tourism is perhaps the greatest single factor in the economy of the Four Corners Region and is growing by leaps and bounds. Because of the impact of travel and the need to maintain the quality interpretive programs at Mesa Verde,

\textsuperscript{17} Cortéz Sentinel, Cortéz, Colorado, June 24, 1968.

\textsuperscript{18} Wenger to General Superintendent Guillet, MVPF.
as well as prevent damage to our park resources, we may have to limit visitation to Mesa Verde National Park. The development of facilities in Mancos Canyon or on Ute lands could be of significant value to the tribe and every effort should be exerted to preserve and protect the ruins as well as the environment in which they are located from spoliation until such time as they might be developed for visitation. \(^{19}\)

In the above statement, therefore, lies the importance of the management agreement proposed by Director Hartzog on June 23, 1966. \(^{20}\)

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19. Guillet to Espeedie Ruiz, Superintendent, Ute Mountain Ute Indian Agency, MVPF.

20. What prompted the director's proposal in 1967 was that the Utes by 1964 were becoming quite interested in the possibilities of obtaining income from tourism and apparently were considering submitting a proposal to turn part of their reservation to the National Park Service, with the Utes to receive a portion of the gate receipts and other income collected by the park. Superintendent, monthly report, May 1964. Superintendent, annual report, 1964, MVPF.
Mission 66 was a 10-year program initiated in 1956 to develop and staff the National Park Service areas in order to meet the requirements of an expected 80 million visitors by 1966. Construction was an important element of the program. Outmoded and inadequate facilities would be replaced with physical improvements adequate for expected demands, but so designed and located as to reduce the impact of public use on valuable and destructible features. It would provide both adequate facilities and personnel for visitor services and assure the fullest possible degree of protection to visitors and resources.

More effective protection of both the scenic and prehistoric values was the primary objective of Mission 66 plans for Mesa Verde National Park. This was to be accomplished by decentralizing activities and dispersing facilities. Space within the park that could be devoted to development was limited and the plans under Mission 66 proposed to make the most efficient and least damaging use of such space.

Certain factors, like the law that established the park, the nature of the terrain and the distribution of the prehistoric Indian ruins imposed severe limitations on the space available for development of visitor use. Such limitations exerted a tremendous influence on the planned use and development of the park.

In the early days when the park was opened to the public, the availability of water was a deciding factor both as to location and
type of facility. Water determined the location of the Spruce Tree area developments. Once the physical developments were started, they grew by gradual accretion until they by far exceeded the original concept and the capacity of the site to accommodate the demands of the 1950s. The slow growth by gradual expansion at Spruce Tree Point continued even after water was brought in from some 30 miles away and water was no longer a controlling factor.

Through necessity at first and then by tradition, Spruce Tree Camp became the center of all activity with a concentration of all facilities and services for the visitor, concession operations and park administration. The intermingling of unrelated activities, competing with each other for more space, added to the general confusion and congestion of facilities. The situation became increasingly acute through the years as the number of visitors increased. Not only was space badly needed for visitor accommodations and services, but also for visitors to maneuver around. In that respect the park was no different from an urban area where a mobile populace was demanding more and more roads and parking to ease traffic congestion and hazards.

Several years before the inception of the Mission 66 program it became quite evident that something had to be done to expand the park's interpretive facilities in order to meet the ever growing number of visitors. Travel had increased steadily since the creation
of the park. Since 1946, when total travel was 39,843, it had increased by average annual increments of more than 13,000 to reach a 1956 total of 186,808 visitors. Statistical projections of the annual increases indicated that the three main cliff dwellings and the mesa-top ruins on Chapin Mesa would soon reach a bursting point.

Prior to 1957 consideration was given to several means of expanding the facilities and attractions on Chapin Mesa. Some of these included the relocation of the park administrative facilities, extending the park road on to the southern portion of Chapin Mesa, and the concept of day-use activities. But it soon became apparent that because of lack of space at Spruce Tree Camp for any further concessioner development, campground expansion, and other facilities, and lack of additional large cliff dwellings that could be developed for a large visitation, any further development on Chapin Mesa would seriously compound the problem. Only by sacrificing archeological values could additional space be obtained to expand the Spruce Tree Camp development.

As originally planned, the Mission 66 scheme of reorientation of park activities would be accomplished through a phased program of physical and management improvements. The physical improvement program provided for the development of three new sites for visitor use—Morfield Canyon, Navajo Hill, and Wetherill Mesa—and the rehabilitation and improvement of certain of the existing developments at Spruce Tree Camp.
How the three sites would be used was explained briefly in the 1957 prospectus:

At Navajo Hill—the key unit of the plan—there will be constructed the facilities and structures required for the personal needs of the visitor, such as lodging, eating, supplies, information, and orientation. Navajo Hill might aptly be termed the visitor service center of the Park...

The Wetherill Mesa development will include construction of the access road, parking overlooks, trails, branch visitor center, comfort station, and seasonal employee quarters. In general, the development will be held to a minimum with simple facilities to preserve the primitive character.

The Morfield Canyon development will include all the facilities required for a campground capable of accommodating approximately 500 camping parties.

The development at the Park entrance will include a new entrance station, comfort station, ranger station, road improvements, and park administrative facilities.

At Spruce Tree Camp the development would consist almost entirely of reconditioning the area and converting it to an archeological interpretive center for daytime visitor use. Among the improvements contemplated were enlargement of the museum, preparation of a lunchroom, road improvements, a large parking area, walks, picnic area, and the removal of all buildings not essential to the planned use of the area.
With respect to interpretive operations the basic proposal in the early planning phases was to develop Wetherill Mesa as a complete interpretive unit similar to, and as an alternate for, Chapin Mesa, and to establish Navajo Hill as a control and dispersal point with a large well-equipped visitor center. In other words, Wetherill Mesa would be an equal to Chapin Mesa in the number of people it would accommodate, the number of ruins open to the visitor, and the interpretive and physical facilities provided.

On August 14, 1957, Director Wirth concurred in the proposal to use the Wetherill Mesa for expansion of the park's visitor interpretive features. Following this the park prepared and submitted a research and development program on June 10, 1958, which was approved by the Director.¹

¹. Mission 66 Prospectus, 1967; Master Plan Narrative, December 11, 1961; there are four thick files of general correspondence in the park, dealing with early stages of the Mission 66 program, MVPF.
XV. WETHERILL MESA DEVELOPMENT

A. Joint undertaking

As part of the Mission 66 program, one of the most significant research undertakings in the history of Mesa Verde National Park was begun late in 1958. This research program, known as the Wetherill Mesa Archeological Project, was a joint effort of the National Park Service and the National Geographic Society. It was to be completed in six years.

Wetherill Mesa is one of the several finger-like mesas characteristic of the area. Many cliff dwellings are situated in the bordering canyon walls; the mesa top is dotted with ruins of earlier structures. During the 1934 fire that swept the mesa it was necessary to bulldoze a trail across the north rim to supply the fire-fighting crews. When it became obvious years later that another area of the park would have to be developed to handle steadily increasing travel, Wetherill Mesa was chosen for development for two reasons. First, the 1934 access road, though primitive, existed. Secondly, the Wetherill Mesa cliff dwellings were as spectacular as those on already developed Chapin Mesa. The attractions of the two areas would balance each other and achieve an even distribution of traffic.

During the 1959 fiscal year, Congress appropriated $63,700 to begin the project. National Geographic Society officials
became interested in the research program soon after its
inception on June 1958. In September, a party consisting of
Melville B. Grosvenor, President; Melvin Payne, Vice-President
and Assistant Secretary; Dr. Lyman J. Briggs, Chairman, Research
Committee; and Dr. Frank H. H. Roberts, Jr., Director, Bureau
of American Ethnology, spent a week in the park looking over the
proposed work. After their return to Washington, the Board of
Directors of the society voted to collaborate with the National
Park Service and to make substantial monetary contributions.
The society's initial donation was $50,000, followed by three
additional research grants of $50,000 each in 1960, 1961, and
1962. These grants would be devoted to research activities that
could not be financed by federal funds, such as excavation,
stabilization, laboratory work, and writing of the archeological
reports. As of 1964, the project was envisioned as expending
some $795,000 from the National Park Service, supplemented by
$250,000 from the National Geographic Society. Superintendent
Chester A. Thomas, who saw the project through, said the National
Geographic's donation provided "the cream for making Wetherill
a meaningful archeological undertaking." It provided the extras
in scientists, equipment, all sorts of items and services the
Park Service could not purchase with its appropriation.¹

B. **Scope of the program**

Wetherill Mesa Project was a two-phase operation. First, excavation and stabilization of a series of prehistoric cliff and mesa-top ruins would be performed for use in the interpretive program as exhibits-in-place. In the second phase, the construction of roads, trails, overlooks, museum, indoor and outdoor exhibits, picnic areas and concession-operated lunch facilities, utilities, and the like would be undertaken.

According to the prospectus for the research and development program prepared by Park Archeologist Carroll Burroughs in June 1958, the program would encompass the following:

1. A complete archeological survey of Wetherill Mesa.

2. Excavation of a series of mesa-top ruins representative of all cultural periods present on the mesa top.

3. Complete excavation of two major cliff ruins and partial excavation of a third.

Excavations of the mesa-top ruins would include representative

examples of house and village types (pithouse, jacal, slab, and single—and double-coursed masonry); farming terraces and isolated special-purpose structures. This series should show a continuous cultural development from Basket Maker III (A. D. 500) through early Pueblo III (A. D. 1200). Excavation of the cliff ruins, which seemed to have been built and occupied during A. D. 1200-1300, would complete the series.

Besides the advantage of opening up a whole new segment of the park for visitation, and the anticipated increase of the interpretive resources, the project would result in far-reaching scientific accomplishment. It could be anticipated, wrote Park Archeologist Burroughs,

that these excavations will produce a cohesive body of scientific information on all of the temporal phases within a single geographic unit. They possibly will discover Basketmaker II material of which we now know nothing in this area. They will certainly confirm and augment our knowledge of the Basketmaker III—through early Pueblo III mesa-top sites. They will provide a wealth of material and scientific data, now completely lacking, on the Classic Pueblo III cliff ruins.

Inherent in a program of such scope are the unlimited possibilities for continuing research into every facet of life of a people of a single geographic area, including their contacts and relationships with people of other areas. Analysis of the material recovered will give an integrated picture of the prehistoric Mesa Verde. Excavation of representative sites of each cultural phase, besides delineating cultural trends and transitions,
may well produce the needed clues for understanding the peculiar and apparently rapid population shifts which seem to have started in this northern San Juan area in the Pueblo II times and climaxed with the complete abandonment of the Mesa Verde by the end of Classic Pueblo III. Through the excavation of the cliff ruins it may be possible for the first time to determine something of the hardships, pressures and other conditions of the 1200's which resulted in this final exodus. Understanding what took place in the Northern San Juan or Mesa Verde area prior to A. D. 1300, will be of immeasurable value in defining lines of future research in the area south of San Juan for the period A. D. 1300 to the coming of the Spanish in A. D. 1540.2

Only three cliff dwellings were to be excavated in the program: Long House, Step House and Mig House.

Long House, a huge and spectacular cliff ruin, is second only to Cliff Palace in size. Although early looters ransacked most of the rear rooms "the depth and extent of the rubble along the front give promise of relatively undisturbed trash areas and house blocks," wrote archeologist Burroughs. It was hoped a series of deeper rooms buried under the fill at the east end of the ruin would be found. Complete excavation of this ruin was contemplated.

2. Archeologist Burroughs, Wetherill Mesa Research and Development Program, June 1958, MVPF.
Step House is a large overhang which contains some unique cultural elements: three Basket Maker III pithouses (ca. A. D. 600) and a late Pueblo III cliff ruin (A. D. 1200-1300). These elements illustrate the "earliest and latest in the Mesa Verde architectural series." The early portions of Step House were partially excavated by Nordenskiold in 1891, and Nusbaum in 1926. Only partial excavation of the late structures were planned in the research program.

Mug House is a medium-sized cliff ruin. Although excavated and ransacked by pot-hunters in the 1800s, "the upper levels are largely intact, the trash mound appears to be untouched, and there are indications of rubble-filled rooms in certain sections which may have been overlooked earlier." Complete excavation of this ruin was considered.\(^3\)

C. General plan of work

During 1957 and 1958 Park Archeologist Burroughs was in charge of the initial phases of the Wetherill Mesa Project connected with preparation of financial estimates, staffing requirements and organization of general facilities. In the spring of 1958 Archeologist Douglas Osborne was selected to supervise the project.

Of the regular staff members selected, Archeologist Alden C. Hayes was the first to arrive, in August 1958. Osborne arrived early in September, followed by Archeologist George C. Cattanach

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3. Ibid. 342
who came late in the same month. Hays' task was the survey of the mesa, and Cattanach's the excavation of Long House. The winter of 1958-59 was spent organizing and shaping the project, and planning the camp and the excavation program on the ground. Gretchen G. Hays, Richard P. Wheeler, and Arthur H. Rohn, Jr., were hired in 1959 as secretary, laboratory chief, and archeologist, respectively.

The project's office and laboratory was a prefabricated steel building, 120 feet long and 50 feet wide, occupied early in September 1959. Besides Wheeler as laboratory chief, the laboratory was staffed with five museum aids. Lucy P. Wheeler was hired as a secretary in November 1961.

"Fieldwork started early in the spring of 1959," wrote Supervisor Osborne,

with two major objectives: the excavation of Long House, and the establishment of the camp and its facilities. Work went on concurrently in the two, and the camp, above and slightly west of Long House, was well established by autumn...

During this summer Cattanach was in overall charge of the fieldwork and camp building. Rohn assisted in the excavation of Long House, and James A. Lancaster was transferred from the park's maintenance staff to take charge of the stabilization program. Hays and his survey crew were busy on the talus slopes and cliffs of the mesa. The winter of 1959-60 began the laboratory work in earnest...
The spring of 1960 saw the laboratory staff caught up with the previous year's fieldwork and ready to embark on current material.
During this year the field staff was reorganized to put Hayes, who now had the survey work moving well, in charge of the field operation. Lancaster, made available to the project throughout the entire field season, took over direction of the excavations. Cattanach was able to put in full time at Long House; Rohn was assigned to the new excavation of Mug House. J. Anthony Pomeroy served as seasonal archeologist during the summer, taking series of pollen samples and partially excavating Sites 1205 (a small rock shelter) and 1539 (a terrace and check-dam site).

Director Wirth enlisted the help of four of the country's outstanding archeologists to act as an advisory group for the Wetherill Mesa Project. These men were: Dr. John Otis Brew, Director, Peabody Museum, Harvard University; Dr. Frank H. H. Roberts, Jr., Director, Bureau of American Ethnology, Smithsonian Institution; Dr. Emil W. Haury, Director, Arizona State Museum, University of Arizona; Dr. Robert Lister, Chairman, Department of Anthropology, University of Colorado.

The archeological survey of the Wetherill Mesa was completed in the spring of 1960, having recorded 800 sites. In the following spring Hayes completed excavation of Site 1205 and started work on Site 1452, a Pueblo II--Pueblo III ruin. This

5. Superintendent, annual report, 1960, MVPF; Hayes, 2.
last ruin was known as Badger House.

In January 1961 the laboratory staff was increased with the addition of Carolyn M. Osborne, textile analyst, cataloger, and professional assistant. Fred E. Mang, Jr., came late in the year as project photographer.

By the end of the 1961 season the excavation and stabilization of Long House and Mug House were completed. That same year Jack R. Rudy, Assistant Park Archeologist of Mesa Verde, made an interpretive survey and prepared a prospectus of the Wetherill Mesa. "Rudy examined," wrote Osborne,

the areas which appeared to offer the best interpretive possibilities, as recommended by Hayes on the basis of the archeological survey, and submitted alternative suggestions for the interpretive loop. Sites have been chosen which will follow one another along the road and will lead the visitor on a logical trip from the earlier into the later archeological manifestations.6

Work during the summer of 1962 included continuation and completion of the Badger House excavation; excavation of Basket Maker III pithouses, Site 1644, by Hayes; excavation and stabilization of Step House by Robert F. Nichols; and excavation of two mesa-top sites, 1595 (Pueblo II—III) and 1645 (Pueblo II)

6. Hayes; Rudy’s prospectus, MVPF.
by Jervis D. Swanack, Jr. It was Lancaster's main responsibility to plan and control excavations and to stabilize all the ruins. In the season of 1963 an early mesa-top (Site 1676) pueblo was excavated. This was the last archeological field season; the next two years were spent by archeologists in final analysis of the material recovered and in writing reports.

In connection with publications, Osborne stated in 1964:

The publication program contemplated by the project is a large one. We plan monographic treatment of the survey and of each site excavated, followed by specialized studies of certain aspects of the archeological recovery. These reports will be published in essentially the same manner and format as Hayes' Survey.

Each of the special aspects of ancillary research supported by the National Geographic Society program—about 32 in all—will either contribute to the site monographs or be published independently. The soil, ecological, and dendrochronological-climatic studies will obviously all require separate treatment; the dendrochronological itself and others will appear with the site reports.

During the course of the Wetherill Mesa Project the archeological work was enhanced by having long-range studies and

7. For Site 1595 see Jervis D. Swanack, Jr., Wetherill Mesa Excavations, Big Juniper House, National Park Service, U. S. Department of the Interior (Washington, 1969). This site was excavated under the general supervision of Lancaster.

8. Hayes, J. For more detailed information about the excavation program of the Wetherill Mesa, see Osborne, the Superintendent and the Park Archeologist monthly reports from 1959 to 1963, MVPF; Carroll A. Burroughs, "Searching for Cliff Dwellers' Secrets," The National Geographic Magazine, CXXVI, 5, (November 1959).
detailed analysis conducted by scientists of other disciplines. Geologists, palynologists, dendrochronologists, physicists, chemists, pathologists, botanists, mammalogists, climatologists and many others assisted the staff archeologists in gaining a clearer insight of life in prehistoric times.  

D. **Status of Wetherill mesa development**

In the early planning stages of the Mission 66 program, Wetherill Mesa would be developed equally to Chapin Mesa in the number of ruins open to the public, the method of interpretation, the number of people it would accommodate, and the physical facilities available to the public. In 1967, however, the Director determined that the approach to Wetherill Mesa be a comparatively low standard road. A method of circulation was proposed that would not require large parking terraces; a minitrain or mini-bus was suggested for traffic control around the archeological areas.  

What happened to the concept of equality between Chapin and Wetherill Mesa was summarized by Superintendent Guillet in a letter to the Director on March 24, 1967. After Director Wirth approved

9. Osborne, monthly reports, 1960-63, MVPF.

the research and development program of 1958, wrote Guillet,

all planning and programming in the park, Regional Office and Washington, centered on the concept that Wetherill Mesa would be developed as an area comparable to Chapin Mesa. Its function would be to provide additional attractions in the park in order to disperse visitation and to relieve the overcrowding of the Chapin Mesa ruins. The Navajo Hill Visitor Center area was a key feature in this development plan in that it was ideally located to affect the more or less equal distribution of visitors to the two mesas.

On July 11, 1958, Director Wirth presented to the National Geographic Society a proposal inviting them to participate in the scientific aspects of the Wetherill Mesa excavations. As you know, they accepted and generously contributed to the project.

On September 13, 1961, a joint meeting of the Scientific Board of the National Geographic Society and the Wetherill Mesa Advisory Group (several prominent non-Service archeologists asked to act as advisors to the project by the Director in 1960) met in the park to review the progress of the archeological program. It was only a few months after this meeting that the idea of retaining Wetherill Mesa more or less as a "primitive area" and thus reversing all the original concepts behind the program came to the foreground. Unfortunately, a search of the park's files has failed to turn up any correspondence relative to this change in the intent of the project, and none of the park staff who might have personal knowledge of the events at this critical time are now with us.

During the May 8-10, 1962 Advisory Group meeting held in the park, this change in the approach to the utilization of Wetherill Mesa was one of the foremost topics discussed. In their report to the Director, the Advisory Group recommended that the
original concept for the development end
use of Wetherill Mesa be adhered to
(Enclosure 5). A statement reaffirming
the purpose of the Wetherill Mesa Project
was prepared and submitted with the
Advisory Group report (Enclosure 6).

On July 20, 1962, Superintendent Thomas
wrote the Regional Director requesting that
serious consideration be given to early
programming of construction funds to
construct the necessary roads and other
facilities to implement the opening of
Wetherill Mesa in the immediate future
(Enclosure 7).

This letter evidently prompted some serious
thinking and review of the planning and
programming of the project in the Washington
Office. In a memorandum of October 8, 1962
to the Southwest Regional Director, Director
Wirth reaffirmed his intention to continue
the development and use of Wetherill Mesa
as originally conceived (Enclosure 8). (We
do not have a copy of the Regional Director's
memorandum of August 8, 1962, referred to in
Director Wirth's memorandum.)

It has been on the strength of the Director's
memorandum of October 8, 1962, that we have
continued to plan and program for the unlimited
use of Wetherill Mesa. This is why we are now
at a loss in understanding the recent events
which seem to be leading us to plan and program for
only limited use of the area. If Mesa Verde is
to survive the constant increase in visitation and
to provide for the fullest use and enjoyment of
the public, Wetherill Mesa must be accessible and
usable on an equal basis with Chapin Mesa. The Chapin Mesa ruins, although having received the brunt of all park visitation during the past 50 years, have been protected and preserved and are still prime exhibits that can be saved for many generations. However, this will not be the case, if we cannot disperse the foreseeable visitor load and demand.\footnote{11}

After several years of changes, proposals and counterproposals, the Mission 66 program still lags behind. Some elements of the program have been completed, others are in the process of completion, while some others are still on the drawing boards.

Morfield Campground-Village complex has become an important activity center. Located about five miles from the park entrance, the Village contains almost 500 individual and group campsites, a 1500-seat amphitheater for campfire programs, horseback, hiking trails, and a shopping center. During the first 29 days of August 1967, a total of 43,577 persons used the facilities of Morfield Campground.\footnote{12}

At Navajo Hill, Far View Motor Lodge was opened in 1964, including a cafeteria, a room-rental office, a handcraft shop and newstand, a small beverage lounge, and a service station. In 1968 the National Park Service opened the Navajo Hill Visitor

\footnote{11. MVPF.}

\footnote{12. Campground Program, 1970; Superintendent, Minutes of Staff Meeting, August 1967, MVPF.}
Center, an interpretive and information facility. It will be from Navajo Hill, located at the crossroads leading to Wetherill Mesa, where visitors' flow for both mesas will be controlled.\(^{13}\)

The already famous Wetherill Mesa ruins have yet to be opened to the public, although their excavation and stabilization were completed several years ago. Delays in construction of about 21 miles of road to the ruins have occurred for one reason or another. It is still a question when the physical development of the mesa will be completed.\(^{14}\)

Meanwhile, the ruins of Chapin Mesa long ago reached the saturation point.

Former Superintendent Nusbaum predicted in 1930 that when travel reached 50,000 a year, the park would reach the saturation point. In 1969 the park had 513,771 visitors, of which 167,375 were campers. During the first 25 days of August 1970, a total of 1,222 cars, representing 4,644 persons, were turned away from

\(^{13}\) Superintendent, annual reports, 1964 and 1968, MVPF.

\(^{14}\) As of November 5, 1970, "contracts have not been let as yet for the parking lot at Wetherill or for the mini-train route. These are supposed to be issued in the late spring of next year for completion next summer. Trails to Long House are under construction but has closed for the winter now. Trails to Step House and Mij House are to be done next FY ('72) as it now stands." Park Archaeologist Wenger, memorandum to Historian Torres-Reyes, November 5, 1970; see also Superintendent, Minutes of Staff Meeting, October 27, 1970.
the campground at the park entrance. During this same period 19 cars representing 72 persons were turned away from lodging in the park, due to facilities being full.15

During the 1964 fiscal year, rapidly increasing travel resulting from the opening of the Navajo Trail across the spectacular reservation area of northern Arizona, and publicity resulting from the Wetherill Mesa Project, pointed out the critical need for increased interpretive staffing to handle ruins visitation and protection. In 1963 a maximum of 20 seasonal and 3 permanent interpreters handled 1,361,000 interpretive contacts and yet the services offered fell far short of meeting the demand. Guided trips through the cliff dwellings were dangerously large both for visitor safety and for protection of the fragile and unstable ruins.16

In his annual report of 1965 Superintendent Thomas wrote:

All facilities are showing the effects of the strain, the ruins most of all. Very likely it will be mandatory next summer to limit the trips into Balcony House as this prehistoric gem has more than reached its breaking point. A system for use next summer was discussed with Regional Chief of Interpretation Barrel. We are of the opinion the matter can be handled with little or no difficulty, just as trips are handled in the

15. Superintendent, Minutes of Staff Meeting, August 25, 1970, MVPF.
16. Superintendent, monthly reports, July 1963 to June 1964, MVPF.
caves in France and "turns" are handled in barbershops and many other places. Americans, being in the rush they are to get to the next place, probably will not wait long for trips and thus the system itself will be an effective tool in limiting the size and number of parties into the ruin.

The problem at Cliff Palace was also discussed. With hundreds of people per hour and rangers being forced to yell above the racket, interpretation at this site is rapidly becoming a farce. The cave acts as a sounding board for scuffling feet, wails of crying kids, the rangers' voices; bedlam is the rule of the day all summer long. We may be forced to limit interpretation to what can be accomplished at the "viewpoint," station men at intervals across the front of the ruin, and allow people to visit the site without having to wait for guided trips. We have learned from Spruce Tree House that few people will pay any attention to the numbered "stations" in the site or refer to their guidebooks, so making Cliff Palace self-guiding is out. Self-guiding is not a device for use in ruins unless forced into it as we were at Spruce Tree House to try and give the short-term visitor something. Also, the same situation prevailed at Spruce Tree House as now prevails at Cliff Palace but was even worse due to the low cave overhang.17

To alleviate crowding and to protect Cliff Palace and Balcony House from the seasonal impact, a limitation on tour size was instituted in 1967 and is still in effect. Visitors are required to secure and present a ticket in order to take a tour to Cliff Palace and Balcony House. Parties are now restricted to 75 persons on trips through Cliff Palace and about 45 on the Balcony House.

17. MVPF.
tour. With this system, as Superintendent Thomas predicted, the greatest number of visitors go away without seeing two of the three principal ruins of the park.¹⁸

As an experiment to determine if they could get more visitors through Cliff Palace in a given day, the interpretive personnel operated this ruin on a self-guided basis on August 5, 1970. A one-page mimeographed information sheet was prepared. Several numbered stations were set up and three rangers were assigned to duty in the ruin at all times. They were able to get 3,160 visitors through the ruin—about 600 more than the normal of 1,450. One related problem was a massive traffic jam in parking lot with extremely heavy visitation the first two hours—about 600. Although the park personnel were not satisfied that the experiment was a good test, wrote Archeologist Wenger,

We found the trouble areas and with minor changes could make the system operable if it should become necessary to resort to such system at a later date. Nearly everyone agrees that self-guiding operations are not as desirable but may become a necessity if we are to keep visitors under control and to get them through the cliff dwellings.

¹⁸ Ranger-guided trips are conducted in both ruins on the hour and half-hour from 9:00 A.M. through 6:00 P.M.
If there were a large auditorium where visitors could be preoriented and given the story of the cliff dwellers then the self-guiding method would be acceptable and perhaps just what we need to provide the most visitors with the best experience.19

A. Research agreement

In the field of resource studies the most important event for the park in 1965 was the successful negotiation of a 15-year cooperative agreement with the University of Colorado creating the University of Colorado Archaeological Research Center in Mesa Verde National Park. Dr. Robert H. Lister of the University Department of Anthropology was the director of the center. Research would be directed towards a more comprehensive understanding of the archeology of the San Juan drainage area and the area's position and relation to the greater Southwest. Dr. Lister, a former National Park Service employee and then a member of the Service's Mesa Verde Advisory Committee—formerly the Wetherill Mesa Advisory Committee—was eminently qualified to direct the research. He had conducted excavations within Mesa Verde National Park, surveys, salvage and excavations in other Service areas and worked with or conducted Service-contracted survey and salvage projects.

One valuable term of the contract called for the university to conduct survey and salvage, on a reimbursable basis, on all construction projects. The center also signed other agreements which included an inventory or survey of the archeological resources on lands under the jurisdiction of the Bureau of Land
Management in southwestern Colorado, and a survey of ruins on a portion of the Ute Mountain Indian Reservation immediately south of Mesa Verde.

As part of the arrangement with the University of Colorado, the park provided a dormitory facility for the research center personnel and the fully equipped archeological laboratory built and used by the Wetherill Mesa Project. The laboratory was made available for processing, analyzing, and storing specimens, for the preparation of photographic and cartographic records, and the writing of reports upon completed research projects.

So far most of the working crews have been students of the University of Colorado who have been employed as field or laboratory laborers or assistants, and have received on-the-job guidance and instruction in archeological methods and theories.¹

During the several summers that the research center has been in operation, staff archeologists and students from the University of Colorado have been engaged in a variety of archeological activities in the park. It is the purpose of the following chapter to summarize briefly the scope and purpose of the field work.

¹ Park Archeologist, annual report, 1965, MVPF; Emergency Archeology in Mesa Verde, 1-4. The agreement was signed by Park Superintendent Chester A. Thomas and Vice-President Thurston E. Manning, University of Colorado, on April 15. Superintendent, monthly report, April 1965, MVPF.
B. **Chapin Mesa**

1. **Salvage at Sites 1088 and 1086**

   With Lister as director and Lancaster as research archeologist, the University of Colorado Archeological Research Center began operations on June 7, 1965, with the salvage of Site 1088, located near the newly-established campground facility of Morfield Canyon. This ruin had been a constant source of annoyance since the time it was cut by the road through the head of Morfield Canyon in the 1920s. With the opening of the Morfield Canyon Campground vandalism increased.

   Work at the site was initiated by Lancaster with a crew of five Navajo laborers; later students from the University of Colorado supplemented the crew.

   Site 1088 was reburied completely and the original surface reestablished so that its existence is not obvious. However, photographic records and a composite map of the village were prepared. The village contained at least 17 surface rooms and two subterranean kivas, with numerous terraces built on a hillside.²

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² Robert H. Lister and Jack E. Smith, "Salvage excavations at Site 1088, Morfield Canyon," *Emergency Archaeology*, 5-32; Superintendent and Park Archeologist, monthly reports, June 1965, MVPF.
On completion of the salvage, the crew moved to the
top of the knoll on which the Morfield water tank is
located to test Site 1086, what appeared to be a tower
structure. Lister was in general charge of the project;
Lancaster directed the field work, assisted by Jack E.
Smith and Thomas Bowen, all of the staff of the University
of Colorado. The test revealed such unusual features it
was decided to proceed with full-scale excavation. The
structure was a completely above-ground kiva with subfloor
ventilator built on a platform. As the site was unique,
it was stabilized by a park crew directed by David A.
Decker. Research on the site was supported by a grant
from the National Science Foundation.3

2. Salvage at Sites 1094 and 1093

Through testing in the Far View area, Lister was
gaining a better picture of the story of that settlement,
a problem he and Lancaster hoped to work on the next few
years. This had to be stopped and the group moved to

3. Robert H. Lister, Contributions to Mesa Verde Archaeology; IV. Site 1086, an isolated, above ground kiva in Mesa Verde National Park, Colorado, Series in Anthropology No. 13, University of Colorado Press, February 1967, 25 pages; Superintendent and Park Archeologist, monthly reports, June and July 1965, MVPF.
Sites 1094 and 1093 in preparation for the improvement of the road to Wetherill Mesa. It was apparent that parts of both sites would be obliterated by road construction. The two areas were excavated during the summer under the direction of Lancaster and Calvin H. Jennings. University of Colorado students, aided by two local workmen, accomplished the digging of the ruin.

Both sites were located on the East Fork of Navajo Canyon. Only the trash area south of the ruin was explored. Excavations exposed three definable rooms which were in an advanced state of decay.4

3. **Site 1067**

One of the most interesting and significant works initiated by Lister in July 1965 was the excavation of the Great Kiva in Morfield Canyon, that is, Site 1067. This was an excellent example of these specialized ceremonial structures and the first actual open site so far excavated in the Mesa Verde. The standing room walls around the kiva were banked high with dirt and the trenches backfilled to a depth of two or more feet. A test trench was dug eastward

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down the slope from the kiva through the trash area. Several burials were found and a corner of a small ruin, Site 1929, was cut. Trenching was begun westward towards Site 1927. The area to the north was also tested to get the relationship of the various house remains to the kiva. At one point the trash in this area extended to a depth of 14 feet. At the bottom of this test trench the remains of some kind of pit structure were found.

Work was also begun in the summer of 1967 on the suspected reservoir (Site 1931) in Morfield Canyon. A two-man crew also initiated a survey study of possible tower sites along the north rim of the park. In an area just below Site 1067 Lister and his students found a Pueblo I Great Kiva with lots of timbers for tree-ring dating. Part of the roof was collapsed and there was "P-1 pottery all over the floor."  

4. Site 60

This site was a large pit structure in the Pithouse B-Twin Trees area in a dense cluster of Basket Maker III and Pueblo I sites which was partially excavated by Lancaster in 1941; in 1965 it was completely cleared and roofed over.

5. Superintendent and Park Archaeologist, monthly reports, July-August 1965; July 1966; June-July 1967, MVPF.
The site proved to be a large, unlined, unfinished pit structure. 6

5. **Far View area**

Research at this area, supported by the National Science Foundation, continued throughout the month of July 1965. Additional tests were conducted and a trench between the building complex and the south retaining wall was run. Considerable fire-burned debris and a large, slab-lined firepit were found.

During the summer of 1968 Lister and 27 students, aided by Dr. Jack E. Smith and Research Archaeologist Lancaster excavated the major portion of Site 820, a Pueblo III ruin in the Far View Group near Navajo Hill. In the summer of 1969 they were joined by Dr. David Breternitz. Clearing of the site was supported by National Science Foundation funds. A tower, five kivas, and at least 35 domestic rooms were uncovered during the excavations. There was evidence that the site was occupied from late Pueblo I times into early Pueblo III.

6. Superintendent and Park Archaeologist, monthly reports, July 1965, MVPF.
Visitors were allowed to observe the excavations, under a controlled situation. Several thousand visitors came to the site and it was estimated that about 600 viewed the dig one day in August 1968. Many were extremely interested in watching archeologists at work.7

In a brief summary report Assistant Chief Park Archeologist Ingmanson noted the following about the excavation of Site 820:

While the excavation was in process the National Park Service hosted a Bureau of Land Management Four-State conference dealing with the problem of Antiquities on Federal Lands administered by BLM. During the conference the BLM managers and specialists were given a guided tour through Site 820 by Dr. Lister. Members of the local staff, and Dr. John Corbett and Staff Archeologist Jack R. Rudy from Washington, represented the National Park Service.

The location of Site 820 along the park entrance road offered a wonderful opportunity to provide on site-interpretation for visitors to the park. Each day, during the excavation, a uniformed man was at the site to answer questions and to provide interpretation of the field work. Visitor reaction was excellent.

Another far-reaching benefit of importance was that of immediate stabilization. During the course of the excavation the park stabilization crew worked right behind the excavators, and often side by side with them. This is a fortunate situation because

7. Dr. Lister, monthly reports to the Superintendent, Mesa Verde National Park, June-August 1968 and 1969, MVPF.
it assures a maximum reliability regarding fine details of construction which could easily be neglected in delayed stabilization. By mid-fall Ruins Stabilization Foreman Al Decker, and his four-man crew of Navajo had completed the excavated portion of Site 820. By mid-summer 1969, the final excavation and stabilization had been completed, making the site ready for interpretive devices and use.

After the completion of work at Site 820, Lister decided to excavate a portion of Mummy Lake. In this area the excavations would be connected with the interpretation of the water catchment (reservoir) story. In his monthly report of July 1969, he stated that three weeks of testing at Mummy Lake has exposed two intake systems into the reservoir, surrounding walls that served to retain the sediments that periodically were cleaned from the bottom of the structure, a set of stone steps and perhaps several ramps that descended into the reservoir, and other features that provide information as to the history of the water control system. Numerous test trenches have revealed the nature of the deposits in and surrounding the reservoir, and are exposing ditches or canals adjacent to the structure. A backhoe will be employed this week to open a series of extensive trenches in the bottom of the reservoir proper. All indications suggest that Mummy Lake was functional during the Pueblo II period.

8. Report by Archeologist Ingamson, August 1969, MVPF.
In August he reported again:

Testing of Mummy Lake was completed and most of our exploratory trenches adjacent to the reservoir were backfilled. A few trenches were left open to facilitate stabilization of certain features. Trenches in the bottom of the reservoir proper, dug by backhoe, revealed the nature of the water-laid deposits there, and additional hand-dug trenches demonstrated the presence and nature of the canals that fed the reservoir and confirmed the location of the canal that continued south down Chapin Mesa. At the conclusion of our investigations Al Decker and his crew moved into Mummy Lake to begin the stabilization of the retaining walls and other features of the structure.9

C. Wetherill Mesa

1. Site 1104

During the summers of 1965 and 1966 Site 1104 was excavated as part of the archeological salvage program connected with the development of roads, trails, water and sewage systems, and other contemplated facilities on Wetherill Mesa. Site 1104, a Pueblo II site on the upper part of the mesa, would be destroyed by the approach road.

Most of the excavation work and preparation of records was done by students. Lister was in general charge of the project. Jack E. Smith and Lancaster shared the direction of the field work in 1965. Dr. Breternitz directed the group in 1966.

9. Dr. Lister's reports are in MVPF; see also Superintendent, Minutes of Staff Meeting, June 27, 1969, MVPF.
The site excavated is the ruin of a small village of early Pueblo III or McElmo Phase times. It consisted of at least twelve single-story rooms built to the north and west of a subterranean kiva.  

2. **Site 1926**

This site is an isolated Pueblo III kiva located southeast of Long House. It was excavated because the nearby cliff was the location of the exit tunnel of a proposed elevator shaft to take visitors to and from Long House. The landing platform for the elevator would be constructed directly over the kiva. A crew was assigned to its excavation during the summer of 1966, but nothing outstanding was encountered. After the kiva had been cleared, it was mapped, photographed and backfilled, as were other areas excavated by the University of Colorado group.

3. **Site 1107**

This site, a small Pueblo II ruin, was excavated during the summer of 1966 because the structure lay on the proposed road right-of-way at the upper end of Wetherill Mesa.


The site was not particularly significant; it consisted of the ruins of three rooms attached to four areas that were identified as work areas.  

4. **Sites 1677 and 1925**

Site 1677 is located in the proposed Wetherill Mesa Visitor Center parking area. It was excavated in the summer of 1966. One firepit and a stone-lined pit were found.  

Site 1925, at the upper or northern end of the mesa, is located on the proposed right-of-way for the road to the archeological zone. Upon excavation in 1966, a small cist was found apparently for storage purposes.  

5. **Mini-train route**

On June 10 Bretermitz and his staff arrived with 25 students to prepare field plans for the 1970 field school.

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operation. Among the staff were Dr. Frank W. Eddy of the University of Colorado and Lancaster. As the contract for the construction of the mini-train was to be awarded that summer, the first priority was to survey the mini-train route and conduct any salvage operation necessary. Also surveyed was the proposed parking lot area. During the three-month period about 25 sites were investigated in the mini-train route and the parking lot area.

In his monthly report of August, Breternitz wrote:

Preliminary cleaning and tabulation of artifacts was completed in the field. During the coming academic year, the graduate student who supervised the Wetherill Mesa excavations will continue detailed studies of the materials recovered and utilize the data as a portion of his doctoral dissertation. Two other students are assisting in this laboratory analysis. Questions which still need to be answered revolve around the fact that the area of the proposed parking lot where Pueblo I material were reported has produced ONLY Basketmaker III materials, even after extensive excavation and testing.

There are undoubtedly additional undetected archeological remains within the limits of the proposed parking lot. It is essential that this area be checked by someone familiar with the locality when construction, earth moving/tree removal operations are begun.15

15. Dr. Breternitz reports, June-August, 1970; Chief Park Archeologist Wenger to Chief, Division of Archeology, July 10, 1970, MVPF.
APPENDIX A

An Act Creating the Mesa Verde National Park

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there is hereby reserved from settlement, entry, sale, or other disposal, and set apart as a public reservation, all those certain tracts, pieces, and parcels of land lying and being situated in the State of Colorado, and within the boundaries particularly described as follows: Beginning at the northwest corner of section twenty-seven, township thirty-five north, range sixteen west, New Mexico principal meridian; thence easterly along the section lines to the southwest corner of the southeast quarter of section twenty, township thirty-five north, range fifteen west; thence northerly to the northwest corner of the southeast quarter of said section; thence easterly to the northeast corner of the southeast quarter of said section; thence northerly to the northwest corner of section twenty-one, said township; thence easterly to the northeast corner of the northwest quarter of said section; thence northerly to the northwest corner of the northeast quarter of said section; thence easterly to the northeast corner of the southeast quarter of section six, said township; thence northerly to the northwest corner of the northeast quarter of section nine, said township; thence easterly to the northeast corner of the southeast quarter of section forty-two, said township; thence southerly to the northwest corner of the southeast quarter of section twenty-six, said township; thence easterly to the northeast corner of the southeast quarter of said section; thence southerly to the northeast corner of the southeast quarter of said section; thence easterly to the northwest corner of the southwest quarter of section seven, township thirty-five north, range fourteen west; thence easterly to the northeast corner of the southwest quarter of said section; thence northerly to the northwest corner of the northwest quarter of said section; thence northerly to the northwest corner of the northeast quarter of said section; thence easterly to the northeast corner of the southeast quarter of said section; thence southerly to the northwes...
said township; thence easterly to the northeast corner of section two, township thirty-four north, range fourteen west; thence southerly along the section line between sections one and two and between sections eleven and twelve to the northern boundary of the southern Ute Indian Reservation; thence westerly along the northern boundary of said reservation to the center of section nine, township thirty-four north, range sixteen west; thence northerly along the quarter-section lines to the northwest corner of the southeast quarter of section twenty-eight, township thirty-five north, range sixteen west; thence easterly to the northeast corner of the southeast quarter of said section; thence northerly to the northwest corner of section twenty-seven, said township, the place of beginning.

SEC. 2. That said public park shall be known as the Mesa Verde National Park, and shall be under the exclusive control of the Secretary of the Interior, whose duty it shall be to prescribe such rules and regulations and establish such service as he may deem necessary for the care and management of the same. Such regulations shall provide specifically for the preservation from injury or spoliation of the ruins and other works and relics of prehistoric or primitive man within said park: Provided, That all prehistoric ruins that are situated within five miles of the boundaries of said park, as herein described, on Indian lands and not on lands alienated by patent from the ownership of the United States, are hereby placed under the custodianship of the Secretary of the Interior, and shall be administered by the same service that is established for the custodianship of the park.

SEC. 3. That the Secretary of the Interior be, and he is hereby, authorized to permit examinations, excavations, and other gathering of objects of interest within said park by any person or persons whom he may deem properly qualified to conduct such examinations, excavations, or gatherings, subject to such rules and regulations as he may prescribe: Provided always, That the examinations, excavations, and gatherings are undertaken only for the benefit of some reputable museum, university, college, or other recognized scientific or educational institution, with a view to increasing the knowledge of such objects and aiding the general advancement of archaeological science.

SEC. 4. That any person or persons who may otherwise in any manner willfully remove, disturb, destroy, or molest any of the ruins, mounds, buildings, graves, relics, or other evidences of an ancient civilization or other property from said park shall be deemed guilty
of a misdemeanor, and upon conviction before any court having jurisdic-
tion of such offenses shall be fined not more than one thousand
dollars or imprisoned not more than twelve months, or such person
or persons may be fined and imprisoned, at the discretion of the
judge, and shall be required to restore the property disturbed, if
possible.

Approved, June 29, 1906.¹

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¹ Congressional Record, 59th Congress, 1st Session, 1906, XL, Part 9, p. 8818.
APPENDIX B

Early Museum Collections from Mesa Verde (Wetherill-Mason)\textsuperscript{1}

1st. Collection:
Made by the Wetherill Brothers, mainly Al, and Charles Mason the winter of 1887-88, in Johnson Canyon. Sent by B. K. Wetherill to Mrs. Chain of Denver (wife of one of the partners of the Chain-Hardy Stationers and Booksellers of Denver) who had visited and explored the cliff dwellings in the Mancos Canyon and was very interested in them.

2nd. Collection:
December 18, 1888, in Cliff Palace, by Richard Wetherill and Charles Mason. The items of interest picked up by the two discoverers, including a stone axe with the handle still attached. Probably added to the 4th collection.

3rd. Collection:
Made by Charles McLoyd, Howard Graham and L. C. Patrick and John Wetherill December 22, 23, 24 and possibly 25 at Cliff Palace. (Mason states that he and Richard returning from the discovery trip met the McLoyd-Graham-Patrick party - they told of their finds and these men became so interested they took 3 or 4 days supplies and accompanied by John Wetherill left immediately for Cliff Palace where, before their supplies were used up they found as much stuff as they could carry out. (The dates given are on the basis of John Wetherill's statement to C. M. Finnan that he believed Cliff Palace was discovered the 18th as he first saw it December 22, 1888 and worked in it until sometime in January 1889.)

I can't seem to find out what happened to this collection. It is possible that this was combined with the 4th, which in turn was combined with the 5th and according to Mason sold to the Colorado State Historical Society. It could be too, that McLoyd-Patrick-Graham combined it with one of their later collections from the Grand Gulch area.

\textsuperscript{1} Prepared by Park Archeologist Jean Pinkley, Mesa Verde National Park, 1960s.
In connection with this, the 4th and 5th collections there is some doubt in my mind as to what actually happened to the material. In the Art Catalogue of the Minneapolis Industrial Exposition of 1892 (the 7th Exposition) it states that at the Sixth Annual Exposition there was shown a collection of mummies, tools, potteries and relics collected by Richard Wetherill and Brothers. That it was the interest in this collection (displayed in Minneapolis in 1891) which led Mr. H. Jay Smith to organize the Smith-Exploring Expedition to Southwestern Colorado, Utah and New Mexico. The mention of mummies would lead me to think that at least part of the collection made in the winter of 1889-90 was displayed here as it wasn't until the spring of 1889 that the first mummy was discovered - the one of a small child found by Clayton Wetherill and Charles Mason, (the 5th collection). However, Mason says that in the winter of 91-92 they started in to enlarge the collection of the winter of 89-90, which had not yet been disposed of. It is possible that part of the collection of 89-90 (the 6th) was sent to Minneapolis for display. If it were not for the mummies one would wonder if maybe the 4th and 5th collections, which were displayed at Durango and then taken by McLoyd to Denver and sold to the State Historical Society might not have been loaned by the State Historical Society to the Minneapolis Industrial Exposition for display.

4th. Collection:

Made by the Wetherills and Mason (with possibly the McLoyd-Graham-Patrick party for part of the time as Charlie says "they camped with us for some time") the winter of 1888-89. This collection made in Cliff Palace, Spruce Tree House, Square Tower House and Johnson Canyon. This collection was displayed in the spring of 1889 in Durango, then added to the 5th collection, taken by McLoyd to Denver and sold to the State Historical Society.

5th. Collection:

Made in three weeks late in the spring of 1889 after the boys returned from making the 4th collection and had taken it to Durango for exhibit. This was made by Clayton Wetherill and Charles Mason, and on this expedition they made some good finds, including the first mummy ever discovered, that of a child of a few months of age. This was added to the 4th collection, the entire combined collections taken to Denver by McLoyd and there sold to the Colorado State Historical Society.
6th. Collection:

Made the winter of 1889-90; started in December of 1889; by Richard, John Al and Clayton Wetherill and Charles Mason. It was made in the Mancos Canyon (Sandal House); The branch of Johnson Canyon known as Acowitz Canyon (Fortified House); the left fork of Johnson Canyon (She House); Cliff Canyon (Cliff Palace); Navaho Canyon (Square Tower House); Spruce Tree Canyon (Spruce Tree House); Long Canyon (Spring House, Step House and possibly others); Rock Canyon (Mug House, Long House, High House (?), Kodak House and other smaller, un-named ruins). This collection was combined with the 8th and sold to H. Jay Smith and C. D. Hazzard of Minneapolis in 1892 and exhibited by them at the Minneapolis Industrial Exposition (7th) of 1892 and later at the World Columbian Exposition (First Chicago World's Fair) of 1893, and, according to Mason, later donated to the University of Pennsylvania Museum. Articles known to have been collected on this expedition of 1889 include the skeleton of the man in the buckskin jacket (Minneapolis Art Catalogue Nos. 1576-77); the mummy "She", Cat No. 1575; and possibly Cat. Nos 1610-11, the bashed skulls from She House.

7th. Collection:


8th. Collection:

Made in the winter of 1891-92; by the Wetherill Brothers and Charlie Mason, to enlarge the collection made the winter of 1889-90 (no work done the winter of 90-91). In the spring of 1892 the combined 6th and 8th collections were sold to H. Jay Smith and C. D. Hazzard of Minneapolis and exhibited by them at the Seventh Annual Minneapolis Industrial Exposition of 1892, and later at the World Columbian Exposition (First Chicago World Fair) of 1893; and later, according to Mason, donated to the University of Pennsylvania Museum.

9th. Collection:

Made later in 1892; by the Wetherill Brothers and Charles Mason for the state of Colorado to be used as part of the State Exhibit at the First Chicago World's Fair of 1893. Made under the direction of A. F. Wilmarth, of Denver; and the field direction of D. W. Ayers, of Durango and Richard Wetherill, of Mancos. Sold to the State Historical Society of Colorado and now, at least in part, in that institution. There was considerable Step House material in this collection.

(This was the last collection made by the Wetherills and Mason in Mesa Verde.)
**APPENDIX C**

Superintendents of **Mesa Verde National Park**

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<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Dates</th>
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<tbody>
<tr>
<td>William D. Leonard</td>
<td>Acting Superintendent</td>
<td>10-8-06 to 5-2-07</td>
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<td>Charles F. Werner</td>
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<td>Hans M. Randolph</td>
<td>Superintendent</td>
<td>8-31-07 to 4-19-11</td>
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<td>E. B. Linnen</td>
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<td>4-20-11 to 5-4-11</td>
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<td>Samuel Shoemaker</td>
<td>Superintendent</td>
<td>9-30-11 to 12-23-13</td>
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<td>Thomas Rickner</td>
<td>Superintendent</td>
<td>12-24-13 to 5-31-21</td>
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<tr>
<td><strong>Jesse L. Nusbaum</strong></td>
<td>Superintendent</td>
<td>6-1-21 to 3-15-31</td>
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<td>C. Marshall Finnan</td>
<td>Superintendent</td>
<td>3-16-31 to 10-8-33</td>
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<td>Ernest P. Leavitt</td>
<td>Superintendent</td>
<td>11-16-33 to 10-11-35</td>
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<td>Paul R. Franke</td>
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<td>1-1-36 to 7-31-39</td>
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<td>Superintendent</td>
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<tr>
<td>Meredith M. Guillet</td>
<td>Superintendent</td>
<td>8-1-66 to</td>
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1. From Roster of National Park Service Officials, May 1, 1953.
### APPENDIX D

**Total Park Travel Through December 1970**

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ILLUSTRATIONS
PLATE 1

Spruce Tree House, Plaza D, before restoration (Fewkes' Report, 1908).
PLATE 2

Spruce Tree House, Plaza D, after restoration (Fewkes' Report, 1908).
PLATE 3

Cliff Palace from the north, before restoration. (Fewkes' Report, 1909).
PLATE 4

Cliff Palace from the north, after restoration. (Fewkes' Report, 1909).
PLATE 5

Mug House before excavations of the Wetherill Mesa Project (circa 1959 photo, HA Files).
PLATE 6

Mug House, looking north, after excavations of the Wetherill Mesa Project (1963 photo, HA Files).
PLATE 7

Long House, west side, before excavations of the Wetherill Mesa Project (1958 photo, HA Files).
PLATE 8

Long House, east end, after excavations of the Wetherill Mesa Project (1963 photo, HA Files).
The Knife Edge Road overlooks the Montezuma Valley from an altitude of 8,572 feet (Photograph by Willard R. Culver, c. 1948, National Geographic Society).
PLATE 10

A narrow ledge and a fortified tunnel was the only approach to Balcony House. Visitors today climb this 30-foot ladder to enter (Photograph by Willard R. Culver, c. 1948, National Geographic Society).