



FIELD REPORT

Dear Folks,

Time has gone quickly and, as a part of the 2009 occupation of the Cañada Alamosa, we hope that you are doing well in your other pursuits. We have heard from some of you and many are pursuing archaeology in a variety of ways. Sadly, the 2009 season was the last of nine years with Earthwatch Institute. They have been wonderful and productive years, merging new friendships with a constant process of discovery.

This report covers the activities of Teams I and II during the 2009 season. The teams worked on selected features located around the Victorio Site. The features selected for additional excavation were pueblo rooms that had exhibited potential for the presence of earlier cultural deposits beneath the floors of the rooms. In some cases, this resulted in the excavation of one or more earlier floors. In another situation, the 13th century surface room had been built on top of an 8th century structure (perhaps another pit house).

Morgan Seamont (a member of our first EW team in 2001 and now a CU graduate student), not content with excavation of one pit house, arrived before the June session and excavated enough of Feature 5 to define the hearth and ventilator of yet another early pit house.

Many of you were old hands while others were at Cañada Alamosa for the first time. You melded into spectacular teams that performed in a seamless professional manner.

Each session yielded many great memories. Adventure, excellent food, lots of beautiful mornings and evenings; and the company of fine people, each of whom made a distinct contribution to the Cañada Alamosa Project. You are a great bunch of real people and we think about you often. We hope that wherever you are, you are enjoying life.

Yours,

Karl and Denny



SECTION ONE

Project Title: Prehistoric Pueblos of the American Southwest

Principal Investigators: Karl Laumbach

Research Area: Monticello Box Ranch on the Rio Alamosa, southwestern New Mexico

Date field report completed: January 18, 2010

Period covered by this report: 04/06/2009 to 12/10/2009

Top Highlight from the Past Field Season

During the June session, a corrugated jar that had been broken in situ was found by Earthwatch volunteers in Room Feature 18 and is shown below in Figure 1.



Figure 1: Reassembled jar from Feature 18

During the summer months, John Fitch (project photographer) glued the fragments back together. We sent a photo to Earthwatch Institute and the editor of the EW E-newsletter asked for more information. Upon reflection, I sent the following response, which was later published in an amended form in the newsletter. The power of this single artifact to reflect the cultural and environmental history as elucidated by the Cañada Alamosa project was profound. My response follows:

The reconstructed jar was found broken on the floor of a room on the 450 plus room/60 acre Victorio Site which is located on the well watered Rio Alamosa in southwestern New Mexico. The Victorio Site was occupied off and on for several centuries but most of the surface rooms were used between A.D. 1200 and A.D. 1300.

The 13th century was a period of great environmental and social change in the American Southwest. Tree-ring data from northern New Mexico indicates that heavy winter snows limited the growing season during the early years of that century, forcing populations to move south. Populations already inhabiting the southern areas reacted to the increase in groundwater by aggregating around large plots of fertile land.

This happy situation was interrupted by the emigrants from the cold north, who built a fortified and terraced pueblo on a rocky outcrop just upstream from the Victorio Site, possibly controlling the flow of the water and providing competition for upland resources that the Victorio Site population depended on. These newcomers are easily recognized in archaeology through their distinctive northern style ceramics and compound walls constructed of shaped masonry elements. Researchers have suggested that the newcomers belonged to a separate social group and likely spoke a different language.

One foci of our research has been to collect environmental information from both the Victorio site and the site inhabited by the northern migrants in order to contrast and compare the variety and availability of plant and animal resources through time. It is clear that the increased populations of the early 1200s quickly denuded the area of pinyon pine, leaving only juniper as a building material. Increased farming activity in the valley coupled with the use of riparian vegetation for firewood reduced the protective layers of vegetation and made the valley bottom susceptible to erosion during the summer floods. The erosion, in turn, reduced the amount of arable land. Our studies have revealed that terraces used for farming corn and squash were truncated by the erosional effects of floods. Large animal species (e.g. deer and elk) were hunted down while increased agricultural fields allowed the rabbit population to flourish, making them a primary, albeit inadequate protein source. It is clear that the goal of environmental sustainability is not a new one and that the past holds lessons for the present.

The arrival of the northern migrants would have stressed the local population's ability to survive. A key point of our research has been to establish that both sites were at least partially contemporary. Radiocarbon dates from the two sites overlap around A.D. 1260. It is our current interpretation that once the newcomers arrived; there was a brief attempt to co-exist, but things didn't work out and given that the migrants held both a fortified position and upstream control of

the irrigation water, the locals left. Until the 2009 Earthwatch season, we had not found ceramic types used by the migrants in context at the Victorio Site, and only a few rooms contained evidence that might be interpreted as reflecting a hurried abandonment on behalf of the locals.

In the summer of 2009, we excavated two widely separated rooms that contained both painted and corrugated ceramics that were of the types used by the migrant population, but located at the site inhabited by indigenous residents, suggesting inter-population trade. One of those rooms also contained the reconstructed corrugated jar which was found broken on the floor (Fig 1). A conical fracture in the side of the vessel suggests that it was purposely broken. Besides the reconstructed jar, the room contained several other broken vessels. When people leave a site for a short time or to only move a short distance away, they come back and retrieve the usable artifacts. When leaving permanently and to a distant location, artifacts that cannot be carried are left and are sometimes intentionally and/or ritually broken. The purposely broken (and now reconstructed) jar found lying on the floor of Room Feature 18 is a mute reflection of the environmental and social turmoil that came to the Cañada Alamosa during the 13th century.

Non-technical Overview of Results

The goal of the Cañada Alamosa Project has been to systematically test four sites representing 800 years of Native American pueblo occupation in the canyon. Three of those sites were tested from 2000 to 2004. The largest site, known as Victorio, was saved for last due to its size and complexity, allowing information gained from the other three sites to guide our investigations at the Victorio Site. The 2005 field season saw us recover surface data from all areas of the Victorio site. The 2006, 2007, and 2008 field seasons allowed us to perform deep excavations in more than 30 room features around the site.

During the 2009 season our field teams continued excavations in those features where evidence of multiple layers of cultural material had been identified. The results were varied. In Feature 27, the presumed "Mimbres" period (A.D. 1000-1125) room was recovered underneath the Tularosa Phase (A.D. 1200-1275) floor, and consisted of a rectangular adobe basin that appears to have been used as the first floor of the Tularosa Phase room. In both Feature 27 and Feature 18, expansion of the excavations encompassing almost the entire room revealed bowls of Seco Corrugated, a ceramic type previously only found at the nearby Alamosa site known as the Pinnacle Ruin. The discovery of these vessels on the Victorio Site provides additional evidence that the two sites were at least partially contemporary.

Feature 18 also contained at least three distinct floor levels and had been remodeled and expanded as revealed by multiple wall alignments. The artifacts suggest that all three floors date to the Tularosa Phase (A.D. 1200-1275); however the lowest floor has not yet been excavated, leaving open the possibility that an even earlier component is present.

Displayed in Figure 2 below, Feature 20, a Tularosa Phase room, was built on top of a pit house (a form of shelter recessed fully or partially into the ground) period structure dating to 400 years earlier (ca. A.D. 750). The nature of the pit house period structure has not been completely defined but it appears that the adobe portions were heavily oxidized by fire.



Figure 2: Excavation at Feature 20, June 2009

Feature 9, located in a previously unexplored room block, revealed a Tularosa Phase floor covering cultural deposits and floors utilized during the Mimbres period. This room had also been remodeled, as evidenced by a wall in the upper fill that was built across the top of features on the lower floor.

The 2009 season initiated the last deep excavations that will occur on the Victorio Site during the course of the Cañada Alamosa Project. In doing so, the season added considerable insight to the development of the Victorio Site in general and the length of occupation for certain rooms and room blocks. These discoveries will complete the corpus of accumulated data from four sites and over 800 years of occupation within this limited area of the canyon. Not only do we now have a measure of population density through time but the animal bones and burnt macrobotanical remains found in context with various time periods will give us a perspective of the canyon environment, as well as a long view of the interaction between human populations and the environmental fluctuations that affected their lives. Some of these data provide the knowledge that will allow the replanting of riverine species long absent from the canyon. The project has also provided a robust environmental data base that can be used to combat destructive land use projects within the canyon.

Acknowledgements

Numerous individuals and institutions have contributed to making this project a unique and successful inquiry into New Mexico's cultural and environmental past. In no particular order they are:

Earthwatch Institute
Earthwatch Institute participants
The Cañada Alamosa Institute
Dr. Dennis and Trudy O'Toole
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Dr. Jeff Ferguson
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SECTION 2: TECHNICAL RESULTS

1. REPORTING ON RESEARCH OBJECTIVES

Objective 1

The overall long-term research objective is to generate a substantive database that will allow definition and interpretation of the patterns of aggregation and site formation that resulted in the Victorio Site to become the largest single pueblo site in the Rio Alamosa drainage

Progress towards/against Objective

Work on the Victorio Site began in 2005 with an extensive surface collection and testing program that encompassed the entire site. In 2006 Earthwatch teams conducted “deep” test excavations into rooms and pit houses on the western portion of the site. The process continued in 2007 with the testing of the pit house, an additional ten rooms and a midden area along the northern portion of the site. In 2008, Earthwatch participants excavated 13 surface rooms and a midden, all located in what we refer to as the “suburbs” on the eastern side of the

Victorio Site. Meanwhile, Morgan Seamont, a long time Earthwatch team leader and now a graduate student at the University of Colorado, completed excavation of a “pie shaped” section of the pit house. Database development for the Victorio Site continued in 2009 as we returned to rooms in all areas of the site that contained multiple floors and/or the promise of stratigraphic integrity. Our sample is now complete.

Objective 2

Generate a database that allows informed discussion of the demographics of the Victorio Site by temporal period

Progress towards/against Objective

The 2009 season added significantly to our ability to discuss demographics and the site development process. The data continued to support the conclusion that the majority of the site's 450 rooms were occupied during the 13th century. This is in contrast to the hypothesis that the size of the site and number of surface rooms was due to multiple occupations over a three hundred year period.

The 2009 season provided multiple insights into the long term use of the site. Excavations in the stratified rooms revealed a series of pueblo floors, some of them beginning in the 11th century, others merely remodeled rooms begun in the late 12th or early 13th centuries. The areal extent of the pit house component was expanded when a pit house period structure was found under the pueblo room at Feature 20 (Fig 2). Most importantly, artifacts indicate that at least two of the rooms were among those abandoned at the very end of the Victorio Site occupation.

Based on surface artifacts and limited testing, our data indicated that there was a substantial pit house village on the site during the 7th and 8th centuries. The archaeomagnetic date from the pit house now suggests that occupation began in the early 8th century. Use of that pit house ended with a raging fire sometime between A.D. 730 and A.D. 750. However the site was soon reoccupied by another pit house component whose population used the earlier pit house as a trash dump. Although we have no firm chronometric dates, the ceramics suggest that the second pit house era on the Victorio Site ended ca. A.D. 900.

Prior to 2008, it was thought that the development of the Victorio site as a pueblo did not begin until the late 12th century when a few rooms were built. These rooms continued to be occupied into the 13th century when additional rooms were added to create the large room blocks and extensive site plan that we see today. While that remains basically true, it is now clear that the same rooms were built as early as the late 11th century when Mimbres Black-on-white was still a dominant ceramic type. Unfortunately it is still not clear whether or not the occupation of a particular room or room block was unbroken from the 11th century on. Our final work at Feature 9 may help answer that question.

Objective 3

Generate a database that allows informed discussion of the organization of settlement and society at the Victorio Site

Progress towards/against Objective

The pit house village is limited to the northwestern portion of the Victorio Site. Although the depth of deposits will not allow us to do more than test two of the pit house features, the recovered artifacts make it apparent that the pit house populations were wide ranging, if not actually mobile. Lithic artifacts recovered in 2006 and 2007 include reduced bifaces and cores of high quality materials, a very different assemblage from the local patterns of expedient use of local rhyolite found in the later pueblo assemblage. Also, decorated ceramics that appear to be from an area almost 60 miles north of the site are common in the pit house assemblage. As the pit house site is located in an ecotone with three major vegetative zones available to exploit depending on the direction one walks, it is likely that it served as the central base camp for seasonal foraging that encompassed a considerable radius. While it will be difficult to ascertain the number of contemporary pit houses, it is not unreasonable to view this site as the central community in the drainage during the 8th and 9th centuries.

The work by Seamont in 2008 and again in 2009 has provided even more support for a wide ranging group with contacts and interaction with northern populations. The floor assemblage from both Feature 2 and Feature 5 contained a basic southern (Mogollon) ceramic assemblage mixed with substantial quantities of San Marcial Black-on-white (a northern pueblo ceramic type). The mixed ceramic assemblage coupled with the remodeling of the Mogollon style ramp entrance into a northern style ventilator shaft makes a strong case for intermarriage between pit house period populations from separate cultural traditions.

As mentioned in the discussion for objective number two, most of the pueblo seems to have been occupied during the 13th century but many of the rooms in the eastern section of the site that were tested in 2008 appear to have been quickly built, used for only a short time and possibly represent the very last occupation of the Victorio Site. Other features excavated in 2009, specifically Feature 18, contain assemblages that suggest a rapid abandonment of rooms that had been lived in for some time as evidenced by multiple episodes of remodeling.

Two distinct masonry traditions associated with the Tularosa Phase are present in all areas of the site. Rooms of both styles contain the same ceramic assemblage. Furthermore, recent results of the clay sourcing studies from the University of Missouri's research reactor suggest that all of the paint-decorated ceramics may have been traded into the site from a distant production area. Thus it would appear possible that the Victorio Site was made up of two merging populations that became integrated with a larger system and ceramic production area located to the north and west of the drainage. Ceramic data indicates that two populations were the local Mimbres groups and the immigrant neighbors to the north who occupied the Kelly Canyon site (Earthwatch seasons 2002 and 2003). It appears that the Victorio site may have become a magnet for local small population groups caught in the long drought of the 13th century and that the site continued to grow until the mid to late 1200s when it was abandoned.

Objective 4

Generate a database that allows informed discussion of the patterns of stability and change at the Victorio Site in relation to the observed settlement patterns in the Cañada Alamosa

Progress towards/against Objective

When we began the process of understanding the Victorio Site it was thought that its great size was due to multiple and fairly continuous occupation from A.D. 700 to A.D. 1300. In fact, our data now indicate that there were two major periods of occupation. In both cases the Victorio Site was the major site in the drainage for that time period. The first time that the site became prominent was during the 8th and 9th centuries when a large pit house village was built and occupied on the northwestern corner of the terrace. We believe that the village was built on this particular terrace because of the deep “perched” remnant soils that were geomorphologically isolated by the entrenchment of the Rio Alamosa. There are only a very few known sites in the Rio Alamosa that date to this time period and all are much smaller.

After the pit house village was abandoned circa A.D. 900, the Rio Alamosa drainage appears to have been largely devoid of detectable human populations until circa A.D. 1000 when numerous small pueblos were built up and down the drainage. The 2008 season provided the first definitive evidence that the Victorio Site was occupied during the 11th century. While that first pueblo occupation consisted of scattered rooms, data from 2009 revealed larger room blocks dating to that early period. Overall, however, the data suggest that large scale pueblo construction began in earnest during the late 12th century and then expanded exponentially during the early and middle 13th century. That expansion came as the majority of the earlier small pueblos in the drainage were abandoned, leading to the conclusion that those populations aggregated at the Victorio Site.

Objective 5

Generate a database that allows informed discussion of the local environment during various occupations of the Victorio Site

Progress towards/against Objective

Collection of preserved macrofossils in the form of charred plant remains is a routine effort in every test excavation. Test excavations are placed to maximize the opportunity to locate fire pits within the rooms. Of the five rooms excavated in 2009, three contained fire pits from which large samples of ash and charcoal were taken. Charcoal was recovered from all of the features. These samples are processed and sent to an ethnobiologist who will identify the plant remains. Data recovered provides information on edible plant species, use of particular species for firewood and construction, and presence and absence of species in the local environment.

Faunal material, the animal bones found in the site, are also routinely collected and sent to an analyst who can identify the bones according to species, number of individuals represented, pathologies present and sometimes the age and season of death.

These data, both plant and animal, from the Victorio Site will be compared to assemblages recovered from the other three nearby sites that have been excavated by Earthwatch and University of Colorado participants. The botanical samples from the 2006, 2007 and 2008 seasons have been processed and sent to an analyst. A report is due in the spring. The faunal remains have not yet been sent to an analyst. Due to the lengthy time and cost required to send these materials to specialized analysts and then integrate that data with the cultural and temporal contexts from the sites, these very important environmental data are some of the last but also some of the most important aspects of the project to be interpreted.

We believe strongly that each archaeological site is an environmental time capsule that can be used to understand the local environment during the time or times that the site was occupied.

2. PARTNERSHIPS

As indicated in the acknowledgements, this project has many partners. The core of the project is the agreement between two non-profits, the Canada Alamosa institute established by Denny and Trudy O'Toole and Human Systems Research, Inc., a 37 year old New Mexico corporation. Supporting the effort are Earthwatch Institute (Boston, MA) who provided much of the work force, the New Mexico Farm and Ranch Heritage Museum (Las Cruces, NM) who provides the expertise of curator Toni Laumbach and supports the oral history project, the University of Colorado (Boulder, CO) who provides Dr. Steve Lekson and numerous field school students both undergraduate and graduate (three MA theses on the project), Eastern New Mexico University (Portales, NM) also provided a field school in 1999 and two MA theses on the agricultural potential in the canyon, New Mexico State University (1 MA thesis), the Institute of Historical Survey (lab and storage space, oral history transcriptions), New Mexico Tech (Geological interpretation) and the University of Missouri Research Reactor and the National Science Foundation grant for ceramic sourcing analysis.

3. PROJECT DEVELOPMENT

3.1. Removed or Modified Objectives

N/A

3.2. New Objectives

N/A

4. DISSEMINATION

Printed:

Clark J.J., Laumbach K.W. (2010) Pueblo Migrations in the Southern Southwest: Perspectives from Arizona and New Mexico in Changing Histories, Landscapes, and Perspectives: The 20th Anniversary Southwest Symposium. U of A SW Symposium article edited by Margaret Nelson and Colleen Strawhacker. University of Colorado Press (in press)

Mass Media:

Tessier, D. (2009) Life on the Frontier *American Archaeology*, , the Archaeological Conservancy, Albuquerque NM.

Nijssen, Jane (2009). Discovering Early Life on the Frontier" *Earthwatch institute (Europe) E-Newsletter*, December 2009

Other:

De Cunzo, Antonio (2009). A Geoarchaeological Investigation of Linear Rock Features At The Victorio Site (LA 88889) Canada Alamosa, New Mexico. MA Thesis in Anthropology, Eastern New Mexico University, Portales

Seamont, Morgan S. (2009). Social Identity and Interaction on the Frontier of Ancestral Pueblo and Mogollon: the Late Pithouse Period of the Victorio Site, Socorro County, New Mexico. An MA thesis in Anthropology, University of Colorado at Boulder

5. CAPACITY DEVELOPMENT AND EDUCATION

6.11 CONTRIBUTIONS TO INTERNATIONAL CONVENTIONS, AGENDAS, POLICIES, MANAGEMENT PLANS

N/A

6.12 CONTRIBUTIONS TO LOCAL, NATIONAL AND REGIONAL CONVENTIONS, AGENDAS, POLICIES, MANAGEMENT PLANS

N/A

7. ACTIONS OR ACTIVITIES THAT ENHANCE NATURAL AND SOCIAL CAPITAL

N/A

8. LONG TERM IMPACT OF PROJECT

Cultural heritage enhanced, restored or maintained

Prior to the implementation of the Cañada Alamosa Project, very little was known about the prehistory of the canyon other than the knowledge that there were "Indian Ruins" in the canyon. The efforts of our project have lifted the veil from those ruins and produced a history that weaves human drama with new data on quite a dynamic prehistoric environment. This story has been and will continue to be shared, putting the area both on the map and, more importantly, in the minds of both the interested public and scholars from disciplines that include geologists, biologists, historians, hydrologists, archaeologists, and Native American descendents of both Pueblo and Apache inhabitants of the canyon.

Prior to this project, those ruins and that story were in jeopardy of being lost to relic hunters and others who care nothing for the wealth of cultural and environmental data to be found in those "Indian Ruins". As a result of this project, those ruins and that environmentally rich canyon environment are recognized as a major resource to the area. If all goes as planned, a conservancy will protect much of the area for future generations to come.

Appendix 1- PHOTOS



Figure 3: Team I Group Photo



Figure 4: Measuring depth, Feature 27, June 2009