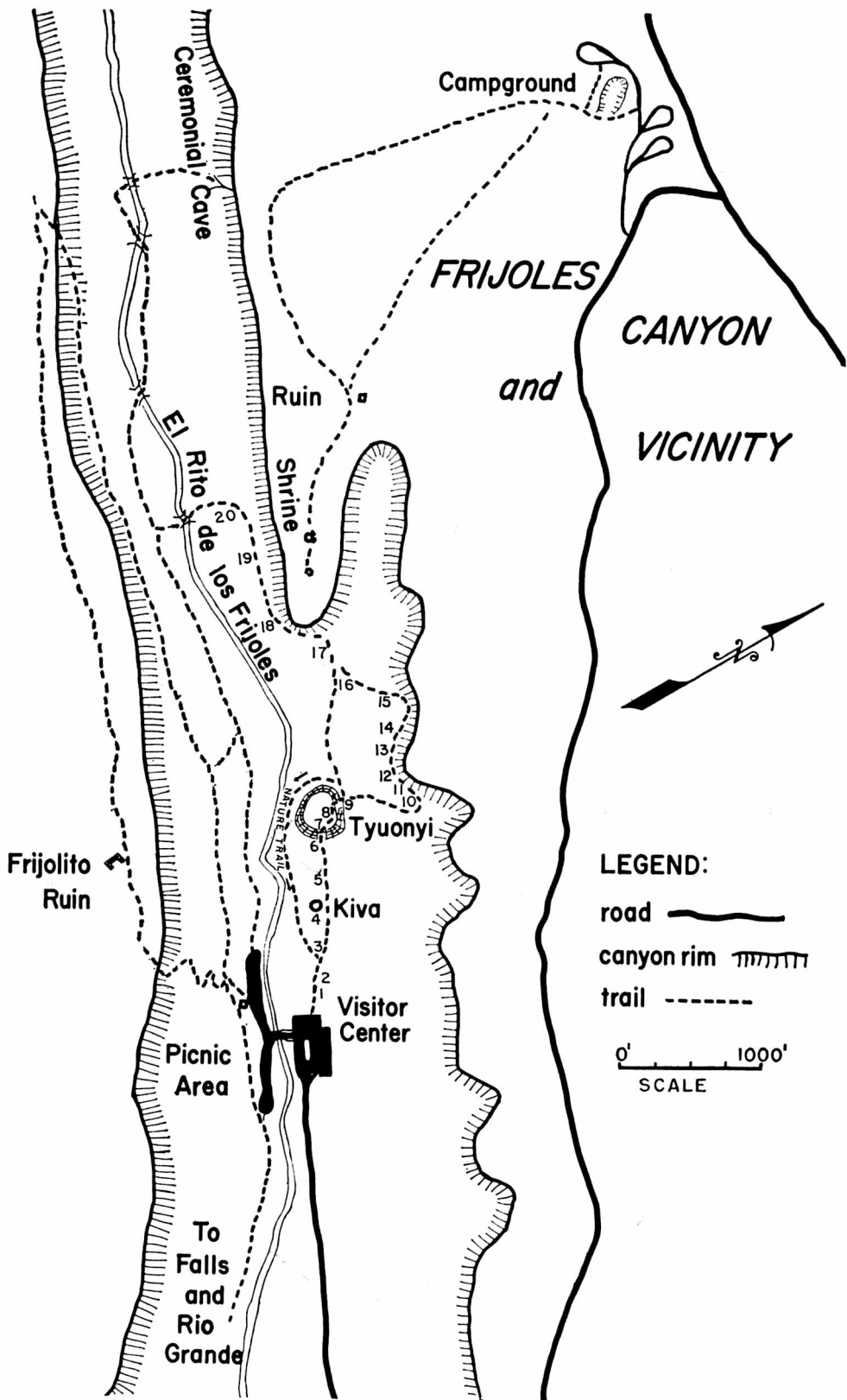


The trail to
FRIJOLES
Ruins

Price 15 Cents If You
Take This Booklet Home

BANDELIER NATIONAL MONUMENT
NEW MEXICO



BANDELIER NATIONAL MONUMENT

Bandelier National Monument is one of the more than 200 areas administered by the National Park Service, United States Department of the Interior. It was set aside to preserve its prehistoric, scientific, and scenic values. Of principal interest and importance in the canyons are the homes of Pueblo Indians who lived here for over 300 years—up to about A.D. 1550. This area belongs to you and is part of your heritage as an American citizen. The men in uniform of the National Park Service are here to serve you, and welcome the opportunity to make your stay more enjoyable.

The Monument was named in honor of Adolph F. Bandelier, a Swiss-American historian and anthropologist who worked in the Southwest in the 1880's. He did some of the earliest scientific work on both the prehistoric and modern Pueblo Indians. His ever popular novel, *The Delight Makers*, depicts life of the prehistoric Indians in Frijoles Canyon.

THE TRAIL TO FRIJOLES RUINS

Points of interest along the trail are marked with numbered stakes that match numbered paragraphs in this guide leaflet. (See map at left.)

Don't be a litterbug!! Use the trash cans along the trail.

1. VIEW OF THE CLIFFS. Along the cliff base you can see some of the dwellings that were used by the Indians. Small masonry dwellings were built in front of most of the caves along the base of the cliff. Such house and cave combinations extended along this canyon wall for nearly 2 miles. Stay on this trail; it will lead you up to the cliff for a closer look.



Frijoles Canyon from Overlook, showing in order: Tyuonyi, flat area where the Indians farmed, the Visitor Center, and the entrance road. This viewpoint may be reached by a trail leading from the Frijoles Mesa Campground.

2. **GEOLOGY.** These cliffs, and the plateau through which they cut, are composed of a soft volcanic ash rock called tuff, deposited about a million years ago by the Jemez volcano. The old volcano may be visited by driving west on State Road 4. Ask the ranger at the Visitor Center for directions.

3. **WIDEST PART OF THE CANYON.** This was one of the principal farming areas where corn, beans, and squash were grown. Also, much farming was done in clearings on the surrounding mesa tops. The people here supplemented their diet by hunting and by gathering edible native plants. You may learn more about plants of this area by taking the nature trail which starts just west of Station 9.

4. **BIG KIVA.** This underground structure called a kiva (KEY-vah) was used primarily for religious purposes. Kivas also

served as schooling places for the young men and boys and possibly for parts of healing and curing rites.

Apparently the smaller kivas were used by individual religious societies or possibly clans. This kiva, because of its large size, may have been a *moiety* kiva. The moiety system is a division of a village into halves for ceremonial purposes.

The roof was supported by six timbers. Replicas of these may be seen in the floor. The purposes of the four rectangular floor pits is unknown.

The small hole near the center of the floor is the *sipapu*, symbolizing in Pueblo Indian belief the place of emergence of their ancestors into this world.

The chimney-like opening to your left (east) was probably a ventilating system. A firepit, no longer intact, was located near the sipapu.

Kivas are still used by many Pueblo Indians.

5. UNEXCAVATED RUIN. This mound will give you some idea of how a pueblo ruin appears before excavation. We estimate there were 30 or 40 rooms here. This ruin, and others in the canyon, have been left unexcavated to preserve them for future scientific study.

6. ENTRANCE TO TYUONYI (chew-OHN-ye). This was the *only* entrance into the central plaza. This fact, plus a zigzag pattern of post holes in the floor (discovered during excavation), strongly indicates that the builders were concerned with defense needs. The people here probably used ladders to reach the rooftops of their homes, and when danger threatened would have pulled up the ladders after them. The name *Tyuonyi* means "meeting place" or "place of treaty" in the Keres language.

7. TYUONYI. Once a large pueblo or village, Tyuonyi was 3 stories high in places, had about 400 rooms and was home for probably 100 people. Although the rooms were small, the people were about the size of modern Pueblo Indians, adults averaging 5'5" tall. Since they had very little in furnishings, room space was adequate. The number of rooms each family had apparently depended on its size, and needs. Inner rooms,

being very poorly ventilated, likely served for storage, with entrance through roof hatchways or doorways in walls. A model of Tyuonyi in the Visitor Center will give you an idea how it looked when in use.

The walls you see standing here are the same height as when excavated in 1909–10. The National Park Service carries on a continual process of stabilization. This is not actual rebuilding, but an attempt to prevent further deterioration, done here by adding cement to original mud mortar to stabilize the fragile walls. Only your cooperation will prevent the loss of these ruins.

Do not sit or stand on walls.

8. **SMALL KIVA.** There were three kivas in this plaza, all much like the larger one at Station 4, and all entered by ladder through the roof. The ventilator shaft was to your left, with firepit and sipapu in the floor. Each of these kivas was probably owned by a different clan or society.

9. **UNEXCAVATED SECTION OF TYUONYI.** The small section

Tyuonyi from the cliffs above—winter scene.



of the pueblo to the left (west) of the trail has not been excavated. Tree ring dates from Tyuonyi indicate that much of the construction occurred between A.D. 1383 and 1466. The caves ahead of you were occupied at the same time as these ruins on the canyon floor. Why some folks chose to live in the cliffs, while others decided to live below, was probably a matter of preference alone, at first. Later, tradition and clan loyalties may have acted against change.

The trail branches here. Turn left if you wish to return to the Visitor Center by way of the nature trail. The trail to your right (to cliff ruins) leads to Station 10 and on to the Long House section. It is another 100 yards, and involves moderate climbing.

Please stay on the trail.

10. **NATURAL CAVE.** This is a natural cave that was used as a dwelling, and was reached by using hand and toe holds in the rock. However, most of the caves are manmade. Most of the natural caves were very small, and had to be enlarged before they were suitable for dwellings.

Only caves with ladders may be entered.

11. **CAVE ROOMS.** Here are some cave rooms that have been hewn out of the soft cliff rock. The ceilings are smoke-blackened from fires built in the caves for cooking, warmth, and light. You can also see that the cliff has been cut away to provide space for lower masonry rooms, and smoothed out for the back walls.

12. **TALUS HOUSE.** This reconstructed talus house was erected by the Museum of New Mexico. (Talus is rock debris which falls from a cliff and piles up at its base, and this *talus house* is built on such debris.) This will give you a good idea how such dwellings were built. Many of these houses on the slope were three stories high. From the number of cave and canyon floor homes here, we estimate the peak population for Frijoles Canyon was about 550 people.

13. **SNAKE KIVA.** This is one of several kivas built in caves along the base of the cliff, and has several painted designs on its back wall. The black zigzag line may represent the



Restored Talus House.

“feathered serpent,” a design found commonly in this area. Just to the right of the “serpent” is the head portion of what may be a costumed dancing figure. Notice the red colored head, and the white feather. The figure is similar to the figures in murals found in the ruins at Coronado State Monument, near Bernalillo, New Mexico, and Pottery Mound Ruin, near Albuquerque, New Mexico.

Notice the successive layers of plaster on the kiva wall. The dancing figure is on an inner

layer of plaster and the serpent is on an outer layer. Apparently, both kivas and regular dwellings were replastered from time to time.

The kiva floor is plastered with mixed animal blood, clay, and soot. Floors were usually plastered with clay only.

14. **PHOTO POINT.** If you brought your camera this is the place to get a good picture of Tyuonyi. Behind you, about 75 feet up the cliff, near the small pine tree, you can see some petroglyphs of a three-legged animal, a turkey, and a snake. Varying light often makes them hard to see.

15. **CAVE KIVA.** This cave kiva was reconstructed to give you some idea what it was like originally. Its functions were the same as for other kivas you have seen: a place for religious activities, a meeting room for men, and for dance preparations. All features of the large kivas occur in this one: airvent, smokehole, and sipapu.

The poles fastened to the ceiling were upper supports for looms, while the small floor holes held anchors for the lower bar of a vertical loom. These fixtures are not originals, but were placed here to show how a loom was supported. On looms such as these, the men of the group did the *ceremonial* weaving, and apparently the weaving of other cotton cloth as well. Cotton was grown in parts of the Southwest during prehistoric times. Whether it was grown nearby or imported we do not yet know. Weaving of other objects, such as mats and baskets, was probably done at home by the women.

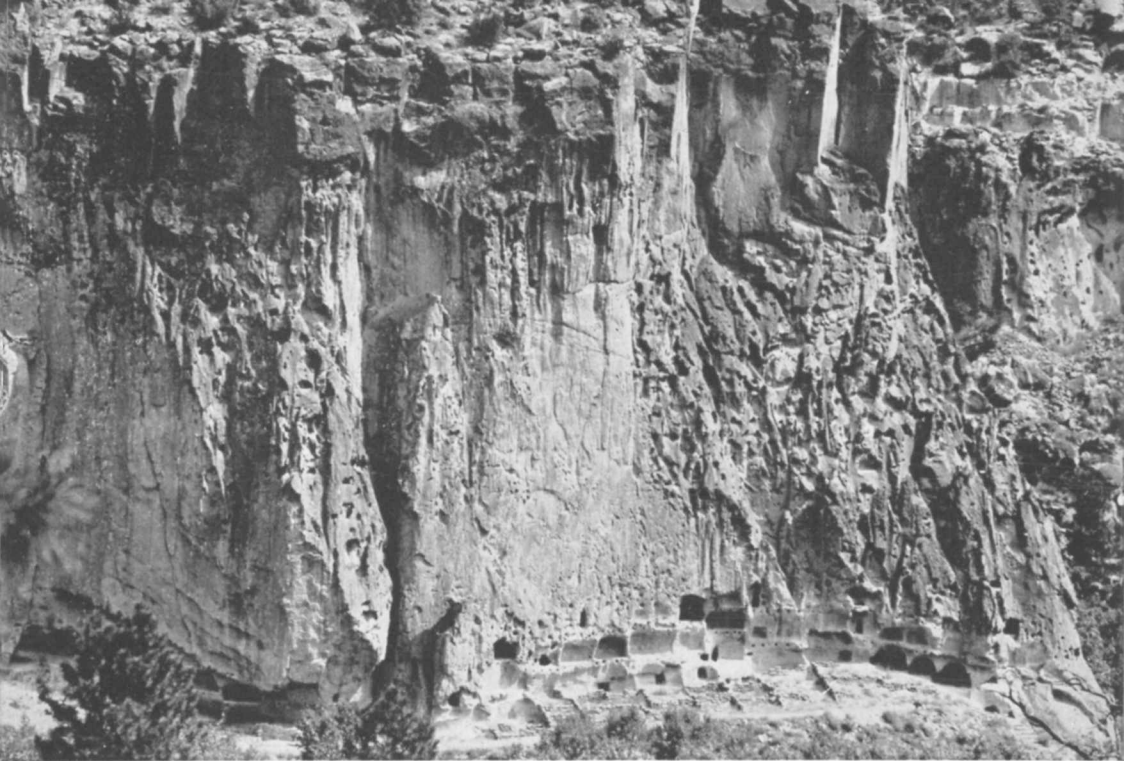
For safety, please stay on the trail.

16. TRAIL FORK. By going left you can return to the Visitor Center or follow the nature trail. The trail to the right leads to the Long House ruins. It takes about 30 minutes to visit them and return to the Visitor Center.

17. THE ORCHARD. These fruit trees and the irrigation system were put in by Judge Abbot of Santa Fe in the early

*Cave rooms excavated by the Indians into the soft tuff
or volcanic ash rock.*





Long House Ruin from across canyon.

1900's. Mr. Abbot settled in the canyon and developed a small farm and summer resort. In 1925, Mr. and Mrs. George Frey came, and developed the Old Frijoles Canyon Lodge. The road into the canyon was built by the C.C.C. in 1934. Prior to this, visitors either hiked in or came on horseback.

The trail across the valley going up and out of the canyon is a hiking trail to the Shrine of the Stone Lions, used by Indians hundreds of years ago. It leads on to Painted Cave, a natural cave containing many pictographs and petroglyphs. It is 6 miles to Stone Lions, almost 10 to Painted Cave, by way of the lower Alamo crossing trail. You must register, at the Visitor Center, any hike away from Frijoles Canyon. This is required for your safety and protection.

Take nothing but pictures—leave nothing but footprints.

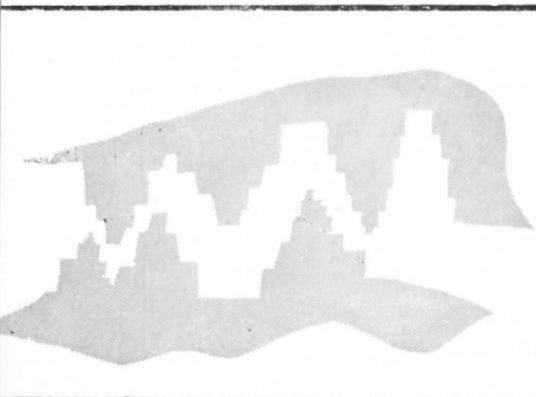
18. LONG HOUSE. This dwelling probably contained the most extensive construction in the canyon. About two-thirds of this section has been excavated. Notice the many rows of small viga holes, made to receive and support ends of roof

beams. The patterns of these holes indicate the structure was four stories high in some places, although for the most part there were only three levels. Note, also, the many petroglyphs carved just above the top row of holes.

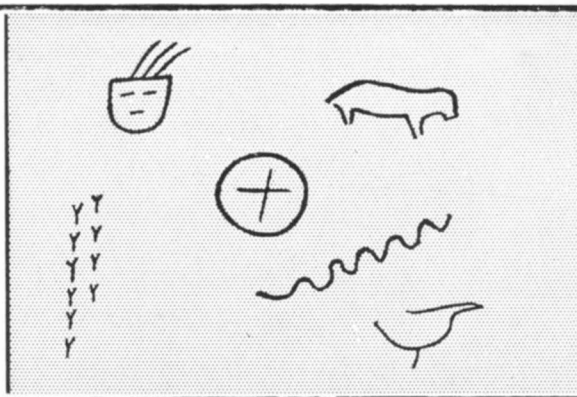
19. **PETROGLYPHS.** These are figures that have been *cut into* the rock. At this point there are numerous petroglyphs, representing humans, birds, animals, and sun and lightning symbols.

The Long House section.





Pictograph



Petroglyphs

Look above the top row of viga holes to see them. Exact meanings of the petroglyphs are not known.

20. PICTOGRAPH. The figure here is painted on the rock, and was a decoration for the back wall of a dwelling. Many rooms were decorated in this manner. This is one of the best, and most easily seen, pictographs in the canyon.

THIS IS THE END OF THE SELF-GUIDING TRAIL

You may return the way you came, or follow this trail across the stream to a fork. There you turn right to Ceremonial Cave, or left back to the Visitor Center. Other nearby points of interest are described in back of this booklet.

THE INDIANS

The ruins in Frijoles Canyon and the surrounding area are protected in order to preserve one link in the known history of the Pueblo Indians. The story of these people, as it is presently known, spans approximately 2000 years, starting about the beginning of the Christian Era, and continuing on today.

The development of several distinct cultures in the Southwest in prehistoric times has been recognized by archeologists. The Pueblo or "Anasazi" (a Navajo word meaning the Ancient Ones) is one of these groups. The Pueblo Culture apparently had its beginnings, and much of its development, in the

general area which is now called the Four Corners—where the States of New Mexico, Arizona, Colorado, and Utah meet.

The cultural progress and history of the Pueblo People has been divided into arbitrary stages by archeologists. These stages or periods are based on the material remains found, and serve as useful tools for study. There have been at least four systems of dividing and naming these stages or levels and their corresponding dates. However, for our purposes, the following breakdown seems best suited.

Basketmaker Period	? B.C.–A.D. 450
Modified Basketmaker Period	A.D. 450–A.D. 700
Developmental Pueblo Period	A.D. 700–A.D. 1100
Great Pueblo Period	A.D. 1100–A.D. 1300
Regressive-Renaissance	
Pueblo Period	A.D. 1300–A.D. 1540
Historic Pueblo Period	A.D. 1540–Present

The progression from one stage to another was by no means as uniform as the chart would suggest. At a given time the people of one area would not necessarily be in the same stage as their neighbors. Also the progression was a gradual transition, just as our way of life today gradually changes from year to year.

Basketmaker Period

This period began before the birth of Christ. The concept of agriculture based on raising maize (corn) reached the nomadic hunting and gathering people living in the Southwest, possibly from Mexico or Central America. Gradually a sedentary, farming pattern of living developed. Just when this change began we cannot say. However, by the beginning of the Christian Era, a way of life based on farming was already well established.

These early people, whom we call Basketmakers because of the fine basketry they made, lived in cave or rock shelters. They grew corn and squash which they stored in stone-lined bins in caves.

Hunting and gathering were still quite important, and

supplemented farming. The early Basketmakers used spears, spear-throwers called *atlatls*, and clubs for hunting and defense.

Modified Basketmaker Period

About A.D. 450, the Basketmakers learned, or developed, the art of pottery-making. Also, about this time, they began to live in "pithouses." These structures were partly excavated into the ground, and were roofed over with frameworks of wood covered with mud. Pithouses were generally entered through a hatchway in the ceiling, which doubled as a chimney. At first the population was small and the pithouses were scattered, but as the population increased small villages of pithouses began to appear. Along about this period, the spear and atlatl gave way to the bow and arrow.

The dress of these early people was quite simple, consisting of yucca fiber sandals, simple breechcloths, and turkey feather or rabbit fur robes for cold weather. Like you and I, they liked to make themselves more attractive to others, and had necklaces, bracelets, pendants, and ornaments of stone, bone, shell, and turquoise, although use of turquoise in this period was relatively rare.

Developmental Pueblo Period

A new type of dwelling gradually began to replace the pithouse in the early 700's. The new buildings were constructed entirely above ground. At first they were built along with pithouses, and consisted of only three or four rooms; the earlier structures may have been simple granaries or storage rooms, later, living quarters. As time went on, more rooms were added, and the rooms became larger. The buildings were often built in a semicircle partially enclosing a courtyard to the south. The few remaining pithouses were usually located in this courtyard. The walls of these early buildings, or pueblos, were constructed of adobe, or mud, reinforced with sticks and a few stones. Later they were made almost entirely of stone.

The pithouses eventually ceased to be used for ordinary

living, and in a somewhat modified form became the first *kivas*, or ceremonial chambers.

The Pueblo People began to grow cotton, and weave it into fine textiles. Like corn, cotton probably reached the Pueblos from the south. This type of cotton, which has a much shorter growing time than most cotton grown today, is still cultivated by the Hopi Indians of northern Arizona.

During this period advances were made, not only in the arts and crafts, but in religious practices, as evidenced by development of the kiva. The Developmental Pueblo Period, then, was a time of transition, not only in architecture, but in the social and religious aspects of Pueblo life.

Great Pueblo Period

From approximately A.D. 1100 to 1300, the Pueblo culture reached its "Golden Age." It was characterized by a great increase in population, a spread of influence over much of the Southwest, particularly in the higher, arid portions of the Colorado Plateau, and by refinement of all aspects of the Pueblo way of life. The buildings, pottery, and other arts and crafts of this period were for the most part superior to those of any other period of Pueblo development.

Great multistoried "apartment houses" at Mesa Verde, Aztec, Chaco Canyon, and other areas were built. These finely constructed stone-masonry structures often contained hundreds of rooms, and were as much as four and five stories high.

The people of Chaco Canyon (now Chaco Canyon National Monument) in northwestern New Mexico, the Mesa Verde area in southwestern Colorado (part of which is Mesa Verde National Park), and the Kayenta area of northeastern Arizona (Navajo National Monument preserves several of these outstanding ruins), seem to have been more energetic and creative than their non-pueblo neighbors. These cultural centers contributed to latest pottery styles, etc., and greatly influenced other groups.

During the 1200's the people began to leave the great pueblos, moving generally to the south. The reasons for this migration are not definitely known, opinions differing among

archeologists. Some point to climatic changes. Tree ring studies indicate periods of below average rainfall became more frequent, culminating in over 20 years of drought at the end of the century. Others suspect friction within or without, and others just an urge to move to new lands as we sometimes witness in our modern civilization. Whatever the reason, the people left the lands which had been their homes for over 1000 years.

Regressive-Renaissance and Historic Pueblo Periods

On leaving the Four Corners area, the Pueblo People went in two general directions: southwest into what is now north-central Arizona, and southeast into the northern Rio Grande Valley, where Bandelier National Monument is located. During the 1300's, this period of resettling, there was a general decline in the Pueblo culture. Building achievements, for example, were not as impressive as during the preceding Great Pueblo Period. However, this decline or regression gradually gave way to a cultural rebirth, exemplified in advances in the arts and crafts.

Although evidence indicates that the Pajarito Plateau, of which Bandelier is a part, was first settled during the late 1100's, probably by small local groups of Pueblo Indians, the area reached its population peak during the 13, 14, and 15 hundreds. This was partially due to the influx from the Four Corners area. The structures here in Frijoles Canyon were built during this later period.

The coming of the Spanish in 1540 ushered in the Historic Pueblo Period, although effects of this contact between peoples were most strongly evident after active colonizing began, somewhat later. The Pueblos have lived in relative peace with the "White Man," adopting some of his ways, but still managing to retain many of the customs and methods of their forebears.

The People of Frijoles Canyon

The people who lived here were a stone age people, having no knowledge of the use of metals. Nevertheless, with the

simplest tools and efficient utilization of natural resources, they were able to fashion comfortable dwellings, sophisticated pottery, clothing, and provide an adequate and varied diet. Their complex social, political, and religious customs show that they had progressed far beyond a day-to-day, hand-to-mouth way of life.

They apparently lived in Frijoles Canyon in relative peace and prosperity for perhaps a little over 300 years. In this dry land the attraction here was a small stream which still flows along the canyon floor.

They grew their crops of corn, beans, and squash in suitable places along the floor of the canyon, and on the surrounding mesa tops. Although the climate was apparently much the same then as it is now, probably little if any irrigation was practiced. The people depended mainly on the late summer showers to mature their crops in much the same manner as do the present day Hopis in northern Arizona.

Why the people left Frijoles Canyon is not known. From tree ring studies it is known that there was a drought in this area during the mid 1500's. The defense-like features at Tyuonyi hint at warfare, but there is little evidence to support this theory. Overpopulation, crop failure, and diseases are possible reasons for leaving. Whatever the causes, apparently all but a few stragglers had left the canyon by about A.D. 1580.

Legends and traditions of the nearby present day pueblos of Cochiti and San Ildefonso suggest that some of the descendants of the ancient people of Frijoles Canyon may still live in these two modern pueblos.

How Do We Know?

The above outline of the history of the Pueblo People is based on the information which has been gained and assembled from literally hundreds of excavations carried on in the Southwest over the last 60 or 70 years, and from numerous studies of the modern Pueblo Indians. Studies of the area by geologists, botanists, and other professionals have helped to reconstruct the history and ecology.

The study of tree ring growth, for example, has given us

insight into the climate in prehistoric times, and has helped to fix with great accuracy the dates when many ruins were built and occupied. Studies of pollen found in the soil from ruins has helped determine the types of plants which existed when the ruins were occupied. These and many other techniques are used, and new methods are constantly being devised which will give us more information about prehistoric people. There are still many gaps in the story which can only be solved by continuing research and study.

ADDITIONAL POINTS OF INTEREST

(See map inside front cover)

CEREMONIAL CAVE is a mile up canyon from the Visitor Center. It contained a small house group and a kiva, but was not necessarily for ceremonial purposes. It was probably home for two or three families or a clan. You climb 140 feet above the canyon floor to enter the cave and its restored kiva, and see evidence of vanished living rooms.

FRIJOLITO RUIN is a medium-sized Pueblo ruin of perhaps 70 or 80 rooms, on the mesa south of Frijoles Canyon. It was partially excavated by Dr. E. L. Hewett in 1908. Tree ring dates indicate it was occupied at the same time as the Frijoles Canyon dwellings. You may reach Frijolito Ruin by either of two trails. Please register at the Visitor Center before taking this walk.

FRIJOLE CANYON OVERLOOK is reached by a 2-mile loop trail starting from the Frijoles Mesa campground. Along this route is a small Pueblo ruin, and remains of an ancient shrine.

THE FALLS ON FRIJOLE CREEK. The Upper and Lower Falls are down canyon from the Visitor Center 1.3 and 1.6 miles, respectively. The Upper Falls are about 80 feet high, the Lower Falls about 30. Along the trail are many interesting rock formations, and near the falls are exposed some of the oldest rocks in the park. By continuing below the Falls for about a mile, you reach the Rio Grande River.

THE UPPER FRIJOLES SECTION of Frijoles Canyon offers other interesting and scenic walks of longer length. From the upper crossing along Frijoles Creek to Headquarters is about 6 miles of trail. An unimproved road leads from Highway 4 to the Apache Springs area, where picnic tables and fireplaces are provided. A trail leads from Apache Springs to Frijoles Canyon rim, then down into the canyon near the Beaver dams on Frijoles Creek. Inquire at Visitor Center for directions.

BACK COUNTRY. Over 90% of Bandelier National Monument is a wilderness area accessible only by hiking trails. About 66 miles of such trails are maintained, and lead to the Stone Lions, Painted Cave, and other points of interest. Please register at Visitor Center before taking any of these hikes.

Visitor Center, Bandelier National Monument.







ABOVE—*Frijoles Canyon, looking west toward the Jemez Mountains.*

LEFT—*Upper Falls of Frijoles Canyon.*—Courtesy Los Alamos Scientific Laboratory.

BELOW—*Lower Falls of Frijoles Canyon.*





Prehistoric shrine overlooking Frijoles Canyon.

—Courtesy Los Alamos Scientific Laboratory.

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Ceremonial Cave.