



## *The Los Alamos archaeological survey, Pajarito Plateau, New Mexico*

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*This is one of many related papers that were included in the 1974 NMGS Fall Field Conference Guidebook.*

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# THE LOS ALAMOS ARCHAEOLOGICAL SURVEY, PAJARITO PLATEAU NEW MEXICO

by  
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## INTRODUCTION

An archaeological survey is being made for the Los Alamos Scientific Laboratory to locate pre-Columbian sites on all Atomic Energy Commission lands on the Pajarito Plateau. The principal purpose of the survey is to map sites so that future construction can avoid concentrations of Indian ruins. Salvage excavations, when necessary in advance of construction, can be kept to a minimum where such information is available.

This study is to conform to various federal laws which pertain to management and conservation of historical sites located on federal lands. The federal government's concern with the protection of early human remains is not new; it was first manifested in an act of 1889 which created a reserve to protect the Casa Grande Ruins in Arizona. Since that time the protection of ancient human occupation sites has been the subject of a series of laws, presidential proclamations and various departmental and bureau policy statements. These were designed to regulate scientific investigation of ancient remains on federal lands, to protect sites from damage (either from government action or by individuals) or to authorize study of sites which must be destroyed by construction or other necessary activities.

## PAST ARCHAEOLOGICAL INVESTIGATIONS ON THE PAJARITO PLATEAU

It is strange that although some of the earliest serious archaeological studies in the southwest were made on the Pajarito Plateau and the near vicinity, few reports have been published. Between 1880 and 1890 the pioneer American anthropologist/historian Adolph Bandelier made several exploratory trips to the Pajarito Plateau, particularly to El Rito de los Frijoles area. He used that canyon as the setting for an ethnographic novel, *The Delight Makers* (Bandelier, 1890), which is still in print and represents a successful attempt to interpret ancient Indian remains in the light of modern Indian life.

During the first 15 years of this century there were annual excavations at various Pajarito locations from Frijoles Canyon to Puye. These were conducted by the American School of Archaeology under direction of the late Edgar Lee Hewitt; they resulted in a handful of short papers which are no more than brief outlines of the work done during particular seasons.

In 1916 a Presidential Proclamation established Bandelier National Monument to protect and preserve important concentrations of ruins. The Monument was carved from the Santa Fe National Forest and for years was administered by the U.S. Forest Service. In 1932 jurisdiction of the area was transferred to the National Park Service of the Department of the Interior.

Little archaeological work was done on the plateau during and between the great wars, but in 1947 and 1948 the late

Frederick C. V. Worman, then of Adams State College, dug a small site in Frijoles Canyon. This he named Rainbow House. In 1949 Worman began to work for Los Alamos Scientific Laboratory (LASL) and was unable to complete a report on the Rainbow House dig. However, several years later Louis R. Caywood, using Worman's notes and other data (and with Worman's assistance), did produce a paper on the excavations (Caywood, 1966).

Meanwhile Worman became the archaeologist-without-portfolio for the Scientific Laboratory, a post which he assumed in addition to his regular work. The distinguished scientist Norris E. Bradbury, director of the Los Alamos Laboratory for many years, was intensely interested in historical-anthropological research and in the need for the conservation of historic sites. Key members of Bradbury's staff also shared these interests, and the result was that Worman was assigned the responsibility of making archaeological surveys in advance of construction, and when necessary, of excavating sites which would be destroyed. He worked closely with the Museum of New Mexico; sites he located and dug are listed on the Museum's state-wide survey.

Mr. Worman produced one report of excavations for LASL (Worman, 1967). His data for a second paper, on excavations on Mesita de los Alamos, have been edited and will be published within a short time.

After Worman's death the LASL decided to continue archaeological planning surveys on LASL lands. A survey of the Pajarito Plateau was begun in late summer of 1973 and is scheduled for completion in June 1975. Survey maps will show pre-Columbian sites. Additional map overlays will emphasize areas of greatest archaeological importance, in which no construction should be planned, and site concentration throughout the study area.

## ARCHAEOLOGICAL SITES OF THE PAJARITO PLATEAU

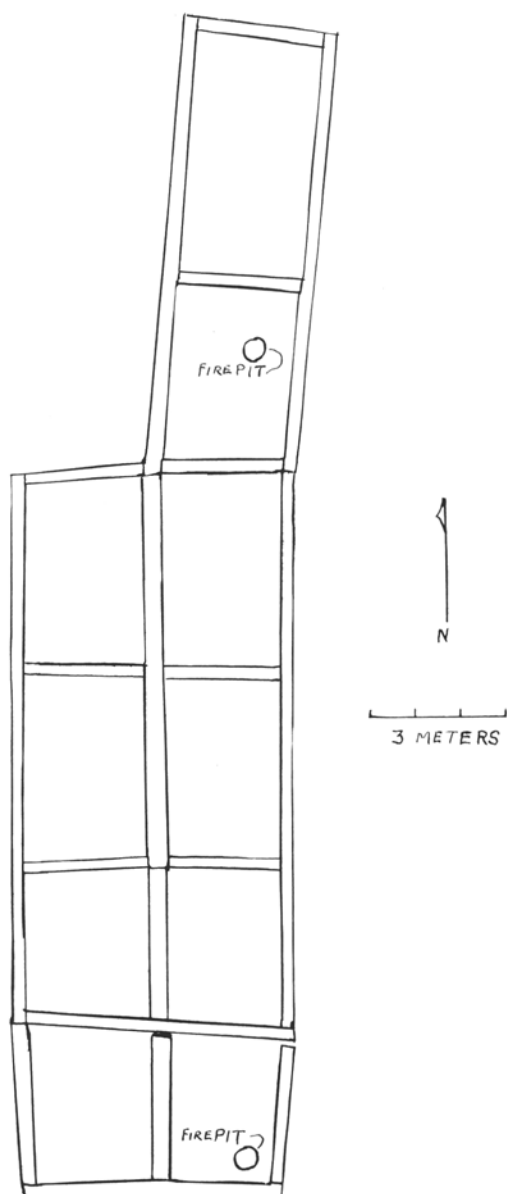
To date, no evidence has been found on the plateau of Indian settlements earlier than the Thirteenth Century. During the latter part of that century and the first half of the Fourteenth Century, the long narrow mesitas of the plateau were well populated by Pueblo Indians. Settlements were almost entirely below 6800 feet; above that, sites were few in number.

The settlements were uniformly small; most of them hardly warrant the designation of village. The most common building pattern for these small communities was a single structure consisting of a double row of single story rooms, usually 10 or 12 in all, with the long axis trending north and south. Where present, a kiva (the Puebloan ceremonial room) was generally only a slightly larger room with rounded corners built as a part

of the rows of rooms. One suspects that "community" structures provided living quarters and storage rooms for two or three families, probably closely related (Figs. 1 and 2).

Local stone (tuff) and adobe were the principal building materials. Blocks of tuff formed the base of the walls; above the basal course the walls were constructed of either masonry or adobe. Masonry was formed by laying courses of tuff blocks in adobe mortar. The most common wall type, however, was made by piling up heavy courses of adobe above the basal stone courses, which created a sort of "rammed earth" wall.

Sometimes, for reasons unknown to us, one of the blocks of rooms grew, by accretion, until it became village size. Usually several rooms were added to the original rows and frequently,



*Figure 1. Ground plan of LA 4710, a typical small site on the Pajarito Plateau. The two rooms with fireplaces were probably living rooms; the others must have been used for storage. This site was dug in 1964 by Frederick Worman.*

two or three more rows of rooms were added. Second stories are also common in the enlarged villages. Commonly two rows of rooms were built to the east, from the northern and southern ends of the house blocks, thus creating an eastward-facing plaza in which a subterranean kiva could be built. The occasional east-west trending house blocks have extensions to the south so that village and plaza faced south and were protected from the prevailing winds on the plateau, which are from the southwest and west (Fig. 3).

Only a single rudimentary study has been made of the soils near these small sites. This investigation indicated that a village was situated at the crest of a mesa and was surrounded by fields. The primitive farming methods were frequently ingenious but usually not highly productive. It is estimated that only a small group of people occupied the small settlements, such as those of the Pajarito Plateau, during the Thirteenth and Fourteenth centuries. Although scores of ruins remain along each mesa top, it is unlikely that more than two or three were occupied at any one time. Occupation of any one village probably lasted no more than a short generation. Indications are that the population constantly shifted about, and houses, or even entire villages, were abandoned for reasons which today might seem difficult to understand. A family might have moved because of a run of bad luck, or disease, or because of the presence of a witch—just as recent pueblo homes have been abandoned.

As time passed the people began to gather into larger settlements and to live at the lower elevations of the plateau. In the late Fifteenth Century the population was concentrated in a few large centers. Ruins of these small towns (e.g., Otowi, Tsankawi, Tshirege, Tyuonyi and others) are well known and are the ruins with which most visitors to the Pajarito Plateau are acquainted. During this period the cavate rooms were dug; these are cave-like rooms carved by the Indians from the tuff cliffs of the canyons. Although two of the large sites, Puye and Tyuonyi, were excavated and several others extensively trenched before World War I, records of those diggings are so brief that they are of little use for constructing a history of human life on the Pajarito.

Another change in living style which occurred during the late Fifteenth Century was that at least some of the farming was moved from the mesa tops to the slopes of the canyons. On the slopes one can find evidence of small rock check dams which were laid across shallow drainage channels. These structures held silt and humus and caught surface run-off from the mesas. Each dam would retain a pocket of soil sufficient to allow a few clumps of maize, some beans, and perhaps a squash vine to grow. It seems probable that the wider canyon floors were intensively cultivated, and probably irrigated, but all vestige of such use have been erased by subsequent flooding.

Occupation of these sites ended sometime in the Seventeenth Century, for unknown reasons. Tree ring records indicate a rather severe drought in the northern Rio Grande Valley in that century. Legends at the Tewa pueblos of Santa Clara and San Ildefonso tell of some ancestors moving to the river valley from the plateau. Such legend agrees with the archaeological evidence and with similar stories told at the Keres pueblo of Cochiti. At Cochiti it is said that Keres-speaking people lived on the Pajarito as far north as Frijoles Canyon, and that north of that canyon the people spoke Tewa.

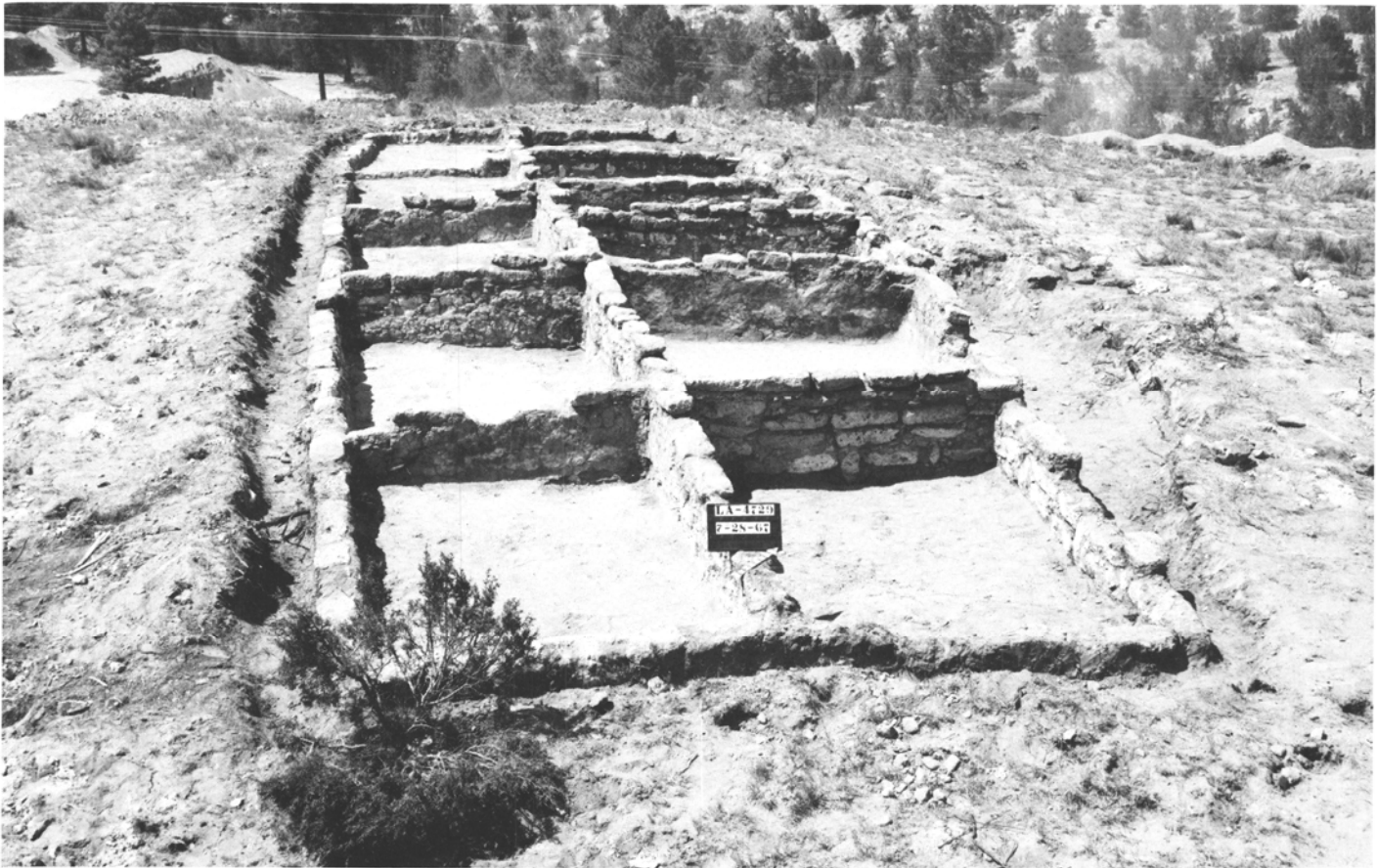


Figure 2. Site LA 4729; excavation of small two-rowed "community" structure.

## REFERENCES

- Bandelier, A. F., 1890, *The Delight Makers*: Dodd Mead and Company, New York, 490 p.
- Caywood, L. R., 1966, *Excavations at Rainbow House*, Bandelier National Monument, New Mexico: National Park Service, Southwest Archaeological Center, Globe, Arizona, processed, 46 p.
- Worman, F. C. V., 1967, *Archaeological salvage excavations on the Mesita Del Buey*, Los Alamos County, New Mexico: Los Alamos Scientific Laboratory, Univ. Calif., Los Alamos, New Mexico, Publication No. LA 3636, 39 p.

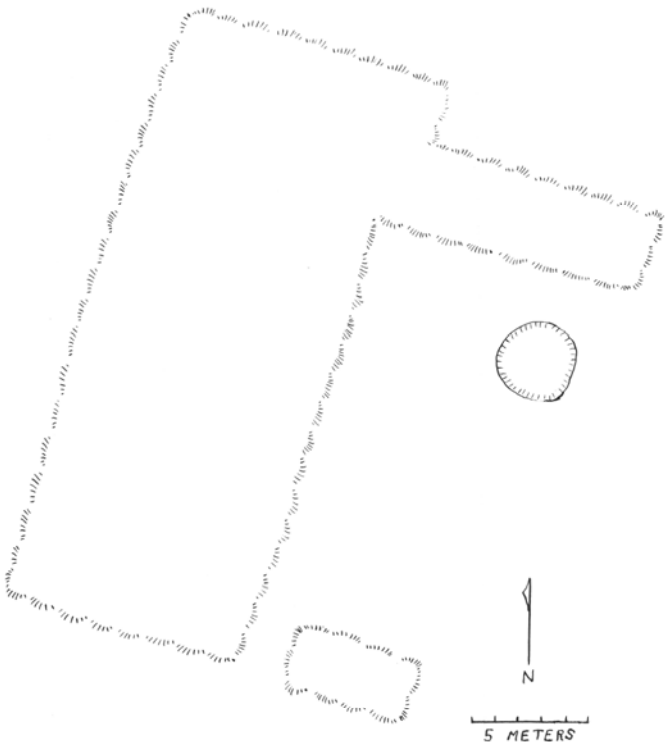


Figure 3. LA 4616, plan of unexcavated ruin with eastward extensions from the main house block and a kiva in the plaza. The west side of the mound is more than one meter high suggesting the presence of two stories in that section.