

# ARCHAEOLOGY IN TUCSON

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Newsletter of the Center for Desert Archaeology

Winter 1996

## The Archaeology of an Ancient Town

by Henry D. Wallace, Center for Desert Archaeology

From the 1860s to the early 1930s, the large prehistoric Hohokam settlements at the northern tip of the Tucson Mountains were landmarks to the residents of Tucson and favorite places for sightseers. In those days, the ruins went by variations of the name Charco del Yuma or Charco de las Jumas, a designation also given to catchments that retained water long enough to be an important water source on the trail leading northwest out of Tucson. The portion of the ruins east of the Tucson Mountains came to be known as Los Morteros, named for the prominent boulders in the center of the site that are studded with dozens of mortar holes. The portion west of the mountains I've called the Huntington Ruin, after the noted scientist and climatologist, Ellsworth Huntington, who provided the most detailed early description of the site.

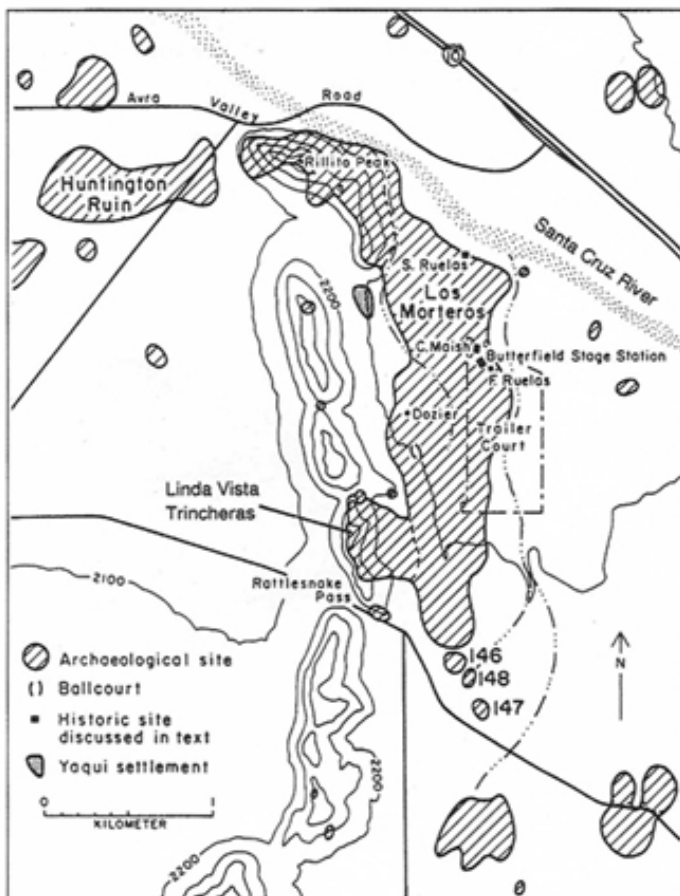
Los Morteros extends more than 2 miles along the Tucson Mountains, with portions stretching up the mountain slopes to the summit and out into the floodplain. With one of

the largest ballcourts in the state, an extensive fortified hillside village, large mounds, stone house foundations, and acres of pottery sherds and other artifacts, few sites in the Tucson area could rival Los Morteros in visual impact and areal extent prior to the era of modern land modifications that began in the 1920s and 1930s.

### ARCHAEOLOGICAL STUDIES

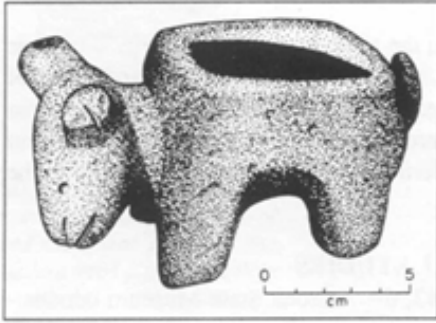
From 1979 to 1983, the Arizona State Museum conducted test excavations at Los Morteros in anticipation of the site's imminent destruction by the Peppertree Ranch housing development. At that time, through the efforts of Paul Fish at the Arizona State Museum, 32 acres of the site, including the ballcourt, the namesake mortar boulders, and a series of mounds and residential areas, were set aside and donated to the University of Arizona Foundation.

Following on the heels of the incarcerated previous owner, Lew McGinnis, the American Continental Corporation (under the direction of the similarly fated Charles Keating) acquired the site. At the prodding of the State Historic Preservation Office and the United States Army Corps of Engineers, the corporation contracted with Desert Archaeology, Inc. (then the Institute for American Research) in 1987 to conduct data recovery excavations. Approximately 10 months of fieldwork commenced, resulting in the discovery of 770 pre-historic cultural features and the complete or partial excavation of 98 structures, an adobe-walled compound enclosure,



Ellsworth Huntington's 1910 photograph of bedrock mortars in the central portion of Los Morteros (reproduced from the 1912 Annual Report of the Board of Regents of the Smithsonian Institution).

and a number of related features. Many of the features were fully or partially excavated by volunteers, who worked alongside the archaeologists during the week and even gave up weekends in their dedication to recover as much as possible before the site was destroyed. Other volunteers worked with archaeologists in the laboratory, helping to process the large volume of artifacts and samples recovered.



*A stone bighorn sheep or dog effigy censer from Los Morteros.*

#### HOW AND WHY

The guiding research interests for the Los Morteros project were based on a desire to learn how this ancient community had been organized. Where did the people live?

Was the community organized into neighborhoods, as had been suggested for some large settlements in the Phoenix area?

Since the entire area had been plowed, no surface traces of architecture remained. The only clues as to what lay beneath the ground were the myriad fragments of pottery, shell, stone tools, and other durable remnants of the settlement. Two sizable portions of the community were available to us for investigation on either side of the ballcourt. Nearly 9 miles of backhoe trenches and many cultural features were excavated, permitting a detailed look at the settlement's organization and how it grew

and changed over time. There were many surprises in store for us.

Because of the enormous range of archaeological features exposed from trenching, we were able to select those contexts that appeared the most promising for providing samples of artifacts that might date to each portion of the settlement's history. We were also able to choose and excavate structures that had burned with large assemblages of artifacts on the floor, resulting in an extraordinary cross-section of household goods and unusual items not commonly recovered at archaeological sites, as can be seen in the accompanying illustrations.

To sort out the sequence of occupation at Los Morteros, a special effort was focused on the evolution of pottery stylistic attributes. Due to particularly rapid changes in design, it was possible to identify distinctive traits in the pottery dating from A.D. 950 to 1150. This allowed for dating within about a 25 to 50-year range in most instances, which greatly facilitated our ability to sequence the trends in occupation at the settlement. The excavated portions of Los Morteros were found to date from the Rillito to the Tanque Verde phases (ca. A.D. 850 to 1300). Surface finds near the unexcavated ballcourt suggest that the earliest occupation may have been during the Snaketown phase (A.D. 700 to 750) or earlier, but this awaits confirmation through excavations there.

#### EARLY OCCUPANTS

In the portions excavated, occupation during the Rillito phase (A.D. 850 to 950) was initiated as a series of isolated structures or little clusters of structures that may represent small farmsteads or fieldhouses. These were located near



The Point of the Mountains region, where Los Morteros is located, was a colorful spot in the history of Tucson. In 1857 or 1858, the Butterfield Overland Mail Company built a station in the vicinity of Los Morteros called Pointer Mountain or Point of the Mountain. This station was relocated during the course of the Los Morteros project. The original station may have burned during the Civil War, but either it, or one constructed shortly thereafter, is seen in this rare photograph taken by H. E. Murdock in 1927 (photograph courtesy of the Arizona State Museum, University of Arizona).

floodwater farming plots on the alluvial fans of the Tucson Mountains and may have been related to a settlement near the ballcourt or to one of several other sizable settlements present nearby. With the abandonment of the nearby Rillito phase settlements, it is perhaps no coincidence that the population present at Los Morteros grew rapidly during the succeeding Early Rincon subphase (A.D. 950 to 1000). At that point, the structure of the Los Morteros community became firmly established, and other than normal processes of growth and attrition, it changed little over the course of the next 150 years.

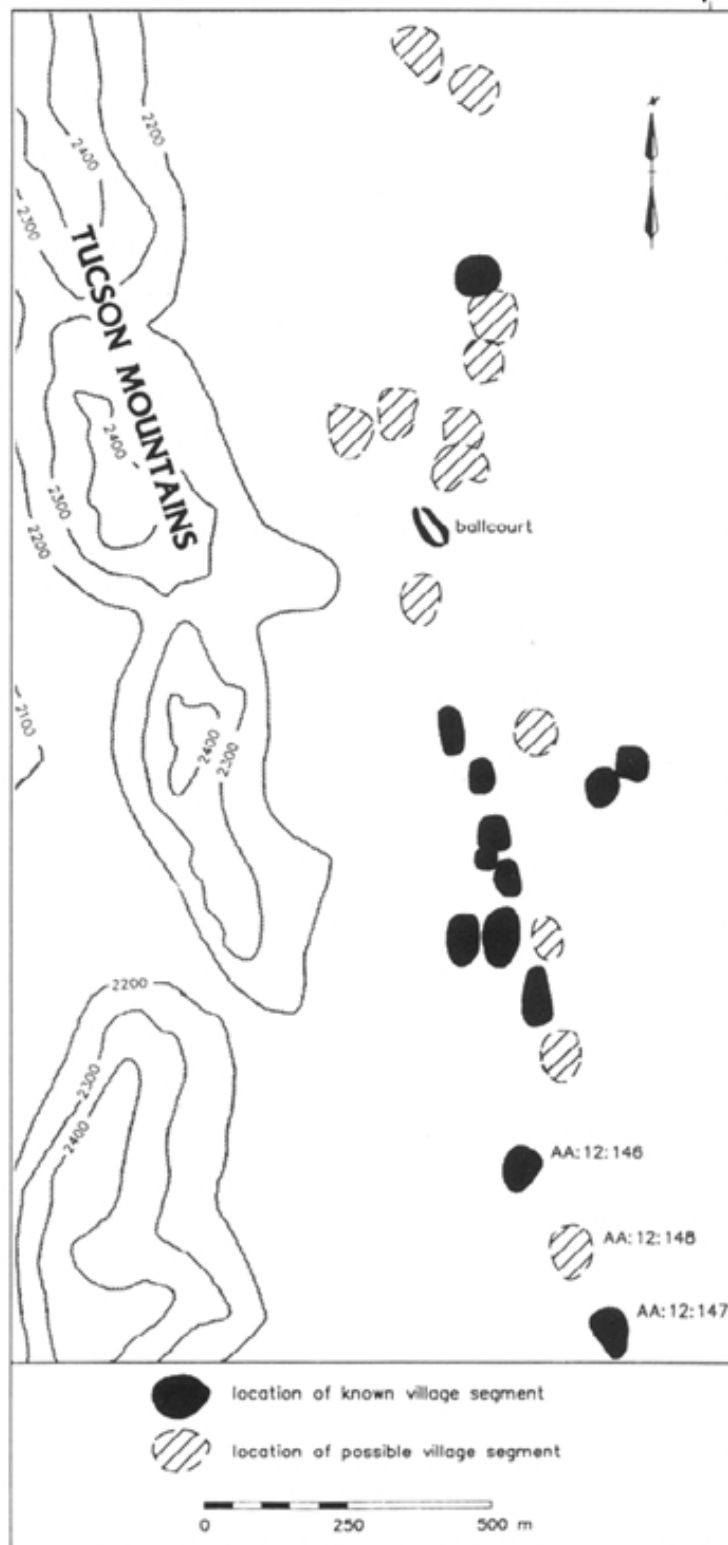
### NEIGHBORHOODS AND VILLAGE SEGMENTS

From the Early Rincon subphase to the early portions of the Late Rincon subphase (A.D. 950 to 1125), Los Morteros was divided into a series of neighborhoods called village segments because they mirrored one another in how they were set up. Each village segment contained from one to four courtyard groups. A courtyard group represented a single household that may have included one family or an extended family. It often had up to three residential structures and sometimes a dedicated storage structure.

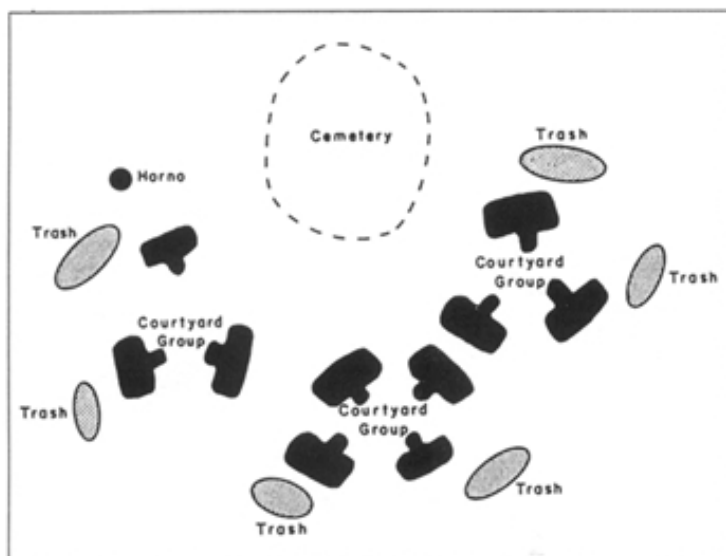
The courtyard groups or households in each village segment shared large communal pit ovens called hornos that were used for roasting agave hearts, and they interred their dead in communal cemeteries. These shared activities lead us to think they were composed of families that may have been related or were socially very close to one another. About 20 to 26 village segments were present at Los Morteros in the Middle Rincon subphase (A.D. 1000 to 1100). If all were occupied simultaneously, a population of between 200 and 624 people (40 to 78 households, with 5 to 8 persons per household) would have been living at the site.

Sometime during the first half of the Middle Rincon subphase (A.D. 1000 to 1050), ballcourts in the Tucson area were no longer built and may not have been used at all. Buffware

pottery was no longer imported from Phoenix, though it had been prior to that time. In addition, the local ceramic designs shifted noticeably from dynamic swirling or banded layouts to more static sectioned or basketweave-type designs. While



*Distribution of known and predicted Middle Rincon subphase village segments at Los Morteros (map by Geo-Map, Inc.).*



*Schematic plan of a typical Middle Rincon subphase village segment at Los Morteros.*

ballcourts were falling out of favor, the settlement of Los Morteros was transformed from a nucleated village centered on the ballcourt to a widely dispersed, linear settlement extending over 1 1/2 miles. This same trend can be seen throughout the Tucson area in other population centers.

### **DRASTIC CHANGES**

The relatively peaceful period of steady growth and development during the eleventh century was shattered in the early 1100s when a complete settlement reorganization occurred. The abandonment of the southernmost village segments at Los Morteros (which have been given site numbers AZ AA:12:146, 147, and 148) earlier in the Middle Rincon subphase may have been a precursor to this phenomenon. Based on the dating of settlements along a presumed canal system across the Santa Cruz River from Los Morteros (identified by Paul Fish, Suzanne Fish, and John Madsen of the Arizona State Museum), it is evident that a 6-mile-long canal was constructed sometime during the last 25 to 40 years of the eleventh century. This canal may have opened up large areas of formerly marginal land to dependable agriculture. It seems more than coincidental that at the same time, the southern half of Los Morteros was completely abandoned, and a very different settlement structure was instituted in the northern half. This drastic change in the community occurred over only a few decades.

Near the end of the Marana canal system, a platform mound settlement was founded after AD. 1150. Numerous smaller settlements were located along the canal. The arid bajada upslope from the canal saw the development of a large, rockpile, dry-fanning field system used for the cultivation of agave and perhaps other crops.

Some archaeologists have argued that the construction of the canal system, with its headgate adjacent to Los Morteros and the platform mound at its tail end is an indication that Los Morteros and the other settlements along the canal system were peaceably joined together in a single large community. They also assume that all or most of the settlements with the key marker for this period, Tanque Verde Red-on-brown pottery, were inhabited at the same time. However, the information from Los Morteros leads to alternative reconstructions. It was discovered that housing areas shifted over time and that one cannot assume contemporaneity between or even within settlements dated to the lengthy Tanque Verde phase (AD. 1150 to 1300). Rather than peaceful coexistence, the data suggest times of stress, if not out-and-out warfare.

### **WARFARE**

The Marana canal system may have been both a symptom and a cause of strife in the region, and it may well have been a prescription for disaster. The expansion of settlement around the Tucson area that occurred in the eleventh century was probably accompanied by a dependable rainfall pattern that would have promoted canal irrigation. The initial construction of the canal could have been motivated by increasing population

levels and a push to develop new farmland. Construction of the canal, with its headgate at Los Morteros, opened up large tracts of previously marginal land and allowed for splintering of the previous population that had been focused at Los Morteros. Conflicts over property rights may well have ensued. The Santa Cruz River probably did not flow year-round in the Los Morteros/Marana area, and it would have taken only a few bad years for the canal-supported villages to experience problems.

Evidence of warfare or at least a perceived threat of deadly force was found at Los Morteros. On the rocky mountainside of the Tucson Mountains above the central portions of the site, a sizable village overlooks the valley below. Called the Linda Vista trincheras, the village includes 80 or more structures and a hilltop plaza or compound enclosure. Aside from the obvious defensive advantage of the hillside location, a massive masonry wall that blocks the only ready access to the village from the west was found. We don't know whether the perceived threat was from nearby settlements or farther afield.

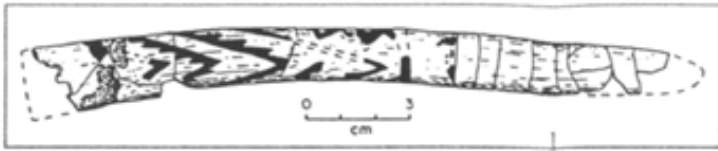
### **ABANDONMENT**

Los Morteros and an enormous region around it were abandoned sometime during the middle to late thirteenth century. Across the Tucson area, other settlements were abandoned at the same time, and large concentrations of people were focused in a few well-watered areas such as San Xavier and the confluence of the Pantano and Tanque Verde drainages. We pick up the story of the Los Morteros region again in the late seventeenth century, with the arrival of the Jesuits. At that time, a series of settlements was present along the Santa Cruz River in the Tucson area, including one near Los Morteros called El Valle de Correa, with a population of 100 people.

### **THE LOS MORTEROS VOLUNTEERS**

The list of volunteers on the Los Morteros project is surely as impressive as the site itself! As a small measure of our gratitude to all of you who helped out by volunteering your time in the field and laboratory (not including, but not forgetting, DAI employees), we list alphabetically those of you whose names were recorded. Some of you have probably been left out because your names weren't written down; please know that your efforts also are greatly appreciated.

Dan Arnit, Bill Atwood, Harry Ashby, John Bishop, Kay Burk, Jim Burr, Gloria Chivers, Janet Chumbley, Richard Ciolek-Torello, Susan Ciolek-Torello, Bob Conforti, Valerie Conforti, Bill Deaver, Sheila Donnelly, Alan Ferg, Cindy Gibbs, Scott Gongoly, Sky Gradillas, Walt Grassie, Erin Grassie, Linda Gregonis, Eric Force, Jane Force, Tom Hartzell, Darlene Heemstra, Stephanie Holding, Jim Holmlund, Jerry Howard, Ben Huckell, Bruce Huckell, Lisa Huckell, Liz Huckell, Carli Hummel, Paul Knapp, Bobbie Lee, Selena Littler, Joan Lloyd, Judy Looper, Joan Manemann, Betsy Marshall, Cindy Mendelson, Susan Mathes, Albert Morales, William Morris, John Murray, John Nowlin, Barry Perron, Preston Perry, Don Reser, Doris Rickard, Shirley Rivers, Luis Rodriguez, Kay Rosenow, Nancy Russell, Josh St. John, Joyce St. John, Marc Severson, Robbie Serface, Cathy Smith, Darlene Smyth, Barbara Snyder, Mike Squires, Sarah Tuttle, Sharon Urban, Betty Wall, Cindy Wallace, Phyllis Wallace, and Russ Wilde.



*Animal bone hairpin with painted design from a Tanque Verde phase context at Los Morteros.*



*H. E. Murdock and friend making good use of the bedrock mortars at Los Morteros in 1927. Photograph courtesy of the Arizona State Museum, University of Arizona.*



*Stirrup-spouted vessel from the floor of an eleventh-century house at Los Morteros. This vessel form and color variant of Rincon Polychrome (white decoration on a red background) is unique for the Hohokam culture area prior to A.D. 1200. This vessel is only the second such known from southern Arizona. Stirrup-spouted vessels in other parts of the new world are thought to have been used in ceremonial contexts as containers for easily poured liquids.*



*This illustration of a nineteenth-century Pima Indian village along the Gila River may be similar to what Los Morteros village segments would have looked like. By permission of the Museum of Art, Rhode Island School of Design. Gift of the RISD Library, photography by Del Bogart.*

# 1822 Ferdinand VII Coin

## Found along Cienega Creek

by Michelle N. Stevens, Center for Desert Archaeology

Most historic artifacts found on archaeological surveys consist of pieces of glass bottles, metal can fragments, broken dishes, and architectural remains. However, AIT volunteers participating in the Cienega Valley Survey during the fall of 1995 made a surprising discovery when one of them found a Ferdinand VII coin that dates to 1822. This coin resembles a Mexican coin worth 8 reales issued during the final coinage phases of the Mexican War of Independence (1810-1821).

### MEXICAN MINTS AND REVOLUTIONS

Southern Arizona was Spanish territory in the early nineteenth century. The Mexican War of Independence began September 16, 1810, when Father Miguel Hidalgo organized a group to fight against Spanish Colonial forces. During the war, both Spanish royalists and Mexican insurgents issued coins. The gold and silver coins issued by the royalists usually had an image of King Ferdinand VII of Spain (1808-1821) on the obverse side and a crowned coat of arms and pillars on the reverse. Before the war, coins were minted only in Mexico City. However, once the war began, new mints were opened in an effort to stop the revolutionists or insurgents, depending on whose side you were on, from robbing the wagon trains that carried ore and bullion to the mint or newly minted coins to the provinces.

The first insurgent mint was started by Hidalgo in the town of Guanajuato in October 1810, just a month after the beginning of the war. A blacksmith and several counterfeiters in Guanajuato made dies to duplicate coins worth 8 reales that were issued in Mexico City. Their machinery was so advanced that the coins they struck cannot be distinguished from those issued in Mexico City under Spanish rule. When Guanajuato was re-captured by royalist forces in November 1810, the Spanish were so impressed with the new machine that they transported it back to Mexico City, where it became a model for future Spanish coin machinery. Although the city of Guanajuato was controlled by royalist forces between 1810 and 1821, the royalists minted coins there only in 1813.

In 1811, Hidalgo was captured and executed by royalist forces, who thought that his removal would cause the revolutionary movement to crumble. However, Don Jose Maria Morelos y Pavón, a priest who had studied under Hidalgo, took up the cause and led the revolutionary movement. In order to pay his troops and buy supplies, Morelos issued copper coins worth 1/2, 1, 2, and 8 reales. These coins can be easily identified because all display the word "SUD," which means south. Though the coins were minted in copper, they were to be ex-changed for gold or silver whenever the revolutionaries won the war.

*This 1822 Ferdinand VII coin worth 8 reales was found by V. Conforti during the survey along Cienega Creek. The obverse side has the inscription "FERDIN \* VII DEI \* GRATIA \* 1822" and a draped regular bust of King Ferdinand VII of Spain (1808-1821), facing right. The reverse side has the inscription "\* HISPAN \* ET IND \* REX \* (illegible mint mark) \* 8R \* C \* G" (assayer's marks) and a crowned coat of arms and dividing pillars.*



Morelos was captured and executed in 1815, but the war efforts continued. By 1821, royalist forces were finally defeated. On September 27, 1821, Agustin Itúrbide became the first ruler of Mexico. However, coins with the Spanish Colonial design, i.e., the portrait of King Ferdinand VII, continued to be struck until new dies could be prepared. On May 18, 1822, Itúrbide was proclaimed the Emperor, and coins with his image were struck a few months later.

### THE CIENEGA SURVEY COIN

The silver coin found during the survey is 1 7/16 inches (4 cm) in diameter and weighs 26.55 grams. It is in relatively good condition, with the portrait and writing legible, although the mint mark is illegible. The year and assayer's marks on the coin match those from the Durango mint, one of the "new" mints opened by the royalists during the War of Independence. The Durango mint struck both silver and copper coins; the silver coins worth 8 reales were poorly manufactured compared to those struck in Mexico City. The Durango coins are often offset, and the images less clear. The date on this coin indicates that it was minted by the first Mexican government before the dies with a portrait of Itúrbide were manufactured.

How did the coin find its way to southeastern Arizona? Spanish Colonial and Mexican coins were considered legal tender until 1857 but continued to circulate and were accepted by the public until the 1880s. Southeastern Arizona was part of Mexico's northwest territory until the Gadsden Treaty was signed in 1854. During this period, hostile encounters with the Apache were common. The Spanish government had given the Apache rations in exchange for peaceful relations, but this program ended in 1831 due to a decline in the Mexican economy and supply shortages in the northwest territory. As a result, Apache raids increased from the 1830s to 1840s, and



many Mexicans moved away from the area.

Increased Apache raids in the northwest territory did not discourage everyone from passing through this region. After the War of Independence, the Mexican government opened up the area, which had been previously restricted by the Spanish Colonial government, to foreign trade and commerce. Supply trains traveled through, heading to Tucson, and woodcutters and hunters also frequented the region. In 1846, Captain Philip St. George Cooke, a commander of the Mormon Battalion, was ordered to construct a wagon road between Santa Fe, New Mexico, and California, and he passed through the Cienega area. Once Southeastern Arizona became a U.S. territory in 1854, the number of travelers and settlers in the region increased, and the first stage lines were constructed through the area shortly thereafter.

Unfortunately, the coin appears to be an isolated occurrence. It was found on the surface of a prehistoric site, and no other historical artifacts are present. Therefore, the date the coin was lost will remain unknown.

### REAL OR FAKE?

The possibility exists that the coin is a counterfeit. It is poorly struck, meaning that the stamp on each side is slightly off-centered and the stamp impression is uneven. The markings around the edge are crudely manufactured, and the mint markings are illegible. It also has small pits on its surfaces, which is common in copies. The heavy wear may be intentional in order to obscure poor manufacturing techniques, pitting, and mint markings. Modern counterfeiters often bury or expose coin copies to weather their surfaces, thus making them appear older.

It is unlikely, however, that this is the case. The coin was found in an area that Mexican travelers are known to have traversed. John Madsen of the Arizona State Museum is completing a study of isolated Spanish and Mexican period artifacts and reports that other isolated artifacts have been found nearby. Lastly, it is known that the Durango mint produced poorer quality coins. The coin is believed to represent a rare, dated example of the Mexican presence in southern Arizona.

### ACKNOWLEDGMENTS

More information can be found in *The Coins of Mexico*, 1536-1963, by Neil S. Utberg (1963, DANS CO: Venice, CA). Mark Santiago of the Arizona Historical Society, John Madsen of the Arizona State Museum, and Neil Powell of Arizona Stamp and Coin provided assistance in preparing this article.

### SAN PEDRO VALLEY ARCHAEOLOGY

## Protecting Our Legacy

Many volunteers from the Center for Desert Archaeology will recall the richness and diversity of archaeological sites that they encountered during the 4 1/2-year survey of the lower San Pedro River. Over 500 sites were identified along the 75-mile stretch of river valley from Winkelman to Benson. But participants in the San Pedro survey also became aware of the fragile nature of such resources, and the perils of vandalism and careless development.

In the face of growing population, economic development, and competing interests, only a concerted effort will be effective in preserving the valley's unique archaeological heritage. The Center for Desert Archaeology has received a grant to prepare an archaeological preservation plan for the 4,000 square miles of the San Pedro drainage system that lie within the United States. The San Pedro Archaeological Preservation Project is a natural outgrowth of our previous reconnaissance work along the river.

The project will not involve new archaeological fieldwork, however. Our goal will be to build a consensus among public and private land managers, communities, educators and researchers, conservation organizations, and Indian tribes. Activities will center on interviews and forums, archival research, public education, and support of local archaeological conservation organizations. For further information, contact Lisa Armstrong at 520-881-2244.

### A Center for Desert Archaeology Workshop

## A Look Beyond Metates and Arrowheads

How did the enduring material of stone serve the needs of prehistoric people of the Southwest? This will be the main theme of a two-part May workshop given by archaeologists Dr. Jenny Adams and Jane Sliva of the Center for Desert Archaeology. Geared to avocational archaeologists, the workshops will consider how stone tools were made and used. A focus on the purpose of various stone tools will lead participants to a better understanding of how ground stone and chipped stone helped to define technological traditions in the Southwest.

The workshops will include hands-on opportunities and lab manuals. Saturday, May 11, two lectures; Saturday, May 18, two lab sessions. 8 a.m. to 12:15 p.m., both days. You are welcome to bring a lunch and join the archaeologists for discussion. Cost: \$45 for Center members, \$55 for all others. Saturday, May 11, lecture only: \$35/\$45. Limited to 30 participants, reservations required.

Call Lisa Armstrong at 520-881-2244 for more details, or complete and send in the enclosed form with your check.

### CIENEGA SURVEY DATES

First Saturday Third Sunday

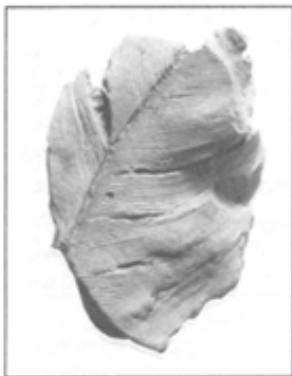
MARCH	2	17
APRIL	6	21
MAY	4	19

If you're interested in volunteering for a survey, call Lisa Piper at 520-881-2244.



**Center for Desert Archaeology**  
***Archaeology in Tucson***  
**3975 North Tucson Blvd. Tucson,**  
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ADDRESS CORRECTION REQUESTED



*This unusual artifact, a feather impression on a piece of fired clay, was found at the Los Morteros site (see article on page 1).*

### Time to Renew?

If your address label indicates that your *Archaeology in Tucson* membership has expired, please renew promptly to remain eligible for all activities, newsletters, and discounts on T-shirts and Center for Desert Archaeology publications.

## The Center for Desert Archaeology

The Center for Desert Archaeology is a nonprofit research and education organization that specializes in the study of archaeology and history of desert regions. Our primary research focus has been southern Arizona.

### Archaeology in Tucson

is the Center for Desert Archaeology's membership program. For further information about the Center for Desert Archaeology or about the *Archaeology in Tucson* program, call use at 520-881-2244. For information on the *Archaeology in Tucson* newsletter specifically, please contact the editor, Homer Thiel.

### ACKNOWLEDGEMENTS

Donna Breckenridge edited, formatted, and provided creative ideas. The photographs of the coin on page 6 were taken by Greg Berg, and the drawing of the projectile point on page 7 was done by Jane Silva. Spectrum Printing, 4651 S. Butterfield, #161, Tucson, printed this issue.

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Membership Category \_\_\_\_\_ d: \$ \_\_\_\_\_

Are you interested in volunteering on archaeology research projects? \_\_\_ Yes \_\_\_ No

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7/94

## Archaeology in Tucson Annual Membership Categories and Rates

Individual.....	\$10	Contributing.....	\$50
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