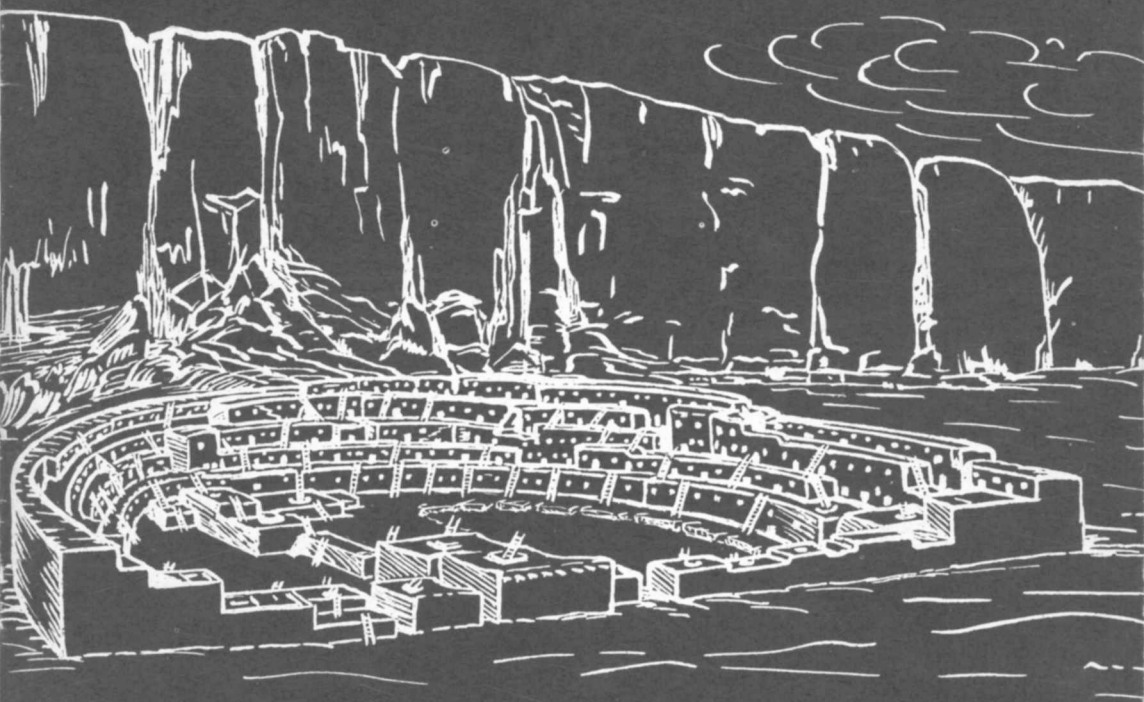
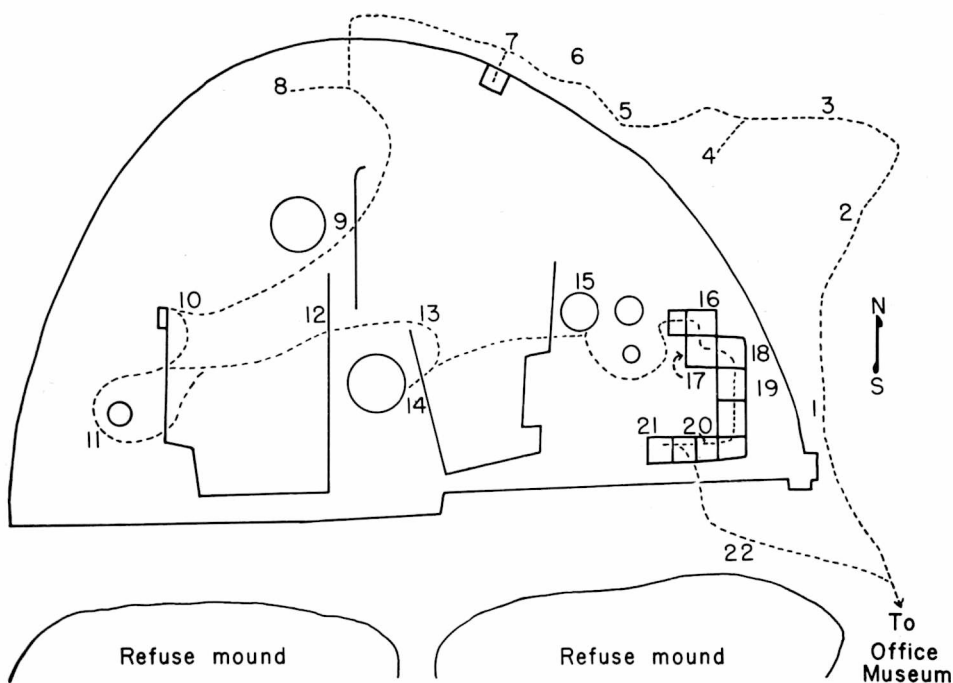


PUEBLO BONITO



15 CENTS IF YOU TAKE THIS BOOKLET HOME

CHACO CANYON NATIONAL MONUMENT
NEW MEXICO



PUEBLO BONITO TRAIL ROUTE

NATIONAL PARKS AND MONUMENTS

Chaco Canyon National Monument, one of more than 280 areas administered by the National Park Service, United States Department of the Interior, was set aside because of its outstanding archeological values. These areas belong to you and are part of your heritage as an American citizen. The uniformed employees of the National Park Service are here to assist you and will welcome the opportunity to make your visit to Chaco Canyon more enjoyable.

The National Park Service was created to preserve the Parks and Monuments for your enjoyment and that of future generations. Federal law prohibits activities which would destroy any of the works of nature or of man, which are preserved here. These include such activities as hunting, woodcutting, collecting — even the taking of small pieces such as broken pottery. Please help us preserve Chaco Canyon National Monument, and remember, a thoughtless act on your part can destroy in a few moments something that has been here for centuries.

2 This pile of sandstone boulders was once a large vertical section of cliff, known as Threatening Rock. It was separated from the cliff by wind and water erosion probably long before construction work on Pueblo Bonito began, and stood out away from the cliff very much as does the rock to your right.

The Indians, fearing the collapse of the rock, constructed at its base a series of short walls to reduce erosion of the soft sandstone rather than to support the rock. It is here that the only remaining portion of those walls is found.

The walls served their purpose. Threatening Rock did not fall until January 22, 1941, during an unusually wet winter. Approximately 100 feet of the back wall of Pueblo Bonito was destroyed and 30 excavated rooms buried.

3 The rock material around you is known as the Cliff-house Sandstone, part of the Mesa Verde Formation. It was formed at the bottom of a sea, during Cretaceous time, approximately 70 million years ago. If you will look closely at the flat rock above Marker 3, you will notice the weathered remains of fossil sea shells. Between the thick beds of sandstone are thin layers of coal, shale, clay and crystalized gypsum, material used by the Indians in making pottery, jewelry and ornaments.

4 This is the best place (excepting the cliff top) for an overall view of Pueblo Bonito, which is over 3 acres in area. When occupied it had approximately 800 rooms, and reached a height of 4 and 5 stories in some places.

As you look over the canyon floor and surrounding country it looks quite barren, but such has not always been the case. When the Pueblo Indians first occupied this district, it was probably covered with a sparse stand of pinyon and ponderosa pine.

Because of the dry climate and intensive use by the Indians, changes gradually occurred. There was no longer sufficient plant cover to hold back runoff from summer rains, and corn fields were flooded and covered with mud and alkali. In other places arroyos cut through the fields,



destroying needed farmland and lowering the water table.

These and other factors eventually caused the Pueblo people to become discouraged and move away from Chaco Canyon. They no doubt felt it would be easier to start over elsewhere than to continue living here.

The Indians probably left the area in small groups and families, with some going southward toward the present day Zuni country, and others moving eastward to the Rio Grande, where many Pueblo Indians still live.

The Indians living in the vicinity today are the Navajos, who arrived in this region long after Pueblo Bonito was abandoned.

◀ *Wall Construction, Pueblo Bonito*

5 Notice the extreme thickness of the wall. This thickness provides strength to support multiple-storied construction. As walls grew higher and had less weight to carry, they were made thinner.

As this point you can also see that only the layers of stones on the outside and inside of the walls have been squared. The wall cores are made of rough, unshaped stones.

6 This section of wall represents some of the finest stone work in all of Chaco Canyon.

Along this section Pueblo Bonito was at least four and possibly five stories high. Imagine how many hundreds of tons of stone and timber were used in the building! Remember also that all of this material had to be transported and placed by hand, for the Pueblo Indians had no pack animals and knew nothing of the wheel. The only domesticated animals they had were dogs, turkeys and macaws — small parrots kept for their bright feathers.

You are now standing at the roof level of the first story. At the top of the wall to your right you can see some tie-beams which the Indians put in for reinforcement.

7 Here is a room with the original roof still in place. Step inside if you like. The larger timbers are ponderosa pine and above that are peeled willows. On top of the willows is a layer of split juniper and juniper bark covered with 4 to 6 inches of hard-packed earth, which forms the floor of the room above.

You may have noticed the masonry here is of a different style from that at the last stop. This type of construction is somewhat older than that found at Marker 6.

By looking at the roof timbers you can see that a great deal of care was taken with them. Timbers were cut with stone axes and carried to the building site, in some cases a distance of several miles. The bark was then carefully peeled and smoothed off with a piece of sandstone. Ceiling beams were set in the masonry wall and the rest of the roof laid on top.

Farther along toward station 8, you can see one fork of the trail which continues on parallel to the cliff. This fork leads to a prehistoric set of steps cut into the stone walls of the cliff. There are several other sets of similar stairways scattered throughout the canyon. These rock cut stairways are often part of elaborate, well engineered prehistoric roadways that connected one major pueblo town to another. The roadways are wide (up to 30 feet), have bases of bedrock or hard packed earth, and are sometimes walled along both sides of the route. Running for miles, they may



One of the two Great Kivas in Pueblo Bonito

have been used for communication, trade, or even ceremonial purposes.

We do not recommend the use of this ancient trail, as the steps are steep and can be hazardous.

8 You are now in the oldest Section of Pueblo Bonito. One indication of its age is the very crude type of masonry used. To the right, notice the two modern roofs. They protect ancient floors which you are welcome to inspect. On your right you can see some small vertical poles stuck in masonry walls. These are an early type of wall reinforcement.

You are now standing on the second story level. The rooms beneath this level have been filled in for preservation purposes.

9 The large circular room is known as a Great Kiva. It probably served as a ceremonial center for some of the residents of the pueblo. A more elaborate Great Kiva will be described for you at Marker 14.

10 In this room were found the bones of 17 women, 6 children, and 1 man, the largest group of burials discovered in Pueblo Bonito. Most of the bones had been scattered around the room for some undetermined reason.

With the burials were found pots, baskets, tools and

jewelry. These items were probably placed with the dead to help them make the journey from this life into the after-world.

The 100 burials recovered in Pueblo Bonito represent only a small percentage of the total number which could be expected to be found in or near a village of this size. Where the rest of the villagers are buried is still unknown but the burials in the floor of the canyon at least, have probably been covered by 2 to 6 feet of sand deposits or destroyed by erosion.

No doubt many of you are interested in the excavation of a ruin. It is a slow and exacting undertaking, for most ruins are buried under many feet of wind-blown sand and fallen building stones. Here at Pueblo Bonito, in some cases as much as 16 feet of such material covered the floors of the rooms. From 1896 to 1899 the Hyde Exploring Expedition excavated 189 rooms of Pueblo Bonito. It took from 1921 to 1927 for the National Geographic Society to finish the job.

Because excavation takes so much scientific skill and knowledge, and cannot be done properly by a person without training, there are both federal and state laws which prohibit digging in any ruin on federal or state property without written permission from the secretary of the bureau concerned, or the appropriate state authority.

11 The small circular room is known as a kiva. It was used by special groups as a ceremonial center, council room, club house, and for other functions, but never as living quarters. The lift-top stand near you contains a model of the structure with a description of its features.

Metates and manos, used for grinding corn and seeds



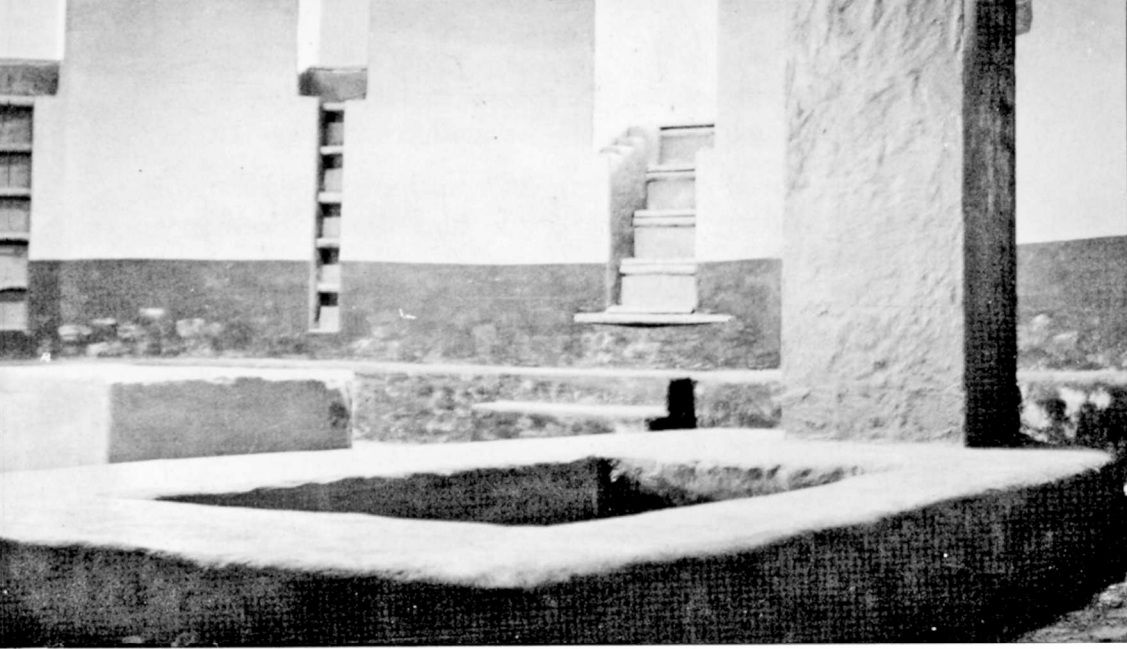
*Retrace your steps and return to the courtyard.
Look straight ahead and you will see Marker 12.*

12 The grooved stones along this wall are called metates (meh-TAH-tays). They and the handstones, or manos, were used by Pueblo Indians to grind corn and other seeds into flour. As the meal was being ground, a great deal of grit was unavoidably mixed with it. Through the years a diet of cornmeal and crushed standstone eventually wore away the teeth, until in old age the Indians had little left but stubs. In addition, they often suffered the miseries of decay, and occasionally abscesses.

Since these people were dependent upon cornmeal as their principal food, metates and manos are the most common items found in the ruins.

13 This large, flat area was the courtyard or compound where the people did most of their work and day to day living when weather permitted. Ceremonies and dances were held out here, as well as in the kivas. The courtyard is at about the same level now as when in use by the Indians. With a little imagination you can visualize the scene on a summer day 800 or 900 years ago—adults busy with handicrafts or standing around in small groups discussing their problems, frolicking children causing concern to worried mothers, and yapping dogs raising small clouds of dust.

14 Here is another example of a kiva. This one is very much like the first one you saw at Marker 9, only a little more complex. The small niches in the wall around the room probably served as storage spaces or depositories for ceremonial objects. In the Great Kiva at Chetro Kettle just up the canyon, more than 130 feet of beads, when strung, were found in similar niches. Entrance to this kiva could have been made by means of the stairway at the north end of the room, and possibly, also, by use of a ladder thrust through a roof entrance. *Please do not attempt to use this stairway.* The structure left of center is a fire box, and the four nearly-square formations nearest the bench were the bases upon



Interior view of the reconstructed Great Kiva at Aztec Ruins National Monument

which rested the four great masonry pillars that supported the enormous roof. The longer rectangular boxes are generally considered to have been foot drums or resonators. They were covered by planks on which ceremonial participants stood to tap a rhythm.

Casa Rinconada, one of the largest Great Kivas in the Southwest, is located across the canyon. You are encouraged to visit it. At Aztec Ruins National Monument, 59 miles north of here, you may visit a completely reconstructed Great Kiva.

15 Here are several small kivas typical of Chaco Canyon. Their function was the same as the small kiva you saw at Marker 11. You will note that this kiva has no columns for supporting the roof. The roof in this instance was built on top of the pilasters along the bench. The small holes cut in the top of the wooden timbers you see around the bench held objects of ceremonial use including small shells, beads, and fragments of turquoise.

In the floor you can see the wall of an even older kiva,

which was leveled by the Indians to make room for a larger one.

The open corner spaces between the kivas and surrounding wall in this area resulted from the construction of circular kivas in abandoned rectangular rooms. These spaces were always filled with dirt to make the kivas subterranean—a fundamental feature of the kiva.

16 This sizable room was probably used at one time as living quarters. Notice that the roof was destroyed by fire, as were many others in this section. The floors of most rooms in the pueblo were of hard-packed clay. They were swept and sprinkled with water from time to time to keep them hard. There are a few instances in Pueblo Bonito where floors made of hewn planks or flagstone have been unearthed.

17 Normally a single family occupied one room, using it as kitchen, living room and bedroom. Small adjoining rooms were utilized for storage. Not all of the rooms in the pueblo were in use at one time even at the peak of occupation. As the pueblo grew in size and height, rooms in the back were abandoned, because of difficult access and lack of ventilation and light. The people usually preferred to occupy rooms which opened directly onto the courtyard, or those on the upper stories which faced it.

Look up to the level of the second story and you will notice a corner doorway. This type of doorway is common in Pueblo Bonito and could only be constructed in thick walls such as the occupants of the pueblo built.

These rooms may not seem to offer much space for one family, but the Indians had no furniture and conducted most of their activities outside. Room interiors served mainly for protection during bad weather, or for sleeping. Beds consisted of pallets or mats placed on the floor.

18 As you travel from room to room notice the small size of the doorways. The builders of the pueblo were no smaller than modern Pueblo Indians. Men averaged about 5 feet 4 inches in height and women 5 feet. Doorways were

made small to keep rooms warm and assure a strong wall above. To secure some privacy and to protect themselves against the cold, the Indians covered their doorways with a blind made of reeds or peeled willows.

In-line doorways may once have provided improved ventilation for living rooms. Many of these lower rooms were later converted to storerooms, with windows and doors sealed. Roof hatchways provided access from newer, upper living rooms. People moved over terraced rooftops to get from rear living rooms to the plaza.



In-line doorways.

19 Notice the sealed door and window in the east wall. These could have been sealed by the inhabitants for several good reasons. Perhaps many of the people left the pueblo hoping to return, so they filled doorways with stone, then covered them with plaster.

Again, after living or storage rooms were abandoned, they were sealed off for use as burial chambers, or as trash dumps, in which case refuse was thrown through a hole made in the ceiling.

20 This is one of the few “T” or key-shaped doorways in the pueblo. This type of opening is found throughout the Southwest and is very common at Mesa Verde, though rare at Chaco Canyon.

21 Here is another room with an original roof. This room is being restored to resemble a living room in Pueblo Bonito 900 years ago.

These rooms were warm in the winter and cool in the summer. Their thick walls of stone plastered with adobe mud insulated the rooms from Chaco's cold winters and hot summers. Living rooms sometimes had their walls brightened by "whitewashing" them with adobe that had been whitened by adding powdered gypsum. Some walls were further decorated with geometric designs painted in colors of red, blue, yellow and green made from various minerals.

Today, the bare stone walls of surrounding rooms reflect little of the quality of life once enjoyed by the residents of Pueblo Bonito.

22 The long, low ridge in front of you is the Pueblo Bonito village dump. At all pueblos refuse was carried in baskets or pots to the nearest convenient spot which was in many cases in front of the building. This ridge or midden mound is the accumulation of 20 feet of floor sweepings, ashes, bones, broken pottery, tools and other trash the people could no longer use. These items, like the ruins themselves, are important archeological remains and are protected by federal law. *Please do not walk on the trash mound.*

PLEASE RETURN THIS BOOKLET OR DEPOSIT 15¢ IN THE STAND NEAR YOU.

We hope you have enjoyed your trip through Pueblo Bonito. The National Park Service Rangers are here to assist you in any way they can, and will do their best to answer your questions.

OTHER THINGS TO SEE WHILE IN THE MONUMENT

1. The VISITOR CENTER is located 4 miles east of Pueblo Bonito. There you will find museum exhibits which will add greatly to your understanding of the prehistoric occupation of Chaco Canyon.

2. The CASA RINCONADA TRAIL is located across the canyon from Pueblo Bonito. Guide booklets may be obtained from a lift-top stand near the parking area.

3. OTHER MAJOR RUINS are accessible by short foot trails leading from roadside parking areas. *When you visit these ruins do not walk on walls or stand near leaning walls.*

CONSERVATION—YOU CAN HELP

If you are interested in the work of the National Park Service and the cause of conservation in general, you can give active expression of this interest, and lend support by alining yourself with one of the numerous conservation organizations which act as spokesmen for those who wish our scenic heritage to be kept unimpaired for the enjoyment of future generations.

Names and addresses of conservation organizations may be obtained from the ranger.

OTHER ARCHEOLOGICAL AREAS IN THIS REGION

Aztec Ruins National Monument - - near Aztec, New Mex.
Mesa Verde National Park - - - - near Cortez, Colorado
Bandelier National Monument - near Santa Fe, New Mex.
Canyon de Chelly National Monument - near Chinle, Ariz.
Navajo National Monument - - - - near Tonalea, Arizona

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of the National Park Service.*

We recommend the following items for
additional information on the Southwest:

YOUR NATIONAL PARK SYSTEM IN THE SOUTHWEST, IN WORDS AND COLOR. Jackson. 500 word articles on each National Park Service area in the huge Southwest region, with full-color photograph for 57 of the 59 areas listed. Most authoritative treatment possible, by former career N.P.S. employee, with every text checked for accuracy by each area's superintendent. Also contains "How to Get There" appendix. 68 pages, 61 full-color illustrations, color cover, paper.

100 DESERT WILDFLOWERS IN NATURAL COLOR. Dodge. Descriptions and full-color portraits of 100 of the most interesting desert wildflowers. Photographic hints. 64 pp., full-color cover, paper.

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**Trademarks of the
ancient dwellers of Pueblo Bonito were
the distinct patterns and unusual designs
of their black-on-white
pottery**

