SILENCING THE PAST: SOCIAL MEMORY AND THE ARCHAEOLOGY OF THE WHITE MOUNTAIN APACHE AND MORMONS IN THE FORESTDALE VALLEY, ARIZONA

by

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A Thesis Submitted to the Faculty of the
DEPARTMENT OF ANTHROPOLOGY
In Partial Fulfillment of the Requirements
For the Degree of
MASTER OF ARTS
In the Graduate College
THE UNIVERSITY OF ARIZONA

2005
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Acknowledgements

Thank you to Dr. J. Jefferson Reid for his help, guidance, and irrepressible sense of humor. Thank you to Dr. Barbara Mills for her patience and knowledge. Without her I would never have been able to work on this wonderful research project. Thanks to the White Mountain Apache Tribe for allowing me to have the opportunity to work with them and explore their history. Special thanks goes to the Tribal Historic Preservation office, most especially to Dr. John Welch and Doreen Gatewood. I would not have come far without their guidance and patience. Thanks to Dr. Andrea Smith who helped me in my search for historical documents. A special thank you to my oral tradition consultants, who taught me so much about themselves and their tribe. Thanks to the ladies of the Show Low Family History Center who helped me find many of the documents I needed.

Thank you to Kelly Jenks, Melanie Dedecker, Kerry Thompson, and Kacy Hollenback for their encouragement and support. Thanks to all the field school students who made this a great research project. My heartfelt gratitude goes out to Mike and Sarah Mier, Tribal Fish and Game, and the Arizona Department of Game and Fish. Most especially thank you to my parents, Sandra and Lawrence Jelinek. Their support and love has made all the difference. This project witnessed many ups and downs and without the aforementioned people I never would have completed it.
This is dedicated in grateful memory of Peter Paige,
the archaeologist whose enthusiasm and spirit
always filled the dank recesses of the repository.
Thank you for your guidance and your humor.

And to the bear. I'm sorry.
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ABSTRACT

I use documentary evidence, oral traditions, and archaeological remains to examine a brief period of interaction between the White Mountain Apache and Mormon colonists in the Forestdale Valley. This research yields a holistic understanding of the nature of Apache and Mormon interactions in the Forestdale Valley. Archaeological evidence and oral traditions support the claim that Apache people reoccupied the homes of the Mormon colonists after their expulsion. This may have been a symbolic as well as a practical act. Shortly thereafter the settlement was burned, resulting in the erasure of the physical evidence of a Mormon occupation. The complexities of Forestdale as a symbol to both groups are revealed through the interplay of social memory and silences in the past.
INTRODUCTION

Though the past suffuses almost every aspect of our daily lives, it is a realm that remains largely foreign to our understanding (Lowenthal 1985:xvi). In the past, everyday life was based on ways of living and believing that are very different from our own; therefore, our present perceptions bias our interpretations of the past (Basso 1996:3; Lowenthal 1985:xvii; Trouillot 1995:5). It is necessary to recognize our inherent biases and accept the fact that any history is only an interpretation of the past based on sources available at that time and filtered through a "modern" lens.

All that remains of the past are its material remnants and the accounts of those who experienced it (Lowenthal 1985:xxi). We can only access the past through three sources: memory, history, and artifacts. This evidence cannot recall the past with absolute certainty because its remains are selectively preserved and altered through time; however, by incorporating as much data as possible from each source, we can try to compensate for many of the problems and biases associated with each dataset.

For the individual, memory extends back only to childhood, but the recollections of relatives and society are also included within its rubric (Lowenthal 1985:xxii). By its nature, memory is personal and largely unverifiable, but it can be corroborated by written sources and material remains (Lowenthal 1985:xxii; Wyatt 1987:138). Oral sources are often essential in research concerning indigenous peoples and minorities, who have been poorly represented in the documentary record (Wyatt 1987:129).

Oral historical sources are essentially narratives (Portelli 1990: 48). These sources provide more information about the meanings attached to events than the events
themselves; therefore the importance of oral testimony may lie not in its adherence to fact, but rather in its departure from it (Portelli 1990:50-52). Oral sources are useful for examining the changes wrought by memory, which reveal the narrators' effort to make sense of the past. Memories validate the holders' version of the past by sanitizing an event or exalting a group (Shackel 2001:1). All members of a group do not necessarily understand the past in the same way; however, elements of the past remembered in common, as well as those forgotten in common, are necessary for group cohesion.

In contrast to memory, history extends back to the earliest records of complex societies (Lowenthal 1985:xxii). History is shared data and its conclusions must be open to public scrutiny. However, history depends on memory, and many recollections incorporate history. Thus, written and oral sources are not mutually exclusive (Portelli 1990: 46).

Both memory and history tend to silence the past by actively excluding or reinterpreting events. For example, social groups may want to forget or alter a damaging or painful history (Lowenthal 1985:xx). While social memory can be about forgetting a past, it often comes at the expense of a subordinate group. In many cases the subaltern group has a choice (Shackel 2001:5). It can subscribe to the dominant interpretation, ignore the prevailing view, or fight their representation in the public memory.

History is a story about power in that it is fashioned and disseminated by the victors (Trouillot 1995:5). Silences enter the process of history at four precise moments: 1) during fact creation when the sources are first made; 2) when facts are assembled into an archive; 3) when the narratives are coalesced during fact retrieval; and 4) during the
construction of the final history (Trouillot 1995:26). Silencing occurs due to uneven power in the production of sources, archives, and narratives (Trouillot 1995:27). Therefore, it becomes incumbent upon researchers to look for silencing in documents, memory, and physical remains in order to maintain a more representative interpretation of the past.

Memory and history both gain emphasis from physical remains (Lowenthal 1985:xxiii; Trouillot 1995:29). Artifacts have their limitations as informants because they are mute and require interpretation. In addition, the continuous but differential erosion of archaeological data alters the record of the past. However, artifacts are an essential bridge between the past and present because they confirm or deny our interpretations of the past. They also symbolize collective links over time and provide archaeological images that illuminate the processes of history and memory.

With Lowenthal (1985) as a guide, I use these three conduits to the past to examine a brief period of contact between the White Mountain Apache and Mormon colonists in the Forestdale Valley from 1878 to 1883. These groups interacted with one another for several years leaving behind a fragmentary historical record; therefore I use documentary evidence and oral traditions to access how both groups interpret this period. I also use archaeology to examine the "unbiased" material remains of the relations between these groups. Because I am examining interactions between two distinct groups I also must examine the expressions of social identity within each society.

Social identity refers to the ways in which individuals and groups are distinguished in their social interactions with other people (Meskell 2002b:280). Current
discussions of social identity generally focus on the processes that produced differences within and between groups (Mills 2004:2). Identity is a multifaceted social construction and a fluid social process (Ferguson 2004:28; Meskell 2002b:281; Mills 2004:4). There are several distinct trends in current social identity research: technological style and social boundaries, migration and identity, processes of colonialism and ethnogenesis, and politics of identity (Ferguson 2004:27). Identity issues in archaeology examine class, gender, age, sexuality, descent, politics, household membership, ideology, citizenship, linguistics, and ethnicity. For my research purposes, ethnic identity is the most archaeologically visible facet of social identity.

Ethnic groups are categories of ascription and identification created and maintained by the group members themselves (Barth 1969:10). An ethnic ascription classifies a person in terms of his basic identity, which is usually determined by his origin and background. People form ethnic groups when they use ethnic identities to categorize themselves and others for the purposes of interaction (Barth 1969:13). Many scholars see a connection between nationality and ethnicity because new ethnic identities often arise when a state conquers new territory (Alonso 1994:390; Emberling 1997:305).

Ethnicity is a process of identification and differentiation that group members can alter by the manipulation of appropriate symbols (Emberling 1997:306). The character and persistence of ethnic groups rely upon the existence of an ethnic boundary, which groups maintain by the exploitation and display of these symbols (McGuire 1982:160). Group boundaries are not necessarily rigid, but rather they can change with struggles for power and prestige (Alonso 1994:392). These boundaries do not enclose unique cultures.
Instead, a group's distinct social and economic location produces differences in lifestyles. Cultural, political, and economic struggles are very important to the emergence and maintenance of ethnic identities.

A study by Singleton (1998:173) examines the role of culture contact and power relations in the formation of African American identity. She demonstrates that the archaeological record can preserve evidence of agency and resistance, as in the case of the secret storage pits among African slaves, and the use of that agency in the construction of identity (Singleton 1998:183). For further discussions of ethnic identity please reference Alonso (1994); Ballard (1997); Barth (1969), Emberling (1997); Loren (2000); McGuire (1982); Meskell (2002b); Stone (2003); and Wake (1997).

Previous anthropological, historical, and archaeological approaches to social identity and social memory are used as a guide for this research project. The documentary evidence is examined in order to gain insight into the different perspectives surrounding this short period of interaction. In addition, oral traditions have been gathered from several individuals who have extensive knowledge of this period. A list of the possible material correlates of social identity has been compiled from ethnographies, oral traditions, and previous archaeological studies. These data sets form an information base, which is used to interpret the archaeological record and identify the locations of Apache and Mormon sites in the Forestdale Valley.
HISTORICAL FRAMEWORK

Environmental Context

The Forestdale Valley is located in east-central Arizona just below the Mogollon Rim. The Mogollon Rim is a physiographic feature that divides the extensive piñon-juniper woodlands and grasslands of the Colorado Plateau to the north from the desert basins to the south (McGuire 1980:19). It also serves as the northern boundary of the Fort Apache Reservation. The Rim consists of ponderosa pine forests and mountain meadows. The Forestdale Valley is in the Silver Creek region of the Little Colorado River Valley, which drains into the Salt River. It is centered on the Forestdale Creek, which floods seasonally and provides ideal land for farming and cattle grazing. Figure 1 shows the layout of the valley.

Figure 1, The Forestdale Valley in East-Central Arizona

Historical Context

Apache History

By the beginning of the eighteenth century Apache bands had shifted their subsistence economy from bison hunting on the Plains to economic raiding combined with mountain game hunting and wild plant food gathering (Basso 1983:465; Goodwin 1969:9). Traditionally, Apaches occupied the White Mountain region seasonally and used the Forestdale Valley for farming. Farming only contributed a small portion to their subsistence economy, which mostly focused on hunting and gathering (Basso 1970:3). Basso states that this type of economy did not permit the Western Apache to establish permanent residences.

The Apache engaged in residential mobility that varied seasonally with the availability of wild resources and the requirements of farming. Women gathered agave in the spring and in May they visited their farm sites in the mountains to plant small fields of corn, squash, and beans (Basso 1970:3; Dobyns 1971:13-14; Goodwin 1969:12-13; Welch 1997:78). Elderly members stayed behind to tend the fields while the rest of the group traveled down to the desert mountain region in July to harvest cactus fruit, seed bearing annuals, mescal, berries, and acorns. In late August and September they gathered mesquite pods, cactus, and yucca. The Apache returned to their farms in late September or October to harvest their crops and collect piñon nuts and juniper berries. They then traveled to low-altitude winter camps in the Salt and Gila River valleys. From November to April they hunted, visited, and raided.
Apache raiding significantly contributed to the economy (Basso 1970:4; Goodwin 1969:9). The Apache primarily took livestock from their Tohono O'odham, Akimel O'odham, and Hispanic neighbors in southern Arizona. Once taken, the Apache raiders drove the livestock to their mountain habitation areas, which made their recovery by the original owners difficult. Figure 2 shows the distribution of Apache groups across the mountain landscape of east-central Arizona before they were confined to reservations by the U.S. government.

With the ratification of the Treaty of Guadalupe-Hidalgo in 1848 and the Gasden Purchase in 1853, Arizona territory came under the jurisdiction of the U.S. government (Sheridan 1995:52-56). In 1853, Dr. Michael Steck began acting as resident Indian agent to the Western Apache bands (Dobyns 1971:25). During this period, the Apache seemed willing to allow Anglo-American passage through their territory for a fee, but the U.S. government was frustrated that they would not stop their raiding activities (Basso 1983:480; Dobyns 1971:26). Beginning with the establishment of military posts in the 1860s, the U.S. government tried to curtail raiding activities and confine the Apache to reservations. This began the Apache wars, which lasted from 1862 to 1886, when Geronimo and his band of Chiricahuas finally surrendered to the U.S. Army (Spicer 1962:255).
The outbreak of Civil War in 1860 led to the withdrawal of troops from the western frontier to fight the Confederacy (Dobyns 1971:26; Ogle 1970:45). In 1862, the Union decided to reassert its authority in the Southwest. Gen. James Carlton secured the Rio Grande for the Union and then turned his attentions toward pacifying the
southwestern Native American groups (Dobyns 1971:27). After a series of military campaigns, U.S. forces defeated the Navajo and removed them to Fort Sumner, leaving the Apache northern border open to intrusions from the U.S. Army and Anglo-American settlers. Gen. Carleton then began establishing a series of forts surrounding White Mountain territory (Basso 1983:480; Dobyns 1971:28). Once the Civil War ended, the Apache became an active target for pacification efforts (Dobyns 1971:30).

In July 1869, President Grant enacted a new and "more peaceful" federal Indian policy (Basso 1983:480; Dobyns 1971:32). As part of his new peace policy, the President sent Col. John Green to scout for a suitable area to set up an Apache reservation. Col. Green was later assigned responsibility to execute a plan for Apache pacification. He built a road in the center of the proposed reserve and established a military post, later called Fort Apache, at its end (Basso 1983:480; Davisson 1976:302; Dobyns 1971:34). The U.S. Army recommended boundaries for the proposed reserve in 1870. The New Mexico-Arizona boundary was to be the eastern limit, the south rim of the Black Mesa was the northern limit, a line through Sombrero Butte, the crest of the Apache mountains and down Salt River to Pinal Creek was the western limit, and the crest of the mountains north of the Gila formed the southern limit.

The White Mountain Indian Reservation negotiations corresponded with the discovery of rich mineral deposits in Apache territory (Dobyns 1971:35; Ogle 1970:88). Government officials were under constant pressures from miners and colonists to open up and pacify Apache territory. Vincent Coyler, Secretary of the Board of Indian Commissioners, was appointed to negotiate with Apaches about access to these mineral
resources, which could not be exploited because of Apache hostilities in the area, and to establish the terms of the peace policy. On September 5, 1871 Grant's Executive Order established the boundaries of the White Mountain Indian Reservation and in 1872, Coyler enlarged the reservation by adding a San Carlos district. By the early 1870s, most of the Western Apache tribes were settled on the White Mountain Indian Reservation (now the Fort Apache and San Carlos Indian Reservations), which was divided into two reservations in 1897 (Basso 1970:17).

Even as the White Mountain Indian Reservation was being established, Native American reservations all over the Southwest were being reduced or eliminated (Dobyns 1971:46). Camp Grant and Camp Verde were both restored to public domain and the inhabitants removed to San Carlos (Basso 1983:481). In 1875, Indian Agent John Clum forced the White Mountain Apache bands (Coyoteros) to abandon their fields and move to San Carlos (Dobyns 1971:47; Ogle 1970:152-153). In 1876, silver was discovered in Globe, and President Grant redefined the western boundary of the White Mountain Indian Reservation to accommodate mining in the region. In 1879, the White Mountain bands finally returned to the Fort Apache region, only to find their territory being settled by Mormons and other Anglo-American settlers (Dobyns 1971:51-52).

Despite the uncertainty of their boundaries and the strain of forced removals, the White Mountain Indian Reservation was moderately peaceful, which may have been related to the fact that much of tribe had been able to remain in their traditional homeland (Basso 1970:17; Spicer 1962:251). However, a period of general unrest broke out on the reservation in 1881. (Basso 1983:481; Collins 1999:45; Dobyns 1971:52-53; McGuire
An Apache prophet named Nochaydelklinne had acquired a growing contingent of followers after a year of constant food shortages. He claimed that he had the ability to raise fallen Apache warriors from the dead and drive all the whites from the Apache homeland. Army officials saw this as the beginning of a mass flight from the reservation. General Carr marched his soldiers to Cibecue, where the prophet was holding meetings, in hopes to arrest him and thwart the uprising. Violence erupted and the prophet and 17 other Apaches were killed, along with eight soldiers. The Battle of Cibecue, as it came to be called, resulted in the dissolution of the prophet's following and the eventual subsiding of hostilities. This conflict, along with the murder of Nathan Robinson on Show Low Creek in 1882, may have contributed to the final Mormon abandonment of Forestdale.

Mormon History

The Latter Day Saints (LDS, Mormons, or Saints) began their trek west in 1846 after they were forced to abandon their settlement in Nauvoo, Illinois. The Mormons reached the Great Salt Lake, or Zion, on July 24, 1847, and quickly turned to the task of establishing Salt Lake City (Brown 1980:151). The Mormons chose as their home a barren region that other settlers had rejected, but they learned to use the land and manipulate the water through irrigation (Larson 1947:282). After they settled Utah, the Mormons began looking for new areas in which to expand their influence. Mormon expeditions explored much of Arizona throughout the 1860s and early 1870s, which resulted in the establishment of many LDS settlements across the region (Daniels
Mormon colonization began in Arizona with the establishment of a settlement at Pipe Springs in 1863 (Daniels 1960:15).

Fueling the Mormon expansion out of Utah was the belief that they had the right to colonize any land that was unoccupied. The LDS worldview includes the notion that the Lord gave the earth to mankind to use and receive benefits from, and if a man was not using the land in accord with Mormon values and interests, they had the right to take it away (Daniels 1960:16-17). Their colonization along the Little Colorado River was part of the deliberate expansion of the Mormon domain (Abruzzi 1993:19). By occupying every arable valley, the church hoped to prevent non-Mormon settlement throughout the Mountain West, from Canada to Mexico.

To occupy the land, Mormons generally used squatter's rights, which were enforced by the Homestead Act of 1862 that authorized citizens to choose any surveyed, but unclaimed tract of public land to settle and improve (Daniels 1960:16-17; Lamar 1977:509-510). Any citizen or intended citizen could claim up to 160 acres and gain title after five years of residence provided they improved the land and paid a small fee. As settlers pushed into the drier regions such as Utah, Colorado, and Arizona, the allotted 160 acres was found to be too small for the elaborate farming required in arid regions. The Desert Land Act of 1877 enabled settlers to claim up to 640 acres of public land (Sheridan 1995:1331). These legislative acts enabled the settling of these regions and reversed the trend of tenancy, that had become popular in the older public land states, where speculators anticipated settlers by purchasing millions of acres for resale at high prices or to rent to tenants.
Mormon interest in the Mogollon Rim region began when Capt. James Brown brought back favorable reports of the soil, water, and general farming conditions in this area to Brigham Young in 1876 (Daniels 1960:45). However, Mormon colonists did not travel directly to this potentially good farming area, but rather Brigham Young sent them into the desert to settle along the Little Colorado River and its tributaries (Daniels 1960:47; McGuire 1980:34). The motivation for this move is unclear, but it might have been the result of an over exaggeration by Capt. Brown as well as a general misunderstanding by Brigham Young (Daniels 1960:47). Some interpret this as Young testing his colonists' faith in their religion. Others suggest that the Mormons consciously chose the area for its bareness in order to keep their enemies from taking away their territory (McGuire 1980:35).

Whatever the reasons, Mormon colonists began to settle the Little Colorado River area in 1876 with the establishment of Obed, Sunset, Brigham City, and St. Joseph (Abruzzi 1993:21; Daniels 1960:47). Between 1877 and 1878 the Mormons established a second series of colonies along Silver Creek including Snowflake, Woodruff, Taylor, and Show Low. The last phase of settlement included the establishment of St. Johns, Springerville, Eagar, and Alpine. Each phase of settlement relied heavily for support on the towns established during the preceding phase. Along the Little Colorado River, colonists found the water to be muddy and the soil dry and alkaline (McGuire 1980:34). These early settlers discovered that many months of hard labor in their fields produced crops that could not sustain the population until the harvest (Abruzzi 1993:25).
Colonizing the Little Colorado River Valley and its tributaries was obviously difficult (Abruzzi 1993:33). Climatic variability from drought and flood put stress on agricultural productivity and the infrastructure. The costs of community maintenance were high, which made the establishment of communities dependent on such unstable environmental conditions only partly successful. But the Mormon desire to colonize this region outweighed its difficulties. The main goals of the colonization effort were to settle and possess the land, to establish and develop the United Order of the Mormon faith, and to build a stronghold from which to promote missionary activity among Native Americans (Daniels 1960:50). Another purpose for colonization was to establish a haven for polygamous families that new anti-polygamy laws were actively targeting.

Soon other large Mormon settlements sprang up and colonization efforts in the area increased. Saint Johns and Show Low, two Mormon settlements north of Fort Apache, attracted more settlers than any other area during the 1870s (Daniels 1960:39). Peripheral settlements began to appear in the areas of Mormon Dairy, Moenkopi, and Forestdale (Daniels 1960:86). Figure 3 shows the various Mormon settlements in Arizona.
Figure 3, Map of Mormon Settlements in Arizona

Forestdale Valley

The Forestdale Valley is located approximately eight miles south of Show Low. It is a well-watered valley where the Apache traditionally planted their summer fields. As previously stated, Indian Agent Clum ordered the removal of the White Mountain Apache band from Fort Apache to San Carlos in 1875; however, the relatives of Apache
Scouts and the *tcâteidn* (Red Rock Strata people), who lived in the Forestdale Valley, were allowed to remain in the area (Smith 2005:22). Figure 4 shows what the valley looks like today.

**Figure 4 The Forestdale Valley Today**

![Photograph by J. Reid (1970s) with permission.]

Because the Forestdale Valley was suitable for agriculture, Mormons from the Shumway vicinity were eager to establish a settlement there (Haury 1985:148). Orson Cluff first explored the area while hunting (Ricketts 2001:137). On February 1878, he and several other families settled in what would be called Forest Dale (Haury 1985:389; McGuire 1980:36). By July there were 13 houses and 180 acres under cultivation and the Eastern Arizona Stake decided to establish a Forest Dale Ward (Joseph Fish, History of the Eastern Arizona Stake of Zion and of the Establishment of the Snowflake Stake 1879-1893, University of Arizona Special Collections [UASP], Tucson, 1870s; Peterson 1973:26). Oscar Mann was appointed as the first Bishop with Alfred Cluff and Peter McBride as his counselors.
In 1879 rumors circulated that the valley was on the reservation and the settlers abandoned their colony (Peterson 1973:26). In 1880 it was again rumored that the valley was not on the reservation. Twenty Mormon families returned to the valley in 1880 to renew their colony and build a church (Haury 1985:399). But Apaches returned to the valley in 1882 to plant their summer fields and officials at Fort Apache ordered the Mormons to leave in 1883 (Haury 1985:400; McGuire 1980:38).

Despite the brief duration of this settlement there is a substantial amount of documentation about this event. There are also a variety of oral traditions surrounding Mormon and Apache interaction in the valley. I use Lowenthal (1985) as a guide to evaluate and interpret the documentary record, oral traditions, and archaeological evidence pertaining to this period.

This research project essentially has two underlying themes. The first theme is to explore the articulation of archaeology, history, and social memory. Multiple narratives must be incorporated in order to compile a complete interpretation of the history of settlement in the Forestdale Valley. Historical documentation, representing the viewpoints of the groups involved, is evaluated as well as oral historical information and archaeological evidence. The second theme is to examine the expressions of social identity within this framework. Within the rubric of social identity, I focus on examining the presence of material correlates of ethnicity at archaeological sites.
ANALYSIS

Historical Documents

The documentary analysis involved a variety of sources from LDS Family History Centers, the White Mountain Apache Heritage Program, and the University of Arizona Special Collections. The documents include family histories, photographs, newspaper articles, letters, maps, and official government documentation. In addition, several secondary sources, such as Smith (2005), were used for general background information. These documents helped ascertain Mormon viewpoints regarding what happened in the Forestdale Valley.

All of the documents underwent external and internal criticism. First, the documents were analyzed to ascertain their authenticity, which historians refer to as external criticism. In many cases this was difficult since most of the archives contained retyped versions of the originals. In addition, the family histories have excerpts from personal journals that have been carefully edited. In order that I might not discount all of the primary sources, only those sources that corroborated with other documentation were used. The credibility of each document was ascertained by looking for internal contradictions and inconsistencies. Historians call this internal criticism. The writers' possible biases and agendas also are taken into consideration. Establishing the authenticity and credibility of the documentary sources was central to creating a coherent understanding of the history of Apache and Mormon interactions in the valley. The following is a more detailed account of the events in Forestdale reconstructed from LDS family histories, which are written from a Mormon perspective.
D.E. Adams and Alfred Cluff, two of the first settlers in Forestdale, initially worked for Corydon Cooley, a wealthy rancher and former Apache scout, on his ranch in Show Low in 1876 (Emma H. Adams, George Mason Adams and Martha Louise Devey Descendants and Ancestors, Show Low Family History Center [SLFHCa], Arizona, 1972; Ricketts 2001:137-149; Viva C. Wetten, The Cluff Family Journal, Show Low Family History Center [SLFHCb], Arizona 1994; Wild 1964:37-43). While out hunting in 1877, Orson Cluff "discovered" the Forestdale Valley. There is some indication that Cluff, along with Joseph Frisby, went to the San Carlos Indian Agent, Mr. Henry L. Hart, to determine whether or not the valley was inside the boundaries of the reservation (David E. Adams, Reminiscences of D. E. Adams, Central, Arizona, Lori Davisson Archive [LDA], Tribal Historic Preservation Office, Fort Apache, Arizona, 1934; Peterson 1967:50). They maintain that they undertook their colonization effort with the full cooperation of Mr. Hart, who purportedly supported the move and signed an affidavit ensuring their protection. Allegedly, Hart believed that the establishment of Anglo-American settlements in the area would discourage the Apache from leaving the reservation. They quickly filed claim on the land. It is important to note that this author and others who have researched this period never found the written permission from Hart or the homestead papers filed for Forestdale Valley.

Orson Cluff moved his family to the valley and was joined by his brother Alfred Cluff, David E. Adams, Joseph H. Frisby, Merritt Staley, Oscar Mann, Ebenezer Thayne, and Isaac Follet. They founded the settlement of Forest Dale on February 18, 1878. The settlers planted corn, potatoes, and squash without irrigation. On March 21, 1878, D. E.
Adams and his wife had a baby girl. Because she was the first child born in Forest Dale they named her Maria Forestdale Adams. The prosperity of the valley brought in more settlers so that there were more than 40 families farming in the valley. On September 27, 1878 Jesse Smith, President of the Eastern Arizona Stake, along with Erastus Snow appointed Oscar Mann as the bishop of Forest Dale Ward (UASP 1870s; Nuttall 1878). Alfred Cluff was named his first counselor and Peter McBride was named his second counselor.

The Mormons, in their missionary activities, may have allowed several Apache families to come back into the valley (McGuire 1980:38). Adams recalled that the Mormons farmed on the west side of the valley and the Apache farmed on the east end (SLFHCa 1972). He noted that the Apache farmed there quite extensively. The missionary attempts failed, and the Apache families demanded the removal of the settlers. Since the Apache had been farming in this area before the Mormons arrived, Mr. Joseph C. Tiffany, a senior Indian Agent at San Carlos, decided that the valley was part of the reservation and ordered the Mormons to vacate the area in 1879 (Daniels 1969:100; Peterson 1973:26).

An account of D. E. Adams, suggests that Corydon Cooley was really the person responsible for their removal (LDA 1934; Stein 1994:14; Wild 1964:37-41). Cooley purportedly feared that the Mormon production of corn in Forest Dale would spoil his own market in Fort Apache. Adams obviously felt that Cooley had such an influence over the Apache through his trade enterprise that he could have the entire colony destroyed whenever he wanted. Some feel that it was through Cooley's influence that Apache
exerted hostility. Adams accuses Cooley of using his influence at Fort Apache to conspire with Gen. Crook. He claims that Crook sent his soldiers out to put up signs and change the reservation boundaries (Wild 1964:40). The Mormon settlers protested Mr. Tiffany's decision, claiming that had they colonized an area about three miles away from the reservation boundary, but in 1879 they were ordered to vacate the valley.

In 1880 Gen. Carr, the new commanding officer at Fort Apache, apparently assured the president of the Eastern Arizona Stake that the colony had not been within the boundary of the reservation and that the Mormon settlers could return to re-colonize the area (UASP 1870s). According to Fish, the official map at Fort Apache showed Forest Dale to be 15 miles off the reservation boundary. By 1882, a new set of colonists had settled at Forest Dale and built a chapel. But Apaches returned to the valley in 1882 to plant their fields and Lieut. Gatewood ordered the Mormons to leave in 1883 (Haury 1985:400; McGuire 1980:38; Ricketts 2001:138).

There is also some indication that the Battle of Cibecue (1881) and a period of general unrest on the reservation had made the colonists fearful (McClintock 1985:172). In 1882, Apaches shot and killed Nathan Robinson on Show Low Creek (UASP 1870s:54; Ricketts 2001:81). Another Mormon, Merlin Plum also was shot at near Sliver Creek. In response to these acts of violence, the Mormons may have chosen to leave Forest Dale to avoid retribution from local Apache groups.

In 1915 Senator Henry Ashurst introduced a bill to the U.S. Senate (S 2870) for the relief of the Forest Dale residents (Ricketts 2001:139; Smith 2005:9). He presented an almost identical bill (S3771) to the Subcommittee of the Committee on Indian Affairs
in 1916. The original bill claimed that the Mormons were evicted following a change in reservation boundaries. However, Ashurst learned in a letter from Franklin Lane, the Secretary of the Interior, that the boundaries of that part of the reservation were never altered, and the settlers had occupied the land illegally from the start (Smith 2005:10-11). The next year, Ashurst brought another bill before the Senate arguing that U.S. government maps, which had printed the reservation boundary below where it actually lay, had misled the settlers (Smith 2005:12). He argued that because the northern boundary had not been properly surveyed, but only approximated, the settlers were misled to occupy lands through no fault of their own. Though the Senate Committee on Indian Affairs was more receptive to this argument, and the bill was amended to reduce the claims by half, it was never passed (Smith 2005:13-16). Ashurst resubmitted the bill every year until 1921, but he never gained monetary relief for the Forest Dale residents. (See Smith (2005) for more detail about this bill, Sen. Ashurst, and his motivations.)

The bills introduced on behalf of the Forest Dale residents are interesting because they provide the most detailed collection of documents surrounding the Mormon occupation of Forest Dale. Table 1 details a list of the Forest Dale colonists included in Senate Bill 3771.

According to these claims the Mormons occupied a total of 2690 acres (4.2 sq.mi) and cultivated over 900 acres. This is a rather large amount of settled land, considering that the valley is barely three miles long, and probably represents an over exaggeration (Smith 2005:18). In addition, based upon an assessment of Hart's records, Smith concludes that Hart was concerned with the intrusions of settlers and miners on the
reservation and was opposed to non-Native encroachment on reservation lands (Smith 2005:18-25). She convincingly argues that it would have been unlikely that such a man would encourage and invite the Mormons to settle so close to the reservation boundaries. Smith suggests that the statements attributed to Hart by Forest Dale residents reflect a worldview of what the settlers believed the position of an Indian Agent should have been (Smith 2005:26).

Table 1, List of Forestdale Colonists

<table>
<thead>
<tr>
<th>Name</th>
<th>Arrival</th>
<th>Total Acres</th>
<th>Family Size</th>
<th>Buildings</th>
</tr>
</thead>
<tbody>
<tr>
<td>David E. Adams</td>
<td>2/1878</td>
<td>160</td>
<td>4</td>
<td>House, outhouses, fences, corrals, well</td>
</tr>
<tr>
<td>George M. Adams</td>
<td>4/1881</td>
<td>160</td>
<td>4</td>
<td>House, outhouses, fences</td>
</tr>
<tr>
<td>William B. Ballard</td>
<td>2/1882</td>
<td>40</td>
<td>11</td>
<td>House, outhouses, fences</td>
</tr>
<tr>
<td>Alfred Cluff</td>
<td>12/1880</td>
<td>160</td>
<td>5</td>
<td>House, outhouses, fences</td>
</tr>
<tr>
<td>Orson Cluff</td>
<td>2/1880</td>
<td>160</td>
<td>4</td>
<td>House, outhouses, fences</td>
</tr>
<tr>
<td>William E. Cox</td>
<td>1/1878</td>
<td>160</td>
<td>3</td>
<td>House, outhouses, fences</td>
</tr>
<tr>
<td>Edmond Ellsworth</td>
<td>11/1880</td>
<td>50</td>
<td>11</td>
<td>A house and 50 acres bought from Moses Cluff</td>
</tr>
<tr>
<td>Theodore Farley</td>
<td>1878</td>
<td>160</td>
<td>N/A</td>
<td>House, outhouses, fences</td>
</tr>
<tr>
<td>J. H. Frisby</td>
<td>1878</td>
<td>160</td>
<td>5</td>
<td>House, well, fences, outbuildings</td>
</tr>
<tr>
<td>Elijah Hancock</td>
<td>2/1882</td>
<td>160</td>
<td>8</td>
<td>House, outhouses, fences</td>
</tr>
<tr>
<td>James Huff</td>
<td>2/1881</td>
<td>40</td>
<td>5</td>
<td>House, outhouses, fences</td>
</tr>
<tr>
<td>Peter J. Jensen</td>
<td>3/1880</td>
<td>160</td>
<td>7</td>
<td>House, outhouses, fences</td>
</tr>
<tr>
<td>William Laxton</td>
<td>2/1881</td>
<td>160</td>
<td>5</td>
<td>House, outhouses, fences</td>
</tr>
<tr>
<td>Oscar Mann</td>
<td>1878</td>
<td>160</td>
<td>10</td>
<td>House, outhouses, fences</td>
</tr>
<tr>
<td>Peter H. McBride</td>
<td>7/1878</td>
<td>160</td>
<td>4</td>
<td>House, well, fences, outbuildings</td>
</tr>
<tr>
<td>Henry E. Norton</td>
<td>2/1880</td>
<td>160</td>
<td>10</td>
<td>House, outhouses, fences</td>
</tr>
<tr>
<td>John Salien</td>
<td>2/1882</td>
<td>160</td>
<td>10</td>
<td>House, outhouses, fences</td>
</tr>
<tr>
<td>Warren R. Tenney</td>
<td>3/1881</td>
<td>160</td>
<td>8</td>
<td>House, outhouses, fences</td>
</tr>
<tr>
<td>Joseph Thayne</td>
<td>3/1880</td>
<td>160</td>
<td>3</td>
<td>House, outhouses, fences</td>
</tr>
</tbody>
</table>

Adapted from Smith (2005) with author's permission.
Oral Traditions

Oral traditions were collected from elders in the White Mountain Apache Tribe and the Mormon community. These consultants filled in the gap left by the inherent biases of documentation (Vansina 1985:199). All the consultants were given pseudonyms to protect their privacy and they were not audiotaped or photographed. In some cases, the oral traditions were compared to other documents or the archaeological record. Consultants were interviewed based upon their knowledge of the events in the Forestdale Valley and their ability to contribute to the identification of Apache and Mormon archaeological remains.

Oral traditions were collected during all three field seasons as part of student projects. In addition, Smith (2005) gathered numerous oral traditions from Mormon families about Forest Dale for her own research. Because Smith conducted such thorough research on Mormon social memory of Forest Dale, I restricted my oral histories to the Apache community, but made use of her records and those gathered during the past field seasons. These oral sources illuminate many details about Mormon occupation in the valley. They also reveal conflicting identifications of a few Mormon and Apache structures.

Apache Oral Traditions

The Apache viewpoint was more difficult to access because there are no known documents written from the Apache perspective concerning the Forest Dale incident. In order to maintain a representative interpretation of history, oral traditions were collected
from Apache elders who are recognized consultants and who claim familiarity with this period of Apache history. The interview process consisted of two parts. Each consultant was interviewed individually to record their knowledge regarding the incidents in Forestdale. The second part of the interview came after the survey was complete. The consultants visited some of the archaeological sites to look at the features and the associated artifacts. This resulted in the identification of some sites as Apache or Mormon as well as the classification of distinctive artifacts and their meanings.

I collected oral traditions from two Apache elders. The first elder, interviewed on June 22 and 26, 2004, is a traditional Apache medicine man. He said that his father had told him about the Mormon squatters in the valley. He recalled that the Mormon settlement had many houses with a log fence constructed around its perimeter. The Mormons also had planted plum orchards in the valley. He said that the Apache chief told the Mormons to leave the valley and they did. The Apaches then divided the Mormon homes and fields among tribal members, while the chief took possession of the only two-story house. His father told him that he had witnessed the subsequent burning of the settlement when he was ten years old. In September, all the Apache families in the valley went to White River for a big fair. Apparently an Apache man named Godewoyah set fire to the Mormon buildings occupied by Apache families. This remembered act might explain why none of the Mormon homes remain standing in the valley.

The Apache medicine man identified many archaeological sites. He also discussed how Apache people used the various sites. He said that large piles of wood in the valley were probably used in ceremonies like the Sunrise dance, a puberty ceremony
for girls. He also recounted how animal bones were placed in trees for good luck. He identified the former owners of agricultural plots, corncribs, corrals, and roasting pits. He showed how different types of rocks were used in fire pits, roasting pits, and sweat lodges. For example, he said that smaller rocks are better for roasting pits, but bigger rocks are needed for sweat baths. Basalt is most commonly used in sweat baths. Roasting pits and sweat lodges are usually located near drainages. He also said that wooden planks nailed to trees are used to store corn or pumpkins.

The other consultant was also a tribal elder. The interview took place June 16, 2004, and she provided a lot of information about traditional foods and agriculture. She said acorn stew, corn, tomatoes, pinto beans, chilies, green squash, pumpkin, radishes, and onions were common foods in the valley. She recalled that people generally check on their fields once a week and they place bottles in trees on the edge of their fields to scare away deer and birds. She also said it is common to barbeque corn, agave, and beef in roasting pits.

Mormon Oral Traditions

Smith (2005) and a few University of Arizona Field School students gathered oral traditions from the LDS community. Smith discovered that the Forest Dale incident was well chronicled in the memories of Mormon community members as a symbol of Mormon migration (Smith 2005:5). Most of her consultants believed that Forest Dale was originally on public land and that the reservation boundary was later changed (Smith
She argues that the Forestdale narrative fits into a wider narrative common in LDS historiography (Smith 2005:30). The Forestdale residents are depicted as victims of forces outside their control. They are in a sense martyrs who tried to serve their faith, but were wronged unjustly, and in the end they received nothing for their hard work (Smith 2005:32). She argues that Forestdale is also a classic settler narrative. When the history of land dispossession is considered, the Forestdale narrative appears as a story of Anglo-Americans being unjustly forced from their rightful property. Smith argues that this is a formula of erasure in which a wider social process (the removal of indigenous populations from their land) is contradicted by the embellishment of a contrary example (Smith 2005:33). She states that the silencing of these aspects of the recent past is widespread in this region. She suggests that Forestdale may reflect more widespread silences found in settler memory (Smith 2005:36).

Divergent Oral Traditions

Over the course of three field seasons several consultants were brought to the Forestdale Valley to identify historical period archaeological sites. More often than not, site identifications made by these consultants contradicted one another. For example, in 2002, one consultant identified a collapsed structure near a large ruin (UA-02-103/FAIR 13-080) as one built in 1945 by an Apache rancher (Scotten 2002:12). However, the next summer a Mormon consultant identified the same structure as a ruined Mormon house
(Werner 2003:18). Archaeological analysis revealed no evidence of a pre-1890 occupation. It is possible that the site once was a Mormon house, which burned and was later reoccupied by an Apache family. Many of the oral traditions and documentary evidence were corroborated by documentary or archaeological evidence. The presence of internally contradictory narratives about the past is not a new finding; oral historians and scholars of social memory often report on the ambivalent statements of their interviewees (Smith 2004:251).

**Archaeology**

An archaeological survey of the Forestdale Valley, undertaken by the University of Arizona Archaeological Field School, was conducted over three summers from 2002 to 2004. This survey involved three teams with five members each walking transects 10m apart. The goal of the survey was to locate, document, and map all of the archaeological sites in the valley. The survey crews followed the Arizona State Museum's (ASM) guidelines for site definition and documentation. The ASM stipulates that a site must meet the following qualifications in order to be considered a site. A site must have material remains of past human activity that are at least 50 years old and contain one of the following characteristics: 1) over 30 artifacts of a single artifact class within a 15m area; 2) over 20 artifacts of more than one artifact class within a 15m area; 3) at least one archaeological feature temporally associated with artifacts; or 4) at least two temporally associated features without any artifacts. In addition, isolated artifacts were recorded on a separate form. The White Mountain Apache Tribe guidelines (see WMAT Cultural
Heritage Best Stewardship Practices, on file WMAT Historic Preservation Office) differ in requiring the documentation of isolated artifacts as sites and in encouraging the inclusion of spatially contiguous materials within a single site boundary. After sites were located, they were mapped using a Brunton compass and an electronic distance measurer (EDM).

For historical period sites, each team filled out forms detailing the nature of the artifact categories. There were data forms for cans, glass, architecture, and miscellaneous artifacts. Each form recorded the total number of each type of artifact and the observable diagnostic characteristics. These forms aided in the identification of sites from this period of interaction and they provided information about the kinds of historical period assemblages present in the valley. This recording procedure was instrumental in creating a guide to the identification and management of historical period sites. I visited historical period sites found during the two previous survey seasons to ascertain their date ranges and artifact categories. A database of all historical period sites documented by the field school was created.

In order to date the historical period sites in the valley, chronologies for several different artifact classes including glass adapted from Berge (1980), tin cans adapted from Berge (1980) and Busch (1981), and construction materials, were used. The chronologies for glass and tin cans are shown in Appendix D. The main construction materials examined were nails. Nails were hand wrought until the 1790s, when they began to be manufactured in bulk (Orser 2004:102). These new nails, termed square-cut
because of their distinctive shape, were used until the late 1880s when modern wire nails became widely available (Orser 2004:103).

This survey strategy raises some important implications for archaeological interpretations. Because all the analysis was conducted in the field, no one can go back and reanalyze the exact datasets, as artifacts may be picked up, moved, or buried over time. There is also little or no temporal control using surface finds. The diagnostic materials available came from the types of artifacts present on the surface, which likely are mixed with earlier deposits. However, because there are several diagnostic artifacts associated with the small time period under examination, the presence of these artifacts show that there was an occupation at a site during that period. In addition, buried deposits were seldom visible unless they were exposed by forest clearing. This obviously biases the sample since more sites may be exposed in areas that have undergone clearing as opposed to those that have not. Finally, because Apaches frequently recycle materials, some sites have deposits representing an Anglo-American and an Apache presence. All of these problems were taken under consideration when interpreting the archaeological remains.

Apache Archaeology

Apache sites are notoriously difficult to identify, document, interpret, and protect (Donaldson and Welch 1991:93; Gregory 1981:264; Whittlesey et al. 1997:236). Because the Apache are mobile and used chipped stone implements and ceramics prior to the proliferation of metal, Apache sites tend to resemble small ephemeral Mogollon sites.
Ceramics were not an important part of pre-reservation Apache material culture because they were inconvenient and unnecessary for the mobile lifestyle of Apache groups (Whittlesey et al. 1997:175). However, one site (UA-02-202/FAIR unknown) located on survey did contain three Apache sherds. As European and American containers became available they rapidly replaced traditional ceramics. The relocation to reservations and the increasing availability of Euro-American vessels in the 1870s probably halted most ceramic production among the Apaches. The ceramics that Apaches did make were plain brown vessels with conical or pointed bottoms, thin walls, flaring rims, and high shoulders (Donaldson and Welch 1991:100; Whittlesey et al. 1997:176). These vessels typically have a distinctive striated interior surface that results from scraping the wet clay with a grass brush (Ferg 1987:66).

Food remains at Apache sites were scarce, but material correlates for subsistence strategies included metates and manos, which they often retrieved from ancestral Puebloan sites (Whittlesey et al. 1997:177). Apaches would have used these artifacts well into the modern period for grinding corn (Ferg 1987:59; Whittlesey et al. 1997:178). They also depended on non-native foods such as wheat flour, sugar, and coffee (Rogge et al. 1995:135). Anglo-American food containers were commonly recycled and used in new ways (Ferg 1987:63; Longacre and Ayres 1968:156; Rogge et al. 1995:139-140). Apaches used tin cans as cups and they punctured holes in buckets to create strainers. They also wove wire into grills. Other artifacts diagnostic of an Apache occupation include white chert or obsidian flakes and tools (Donaldson and Welch 1991:100; Whittlesey et al. 1997:177). They also worked glass to make projectile points.
The architectural remains of Apache camps can be difficult to recognize archaeologically. The most commonly recognized forms of architecture are rock rings that served as foundations for Apache gowahs (Donaldson and Welch 1991:95; Gerald 1958:11; Whittlesey et al. 1997:172). Because the Apache population was mobile, their dwellings had to be easy to construct (Ferg 1987:47). They used brush and wood to create their dwellings, but all that survives archaeologically are the rock rings. They also had a tendency to settle in locations that were previously occupied. Other forms of architecture include multicoursed rock constructions used for defense, storage cellars, ramadas, sweathouses, and windbreaks (Donaldson and Welch 1991:94-99; Whittlesey et al. 1997:174).

Other types of material culture that denote Apache social identity are artifacts that have axe holes in them (Rogge et al. 1995:137). Apaches ritually "killed" objects that belonged to family members who died. They destroyed these objects in order to clearly demarcate the worlds of the living and the dead. It also protected the living from the temptation of coming into contact with an object that could give them ghost sickness. Finding these objects provides a rare opportunity for distinguishing ideology in material culture. Another object indicative of Apache social identity is the metal cone, or tinkler, which the Apache used as decoration on their clothes (Ferg 1987:97).

Apache sites were relatively easy to identify in the Forestdale Valley. Architecture provided the best clues to Apache identity because it is probable that only Apaches built substantial structures after 1900 in the Forestdale Valley. An exception to this rule may be non-Apaches who married into a family living in the valley. Most or all
of the extant corrals, outhouses, fences, and homes are probably Apache. In addition, roasting pits, sweat lodges, and some gowah rings were also present in the valley. One of the consultants, the Apache medicine man, helped by identifying several Apache sites in the valley. There were 53 identifiable Apache sites out of a total of 67 historical period sites. Some sites had archaeological remains that were ambiguous or too ephemeral to make a reliable designation. Appendix E details the criteria used to make these identifications.

After all the sites were identified, they were classified based on site use. The categories were Agricultural, Camp Site, Funerary/Ritual, Habitation, Disposal, and Unknown. Figure 5 shows the number of sites within each category.

![Figure 5, Site Use Distribution Chart](image)

Sites that fell into the agricultural category contained features such as ramadas, roasting pits, small and large structures, corncribs, corrals, fences, outhouses, and rock piles, which were located in the valley or low hills. Figure 6 shows a roasting pit dating to the 1940s and Figure 7 shows a typical ramada. Many of these sites were still in partial
use by the original owners and had extensive artifact scatters. Sites designated as
 campsites had smaller artifact scatters associated with rock rings and were located in the
 low hills or hills. Funerary/Ritual sites had cemeteries or sweat lodges. The cemeteries
 were situated in the hills and low hills while the sweat lodge was in the valley next to the
 Forestdale drainage. Habitation sites had features such as gowah rings or milled lumber
 structures. They were scattered throughout the valley and low hills. There was only one
 obvious disposal site, which was situated in the low hills, but there were no diagnostic
 remains to classify it as Apache. It could just as easily been a one-time dump by people
 passing by.

 Figure 6, Site UA-04-101/FAIR 23-020
 Roasting Pit
One site, UA-03-010/FAIR unknown, lacked any diagnostic artifacts, but contained two rock rings, which may be *gowah* rings. It is shown in Figure 8. In order to determine the dates these rock rings may have been used, Dr. Jeffrey Dean took four tree-ring cores from the ponderosa pine trees growing inside the features in 2003. Table 2 details the tree-ring date ranges for the cores taken from this site. Dendrochronology places the occupation before 1919.
Table 2, Tree Ring Date Ranges for UA-03-010/FAIR unknown

<table>
<thead>
<tr>
<th>Tree Ring Lab #</th>
<th>Date Ranges</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCP-59</td>
<td>No Date</td>
</tr>
<tr>
<td>SCP-64</td>
<td>1919-2003B(^1)</td>
</tr>
<tr>
<td>SCP-65</td>
<td>1919-2003B</td>
</tr>
<tr>
<td>SCP-66</td>
<td>1921-2003B</td>
</tr>
</tbody>
</table>

\(^1\)B indicates that bark was in the sample.

Tree-ring cores also were taken from trees that had milled lumber boards nailed to the trunks to form an enclosure. This feature was part of site, UA-03-016.FAIR unknown, that had been used for agriculture in the past. It is shown in Figure 9. There was a significant scatter of historic and prehistoric artifacts associated with it. According to the Apache medicine man, enclosures like this one were used to store corn or pumpkins. Dean also took cores from these trees in 2003. Table 3 displays the tree ring date ranges
for the ponderosa pine trees to which the boards were nailed. The enclosure post-dates 1948 since that was the year the youngest tree began to grow rings.

Figure 9, Site UA-03-016/FAIR unknown

Table 3, Tree Ring Date Ranges for UA-03-016

<table>
<thead>
<tr>
<th>Tree Ring Lab #</th>
<th>Date Ranges</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCP-60</td>
<td>1931-2003B</td>
</tr>
<tr>
<td>SCP-61</td>
<td>1927-2003B</td>
</tr>
<tr>
<td>SCP-62</td>
<td>1948-2003B</td>
</tr>
<tr>
<td>SCP-63</td>
<td>1925-2003B</td>
</tr>
</tbody>
</table>

During the 2004 season a small log structure, UA-04-105/FAIR unknown, was found on survey. While the roof had wire nails fastening tin shingles to milled lumber planks, the main body of the structure was made of hand-hewn ponderosa pine logs. It is shown in Figure 10. It was possible that this site may have been Mormon and then reused by Apaches. Dean took 16 core samples from the structure to see whether it could have dated to the Mormon occupation. Table 4 displays the date ranges from the logs in this
structure. The tree ring dates show that most of the wood was cut around 1914, making it too late to be a Mormon structure. My discussions with the Apache medicine man reveal that the log structure was actually a corncrib built by his father.

Figure 10, UA-04-105/FAIR unknown

Table 4, Tree Ring Date Ranges for UA-04-105

<table>
<thead>
<tr>
<th>Tree Ring Lab #</th>
<th>Date Ranges</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCP-67</td>
<td>No Date</td>
</tr>
<tr>
<td>SCP-68</td>
<td>1776-1914G¹</td>
</tr>
<tr>
<td>SCP-69</td>
<td>1866-1914G</td>
</tr>
<tr>
<td>SCP-70</td>
<td>No Date</td>
</tr>
<tr>
<td>SCP-71</td>
<td>1868-1914G</td>
</tr>
<tr>
<td>SCP-72</td>
<td>1863-1914G</td>
</tr>
<tr>
<td>SCP-73</td>
<td>1840-1914G</td>
</tr>
<tr>
<td>SCP-74</td>
<td>1852-1914G</td>
</tr>
<tr>
<td>SCP-75</td>
<td>1812-1914G</td>
</tr>
<tr>
<td>SCP-76</td>
<td>1851-1911W²</td>
</tr>
<tr>
<td>SCP-77</td>
<td>1876-1914G</td>
</tr>
</tbody>
</table>

¹ G indicates the presence of beetle galleries.
² W indicates the presence of a waney edge.
In order to test whether the Apache site type classifications reflected a non-random association of artifact type and social identity, I used the Chi-square test to statistically explore the survey data (Thomas 1986). All of the Chi-square tests and the results appear in Appendix C. The only test that yielded significant results was one that examined site location and site use. As expected, the site use category represents a nonrandom association between site use and location within the valley.

Apache sites in the valley reflect its long use by these people not only as a place to farm and ranch, but as a place where people live, camp, conduct rituals, and bury their relatives. The valley is still in use as a place to herd cattle and grow corn and squash.

Mormon Archaeology

Excavations at Joseph City provide a clear example of what to expect at Mormon sites. Ceramic assemblages contain many Euro-American types including earthen wares, stone wares, porcelain, historical period Hopi and Zuni pottery, and Mormon-made red wares (Ferg 1988:29). The glazed red ware ceramics made in Brigham City are abundant at Mormon sites, but absent on contemporaneous non-Mormon sites (Ferg 1988:93).

Discarded food remains are rarely present at sites, but food containers are very common. These include glass bottles, fruit jar lids, metal cans, and corks (Ferg 1988:44, 51, 52, 77). There are also cast-iron stoves, kettles, and cooking and eating utensils (Ferg 1988:63-64). The cans and bottles will likely have the same origin as those found among Apache material remains, but they will probably not be reused and given new uses as done among the Apache.
The documentary record states that there were many Mormon houses in the valley during the occupation, but Hough recorded that Apaches burned most of the buildings in the early 1900s (1903:290). Unfortunately, none of the sites in the Forestdale Valley contain enough diagnostic artifacts to be labeled Mormon. There was a widespread scatter of artifacts across the valley that possibly were Mormon. Figure 11 shows a hand wrought bar that might be from the Mormon occupation. Haury recorded a building in 1941, which he identified as the Mormon Church (1985:399). Samples from the wood dated to 1881, the year the second group of colonists resettled Forest Dale (Bannister, Hell, and Hannah 1966:38). A list of these dates appears in Table 5. Haury noted that the building was destroyed several years later. It is unknown why Haury designated this building as the church because structurally it could also have been a house or a large corncrib.

Figure 11, Possible Mormon Artifact
Table 5, Tree Ring Date Ranges for Mormon Structure

<table>
<thead>
<tr>
<th>Tree Ring Lab #</th>
<th>Date Ranges</th>
</tr>
</thead>
<tbody>
<tr>
<td>MT-1</td>
<td>1787-1881rL(^1)</td>
</tr>
<tr>
<td>MT-2</td>
<td>1763-1881rL</td>
</tr>
<tr>
<td>MT-3</td>
<td>1806-1881rL</td>
</tr>
<tr>
<td>MT-4</td>
<td>1784-1881rL</td>
</tr>
</tbody>
</table>

\(^1\)L indicates that bark has been stripped and r indicates a continuous outer ring for less than a full section.

The lack of significant archaeological evidence for a Mormon presence in the valley is not surprising given that they were there for a short amount of time. Nevertheless, it is possible to suggest a likely location for the Mormon settlement based on documents, oral history, and the small amount of archaeological evidence. Oral tradition and documentary evidence suggest that the Mormons were farming near water sources. There are three springs in the eastern end of the valley as well as the seasonal drainage. Two plum orchards frame the eastern end of the valley. Though plums occur naturally in the valley, these orchards are near springs and were planted in rows. Consultants stated that the Mormons planted these orchards. In addition, there is a definite scatter of historical period artifacts dating to the time of Mormon occupation that exists between these two orchards. Because the flood plain in Forestdale has been repeatedly disturbed by plowing and herding it is reasonable to assume that the artifactual remains of the Mormon settlement were widely dispersed. The orchards provide the most visible evidence of Mormon occupation. The Mormon orchards are included in the Apache site count because Apache people later reused them. Oral tradition confirms the archaeological observation that Apaches reused these sites. This is not surprising given that the Apache frequently reuse objects; however, this instance of reuse may also be a
symbolic form of resistance. They ousted the Mormons from their territory and then reoccupied their homes and fields.
SUMMARY AND CONCLUSIONS

Historical documents, oral traditions, and archaeology have played crucial roles in the development of a holistic interpretation of the events in the Forestdale Valley. While historical documents are inherently biased against minorities and are traditionally kept by the "historical victor," they serve as a cornerstone for any historical interpretation. In this case, documents written by U.S. government officials and the Mormon colonists were examined. Though unavoidably biased in their interpretation of events, they revealed the underlying worldviews of these two groups. They are valuable because they capture the feelings and viewpoints of their writers at their time of creation; however, the documentary record did not preserve the viewpoints of Apache people. To access their memories of this event, oral traditions were collected.

Oral traditions filled in the gap left by the documentary record. These sources were considered carefully because they are essentially personal narratives in which actual events may have been altered in order to make sense of the past or to validate one's actions. Oral traditions were compared with the archaeological and documentary record in an attempt to verify the narratives. They also aided in the examination of social memories held by these two groups. Not surprisingly, Mormon social memory painted the settlers as brave people who were treated unjustly by a corrupt government. This narrative reflects a worldview in which Anglo-Americans, not Apaches were responsible for the Mormon abandonment of Forest Dale. In contrast, Apache social memory situates the tribal chief as the instrument of Mormon removal. Oral traditions were invaluable to
this research project, not only for recollections about the Forest Dale colony, but also in
the identification of archaeological remains.

While the archaeological record was meant to be the arbiter between historical
documentation and oral traditions, in this case it was largely silent. Not only was the
archaeological record difficult to interpret, but evidence was conspicuously absent from
this moment in history. It was possible to identify Apache sites in the valley, but difficult
to isolate Mormon remains. This may relate to the use of survey data, rather than
excavation data, which would have been a more robust record but impossible to execute
at all the sites. Though it was not difficult to recognize social identity at many sites, the
identifications were mostly a factor of time rather than the presence of material correlates
of identity. It was assumed that only Apache people built substantial structures in the
valley after 1900. In addition, isolated historical period artifacts were impossible to
designate as Mormon or Apache. Though difficult to interpret, the archaeological record
was an important component of this project.

Using archaeology, oral traditions, and historical documents, I conclude that the
Mormon settlement was probably situated in the eastern end of the Forestdale Valley.
Though no Mormon structures remain standing, it is possible to recognize some of the
areas where they were located. The existing evidence points to an area of occupation in
the northern half of the valley near three springs. Two plum orchards frame the
northeastern end of the valley. Available evidence suggests that the Mormons planted
these orchards. In addition, there is a widespread scatter of historical period artifacts
dating to the time of Mormon occupation that exists between these two orchards. The orchards provide the most visible evidence of Mormon occupation.

Oral traditions, documentary evidence, and archaeological remains indicate that Apaches reused the Mormon buildings. This may reflect Apache reuse behavior; however, this instance of reuse may also be a symbolic form of resistance. Apache oral traditions maintain that the Apache chief, not U.S. government officials, forced the Mormons to leave. According to Apache social memory, they ousted the Mormons from their territory and then reoccupied their homes and fields. Following this reuse, an Apache later burned the buildings down. While it is pure speculation to gauge his motivations, it nevertheless is tempting to suggest that this may reflect a "silencing of the past." Whether intentionally or not, he may have introduced a silence in the archaeological record by burning down the Mormon settlement. It is important to note that without the documentary and oral historical record, we would never recognize a Mormon presence in the Forestdale Valley. This is because most of the artifacts found that may be from the Mormon occupation could just as easily be interpreted as ephemeral remains left by soldiers or hunting expeditions.

In the case of Mormon social memory, the Forestdale settlement is an example of negative heritage (Meskell 2002a:558). Negative heritage is a site of conflict that becomes the repository of negative memory in social memory. Smith (2005) has demonstrated that the Mormon community still holds onto this site as representative of their struggles to promote their faith and settle a rough land in the face of discrimination.
In Mormon social memory this valley, though not represented in the archaeological record, serves as a testimony to their struggles.

By examining documentary evidence, oral traditions, and archaeological remains, we have gained a more holistic understanding of the nature of Apache and Mormon interactions in the Forestdale Valley. Archaeological and oral tradition evidence show that Apache people reoccupied the homes and agricultural fields of the Mormon colonists after their expulsion. This may have been a symbolic as well as a practical act. Not only were the Apache people reclaiming their traditional agricultural plots, but also they "colonized" the homes of the squatters. This study has yielded a new interpretation of Apache and Mormon history in the Forestdale Valley. It produced a map of Mormon and Apache settlement in the valley and resulted in a list of artifacts and features that are diagnostic of Apache lifeways.

All of the published materials will be submitted for approval to the White Mountain Apache Tribe, as they retain ownership of all data pertaining to tribal land. The Fort Apache Heritage Foundation will receive any and all proceeds that come out of this project.
APPENDIX A: PERMISSIONS

Subject: RE: Favor
Date: 3/7/2005 1:19:45 PM US Mountain Standard Time
From: ferg@email.arizona.edu
To: Lauren.Jelinek@*

Dear Lauren,

You're talking about Figure 4.1 from WESTERN APACHE MATERIAL CULTURE? If so, consider yourself given permission for one-time use in your thesis. And this should satisfy pretty much everyone, since if you had contacted the UA Press (and perhaps you already did), they seem to generally refer such inquiries to me, since technically that is not their book - it was published for the Arizona State Museum by the UA Press. If you need this on letterhead, or in some more formal wording, let me know. Also, if that is NOT the map you're referring to, let me know.

I think tomorrow you'll be getting your Archaeology Southwest article to look at, and they'll be wanting you to comment on it by the next day, since we're on a short time schedule here.

Alan

Alan Ferg, Archivist
Arizona State Museum
University of Arizona
Tucson AZ 85721-0026

phone: 520-621-2970
email: ferg@email.arizona.edu

-----Original Message-----
From: Lauren.Jelinek@*
To: ferg@email.arizona.edu
Subject: Favor

Hi Alan,

I have huge favor to ask you! I'm writing my thesis and I just realized that I need permission to use your map of the Apache bands and their locations that appears in your 1987 book. Is it possible for you to give me permission to use it? Sorry this is on such short notice, but I didn't realize it was required for unmicrofilmed theses until yesterday. I hope you had a nice weekend.

Lauren

Wednesday, March 09, 2005
Hi Lauren,

No problem at all. So glad to hear you're almost done. That must be a great feeling. Best, Andrea

On Tue, 8 Mar 2005 21:13:64 EST
Lauren.Jelinek@lafayette.edu wrote:

> Hi Andrea!
>
> I am in the final processes of putting my thesis together and I was
> wondering if I could use an edited version of the table you inserted in your
> article
> naming the claimants in Foreside and their property in my thesis. What I
> did was only include the names, date arrived, total property, and
> improvements.
> I'll obviously cite that I got it from you, but I need your written
> permission so I don't get in trouble for copyright infringement. When I'm
> done I'll
> send you a copy.
> >
> >Lauren
Subject: Re: Written permissions
From: btTijlte@errgil.apl^r^.-Wii
To: LaurenJelink.

Dear Lauren,

With this email you have permission to cite two student papers written for the field school, by William Werner (2003) and Ali Scotten (2002).

Barbara

Quoting LaurenJelink:

> Hi J.J. and Barbara,
> > I have finished making the suggested changes to my thesis. Now all I need
> > are written permissions from you. An e-mail will be fine.
> > > J.J. I need you to give me permission to use your photograph of the
> > > Forestdale Valley landscape.
> > > Barbara I need permission to cite the field school student papers
> > > (specifically Bill Werner and Ali Scotten).
> > > Once I put the permissions in my thesis I will bring you both bound copies
> > > of it.
> > > Thanks,
> > >
> > > Lauren

Barbara J. Mills
Professor
Department of Anthropology
University of Arizona
Tucson, AZ 85721-0030
520-621-9671 (Office)
520-626-8708 (Lab)

Saturday, April 16, 2005
Lauren,

I am glad that you found the photograph of the Forestdale Valley that I took in the 1970s to be a useful addition to your fine master's thesis. You certainly have my permission to use it in your thesis.

J. Jefferson Reid  
Professor of Anthropology  
University of Arizona  
Tucson 85721
APPENDIX B: HUMAN SUBJECTS APPROVAL

Project Title: Markers of Ethnicity and Identity in Material Culture Among the White Mountain Apache Tribe and Mormons Colonists in the Forestdale Valley.

IDENTIFICATION OF PI(s)
Principal Investigator(s): Lauren Jelinek
Degree(s): B.A.
Status/rank: Graduate Student
Department: Anthropology
College: Social/Behavioral Science

Faculty Advisor (if PI is a student):
Dr. Barbara Mills
Ph. D.
Professor
Anthropology
Social/Behavioral Science

PI CONTACT INFORMATION
Contact phone:
Email:
Fax:
Mailing address
(PO Box):
N/A
N/A

ADVISOR CONTACT INFORMATION
Contact phone:
Fax:
N/A
Mailing address:
Department of Anthropology
University of Arizona
Tucson, Arizona 85721

PROJECT START DATE: MAY 31, 2004
PROJECT END DATE: JULY 31, 2004

SUPPORT
Is this research project supported by intra- or extramural funding? Yes X No
If “yes”, sponsoring agency/ies: 
Amount of funding: 

NOTE: Per Federal requirements, the full grant application must be submitted if the research described in your PRF is in conjunction with a grant proposal to the National Institutes of Health or one of its affiliated institutes.
Verification of Human Subjects Training

All individuals conducting research involving human subjects (with or without financial support of any sponsoring organization or agency) must complete Human Subjects training. Those individuals include principal investigators, co-investigators and all other individuals involved in the conduct of research. Students and their advisors must meet the same standard as faculty and staff.

Please list all individuals involved in the above-cited research study

<table>
<thead>
<tr>
<th>Name</th>
<th>Research Role (PI, Co-PI, Collaborator, Sub-I, Data Manager, Research Assistant, etc.)</th>
<th>Will this person be involved in the consenting process?</th>
<th>Training Title</th>
<th>Completion Date(s) for each Human Subjects training listed (mm/dd/yy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lauren Jelinek</td>
<td>PI</td>
<td>YES NO</td>
<td>Med-I</td>
<td>04/21/04</td>
</tr>
<tr>
<td>Dr. Barbara Mills</td>
<td>Co-PI</td>
<td>YES NO</td>
<td>Med-I</td>
<td>02/04/03</td>
</tr>
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<td></td>
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<td>YES NO</td>
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<td></td>
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</tbody>
</table>

*Consent forms are to be signed and dated by the subject (or their legal representative) and by the Principal Investigator or Co-Principal Investigator (no other study personnel may sign as Investigator without prior approval of the IRB). Other study personnel involved in the consenting process may sign as Presenter, but not as Investigator.

**Med-I: Social/Behavioral Science and Biomedical Researchers**

Text: Protection Study Volunteers In Research (First Edition)

Authors: Cynthia McGuire Dunn/Gary. L. Chadwick

**Med-II:** Same as above (Second Edition)

Note: Either Med-I OR Med-II (both not required) Revised: 10/03

**SBS: Social/Behavioral Science Researchers only**

Text: Planning Ethically Responsible Research

Author: Joan E. Sieber
ASSURANCES

If appropriate, after review by the Departmental Review Committee, please forward their opinions and comments along with the signatures on the Project Review Form to the Human Subjects Committee, University of Arizona, 1350 N. Vine Avenue, PO BOX 245137, Tucson, Arizona 85724-5137. Only one copy is required and will be retained for the Human Subjects Committee files and eventually microfilmed for a permanent record. Please provide responses to all of the following items.

1. PRINCIPAL INVESTIGATOR

By signing below, I, the Principal Investigator, assure to the IRB that all other investigators (co-investigators, collaborating investigators, involved statisticians, consultants, or advisors) are fully aware of, and concur with, the project submission and that all Human Subjects training verification information provided in this form is accurate. I agree that no procedural changes relating to the human subjects will take place without prior review by the IRB.

Lauren Jelinek
Principal Investigator (typed) Signature/Date Department

2. DEPARTMENTAL REVIEW COMMITTEE

We/I have examined the proposal cited above, and find that the (check all that apply)
☐ yes ☐ no information contained herein is complete;
☐ yes ☐ no scientific aspects of the project include appropriate provision for protecting the rights and welfare of the human subjects;
☐ yes ☐ no required forms have been completed in accordance with the Federalwide Assurance filed by the University of Arizona with the U.S. Department of Health and Human Services.
☐ yes ☐ no the procedures for obtaining informed consent comply with the spirit and intent of DHHS regulations.

Based on review of the proposal, the Departmental Review Committee has determined that this project (check only one):
☐ should be exempt from IRB review. (Attach memo of explanation.)
☐ places human subjects at minimal risk.
☐ places human subjects at more than minimal risk.

Dr. Ellen B. Basso
Chairman of Departmental Review Committee (typed) Signature Date
Email (typed): ebasso@u.arizona.edu

3. SUPERVISING OFFICIAL

I certify that signed consent forms will be filed in ______ (administrative room/building) and retained for a period of six years.

Dr. John Olsen
Head of Department Signature
(PLEASE PRINT OR TYPE)
Department Head
Title
(Please PRINT OR TYPE)
PROJECT ABSTRACT

In the space below, provide an abstract of the project in 400 words or less. Include information about (a) the background and rationale for the study; (b) the purpose and objectives; (c) methods to be employed and (d) significance of the study.

This study will examine the archaeological manifestations of ethnicity in material culture among the White Mountain Apache tribe and Mormon colonizers in the Forestdale Valley. Between 1877 and 1883 a small group of Mormon colonizers settled in the Forestdale Valley, an area that the White Mountain Apache tribe habitually used for seasonal farming. The boundary of the Fort Apache Reservation was not clearly defined in this area and disagreements regarding the rightful inhabitants of the land ensued between the Mormons and Apaches. In 1879, the Indian agent at San Carlos asked the Mormons to leave Forestdale; however, in 1881 a new Indian agent allowed the Mormons to resettle the area, only to expel them again in 1883. A great deal of ambiguity surrounds the history and motivations behind this colonization effort. I intend to explore the history of Apache and Mormon interaction and examine the expression of ethnicity in material culture in the Forestdale Valley by looking at documentation, material culture, and oral histories gathered from elders who remember this incident. Ethnicity was a significant structuring principle in past societies; therefore, understanding ethnicity and its corresponding archaeological manifestations is a necessary precondition for generating a complete picture of the past (Emberling 1997:296). This brief period of contact between the White Mountain Apache tribe and Mormon colonists in the Forestdale Valley creates a unique opportunity to study the expression of distinct ethnicities and the process of ethnic boundary maintenance in material culture.

In order to gain a complete understanding of the history of this incident I will conduct a thorough study of the documentary evidence pertaining to the period of contact. In addition, I will gather oral histories from several individuals, both Apache and Mormon elders, who have knowledge of this period. Oral history will help balance out the information I have gathered from documents by representing the White Mountain Apache interpretation of this event, which has not been previously recorded. It may also provide information about the incident that other chronicles have not recorded. I intend to ask each informant questions pertaining to the location of Mormon and Apache settlements, the history of Apache and Mormon interaction in the area, and the appearance of artifacts distinctive to one group. I will obtain written consent from my informants, assign each informant a pseudonym, and keep notes on the interviews referring only to the pseudonyms. There will be only one list of consented informants and their corresponding pseudonyms, which will be kept in a locked file cabinet in the Anthropology building after the project is finished. I also intend to generate a list of possible ethnic markers from oral histories, ethnographies, and previous archaeological study that will likely be present at historical period sites in the Forestdale Valley. This will give me an information base, which I will utilize on my survey this summer to identify the locations of Mormon households in the Forestdale Valley. This will be the last of three consecutive years of
archaeological survey, undertaken by the University of Arizona Field School, intended to cover the whole valley. I will examine all of the artifacts must be examined in the field. Part of this examination will involve my informants. I intend to bring them out to archaeological sites in order to have them examine the artifacts. It is my hope that they will provide me with information about the manufacture and use of specific artifacts as well as an understanding of spatial organization. Oral history informants will be invaluable in this capacity as they may be able to give me insights into the motivations behind using certain objects as well as what artifacts are ethnically distinctive. This study will produce a better understanding of ethnic boundary maintenance and will provide a list of artifacts that when found together on a site may be indicative of a certain ethnic group. It will also serve to clarify the nature of Apache and Mormon contact in the valley and provide both communities with an accurate representation of their past interaction.

Emberling, Geoff
1. POPULATION

a. Number of persons to be recruited for participation in the study: There will be approximately four to eight people involved in this study.

b. Description of the population to be recruited and rationale for their participation (indicate age range, gender, ethnicity, vulnerable or captive population status). Note any special efforts to encourage the recruitment of women and/or representatives from racial or ethnic minority groups. I will recruit elders from both the White Mountain Apache Tribe and the Mormon community. The informants may be either male or female, the only prerequisite being that they have knowledge they wish to share about the Apache and Mormon interaction in the Forestdale Valley. Dr. John Welch, the Tribal Historic Preservation Officer for Fort Apache will refer the informants from the Apache Tribe to me and I will contact people from the Mormon community who have expressed an interest in participating in my oral history research.

c. What are the inclusion and exclusion criteria for study participation? The informants must have knowledge of the incident in question and the material culture used during that period. The informants must also be members of the Mormon or Apache community.

2. RECRUITMENT AND CONSENT PROCEDURES. For each response in this section, note whether the activity will be done orally, in writing, or both. List here points to be covered in an oral or written presentation here. Place consent documents in Appendix A. Include copies of any visual material (advertisements, flyers, web announcements, etc.) in Appendix B for approval.

a. Describe how you will contact individuals who may become participants in the study (e.g., web site, email, flyers, phone calls, advertisements). As previously noted, Dr. John Welch will refer the informants from Apache community to me and I will then contact them by phone. He will ask elders he personally knows, within both the Apache community, who have knowledge of the history of the valley and material culture whether they would be interested in participating in my research project. He will say that I am conducting research in the Forestdale Valley and that I would like to know if they have any memories or stories about the Mormon occupation that they would like to share. He will also ask them if they will be willing to visit the valley and talk with me about sites and artifacts associated with Apache history. I will do the same for the Mormon elders who have asked if they could contribute oral histories to my project.

b. Describe how the project will be explained to individuals when you recruit them for participation (include the text of advertisements, phone solicitations, etc). Include any pre-screening questions or surveys that may be used. I will orally
explain the objectives of this project to the informants individually. I will communicate to each informant that I am undertaking this project for my Master's thesis and that I am affiliated with the University of Arizona Field School. I will then explain that I am surveying the Forestdale Valley in hopes of finding Mormon and Apache sites that date to the Mormon occupation of the valley. I will also say that I hope to find artifacts that can be associated with either an Apache or a Mormon ethnic identity. I will ask each informant if they will be willing to share with me their knowledge of this period and the material culture associated with it. I will also ask if they will be willing to accompany me out to the valley to look at the sites and artifacts in question.

c. Describe how informed consent will be obtained. If the participants are minors or of another vulnerable population, explain how assent will be secured. If a consent document is inappropriate for your project, explain why and explain how you will ensure informed consent (e.g. with a disclaimer or some other option). I will present a written statement to each informant for written consent purposes. In this statement I will explain the university's requirement for consent by reading verbatim the consent form present in Appendix A. I will then obtain written consent from each informant.

d. How will you make it clear to the recruits that their participation is voluntary and that they may withdraw at any time? I will reiterate this verbally and ask them if they understand that this is voluntary and that they may withdraw whenever they please.

3. METHODOLOGY AND DATA COLLECTION PROCEDURES

a. Is your project evaluating an active intervention or treatment procedure (to determine whether an intervention/treatment is effective for the people undergoing it)?
   - Yes  No X. If yes, in lay terms provide a summary of the intervention and/or treatment methods and procedures to be employed

b. What type of data collection and recording will be employed? Check all that apply and provide an explanation. (If Administrative Records are to be used, include a letter of authorization from the appropriate agencies in Appendix C. Include samples of all data collection instruments in Appendix D.)

- [ ] Questionnaires/Surveys  [ ] Interviews/Focus Groups
- [X] Observations  [ ] Records Review (medical, educational, etc.)
- [ ] Videotaping  [ ] Audiotaping
- [X] Photography  [ ] Other (define):
- [ ] Participant observation
I will meet with each informant individually to discuss his or her interpretation of the events in Forestdale. I will also take the informant out to the archaeological sites to identify artifacts. I will observe how they identify artifacts and I will record their explanations and memories. I will only photograph the artifacts that the informants identify. I will not take any photographs with any of my informants in them.

c. In lay terms, provide a description of the methods and procedures for data collection that will be employed. I will meet with each informant individually to explain the project to them and obtain their consent. Then I will interview them about the Mormon colonization of the Forestdale Valley. The interviews will take place in a location convenient for each informant and will last approximately two hours for the initial interview. I will take them out individually to the valley and have them visit archaeological sites and examine the associated artifacts. This will last approximately four hours. I will be taking notes during the interviews and site visitations. I also will take photographs of the artifacts they identify. I will submit a formal letter of consent from the White Mountain Apache Tribe for the use of their land in the interview process as soon as I receive it.

d. Where will the project be conducted? If study is to be conducted at an off-campus agency or organizational location, include a letter of authorization in Appendix C, or state when it will be provided to the Human Subjects Protection Office. If your project takes place off-campus but site authorization is inappropriate, explain why. The project will be conducted at archaeological sites in the Forestdale Valley on the Fort Apache Reservation. A formal letter of authorization from the White Mountain Apache Tribe will be included as Appendix C when I receive it.

4. CONFIDENTIALITY OF PERSONAL IDENTIFYING INFORMATION

a. How will confidentiality of collected information be maintained? I will assign each informant a pseudonym and refer to this pseudonym in all cases. When I describe each informant in my report I will only state that the person is a male or female elder of the White Mountain Apache tribe or the Mormon community. I will not provide any other description of my informants.

b. What are the plans for retention and/or destruction of linkages between study data and personal identifying information? (Specify when and how personal identifying information will be destroyed.) I will have only one form that lists the real names of my informants and their pseudonyms. This form will be kept in a locked file cabinet in the Anthropology building at the University of Arizona once the project ends. At the end of six years this document will be destroyed.
c. If these linkages will not be destroyed, explain how you will maintain confidentiality of the personal identifying information. N/A.

d. In the event that personal identifying information will not be kept confidential, explain why not and explain how you will ensure that the subjects are consenting to your sharing this information. N/A.

e. Will a Certificate of Confidentiality (through DHHS or another Federal agency) be utilized? No.

5. **BENEFITS, COSTS, COMPENSATION & RISKS**

a. Benefits:  
   i. What are the potential benefits directly to the participants, if any? The benefit to each informant will be the satisfaction of having assisted with this research project. They may also learn more about the history of Apache and Mormon interaction in the Forestdale valley.

   Benefits:  
   ii. What are the potential broader benefits of the study? This study will provide guidelines for distinguishing ethnic affiliation at archaeological sites in the Forestdale Valley and elsewhere in east-central Arizona. It will also identify and incorporate multiple narratives into the history of the Apache and Mormon interaction in this region. In addition, it can provide insight into the development of relationships between the two communities.

b. Costs:  
   i. What are the costs to the participants (monetary, time, etc)? The participants will have to dedicate two or three days to the interview process and site visitation. The consent and interview process will only take up one afternoon for each informant. Site visitation and artifact identification will take no more than 2 afternoons for each informant.

c. Compensation: Will monetary or other compensations be offered to the subjects? (If so, identify the amount of compensation and method of payment.) No.

d. Risks:  
   i. What risks to the participants could be encountered through participation in this project (physical, psychological, sociological, etc)? There are no risks to the informants.

   Risks:  
   ii. Describe the approaches you will take to minimize these risks and/or to minimize their impact.
6. APPENDICES

Attach the following appendices to the PRF, in the order specified, labeled as indicated, and with a table of contents identifying all appendix materials. Use titles that are consistent with those used in the text of the PRF.

A.1 Subject Informed Consent Form/Parental Informed Consent Form
A.2 Minor Assent Form
B. Recruitment Materials
C. Site Authorization Letter (for study conduct and/or access to administrative records)
D. Data Collection Instruments
E. Grant Applications
F. Explanation of human subjects training for non-UA personnel <Note from Diana Archangeli on September 29, 2003: please discuss alternatives to the Rochester test with Rebecca Dahl before submitting something in this section: rdahl@u.arizona.edu.>
G. HIPAA documentation.
Subject’s Consent Form
Markers of Ethnicity and Identity in Material Culture Among the White Mountain Apache Tribe and Mormons Colonists in the Forestdale Valley.

I AM BEING ASKED TO READ THE FOLLOWING MATERIAL TO ENSURE THAT I AM INFORMED OF THE NATURE OF THIS RESEARCH STUDY AND OF HOW I WILL PARTICIPATE IN IT, IF I CONSENT TO DO SO. SIGNING THIS FORM WILL INDICATE THAT I HAVE BEEN SO INFORMED AND THAT I GIVE MY CONSENT. FEDERAL REGULATIONS REQUIRE WRITTEN INFORMED CONSENT PRIOR TO PARTICIPATION IN THIS RESEARCH STUDY SO THAT I CAN KNOW THE NATURE AND RISKS OF MY PARTICIPATION AND CAN DECIDE TO PARTICIPATE OR NOT PARTICIPATE IN A FREE AND INFORMED MANNER.

PURPOSE
I am being invited to participate voluntarily in the above-titled research project. The purpose of this project is to clarify the history of Apache and Mormon interactions in the region, discover Apache and Mormon settlements, and identify ethnically distinct artifacts relating to both communities.

SELECTION CRITERIA
I am being invited to participate because I am an elder of the Apache or Mormon community and I have knowledge that pertains to this research project. Approximately four subjects will be enrolled in this study.

STANDARD TREATMENT(S)
You do not have to participate in this study if you do not want to.

PROCEDURE(S)
If I agree to participate, I will be asked to consent to the following: two interviews about the history of the Apache and Mormon interaction in the Forestdale Valley, a visit to archaeological sites in the Forestdale Valley, and the identification of material culture. The interviews will take place in a location convenient for me and will last approximately two hours for the initial interview and four hours at archaeological sites during the month of July at my convenience. I may choose not to answer some or all of the questions. During the interviews written notes will be taken in order to help the investigator review what I say. My name will not appear on these notes. Any questions I have will be answered and I can withdraw at any time.

RISKS
There are no known risks from my participation.

BENEFITS
There is no direct benefit from my participation.
CONFIDENTIALITY

Only the principal investigator will have access to my name and the information I provide. In order to maintain my confidentiality, interview information will be locked in a cabinet in a secure place.

PARTICIPATION COSTS AND SUBJECT COMPENSATION

There is no cost to me except for my time and I will not be compensated for my participation.

CONTACTS

I can obtain further information from the principal investigator Lauren Jelinek M.A. candidate at #######. If I have questions concerning my rights as a research subject, I may call the Human Subjects Committee office at (520) 626-6721.

AUTHORIZATION

BEFORE GIVING MY CONSENT BY SIGNING THIS FORM, THE METHODS, INCONVENIENCES, RISKS, AND BENEFITS HAVE BEEN EXPLAINED TO ME AND MY QUESTIONS HAVE BEEN ANSWERED. I MAY ASK QUESTIONS AT ANY TIME AND I AM FREE TO WITHDRAW FROM THE PROJECT AT ANY TIME WITHOUT CAUSING BAD FEELINGS. MY PARTICIPATION IN THIS PROJECT MAY BE ENDED BY THE INVESTIGATOR FOR REASONS THAT WOULD BE EXPLAINED. NEW INFORMATION DEVELOPED DURING THE COURSE OF THIS STUDY WHICH MAY AFFECT MY WILLINGNESS TO CONTINUE IN THIS RESEARCH PROJECT WILL BE GIVEN TO ME AS IT BECOMES AVAILABLE. THIS CONSENT FORM WILL BE FILED IN AN AREA DESIGNATED BY THE HUMAN SUBJECTS COMMITTEE WITH ACCESS RESTRICTED TO THE PRINCIPAL INVESTIGATOR, LAUREN JELINEK OR AUTHORIZED REPRESENTATIVE OF THE ANTHROPOLOGY DEPARTMENT. I DO NOT GIVE UP ANY OF MY LEGAL RIGHTS BY SIGNING THIS FORM. A COPY OF THIS SIGNED CONSENT FORM WILL BE GIVEN TO ME.

Subject's Signature ___________________________ Date ____________

INVESTIGATOR'S AFFIDAVIT

I have carefully explained to the subject the nature of the above project. I hereby certify that to the best of my knowledge the person who is signing this consent form understands clearly the nature, demands, benefits, and risks involved in his/her participation and his/her signature is legally valid. A medical problem or language or educational barrier has not precluded this understanding.

Signature of Investigator ___________________________ Date __________________

1/2000
August 10, 2004

Lauren Jelinek

Dear Ms. Jelinek:

On the basis of your adequate responses to the recommendations provided to you at the June meeting of the Tribal Project and Plan Review board it is my pleasure to authorize your research activities on the Fort Apache Indian Reservation pursuant to the following documents and the conditions and stipulations contained therein:

- Research and Recording Policy of the White Mountain Apache Tribe (draft of July 9, 2004);
- Your Research Proposal for Examining Markers of Ethnicity and Identity in Material Culture Among the White Mountain Apache Tribe and Mormon Colonists in the Forestdale Valley, received from you earlier today; and
- The processes for archaeological and oral historical research on tribal lands outlined in your Human Subject's Research Proposal.

Good luck with your research.

Sincerely,

Dallas Masssey, Sr.
Tribal Chairman
APPENDIX C: STATISTICAL ANALYSIS

In order to test whether the classifications reflect a non-random association of artifact type and social identity, I used the Chi-square test to statistically explore the survey data (Thomas 1986). The Chi-square non-parametric test was chosen because the data are classified into categorical variables based on the presence or absence of certain artifact classes. Because the survey was conducted over three years by seven different survey crew chiefs, not all of the sites have historical artifact counts. As a result, the historical period site components were not recorded in a way amenable to stringent statistical testing.

The categories used in the Chi-square tests are Apache and Unknown. Mormon is not included as a category because there are only two identifiable Mormon sites in the valley. The small number of Mormon sites skews the test results. Because the Mormon sites exhibit reuse by Apaches later in time, these two sites have been added to the Apache data set. The following statistical tests examine the nature of Apache and Unknown sites. The artifact classes chosen for inclusion in the Chi-square test include cans, glass, historic ceramics, reuse, archaeological features, and prehistoric artifacts. In addition, these artifact classes were tested against geographical site location to test for non-random associations between the presence of these artifacts and the landscape. Table 6 includes the results of the statistical tests.
Table 6, Results of the Chi-square Tests

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<th>Tested Variables</th>
<th>Chi-square</th>
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<th>Significance</th>
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<td>Reuse and Identity</td>
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<td>Prehistoric Component and Identity</td>
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<td>.90&gt;p&gt;.10</td>
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<tr>
<td>Location and Identity</td>
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<td>1</td>
<td>.90&gt;p&gt;.10</td>
</tr>
<tr>
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<td>27.94806</td>
<td>6</td>
<td>p&lt;0.001</td>
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</table>

Site use and Apache site location was the only test that showed a significant relationship between the variables. None of the other tests indicate a significant relationship between social identity and artifact classification. While I did not expect to find significant results with cans, glass, historic ceramics, and prehistoric artifacts, not finding a relationship with reuse and social identity was surprising. What the results do show is that basic artifact classifications are insufficient to represent and describe identity. It is not the artifact classes themselves that are distinct to social identity, but the behaviors with which they are associated. If social identity is to be quantified, a better way to classify the behaviors associated with it must be developed. It is the behaviors associated with artifacts that will provide the critical information. Unfortunately, the Forestdale data were not amenable to statistical analysis.
APPENDIX D: ARTIFACT CHRONOLOGIES

Tin Can Chronology adapted from Busch (1981) and Berge (1980)

1819-Beginning of commercial canning in the U.S.
1825-Thomas Kensett granted U.S. patent for canning food in a tin can.
1856-Gail Borden granted patent for canned condensed milk.
1865-Kerosene canned.
1872-Large-scale meat canning begins in Chicago.
1875-First sardines packed in cans.
1892-First tobacco can.
1894-AMS Machine Co. begins making the locked double seam can.
1901-Formation of the American Can Company.
1906-First modern paint can manufactured.
1909-Tuna canning begins in California.
1910-Flat sided hinge lidded tobacco can manufactured.
1917-Ernest Moller, Bayer Company, develops pocket sized aspirin can.
1921-First citrus juice canned and shipped from Florida.
1922-First canned dog food developed by P.H. Chopped.
1926-Canned ham introduced.
1933-First quart can of motor oil available.
1935-Introduction of the beer can.
1945-First aerosol cans sold.
1953-Canned soda becomes popular.
1959-First all aluminum beer can marketed.
1962-Introduction of the beverage can pull-tab.
1965-Introduction of the tin-free steel beverage can.
Bottle and Glass Chronology adapted from Berge (1980)

Pre-1880: Free blown glass.
1790-1810: Dip molds.
1785-1840: Large production of lamp chimneys.
1800s: The mineral water bottle with a pointed bottom to lay on side and moisten cork.
1800-1870: The American Historical Flask Period.
1810: Commercial preserving in glass in France, England, and America.
1810-1880: Iron hinged bottom mold (2 piece mold).
1811: Syrups for flavoring drinks.
1821: English patent on split iron mold, to shape whole bottle.
1841: Nursing bottle patent.
1850-1880: Glass balls for trap shooting.
1857: The snap case, making pontil mark unnecessary on hand made glass bottles.
1858: The Mason or fruit canning jar.
1861: Syrups for flavoring drinks.
1860s: Kerosene lamps appear.
1861: First lead glass medicine bottles. Shortly after this French squares, tall four sided bottles with beveled edges were put on the market.
Late 1870s: High frequency of mold made bottles with applied finishes but sparse frequencies of makers marks and lettered panels.
1870-1910: Three part mold.
1870s-1920s: Turn molds.
Late 1870s-1903: High frequency of mold made bottles with applied finishes, makers marks, and lettered panels.
1871: Pressed glass fire extinguisher patented.
1875: Manganese used to clarify glass.
1879: Hutchinson stopper patented.
1879: Edison's first hand blown light bulb
1880-1910: Closed mouth mold.
1884: Introduction of milk bottles, very slow in acceptance with complete adoption after World War I.
1885: Introduction of semi-automatic manufactured bottles.
1891: Safety glass imbedded with wire mesh produced.
1896-1900: Bottled Coca-Cola.
1900-1920: Introduction and wide use of metal screw closure.
1903: The patent of Owens automatic bottle machine.
1904-present: Automatic bottle machine.
1912: Crown cap universal for carbonated beverages (patented in 1892).
Post 1912: Particle cork liners in crown caps.
Post 1917: Little manganese used in making glass.
1919: Machine-made bottles still heavier than hand made bottles.
1920: Complete transition to crown for beverages.
1920-1930: Era of wide range of commercial closures, replacing cork stoppers.
    Use of older vessels by bootleggers is popular.
1922-1926: Introduction of plastic closure.
1926: Beginning of the baby food era.
1930-1935: Standardization of wide range of bottle finishes and closures.
1938: Non returnable beer bottles.
Post 1940: "No Deposit-No Return" embossed on pop bottles.
1945: Bubblers in use in tank for homogeneity; the square milk bottle.
1948: Larger capacity soft drink bottles; non-redeemable soft drink bottles.
1953: Synthetic sweeteners in soft drinks.
1959-1961: The advent of rigid polyethylene containers
**APPENDIX E: ARCHAEOLOGICAL DATA**

Table 7, Site Data and Features

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