



With this, our first newsletter, we are pleased to formally announce the formation of the Maxwell Center for Anthropological Research (MCAR). Officially recognized by the University of New Mexico as a Category 1 research center, MCAR is designed to unite and support the research projects of Maxwell Museum staff, UNM faculty and students, and affiliated scholars. The elements of its goals, mission, and organization are presented below, and brief synopses of current MCAR projects are presented. The "in-house" projects include such diverse research as culturally modified trees in Alaska, documentation and sharing of a 1930s photographic collection with Alaskan Native peoples, and examination of Folsom Paleoindian land use in northwestern New Mexico. The Maxwell has also supported Bob Leonard's cooperative program of international research in northern Chihuahua—involving INAH, the Museum of New Mexico, and UNM—for the past several years. Our featured piece concerns the research being conducted at the site of Paa'ko by Mark Lycett, MCAR's first affiliated scholar. He presents the results of his research into the changes in Puebloan settlement, subsistence, and land use that occurred during Spanish colonization of the Rio Grande. Mark's affiliation with MCAR exemplifies the kinds of collaborative research projects for which the Center was designed. The Maxwell has collections and documentation from UNM investigations at Paa'ko some 50 years ago, and this material is an important source for his research. In addition, collections from Mark's project will ultimately be curated at the Maxwell.

The Newsletter will appear biannually to present the results of MCAR projects, appointment of affiliated scholars, and announce new programs and events. Questions and comments are welcome!

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Maxwell Museum Center for Anthropological Research

Garth L. Bawden
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By creating the Center for Anthropological Research within the University of New Mexico's College of Arts and Sciences, the Maxwell Museum of Anthropology brings its existing programs in archaeology, biological anthropology, and ethnology into a formal research center that will truly represent the discipline and more effectively further the research activity that stands at the center of its mission. In recent years, local and national trends have converged to greatly expand the use of the Maxwell Museum as a sponsor and an active participant in anthropological investigation. Concurrently, it has become very apparent that there is a need to institute a formal administrative and financial structure to facilitate the use of the museum and its resources by UNM and outside scholars and to create a base for researchers working in the region. Our response to this increasing need is to establish the Maxwell Center for Anthropological Research. The Center will serve as a focus for the active interaction of university anthropologists and students, research staff, and affiliated scholars in an institution that holds major systematic collections of material culture and offers study opportunities that cannot be matched in a classroom setting. We also expect that, while being

fully inclusive regarding research directions, the Center will develop areas of excellence. For example, the Maxwell currently sponsors a number of archaeological and ethnological projects centered on the cultures of the Rio Grande and Northern Mexico. The Center can act as a meeting place where these previously isolated studies can benefit from each other and where their principal investigators can exchange ideas and information to their mutual benefit. Such collaborations will also create great opportunities for students by exposing them to ongoing research and by expanding the possibilities for field and laboratory training and for acquiring educational grants. As the reader will note from the projects described in this first newsletter, the Center is already active in a wide range of projects and areas. We intend that this be only the beginning of a valuable contribution to the broad study of the human cultural condition that is the province and responsibility of anthropology.

Mission

The mission of the Maxwell Museum Center for Anthropological Research is to coordinate and promote archaeological, ethnological, and biological anthropology research activities at the Maxwell Museum of Anthropology, including collections and field research undertaken by Maxwell Museum staff members, affiliated scholars of the center, and students.

The center accomplishes this mission by:

- awarding research affiliations to scholars within and outside of the University of New Mexico
- entering into partnerships with other UNM departments to investigate research questions of mutual interest
- providing UNM students with opportunities to participate in and conduct independent research
- supporting visiting scholars engaged in research beneficial to the center's educational mission at UNM
- organizing professional symposia
- publishing the results of research by affiliated professional personnel and students
- continuing to seek out and acquire collections that improve the Maxwell Museum's ability to support research activities.

Governance

Center activities will be overseen by the Director of the Museum (Garth L. Bawden) and the Senior Research Coordinator (Bruce B. Huckell). Further direction will be obtained through a five member advisory board, chaired by the Senior Research Coordinator and consisting of Museum personnel and affiliated scholars. Their duties will include input on applications for affiliated scholar positions; Center involvement in projects; review of research project proposals; and as-needed advice on other Center matters. The board's role is advisory.

Research Activities

Ongoing internal research projects include those conducted by the senior research coordinator and the curatorial staff of the museum and the OCA (Office of Contract Archaeology). Inclusion of each project is subject to approval by the Center. Other research will be conducted by affiliated scholars, both UNM faculty and professionals outside of UNM. In the future, we hope to add research fellowships for students, both UNM and otherwise, and to support research by visiting scholars engaged in post-doctoral sabbatical research or other short term projects. More possibilities include internal and external partnerships with the UNM Latin American and Iberian Studies Program and the Native American Studies Program, and perhaps also state and federal agencies such as BLM and USFS. Results of research may be disseminated through various publications such as the Maxwell Museum Anthropological Papers, the Maxwell Museum Technical Reports, the OCA series, and quarterly updates to the museum website. The Center also intends to sponsor conferences and workshops, as well as various forms of outreach such as public lectures and exhibits in the Maxwell Museum.

Photoarchive Research and Repatriation: The Collection of Dr. Julien Manser

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The Manser Collection of Bering Sea photographs, taken by Albuquerque resident Dr. Julien Manser in the summers of 1932 and 1933, was donated to the Maxwell Museum of Anthropology in 1969. The photographs were considered supporting material of a donation of objects---primarily ivory carvings, baskets, and implements---and they were relegated to document archives. Consequently they were not catalogued until twenty years later, when the Photographic Archives department was established in the Museum. In 1999, I became the acting photoarchivist for the Maxwell Museum, and as a Native American art historian I have a strong interest in the value and research accessibility of many of the photographic collections of Native Americans that are housed in the archive. The Manser Collection is unique because it consists wholly of photographs of Native people in Alaska.

It offers a fresh perspective in the way 'seeing' is interpreted across cultures and time, and it is in this way that the photographic record of Dr. Manser provides a unique opportunity to research and explore Native Alaskan history and culture. Dr. Manser was a dentist assigned to duty on the U.S. Coast Guard Cutter Northland that traveled through the Bering Sea waters of Alaska from Unalaska to Point Barrow during the summers of 1932 and 1933. While providing dental treatment to the Native Alaskan people along the route, Manser photographed the villages and people who lived in the region and kept a journal of his impressions. He considered the journal notes as "off-the-cuff observations of a rank amateur interested in people and things." From today's perspective they contain an understanding unusual for a non-Native traveling in Alaska, but most significantly they provide a critical historical record of Native life in Alaska during that time period, especially as many of the photographs provide an invaluable tool for identifying both people and objects. The availability of both photographs and journal notes by this amateur anthropologist who was significantly untrained in the institutional frameworks of anthropological research at that time, provides unique insight into the cultural integrity of the disappearing cultural practices of Native Alaskan peoples.

The Manser collection consists of 216 photographs taken in a number of villages around the Bering Sea area. As a record of individual Native Americans in their cultural environment they provide an invaluable historical resource to the people and communities of the Alaskan villages. Providing a historical record that captures tradition and culture prior to the mid-20th century, the collection has been rarely viewed or accessed for research by Alaskan Native people or by researchers interested in that area. It is not a collection that is known to the individuals who might be best served by it. With that in mind, it is our intention to repatriate copies of these images to the communities where they originated. It is our hope and goal to create a shared collaboration with cultural specialists and community representatives from the villages to provide a documentary resource, a historical narrative and dialogue, which can be easily accessed by any of the communities represented in the collection.

All of the photographs are documented with date and place,

Mrs. Tommy Octuk and children, Teller, Alaska,
October 1932. (J. G. Manser, photographer)



and many include individuals' names and other pertinent information. What is missing is the interpretation and documentation from the Native perspective, and it is this shared knowledge that is the focus of this collaborative research grant. There is a wealth of visual history that should be returned and shared with these communities and an opportunity to be equal partners in the further documentation and interpretation of this collection, and the time is now ripe for this collection to aid in the further rectification of conventionally eurocentric anthropological models. The Manser Collection lay dormant throughout the beginning of new forms of scholarship that challenged these institutionalized perspectives, and can now be used to further

contribute to a future of shared understanding and respect for cultural heritage Native and non-Native.

To further the dissemination of this material to a wider audience, the goal is to create a digital CD ROM as well as a booklet containing the Manser photographs, journals, notes, and comments, as well as additional information that may come to light during the project.

The collaborative interpretation process occurring throughout this project will contribute to a transition out of the conventional preservation model into dialogue between communities and archivists, and facilitate expression across time and space. This framework provides an engaging method of collaborative research and reinterpretation that will act as a valuable cross-cultural reference for examining the past and furnishes the means for a comprehensive history to evolve.

Culturally Modified Trees as Indicators of Cultural Activity in Northern Temperate Rainforests

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Before the advent of commercial logging in the coastal forests of British Columbia and southeast Alaska in the 1950s, culturally modified trees (CMTs) were common from Oregon to Alaska's Kodiak Island. Analysis of CMT samples in Washington and British Columbia has been used to interpret patterns of traditional Native forest use during the last 400 years. Based on these studies, CMTs from Alaska are used to examine patterns of cultural activities in the temperate rainforests where other cultural evidence is scarce due to intense vegetative growth and rapid decay of all organic materials.

Native inhabitants of coastal Southeast Alaska and British Columbia have a deep and complex cultural adaptation making extensive use of wood and bark from the temperate rainforests for the manufacture of housing, clothing and other cultural objects. Sitka spruce (*Picea sitchensis*), western hemlock (*Tsuga heterophylla*), western red cedar (*Thuja plicata*) and yellow cedar (*Chamaecyparis nootkatensis*) are favored species, especially red and yellow cedar for their natural antibacterial action that inhibits decay in this wet and humid environment.

Bark was used extensively for roof coverings, clothing and even food during times of scarcity. The process of bark removal was standardized, resulting in a clearly recognizable scar pattern on the living tree that we refer to today as a CMT. Typically a horizontal cut was made near the base of a live standing tree with an adze or an axe and a sheet of bark was pried upward to meet a parallel cut that defined the desired length of the piece. Alternatively, especially with red cedar and yellow cedar, the upper cut was omitted and the bark strip was allowed to taper naturally up the trunk, resulting in a continuous piece of bark several meters long. Usually the tree was not completely girdled, and the scar was left to heal on the living tree.

The physiology of tree scarring and natural healing is similar throughout the Pacific Northwest. After a tree is stripped, the bark and cambium at the edges of the scar grow over the scar face. Each new ring curls incrementally over the last, meeting the scar face at an obtuse angle and creating a lobe of tissue on either side of the scar. After decades the scar appears buried inside the tree, often visible only through a crease in the bark. With enough time the two lobes can grow together and hide the scar completely. The healing lobes on a CMT are usually devoid of branches or knots, and were frequently preferred by Natives for repeated bark stripping, producing a tree with multiple scars dating many years apart.

Due to multiple stripping events, most CMTs in the northern rainforests are shells of living bark and sound wood hiding a rotten core, with extremely complex, often distorted rings. The thin columnar sample extracted by a tree increment borer, the usual tool for dendrochronological sampling, is unsuitable for interpreting and cross-dating these complex cultural scars. Instead, researchers use a chain saw to cut pie-shaped wedges that intersect one corner of the stripping scar through to the center inside the lobe of a standing tree, or they fell the tree entirely and remove a whole slice from the trunk. Whole-round samples, called cookies, are best from a research standpoint because they allow the researcher to view and count the entire tree cross-section, thus accounting for distorted and missing rings, which are quite common in old, multiple-stripped trees. This is the only way to discover and date completely imbedded scars. In addition, working with cookies allows the researcher to accurately determine the age of the tree. The disadvantages of working with cookies are that sampling kills the tree, and the whole-round samples are often large and difficult to transport to lab facilities.

Dendrochronological analysis of tree stands containing CMTs can reveal more information relative to cultural activities associated with bark stripping events. A local tree-ring chronology is established by sampling 20 to 40 trees in the vicinity of the CMTs using a standard tree-ring increment borer. The samples are cross-dated to establish a local chronology, which can be compared with regional chronologies to reveal local perturbations in tree-ring width patterns. These patterns can be interpreted as local climate fluctuation, canopy variations suggestive of clearing activities and other sources of local variation in growth patterns of the dominant forest species.

Current CMT research includes comparison of oral histories of Tlingit and Tshimshian peoples in Southeast Alaska, archaeological observations and dendrochronological analysis at the Ship Island site (49-CRG-357) north of Ketchikan, Alaska, to evaluate a possible link with the legendary last battle between the Stikine Tlingit of Alaska and the Tshimshian of British Columbia. Local and regional chronologies obtained from this research will aid future investigations into patterns of occurrence of CMTs throughout the region.

Geoarchaeological Investigations at the Rio Rancho Folsom Site, New Mexico

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During the fall of 1999 and spring of 2000, field research was conducted at the Rio Rancho Folsom site, located 25 km northwest of downtown Albuquerque. This research was funded by the National Geographic Society (NGS Grant 65T6-99). The site is on the Llano de Albuquerque west of the Arroyo de las Calabacillas. Present vegetation, investigated by Lisa W. Huckell, is a mixed grassland and desert scrub developed on eolian sand. First investigated by Frank Hibben and the late Jerry Dawson between 1965 and 1967, the site consists of five spatially discrete, shallowly buried loci dispersed along 300 m of an east-west trending ridge. Three loci represent campsites that yielded a few thousand artifacts each, including Folsom point basal fragments, perform and channel flake fragments, end scrapers, graters and other unifaces; miscellaneous biface fragments; and debitage. The easternmost locus also yielded Cody Complex, Archaic, Ancestral Pueblo, and Historic artifacts. The two smaller loci produced only a few specimens each. Unfortunately, Dawson never fully published on Rio Rancho; remedying this situation is a priority.

The collection, housed at the Maxwell Museum, consists of approximately 7400 artifacts. Several dozen 35 mm slides and a few black-on-white photographs of the work have survived, but no excavation notes or overall site map exist. New field work devoted to mapping, local geomorphology, on- and off-site depositional and soil stratigraphy, and the stratigraphic context of Folsom artifacts within these deposits.

A complete topographic map of the site area, covering 340 m E-W by 170 m N-S, was prepared using GPS (global positioning survey). This included locating previously excavated areas, which was possible for the three large loci using occasional, 35 year-old, in-situ wooden grid stakes and microtopography of the loci. Contour maps in 2.5

to 20 cm intervals were generated by James P. Holmlund (Geo-Map, Inc., Tuscon, AZ). We found no trace of the two smaller loci.

Geomorphic, sedimentological, and pedological studies, aided by backhoe trenches, provided details of the landscape as it existed during Folsom time. This work was conducted by Leslie D. McFadden (Dept. of Earth and Planetary Sciences, UNM). At all three major loci, a well-developed soil with a moderate to strong argillic Bt and a stage 2 calcic (Bk) horizon was exposed in the upper .75 m of an eolian sand. Based on correlations with soils in the region, estimates of its age are in the range of tens of thousands of years. This suggests that the present-day local topography on and near the site has changed little since Folsom occupation. Also, trenches excavated into what Dawson identified as a playa (dry lake bed) southwest of the site, demonstrated that it was not a lake but rather a large erosion basin.

We excavated 1 m by 1 m test pits in 5 cm levels at the three major loci. Our goal was to recover artifacts in situ or, by passing excavated sediment through 1/16 inch mesh screens, to recover them from a narrowly bounded vertical space. At the easternmost, multicomponent locus, two pits were excavated, each of which produced artifacts from an unconsolidated sand atop an erosional surface developed on the upper part of the argillic horizon. Artifact quantities ranged from 14 to 60; although impressive, the latter total largely consists of flakes less than 5 mm in maximum dimension from a buried, eroded ant hill. At the next locus to the west, two test pits failed to produce artifacts.

At the westernmost locus, we discovered a 20 m by 20 m area of unexcavated Folsom camp debris. Twenty-nine artifacts—debitage and one broken graver—were recovered from 11 test pits scattered judgmentally east of the 1965-6 excavations. All but three specimens were recovered between 5 and 20 cm below surface, from the uppermost part of the argillic horizon. We observed no evidence of an erosional hiatus, nor did we encounter spatially discrete, high density clusters of flakes of single materials. This implies that artifacts were subjected to minor eolian and fluvial transport before burial, and potentially by bioturbation subsequent to burial. Debitage raw materials included chert from the Chuska mountains some 225 km to the west as well as chert and obsidian from the Jemez Mountains some 70 km to the north of the site.

This research provides more detailed understanding of the role of natural site formation processes at the Rio Rancho site, which will inform ongoing laboratory studies of the spatial distribution of artifacts and activity areas within the loci. The work has demonstrated that an additional area of Folsom occupation remains to be excavated at one locus, further underscoring the importance of this site for understanding Folsom habitation sites.

Excavations in Locus B, Boca Negra Wash, Summer 2001

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Since the mid-1960s it has been known that the middle Rio Grande Valley of New Mexico contains an abundance of Paleoindian sites. However, with the exception of the Rio Rancho Folsom site, these sites were known largely from surface collections. In June of 1998, the first author discovered a previously unrecorded Folsom site on the broad relict surface known as the West Mesa or Llano de Albuquerque that separates the Rio Grande and Rio Puerco valleys. The site lies in mixed grass and scrub vegetation on the northeastern portion of the basalt flows emanating from the Albuquerque volcanoes. With permission from the State Lands Office, a testing program was

inaugurated in January 1999 to assess the site and its research potential. Particularly, could this site contribute to an ongoing larger research effort---centered on the reinvestigation and analysis of Dawson's Rio Rancho site---to investigate Folsom land-use in north-central New Mexico?

Like many of its counterparts in the region, the Boca Negra Wash site is positioned adjacent to a small (c. 90 m by 60 m) playa. By the mid-1930s, a dirt road was constructed through the area, crossing the eastern edge of the playa and impacting a portion of the cultural occupation area. Our intensive surface survey revealed two spatially discrete activity loci separated by approximately 60 m, one east and the other south of the playa. From the c. 80 m by 45 m eastern locus (Locus A) we point-plotted and collected 68 surface artifacts, including a Folsom point tip, the distal end of a Folsom point perform, a biface fragment, a graver, two endscrapers, and abundant debitage. Most artifacts are of Pedernal chert, obsidian (Jemez Mountains), and Chuska (also known as Washington or Narbona Pass) chert; primary outcrops of these materials lie 70 km to 220 km away. The remainder includes cherts not immediately assignable to known sources. Post-Folsom artifacts are two sherds, both from the surface near the road. Test excavations revealed presence of buried artifacts within the upper part of the Bt horizon of a cumulate soil developed on a thin-sheet sand deposit resting atop a lava flow. From the second locus (Locus B, c. 20 m by 30 m) we recovered 38 pieces of debitage dominated by the same three major materials listed above, along with a fragmentary endscraper.

A cross pattern of auger holes placed in the playa revealed a depositional sequence consisting of a 35-cm layer of slightly clayey sand, which rests atop some 70 cm of typical playa sandy clay exhibiting what appears to be well-developed soil. Beneath this unit is a lacustrine clay deposit approximately 60 cm thick near the center of the playa, thinning towards the edges. It rests atop a unit of eolian sand 2 m or more thick. The playa supports a distinctive grass species, but has not been observed to hold surface water.

In the summer of 2001 the UNM Southwestern Archaeological Field School was conducted at the site. Six weeks of excavation by student crews in both Locus A and Locus B led to completion of 42 1 m by 1 m grid squares in Locus A and 32 squares in Locus B. Over 200 artifacts were recovered from each locus. Several of the units at Locus B produced six or more artifacts, a higher density of artifacts than is typical for Locus A. Although Locus A did not produce any tools, Locus B yielded a broken Folsom point perform, a small fragment of a finished Folsom point, and half a dozen channel flakes from Folsom point manufacture. In addition, a third small concentration of Folsom artifacts, including the tip of a finished Folsom point and a channel flake fragment, was discovered about 35 m west of Locus B. It is possible that this is a third spatially discrete locus of the site, but we did not have time to test it.

Artifacts from the two loci are consistent in demonstrating that Pedernal chert, Jemez obsidian, and Chuska chert are the three most common raw materials. In addition, artifacts of Zuni spotted chert, fine-grained quartzite, petrified wood, and a yellowish brown chert were also recovered. Given the relative abundances of these raw material types and the sizes of the flakes of particular material types, it is probable that the Pedernal chert and Jemez (Valle Grande) obsidian sources were the ones visited most recently before these hunter-gatherers arrived at Boca Negra Wash.

Research at the Boca Negra Wash site indicates that it is essentially a single-component Folsom camp with much of its artifact assemblage shallowly buried. It holds considerable potential to inform studies of Folsom technological organization, raw material economies, and mobility, as well as intrasite organization of activities. Moreover, the playa deposits afford the chance to begin building a late Pleistocene paleoenvironmental record for the Albuquerque Basin; none currently exists. Further excavation will be undertaken in the summer of 2002 with the UNM field school.

Excavations in Locus B
Boca Negra Wash Folsom site



Paa'ko and the Impact of Spanish Colonialization on the Pueblo Peoples of New Mexico

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INTRODUCTION

At any given point in the 17th century, the indigenous landscape of the Middle Rio Grande may have consisted of fully incorporated mission sites subject to resident Spaniards, less populous and less central visitas, formerly missionized places, and displaced refugee communities. To the extent that these differences structure the possibilities for interaction between colonizer and colonized, they are crucial to understanding variation in the historical experience of colonialism in the northern Southwest.

Demographic and social disruption associated with colonization led to local and regional shifts in settlement and land use. By the mid-seventeenth century, fewer and less populous indigenous settlements occupied a smaller overall area. Instability in the number, location, and composition of settlements appears to have been common during this period, as Pueblo villages broke up, reformed, and coalesced into new combinations of community and place. While these shifts might have played out in a number of ways, this spatial restructuring was organized around a particular colonial institution: the mission. By mid-century, missionized places had become the focus of settlement, incorporating a declining indigenous population into new systems of production centered on European crops and domestic animals, new technologies, and emerging exchange networks. More than sites of conversion, missions were the single most important location of colonial and indigenous contact and the context in which colonialism as an historical process of disruption, incorporation, and transformation was situated.

LA 162 (Paa'ko or the visita of San Pedro) was a relatively small and discontinuously settled ancestral Pueblo settlement that persisted at the margins of colonial New Mexico until the mid 17th century. In contrast to mission locations in the nearby Galisteo Basin and Rio Grande Valley, this settlement was never geographically, economically, or politically central to the Spanish colony. Located at the head of the San Pedro Valley, one of three major drainage systems on the eastern slope of the Sandia Mountains, this site lay outside of any of the major settlement clusters or "provinces" identified by Spanish colonists. It was a small-scale, intermittently occupied, and partially incorporated place. While part of the mission system, it never had a resident friar, a monumental church, or a convento complex. It was a place where some kinds of Spanish technologies and productive systems became important while others did not. Its inhabitants were variously involved in colonial social and economic networks, and involved in different ways than those living at some of the larger, more fully and continuously incorporated mission sites with resident priests. LA 162 thus offers a unique opportunity to consider the effects of partial incorporation on a 17th century Pueblo community.

THE ARCHAEOLOGY AND HISTORY OF THE EAST MOUNTAINS

Occupation of the eastern slope of the Sandia Mountains was limited until the late 13th century, when both the number of recorded sites and the size of sites with residential occupations increased. Three relatively large, aggregated villages, including LA 162, were first occupied between A.D. 1300 and 1425 but probably abandoned between the mid-1400s and the mid-1500s. Sometime in the late 16th or early 17th century, small groups of people

moved back to Paa'ko. Permanent Hispanic settlement on the eastern slope of the Sandias began relatively late in the colonial period, with the creation of "buffer communities" on the frontier between colonial populations and indigenous Plains groups in the 18th and 19th centuries.

LA 162, or Paa'ko, is the largest prehispanic community in East mountains, consisting of some 26 roomblocks arranged in eight plaza groups, divided into two major spatial divisions. This place is associated with two historic place names, Paaco, and San Pedro. The former is a Spanish transcription of an indigenous place name appearing in Oñate's lists of Obedience and Vassalage, while the latter refers to a visita occupied during the 17th century. One document suggests that this visita was abandoned, then re-settled during the mid 17th century. There is no documentary evidence of indigenous residential occupation later than 1660.

Both surface documentation and excavation suggest that the occupational history and construction sequence of LA 162 is complex. There are two major spatial divisions of architecture within the site. The South Division, or San Pedro Viejo 1, includes at least ten adobe or masonry and adobe roomblocks arranged in four agglutinated plaza groups. These roomblocks are separated from the North Division (San Pedro Viejo 2) by a low-lying drainage. Both divisions show evidence of a widespread and intensive occupation between the late 13th and early 15th centuries. The colonial period occupation of the settlement was confined to a single plaza group in the southwest quarter of the North Division. Four single story masonry roomblocks were superimposed over previously occupied masonry and adobe structures in a single plaza group. Features associated with this colonial period occupation include soil and water control facilities, corral enclosures, and a copper smelting facility.

Over the past 87 years, there have been several large-scale research projects at the site, including the work of Nels Nelson in 1914, the Museum of New Mexico in the 1930s, and University of New Mexico in the late 1940s and 1950s. Overall, more than 400 rooms were excavated.

The legacy of previous research at Paa-ko presents us with both serious challenges and enormous opportunities. While these research programs generated a large corpus of information, the vast majority of these data remain unpublished in notes, field catalogs, and manuscripts. In addition, both the level of detail and methods of data collection varied from project to project and no complete map and system of spatial control was ever created. Despite these limitations, the notes and collections provide access to a spatial scale well beyond the scope of most modern research projects. These data make it possible to address important questions, while limiting the scale of new excavations. Strategies for incorporating these data are an important component of ongoing work at the site.

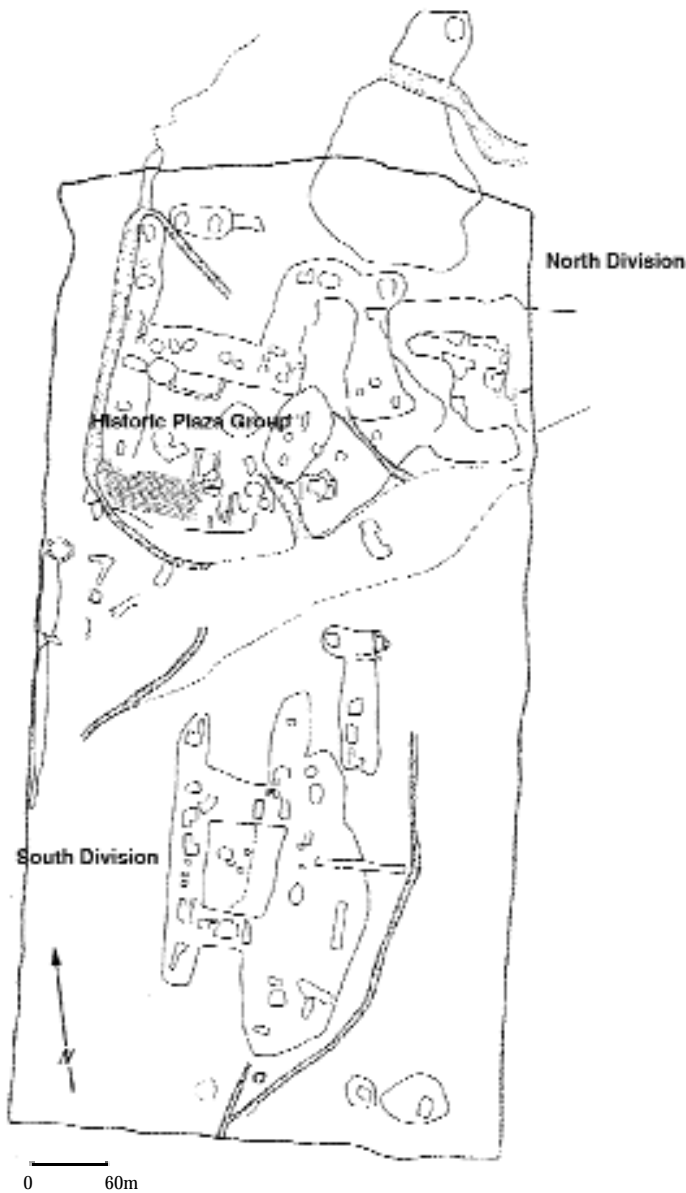
INVESTIGATIONS 1996-2001

Since 1996 we have implemented a multi-stage research program incorporating study of previous collections, intensive surface documentation, and extramural excavations. Because of the complex sequence of prior research at LA 162, documentation of the contemporary site surface is vital to the integration of previously collected and newly recovered data. This documentation included a stratified systematic unaligned collection of 1.01 percent of the site surface.

Prior to our work, excavations at LA 162 concentrated on architectural contexts. Much of the daily activity of such settlements, however, was conducted in and structured around open areas, plazas, and previously occupied roomblocks. Between 1996 and 1999, a random stratified sample of 0.015 per cent of the site surface was chosen for excavation on the basis of location within the site, situation relative to architectural space, and surface artifact density. This sampling strategy is designed to provide an understanding of depositional patterning across the site as a whole. These extramural tests allow us to characterize the extent, depth, and character of archaeological deposits across a range of contexts. These units have also been an important source of paleoecological data from field systems and processing areas.

Excavations within a large masonry terrace adjacent to the Historic Plaza have exposed a series of well-defined features related to copper smelting and other metal working activities associated with the 17th century residential occupation. The 200 m² terrace was repeatedly used for metal production with superimposed and interdigitated features created by periodic episodes of use, maintenance, and reconstruction. The specific functions of these facilities may have included copper smelting, copper ore roasting, charcoal preparation, and iron forging. Preliminary analysis of ores, slags, and finished copper from these excavations suggests the high temperature reduction of locally available malachite ores to produce copper and copper-iron metals.

Map of LA 162, Paa'ko, showing the North and South Division and the Location of the Historic Plaza Group



Seventeenth century metallurgy is very poorly documented in New Mexico, with evidence of metal production limited to a handful of contexts. The facilities documented at LA 162 are decidedly rare and perhaps unique in their construction, technology, and situation within an indigenous setting. Local knowledge, local materials, and local labor were clearly integral to the implementation of this novel, colonial technology. At least some of Paa'ko's inhabitants were involved in the production of highly valued items, and, perhaps, in their distribution through regional economic networks.

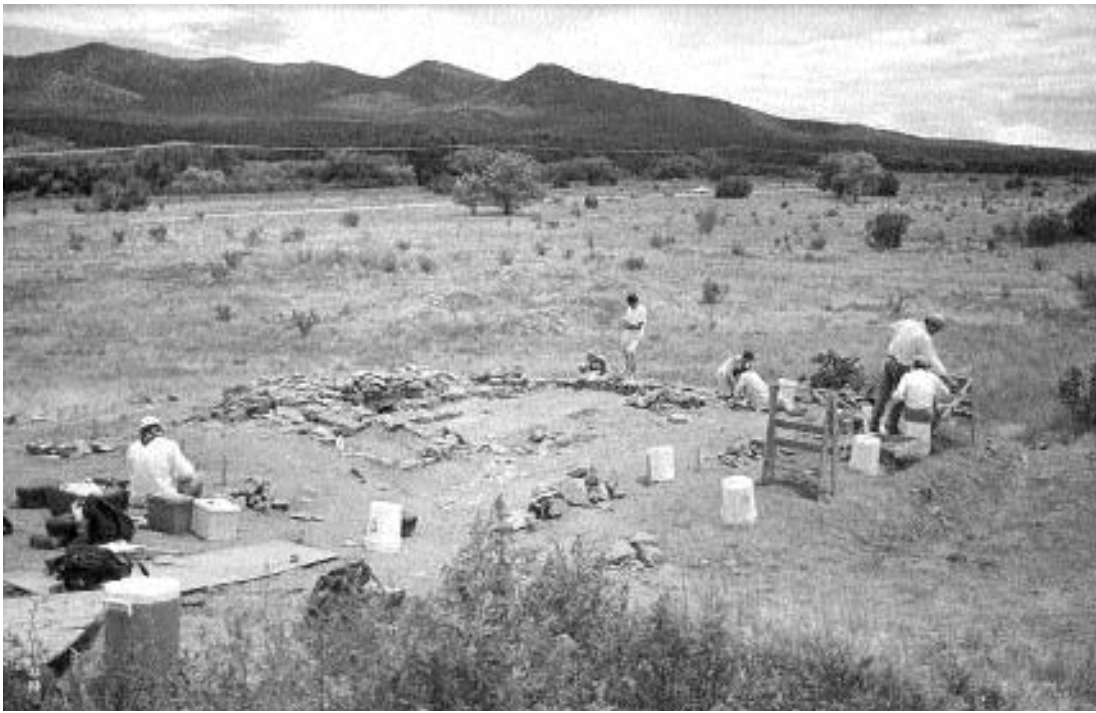
Much of our understanding of 17th century productive practices at the site comes from five seasons of excavation of plaza surfaces. These excavations indicate a complex sequence of occupation, reoccupation, and construction in extramural spaces including multiple, successive plaza surfaces, followed by conversion of some areas to animal penning at or near the end of the residential occupation.

European species of grains, garden, and orchard cultivars, as well as species from other parts of the Americas, were introduced into New Mexico during the colonial period. Recovery of a single kernel of wheat suggests periodic but relatively limited access to this grain. No other European domestic plants occur in either macrobotanical or pollen assemblages from this site. In contrast, introduced field weeds, including bindweed (*Convolvulus arvensis*), sweet clover (*Melilotus*

sp.), and goat head (*Tribulus terrestris*), are relatively common in pollen assemblages from 17th century plaza surfaces. Although produce was being drawn off for colonial use, agricultural and gathering practices remained predominately local and indigenous. Macrobotanical and pollen remains indicate continued use of a wide array of indigenous cultivated and wild plants.

European domestic animals first appear at LA 162 in the seventeenth century, becoming more frequent in later contexts and common only after the construction of corrals. In sharp contrast to contemporary mission assemblages, preliminary analyses indicate that introduced faunal assemblages at Paa'ko are dominated by goat and to a lesser extent horse, rather than by the more valued and more common sheep. This assemblage suggests neither a complete inclusion nor complete exclusion from colonial livestock production, but rather, a complex and attenuated access to these resources.

Recent excavations have partially exposed the foundation walls of a large adobe structure superimposed over a filled kiva in the southwest quarter of the historic plaza. It is possible that this structure is a small chapel associated with the visita of San Pedro. The corral and enclosure systems that dominate the southern third of the plaza may have been built in association with this structure. The conversion of plaza space to a complex of corral enclosures removed nearly one fourth of the available plaza surface from human use and prevented occupation of the adjacent roomblocks. The use of this corral system may have continued well after the residential occupation of the site and may reflect the changing role of Paa'ko in the emerging cultural geography of Colonial New Mexico.



Excavations in progress on the terrace at Paa'ko where the smelting features are located

CONCLUSION

During the 17th century, Paa'ko Pueblo incorporated and was incorporated by the visita of San Pedro. During this period, both colonizer and colonized became enmeshed in new and interdependent systems of production. At LA 162, this historical transformation took diverse and sometimes surprising forms. The

transformation of community and place was complex, contingent, and local in character. Colonial institutions and forms of production are not simply present or absent. Instead, they are represented in partial and differentiated ways that cannot be attributed solely to this settlement's place within a larger system. Ongoing work at LA 162 is focused on understanding the unfolding of these possibilities within the circumstances and structures that constrained them.

New Research in the Casas Grandes Region of Chihuahua, Mexico

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Since 1995 the Maxwell Museum has supported archaeological research in the state of Chihuahua, Mexico, in the Casas Grandes region. This international and multi-institutional project is directed by Rafael Cruz Antillon (Museo Nacional de Antropologia, Mexico City), Robert Leonard (Department of Anthropology, UNM), and Timothy Maxwell (Office of Archaeological Studies, Museum of New Mexico). The focus of the research is on understanding the prehistoric economy of the area. Perhaps the most significant site in the region is Paquime, formerly known as Casas Grandes. Paquime was occupied from approximately 1250-1450 AD. At the height of its occupation Paquime stood perhaps five stories high and was home to several thousand residents. It was at the center of a trading relationship that spanned thousands of miles, from the American Southwest to the Valley of Mexico, and from the Pacific Ocean to the Atlantic Ocean. Trade items included shell, turquoise, copper, salt, and macaws and beautiful polychrome ceramics. Modern versions of these beautiful ceramics are made in Mata Ortiz, Mexico, and are available in the Maxwell gift shop.

Our research has focused on how smaller sites in the area related to Paquime, and we have focused excavations on four major sites: Galeana, Villa Ahumada, Casa Chica, and Casa de Fuego. Galeana is a multistoried adobe site approximately 20 km from Paquime, and may have been a locale for the manufacture for Madera Black-on-red ceramics. Villa Ahumada lies at the easternmost edge of the influence of Paquime, and may have been a hub for the trade of turquoise. Casa Chica is a small farmstead near Galeana. Fifteen kilometers to the southeast of Paquime is

Casa de Fuego, which has a ballcourt, and which may have been a locale where local copper ore was mined and smelted. Casa de Fuego may also have been a gathering place for people from diverse areas to watch the great Mesoamerican ballgame.

One recent component of the project involves exploring the possibility of interaction between people in the Casas Grandes region, Western Mexico, and South America. The evidence is multi-faceted and intriguing. First, let us begin by examining the connections between Casas Grandes and West Mexico. Our analysis shows that the beautiful polychrome ceramics found in our region share some very interesting similarities in design styles with Western Mexico. In addition, copper objects are very important to the Casas Grandes people, although there is currently a debate as to whether or not copper was produced there. While copper may or may not have been manufactured there, the copper-working tradition is clearly derived from Western Mexico. But where is the link to South America? There are several. First, the copper traditions of West Mexico have clearly been influenced by prehistoric traditions of what is now Columbia, Ecuador, and Peru. Scholars suggest that prehistoric people from Ecuador or Peru sailed north on balsa rafts looking for marine shells of the genus *Spondylus*, which were very important to their culture. Interestingly, *Spondylus* is also very important to the prehistoric cultures of West Mexico and the Casas Grandes area. *Spondylus* is unevenly distributed along the coast of South and Central America, and the South American sailors sailed 1,000 km to the north where they found not only *Spondylus*, but also rich copper deposits. They either settled there, or taught the prehistoric West Mexicans how to mine, smelt, and manufacture copper objects. Interesting also is the fact that polychrome ceramics used by the ancient South Americans show similarities with Western Mexican and Casas Grandes wares.

A good story, but where is the direct evidence? Equally important as copper, *Spondylus*, and polychrome ceramics were to the South Americans, were talking birds. Readers familiar with the prehistory of the Casas Grandes area will recognize that talking birds, especially jays and macaws, were important to the people of that area as well. The talking bird that was important to the South Americans was the White-tailed Jay, *Cyanocorax mystacalis*, known only from coastal areas of Ecuador and Peru. Interestingly, the closest relative of the White-tailed Jay is the Painted Jay, *Cyanocorax dickeyi*, known only from Western Mexico, 1,000 km to the north. How can we explain this disjunct population? Perhaps prehistoric boatmen from south America, in their search for *Spondylus* shells, brought along this important bird, which escaped into the wild. In fact, transport by humans may be the most plausible explanation for these two closely related bird populations being so far apart today. In sum, copper, polychrome ceramics, *Spondylus*, and talking birds may have been cultural traditions shared from Ecuador and Peru to the Casas Grandes area and ultimately, the American Southwest.

As our work continues, we will continue to explore these connections. This coming summer, our efforts will focus on whether or not Casa de Fuego was indeed a location for the production of copper. Historic copper mines exist in the area, and while we know the prehistoric people of the area valued copper, we need clearer evidence that they actually produced it.

While the research has contributed greatly to our understanding of the prehistory of the area, perhaps its greatest success lies in training students. Over 250 students from 18 different countries have participated in the project, making it one of the largest international projects in the world.

Interested persons can obtain further information about the Maxwell Center for Anthropological Research from the museum's web site <http://www.unm.edu/~maxwell>. In addition we invite anyone who wishes to learn more about our projects to contact Dr. Bruce Huckell at (505) 277-4405 or (505) 277-4491 or e-mail him at bhuckell@unm.edu. In future issues of this newsletter we will be introducing a MCAR membership program to enable interested persons to participate in our research projects and to provide support for the Center's work.