
James E. Snead
Dept. Of Sociology and Anthropology
George Mason University
Fairfax, VA 22030-4444

1 May 2005

NSF BCS #0352702

NMCRIS 88274
TABLE OF CONTENTS

Introduction 1

1. Regional Scale: Archival/Collections Analysis of Large Coalition Sites 4
   Pueblo Alamo 4
   Manzanares 10
   Pueblo Largo 17

2. Community Scale: Survey in the Burnt Corn-Petroglyph Hill Archaeological District 25
   Research Design 25
   Summary of Results 28

Acknowledgments 36

References Cited 37

Figures
1.1 Large sites in the Galisteo Basin. 3
1.2 Pueblo Alamo (LA 8): plan 6
1.3 Pueblo Alamo (LA 8): photo 8
1.4 Manzanares (LA 1104/10607): general plan 11
1.5 Manzanares (LA 1104/10607): excavated area 14
1.6 Manzanares (LA 1104/10607): photo 15
1.7 Pueblo Largo (LA 183): plan 18

2.1 Petroglyph Hill: distribution of sites and isolated occurrences 26
2.2 Petroglyph Hill: Pre-Columbian sites 28
2.3 Petroglyph Hill: Historic sites 29
2.4 Petroglyph Hill: small structures 34

Tables
2.1. Petroglyph Hill: site data 30
2.2. Petroglyph Hill: isolated occurrence data 32

Cover: Petroglyph Hill from the southwest (photo: J. Snead)
INTRODUCTION

This report is a preliminary account of archaeological research conducted in the Galisteo Basin, New Mexico, during 2004. This was the first of three seasons funded by the National Science Foundation, SBS 600142, an effort that has evolved from a smaller scale project focused on Burnt Corn Pueblo (LA 359), a Coalition Period settlement in the western Galisteo.

The project is designed to explore two intersecting trends in archaeological research on the Ancestral Pueblo people of the American Southwest: an interest in the large-scale movement of people, and concern for manifestations of warfare and violence. Both have been topics of scholarly debate for more than a century, although shifting intellectual fashion brings them in and out of vogue. Recent problem-oriented fieldwork in various regions of the Southwest on conflict (e.g. Haas and Creamer 1993) and migration (e.g. Clark 2001), as well as overviews summing up existing data (e.g. Cameron 1995; LeBlanc 1999) represents a significant advance. This new work also highlights the limits of our knowledge about how processes such as these played out in Ancestral Pueblo society. In particular, there remain considerable gaps, both regional and temporal, in empirical evidence that can be brought to bear on the subject. Recent case studies (e.g. Rice and LeBlanc 2001) go some way towards addressing these needs, but many important opportunities have yet to be realized.

One of these critical but understudied areas, and the setting for this project, is the Galisteo Basin of New Mexico. The Galisteo was one of the primary population centers of the northern Río Grande region at the time of the Spanish entradas in the 16th century, home to numerous villages of Tewa-speaking people known as the “Tano.” The Tano people played a central role in the events of the early colonial period and were prime movers in the Pueblo Revolt of 1680, occupying Santa Fe after the initial Spanish defeat. The reconquest era was disastrous for the Tano, and by the early 18th century they had abandoned their communities in the Galisteo in favor of residence at other local pueblos or the newly-established village of Hano at Hopi.

The archaeological record of the Galisteo is thus rich in evidence from the late Pre-Columbian and Colonial periods, and the majority of the research conducted in the vicinity has emphasized these eras (e.g. Lycett 2002). In contrast, earlier periods are quite poorly understood (e.g. Spielmann 1996). It is widely believed that as recently as the early 13th century the Galisteo was a relatively open environment, compared to the surrounding basins and valleys. The rapid expansion of settlement during the mid-late 1200s leading to the establishment of the major Tano villages is typically seen in light of the pan-southwestern population movements of that period. The area is thus a rich source of information about “migration” and its ramifications. Despite widespread acknowledgment of this potential, however, circumstances have prevented any systematic examination of population movement in the Galisteo context (cf. Dutton 1980).

The Galisteo has also provided fodder for discussions about conflict in the Ancestral Pueblo world, perhaps motivated in part by the warlike attributes of the historic Tano. The empirical basis for this, however, has until recently consisted of anecdotes from the historical record, sites in defensive positions and broad references to “considerable site destruction” (LeBlanc 1999: 230). The large size of the late Tano villages, in particular, makes it difficult to address the issue of conflict, since excavation exposes only a tiny fraction of the whole. Like the issue of migration, the topic of conflict in the Galisteo past has remained intriguing but...
Interest in the synthesis of migration and conflict in the Galisteo context was stimulated by fieldwork conducted at Burnt Corn Pueblo. Research at the site began as an attempt to collect information on the spatial organization of Coalition Period communities to compare with similar data derived from later communities dating to subsequent periods (Kolb and Snead 1997; Snead 1995; Snead n.d.a). Portions of the site and the surrounding terrain were located on public land managed by the Bureau of Land Management (BLM) and thus accessible. Of equal importance was the fact that Burnt Corn appeared to be one of the “new foundations” of the late AD 1200s and occupied only briefly thereafter, which enhanced its utility for the analysis. Survey in 2000, and an excavation season in 2002, established the presence of a substantial community associated with Burnt Corn itself and placed the settlement in chronological context (Snead 2001, n.d.b.).

Our fieldwork at Burnt Corn Pueblo also established that the site had been systematically destroyed by fire in a way that implied warfare, or some related form of conflict on a dramatic scale. This represented some of the best empirical data for such processes from Galisteo contexts, thus representing an opportunity to address related topics. Superficially, it was difficult to account for this destructive episode through the most widespread paradigm for the emergence of warfare in the Southwest, that of resource stress. Assuming that the Galisteo had been underpopulated prior to the 1200s because of relatively marginal conditions for agriculture there, the establishment of communities such as Burnt Corn implied that these circumstances had ameliorated. Indeed, existing dendrochronological data suggests that the decades around AD 1300, spanning the establishment and destruction of Burnt Corn, were relatively wet years in the northern Rio Grande (e.g. Spielmann 1996: 185). Further evaluation would obviously require more empirical data and the development of alternative hypotheses. In particular, the circumstances surrounding the founding of Burnt Corn itself seemed potentially important in understanding its demise. Certainly the appearance of a new group of people in the area would have represented changing economic and sociopolitical circumstances, provoking adjustments and responses that might have included conflict.

Burnt Corn thus represented the opportunity to explore the possibility that these two processes in the Ancestral Pueblo world, migration and conflict, were fundamentally interlinked. Although argued in greater detail in the successful proposal to the National Science Foundation through which this work is funded, our preliminary thesis is that the causes of conflict within Ancestral Pueblo society are embedded in the social and political dynamics of particular times and places, and that the instability and disruption caused by the large-scale movement of people across the landscape was a primary element of such dynamics. After some discussion the various activities underway as part of this research program have been grouped under the title “Tano Origins Project,” which encompasses the spatial, cultural, and conceptual frameworks involved.

The research program designed to examine the relationship between conflict and migration in the Galisteo Basin is focused on the Coalition Period (AD 1050-1325), and in particular the Pindi and Galisteo Phases (1250-1300; 1300-1325). As detailed in the following pages, archaeological research during 2004 took place at the regional and community scales of analysis. The first two focused on archival and collections study, while community-level research consisted of pedestrian survey within the Burnt Corn-Petroglyph Hill
Archaeological District. Plans for the 05 and 06 seasons involve expanded survey but will also encompass further excavations, both at Burnt Corn and at related sites.
Figure 1.1. Large sites in the Galisteo Basin and adjoining areas of the northern Rio Grande. Site names in capital letters are those receiving particular emphasis in this report; boundary marks the limits of public land in the Burnt Corn-Petroglyph Hill area that at present demarcates the archaeological district and study area.
1. REGIONAL SCALE: ARCHIVAL/COLLECTIONS ANALYSIS OF LARGE COALITION SITES

In order to examine the dynamics of settlement in the Galisteo Basin during the Coalition Period a strategy of regional analysis was developed. Since fieldwork at this scale is currently prohibitive, particularly since the region is one of the most impressive archaeological districts in the Southwest, with numerous large sites present (figure 1.1), it was decided to take advantage of the significant previous research associated with the area. In the process of a preliminary overview, three large Coalition Period sites in the Galisteo and adjacent Santa Fe districts that had been the site of substantial but largely unpublished excavations were identified: Pueblo Alamo (LA 8), Manzanares (LA 1104/10607), and Pueblo Largo (LA 183). Excavation records for all of these sites along with associated collections are archived in the Laboratory of Anthropology (LOA) of the Museum of Indian Arts and Cultures in Santa Fe, making access to them relatively straightforward.

Several research trips were made to Santa Fe in the course of Spring 2004, during which data from these three sites was reviewed. Where possible, site visits were also made. This work not only provided an evaluation of the available information, but in each case provided new insights into these important sites.

Pueblo Alamo

Pueblo Alamo (LA 8) is a multi-structure Ancestral Pueblo community located along the Cañada de los Alamos south of Santa Fe (fig. 1.1). Ceramics and tree-ring dates indicate a substantial occupation probably spanning the 13th century AD. The archaeological record of the vicinity is quite complex, including a large 14th century pueblo (Chamisa Locita, LA 4) and several smaller structures (LA 8028), along with at least one major hilltop shrine (LA 125568). This evidence indicates that the foothills of the Sangre de Cristos and the upper Cañada de los Alamos/Cañon Ancha drainages were hospitable environments for settlement in the Coalition and Early Classic periods. This is particularly important given the limited evidence for 13th century settlement in the vicinity of upper and lower Arroyo Hondo (LA 76/12) nearby and in much of the associated Arroyo Hondo sustaining area. It is thus unfortunate that the archaeological evidence from Pueblo Alamo is so poorly understood.

History of Research

Archaeological research at Pueblo Alamo was inaugurated by Nels Nelson, who conducted work in the area in 1915. His transcribed field notes are archived at the American Museum of Natural History (AMNH) in New York, although photocopies are on file at LOA (NMCRIS 42654). Nelson identified four roomblocks in a roughly linear arrangement, which he numbered I through IV (from SW-NE) (figure 1.2a). He completely excavated 24 rooms and sampled a few more. He also excavated a room in a separate, @ 3-room structure, identified as Building V, “Located directly S. of main pueblo on a steep, rounded knoll, close to the S. Bank
of creek and marked by two pine trees.” His notes are relatively limited and include no feature plans, but the general descriptions of contexts and lists of artifacts provide useful information. A selection of this material was taken back to the AMNH.

At some point in the late 1920s Pueblo Alamo was sampled and mapped by H. P. Mera (figure I.2b). Mera also documented four roomblocks, from 10 to 29 paces apart, with one possible smaller mound. Test excavations by W. S. Stallings to collect samples for tree-ring dating were made between 1932 and 1937, followed by sporadic visits to Pueblo Alamo by Museum of New Mexico employees such as Bertha Dutton and Ken Honea through the late 1960s. The survey form filled out by Honea and Wood in 1963 recorded four roomblocks in the vicinity, but identified only the northernmost as LA 8, classifying the three southernmost examples as LA 8028. This is seems to be in error, since Mera’s notes on LA 8028 indicate that it is elsewhere in the vicinity.

Pueblo Alamo was in the path of the planned I-25, and a large-scale excavation project was launched in 1971 to mitigate the impact. Preliminary survey of the location was conducted on April 6, 1971, with excavations beginning April 12 and lasting several weeks. The project was directed by Joe Allen and staffed by a rotating crew of museum personnel and day laborers provided by the State of New Mexico, with ultimate authority residing in the Museum’s Stew Peckham. By the end of the 1971, 78 rooms in three of the four roomblocks had been fully or partially excavated, along with numerous trenches and strat plots (fig. I.2c). Confusingly, the roomblocks were lettered A-D (from NE to SW) (here I will combine Nelson’s and Allen’s numbering system, e.g. IV/A, for clarity). In addition to Allen’s preliminary report (1973), brief studies were prepared of surface ceramics found at the site (Warren MS, NMCRIS 31018) and of the local vegetation (Tierney MS, NMCRIS 31018). Associated records suggest that further analyses were anticipated but never completed.

What remained of Pueblo Alamo was examined by several groups in the 1990s, typically as part of activity in the highway right-of-way. From this work it appears that construction of the interstate destroyed the entire center of the site, but that deposits were preserved to the north and south. The absence of a final report from the 1971 excavations and poor documentation of the highway construction limited the ability of these later projects to make sense of the remains, and considerable confusion has resulted. In general, it can be said that the northern end of roomblock IV/A, largely excavated, still exists east of I-25, while another roomblock is preserved on the south side of the interchange. This latter feature was misidentified as Allen’s excavated block B by Dave Legare in 1994 (NMCRIS 45813), who considered it to have been largely excavated. Fieldwork by Mike Marshall in 1996 clarified the picture and indicated that it was the southernmost roomblock (I/D) as noted by Nelson and Mera but left unexcavated by Allen (NMCRIS 53762). Marshall and other recent visitors (NMCRIS 49418, 55173) note the presence of numerous, ephemeral features throughout the vicinity.
Figure 1.2. Pueblo Alamo (LA 8) as mapped over the 20th century. The map for the Allen excavations was reconstructed from the original housed with the excavation records. Note that the southern roomblock was not excavated in 1971 and thus not mapped. Courtesy New Mexico Historic Preservation Division: scale approximate.
Site Visit

I visited Pueblo Alamo in May 2004. The remnants of roomblock IV/A are accessible from US 284 northeast of the intersection, adjacent to a construction lot used by the NM State Highway Department. Perhaps 15 meters of the roomblock are preserved, showing evidence of Nelson’s trench and terminating abruptly at the cut above the onramp to southbound I-25. Few artifacts were present on the surface, but a small structure or roomblock exists approximately 50 meters to the north adjacent to the road entering the construction lot (also noted by Wiseman - personal communication). I was unable to reach the west side of I-25 to ascertain the presence of the southernmost roomblock, noted most recently by Marshall (NMCRIS 53762), or the other smaller features they describe.

Summary of Excavation data

The 1971 excavation strategy at Pueblo Alamo included the excavation of rooms, test trenching, and stratigraphic blocks/plots, of which 135 were assigned “feature numbers” keyed into a site map. Burials were also assigned feature numbers, and 19 of these were recorded. Review of the feature forms suggests that a preliminary total of 78 rooms (including kivas) were partially or completely excavated in the three roomblocks IV/A-II/C. Comparison of the forms and the site map, however, reveals that 10 of these room numbers were redundant or never issued, bringing the total to 68: 28 in roomblock IV/A, 19 in roomblock III/B (including four subfloor pit structures), and 21 in roomblock II/C. Of these, only 30 rooms have either completed forms, sketch maps, or (in all but three cases) both. Most of the rooms for which associated data has been preserved are found in clusters, possibly representing phases of the excavation or particular excavators. In some cases the absence of forms means that entire sections of the structures are without information, such as the entire southern end (8 rooms) of roomblock II/C. It is also difficult to determine exactly how much of each roomblock was excavated. The presence of rooms excavated by Nelson complicates the picture, and unexcavated rooms are depicted inconsistently on the maps. It is clear, however, that the majority of rooms in the three roomblocks were excavated, and that substantial areas of intermural space - particularly associated with roomblock II/C - were sampled via trenches and strat plots.

The available excavation data indicate that Pueblo Alamo had a complex history. A large percentage of the rooms had multiple floors, implying a fairly long period of occupation. This conclusion is also supported by evidence for trash fill below floors, wall reconstruction, the blocking of doorways, etc. Numerous floor features are also present. Information about artifact context, however, is very limited.

Collections

AMNH records list 47 catalog entries for Pueblo Alamo (29.0/4905-29.0/24951) under accession 1915-85, including material from 16 of the excavated rooms. The majority of these are single artifacts. The database preserves Nelson’s field numbers, making cross-referencing possible. Only a few finds in any given room were taken back to New York, and while the selection method has yet to be determined the sample seems weighted towards bone tools. None of the faunal material mentioned in the notes appears to have been curated. None of the faunal material mentioned in the notes appears to have been curated. No material from this collection was examined during the site visit.
At present there are 56 catalog entries in the collections at MIAC representing Pueblo Alamo collections, with 51 of these representing the 1971 excavation data. The bulk of this material is ceramic, but also includes botanical/soil/pollen samples lithics, some faunal material, and two boxes of dendro samples. Assessment of the collections in March 2004 determined that basic contextual recording is included with most of the specimens. Further analysis would be an exhausting process, however, since the materials were not curated by context. The entire collections would thus have to be re-sorted in order to identify any spatial patterning of artifacts.

Chronology

Nine tree ring dates derived from the specimens collected by Stallings were published in the 1950s, with additional samples from the same source processed and published thereafter, for a total of 52 (Robinson et al 1973: 31-32). There is little published provenience data for these samples, although of the nine dates published in 1953 four were derived from two rooms in the northernmost roomblock (presumably IV/A), with five taken from “Nelson’s building V” (Smiley et al 1953: 17). All were apparently derived from from “charcoal fragments” (Robinson et al 1973: 32), with only a few cutting dates in the assemblage. The site is typically considered to
have been occupied throughout the 13th century, with several “vv” dates between AD 1202 and 1221 (Robinson et al 1973: 31). This roughly correlates with the original published date range of AD 1193 to 1268 (Smiley et al 1953: 17). The absence of dates from the 1971 excavations greatly hinders building a more elaborate chronology.

Other Studies

Pueblo Alamo appears sporadically in archaeological reports for other sites and projects in the vicinity, including some of the Arroyo Hondo reports (e.g. Dickson 1979: 81; Habicht-Mauche 1993: 91). Regge Wiseman has conducted two studies that make use of excavated data from the site, one focusing on possible Plains-Pueblo connections (1999) and the other using the tree ring data (2004).

Evidence for Conflict

Only one set of human remains at Pueblo Alamo can be plausibly associated with the abandonment of the site. Associated with the first phase of surface clearance during the excavations, these are described in the excavator’s notes as “Intrusive burial discovered in burned room; apparently disturbed by subsequent wall slump.” No detailed description has yet been found, but further review of associated photographs may clarify the association. The presence of human bone in backdirt from the Nelson excavations is also noted, but without further comment. Nearly all of the other sets of human remains uncovered in 1971 were found in trenching outside the roomblocks themselves and are clearly formal burials.

Considerable portions of Pueblo Alamo show evidence of burning. Nelson’s notes describe charred timbers, burnt roofing material, blackened wall plaster, or burnt fill in at least eight of the 24 rooms excavated, and the schematic nature of the notes suggests that this is a minimum number. These burned were distributed throughout the four roomblocks, amounting to 1/3-1/2 of the total.

Allen’s notes show a similar pattern of widespread burning. Fourteen of the 30 rooms with forms note the presence of burnt roofing material or similar evidence on the floor or in room fill. Notes on the site map indicate that twelve additional rooms show signs of burning on walls, which, while not definitive, is certainly a suggestive pattern. Evidence for burning also shows a strong spatial pattern. In IV/A, all but one of the rooms for which we have forms show evidence for burning, with similar evidence from three of Nelson’s rooms in the same area. III/B, most of the rooms at the center of the block appear to have burned, and it is only in II/C that we have several contiguous rooms without evidence for burning. Several rooms in II/B and III/C have multiple floors, some separated by burned fill, others with wall burning associated with the lowest floors. However, only one of the ten recorded burnt rooms in IV/A has more than one floor, clear evidence that the burning episode in this location marked the termination of occupation. Nelson noted charred wood in one of his I/D units, and although no recent excavations have taken place there two recent survey accounts of this roomblock both comment on the presence of surface evidence for burning. Legare (NMCRI 45813) suggests that this represents re-use of burned adobe in construction, although Marshall’s interpretation is that the structure was destroyed by fire (NMCRI 53762: 26)

Allen’s report notes the widespread occurrence of fire, but suggests that the structures had
been rebuilt afterwards and saw no reason to assume a significant catastrophe (1973: 14). He notes the absence of bodies in the rooms, vessels broken in situ, or other signs of hasty abandonment. He discards Kidder’s theory that Athabaskan raiders put pressure on the 13th century communities, but does not replace it with one of his own.

In fact evidence for the intentional destruction of Pueblo Alamo by fire is quite convincing. The difficulty, of course, is that with such an imprecise chronology we can’t assume that this was a single episode, or even that the four different roomblocks were contemporary. It is conceivable that the various burning episodes were distinct and unrelated phenomena. However, a conservative interpretation of the available evidence is that there were at least two catastrophic fires at the site, one followed by rebuilding, with a second fire linked to final abandonment.

Potential for Further Analysis

Despite the fact that most of LA 8 was obliterated following the 1971 excavations, there remain three areas of possible future analysis.

1) **Chronology.** Further review of correspondence on file at the Laboratory of Tree Ring Research (LTRR) in Tucson may clarify the context of the early dating samples. Most important, however, are two boxes of dendrochronological samples identified during collections evaluation that came from the 1971 excavations but were never processed. Reasonable contextual information is included with these samples, so that obtaining dates from them offers the opportunity of a much more refined chronology than currently available. In particular, several samples are derived from a part of roomblock IV/A that was destroyed by fire, potentially providing the opportunity to “bracket” construction of the roomblock with the destruction event.

2) **Collections Analysis.** Despite the difficulties presented by the method of curation, further investigation of the artifacts from Pueblo Alamo would prove instructive. Formal analysis of the ceramics, for instance, might identify affinities between Pueblo Alamo potters and those of other communities in the vicinity, particularly Arroyo Hondo.

3) **Survey.** Detailed documentation of the remaining elements of Pueblo Alamo would provide useful information. In particular roomblock I/D, which was only partially excavated by Nelson and shows surface signs of burning, would reward further investigation.

**Manzanares**

Manzanares (LA 1104/10607) is a complex of adobe structures located approximately one mile east of the town of Lamy on the north bank of the Río Galisteo. Topographically the setting is a broad, open terrace overlooking the river with the sides of the valley rising more steeply to the north. It is apparently at the eastern limit of a dense area of Coalition Period settlement that
includ
es LA
10
and
the
Lamy
Juncti
on
sites
(LA
27,
362-
368,
3177
4-
31779
).
Figure 1.4. Manzanares (LA 1104/10607), modified after Nels Nelson map of 1915. Note location of “trench” in building VI, possibly that documented in figure 1.6. Scanned from photocopy, NMHPD.
History of Research

Nels Nelson excavated at Manzanares in 1915 while testing several sites in the Lamy vicinity. The site correlates with his “Mansanaria no. 2”, which he called “an old communal pueblo with several regularly arranged buildings.” The sketch map indicates seven different roomblocks in which as many as 17 test pits were made, although notes were apparently taken for only six of these (fig. I.3). Potsherds, groundstone, and some “animal bone” were present.

The site was assigned LA 1104 by Mera, although the fact that no map was made and the location poorly recorded caused considerable confusion thereafter. Stallings collected tree ring samples in 1933 from two contexts, the “Upper Room” and the “Lower Room,” with no further information available. The extensive tract of land that included Manzanares was slated for development by AMREP Corporation in the early 1970s, and Charlie Steen agreed to conduct excavations in exchange for logistical support. Although apparently aware of the previously-assigned Mera number, Steen used the designation LA 10607 because of the “indefinite” description (Steen 1980: 129). He identified two mounds at the site, one of which had multiple stories, although when the location was mapped several other mounds were documented (fig. I.4).

There was no particular urgency for the work, since AMREP had decided that the locality might be converted into an archaeological “park” rather than developed. Excavations were thus conducted episodically over several years with volunteer crews, typically with summer and fall sessions. Work began on June 18, 1971, continuing episodically through June and then again on September 25-26. Rooms 1-9 were excavated, at least in part, during this period. Excavations resumed for several days in late July-early August 1972, when rooms 10 and 11 were begun. The 1973 fieldwork took place in May and June and then in October, with much of the earlier work completed and at least partial clearance of a contiguous block of rooms. Work recommenced in June 1974 in a separate area, with several more rooms begun, with another short session in September. Steen’s crew in June 1975 was composed of students from his classes at the College of Santa Fe. Work continued in late October-early November. The last recorded Steen fieldwork at Manzanares took place on April 19, 1976, although his published article gives 1977 as the completion date. In total, 27 rooms were tested, with 21 completely excavated (1980: 132).

The paper trail for the latter part of Steen’s project is particularly incomplete, but it appears that AMREP decided against the archaeological park and instead sold the property, possibly to the current owner, Patrick McGinn. Collections in the LOA suggest that the site was surface collected by a Boy Scout troop in 1977, but no records of this effort were included, and there seem to have been no post-Steen excavations. McGinn has had periodic contact with the Archaeological Conservancy, which maintains an interest in protecting the site.

Site Visit

The site was visited on March 12, 2004, with Patrick McGinn, Genevieve Head, and Regge Wiseman. The current road passes along the north side of the central site, which is bounded to the south by the railroad line. The area adjacent to the road has been leveled and was used as a garden for a time. The absence of landmarks makes it difficult to identify the location of these previous efforts, and the site itself currently appears to be a featureless mound. Ceramics are dominated by B/w types, Santa Fe and “Galisteo,” with a predominately chert lithic
assemblage. One large open excavation area is presently visible in the center of the mound. Wiseman expressed his doubts that this was the location of the Steen excavations, and comparison of the terrain with available maps suggests that this is the location of the “trench” excavated by Nelson in his building no. 6. Unfortunately this feature does not appear on the topographic map made by Steen’s team.

Summary of Excavation Data

Steen’s short summary article (1980) provides the only published information about the Burnt Corn excavations. Related material on file at ARMS under LA 10607, include the excavator’s field notes, an assortment of data and analysis forms, and numerous photographs. There are numerous inconsistencies in this material; Steen recopied his own notebook from other sources, and it does not cover the entire excavation period. Room forms were compiled for the first year, thus covering rooms 1-10, but since some of these rooms weren’t completely excavated until the following summer their utility is impaired. Drawings and plans are rare. Ceramic analysis forms are available for many of the excavation units, and lithic data was compiled for rooms 10, 13, 14, and 17. Site/unit terminology changed over the course of the excavation and was inconsistently applied, so that even where data has been recorded it is not always possible to correlate finds with locations. The only information for rooms 18-28 is Steen’s notes, of particular importance since most of the tree ring samples were taken from rooms 22 and 23.

Two maps were executed for the work, one a survey-grade topographic map of the site and vicinity, the other a rendition of the excavated units at the completion of the work (see fig. I.4). The topographic map is of high quality but was apparently made early in the project, probably 1971, so only the first few excavated rooms are indicated. The map of the excavation units (see fig. 1.5b) appears to show sets of contiguous rooms exposed on the north and east sides of the plaza, but some excavated rooms are not present and sketches in Steen’s notebook cast doubt on the depicted layout. Ultimately the most useful part of the Manzanares excavation data may be the photographs, which were not examined in detail in this evaluation but are quite numerous.

In overview, the Manzanares notes depict a substantial, multi-storied structure built around a central plaza. Steen estimates 250 ground floor rooms, but it isn’t clear if he’s referring to the principal complex or including other roomblocks in the vicinity (1980: 129). The pueblo was built of pisé, with a few masonry walls, while some of the rooms contained prepared flagstone floors, a few with painted or whitewashed plaster. Evidence for reconstruction was noted in a few cases; some doorways and “windows” were plugged with adobe, and rooms 17, 22, and 23 were built over midden. Some floor features, such as hearths and ash pits, were recorded. The presence of possible features from the upper floors within the room fill complicates the matter.

No evidence is available for intact floor assemblages, although relatively large quantities of groundstone were recovered from room contexts. Raw materials included sandstone, granite, and schist, all of which can be obtained in the vicinity. Ceramic inventories were dominated by corrugatedwares and B/w types, typically Santa Fe B/w and Galisteo B/w. Minute percentages of White Mountain Redwares were also present. Occasional fragments of other artifacts, such as a “clay pipe fragment,” “polishing stones,” etc. were recorded. Low percentages of “bone” were present in most of the rooms with limited further attribution, although a “Human rib bone” was described in room 1. The fill of room 2 included an intrusive infant burial. Steen’s article refers
to "numerous charred corn cobs," but their distribution is not presented (1980: 138).
Minimal collections from Manzanares are preserved at the AMNH in accession 1915-85, listed under three catalog numbers and consisting of approximately 45 sherds, one flaked stone artifact and one “mammal bone.” In contrast, there are 43 boxes of artifacts from LA 1104/10607 curated in the LOA. Four of these are either surface collections or are otherwise undocumented, with 39 boxes of material from the Steen excavations. These materials are essentially unprocessed, possibly remaining in the original post-excavation bags, and as such cannot be examined by researchers. Only one of the catalog records contains specific information (#27011, “Charred wood, beam spec.”) Due to the transfer of collections to the former State Archives building processing of old collections such as this are underway, and the LA 1104/10607 material should be available shortly.

**Chronology**

Samples collected at Manzanares by Stallings are described as coming from two proveniences, an “Upper room” and a “Lower Room” (Robinson et al 1973: 24). There are no indications as to how these locations relate to the site in general. Only two vv dates were derived from the Upper Room, and while these suggest the possibility of an early 13th century occupation the data are thin. In contrast, the 17 samples from the Lower Room outline a tight construction...
sequence at the end of the 1200s, with cutting dates clustering between 1295-1301 (see also Smiley et al. 1953: 37).

This chronology is supported by the fifteen tree ring samples collected by Steen from his rooms 13, 16, 22, and 23. The single sample from room 13 is apparently a charred timber found in the fill “1.3 m below the surface,” with a 1276+vv date. Rooms 16, 22, and 23 are in another part of the site and contiguous, with samples derived from “charred timbers” that were part of the collapsed 1st story ceiling. It also appears to have been first constructed between the mid-1290s, with possible reconstruction toward the end of the first decade of the 14th century. The presence of a few outliers suggest that settlement of the vicinity may have occurred a few decades prior to primary construction, perhaps in the 1270s, with reuse of beams in the second episode. There is limited evidence for a possible third occupation of Manzanares, such as the intrusive infant burial in the fill of room 1 and a “rough floor” superimposed over the fallen ceiling in room 23.

Other Studies

To date no other studies have been conducted with the Manzanares material. Private ownership, the lack of a final report, and the unprocessed collections have so dampened knowledge about the site that very few archaeologists working in the region are aware of its existence.

Evidence for Conflict

The location of Manzanares, adjacent to the Rio Galisteo floodplain, cannot be considered defensive. The absence of any detailed information from the surrounding sites makes it impossible to assess whether the construction of a plaza pueblo, with its limited access, can be interpreted as a “defensive” shift in the orientation of the community. None of Nelson’s comments about the outlying roomblocks indicate destruction by fire or other relevant data.

In the plaza pueblo itself, numerous mentions of “bone” on room floors is provocative, but it is likely than any human remains would have been recognized. Indeed, the mention of “human rib bone” in room 1 is stands out. From the available information it is impossible to determine whether this find was in good floor context or in the fill, and it is plausible that it represents either a decayed secondary burial or a burial disturbed in antiquity.

The most obvious evidence for conflict at Manzanares is the burning episode associated with rooms 16, 22, and 23. Steen’s notes indicate that the center of the floor above room 22 had burned, which he interpreted as possible evidence for a 2nd story hearth or firepit at that location, although while physical evidence for such features was present elsewhere on the site, none was evident here. The fact that the north end of the ceiling of the adjacent room 23 burned as well is suggestive of a broader conflagration. Since these locations are the source of the latest tree ring dates for the site, the absence of any substantial reoccupation after the burning is provocative.

Evidence for destruction by fire is less clear for other parts of the site. The presence of a single charred timber in the room 13 fill is inconclusive. Steen noted the presence of numerous “rotten ceiling timbers” in the nearby room 2, which also had heavily sooted walls. However, since Steen does not mention burning, no dating samples were derived from this material, and no other fire-related damage was noted for this part of the roomblock a destructive fire is unlikely. It is, however, unclear that this area was occupied simultaneously with the burned rooms.
Potential for Further Analysis

The poor state of the Manzanares excavation records limit the potential for further analysis. Nonetheless, there are some important opportunities for enhancing the utility of this information. It is particularly important to maximize this information, since the dates from the site indicate that it was an almost exact contemporary of Burnt Corn.

1) **Chronology.** It may be possible to obtain better information about the provenience of the Stallings tree-ring dates taken from the site from the LTRR. Bringing these in line with the Steen dates - or even to determine from which structure on the site they derived - would clarify the occupational history of the location, while the nature of the specimens themselves might clarify the extent of on-site burning.

2) **Collections Analysis.** When processing of the collections is complete a new avenue of research will open up. If provenience is well-documented, formal analysis of the ceramics might be instructive. Assuming that the faunal material was retained, further analysis of this evidence would also help build a better picture of life at Manzanares.

3) **Survey.** Since none of the sketch maps of the Manzanares site as a whole were with us on our site visit, we were unable to document the preservation or destruction of associated roomblocks. In general, these features in the Lamy area are quite ephemeral. Further fieldwork at the location, however, would allow us to better understand the organization of the community, and then compare it to contemporary communities such as Burnt Corn.

**Pueblo Largo**

Pueblo Largo (LA 183), the third site of interest in this study, is also the largest and the best-known. Located on a ridge high above the Arroyo Estacado towards the southeastern limits of the Galisteo Basin, Pueblo Largo has an estimated 489 ground floor rooms arranged in three architectural groups as well as numerous features in the associated landscape. Available information indicates that it is the earliest of the large Galisteo sites, with dates spanning the Coalition and Early Classic Period. It is thus particularly important as a possible bridge between these periods. Because of a complicated research history, however, Pueblo Largo remains relatively poorly known, making a detailed reanalysis particularly important.

**History of Research**

Nels Nelson first worked at Pueblo Largo in September-October 1912. He initially called the site “Pueblo Estacado,” apparently after common usage, despite the fact that Adolph Bandelier used the name “Pueblo Largo” twenty years earlier. Bandelier did not visit the site, however, and acknowledged that there were two sites by that name, the other now known as Pueblo Blanco (Lange and Riley 1966: 377). Regardless, the name “Pueblo Estacado” was dropped by the time Nelson’s report was published (1914). Lack of water hindered the 1912 excavations and only 13
rooms were excavated. A planimetric map of the site and the immediate environs was made on October 23-24, 1913 (figure 1.7).

Although Largo was designated LA 183 by Mera no plan of the site was made, and testing from tree ring samples during the 1930s was minimal. The site attracted the attention of Bertha Dutton in 1939 as a good place to test ideas about population movement in the region, but it was only in 1947 that she was able to begin excavations (1953: 340). Using an innovative strategy mixing research and education, Dutton staffed her project with girl scouts, with the Largo excavations serving as one component of a “mobile camp” summer program (Dutton 1951). If the
Figure 1.7. Pueblo Largo (LA 183) after Nelson’s 1913 map, with original numbering redrafted and the addition of lower case lettering for structure IV roomblocks as used by Dutton.
1951 season is indicative, the team worked for two weeks a summer, excavating two or three rooms during this interval. Dutton continued working at Largo until at least 1956, when the Girl Scout program changed direction. Ownership of the San Cristobal ranch also changed, and when Dutton’s request to continue her research by shifting northwards to LA 309 was turned down she shifted to Las Madres (LA 25). These circumstances and Dutton’s workload at the museum prevented her from completing a final report on the work at Pueblo Largo, although a series of preliminary articles appeared in *El Palacio* (Dutton 1951, 1953, 1955).

Although Largo was designated LA 183 by Mera no plan of the site was made, and testing from tree ring samples during the 1930s was minimal. The site attracted the attention of Bertha Dutton in 1939 as a good place to test ideas about population movement in the region, but it was only in 1947 that she was able to begin excavations (1953: 340). Using an innovative strategy mixing research and education, Dutton staffed her project with girl scouts, with the Largo excavations serving as one component of a “mobile camp” summer program (Dutton 1951). If the 1951 season is indicative, the team worked for two weeks a summer, excavating two or three rooms during this interval. Dutton continued working at Largo until at least 1956, when the Girl Scout program changed direction. Ownership of the San Cristobal ranch also changed, and when Dutton’s request to continue her research by shifting northwards to LA 309 was turned down she shifted to Las Madres (LA 25). These circumstances and Dutton’s workload at the museum prevented her from completing a final report on the work at Pueblo Largo, although a series of preliminary articles appeared in *El Palacio* (Dutton 1951, 1953, 1955).

No systematic archaeological research has been conducted at Pueblo Largo since Dutton’s day. The various owners of the San Cristobal Ranch have been conservative in their approach to local archaeological resources, and only San Cristobal itself has seen any substantive research (cf. Lang 1977). Given the existence of Dutton’s body of work and the fact that Pueblo Largo is the smallest of the large sites in this part of the Galisteo, it has attracted little recent interest.

**Site Visit**

No site visit was made to Pueblo Largo. Field trips to the site are occasionally conducted by the Office of Archaeological Studies of the Museum of New Mexico, but the site is otherwise difficult to access. Arrangements to see Largo will be made during the 2005 field season.

**Summary of Excavation Data**

Despite this significant body of work, it is difficult to synthesize the results of excavations at Pueblo Largo. Nelson’s notes and the associated publication are typically schematic, and there is no substantive report from Dutton’s Pueblo Largo project. Unlike the other excavation materials housed at the LOA, Dutton’s are to be found in the archives, rather than the survey room, perhaps because they were in her personal possession until after her death. The boxes containing Pueblo Largo artifacts have only been superficially processed. They contain large quantities of handwritten fieldnotes, photographs, correspondence, and related paperwork, all of which will need to be carefully evaluated. The educational focus of the project also creates difficulties for further analysis, since many different individuals were involved and continuity between excavators appears to have been limited.
Nelson identified six different structural groupings at Pueblo Largo, which he labeled I-VI, which he estimated contained a total of 489 ground floor rooms. He distinguished three large, open plazas, with one obvious kiva and three possible kiva depressions. He distributed his excavation units around the site, with at least two in each of the six complexes. The walls of excavated units were of masonry, with some preserved plaster, and ranged from 2'-7' in height. Of particular interest was room 1 in structure IV, in which he uncovered “some charred timbers as well as over a half bushel of carbonized maize of good quality” [72]. Nelson also suggested that structures V and III were the oldest on the site, based on the degree of visible deterioration. A major shrine on a mesita to the south of Pueblo Largo was also investigated; a standing slab with an incised anthropomorphic figure was removed and taken to New York, where it remains in the collections of the American Museum of Natural History.

Preliminary review of Dutton’s field notes and LOA catalog entries has identified 26 rooms and related areas in which some excavation took place, with two kivas (Kiva A, corner kiva XX) excavated and at least one trash mound (B) trenched. No field map indicating the distribution of these excavation units has not been located, making it difficult to establish the relevant associations. Dutton apparently worked from Nelson’s map, using his I-VI structure numbers but lettering the different roomblocks within each of these complexes (see fig. 1.7). Rooms were numbered in order within roomblocks and structures, thus “IVe-3,” etc. Excavations were apparently conducted in all areas of the site except structure III. Emphasis, however, was placed on Structure V - often referred to as “Plaza V” - with as many as 22 rooms/areas tested or completely excavated. In contrast, only one room each in structures I and II and two in Structure III appear to have been excavated. Further examination of the record should clarify these details, but excavation clearly emphasized the area of the site believed to have been the earliest occupation on the basis of ceramics and, eventually, dendrochronology (see below).

Considerable information on the different rooms is available in the raw notes and in some summary sheets. Good wall preservation and the presence of red plaster and flagstone floors seems to have been widespread. Of the rooms excavated in roomblock V, one (V-2) was adjacent to Nelson’s room V-1, while another, V-5, contained the preserved roofing material that provided a large number of dates associated with Dutton’s project. One of the rooms excavated in structure IV, IVf-2, was adjacent to Nelson’s burned room IV-1, while room IVe-3 in the adjacent roomblock produced large quantities of burned maize, wood, and other roofing material.

Other finds made within rooms at Pueblo Largo include a wide range of artifacts, including groundstone, ornaments, numerous other lithic items, and ceramics of both B/w and glaze types. Of particular interest were fifteen “burials” found without associated artifacts (1955: 40). It is uncertain as to whether the field notes contain more specific provenience data for floor assemblages, and the published record contains few further remarks about context.

Collections

Substantial collections from Pueblo Largo, as both “Pueblo Estacado (Pueblo Largo)” and “Pueblo Largo” are preserved at the AMNH as 147 catalog entries under accession 1912-52. Room-level provenience is included in most records, and a cursory examination suggests that material from all 13 excavated rooms is present. Numerous single artifacts are present in this collection, including bone flutes, lithic artifacts of various types, several miniature jars, and the
“effigy” removed from the shrine. One interesting item, cat. # 29.0/2646, is a small box of charred corn cobs from burned room IV-1. Other than the corn cobs and the shrine figure, no items in the collection were examined during the site visit.

There are 278 catalog entries for Pueblo Largo collections at the LOA. Of these, 18 boxes of “human remains” were transferred to the Maxwell Museum of Anthropology at the University of New Mexico, leaving 260 entries stored in Santa Fe. Some of these are surface collections, but the vast majority are associated with the Dutton excavations. These apparently range from single vessels and ceramic figurines to boxes of sherds and lithics. Large quantities of faunal material are also present; unusual items include two boxes of “slag” (25330, 25334), a “yucca cord with rabbit skin” (25352), and “cinders” (26171, 26172). A considerable percentage of the collection is made up of groundstone artifacts of various types. The large size of this collection prevents simple characterization, and no effort has yet been made to examine a sample of the boxes. The catalog suggests that provenienced data is fairly good, in some cases to the room and level.

Chronology

The chronology of Pueblo Largo is quite substantive, although the contextual record for the available dates is less so. A small collection was made at the site by Stallings in the 1930s, but the vast majority of the 366 dated samples derives from the Dutton excavations. Most are v/v dates, but small numbers of cutting dates are present in several locations. A series derived from construction wood in room V-5 dating to the mid-late 1290s apparently prompted Dutton to focus her work on that part of the site (Bertha Dutton to Terah Smiley, 7 March 1953: 95PLE.011 Pueblo Largo tree rings, LOA). These are bracketed by cutting dates from elsewhere in Structure V, suggesting episodic construction from the 1260s through the mid-1300s. The burned room, IVe-3, has three cutting dates between AD 1425 and 1435, with other cutting dates from structure IV also implying construction in the early-mid 1400s.

The occupation of Pueblo Largo thus appears to have begun at some point in the AD 1270s, with a significant construction episode at the end of the century associated with building V. At some point thereafter the settlement appears to have moved laterally, with the possible abandonment of building V in favor of the other structural complexes at the site. Pueblo Largo appears to have been largely abandoned by the mid-1400s. Without further dating, however, this chronological scheme remains extremely conjectural.

Other Studies

Some detailed studies of Dutton’s material were conducted shortly after excavation. In the Pueblo Largo papers, for instance, is a 1957 paper by David Brugge on maize from refuse mound B, plaza V, and room IVe-3. Correspondence in these files hints at other such projects, which more detailed review may locate within this collection. There does not, however, appear to have been any substantive study of Pueblo Largo collections for several decades.

Evidence for Conflict

Nelson made several observations about the possible role of conflict at Pueblo Largo. The absence of reliable water at the site, and its location on the brink of a high escarpment, suggested that the location had been selected for its defensive advantages. The burned room
excavated in structure IV also indicated that part of the complex had been destroyed by fire. “Pueblo Largo cannot have been occupied for a very long period of time...,” he observed, “and the indications are not wanting that its abandonment was forced by some human agency” (1912: 53).

In contrast, Dutton was less persuaded that the data she recovered was evidence for conflict at the site. Although in her unpublished notes she acknowledged the defensive attributes of Galisteo sites founded in the late 1200s, such as Largo itself, this observation is absent from the published literature. Her summary remarks regarding Pueblo Largo emphasized continuity: “for approximately two centuries, we have a record of slow change...This would seem to reflect a certain degree of social stability, and no great influence from outside sources” (1953: 351).

My preliminary interpretation of the evidence from Dutton’s excavations suggests, in contrast, that conflict may have played a central role at Pueblo Largo throughout its history. Destruction by fire, for instance, may have occurred on more than one occasion. In structure V, the earliest part of the complex, burned roofing material was noted in both rooms V-2 and V-5. There are numerous hints in the record that this destruction may have been more widespread. Brugge’s unpublished paper on maize analyzed charred specimens “from the fill of several rooms associated with Plaza V (Brugge 1957). Given the late 1290s dates from V-5, it would be logical to assume that this event occurred early in the 14th century. Ceramic evidence, particularly the presence of glaze A ceramics, indicates that structure IV was established somewhat later, but this complex also appears to have suffered considerable damage by fire. Nelson’s room 1 and both Dutton’s IVe-3 and IVf-2 burned, and as the latter two were in different associated “wings” of the complex the burning appears to have been widespread. Finally, the “carbonized” adobe in the fill and heat-reddened plaster found in room I-3, in the southernmost and temporally latest roomblock at Largo (Dutton 1953: 347), imply another burning episode. Obviously the presence of hearths and cooking fires in these structures could have left evidence that can be confused with that of a larger conflagration, but the trend is compelling.

Clearly further review of the excavated data will clarify patterns of destruction at Pueblo Largo. Determining the distribution of the excavated rooms in structure V would allow us to better characterize the burning episode in that location. More information about the “burials,” for instance, would be instructive, since despite the published indication that these were found without “funerary accompaniments” (Dutton 1955: 40) there is a catalog entry for “funerary objects” (31888). A better understanding of the context for these human remains would make it clear whether they were, in fact, intentional burials, or casualties of conflict.

Potential for Further Analysis

1) Chronology. As with the other sites in this study, there is a potential to increase the number of tree ring dates for Pueblo Largo and thus to establish a better chronology for the site.

2) Collections Analysis. This is the area of research that has the greatest potential for expanding our understanding of Pueblo Largo. The scope of the collection and the reasonable condition of the field notes make it likely that such an effort would pay dividends. Considerable time and labor, however, would be required. Current interest in
Dutton’s project, particularly coming from graduates of the girl scout program, might be tapped to pursue this approach.

3) **Survey.** Pueblo Largo needs to be substantively re-recorded. Since our only map of the site is more than 90 years old, we can’t be certain of how a more nuanced understanding of site structure would assist further interpretation. It would also be useful to evaluate Dutton’s work at the site itself, since while her excavated rooms have been backfilled there may be a way to better understand her excavation strategy “on the ground.”
2. COMMUNITY ANALYSIS: SURVEY IN THE BURNT CORN-PETROGLYPH HILL ARCHAEOLOGICAL DISTRICT

Because of the preliminary stage of analysis and the fact that the Petroglyph Hill tract will not be completely surveyed until the summer of 2005, this section of the report is necessarily a general summary of activity rather than a comprehensive account. Also, since detailed recording of the rock art directly associated with Petroglyph Hill itself was conducted as a separate project by Marit Munson of Trent University, Ontario, no discussion of that effort will be presented here.

Research Design

Petroglyph Hill is a tract containing an estimated 1438 acres in sections 28, 29, 31, and 32 of Township 14 N, Range 9 E, Santa Fe County, that was formerly part of the Thornton Ranch and recently purchased by the county as part of its open space initiative. The property abuts state trust land to the south and a large unit to the west managed by the Bureau of Land Management. Petroglyph Hill thus represented the critical acquisition in establishing what is at present the largest contiguous expanse of public land in the Galisteo Basin. Local terrain consists of a dissected escarpment separating the plains south of Santa Fe from the lower Galisteo Basin further south. As elsewhere in the vicinity geology is complex, with intrusive volcanics from the Oligocene Espinaso formation represented by features such as Petroglyph Hill itself as well as earlier Eocene outwash gravels (Lucas 1982; Smith et al 1991). Piñon-juniper woodland typifies local ecology.

At the time of purchase the archaeological resources of Petroglyph Hill were almost completely unknown. The western boundary of the tract is approx. three km from Burnt Corn Pueblo, and the area would thus have formed part of the “periphery” of the Burnt Corn community in the late 13th/early 14th centuries AD. After the destruction of Burnt Corn the nearest significant settlements were San Marcos to the west and San Lazaro to the south, both more than five km distant. Despite the provocative name and the occasional visit to the site by rock art specialists, neither Petroglyph Hill nor any other archaeological feature in its vicinity had ever been formally recorded. The nearest recorded sites were those documented in reconnaissance survey on nearby BLM properties and those identified during the Burnt Corn survey in 2000 (Snead 2001). Numerous other surveys have been conducted in the vicinity, but almost all of these were either in close proximity to large Ancestral Pueblo communities such as San Marcos (e.g. SWCA 1995) or were from topographically distinct areas to the north and south (e.g. Doleman et al 1979).

Archaeological survey at Petroglyph Hill thus represents two important opportunities for the study of warfare and migration in the Galisteo Basin during the Ancestral Pueblo era. Its’ proximity to Burnt Corn provides an opportunity to study the community landscape during both the Coalition and Classic period. This is particularly significant given the work in the core of the Burnt Corn community, which has provided uniquely detailed information about the organization of that locality. Adding Petroglyph Hill to the surveyed area greatly enhances the resolution at which this landscape can be perceived, providing a better empirical basis from which to ask questions about the dynamics of settlement that pertain to the broader research goals.
The second opportunity relates to unique aspects of Petroglyph Hill itself. Cursory visits to the site prior to the beginning of fieldwork identified an extraordinary number of petroglyphs of several time periods on the hilltop, making it likely that the location had served as a focus for some level of ritual activity. We have almost no information about such features in the Galisteo Basin or elsewhere in the region, particularly those established during the Coalition Period. Shrines played a central role in community identity; understanding how they were established and used would provide important information about the social configuration of local groups over time.

Obtaining management information for the area was an equally important goal. Like other county open space, Petroglyph Hill will fill multiple uses, with recreational activities high on the list. A thorough understanding of the nature and distribution of archaeological resources is critical for making informed decisions about making the vicinity accessible to the public. At one level such information is pragmatic, reflecting a need to plan trails, parking lots, and related facilities in a way that reduces any impact on archaeological sites. More conceptually a detailed knowledge of the local archaeology will help to identify vulnerable areas that will require protection from accidental impact, vandalism, or looting. Finally, since Petroglyph Hill represents an important heritage resource for the residents of Santa Fe County, better archaeological information will identify interpretive opportunities that can be developed as part of an educational mission.

Methodology

The plan for the 2004 fieldwork was developed in response to these research and management goals. A “site” survey methodology was adopted, emphasizing the identification and recording of archaeological sites, defined as follows:

1) Features (architecture, walls, etc.) either in groups or in identifiable cultural contexts.
2) Petroglyph panels (more than one element in association)
3) Higher density of artifacts on the ground surface. This threshold was defined arbitrarily, reflecting the survey crew’s knowledge of local conditions.

This site definition is similar to that employed during the Burnt Corn survey, which will make it easier to compare data from the adjacent areas. Transecting was conducted at 10 meter intervals by teams of 4-5 surveyors walking at a steady pace. This level of intensity is often called “full-coverage survey” (e.g. Fish and Kowalewski 1990), but the fact that archaeological manifestations in the area are often ephemeral and very localized means that in practice the results produced by such a strategy must be considered the product of an intensive sample rather than absolute.

In addition to sites, the catch-all category “isolated occurrence” was used to collect information from archaeological evidence that did not otherwise meet the recording threshold. By definition these manifestations are eclectic, typically single features or diagnostic artifacts found in isolation. Some overlap exists between categories of sites and isolated occurrences, attributable to idiosyncracies between the field teams, and will be reconciled in the final analysis.
The plan calls for 100% survey of the Petroglyph Hill tract. Since the field teams would be unfamiliar with either the details of local archaeology or the terrain, it was decided to prioritize work in areas of potential high impact by subsequent users. Thus work focused on the following:

1) Petroglyph Hill and environs. Survey in this area was given highest priority both because of the importance of identifying the boundaries/associations of the petroglyph site and because it allowed coordination with Marit Munson’s rock art recording project.

2) NW corner of the Petroglyph Hill tract. This area includes the traditional access to the property, and thus may represent the area of highest future use.

3) Existing roads/trails. The development of trails for recreational use is a high priority, and assuming that such trails will follow ranch roads crossing the property we prioritized survey along these corridors.

Site data was collected using the standard forms provided by the New Mexico State historic Preservation Office (NMSHPO). After a brief experiment attempting to document site boundaries as shape files using hand-held GPS units, locations were plotted as single-point UTM coordinates. Back in the lab these data were processed in ArcGIS. Digital photos were taken of all sites and isolated occurrences, with B/w photos taken as backup in most instances.

**Summary of Results**

The survey team was in the field for 30 seven-hour days between 17 May and 6 July 2005. Typically work was conducted by two crews, one under led by field director Genevieve Head, the other by crew chief Adam Sullins. A minimum of 6 people were in the field daily, contributing 180 person-days of work. During this period 563 acres were surveyed, amounting to just over 40% of the total. A total of 66 sites and 144 isolated occurrences were recorded (figure 2.1).

The initial goal of surveying the entire tract in summer 04 was thus not achieved. In part this is due to the time required to develop and implement appropriate field strategies for a new archaeological area. Equally influential was the surprising density of archaeological record in the area. The time required to document sites and analyze associated artifacts greatly exceeded our anticipations. This is a positive result, since the richness of archaeological resources in the vicinity make it an even more important resource for understanding the Ancestral Pueblo heritage. The associated management information is thus also more critical. Lessons learned in 2004 will be applied to the satisfactory completion of work in the 2005 season.

**Chronology**

The Pre-Columbian chronology of sites recorded at Petroglyph Hill was assessed via temporally-diagnostic artifacts, primarily painted ceramics, following criteria developed by the National Park Service in recent inventory surveys (McKenna and Miles n.d.). There were 42 sites for which at least a general time period could be suggested (figure 2.2).
Figure 2.2. Pre-Columbian Chronology (G. Head)
Figure 2.3. Historic Period Sites (G. Head)
More than half of these (23) exclusively contained pottery from the Rio Grande glazeware sequence and thus date to the Classic Period (here defined as post-AD 1315). In contrast, 14 sites with black-on-white ceramics date to the preceding Coalition Period (AD 1175-1315), with only three sites containing ceramics from both sequences suggesting multi-component or long-term occupation. Two sites of possible Archaic or Developmental occupation were also recorded. Finally, 13 sites with historic period components were recorded (figure 2.3). Only three of these were exclusively historic in date, with the remaining 10 showing signs of earlier occupation.

Site Data

The 66 sites recorded sites were first identified with temporary field numbers (PH 1-66) and subsequently assigned LA 145872-145890, 145892-145938. Summary data is presented in table 2.1.

Table 2.1. Sites

<table>
<thead>
<tr>
<th>Precolumbian</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Structures</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structure(s) with associated artifact scatter</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Artifact scatters</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ceramic scatters</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithic scatters</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sherd and lithic scatters</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Groundstone</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artifact scatters with groundstone</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grinding slicks</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grinding slicks (oblique)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Petroglyphs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Petroglyph panels with artifact scatters</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Historic</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Historic sites</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2.1. Sites
The only prominent features recorded as sites in the course of the survey were small structures. These ranged from 2-10 rooms in size, representing Ancestral Pueblo constructions typically characterized as field houses, farmsteads, and small pueblos. Seven of these were recorded.

Artifact scatters, organized by dominant material type, represent the vast majority (64%) of recorded sites. Lithic scatters predominate, ranging from localized concentrations of debitage to extensive and diffuse distributions of flaked stone of various types. Ceramic scatters - distributions of potsherds from multiple vessels - make up a much smaller percentage of the total (6%). Sherds and lithics without associated features were found together on 21% of sites.

In an effort to identify possible functional variation among sites, sites that included groundstone artifacts were tallied separately. This included manos, metates, and grinding slicks of various types. Of the 11 sites in this category, seven also had associated artifact scatters.

There were relatively few petroglyphs recorded in the landscape beyond Petroglyph Hill itself. Three of these that had associated artifact scatters were recorded as sites, while an additional 17, most representing single, isolated elements or inscriptions, were classified as isolated occurrences.

**Isolated Occurrence Data**

Table 2.2 summarizes information from the 144 isolated occurrences recorded. The “catch all” aspects of this category are evident in the table, making it unsuitable for statistical evaluation. They are expected to be quite useful in the final analysis, however, because they provide interpretive nuances that the field teams thought might be useful. In cases where there obvious overlap with site categories - such as among the artifact scatters - the presumption is that those recorded as isolated occurrences were significantly smaller in size and indicative of more ephemeral activity.

In some instances single artifacts were recorded when they seemed likely to convey information that would not otherwise be available. These include one possible clay source and two outcrops of petrified wood, neither of which are strictly “archaeological” but are potential resources for the Ancestral Pueblo population as well as locations of potential management concern. Use of this category also allowed the survey crews the opportunity identify cultural features that were of uncertain interpretive value but may be helpful to land managers. Among the 36 isolated occurrences of historic date, for instance, are survey markers, stakes, and a fence line. These may be filtered out as time goes on, but for the present they are useful landmarks.

**Preliminary Interpretations**

Only a few preliminary comments can be made at present about the archaeology of the Petroglyph Hill tract. The incomplete coverage of the survey area means that even a preliminary spatial analysis of these sites is unreliable. The only (extremely general) patterns evident in figure 2.2 are, first, a significant overlap in the distribution of Coalition and Classic sites, which may imply continuity in land-use practices over time. In this light the low frequency of multi-component sites is counterintuitive. If people did the same things on the Petroglyph Hill landscape over time, they may have been doing them in slightly different places.
### Precolumbian

**Ceramics:**
- Scatter: 8
- Isolated artifact: 4
- Pot drops: 5

**Lithic:**
- Scatter: 17
- Flaked stone artifact (core/biface): 13
- Grinding slick/cupules: 1
- Groundstone metate: 1
- Projectile points: 5
- Sherd and lithic scatters: 14

**Features:**
- Cist (probable): 1
- Petroglyphs: 17

### Historic

- Artifact scatter: 13
- Isolated artifact: 7
- Grave marker (possible): 1
- Fence: 1
- Survey markers: 3
- Stakes: 11

### Precolumbian/Historic

- Artifact scatter: 8

### Unknown

- Cobble cache?: 1
- Hearths: 3
- Rock concentrations: 4
- Rock alignments: 2
- Soil stains: 2

### Natural Features

- Possible clay bed: 1
- Petrified wood sources: 2

---

**Table 2.2.** Isolated Occurrences.
A second potential pattern is the comparatively low frequency of Coalition sites towards the eastern end of the survey area, where sites of the Classic Period appear to be significantly more common. If this pattern holds up following further survey it will be in accord with the general perception that populations in later periods were traveling further distances from their home villages to their fields or other resource areas. This assumes that people using the land in the earlier periods lived nearby, either in farmsteads or communities like Burnt Corn, while those who came later saw more distant, central places such as Pueblo San Marcos as their homes.

Given that the most spectacular archaeological site in the study area emphasizes petroglyphs, it is interesting to note that petroglyphs are relatively sparse elsewhere on the landscape. All of the sites recorded and most of the isolated occurrences are within a few hundred meters of Petroglyph Hill itself, with none found in the eastern or southwestern areas that have been surveyed. Isolated petroglyph panels have been recorded beyond the bounds of the Petroglyph Hill tract (i.e. Roney and Williams 1994), however, and it will only be upon completion of the survey that the ramifications of this pattern will become evident.

Perhaps the most important aspect of the Ancestral Pueblo landscape as recovered during the 2004 data is the concentration of small, Coalition Period structures in the southwest corner of the survey area (figure 2.4). This location lies adjacent to a major intermittent drainage that passes through the Petroglyph Hill tract which, pending determination of its historic name, we refer to as “Arroyo Sin Nombre.” The relatively flat terraces along this stretch of the arroyo represent an obvious agricultural resource in both modern and ancient times, and the presence of five small structures in close proximity suggests that a “community” may have existed in this location. The newly-defined Sin Nombre community represents the only such social/political grouping known from the immediate vicinity and would have been a close neighbor to Burnt Corn. Its true extent is difficult to determine, since the recorded structures are immediately adjacent to the property boundary, but since we believe that the land on the other side of the fence belongs to the BLM it should be feasible to gather further documentation.

Management Notes

A few brief remarks concerning management issues at Petroglyph Hill emerging from the archaeological survey are warranted. First, most of the archaeological resources recorded to date are of relatively low visibility. Most of the artifact scatters that dominate the landscape are difficult for the layperson to discern, and even the small structures are represented by ephemeral mounds of low visibility. With the obvious exception of Petroglyph Hill itself - which will clearly have special requirements - there are few sites that would attract immediate attention from casual visitors and thus warrant specific attention for preservation.

There are, however, several exceptions. Chief among these are the historic sites, which include several standing or partially-collapsed structures, all of which are potentially subject to vandalism. Also worthy of attention are the small petroglyph panels found away from Petroglyph Hill itself. Some of these consist of petroglyphs on small boulders which would be easy targets for vandalism and theft. At equal risk are recognizable artifacts visible on the surface, including potsherds, projectile points, etc. Groundstone artifacts are particularly at risk; metates can be seen at some distance and are essentially portable, and could thus be removed in a matter of minutes.
Figure 2.4. Ancestral Pueblo structures in survey area.
In this regard, it should be noted that the ephemeral character of the archaeological landscape of Petroglyph Hill makes it a particularly fragile resource. Thin distributions of artifacts and small structures provide important information about land use practices, but their ephemeral character means that they are uniquely vulnerable to casual impacts. The archaeological record associated with large pueblos that were occupied for hundreds of years, such as San Marcos, contain literally 10s of 1000s of ceramics, which somewhat mitigates the impact of souvenir collection. A small field house at Petroglyph Hill, however, may contain only a handful of ceramics, so that their removal by a visitor could have a drastic effect on our ability to understand that site.

Incorporating such concerns into a management plan is challenging. First, off-trail travel should be discouraged. Negative impacts of bicycles and ATVs are already evident in the area, and perceptions about how these affects harm the natural landscape should be extended to the cultural landscape as well. Given the probability that initial trail construction will follow the lines of existing ranch roads, most of the impact of such features will have already taken place. Decisions about particular routes can be made in light of the potential visibility of sites in specific areas to limit the possibility that such places will be exposed to potentially harmful visitation. Education is essential. A biological analogy to archaeological landscapes can be found in successful campaigns to preserve cryptogamic soils; if visitors can be educated that errant footsteps can harm small life forms that hold down the soil, they can probably be taught the importance of dispersed fragments of pottery. Finally, regular monitoring of particularly vulnerable locations should be instituted so that land managers will receive a regular flow of information about real and possible impacts to local resources and can respond accordingly.

**Prognosis for 2005**

Our estimate is that 875 acres are unsurveyed. Using site and IO densities recorded in 2004 as a basis for estimation, there are an additional 103 sites and 275 isolated occurrences at Petroglyph Hill. Much of the terrain that remains to be covered, however, is heavily dissected and thus less likely to contain sites at a high density. The field director’s modified estimate is thus for 80-100 sites and 200 isolated occurrences (G. Head, personal communication, 2005). The principal goal for the 2005 season is to complete the survey itself, so that development of a management plan can proceed. The completion of this goal may require certain economies, however, particularly as regards detailed site recording. Without compromising professional standards as set by the NMSHPO, some of the more intensive recording strategies employed in 2004 may be modified for more rapid fieldwork. Followup recording once primary fieldwork has been completed may also be adopted if necessary. Ultimately, however, the goal of 100% coverage of the Petroglyph Hill tract is achievable, and the 2005 season is anticipated to bring this part of the project to a successful conclusion.
ACKNOWLEDGMENTS

The Tano Origins Project is a collaborative enterprise made possible by numerous institutions and individuals. Primary funding is provided by the National Science Foundation, Social and Behavioral Sciences Division, Grant #600142. Processing of the grant and associated logistics comes under the auspices of the Office of Sponsored Programs at George Mason University, with day-to-day liaison service provided by Karen Secrist of the Department of Sociology and Anthropology. In addition to the PI, the three permanent staff members of the project are Genevieve Head, Field Director; Leslie Cohen, Lab Director; and Adam Sullins, Crew Chief. Crew members in the 2004 season included George Mason students Lillian Greenawald, Elise Kordis, and Brian Wenham; and numerous local volunteers, including Barbara Chatterjee, Gary Hein, Brent Lambert, Lois Lockwood, Martha Mace, Ruta Marchal, Toni Marks, and Joe Sneed.

The opportunity to conduct the work at Petroglyph Hill is provided by Paul Olafson of the County of Santa Fe’s Open Space and Trails Program. Consultation with Design Workshop, which is preparing the management plan for the tract, is ongoing. The best roads leading to the Petroglyph Hill cross Thornton Ranch property currently being developed by the Commonweal Conservancy; Ted Harrison graciously permitted access.

Several local institutions are close collaborators with the Tano Origins Project. These include the Laboratory of Anthropology of the Museum of Indian Arts and Cultures, which provides laboratory and office resources through its research associate program. Chris Turnbow, assistant director, makes this possible, and also shares his volunteer resources. This generosity is equalled by that of Eric Blinman of the Office of Archaeological Studies, Museum of New Mexico, who has also promoted the project among his volunteers and is a frequent consultant on matters of Galisteo archaeology. Paul Williams, district archaeologist for the Bureau of Land Management, is another advisor, as is local landowner Buck Dant.
REFERENCES CITED

Allen, J. W.

Brugge, David
1975 Maize of Pueblo Largo. Unpublished MS, Dutton Pueblo Largo Collection, 95PLE.005. Archives, Laboratory of Anthropology, Museum of Indian Arts and Cultures, Santa Fe.

Cameron, Catherine M.

Clark, Jeffery J.

Dickson, D. Bruce

Doleman, William H., A. Yvonne Oakes, and Allan Dart
1979 Archaeological Clearance Investigations Along Seismic Testing Corridors in the Galisteo Basin Area, for Teledyne Exploration Company. *Laboratory of Anthropology Note 148.* Museum of New Mexico, Santa Fe.

Dutton, Bertha P.


Fish, Suzanne K., and Stephen A. Kowalewski, eds.  

Haas, Jonathan, and Winifred Creamer  

Habicht-Mauche, Judith  

Hammack, Laurens C.  

Kolb, Michael J., and James E. Snead  

Lang, Richard W.  
1977 *Archaeological Survey of the Upper San Cristobal Drainage, Galisteo Basin, Santa Fe County*. MS on file, School of American Research, Santa Fe.

Lange, Charles H., and Carroll L. Riley, eds.  

LeBlanc, Steven A.  

Lucas, Spencer G.  

Lycett, Mark T.  
McKenna, Peter J., and Judith Miles  

Nelson, Nels C.  


Rice, Glen E., and Steven A. LeBlanc, eds.  

Robinson, William J., Bruce G. Harrill, and Richard L. Warren  
1973 *Tree-Ring Dates From New Mexico J-K, P, V Santa Fe-Pecos-Lincoln Area*. Laboratory of Tree-Ring Research, University of Arizona, Tucson.

Roney, John, and Paul Williams  

Smiley, Terah L., Stanley A. Stubbs, and Bryant Bannister  


Snead, James E.  

2001 Archaeological Survey in the Canada de la Cueva, Santa Fe County, New Mexico: Report of the 2000 Field Season. Submitted to the Bureau of Land Management, Northeast District, New Mexico


Spielmann, Katherine A.

SWCA
1995  Archaeological Survey of Proposed Improvements to NM Highway 14, Santa Fe County, New Mexico. SWCA Archaeological Reports No. 94-131. Report on File, NMSHPO.

Wiseman, Regge