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Although Preservation Archaeology begins with the active protection of archaeological sites, it doesn't end there. We utilize holistic, low-impact investigation methods in order to pursue big-picture questions about what life was like long ago. As a part of our mission to help foster advocacy and appreciation for the special places of our past, we share our discoveries with the public. This free back issue of *Archaeology Southwest Magazine* is one of many ways we connect people with the Southwest's rich past. **Enjoy!**

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Preservation Archaeology in the San Pedro Valley

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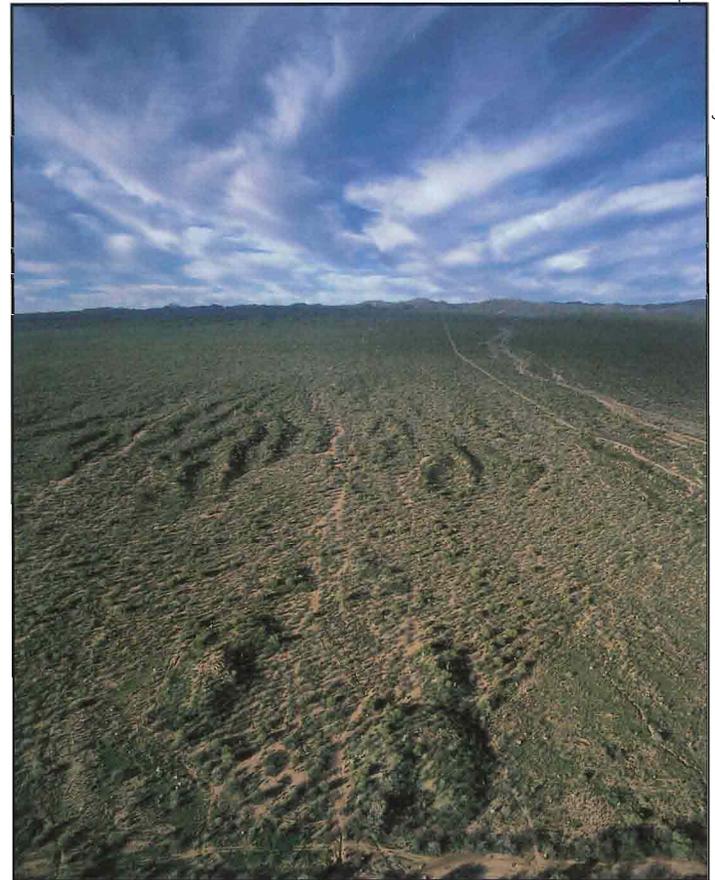
BALLCOURTS, KIVAS, CLOVIS POINTS, AND PRESIDIOS are just a few of the traces of the past found in the San Pedro Valley east of Tucson. The human heritage of this beautiful valley has a richness and a diversity that has motivated the Center's preservation archaeology efforts for more than a decade.

Preservation archaeology integrates research, public outreach, and stewardship of the nonrenewable archaeological record. This issue of *Archaeology Southwest* highlights our blend of these elements into a long-term program in a single valley. Productive research has been accomplished using information gathered with low-impact methods: reassessing previous excavations, surface surveys site mapping, and limited new test excavations.

This is the first publication of the Center's San Pedro Preservation Project. We initiated this project in 1996, after our 1990-1995 volunteer survey of the 120 km from Winkelman to Benson made it clear that the archaeology in the valley, while diminished by vandalism and development, still had remarkable potential for research and preservation. We focused on the large sites from the thirteenth and fourteenth centuries with our mapping and testing program.

Funding for the San Pedro Preservation Project came from a private foundation, with further assistance from the Salus Mundi and Amerind foundations and invaluable volunteer labor by Center members. Another crucial element was a grant from the National Science Foundation that funded a related study of the wash sands of the valley. Determining the natural distribution of sands in the area has allowed us to identify places of manufacture for many types of pottery.

Preservation archaeology is more than research. Valley residents have participated in the Center's work through volunteer opportunities, lectures at local community centers, open-house events at specific sites, and numerous personal contacts. These outreach efforts are paying off. In 2002, we accepted the generous donation of a



©Adriel Heisey

The Bajada site, one of the last-occupied settlements in the northern San Pedro Valley, is located on the toe of this gently sloping bajada. The Center's work salvaged key architectural information from this badly vandalized site. The site, now owned by the Nature Conservancy, is patrolled regularly by Arizona site stewards.

conservation easement by Harold and Mignon Elliott that preserves three sites in perpetuity, and in July 2003, we purchased a 95-acre parcel with a significant fourteenth-century site on it. Preservation archaeology in this valley is well underway, though there is still much to accomplish in the future.

This issue was made possible by a generous gift from the Southwestern Foundation for Education and Historical Preservation.

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A Brief History of Lower San Pedro Archaeology

Jeffery J. Clark, Center for Desert Archaeology

DESPITE IMPRESSIVE RUINS and its proximity to Tucson, the lower San Pedro Valley has seen only limited archaeological work. In the early 1880s, Adolph Bandelier was the first professional archaeologist to explore ruins along the river, briefly visiting the site of Tres Alamos. In 1908, Jesse Walter Fewkes provided the first detailed information on sites in the lower San Pedro, drawing sketch maps of several of the larger platform mound ruins, including Lost Mound, Leaverton Mesa, and High Mesa. In 1929, Carl Sauer and Donald Brand visited several sites in the southern portion of the lower San Pedro, among them Redington and Bayless ruins. William Duffen, a student of Byron Cummings at the University of Arizona, conducted the first formal excavations in the lower valley at these two sites in the 1930s as part of his Master's thesis.

In the northern lower valley, avocational archaeologist Alice Hubbard Carpenter was the primary investigator and steward of the cultural resources for over 50 years. Shortly after she moved to Oracle in 1924, until close to the time of her death in 1982, Carpenter was active in the field, advocating site preservation, removing artifacts from threatened sites, participating in field schools, and aiding professional archaeologists. She also rescued the largest copper bell found to date in the Southwest—which was mistakenly thought to be a copper toilet float by its finder. Carpenter and her friends investigated nearly all the large sites along the northern lower San Pedro, naming many of them.

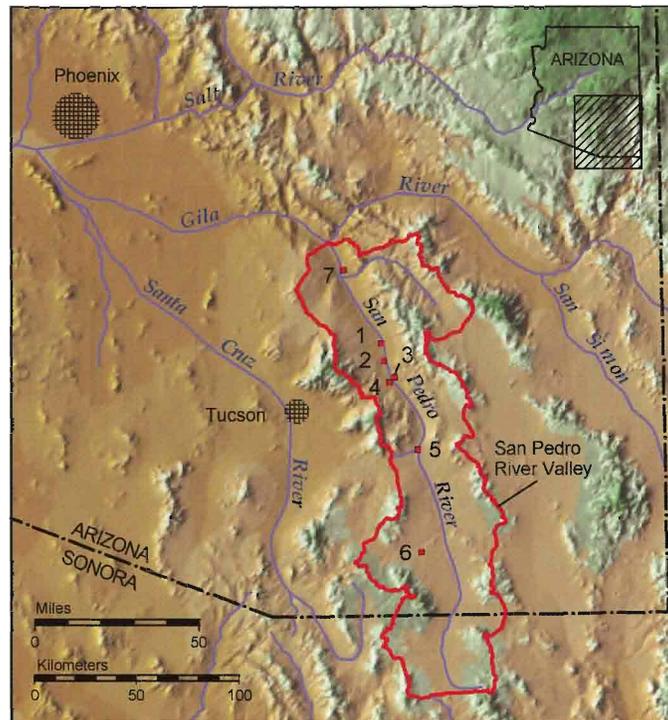
In 1931, seven years after Carpenter's arrival, William Shirley Fulton established his summer residence on the Double F Ranch near Dagoon, Arizona, and began investigating a pithouse settlement on his property. In 1936, he built a small museum and, the following year, established

the Amerind Foundation. Fulton brought in Carr Tuthill, a University of Arizona student, to serve as field director, report writer, and curator. In 1940, Tuthill conducted large-scale excavations at Tres Alamos, the principal settlement

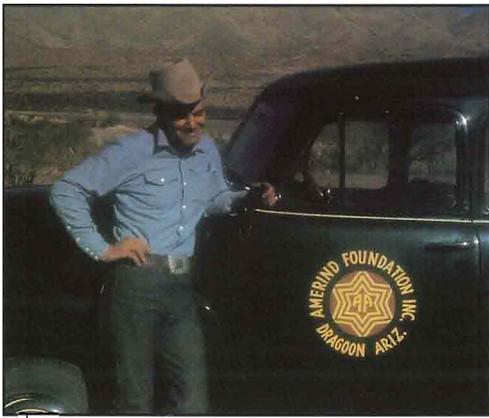
near the upper and lower San Pedro boundary during the pre-Classic and Classic periods. In late 1947, Tuthill left the Amerind Foundation and was replaced by another University of Arizona student, Charles Di Peso.

During Di Peso's long tenure, the Amerind Foundation became one of the premier research institutions in the Southwest. In 1948 and 1949, as part of his Master's thesis research, Di Peso excavated Babocomari Village in the upper San Pedro Valley. Di Peso's next series of excavations focused on establishing links between the Classic period and the early Spanish period inhabitants of southeastern Arizona. In 1950 and 1951, Di Peso investigated the short-lived Spanish presidio of Santa Cruz de Terrenate and Santa Cruz de Gaybanipitea, a Sobaipuri village that was also the site of a Spanish *visita* (see pages 14-16). Finally, Di Peso excavated a room at José Solas Ruin near Cascabel, which he misidentified as San Salvador de Baicatcan, a major Sobaipuri settlement mentioned in early Spanish documents.

In 1956, Di Peso focused on the lower San Pedro Valley in search of migrants from the Puebloan world. Reeve Ruin, roughly 5 km south of Redington, provided the perfect candidate for such an enclave (see pages 7-10) with its defensible location, room block layout, and gypsum-block masonry. Di Peso's investigation of Reeve Ruin was followed shortly by a related excavation by Rex Gerald at the Davis Ranch site, another suspected enclave across the San Pedro River, opposite Reeve Ruin. This site yielded a large rectangular kiva, the only example of this type of Puebloan



General setting of the San Pedro Valley and some of the major sites at which early excavations were conducted. 1: Alder Wash; 2: Second Canyon compound; 3: Davis Ranch; 4: Reeve Ruin; 5: Tres Alamos; 6: Babocomari Village; and 7: Big Ditch.



Charles Di Peso in the early 1950s.

ceremonial architecture discovered in the valley to date (see photo on page 10). Reeve Ruin and Davis Ranch proved to be the Amerind's last forays into the San Pedro.

These excava-

tions were soon overshadowed by Di Peso's most ambitious project at Casas Grandes in northern Mexico.

In the late 1960s, the Arizona Department of Transportation planned to construct a state highway between San Manuel and Benson. The sites in the northern half of the project area were excavated, but the construction project was canceled after about 5 km of pavement had been laid. In late 1969 and early 1970, Laurens (Larry) Hammack, the state's highway salvage archaeologist, and his assistant director, Hayward Franklin, excavated Second Canyon Ruin, a late Classic compound with underlying pithouses representing several occupations. The compound was probably built by the last pithouse occupants, suggesting continuity across this architectural transition.

In late 1970 and early 1971, with Bruce Bradley as assistant director, Hammack investigated three pithouse sites near Alder Wash as part of the Peppersauce Wash Project. Alder Wash Ruin, the most informative of the three investigated sites, yielded valuable information on both the late pre-Classic and Protohistoric inhabitants. An early Spanish period Sobaipuri occupation was discovered during the course of the excavations. One of the structures contained European trade beads.

Throughout the 1970s, Central Arizona College (CAC) conducted a series of field schools in the lower San Pedro in collaboration with the University of Arizona. In the early 1970s, with Dudley Mead directing, the CAC field school surveyed about 5 km² between the upper reaches of Bonito Canyon and Smelter Wash, about 5 km west of San Manuel, identi-

fying 35 sites and intensively excavating one that was threatened by construction of a natural-gas pipeline. Mead's field school constitutes, by far, the largest project conducted in a bajada setting within the lower valley.

In 1974, upon the advice of Carpenter, Mead moved the CAC field school to the Aravaipa confluence, about 3 km from campus. He began excavating Big Ditch, a large pre-Classic ballcourt village. The Big Ditch excavations continued from 1975 through 1977 under the supervision of Director Bruce Masse and Assistant Director Linda Gregonis. In late 1977, Mike Bartlett became the third and final CAC field school director. Bartlett moved up the terrace from Big Ditch and investigated several early Classic period rooms to the north of the Ash Terrace platform mound.

Interest in San Pedro archaeology waned in the late 1970s and early 1980s. Carpenter and Di Peso both passed away in 1982. Bradley last worked in the area in 1979 at Bayless Ruin, the CAC's last field season took place in 1979, and Franklin moved on after publishing the Second Canyon report in 1980.

The Center's interest in the area—beginning in the late 1980s and continuing to the present day—ushered in a new era of lower San Pedro archaeology, one that considers past and present work and integrates research, education, and preservation goals.



Second Canyon Ruin. Extensive horizontal stripping in 1969 and 1970 exposed a complex sequence of masonry-and-adobe rooms overlying earlier pithouses.

Courtesy of Arizona State Museum

San Pedro, River of the Ancients

Bruce B. Huckell, Maxwell Museum of Anthropology

NO OTHER RIVER VALLEY reveals the story of the first humans in the Greater Southwest as completely as the San Pedro River Valley. Since the late nineteenth century, the San Pedro River and its tributaries have eroded deeply into their floodplains, exposing deposits laid down many millennia ago. Among the first scientists to appreciate the buried record in this valley were E. B. (Ted) Sayles, Ernst Antevs, and Emil Haury.

These three researchers, in search of the antecedents of the Hohokam, surveyed the valley under the auspices of Gila Pueblo, a privately funded research institution. They worked along the main channel of the river, primarily in the upper portion of the valley between Benson and Palominas. In the Fairbank-Charleston area, they discovered the sites that ultimately defined the San Pedro stage of the Cochise culture. The buried Fairbank site was the first excavated example of what we now regard as the San Pedro phase of the Early Agricultural period. A reinvestigation of the Fairbank site in the late 1980s showed the presence and importance of maize

for the sustenance of this 3,000- to 3,500-year-old cultural group.

Amateur archaeologists and local ranchers were also drawn to search its arroyos, and because of them, far older sites were discovered. In 1951, after a summer flood, Fred and Marc Navarrete found huge bones protruding from the bank of Greenbush Draw, near Naco. Upon discovering a pair of Clovis points among the bones, they reported their find to Haury. Later in the year, with the help of several students and collaborators, Haury recovered another six Clovis points scattered among the bones of this lone mammoth. Four years later, Ed Lehner told Haury about numerous



Bruce Huckell

University of New Mexico geoarchaeology students profile the stratigraphy exposed by the San Pedro River at an Early Agricultural period site located within the Bureau of Land Management's San Pedro Riparian National Conservation Area. The cultural deposit is visible at the level of the shoulders of the two people on the ladders.

large mammoth bones in the arroyo north of his ranch, some 20 km northwest of Naco. Excavations there in 1955-1956 revealed parts of 9 mammoths, 13 Clovis points, and 8 stone butchering tools. The Lehner site provided the first accurate radiocarbon date of the Clovis culture, placing the mammoth kill at approximately 11,200 years ago. To this day, the Lehner and Naco sites remain among the

best examples of mammoth-hunting sites in North America.

In the mid-1960s, C. Vance Haynes and his colleagues continued the search for more Clovis sites; he and Peter Mehringer discovered the Murray Springs Clovis site in 1966. From 1966 to 1971, excavations there revealed a mammoth carcass, a multiple-bison kill, and an associated camp—still the only camp found with a kill. In addition, Murray Springs offered detailed in-

Mammoth limb bones and teeth exposed by excavations along a tributary of Horsethief Draw, northwest of the San Pedro Riparian National Conservation Area visitor center on State Route 90. The bones were in the same stratigraphic position as mammoth remains found at the Lehner and Murray Springs Clovis sites, though no artifacts were found in association with this mammoth.



Bruce Huckell

sights into late Pleistocene and early Holocene climate, megafaunal extinction, the chronology of Clovis occupation, and the depositional history of the San Pedro and its tributaries. Also in the 1960s and early 1970s, three more small Clovis sites were found and investigated: two mammoth kills near Naco on Greenbush Draw—the Leikem and Navarrete sites—and another near Murray Springs, the Escapule site. Nowhere in North America has such a cluster of Clovis kill sites been found in such a small area.

The San Pedro Valley also contains many Archaic period sites that postdate Clovis but predate the arrival of agriculture. In fact, the reinvestigation of the Lehner site by Haynes in 1974-1975 revealed a brief Early Archaic re-use of the site about 9,800 to 9,900 years ago. The only other significant source of information on this intriguing period comes from the Double Adobe area of the Sulphur Spring Valley, where the Center has recently acquired a parcel of land containing an extensive Archaic site.

Archaic campsites are best known from the surfaces of the terraces along the San Pedro River and the piedmont slopes of the high mountains that bound the valley. Sayles found some in his periodic surveys, but it was work by

Larry Agenbroad and Norman Whalen in the 1960s that provided the story of middle Holocene hunter-gatherers. Scattered along a wash in the Santa Catalina foothills west of Redington is the Lone Hill site, a camp probably occupied repeatedly between about 3,500 and 5,500 years ago. Abundant basin metates and one-hand manos reveal the important contribution of plant seeds to the Archaic diet, and numerous San Jose/Pinto, Chiricahua, Gypsum, and other small dart points testify to the hunting of animals such as deer and bighorn sheep. West of Benson, from terraces overlooking the river to the piedmont slopes of the Whetstones, Whalen discovered huge areas of repeated Archaic occupations. In some cases, these sites covered tens of thousands of square meters. Although containing fewer seed-milling tools, the sites were generally similar in artifact content to Lone Hill.

The attraction of the San Pedro Valley for Archaic foragers is not difficult to understand, for along the river or within a few kilometers of it one can taste the fruit of the saguaro, prickly pear, and mesquite, roast the hearts of agaves, feast on the *bellotas* (acorns), and hunt mammals, large and small.

Ballcourts and Buff Wares

Henry D. Wallace, *Desert Archaeology, Inc.*

AN IMPORTANT SHIFT in settlement occurred in southern Arizona between A.D. 500 and 600, when small, seasonally mobile groups began to occupy villages year-round. By 550, these villages consisted of central plazas surrounded by residential areas. Although formal ballcourts were not yet built at these sites, ballgames were probably played in the plazas at this early date, fostering ties and limiting conflict between communities. The ballgame was most likely an import from West Mexico, in the Nayarit-Zacatecas-Jalisco-Michoacan area, and may have been accompanied by a new variety of corn that was more readily ground into flour than earlier varieties.

Concomitant with the shift to more permanent settlement were changes in leadership from individual lineage or kin-group leaders to village-level political and ritual figures who headed many different lineages. These changes culminated around 800, with construction of large, elliptical, banked ballcourts at the largest villages in central and much of southeastern Arizona, including the lower San Pedro Valley. These formal ballcourts were accompanied by a new cremation burial ritual and a new artistic style found on decorated buff ware pottery and other artifacts. This complex of traits was probably associ-

ated with the new religion that swept through the entire region. Associated ceremonies and rituals promoted village interaction and the arbitration of disputes without conflict.

There are six known ballcourts between the mouth of the lower San Pedro River at Winkelman and Tres Alamos, the southernmost known example. Patterns in orientation suggest that these were part of a connected local system. The long axes of five of the ballcourts parallel the north-south-trending valley. The exception is the large ballcourt at Redington, which is oriented east-west.

All of the early ballcourts in the lower San Pedro were large, averaging about 56 m in length (a little more than half a football field). Later ballcourts, built between 930



Decorated buff ware pottery is common on sites in the lower San Pedro Valley.

Jannelle Weakly, Arizona State Museum

and 1050, were, on average, about half that long. A new type of ballgame may have been played within the small courts. The two largest sites in the valley, Big Ditch and Redington, each had both a large, early ballcourt and a small, late ballcourt.

From 800, when the first earthen-banked ballcourts appeared on the scene, until the 900s, villages remained nucleated, with few people living outside the large settlements on a permanent basis. With the construction of the second wave of smaller ballcourts, this pattern changed. Villages dispersed along what were probably the locations of their canal systems. This shift was not unique to the lower San Pedro Valley; it occurred throughout southern and central Arizona at that time. This interval was associated with optimal rainfall conditions, and riverine farming was seldom better. Population increased, and families moved out and settled new areas as canal systems expanded. Warfare was probably not a major concern. Contacts with West Mexico continued, as evidenced by the recovery of Mexican artifacts in southern Arizona

such as copper bells, pyrite-encrusted mirrors, and pottery. For example, one of the small hamlets north of Redington contained a portion of a vessel that probably originated in Nayarit.

Who were the people of the lower San Pedro? The earliest villages were probably settled by those who had been living in the region for centuries. Certainly, from 500 to 1100, the area was within the ideological sphere of the Hohokam, and the northern portion of the valley was closely tied to the middle Gila Valley.

By the time the first ballcourts were constructed in the area, clear material differences emerged between the populations living north and south of the modern town of

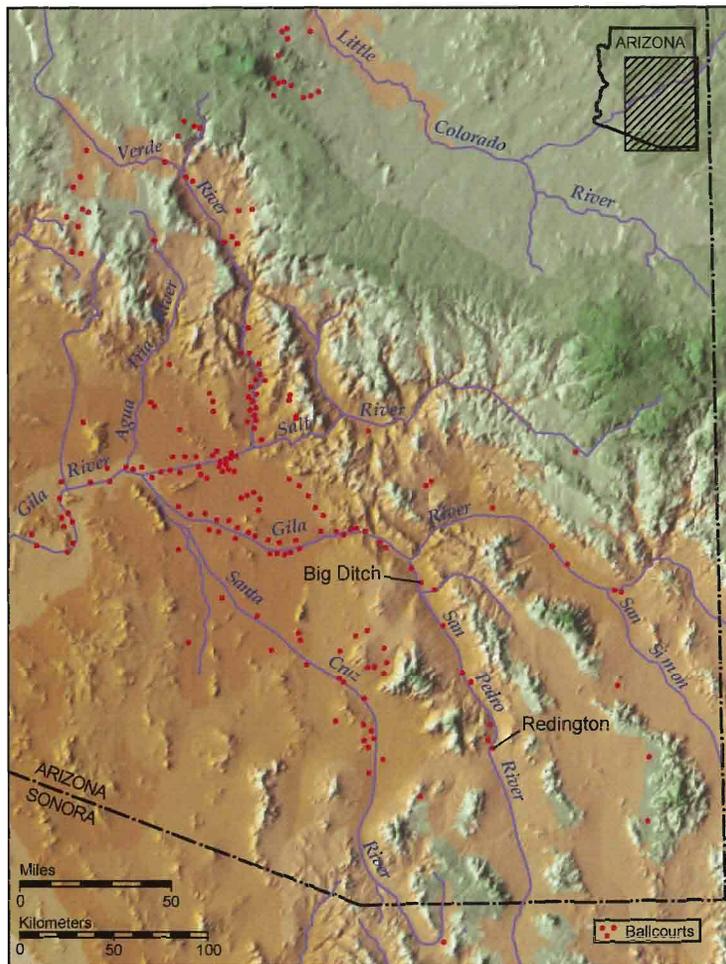
Mammoth. At Big Ditch, near the mouth of Aravaipa Creek, residents manufactured a technologically sophisticated replica of Middle Gila Buff Ware pottery. Because this ware was not simple to reproduce, it is reasonable to suppose that at least a few potters from the middle Gila married into Big Ditch households. Both the imported Middle Gila Buff Ware pottery and the local imitation have

been found in this northern portion of the valley.

South of Mammoth, there are relatively abundant examples of Dragon and San Simon Brown wares. This red-on-brown pottery is painted in several styles. One style corresponds with designs common across southeastern Arizona, northern Sonora, and southwestern New Mexico. From its distribution and frequency in the valley, it was probably produced in the Redington area, as well as at one or more sites farther south. A second style is a combination of this San Simon style and styles of decoration that originated in the middle Gila and Tucson areas. Very few of these wares are found north of Mammoth.

Coincident with this north-south boundary in local artistic and techno-

logical styles are differences in residential architecture and, possibly, mortuary practices. The presence of ballcourts, Middle Gila Buff Ware, and other markers of Hohokam ideology also suggest a northern influence in the southern portion of the valley, but a difference in ethnic or tribal identity from the inhabitants of Big Ditch is also likely. Such a distinction became increasingly apparent over time. Late in the eleventh century, Mimbres black-on-white pottery appeared in the southern lower valley, along with other ceramic wares from the east and northeast. These wares are also rarely found north of Mammoth. Later migrations (see pages 7-10) were likely presaged by smaller-scale population movements around 1100.



Ballcourt locations provide insight into the extensive Hohokam interaction network that was focused on the Salt and Gila rivers and extended outward along other desert rivers.

Mounds and Migrants in the Classic Period

Jeffery J. Clark, Center for Desert Archaeology

Patrick D. Lyons, Center for Desert Archaeology

THE MASONRY RUINS of Classic period settlements are by far the most visible archaeological features in the San Pedro Valley. The high profile of these sites has both advantages and drawbacks. On the positive side, we can confidently state that nearly all of the major occupations and most of the minor settlements from this interval have been identified. On the negative side, these sites have been, and continue to be, attractive targets for pothunters. The dual motivation of high research and threat potential provided the primary impetus for conducting test excavations. The main goal was to obtain a representative sample of artifacts and plant and animal remains from every major Classic period settlement, while minimizing the impact to each site. To accomplish this task, trash deposits outside architectural ruins were prioritized. These artifact-rich contexts had high recovery rates even though very little dirt was actually moved.

Beginning in Spring 1999, and continuing through Spring 2001, a group of dedicated volunteers—supervised by the Center's staff—tested more than 100 of these deposits at 29 sites. Ultimately, nearly 45,000 sherds, 20,000 pieces of flaked stone, 5,000 animal bone fragments, 500 fragments of ground stone, 300 flotation samples, and 200 pieces of shell were recovered. The following account is based on the analyses of this material and previous work in the valley and surrounding areas.

Dramatic changes occurred in the lower San Pedro Valley in the A.D. 1200s. By 1300, all of the valley's residents had moved from dispersed pithouse settlements into more concentrated masonry and adobe villages. The San Pedro floodplain was covered with maize fields fed by canal systems up to 8 km long. Each canal system was built and maintained by an irrigation community containing between 100 and 300 people.

Beans and perhaps squash were also cultivated. Mesquite beans and various cacti fruits were favorite gathered resources. An occasional trip was made to obtain juniper

berries from the mountain slopes far above the floodplain. Although cotton was grown in other river valleys of central and northern Arizona, we encountered no evidence of this raw material for textiles. Even more conspicuous is the near-absence of agave, considering the thousands of rock piles, presumably used in cultivating this plant, that line many of the terraces overlooking the floodplain. These agricultural features apparently fell out of use by the mid-1200s, as the later inhabitants focused their subsistence efforts on the floodplain near their villages. These areas were easy to monitor and protect from outsiders.

During the late 1200s, platform mounds were built in 11 of the irrigation community centers along the 56-km stretch of the river from Dudleyville, near the Gila River confluence, to Redington. Although the social function of platform mounds is unclear, they would have been prominent territorial markers on the landscape for each individual community.

On a larger organizational level, platform-mound settlements and corresponding irrigation communities can be grouped into two districts based on location and differences in artifact assemblages. The Aravaipa district includes a cluster of four mound villages and associated settlements near the mouth of Aravaipa Creek. This district is one of the most fertile in the valley, and there is an extended history of settlement in the area. Artifacts from Aravaipa district settlements suggest limited interaction with outside groups and close links with the inhabitants of earlier pithouse settlements in the vicinity, particularly the Big Ditch ballcourt village near Ash Terrace. Some of the inhabitants of Big Ditch produced pottery that imitated buff wares manufactured in the middle Gila River Valley (see pages 5-6).

This tradition of pottery production was continued in the Aravaipa district during the Classic period (1200-1450), with one or more settlements making many of the San Carlos Red-on-brown and red ware vessels recovered from the lower valley. San Carlos Red-on-brown is the only

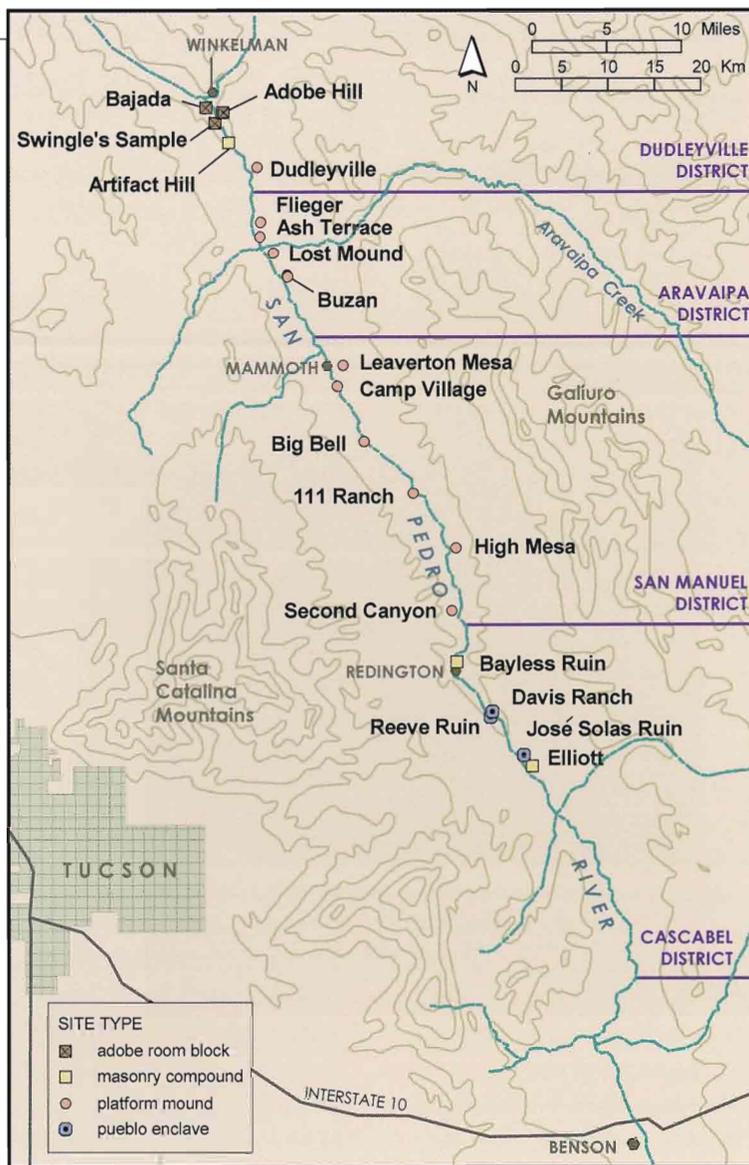


Volunteers, student interns, and professional supervisors excavated 1-m by 2-m test units in trash deposits in 29 sites along 104 linear km of the San Pedro. These limited impacts to the sites produced high-quality information.

Classic period decorated ware found in quantity that was made by groups with deep historical roots in the region.

The San Manuel district was composed of six mound villages and associated settlements dispersed along a 35-km portion of the river from Leaverton Mesa to Second Canyon, the southernmost platform mound in the valley. Except for Leaverton Mesa, the regular 6.5- to 8-km spacing of mounds roughly coincides with inferred canal networks, suggesting one mound for each irrigation community. Beginning in the early 1300s, and continuing throughout much of the century, platform-mound settlements in this district were abandoned in a gradual retraction of settlement toward Aravaipa Creek and the Gila River. Platform mounds suggest strong Hohokam connections, and the ample quantities of San Carlos Red-on-brown and red wares indicate contact with Aravaipa-district settlements. However, the San Manuel-district residents were also interacting closely with various migrant groups who were arriving in the lower valley during the Classic period.

This interaction is best demonstrated by the distribution of locally produced corrugated pottery. Corrugation is a technique associated with Ancestral Pueblo groups to the north and east of the valley. In the San Pedro Valley, corrugated pottery had a brief history, largely confined to the late 1100s and early 1200s. Within this narrow time frame, the density of corrugated wares was remarkably uneven, peaking in the heart of the San Manuel district and rapidly dropping off in the outer mound villages. Hence, a number of corrugated pottery-producing households entered the lower San Pedro Valley at the beginning of the Classic period, possibly from the Safford Basin, Point of



Key locations of the Center's test excavations. The four districts reflect different patterns in the archaeological remains.

along a well-established migration route that extended south from the Four Corners area through Point of Pines, the Safford Basin, and ultimately into the lower San Pedro Valley.

Two San Pedro migrant enclaves, Reeve Ruin and the Davis Ranch site, excavated by the Amerind Foundation in the 1950s, are located 13 km south of Second Canyon, the southernmost platform mound in the San Manuel district. Other potential enclaves in the Cascabel district were identified by the Center. These sites extend nearly to the southern end of the lower San Pedro Valley. Kayenta/Tusayan settlements can be distinguished from local and other migrant settlements by the presence of perforated plates (see page 12), Maverick Mountain series pottery, kivas, and unique elements of domestic architecture that have their origins in northeastern Arizona.

In addition to the architectural transformations discussed above, the arrival of long-distance migrants coin-

Pines, or areas farther north. Many of these households settled within or near local settlements in the San Manuel district. Other groups moved into favorable bajada settings north of Big Bell, and several even traversed Redington Pass to enter the northeast Tucson Basin. Very few producers of corrugated pottery settled in the Aravaipa district.

This early population influx paved the way for long-distance migrations that began in the late 1200s, which is roughly contemporaneous with the construction of platform mounds and adobe compounds. This second migration continued into the 1300s, and included families who originated in the Kayenta and Tusayan regions of northeastern Arizona, some 480 km to the north. They traveled

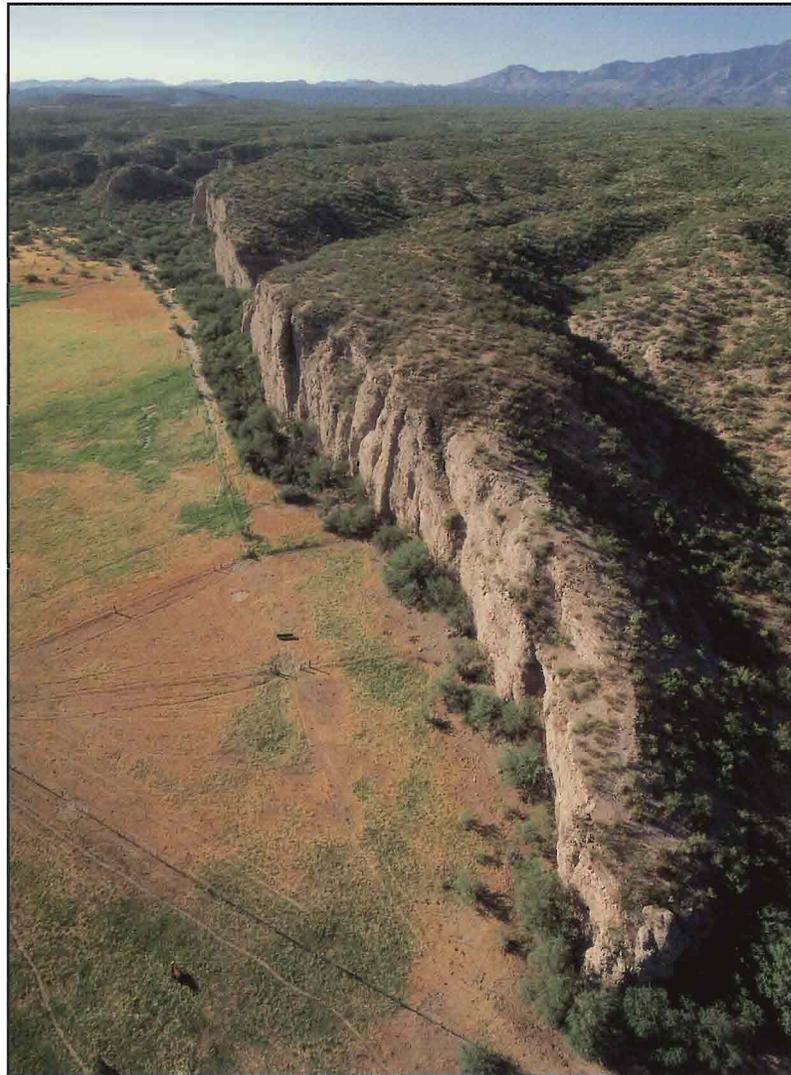
cided with several dramatic changes in artifact assemblages. The frequency of obsidian, ideal for making razor-sharp projectile points, increased dramatically by 1300. Most of this material derived from sources in or near the Safford Basin along the migration route from the north. The Kayenta/Tusayan migrants appear to have had much greater access to obsidian than local groups and may have controlled obsidian distribution within the valley. Live macaws from Central America may also have been entering the valley with migrant groups and traded to local settlers. Finally, decorated ceramics increased dramatically in lower San Pedro assemblages at this time, including Maverick Mountain series pottery and Roosevelt Red Ware (Salado polychromes), which are linked stylistically and technologically with the Kayenta/Tusayan migrants. During the first half of the 1300s, Gila Polychrome, the most prevalent Roosevelt Red Ware type, appeared and eventually dominated decorated ceramic assemblages throughout the lower valley.

Our initial hypothesis—that long-distance migrants were producing most of the Roosevelt Red Ware vessels, both for their own use and trade with the local inhabitants—was largely confirmed by the petrographic analysis of sand used as ceramic temper material. Migrant settlements in the Cascabel district were the principal producers of Roosevelt Red Ware until the sites were abandoned in the late 1300s. Both obsidian and Roosevelt Red Ware vessels were exchanged by Kayenta/Tusayan migrants with local groups in substantial quantities.

Despite this harmonious picture of trade and co-residence between various migrants and local groups, the

location of several settlements suggests social tension and perhaps even overt conflict. High Mesa and Leaverton Mesa, in the San Manuel district, are in walled defensible locations. These two settlements anchor the district flanks on the eastern side of the river, protecting the less-defensible central mound

settlements from both the migrants in the Cascabel district and local groups in the Aravaipa district. The Reeve Ruin enclave is in a similar walled defensible position. These fortified settlements suggest that the various groups were at least suspicious of each other, if not openly hostile at times. However, the indefensible locations of the Davis Ranch migrant enclave, immediately across the river from Reeve Ruin, and the Second Canyon platform mound, presumably occupied by local groups, suggest that there was little conflict. It is likely that migrant and local populations engaged in both cooperative and com-



Reeve Ruin is located on the relatively flat area in the middle of the photograph. Steep cliffs, deep side canyons, and construction of double walls to restrict access made Reeve a highly defensible settlement for its immigrant residents.

petitive social relations during the century or so they both inhabited the valley.

Many sites in the northern Dudleyville district are associated with large quantities of Tonto and Cliff polychromes, the latest of the Roosevelt Red Ware types (see page 12). During the late 1300s and early 1400s, settlement in the valley was concentrated in this district. Many of the settlements south of Aravaipa Creek were abandoned by this time. A sherd of Rio Grande Glaze Ware C recovered from Flieger Ruin in the Aravaipa district indicates that this settlement may have endured past 1425, slightly more than a century before the arrival of the Spaniards.

Limited evidence and analogies drawn from comparable late settlements in southeastern Arizona, southwestern New Mexico, and in the Phoenix Basin suggest that these late sites were occupied by groups who were descended from both local and migrant populations.

After several generations of close interaction and intermarriage, an entirely new social identity may have emerged, with connections to both the developing Puebloan world and the declining Hohokam world. The inhabitants of these sites also made Roosevelt Red Ware vessels and had access to obsidian from a distant source near Flagstaff, attesting to continued ties with northern Arizona. As the population declined, the inhabitants of these final settlements may have increased their contacts with the occupants of adja-



Rectangular kiva at the Davis Ranch site, excavated in 1956 by Rex Gerald of the Amerind Foundation.

Courtesy of Amerind Foundation

cent river valleys for trade and marriage partners.

By 1450, even the last Classic period occupations in the north were terminated. No archaeological sites have been found that date to the next 200 years, suggesting that very few people were living in the valley until the arrival of the Sobaipuri, the inhabitants of the region when the Spaniards first

settled in southern Arizona in the late 1600s. Sobaipuri sites and artifacts are dramatically different from those associated with the Classic period inhabitants, and it is difficult to infer that the two populations are related (see page 14). Understanding how such a lush region could have been unoccupied for so long requires us to look outside the San Pedro Valley to adjacent valleys of the southern Southwest and beyond.

Sands of the San Pedro Valley

Elizabeth J. Miksa, Desert Archaeology, Inc.

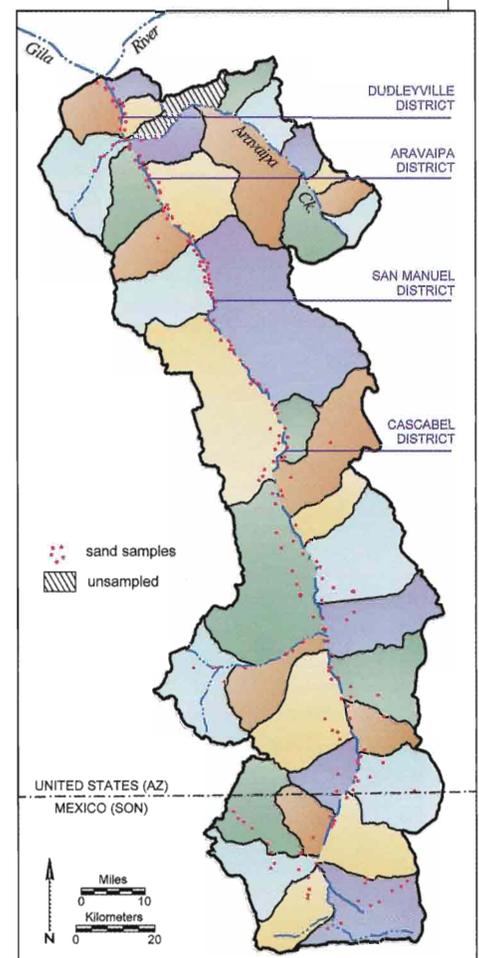
Jeffery J. Clark, Center for Desert Archaeology

PETROFACIES ARE ZONES OF SIMILAR-LOOKING SANDS. A valley such as the San Pedro Valley has a diverse collection of sands, because the bedrock varies from place to place in the surrounding mountains. Each stream in the valley carries sand from the mountain bedrock above it. As the bedrock changes, so does the sand in the washes. For example, the sand near San Manuel includes altered minerals from the copper porphyry, and sand from the Galiuro Mountains has distinctive volcanic grains in it.

The two sands considered in this example allow us to distinguish between the western (San Manuel) and eastern (Galiuro) sides of the San Pedro Valley. However, we want to be able to identify much smaller areas wherever possible. Our goal is to characterize the entire valley. To do this, we collected and analyzed 265 sand samples from washes that enter the San Pedro Valley and Upper Aravaipa Creek. The map displays the 38 petrofacies that we can currently distinguish.

Sands can link a potsherd recovered from an archaeological site to the location where a prehistoric potter manufactured a vessel. Much of the pottery that was produced in the San Pedro Valley is a mixture of clay and sand. Adding sand to clay made it easier for prehistoric potters to fire their vessels and to subsequently use them for cooking.

Ethnographers studying potters around the world have found that most potters collect sand from within 1 km of their workshop. Therefore, we assume that the type of sand in a vessel indicates its location of manufacture. By comparing the sand in San Pedro pottery with our petrofacies map, we have a pretty good idea of where



Petrofacies map of the San Pedro Valley.

pottery was produced in the valley, as well as where it was traded.

We have analyzed over 2,000 sherds to determine where the pots from which they came were manufactured.

The initial results of our study of more than 750 Roosevelt Red Ware sherds are discussed below.

Sergio Castro-Reino and Carlos Lavayen helped process and point count many of the samples.

THESE THREE MAPS of the lower San Pedro portion of the petrofacies map illustrate how petrographic data can be used to understand pottery production and distribution. By matching sands collected from petrofacies with the sand temper in pottery recovered from our excavations, we have established that Roosevelt Red Ware was produced in three major source areas. In each map, one of these source areas is highlighted, and the percentage of sherds with sands from that source is shown where they were recovered. These analyses are still preliminary, and we hope to be able to get finer resolution for source areas B and C.

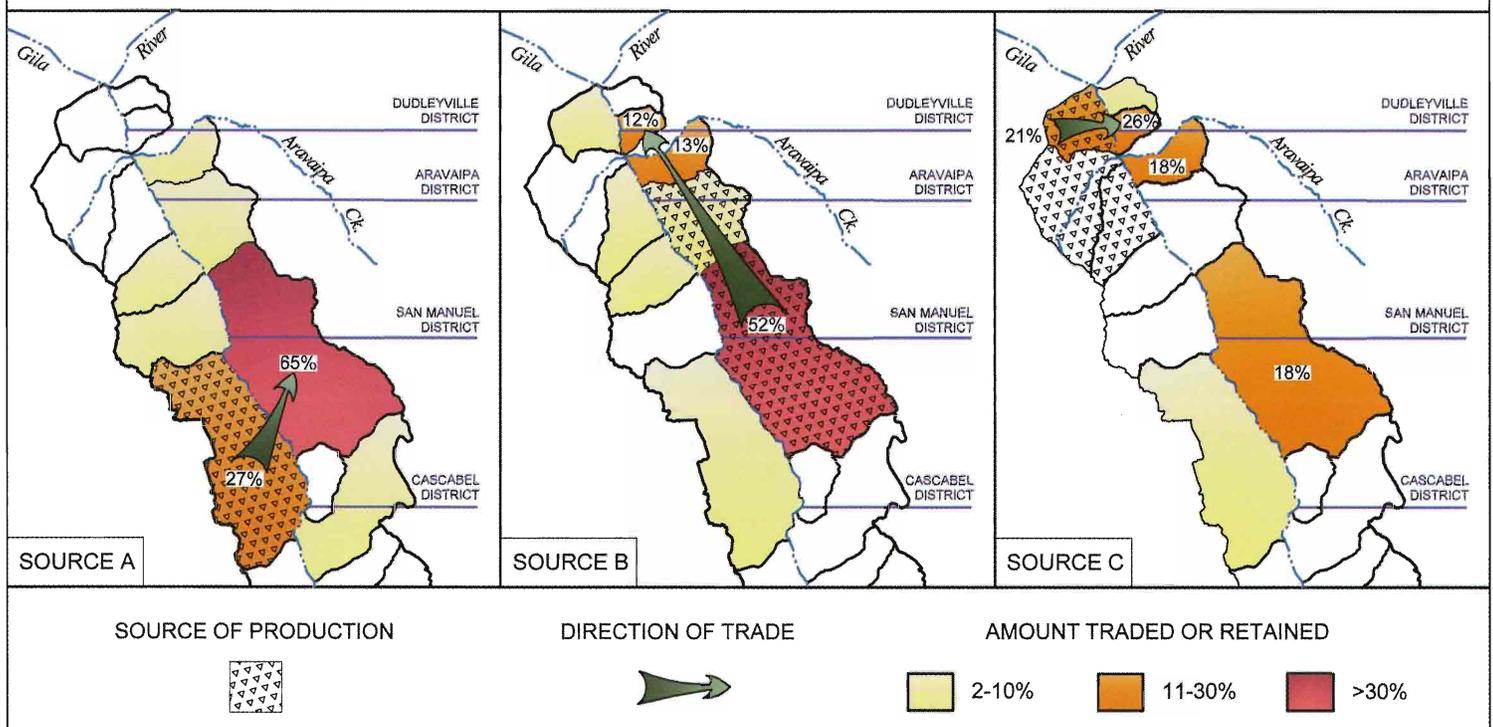
Source A is a single large petrofacies on the western side of the river in the Cascabel district. The only large settlement in Source A is the migrant community at Reeve Ruin. Most of the Roosevelt Red Ware produced on the western side of the river was traded to settlements directly across the river.

Source B is more complicated, because two petrofacies are similar enough that they must be considered a single production area from a geological perspective. However, distribution patterns in these maps allow an archaeological perspective to be considered as well. Over 10 times as many sherds were recovered from the southern petrofacies than from the northern petrofacies, which strongly suggests that production occurred in the former area. There also appears to have been some trade with platform-mound settlements in the Aravaipa district.

Source C is more complex still. Three adjacent petrofacies in the northern portion of the valley are also similar geologically. Here, the recovery evidence is even more compelling, indicating the northernmost of the three petrofacies was probably the production area. Within this northern petrofacies, two large late Classic period settlements are the likely producers of pottery from Source C. Trade across the river with platform-mound settlements in the Dudleyville and Aravaipa districts is indicated, along with limited exchange with migrant settlements in the Cascabel district.

We are continuing to refine our petrographic analysis, and there is still much more to do to integrate it with the geological and archaeological data. Nevertheless, this study has given us the ability to more closely examine local trading patterns, which in turn has led to a better understanding of the San Pedro Valley's occupants.

Distribution of Roosevelt Red Ware from Three Major Sources of Production



Perforated Plates

Patrick D. Lyons, Center for Desert Archaeology

THE ENIGMATIC OBJECTS known as perforated plates have interested archaeologists since the early 1900s, when Jesse Walter Fewkes and others encountered them at cliff dwellings in Navajo National Monument, Protohistoric villages on the Hopi Mesas, and Classic period platform-mound sites in the Phoenix Basin.

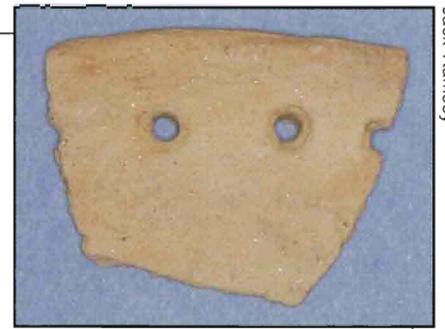
Contextual clues and use wear suggest that perforated plates were used as base-molds in pottery making, or as potter's turntables. Unfired, tempered clay has been found adhering to the interior surfaces of some whole specimens. A few exhibit traces of pottery pigments in the form of incidental smudges and fingerprints. In addition, their exterior surfaces often display abrasions and striations, suggesting that they were rotated on a regular basis. Perforated plates have been recovered from "potters' burials" alongside the remains of women interred with pottery-polishing stones, shaped-sherd pottery scrapers, raw clay, and pigments.

Various hypotheses have been suggested regarding the function of the holes in perforated plates. The holes may have made the plates easier for potters to grip, or may have

aided in the evaporation of water from pots being formed on them. Some researchers believe the holes held fibers that were draped

over unfired pots to mark off areas to be painted. A few archaeologists have suggested that the plates were used in rituals, and that the holes held flowers or prayer feathers.

Regardless of their function, these objects, when found south of the Hopi Mesas, are markers of ancient migrations from northern Arizona. Perforated plates have been found in sites dating between A.D. 1250 and 1450, in every major river valley in the American Southwest and the Mexican Northwest, from the San Juan Basin to Casas Grandes, Chihuahua, and from Phoenix to the Cliff Valley in New Mexico. Many sites that have yielded perforated plates are known to be places where Roosevelt Red Ware pottery was manufactured. Nearly all perforated plates recovered from the Center's test excavations were found at sites in the Cascabel district.



Perforated plate fragment from José Solas Ruin in the Cascabel district.

Cliff Polychrome

Patrick D. Lyons, Center for Desert Archaeology

IN THE LOWER SAN PEDRO VALLEY, recurved (flared-rim) Roosevelt Red Ware bowls likely appeared after A.D. 1350, and became more frequent as fewer incurved bowls and hemispherical bowls were produced. In a study of ceramics from Ormand Village, in New Mexico, Francis Harlow referred to Roosevelt Red Ware bowls with recurved rims as Cliff Polychrome. Gila Polychrome bowls characteristically display a wide painted band ("banding line") just below and parallel to the inside of the rim. Emil Haury noted that on nearly all recurved bowls, the banding line was painted well below the rim, near the point where the vessel is constricted, and that painted designs were most often applied in the zone



Jack Ramsey

Gila Polychrome rimsherd (left) and partial vessel of Cliff Polychrome (right). Note that the solid black "banding line" on Gila Polychrome occurs at the rim, whereas it is much lower on Cliff Polychrome. Recognizing Cliff Polychrome helps to identify the latest Classic period occupations in the San Pedro Valley.

between the rim and the banding line. Distinguishing between "standard" Gila Polychrome and Cliff Polychrome bowls allows fine-scale sorting of late Classic period sites in the San Pedro Valley. This procedure is potentially applicable across the American Southwest and Mexican Northwest.

In Search of the Coronado Trail

Linda J. Pierce, Center for Desert Archaeology

Don Burgess, Volunteer, Center for Desert Archaeology

THE CORONADO NATIONAL MEMORIAL, located on the United States-Mexico border along the western edge of the San Pedro River Valley, commemorates the first major European exploration of the Southwest by Spanish explorer Francisco Vázquez de Coronado in 1540. Although there is no evidence that Coronado crossed what is now the international border in exactly that spot, most historians and archaeologists believe that a prehistoric trade trail somewhere in the San Pedro Valley was, in all probability, the route followed by this expedition as it traveled north out of Mexico to the Pueblo of Zuni and beyond to the plains of Kansas in search of the Seven Cities of Gold (Cibola).

For more than 100 years, archaeologists and historians have been trying to determine Coronado's exact route. At least 11 documented trips were made over all or portions of this trail in the mid-1500s. Although the Spanish written documents describing these trips are important sources of information on the native inhabitants and natural environment encountered, they are often unclear and open to differing interpretations.

The Coronado expedition was substantial, numbering as many as 350 Spaniards and more than 1,000 Mexican Indians, along with thousands of horses, mules, cattle, and sheep. Surely a group of this size lost and discarded numerous personal items and artifacts along the trail. Recent research by historians Richard Flint and Shirley Cushing Flint and others is providing new information that may hold the key to finally determining the actual Coronado trail. They have concluded that there are at least seven types of artifacts specific to the Coronado expedition:

- ◆ copper crossbow boltheads;
- ◆ crossbow parts and accessories;
- ◆ short copper or brass aglets (lace tips);
- ◆ Nueva Cadiz glass beads;
- ◆ sheet-brass Clarksdale bells;
- ◆ obsidian-edged swords and lances; and
- ◆ caret-head nails (horseshoe nails).

As can be seen in the accompanying illustrations, artifacts that are most diagnostic of the Coronado expedition are fairly mundane. However, they should not be judged by their unprepossessing nature. If researchers can learn of the existence of enough of these artifacts and plot their

original find locations on a map, they will be able to determine the specific route of the expedition into the United States. This, in turn, will make the historical documentary information from this period more understandable, and shed light on a critical yet very inadequately understood time in American history.

In early 2004, the Center for Desert Archaeology will launch a concerted effort to educate the public about Coronado and artifacts specific to his expedition. This public outreach campaign will culminate in the spring of 2004, with a series of *Coronado Roadshows* in small communities throughout southeastern and central Arizona and southwestern and central New Mexico. Members of

the public will be encouraged to bring possible Coronado-era and other early Spanish artifacts to these lecture and open-house events, where archaeologists and historians will be available to study artifacts and to tell people more about their items.

Readers who know of the existence of items found in southern Arizona or New Mexico that are similar to those illustrated here are encouraged to contact the Center. An unimpressive hunk of metal, collected by someone's grandfather 100 years ago, may hold the key to this long standing question, and provide another chapter in the San Pedro's long history.



Top: Copper crossbow boltheads (dart points). Coronado's was the only expedition to carry crossbows into this part of the Southwest; later Spanish explorers carried firearms. Bottom: Caret-head nail. Hundreds of these distinctive nails were found at the Jimmy Owens site in Texas, a Coronado campsite. Seemingly short-lived in popularity, they were no longer in use by the end of the sixteenth century.



Palace of the Governors Collection

Santa Fe, New Mexico

William Hartmann

Charles Di Peso and the Origins of Sobaipuri Pima Research

James M. Vint, *Center for Desert Archaeology*

THE ARCHAEOLOGICAL AND HISTORICAL “GAP” between A.D. 1450, the end of the Classic period, and the 1690s, when the Spaniards began to occupy the San Pedro area, is known as the Protohistoric period. Until Charles Di Peso of the Amerind Foundation began his study of the Sobaipuri Pima in the San Pedro area, the Protohistoric period was an interval of little interest to archaeologists and historians. Protohistoric archaeological materials are sparse at best, and there are only a few sporadic Spanish records relevant to the northern frontier of New Spain during that era.

Di Peso intended to find Sobaipuri Pima sites that were described by Padre Eusebio Kino and his military escort Juan Mateo Manje in the 1690s, and then work backward in time from Spanish records, and forward in time from 1450 using archaeological evidence.

Di Peso’s research focused on three sites: Quíburi (also the location of the Presidio of Terrenate), Gaybanipitea, and a site he thought was Baicatcan. He began his work at what he believed was Quíburi, first visited by Kino and Manje in 1696. Kino described the village as having more than 500 people and a fortified enclosure for defense against the hostile Apaches and Jocomes. This was probably the largest Sobaipuri village in the San Pedro River valley in the 1690s. This site was also the location of the short-lived Spanish Presidio of Terrenate, built and occupied from about 1775 to 1780 (see pages 15-16).

Although the site investigated by Di Peso was unquestionably the Presidio of Terrenate, it was probably not the location of Quíburi. A compound within the limits of the presidio interpreted by Di Peso to be of Sobaipuri construction is now known to be the initial settlement of the Spaniards while the presidio walls were under construction.

Although there were Piman guides in residence at Terrenate, there is no archaeological evidence that this was the Quíburi visited by Kino. Recent research has suggested that the site visited by Kino is somewhat north of Terrenate. The village may have shifted from one location to another along a several-kilometer stretch of the San Pedro north of Terrenate. Furthermore, the Sobaipuri population was scattered among several *rancherías* in the area rather than concentrated in one large village. The massive remains of Terrenate could have obscured any earlier Sobaipuri settlement, but the artifact assemblage collected by Di Peso does not show much evidence of such a settlement.



Courtesy of Arizona State Museum

Sobaipuri houses were simple structures of bent-pole frames covered with brush. This excavated house illustrates the typical oval alignment of cobbles that can be detected by archaeologists in careful surface inspections.

Di Peso hypothesized that indigenous populations in the region were descended from a group he called the O’otam, who inhabited the region prehistorically. In an effort to establish a continuum from prehistory to history, he investigated a site he believed was Baicatcan. Di Peso argued that plain ware pottery in association with Gila Polychrome was similar, if not identical to, Sobaipuri pottery called Whetstone Plain, and that it indicated a bridge between prehistory and history. This site, also known as the José Solas Ruin, is now known to be a late Classic site with no Protohistoric connection.

The site identified by Di Peso as Gaybanipitea is clearly a single-component Sobaipuri site, and the work conducted there established the definitions of Sobaipuri material culture and architecture still largely used today. This site, visited by Kino and Manje in 1697, is located several kilometers south of Terrenate. In March 1698, Gaybanipitea was attacked and destroyed by a group of several hundred Apaches, Jocomes, Sumas, and Mansos. Even though this site is undoubtedly Sobaipuri, and matches the description of the village visited by Kino and Manje, some archaeologists question its identification as Gaybanipitea. The site investigated by Di Peso may actually be Pitaitutgam, a village mentioned only briefly in Spanish records but shown on Kino’s 1696-1697 map in approximately the same location.

Regardless of whether Di Peso correctly identified the location of Quíburi or Gaybanipitea, he is certainly responsible for engendering interest in a time period and people previously ignored by archaeologists and historians. Since the late 1980s, inspired by Di Peso’s efforts, archaeologists continue to increase our understanding of Sobaipuri sites.

The Life and Times of Santa Cruz de Terrenate

J. Homer Thiel, *Desert Archaeology, Inc.*

James M. Vint, *Center for Desert Archaeology*

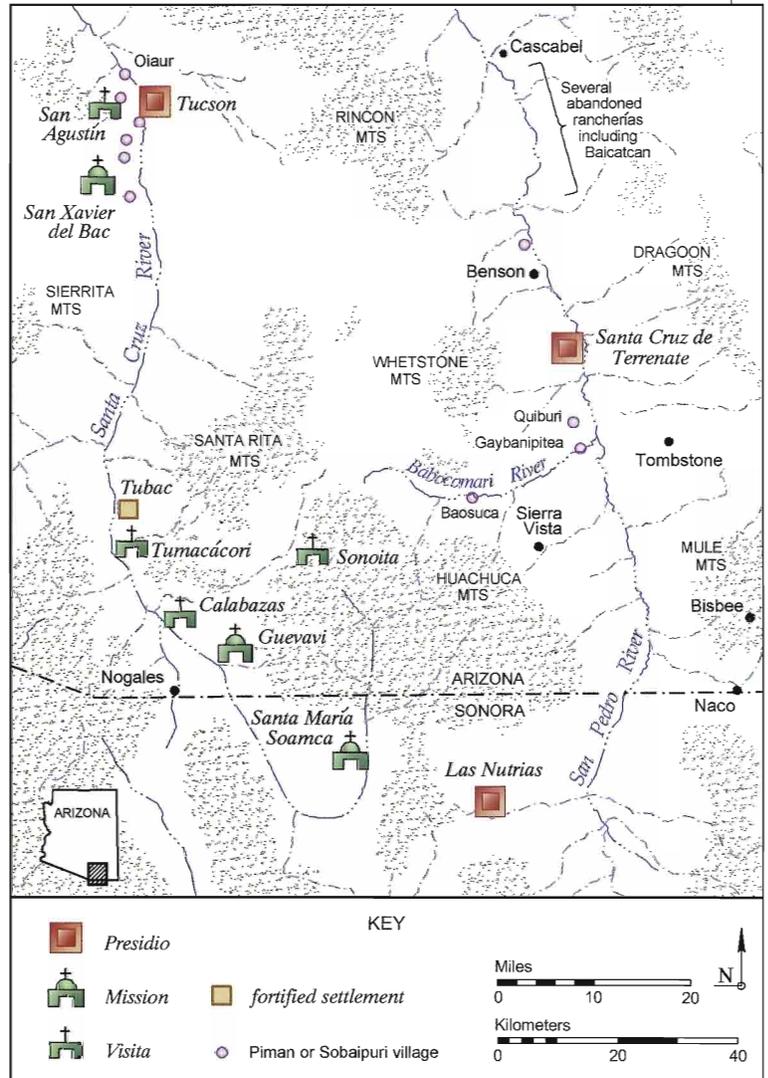
THE SHORT AND VIOLENT HISTORY of the Presidio of Terrenate began in August 1775, when an Irishman named Hugo O'Connor, who was serving in the Spanish military, selected a location on a terrace above the San Pedro River for a new military fortress. The Spaniards were reorganizing their network of presidios, rebuilding some and relocating others, in order to strengthen the northern frontier of Sonora, which was facing attacks by Native Americans, as well as possible encroachment by other European powers.

Terrenate was one of three presidios relocated along the northern frontier, filling the gap between the new presidios at Fronteras and Tucson. Although its location along a flowing river may have seemed ideal, O'Connor had selected a site that was very isolated, difficult to supply, and constantly threatened by the Apaches.

Soldiers stationed at Las Nutrias probably arrived at the new presidio in early 1776. Initially, 46 soldiers, 10 Opata Indian scouts, and the soldiers' family members lived at the fort. Later, additional troops were sent to the presidio, and the population may have peaked at 300. The men quickly built temporary structures in the plaza of the area planned for the fort. They then began work on more permanent structures, including an enclosing adobe wall with a rock foundation, a bastion at the southwestern corner of the fort, a commander's house, and a chapel. Construction was slow, because many of the men spent time guarding supply trains and horse and cattle herds.

By 1780, financial problems in the colony made buying basic necessities such as clothing, food, horses, and weapons difficult. Many of the soldiers lacked firearms and instead used lances when fighting the Apaches, who viewed the arrival of the soldiers as an encroachment upon their lands. Over a four-year period, the Apaches attacked repeatedly, killing two of the fort's commanders in the process. The constant raids and attacks on supply trains resulted in large casualties among the Spanish population. The morale of the soldiers plummeted, and it is likely that they were all pleased to see the fort abandoned in 1780, when the soldiers moved back to Las Nutrias.

Looking at the Presidio of Terrenate today, one has the impression of a site overgrown by mesquite and other desert shrubs, with a trail passing over buried archaeological features and winding among stabilized adobe walls and rooms. Its current appearance is even more overgrown than in a photograph taken by the Historic American Build-



Locations for the presidios at Tucson and Terrenate were selected in August 1775, as part of a plan to strengthen the northern frontier of New Spain and to provide greater protection from Apache raids. Sobaipuri village names on this map are from the 1690s, when Jesuit missionary Padre Eusebio Kino made many visits to the area.

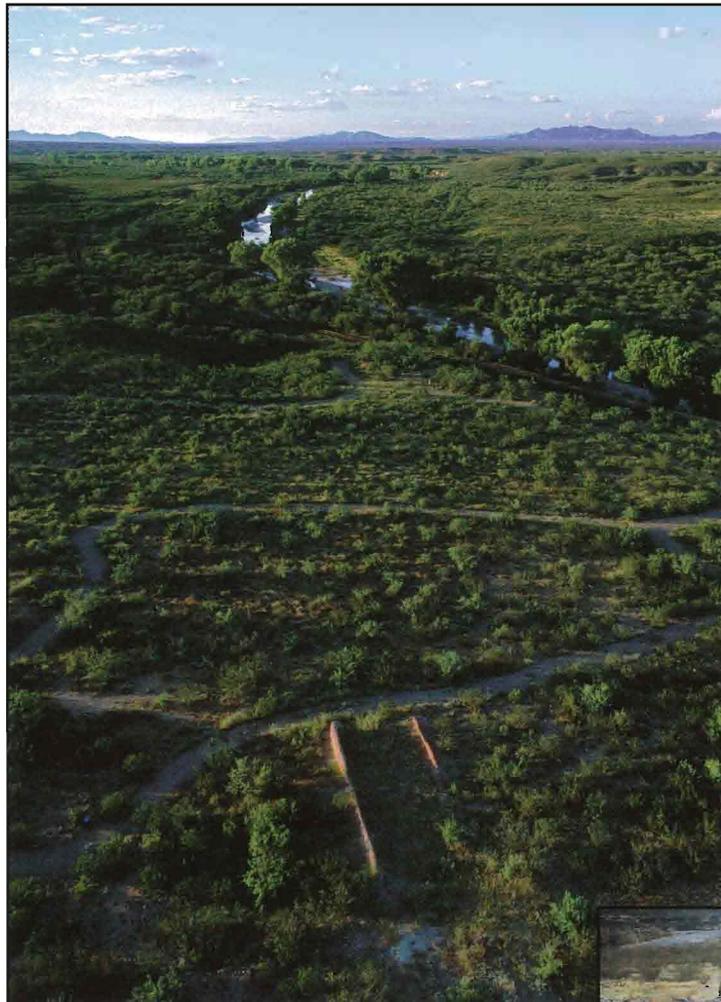
ings Survey in November 1937. The seemingly stable condition belies the effects of time, visitors, and archaeologists on this important site. The Presidio of Terrenate has been known to residents of the San Pedro River valley since it was built. The Sobaipuri Pima and Apaches who lived in the region were, of course, knowledgeable about the presidio—the Apaches to a disastrous degree. Following the Spanish abandonment of the Presidio in 1780, it fell into disuse and decay, but may well have served as a temporary camp for native peoples who still occupied the area, and later settlers and travelers.

Some indication of the Presidio's fate during the late nineteenth century comes from Charlie Montejó, who was

born in Contention City, Arizona, in 1884. Charles Di Peso, of the Amerind Foundation, interviewed Montejo in Tombstone in early 1951. As a child he remembered much of the presidio still standing, some rooms with intact roofs. His father, Ignacio Montejo, who moved to the area in about 1853 when he was 17 or 18 years old, had remembered that the Presidio was abandoned, but had been filled with “prisoners of Mexico.”

While Di Peso was excavating Terrenate in 1950 and 1951, a number of locals visited the site, which allowed Di Peso to learn more about the region’s history. A Southern Pacific Railroad (SPRR) foreman told Di Peso that there was a quarry near Terrenate until about 1940, which stored powder and other material on the site. The foreman also mentioned that a Phelps-Dodge sawmill foreman found a coin at Terrenate that was dated either 1665

or 1669, and that a woman had found a medallion on the site. Clarence Darnell, another SPRR employee, told Di Peso that he had dug up two “skeletons” in a room that were buried in a sitting position (a form of burial associated with the Sobaipuri Pima tradition). He also commented that other SPRR workers had “dug for skulls” on the site. Darnell told Di Peso that he had heard Mexicans were living at the Terrenate ruins in 1890. Artifacts reportedly taken from the site by collectors include a dagger, a gold cross, and an “idol.”



Santa Cruz de Terrenate (above) is accessible by a walking trail from a parking area that is about 1 km from the site. Di Peso’s excavations (right) focused on the temporary structures that housed soldiers and their families during construction of permanent quarters. The outer wall was completed, but only a portion of the permanent quarters was finished prior to abandonment of this location. The chapel walls appear in both photographs.

The site was vandalized several times while Di Peso was working there. However, disturbance to the site cannot be attributed only to looters and vandals: archaeology, too, is an inherently destructive process, albeit one that is controlled, carefully monitored, and documented. When Di Peso first began work at Terrenate, he had the site area bladed to remove remaining vegetation and some amount of overburden. Today’s field methods might be more thorough, including careful mapping and controlled surface collection prior to excavation, but the end result is the same: the site is removed from the soil and preserved in field notes, maps, photographs, and collected material remains. This form of “preservation” is only as good as the methods used to excavate and record the site.

Unfortunately, vandals continue to search for buried treasure at Terrenate even though it is on federally protected lands, perhaps because it has been advertised in several books and metal-detecting magazines.



Treasure hunters are bound to be disappointed, though, for no one has ever found buried treasure at any Spanish mission or presidio site in the United States. They will be even more disappointed if they are caught and prosecuted. Two hundred years of neglect have at least been offset by Bureau of Land Management oversight, and ongoing archaeological and historical research continues to reveal new insights into life at the Presidio. Even so, wise and attentive stewardship is necessary to maintain the integrity and research potential of this important site.

©Adriel Heisey

Courtesy of Amerind Foundation

Picturing the Past: Images, History, and Place in the San Pedro Valley

Chip Colwell-Chanthaphonh,
Center for Desert Archaeology

ADRIEL HEISEY'S PHOTOGRAPHS, like few others of the Southwestern landscape, seamlessly fuse the objects of history, culture, and nature's dazzling beauty. While these images spark our imagination, they are also a way to talk about history and the way each observer sees the environment through his or her personal and cultural lens. In a series of public meetings and private interviews, four individuals were asked about how they perceive and experience the places shown in Heisey's photographs of the San Pedro Valley.

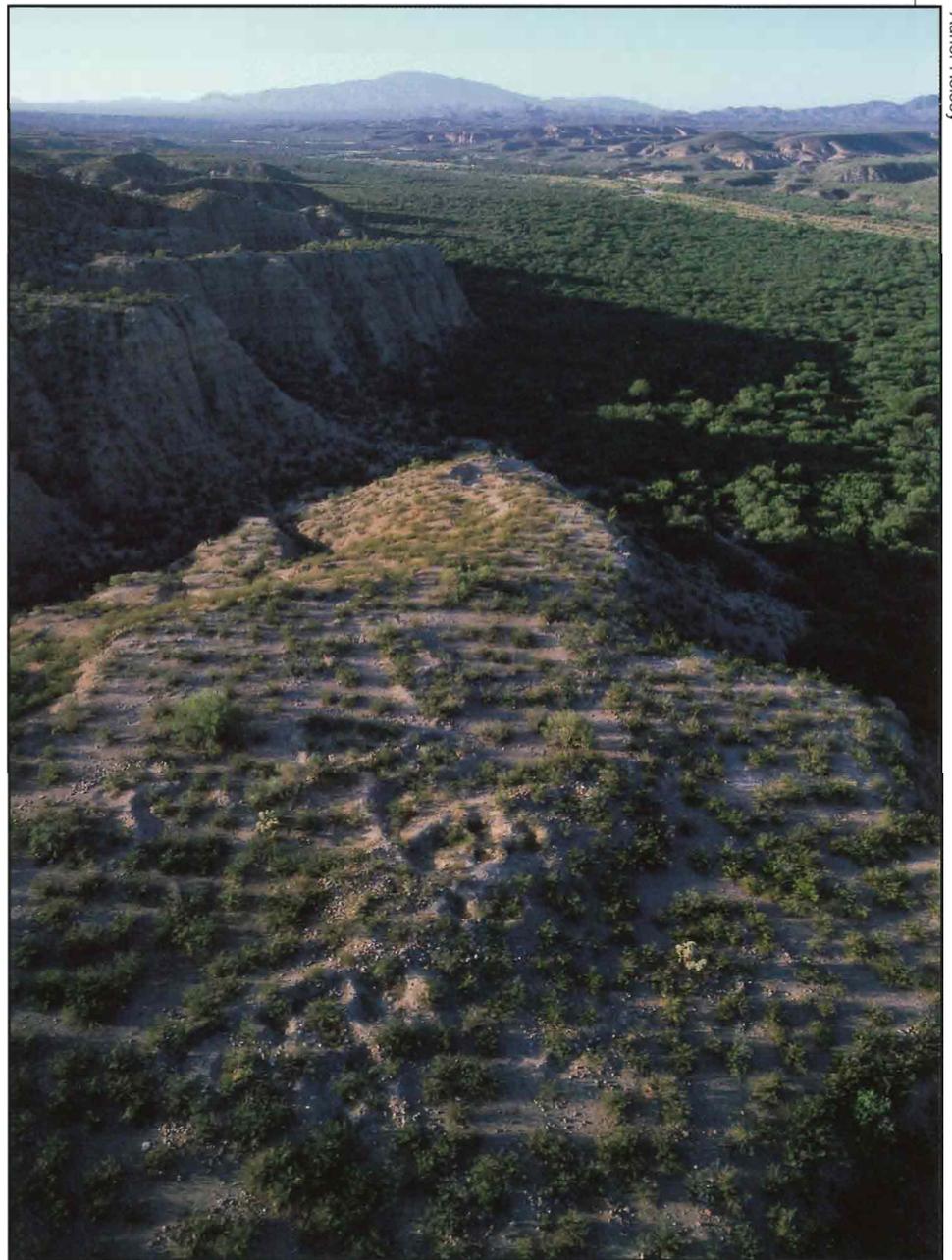
Daniel Preston is the former vice chairman of the San Xavier District of the Tohono O'odham Nation and currently works as a cultural resources consultant.

The first time I saw Adriel's photos, I thought that this is what an eagle must see from above. These images represent and give me the feeling of the time of our ancestors. Our traditional lands go east to New Mexico, north to Flagstaff, west to the Pacific, and south down in Mexico. The Hoo-hoogam, our ancestors, left their spirit in these lands. These are all of the buildings you see, and the elders pass on stories about them. But now for a very long time we've been put on "reservations" and kept away from these places. The Tohono O'odham own three million acres, but imagine all that we once had.

We have creation stories that say we are not above other things, but we are equal to them. Think of water. People move to a new area because of resources—beauty and water. In the desert, if you do not have enough water, you will die of thirst. But in the monsoons, if you have too much water, then you will drown. What we need then, is balance.

Our traditional lands are where you live, and where we no longer are. People now living on this land often ask

me how best to take care of it. I say that each of us has that responsibility—to take care of the place where we live. Those who once lived here, their spirits remain. I appreciate people being aware of how their actions affect other people. It's good to see some areas left that are jewels, for people do not know what they have until it is gone. And once it is gone you can't bring it back.



The platform-mound village of High Mesa is located above towering cliffs and overlooks the broad San Pedro River floodplain. Vandals have damaged the platform mound (mid-foreground), but the site is generally in good condition.

Adriel Heisey

William H. Doelle has been a practicing archaeologist for more than three decades. He is president of the Center for Desert Archaeology.

I am a scientist by nature and an archaeologist by profession, so I cannot help but see how these images convey time and history. About 12,000 years ago humans were making a living in the San Pedro Valley by hunting big



©Adriel Heisey

A large ballcourt (center foreground) and a small court (obscured by vegetation) mark this extensive pre-Classic village. The site has been protected by many generations of the Smallhouse and Ronquillo families.

game—killing mammoths and bison. Much later, some 4,000 years before the present, corn, beans, and squash were introduced from Mexico. Although this happened a long time ago, these lives laid the foundation for future cultures.

In the picture of Reeve Ruin (see page 9), which the Amerind Foundation excavated in the 1950s, you can see the site perched high off the river bottom, and surrounding the site is a thick defensive wall. The artifacts excavated here tell us that the people who built this ancient village migrated from northern Arizona 800 years ago. You wonder what it would be like to pick up your entire life, trek across the desert, and settle in an entirely new place. Their home high up off the river gives us just a glimpse of their lives.

You often think of archaeologists down on their knees, using a trowel to pry away the earth from a fragment of pottery or stone. But these photographs show that although we often do this, we also need to step away and gaze at the larger landscape. And I am truly impressed by how orderly and structured is the human impact. With Heisey's images you can pick out all the things, and see how large, yet how connected it all is.

Andrew Smallhouse is a fifth-generation rancher and farmer on the San Pedro River. His family has worked closely with archaeologists for decades.

This is where I live. My great-grandparents first came to the area in 1884. They came for the same reason many Native American people came: climate, water, and the natural resources. The ecology and landscape has changed a great deal. Seeing these images is difficult, because we care so much about the land; we live and depend on it. We work the land every day, as Native Americans used to work the land. We're growing some of the crops that were grown by Native Americans.

Lots of these ruins are on private land, and we're losing private property more and more. We believe in preserving all these sites. Archaeologists probably come across many people who don't want others to come on their property, and it's probably because of these issues of losing land.

I'm fascinated with the history of Native Americans because it tells about how to manage the land, and what's changed over the years. Even in history 800 years ago we hear about people fighting for the land, as people are fighting now. The San Pedro was a special place; otherwise, why else would they fight?

Adriel Heisey has been flying an ultralight aircraft since 1990. His award-winning photographs have been shown across the United States.

Even just a few feet off the ground the world is seen in a different way. The magic of these photos comes from escaping specificity. They make you look in new directions—100 or 200 feet up, you cannot see the landscape as you usually do. I spend much time trying to find the photo, to take a cupfull of time and freeze it in an image. When I'm up there it's very tense because my life is on the line. These photos, I bring them back because they allow for contemplation.

I am deeply troubled when I fly because there are no secrets, no concealments in the air. Everything and anything that we aspired to do is nakedly scrawled on the landscape. Flying over the land, you are confronted with

all of it. You can see the things that are well thought through and things that are just raw scratches for gain of whatever sort could be had.

I think the yearnings and strivings of mankind are something that has to be reckoned with. Humans are very sincere, but they are often very desperate in a desert. Living here, I cannot distance myself from them. So then it becomes very fascinating as to how other people addressed those same problems, although they had different perspectives of the world and resources than we do today. And the fact that what they have left behind continues to exist within our midst is a very powerful idea that I can't get away from. I feel that these "leavings" really are among us as we go about our daily lives even though they are not recognized to a large extent. So, in one word, my aim is—awareness.

Mignon Elliott, 1923-2003

WHEN I FIRST MET MIGNON ELLIOTT, she was already using a walker to get around. It was a fairly high-tech walker, with wheels and hand brakes. The combination of this technology, the loving care of her husband Harold, and her own strong spirit meant that Mignon was in no way handicapped.

The Center is a young institution, so we must invest extra energy to show potential donors that we are worthy of their trust. As we worked through the details of the conservation easement that the Elliotts donated to the Center, I had many opportunities to get to know Mignon. One day, Center archaeologist Patrick Lyons and I carried the entire excavated collection from the Elliott site out to Cascabel to allow Mignon to see what was found and to discuss its significance. Mignon could have chosen not to sign a deed of gift allowing the collection to go to the Arizona State Museum. Except for "funerary objects" associated with human burials, Arizona law stipulates that artifacts belong to a landowner.

Instead, Mignon listened to our words and decided that she would retain one plain, one corrugated, and one Gila Polychrome sherd. Those three sherds made the story of the past tangible to her. For the many years that Mignon and Harold had protected the sites on their property, that seemed a remarkably fitting and generous choice. Mignon Elliott, we will miss you. Harold Elliott, we have some understanding of your loss.

William H. Doelle
Center for Desert Archaeology

See the Center for Desert Archaeology website for more information: <<http://www.cdarc.org>>

THE CENTER FOR DESERT ARCHAEOLOGY, a private, nonprofit organization, promotes stewardship of archaeological and historical resources through active research, preservation, and public outreach. The Center is a 501(c)(3) organization and is supported through donations, memberships, and grants from individuals, foundations, and corporations. Center members receive an annual subscription to *Archaeology Southwest*, substantial discounts on other Center publications, opportunities to participate in archaeological projects, and invitations to special lectures and events. For more information or to join, contact Linda Pierce, Programs Manager, at 520.882.6946 or lpierce@cdarc.org.

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Back Sight

A “SENSE OF PLACE” is a deeply felt relationship between people and their natural or built environment. Our San Pedro Project has helped me realize how archaeologists develop a special archaeological sense of place for their research area.

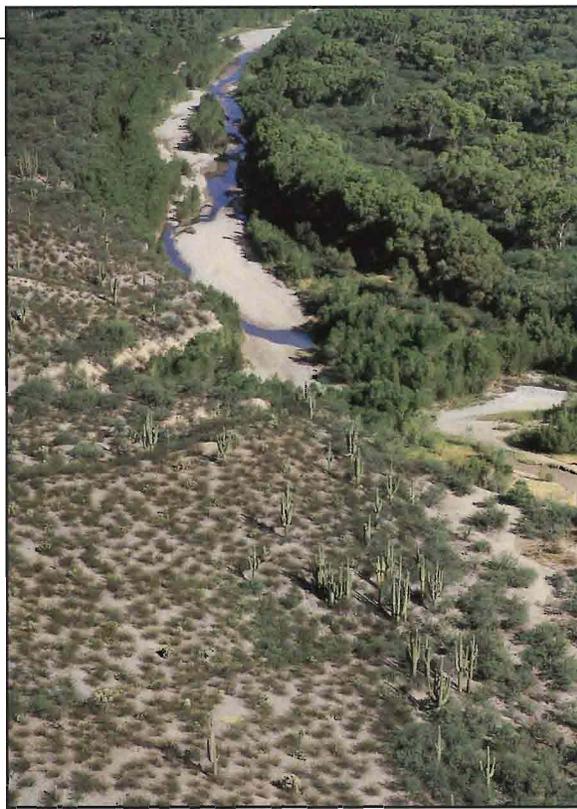
Relationships with people play a central role in building that archaeological sense of place. Gaining permission to access private property requires building trust. Both surveys and excavations create close relationships with large numbers of volunteers. Even analysis and publication depend on team efforts. All of these steps require time to complete, and relationships grow with time.

In the San Pedro Valley I feel fortunate to have played an additional role. I have introduced many people to the archaeology of the area through dozens of day trips. I learn something new from each visit—from the people with me and from gaining one more chance to walk over sites and their surroundings. I emphasize at the outset of each tour that it will take the entire day to start to get the feel of the valley and its history.

One very special visit to the valley involved Daniel Preston and his partner Renee Red Dog. Daniel grew up at San Xavier on the Tohono O’odham Reservation. He was involved with archaeology and archaeologists for many years through his role as vice chairman of the San Xavier District. Daniel had never visited the San Pedro Valley, other than passing through on the highway.

Near the end of our day, by the Davis Ranch site in what I find to be the most peaceful and

back sight (băk sīt) n. 1. a reading used by surveyors to check the accuracy of their work. 2. an opportunity to reflect on and evaluate the Center for Desert Archaeology’s mission.



San Pedro essence—saguaro, cottonwood, perennial water.

©Adriel Heisey

special part of the valley, Daniel asked if he could say a prayer. He lit a piece of wild sage collected from northern Arizona and offered a prayer to the four directions. We turned with him to face each direction. The prayer was in O’odham, so the individual words did not convey their meaning to me. Instead, I had to create my own meaning, drawing from the setting, the sounds of O’odham, the smell of the sage, and my friendship with Daniel. It was a special experience that still resonates

today. Daniel gave me the remnant of the sage that he burned, and it sits in a small shrine on my computer as I type this. It still retains some of its pungent smell and stimulates my memory of the prayer ceremony.

Helping others connect with the rich and diverse landscapes of the Southwest is a critical part of the mission of the Center, and *Archaeology Southwest* is the primary vehicle for doing this. We seek out authors who have built deep connections with the places they write about. We hope that their passion for the places they know so well shines through and inspires others to deepen their connections to their surroundings. The San Pedro Valley has touched me and all Center staff and members who have worked there. So this issue is special to all of us.

A handwritten signature in black ink that reads "William H. Doelle".

William H. Doelle, President & CEO
Center for Desert Archaeology

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