

A Grand and Isolated Place

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Some 125 years ago an intrepid Southwestern ethnologist and historian named Adolph Bandelier scribbled an entry in his journal, describing with amazement a canyon filled with Pueblo ruins and cave dwellings in a remote part of northern New Mexico:

The grandest thing I ever saw. A magnificent growth of pines, *encina*, *alamos* and towering cliffs, of pumice or volcanic tuff, exceedingly friable. The cliffs are vertical on the north side, and their bases are, for a length as yet unknown to me, used as dwellings both from the inside and, by inserting the roof poles, for stories outside. It is of the highest interest. There are some of one, two, and three stories.... Aside from the caves, there are ruins of a large pueblo, immense *estufas*, round towers of two stories, etc.

Bandelier's journal entry became the first written record of the rugged beauty of isolated Frijoles Canyon and its impressive but enigmatic archaeological sites. In the century since his first visit, much has changed. A trip to Frijoles no longer requires a two-day mule ride, and the canyon is now part of Bandelier National Monument. Each year more than three hundred thousand visitors descend into the canyon to inspect the ruins and, on hot summer days, dabble their feet in Frijoles Creek. What has not changed is the way visitors react. Their first glimpse of the canyon still provokes the same mixture of surprise, awe, and curiosity that Bandelier expressed in his diary.

Despite the extraordinary wealth of archaeologi-

cal sites on the Pajarito Plateau—the volcanic tuff tableland dissected by Frijoles and other canyons—relatively little archaeology has been done there. Because of this, the story of Bandelier National Monument and the surrounding plateau has remained, as writers love to say, “shrouded in mystery.” Fortunately, an abundance of new, innovative research, much of it conducted by the authors of this book, has begun to unveil a complex human story that is as singular and thought-provoking as that of better-known Chaco Canyon and Mesa Verde. It is made all the more compelling by the lateness of its telling. It is both a new story and an ancient tale, and it is as grand as any Bandelier could have imagined.

Idyllic but Unpredictable

Part of the seductive power of the Pajarito Plateau lies in its spectacular volcanic landscape. Wedged between the rim of the Jemez Mountains and the Rio Grande, the plateau is a nine-hundred-foot layer of solidified volcanic ash, or tuff, deposited more than a million years ago by the explosion of the Valles Caldera. Within its roughly 220-square-mile expanse, the plateau ranges from 5,500 to over 8,000 feet in elevation. A dozen deep canyons cut it into long, sloping mesas (see plate 1). A few canyons with permanent streams, such as Frijoles, are oases that nourish water-loving plants and animals that otherwise could not survive.

The sheer tuff cliffs of the canyons hold the remains of hundreds of cliff-face apartments that Puebloan people excavated into the soft rock. In



Figure 1.2. Cavate rooms in the north wall of Frijoles Canyon, seen from Tyuonyi Pueblo.

Frijoles Canyon these dwellings, known as “cavate rooms” or just “cavates,” accompanied the nearby village of Tyuonyi to form a prehistoric community that spread along the canyon for over a mile.

Frijoles Canyon is so impressive that many visitors come away convinced that the canyons must have been the focus of human life on the plateau. In fact, during their first three centuries there the Puebloans lived not in the canyons but on the mesa tops, abandoning them only when they were no longer capable of sustaining agriculture.

Because the Pajaritans lived both on the mesas and in the canyons, it is hard to walk anywhere on the Pajarito Plateau without spotting broken pieces of pottery or stone flakes—or, more prosaically, rusting cans and shards of glass—all enduring fragments of the plateau’s nearly twelve-thousand-year human history. The Pajarito holds an estimated ten thousand archaeological sites, from nearly invisible scatters of artifacts to immense Puebloan villages. These remains offer gritty evidence of the inventive ways in which humans used this landscape and how it shaped their lives. Indeed, what is most fascinating about the Pajarito is how successfully its people have faced the difficulties and uncertainties of making a living in a drought-prone and always unpredictable environment. These challenges were most ingeniously met by Puebloan farmers who made the plateau their home during the late prehistoric period.

Reinventing Pueblo Life in a New Landscape

The Puebloan farmers who colonized the Pajarito Plateau in the late 1100s and 1200s were desert-smart survivors who had been victims of their own success. Immigrants from Chaco Canyon, Mesa Verde, and the San Juan River area, they carried with them the distilled wisdom earned during seven centuries of farming-based village life in the northern Southwest. They were masters at coaxing crops from poor, parched soils and at supplementing their harvests with hunted game and edible wild plants. They were also wary, chastened refugees of the vast network of great-house communities that covered much of the eastern Colorado Plateau between 1000 and 1300 CE. Beginning with Chaco great houses in the early 1000s and ending with Mesa Verde commu-

nities in the late 1200s, these elaborate ceremonial and residential centers collapsed in a tangled web of drought, internal dissension, and violence.

Settling on the Pajarito gave the refugees a chance to start anew and learn from old mistakes. We might suppose that many of the immigrants vowed never again to live in large villages or heed the instructions of elite religious leaders. During the 1100s and early 1200s, little happened to challenge these resolutions, but as thousands more immigrants poured onto the plateau in the late 1200s, it became increasingly clear that organized communities and wise political and religious leaders were needed to apportion and protect agricultural land and wild foods, establish food reserves, and promote cooperation and concord among people with different backgrounds and languages. How the Puebloans reinvented village life to meet the special demands of the Pajarito landscape—and the consequences of their actions—forms the plateau’s most compelling story.

Telling the Pajarito Story

In the chapters that follow, my colleagues use findings from recent archaeological research to address this and related themes. Better archaeological evidence collected during the last thirty years makes it possible to ask and answer increasingly sophisticated questions. The new evidence grew out of three important investigations. First, members of the eight-year-long Pajarito Archaeological Research Project, directed by James N. Hill of the University of California, Los Angeles, surveyed for sites across the Pajarito and excavated some of them. A second study, the Bandelier Archaeological Survey, was prompted by a lack of comprehensive, accurate information about sites in Bandelier National Monument. Under my direction, project staff recorded valuable data on nearly two thousand prehistoric and historic sites. Third, Timothy A. Kohler’s Bandelier Archaeological Excavation Project greatly expanded the reach of the survey by excavating at six sites together spanning more than four hundred years of ancestral Pueblo life. Stimulated in part by these studies, researchers continue to survey, excavate, and preserve sites in Bandelier and around Los Alamos National Laboratory.

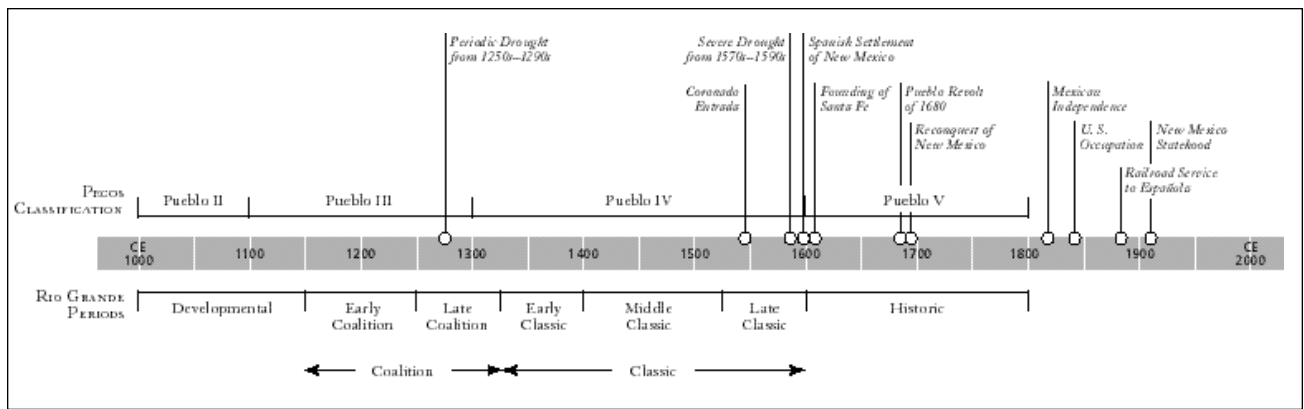


Figure 1.3. Archaeological time periods and major events in the northern Rio Grande region.

Because it is difficult to summarize all the research that has been conducted, we chose topics for this book that illuminate key aspects of the Pajarito story. Most of the chapters are focused on the Pueblos who lived on the plateau between 1150 and 1550 or 1600 CE, but the authors also describe human use of the plateau during the earlier Paleoindian and Archaic periods and during later historic times.

Archaeologists commonly divide the Pueblo era in the northern Rio Grande region into two cultural periods, the Coalition (1150–1325) and the Classic (1325–1550/1600). During the Coalition period, Puebloan immigrants arrived on the Pajarito Plateau and built hundreds of small, mostly short-lived settlements. Rapid population growth during the 1200s and early 1300s led to competition for land and food. During the Classic period, people constructed large villages, new religious beliefs and ceremonies emerged, and social and political life became more complex as Pueblos adapted to communal living and a drier climate.

Although much of the Pajarito Plateau today appears wild and untouched by humans, this is far from the case. To those trained to see its clues, the landscape bears the subtle traces of centuries of environmental and climatic change, as well as human use. In chapter 2, ecologist Craig Allen introduces the environment and climate of the plateau since the end of the last ice age. He describes the geology, soils, plant and animal life, and rainfall patterns to which the plateau's people had to adapt, as well as the significant alterations

people in turn worked on the plateau.

Paleoindian hunters, who arrived at the close of the Pleistocene geological epoch, were the first humans to use the Pajarito Plateau, from about 9500 to 6000 BCE—though the only evidence of their presence is the occasional finely made spear or dart point. Warming temperatures and the extinction of many big game mammals brought an end to the Paleoindian lifestyle and the beginning of a long era known as the Archaic, from about 6000 BCE to 500 CE. Archaic people, like their Paleoindian predecessors, lived in small, mobile groups that ranged across the landscape, hunting mammals and foraging for edible plants in a carefully scheduled yearly round tuned to the seasonal availability of each plant or animal. In chapter 3, Bradley Vierra describes the unique challenges of Paleoindian and Archaic life on the plateau. As he emphasizes, there is much to envy in a hunting and gathering lifestyle. For one thing, most hunter-gatherers probably did not work as hard as later farming people. And because their diet was highly varied and low in fats, Archaic people enjoyed better health than many of us do today.

Coalition-Period Farmers

When the first Puebloan farmers arrived around 1150 CE, the Pajarito Plateau had been little used for more than five hundred years. The colonists built small masonry and adobe pueblos that archaeologists characterize as hamlets, and they established fields watered by rainfall. Population ballooned through the early 1200s as more immigrants arrived, many of them probably from around Mesa Verde and the

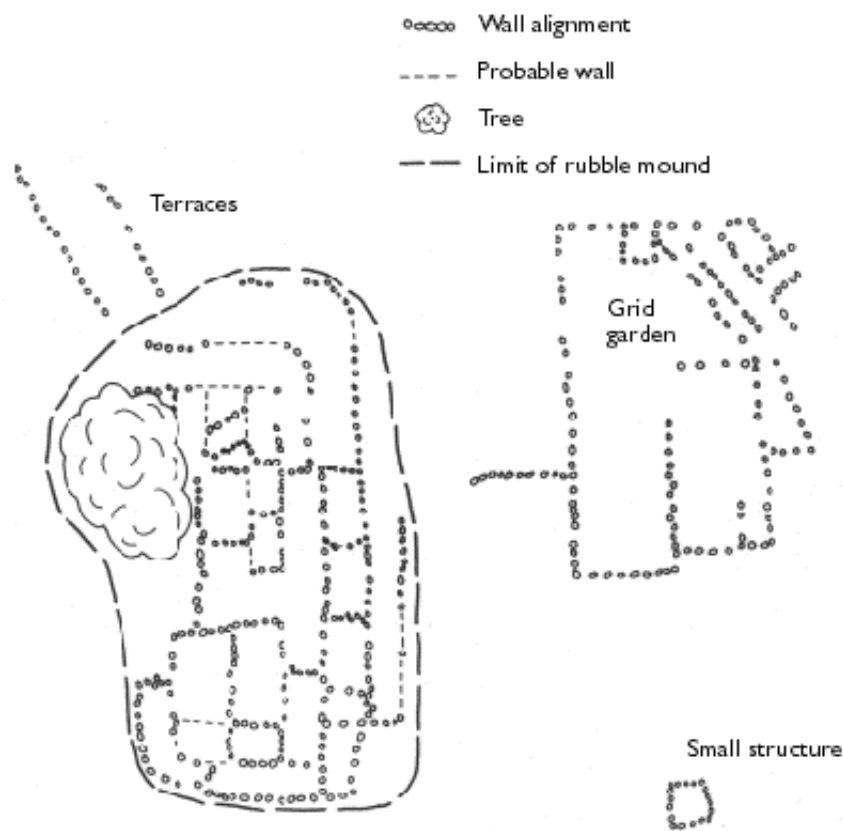


Figure 1.4. Plan of a Coalition-period hamlet.

San Juan River. Most settlements appear to have been used for no more than a generation, probably because nearby resources, including agricultural land, were exhausted. As people abandoned old settlements, they founded new ones in virgin locations, a cycle that was repeated for the next 175 years.

Because depleted farmland had to be fallowed, Puebloan immigrants found themselves increasingly in competition with one another for new land. Good farmland was never abundant on the plateau, and because summer rains were unpredictable, farmers became adept at producing crops under difficult conditions. In chapter 4, Rory Gauthier and Cynthia Herhahn describe the ingenious strategies Pajaritan farmers developed as population increased, land became scarcer, soils were depleted, and climate became drier.

The Pajaritans' growing dependence on corn, beans, and squash during the Coalition period, together with their domestication of turkeys, sug-

gests that they were depleting the wild game in their territory. Relying on domesticated plants and animals increased their control over the food supply, but it also sparked far-reaching changes in the Puebloan diet. In chapter 5, Kari Schmidt and Meredith Matthews describe how late Archaic and Puebloan foods changed over the course of four thousand years on the plateau. Drawing on painstaking studies of plant remains and animal bones, the two address a crucial question: How and why did diet change as the plateau's inhabitants increased in number and became more dependent on agriculture?

A harbinger of coming agricultural hardships arrived around 1250 CE in the form of a serious drought that continued through the late 1290s. At Mesa Verde, the later part of this infamous period, popularly known as the "Great Drought," saw a total depopulation of the region. On the Pajarito, population dropped precipitously, but after 1300, climatic conditions improved and it boomed again, reaching a peak of nearly four thousand people in what is now Bandelier National Monument alone. Many of these people undoubtedly came from the Mesa Verde and San Juan River areas. Until that time, most Pajaritan hamlets had sheltered no more than a few families, but after 1350, large pueblos, each housing several hundred residents, began to appear.

Classic-Period Villagers

How and why villages develop has been a subject of intense interest to archaeologists in recent years. In chapter 6, Tineke Van Zandt describes Puebloan villages and the settlement landscape they created on the Pajarito Plateau. She explains how the



Figure 1.5. A petroglyph panel on a basalt boulder in White Rock Canyon, depicting deer, snakes, and a shield.

development of large communities might have reduced competition for land, provided food in times of need, and promoted cooperation and unity among village members.

Clues to a renewed importance of religious beliefs and ceremonies involving entire villages during the Classic period are preserved in rock art near some Pajarito villages. In chapter 7, Marit Munson describes the plateau's abundant and ever-perplexing petroglyphs and pictographs. She finds that before the early 1300s, rock art frequently displayed war-related themes. After that date, the imagery shifted to religious scenes, including depictions of supernatural beings in human form.

The war symbolism in rock art coincided with the boom in immigration and the construction of the first villages, some of which, such as Burnt Mesa Pueblo on the northern edge of Bandelier National Monument, assert a distinctly defensive character. Competition over territory and resources was a fact of life on the plateau in the late 1200s and early 1300s, and tension manifested itself in the creation of village and ethnic boundaries. Interestingly, the most visible boundary centered on Frijoles Canyon.

Archaeologists deduced the existence of this

boundary in part by studying stone tools. Puebloans on the Pajarito Plateau used three kinds of stone—obsidian, basalt, and chert—for almost all the stone implements they manufactured, yet each of these materials outcrops in only a few places. In chapter 8, Michael Walsh shows that each of these materials was initially used by people living nearest to its sources, but unaccountably, the pattern was disrupted in the Frijoles Canyon area in the late 1200s. The change in people's uses of different types of stone appears to reflect the imposition of social

constraints on raw material collecting on either side of Frijoles Canyon. What is most tantalizing about this apparent archaeological boundary is that it closely corresponds to a boundary described by Keres and Tewa people in their oral traditions. These two Pueblo groups, who now live in the Rio Grande Valley and who are named for the languages they speak, not only identify the Pajarito as their ancestral homeland but also mark Frijoles Canyon as the dividing line between their historic territories.

The Frijoles boundary acquires another dimension from studies of pottery, the most common artifact on the Pajarito Plateau. Distinguished by its thick, shiny, lead-based paint, a new type of ceramic known as glaze ware became the most common household pottery south of Frijoles Canyon in the 1300s. North of Frijoles, a locally made pottery called biscuit ware predominated. Although both kinds of vessels saw everyday use and were widely traded, each eventually served a less obvious role: it became a social marker. Like chert and basalt tools, each of the two wares stops at Frijoles Canyon. But was that always the case? In chapter 9, James Vint shows that the boundary between the wares moved northward over time, reaching

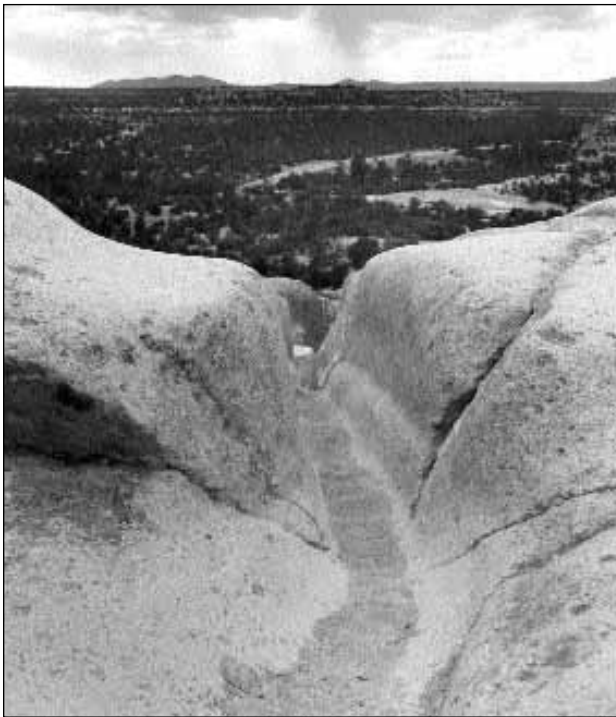


Figure 1.6. A deeply worn prehistoric trail near Tsankawi Pueblo.

Frijoles in the early 1400s. He suggests that the spread of the two wares was a sign of emerging ethnic territories and widening trade networks.

Although Frijoles Canyon served as a boundary, it appears not to have formed a barrier. People to the north and south of it continued to trade with one another, traveling over a plateau-wide network of trails. Clearly visible where they were worn into the exposed tuff, these narrow bedrock paths were created by heavy foot traffic and intentional shaping. In chapter 10, James Snead describes the trails, the features found with them, where they go, and what they tell us about plateau community relations.

By 1450, in apparent response to a new and prolonged cycle of dry weather, population on the Pajarito declined further. Many people left altogether; others moved into canyons on the plateau with permanent water. In Frijoles Canyon, which was virtually unoccupied before 1300, population grew throughout the 1400s and peaked around 1500 at an estimated eight hundred people. This community, including Tyuonyi Pueblo, its supersize ceremonial building, known as Big Kiva, and the cavate pueblos along the north wall of the canyon, was one of the

largest on the Pajarito. Because cavate rooms were dug into the cliffs, their interior features—hearths, storage niches, anchors for weaving looms, wall plaster, and painted murals—are often beautifully preserved. In chapter 11, Angelyn Bass Rivera describes the cavates and the way they were furnished. She also weighs in on a long-standing question: Were cavate pueblos used differently from ordinary pueblos?

How long the Frijoles community remained vibrant is a question still unresolved, although tree-ring dates and time-diagnostic potsherds suggest that its population diminished after 1550. What caused the Pueblo people to leave the plateau remains uncertain, too, but it seems likely that their departure reflected both growing environmental challenges—depletion of game and edible plants, exhaustion of soils, increasingly dry weather—and the inability of village leaders to solve those problems. In chapter 12, Robert Preucel recounts one of several oral histories charting the Keresans' pilgrimage from Frijoles across the southern Pajarito Plateau. From the Keresan perspective, why villages were abandoned is less important than the villages themselves and the sequence in which the people lived in them. As Preucel emphasizes, oral traditions interweave historical narratives with myths and moral instruction.

Just Off the Map

After the late 1500s, the Pajarito Plateau saw little human activity for three hundred years. Both Keres and Tewa people, now living along the Rio Grande, maintained strong practical and spiritual ties with their ancestral homeland, using it for hunting and gathering and as a place for ceremonies. During the Spanish colonial and Mexican periods (1598–1846), the Pajarito was a dimly perceived wilderness, known mainly as a refuge for raiding nomads and livestock rustlers. In the later half of the 1800s, action surged there again as Hispanic and Pueblo shepherds introduced large flocks of sheep. Logging camps went up, too, and for a time, several mining camps flourished. In a few places homesteaders tried their hands at farming. Prospects for mining, logging, and herding waned as the economy weakened around the turn of the century, and

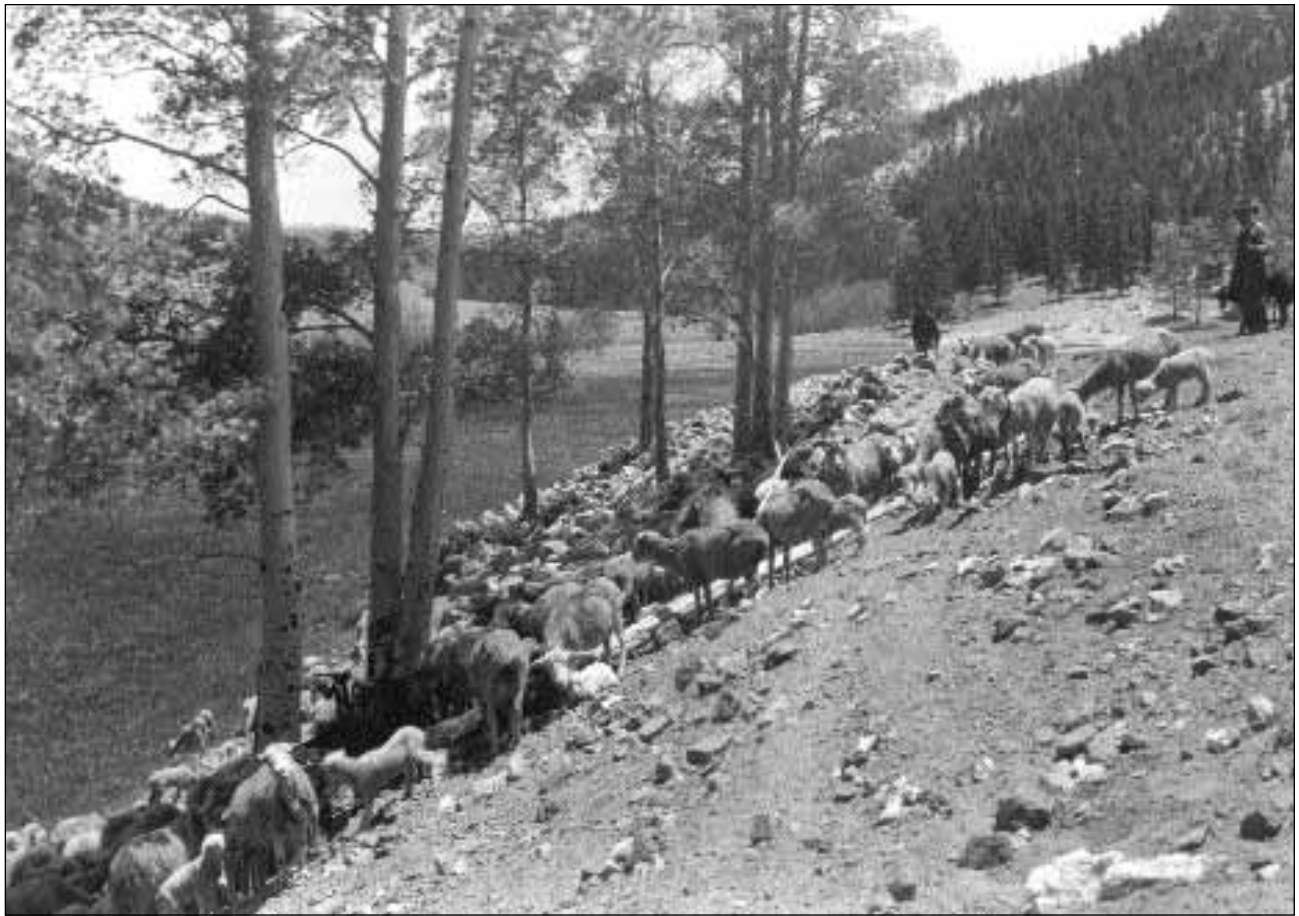


Figure 1.7. Shepherds with their flock in the Jemez Mountains, about 1935.

plateau farmers and ranchers eventually found themselves displaced by the federal government. In chapter 13, Monica Smith describes the startling transformation of the Pajarito from remote Pueblo homeland to host of the nation's premier nuclear weapons research laboratory.

One of the more recent permutations of the modern world to arrive on the Pajarito Plateau has been archaeology. Unsurprisingly, the impressive Classic-period villages such as Tyuonyi and Long House in Frijoles Canyon and Puye in Santa Clara Canyon to the north were among the first to be excavated. By current standards, the early investigations left much to be desired, but they proved crucial in establishing archaeology as a discipline and educating the public about its importance. In chapter 14, James Snead introduces us to early archaeology on the plateau through the *Rito de los Frijoles Gazette*, a handwritten newsletter issued

during the 1910 and 1911 Frijoles field seasons. Produced by staff and students for their own amusement, it provides an intimate and often humorous view of life in an archaeological field camp nearly one hundred years ago.

Although we have learned much about the people of the Pajarito since Adolph Bandelier's first visit, much more remains to be discovered. What we know and hope to learn is summarized in chapter 15 by Timothy Kohler. Our final essay, presented in chapter 16, is drawn from a taped interview with two respected Pueblo elders, Joseph H. Suina of Cochiti Pueblo and Julian Martinez of San Ildefonso Pueblo. They close the volume by providing modern Keres and Tewa perspectives, respectively, on their ancestral homeland. Their reflections and observations on Puebloan life remind us that knowledge, whether scientific or traditional, is our most precious cultural artifact.



Figure 1.8. Pueblo excavators at Tyuonyi Pueblo, about 1910.

Robert P. Powers directed the Bandelier Archaeological Survey and is an archaeologist with the National Park Service in Santa Fe.

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