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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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In the Mountain Shadows

The continuing story of an ancient southern Arizona community

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about us

Archaeology Southwest explores and protects the places of our past across the American Southwest and Mexican Northwest. We have developed a holistic, conservation-based approach known as Preservation Archaeology. By looking forward and acting now, we are achieving protections and creating meaningful connections between people and history that will benefit generations to come. Learn more at www.archaeologysouthwest.org.

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ONLINE EXCLUSIVES:

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www.archaeologysouthwest.org/asw27-1

Visit the website of Catalina State Park at http://azstateparks.com/parks/CATA/.

Cover image: Artist's visualization of a moment in time at Honey Bee Village, a Hohokam settlement about four miles northwest of Romero Ruin and generally contemporaneous with its peak of settlement between about A.D. 850 and 1000. Daily life would have looked much the same at Romero Ruin, with ramadas and clusters of pithouses. Recent fieldwork at Honey Bee and nearby sites helps us understand Romero Ruin in the context of a larger community of Hohokam settlements in the Cañada del Oro valley. Image: Robert B. Ciaccio. Cover design: Kathleen Bader.



Archaeology Southwest

Exploring and protecting the places of our past

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In the Mountain Shadows: The Continuing Story of an Ancient Southern Arizona Community

WILLIAM H. DOELLE, ARCHAEOLOGY SOUTHWEST DEBORAH L. SWARTZ, DESERT ARCHAEOLOGY, INC.

For thirty years now, Catalina State Park has welcomed anyone who seeks quiet communion with the surprising abundance of the Sonoran Desert and its rugged Santa Catalina Mountains. As you gaze across the land or up at the peaks, you sense a timelessness, and maybe a feeling of belonging, that invokes something of what life was like here for many centuries. Yet, the greatest changes

probably occurred over these past three decades, making this place that much more special, and essential.

In 1996, we published Archaeology in the Mountain Shadows: Exploring the Romero Ruin, a booklet that shared information about the archaeology of the park in the context of the immediate ecology and in terms of what we knew then about life in the northern Tucson Basin in the distant past. Specifically, the booklet interpreted Romero Ruin for park visitors and served as an accompaniment to the interpretive trail we helped develop during two sessions of archaeological fieldwork.



The 2013 wildflower season at Catalina State Park, which celebrates its thirtieth anniversary in May. PHOTO: MARGIE CASWELL, COURTESY OF THE ARIZONA STATE PARKS

Our understanding of what life was like for the people who lived in the Tucson Basin between A.D. 500 and 1450 has expanded since then. Archaeologists call these people the Hohokam, and the Romero Ruin tells part of their story, while also reflecting a bigger picture of Hohokam life. The thirtieth anniversary of Catalina State Park provides a timely opportunity to revise *Archaeology in the Mountain Shadows* in light of what we have learned about the Hohokam of the Tucson Basin since 1996, and as a special issue of our flagship publication, *Archaeology Southwest Magazine*.

Articles in this issue include updated versions of the original content, as well as new information about the Romero family (page 9), the Sutherland Wash Rock Art District (page 14), and Romero Ruin in the context of other Hohokam communities in the Tucson Basin (page 17). Bill Doelle provides a look at how our work at the park reflects our early commitment to Preservation Archaeology (page 18), and he considers the meaning and value of Catalina State Park, today and tomorrow (pages 19–20).



The Hohokam community at Romero Ruin had neighbors that included the community at Honey Bee Village. MAP: CATHERINE GILMAN

We dedicate this issue to Catalina State Park and all of its stewards—staff, volunteers, and mindful visitors alike. We hope that it serves visitors as well as the previous edition, and we hope that it encourages readers to discover, or rediscover, Romero Ruin.

What Is All around Me? Ecology and Archaeology of Catalina State Park

The terrain within and surrounding Catalina State Park is quite irregular, with numerous ridges and valleys. The road through the park lies in the floodplains of the Cañada del Oro and Sutherland washes, the two largest drainages in the park. On both sides of the road, at varying distances, the steep banks of these washes crest in flat ridgetops. Smaller washes coming down from the mountains carve small, fingerlike ridges.

Common plants in this Lower Sonoran Life Zone include mesquite, paloverde, and acacia trees, crucifixion thorn, ocotillo, and cacti such as cholla, prickly pear, and saguaro. Large desert willow, Arizona sycamore, Arizona ash, and native walnut trees shade the banks of the washes. Numerous small shrubs and annual grasses, some of which are nonnative, carpet the ground.

Many different animals inhabit the park, and others simply pass through on their way to the cooler, higher elevations of the Santa Catalina Mountains. Human visitors commonly see jackrabbits and cottontails, mule deer and white-tailed deer, javelina, coyotes, ground squirrels, and packrats (woodrats), as well as various birds, lizards, and snakes. Rarer are mountain lions and black bears. Bighorn sheep seem to have disappeared by the late 1990s, but a planned restoration effort should go forward in late 2013.



Top: A stand of healthy saguaro cacti at Catalina State Park. Saguaros produce edible fruits that are harvested in midsummer. PHOTO: COURTESY OF THE ARIZONA STATE PARKS. Bottom left: Antelope jackrabbit (Lepus alleni) at rest. PHOTO: PAUL AND JOYCE BERQUIST ©1978; COURTESY OF THE PHOTOGRAPHERS AND THE ARIZONA-SONORA DESERT MUSEUM. Bottom right: Ideal harvest time for agave is just before the plant sends up its inflorescence (flowering stalk). PHOTO: MELISSA KRUSE-PEEPLES.

a small room or a petroglyph pecked into a boulder. Other small sites consist solely of mortars or grinding areas for processing plant foods.

By 1996, when the first edition of this text appeared, archaeologists had intensively inspected about one-third of the park, centered on the Romero Ruin. The Arizona State Museum had site files on at least

thirty-four ancient sites, three sites with ancient and historic remains, and one historic site within the park boundaries. Today, the Romero Ruin remains the only site that has been excavated, through our limited testing program.

Although archaeologists sometimes investigate one site at a time, we always understand that the information we gain is part of a much larger picture (see pages 14–17). Archaeologists interpret Catalina State Park sites in the context of other sites around the Tucson Basin,



The vegetation of the Sonoran Desert around Tucson has been stable for the past 6,000 to 8,000 years. Because some plants and animals were so well adapted to this desert environment, they served as relatively unfailing sources of food, clothing, and building materials for the people who lived here.

The traces of those people are evident at a wide variety of archaeological sites in the park. Some are small, temporary camps where people gathered foods and other resources, and others are large villages where people lived for generations, such as the Romero Ruin. At some of the smaller sites, our only clue that people were there might be the cobble foundation of



an area roughly defined by the surrounding mountain ranges the Santa Catalina, Tortolita, Tucson, Sierrita, Santa Rita, and Rincon mountains. These natural boundaries allow for a bigger, and better, understanding of life in the distant past than do arbitrary park boundaries.

ONLINE EXCLUSIVE

To see a digital copy of archaeologist Emil W. Haury's original, handwritten site card for the Romero Ruin, which he completed in 1937, visit www.archaeologysouthwest.org/asw27-1.

What Happened Here? The Tucson Basin through Time

Almost 100 years of archaeological investigations in southern Arizona have cumulatively identified telling changes in flaked stone tools and pottery decoration through time. Because of this documentation, the stone tools and pottery sherds we find on or below the ground surface often reveal the approximate age of a site.

The earliest people to live in this area, from approximately 11,500 B.C to A.D. 50, did not use pottery. We recognize their "footprints" through the flaked stone artifacts they left behind, particularly certain styles of projectile points (see page 11) or spear points that people used at specific times. Such artifacts are associated with the Paleoindian period, dating from 11,500 to possibly 7500 B.C, and the Archaic period, dating from around 7500 to 2000 B.C. In these times, people hunted game and gathered wild plants.

During the subsequent Early Agricultural period (2000 B.C. to A.D. 50), people across the region began to settle in villages and to cultivate maize (corn). Famed twentieth-century archaeologist Emil Haury interpreted information from Snaketown, a site on the Gila River, to indicate that Hohokam represented a migration of people from Mexico around 300 B.C. In Haury's model, these people brought with them new crops, irrigation, and distinctive items of material culture.

More recent work along the Santa Cruz River, especially at the site of Las Capas, just northwest of Tucson, and around Sentinel Peak ("A" Mountain), just west of downtown Tucson, has revealed a dramatically different story. We now know that people were growing maize here around 4,000 years ago. At Las Capas, people built sophisticated and extensive irrigation systems about 3,000 years ago. The earliest known irrigation canals in the Tucson Basin are 3,500 years old.

In the Early Ceramic period and the early Hohokam era, people relied on agriculture, continued to use stone tools, and began to create and use pottery. For four or five centuries, across the southern Southwest, this pottery was plain and brown. The people known to archaeologists as the Hohokam initiated (circa A.D. 500) production of distinctive red-on-buff and red-on-brown painted pottery.

The Hohokam lived in communities in and around the areas now known as Phoenix and Tucson. Their influence extended across much of the center of the state, however, from Gila Bend to the New Mexico border and from the Mexican border almost to Flagstaff.

For the most part, sites within Catalina State Park date to the pottery-making times of the Early Ceramic period and the Hohokam era.

Food for Thought...

In Archaeology Southwest Magazine, when we want to speak about eras before—or even the centuries just before—Europeans entered the Southwest, we use the words "ancient" and "precontact." Archaeologists sometimes refer to "prehistory" and "prehistoric" times, but we recognize that these terms might imply that descendant Native peoples do not have history, when, in fact, their histories have been passed down through narrative and ceremonial traditions.



What Is Romero Ruin, and What Is It Not? An Overview

One of several large Hohokam villages in the Tucson Basin, the Romero Ruin is also the largest site in Catalina State Park. At fifteen acres, it spans the entire width of the ridge upon which it sits, and stretches about one-quarter mile from the ridge tip back toward the Santa Catalina Mountains.

A large precontact agricultural field system extends for more than half a mile from the southern end of the site toward the base of the mountains. It contains two cobble-masonry fieldhouses, as well as numerous rock piles and rock terrace borders. These stone features trapped moisture and controlled soil erosion, essential strategies for desert farming. Crops grown in these fields and in the



In 1910, amateur photographer Robert H. Forbes took the earliest known photographs of the Romero homestead. PHOTO: COURTESY OF THE ARIZONA HISTORICAL SOCIETY, PHOTO NO. 5471

A short newspaper article from March 6, 1875, also mentions the site:

floodplains of the Cañada del Oro and Sutherland washes provided much of the food consumed by people who lived here.

Based on the decorated pottery we found at the site, we determined that people lived at this settlement continuously from A.D. 500 to 1450. The settlement was most populous between about 850 and 1000. Before and after that time, a smaller population lived primarily at the wider, northern end of the site, closer to Sutherland Wash, which probably flowed year-round at that time.

A little more than four centuries after the Hohokam left this place, visitors began recording—and speculating about—the existence of the ancient settlement, and members of an old Tucson family came to live here briefly. Maps from the late 1800s identify the Romero Ruin as "Pueblo Viejo," or ancient village.

[Francisco] Romero and [William] Zeckendorf have within 10 days discovered and located what presents all the superficial proofs of a most valuable gold and silver vein on the eastern [sic—western] slope of the Santa Catalina Mountains only about 12 miles northeast of Tucson....within 2 miles are the ruins of a town once of considerable size. The country is strewn with pottery and other relics. The embankments of a reservoir are there clearly outlined.

Romero probably built and inhabited the historic masonry structures on the site at that time (see pages 8–9).

Several historical figures described the site in writing: colorful diarist George O. Hand (1830–1887), local historian Donald W. Page (1884–1958), and Ellsworth Huntington (1876–1947), a geographer and climatologist from Yale University. Page and Hand conveyed local folklore and beliefs about the earlier settlement, and Huntington provided a scientific view of the site.

Page's papers indicate that, during the first two decades of the 1900s, people believed Spaniards had settled at the Romero Ruin. Some of the folktales circulating at that time identified the site as Cirú, a mythical early Spanish mission that had succumbed to an Apache attack. Others described it as a Spanish gold-mining town with a church and a fortune in hidden gold, and still other tales made the Spanish mission and the mining town one and the same.

Unfortunately, such tales of buried gold encouraged people to dig in search of it. Today, we know that there was never a Spanish mission or a mining town at the Romero Ruin. Signs of the damage wrought by early treasure hunters remain, however (page 8).

Huntington wrote the first scientific description of the site in 1910. He had visited many large precontact sites in the Tucson area, and he was arguably more objective than local residents. He spoke with locals, examined the site, and thoughtfully weighed the evidence, concluding that "the ruins antedate [predate] the Spanish and may be much older." He photographed and described the surface remains of the precontact settlement and the Romero homestead. He also documented the two ballcourt depressions, which he, like the earlier newspaper account, interpreted as reservoirs (see pages 13–14).

Who Lived Here, and What Do We Know about Them? The Historic Remains

Around the turn of the twentieth century, most of the country around Catalina State Park served as ranch land. Important topographic features in the area bear the names of historical ranchers: Pusch Ridge, Romero Canyon, Sutherland Wash.

A range of documents indicates that Francisco and Victoriana Romero lived at the Romero Ruin after the mid-

1800s. They built several structures right on top of the Hohokam settlement, within the wall that had enclosed the latest phase of the ancient village.

In 1928, Fabian Romero Jr. claimed that his grandfather Francisco had built this wall. We determined that the building techniques used in the enclosing wall and the Romero dwellings were quite different, however. In fact, because only the lowest stones of the enclosing wall were still in place during our excavations, it seems likely that Romero actually used stones from the enclosing wall to build the historic structures.

Five historic structures lie within this outer wall. One of the collapsed buildings appears to be two adjoining rooms, and the other three buildings appear to be single rooms. When we excavated one of the structures, we could see the damage wrought by seekers of Cirú and its fabled stash of gold (see page 7). Nevertheless, we found a fragment of wood, pieces of four square nails, some scrap metal, and, on the floor of the structure, a .50/70 U.S. rifle cartridge that postdates the Civil War. Remains of a corner fireplace are still visible in 2013.

We were surprised that we did not find many historic artifacts during our surface collections and archaeological excava-



Artist's rendering of what the corner fireplace might have looked like when Francisco and Victoriana lived here. IMAGE: ROBERT B. CIACCIO

tions. This apparent lack suggests the Romeros did not live here very long. Additional historic trash might lie in pits and in the remains of outhouses, but we did not locate such deposits.

We learned more about the Romero family and the time in which they lived through old newspaper articles, census reports, and diaries. Recent archaeological and archival work by historical archaeologist J. Homer Thiel regarding the remains of the Romero's homes in downtown Tucson has revealed additional information about the family and its history (see page 9).

Francisco and Victoriana's son, Fabian Sr., inherited the ranch and expanded it to 4,800 acres, but he never inhabited his parents' dwellings at the Romero Ruin. Instead, he built a new ranch house across Sutherland Wash from the original homesite, at the base of the ridge. The remains of this house also lie within the boundaries of Catalina State Park.

Francisco and Victoriana Romero

Francisco Romero was born to José Romero and Soledad Saenz [Saiz] on October 4, 1822, in the Presidio San Agustín del Tucson, Sonora, Mexico. His great-grandfather had come to Tucson with a Spanish military expedition, making Francisco a fourth-generation Tucsonan.

At some point before 1853, Francisco married Victoriana Ocoboa (born 1833 or 1834), a daughter of Alvino Ocoboa and Dolores Soza of Tucson. Victoriana's brother Tomás served as a Presidio soldier until Indians killed him in 1848.

Francisco served as a scout for the Mexican Army (1851), and the last roster of Tucson Presidio soldiers (1855) includes his name, with the rank of Private. In 1860, the census recorded him as a farmer.

The 1862 Field Map suggests that Francisco owned a field adjacent to the terrace above the eastern floodplain of the Santa Cruz River, immediately west of the northwestern corner of the Tucson Presidio. An 1862 Map of Tucson, drafted by John Mills Jr., shows a house next to the field that belonged to Francisco Romero. Church and census records indicate the Romero family lived in Tucson through the 1860s.

After losing a great many livestock to Apache raiders in 1869 and 1870, Francisco briefly moved to Sonora. In January 1871, he was among the vigilantes who murdered Apache people living at Camp Grant northeast of Tucson. Records indicate that Romero was buying and selling property in Tucson in 1872 and 1873.

A newspaper account of Francisco's and Zeckendorf's mining activity (see page 7) suggests that Romero and Victoriana lived at Romero Ruin around 1875. Donald Page's (see page 7) 1928 interview with their grandson, Fabian Jr., gives us a sense of life at the ranch:

He [Francisco Romero] lived there alone with his wife and was apparently in a more or less constant state of warfare with the Apaches, as young Romero says that he generally began the day by riding after the Indians and, after a



Francisco and Victoriana Romero; their obituaries remembered them as pioneer citizens of Tucson. PHOTOS: COURTESY OF THE ARIZONA HISTORICAL SOCIETY, NO. 27340

long range rifle duel, getting back a few head of his herd of 30 cattle that the Apaches had managed to run off during the night. His armament consisted of a brace of cap and ball pistols and a rim fire .44 carbine that he managed to secure from the States. This weapon gave him an immense advantage over the Apaches who were armed with bows and arrows and flint-locks, as the elder Romero craftily stayed out of range of their arms and generally managed to pick off one or two of their number, and in time the Indians came to entertain a great fear of him and his rifle. However, he did not escape unscathed as his nephew tells me that the old man's body was seamed by scars left by arrow and lance wounds.

These Apache raids may have compelled the Romeros to return to Tucson. Francisco was a registered voter in Pima County from 1876 onward. He continued farming along the Santa Cruz River, on the western side of Flowing Wells, and buying and selling property. In June of 1880, the family was living at what is today the corner of Main Street and Paseo Redondo, in a home they probably had built in the early 1870s, to replace their dwelling from the early 1860s. Francisco died on September 11, 1905, and Victoriana passed away on January 19, 1908. The house was demolished by 1909.

—J. Homer Thiel

Who Lived Here, and What Do We Know about Them? The Ancient Remains

Our archaeological investigations at the Romero Ruin consisted of three short field seasons in the late 1980s and early 1990s. In 1987, we mapped surface remains and systematically collected a sample of artifacts from the entire surface of the site. From these artifacts, especially from sherds of decorated pottery, we were able to determine that people had lived at the site for almost 1,000 years, from A.D. 500 through 1450 (see page 6), and that these people were part of the archaeological tradition we call Hohokam.

Our surface survey and mapping helped us understand

how the settlement was organized at different times. At first, Romero villagers seem to have lived in a typical Hohokam settlement arrangement. We know from decades of archaeology at Hohokam sites that lineage leaders built large residences with entrances oriented toward the central open space in the village, the plaza. A leader's relatives and their families lived in smaller houses set slightly farther away from the plaza and behind the leaders' houses. People discarded refuse in trash scatters and mounds just a bit beyond the residential area (see page 12). Villagers established cemeteries within the plaza area, and rever-



Map of the Romero Ruin, showing what visitors may see from the trail. MAP: CATHERINE GILMAN



Within the walls of a newly discovered room was a whole mortar, probably used to grind mesquite pods. Although the mortar was broken, the small rocks supporting it suggested that it had been used in this location. The mortar probably broke when the walls collapsed on top of it. PHOTO: DEBORAH SWARTZ

ence for village ancestors probably provided a critical connection to place. Such veneration helped substantiate residents' claims to their village and its surrounding territory, where they cultivated fields, gathered wild resources, and hunted game.

Around A.D. 750 or 800, village populations increased throughout the Hohokam region, and a major new ceremonial complex focused on ballcourts swept across communities (see pages 13–14 and page 17). These large oval depressions are usually surrounded by earthen embankments. People smoothed and sometimes even plastered the floors and sloping walls of these features, and archaeologists occasionally find stone markers at the ends or along the centerlines of the courts. Generally, villagers built ballcourts on one side of the village plaza. There are two ballcourts at the Romero Ruin, a larger, probably earlier court at the edge of the settlement, and a smaller, probably later court nearer the village plaza.

This basic settlement layout held at the Romero Ruin until about A.D. 1000, when villagers began dispersing to smaller settlements nearby, again reflecting similar developments in other Hohokam communities. Those who remained lived at the northern end of the site, and by 1075, they stopped using the ballcourts.

In the 1200s, or perhaps as late as 1300, residents were again living in the area of the "old" village, and they enclosed the heart of their settlement with a continuous rock wall (see page 12). Archaeologists find these compound walls surrounding the remains of aboveground structures at contemporaneous sites throughout the Hohokam region.

Recognizing these residential patterns at the Romero Ruin helped us estimate village population through time: as many as 125 to 200 people may have lived in the village at the peak of settlement, around A.D. 900. Try to envision *that* as you follow the park's interpretive trail!

Planning for this interpretive trail provided our first opportunity to collect data from buried deposits at the site. Our excavations sampled smaller areas of the site, but more intensively. In 1990, with the help of volunteers, we excavated a few areas along the course of the trail in order to recover information before con-

struction disturbed buried remains. In 1993, we exposed and stabilized wall segments now visible from the trail. During that work, we investigated two of the trash mounds, several cobble masonry walls and rooms of the Hohokam settlement, and one of the historic structures of the Romero homestead (see pages 8–9).

The Artifacts

The artifacts we recovered were just what archaeologists expect to find at a Hohokam site. The most common artifacts we found were pieces of broken pots, which archaeologists call sherds or potsherds. The second most common objects were flaked stone artifacts, which include the leftover flakes and shatter from making tools, as well as the tools themselves.

Many of the tools were projectile points. We recovered most of these through excavation, but we did find a few on the

Food for Thought...

Stone projectile points are popularly called "arrowheads," but although all arrowheads are projectile points, not all projectile points are arrowheads. The earliest inhabitants of the Southwest (from roughly 11,500 to 7500 B.C.) affixed stone points to long shafts to make spears that were thrust or thrown by hand. Around 7500 B.C., people began mounting the points onto lighter dart shafts, and they used a specially made stick known as an *atlatl* to launch them with great force. Darts and atlatl remained the primary weapon system in the Southwest until the region's inhabitants adopted bow and arrow technology, most likely sometime between A.D. 350 and 500. Archers relied on simple self bows until the introduction of the more powerful recurved bow around A.D. 1200, which coincided with an increase in conflict in several areas of the Southwest.

ground. The majority of these points date to the period between A.D. 700 and 1100.

Archaeologists use the term "ground stone" primarily to refer to stones worn smooth from grinding edible plants into flour. At the Romero Ruin, we recovered manos, metates, mortars, and pestles. Manos are hand-held stones, usually flat and rectangular, used for grinding material against the larger, stable metate. Romero's residents ground corn, mesquite pods, and paloverde seeds for food. We also found another type of ground stone—small, smooth stones that potters used to polish the surfaces of vessels before firing.

Archaeologists usually find

marine shell at Hohokam sites, and the Romero Ruin was no exception. The Hohokam traveled to the Gulf of California and the coast of California, or traded with people from those areas to obtain shells, which they then made into jewelry. We collected more than 180 pieces of shell during three field seasons at the Romero Ruin. Most were pieces of bracelets made of *Glycymeris* shell from the Gulf of California. We also found pendants, rings, and beads made of shell.

The Compound Wall

Excavations along the interior and exterior of the compound wall exposed cobbles from the fallen wall. Along some sections

Five bracelets made of Glycymeris shell. Twenty of these quintessentially Hohokam objects were found in a cache in the Tucson Mountains. PHOTO: ARTHUR W. VOKES, COURTESY OF THE ARIZONA STATE MUSEUM, UNIVERSITY OF ARIZONA, NO. A-14919 of the wall, we found enough cobbles to rebuild a wall six feet high; along other sections, we found very few rocks. Francisco Romero may have removed fallen rocks from these areas and used them to build his homestead (see page 8).

These limited excavations revealed two walls not visible on the surface. Together with a segment of the enclosing wall, they formed a small room four feet long and at least three feet wide inside the compound (see page 11). Other buried walls almost certainly exist, forming rooms that have not yet been discovered.

The Trash Mounds

Trash mounds are a rich source of information about life in the distant past. Just as our garbage shows traces of what we eat and how we live, so too does ancient garbage provide information about its producers. We investigated two of the seventeen trash mounds at the Romero Ruin: the largest mound and a mound beneath a segment of the western compound wall.

Animal bones found in these two mounds had come from deer, bighorn sheep, pronghorn antelopes, jackrabbits, cottontail rabbits, quail, and reptiles. The predominance of jackrabbit bones suggests that they were an especially important source of meat for the people who lived here.

Because of the small size and fragility of plant remains, we recover them through a special process. In the laboratory, ana-



Volunteers contributed greatly to our work at Romero Ruin. Left: Volunteers carefully exposed an extensive area of fallen cobbles. Right: After they removed rocks that clearly had fallen, the crew gradually exposed the base of the compound wall at the Romero Ruin. PHOTOS: DEBORAH SWARTZ



An archaeologist measures and draws layers of ancient trash visible in the wall of an excavation into a large trash mound at the Romero Ruin. Each layer roughly corresponds to a distinct time period. PHOTO: DEBORAH SWARTZ

lysts pour soil samples into a basin of water, where burned plant parts and seeds float to the top. After skimming and drying the plant remains, a specialist examines them under a microscope.

When we examined samples from trash mounds at the Romero Ruin, we found agave parts were quite common. People used agave for food and fiber, and possibly for drink. Because agave does not grow naturally at this elevation, we infer that people cultivated it in the fields located up the ridge from the inhabited part of the site (see page 7).

We also recovered several fragments of corncobs and one fragment of a squash rind. Unlike agave, these crops need quite a bit of water, so people probably grew them at the base of the ridge near Sutherland Wash. We identified some wild plants that probably supplemented residents' diets: saguaro and hedgehog cacti, mesquite, and hackberry.

Archaeologists also use trash deposits to determine a relative time sequence at a site. Our reasoning follows the geologic law of superposition, which states that, in undisturbed areas, the earliest deposits are on the bottom, and the latest (most recent) ones are at the top. If enough time goes by without disturbance, careful excavation can reveal the time sequence of certain artifact types or ceramic decorations. At the Romero Ruin, near the bottom of the large trash mound, we found a distinctive red pottery that dates from around A.D. 500. At the time of our initial surface collections, archaeologists had not even defined this pottery type. The deep deposits from the Romero trash mound helped to establish the pottery's antiquity, and gave us new insights into the time before painted pottery was common.

The Ballcourts

What Huntington (see pages 7–8) and others thought were reservoirs were actually the remains of ballcourts. Because our excavations were very limited, we were unable to date these features precisely. Residents probably built the large court first, because archaeologists have found that most large courts are early. The constraints imposed by the long narrow ridge the site sits upon may have influenced the decision to put the large ballcourt at the far edge of the settlement, or perhaps the residential area around the village plaza was too dense to accommodate a large court. Villagers subsequently added the smaller court nearer to the plaza.

Ballcourt construction would have required cooperation among villagers, and possibly help from other villages, too. This suggests that, unlike individual houses, ballcourts were public



This small, fully excavated ballcourt at the Water World site in Avra Valley, west of Tucson, serves as a likely proxy for the small ballcourt at the Romero Ruin. Note the prepared plaster preserved along the edges of this ballcourt. At each end of the ballcourt is a well-plastered entry that slopes gently downward. PHOTO: HENRY D. WALLACE



structures that brought together many people. Along with depictions on ancient walls and ceramics, historic accounts reveal much about ancient ballcourts in Mexico. Using this information as a model, archaeologists believe that Hohokam ballcourts were public places fulfilling a mixed secular and ritual function.

Besides being entertaining, the dances and games that took place in and around these earthworks probably served to resolve disputes and help certain people gain political favor. By involving residents and people from neighboring villages, the ball game probably faciliated trade and communication as well (see page 17).

Historic accounts by Spanish observers in Mexico suggest that players struck a rubber ball with their shoulders and hips. In some places, a ceremonial dance took place in the ballcourt prior to the game. This pottery model or platter from Nayarit, Mexico, shows the game in play. PHOTO: COURTESY OF THE LOS ANGELES COUNTY MUSEUM OF ART, M.86.296.34.

What Do Romero Ruin and Other Sites Nearby Tell Us about Life in the Distant Past?

Together with the evidence we recovered at Romero Ruin, new information from nearby special places outside of Catalina State Park, such as the Sutherland Wash Rock Art District and the Romo Cache, and from nearby settlements, such as Honey Bee Village, tells us much about the people who lived here and their ties to Hohokam settlements around the northern Tucson Basin.

The Sutherland Wash Rock Art District and Hohokam Life

Within sight of Romero Ruin and other Hohokam sites throughout the Cañada del Oro valley lies the Sutherland Wash Rock Art District, a complex of sites located in a boulder-rich landscape at the base of the Santa Catalina Mountains. The complex centers around a bedrock canyon with deep *tinajas*, or water catchment basins, that even today contain water much of the year.

The district is resplendent with rock art and a variety of special features in the built and natural landscapes that collectively suggest Sutherland Wash was a special place for the Hohokam between about A.D. 1000 and 1300. Recent work strongly suggests the site was an important ceremonial center.

Some of the features documented in the district include permanent or temporary habitation areas, ancient trails, specialized activity areas surrounded by petroglyphs, bedrock and boulder mortars, and a large concentration of cupules, small concavities that were ground or pecked into the rock face. Fine attention to detail and technique is evident throughout the more than 600 petroglyph panels, as in magnificent scenes of bighorn sheep and depictions of birth and families among clearly gendered, humanoid figures.

Top right: Prominent solar marker glyph is probably also a flower. PHOTO: JANINE HERNBRODE. *Bottom right: Detail of probable bighorn sheep image with broad body.* PHOTO: HENRY D. WALLACE





Large boulder with diverse elements conveys the foothills setting of the Sutherland Wash Rock Art District. PHOTO: HENRY D. WALLACE

A substantial subset of the petroglyphs may reflect something of the Hohokam belief system. There are many representations of flowers, butterflies, and birds, imagery characteristic of a spiritual landscape known as the Flower World. In this Uto-Aztecan belief system of ancient Mesoamerican origin, believers evoked a flowery, colorful, glittering paradise through prayers, songs, and other actions. The likelihood of this connection is strengthened by the discovery of Mesoamerican copper bells at Honey Bee Village (see page 17) and in the Romo Cache (see following). The Flower World metaphor is also associated with the movement of the sun. Interestingly, and after many predawn hikes, we have documented a number of sunlight and shadow interactions on some of the panels, which clearly mark equinoxes and solstices.

Romero's residents and people from villages throughout the Middle Cañada del Oro valley surely made use of this ceremonial center. Its location may have been a major entry point into the mountains, making it a logical location for a communal ceremonial place.

-Janine Hernbrode, Peter Boyle, and Henry D. Wallace

The Romo Cache and Hohokam Life

In 1949, while on a hunting expedition, Ray Romo felt his foot sink into loose rocks near the top of a hill. That promontory rests less than four miles northeast of the Romero Ruin, just above the Sutherland Wash Rock Art District.

When Romo moved some of the rocks to investigate, he found a pottery jar covered by an inverted bowl that had broken with the pressure of his step. Red-painted designs decorated the brown surfaces of both vessels, which dated between A.D. 1100 and 1150. The jar contained around 100,000 stone and shell beads, and about thirty copper bells. To acknowledge Ray Romo, archaeologists still call this assemblage "the Romo Cache."

Most of the beads were of red and black stone, but a small number were turquoise or marine shell. Most exhibited signs of wear from stringing on some kind of cordage or sinew, though, if such had been present when someone placed the beads in the jar, it did not survive.

In a 1959 article, notable archaeologists Emil W. Haury and Carol A. Gifford referred to the site Mr. Romo found as a "prehistoric strongbox" because of the amazing wealth contained in the jar. Although we do not know how people measured wealth in the distant past, we do surmise that the amount of effort

expended to manufacture and transport an object bore some relationship to its value.

As for the 100,000 beads, it probably took approximately fifteen minutes to make each bead. First, the artisan drilled each bead, and then strung and shaped several beads together. One way to think about this find is to consider that it would take one person, working day and night for almost three years, to make these beads. Another way to visualize this quantity of beads is to imagine that, if an artisan had strung them all together, this would have taken about 300 feet of thread! This means that, if an average necklace had measured four feet long, the cache contained enough beads to make approximately seventy-five necklaces. Because people in the distant past probably owned only one or two necklaces, the beads in the cache may represent an accumulation of valuables from many people.

Archaeologists do not often find copper bells in the Southwest, but we do know that artisans made them in Mexico and trade brought them north. Archaeologists have recovered about 620 bells from more than ninety sites in the American Southwest and Mexican Northwest. Still, only a few sites have borne more than ten bells, and many have just one. Because the process used to make bells was time consuming (see below), the quantity of copper bells in the Romo Cache also represents an astonishing collection of valuable items.

So, what does this accumulation of riches represent? Did the jewelry and copper bells belong to the residents of one village or to specific people from several villages? Might the cache be the accumulation of a single, very wealthy individual or family?

Researchers documented a similar cache south of Tucson. Like the Romo Cache, it was a pot filled with valuables, in this case almost 1,500 beads and pendants made of turquoise and shell. An inverted bowl also covered this vessel, which someone placed on the side of an isolated hill, near a water hole with nearby rock art. Although the two caches are contemporaneous, the southern cache did not contain nearly as many items



The "wealth" in this vessel included 100,000 beads and about 30 copper bells. Archaeologists from the Arizona State Museum visited the area and determined the find was isolated. Possibly, it was related to the nearest habitation site, about a half mile to the west and closer to Sutherland Wash. PHOTO: D. LINDSAY; COURTESY OF THE ARIZONA STATE MUSEUM, UNIVERSITY OF ARIZONA, NO. 9104

as the Romo Cache. The former might, therefore, represent the wealth of a single family.

The proximity of each cache to rock art panels and a good water source presents a strong case that these were very special places. Because people had actually worn the beads, these





caches probably represent offerings, rather than stashes of beads for trade. Perhaps they were offerings seeking water in a very dry year, for they are, indeed, located above reliable water sources. —Deborah L. Swartz and William H. Doelle

Top: Detail of copper bells. PHOTO: COURTESY OF THE ARIZONA STATE MUSEUM, UNIVERSITY OF ARIZONA, NO. A-9073 Left: Copper bells were made using a process called the "lost wax" method. A small pebble was embedded into a ball of clay, the clay was dipped into wax to form an even coat, and then the waxed ball was surrounded with more clay. Molten copper was poured into the space held by the wax, which melted out. After the copper cooled, the clay was removed from the exterior and chipped off the pebble inside the copper bell. IMAGE: ROBERT B. CIACCIO, ADAPTED FROM AN EARLIER ILLUSTRATION BY RONALD J. BECKWITH

The Middle Cañada del Oro Valley Community

During the Hohokam era, a person interacted daily with the other residents of his or her local village. A village of 50 to 200 persons was not self-sufficient, however. Most of the corn, beans, and squash consumed by villagers would have been grown 1000 into the 1200s—there is intriguing new information that regional community members had a ceremonial imperative to build at least some portion of their dwellings with mid- or high-elevation wood from the Santa Catalina Mountains. The high-elevation wood was fir or pine from the Mount Lemmon area (see map on page 4), and the mid-elevation woods were

locally. But what about the years when floods or drought or a serious frost resulted in crop failures, and stored foods were insufficient? Those were the times when access to a larger network of partners would have been essential. Archaeology reveals a number of ways that villages maintained relationships with other settlements.

Ballcourts represented one of the most important links between settlements. They established a reason for local residents to work together to build and maintain the structure; ball games and associated ceremonies brought people from nearby villages for visits of a day or more. Evidence of specialized craft production at Honey Bee and Sleeping Snake, excavated sites northwest of the Romero Ruin and generally contemporaneous with Romero's peak of settlement, suggests the exchange of goods was an



Archaeologists have excavated four ballcourts in the greater Tucson Basin: Sleeping Snake, Hodges, Water World, and Dakota Wash. Preservation efforts by Pima County and the City of Tucson protect substantial portions of six large villages outside Catalina State Park: Honey Bee Village, Los Morteros, Hardy, Julian Wash, Dakota Wash, and Valencia. We know that four of these sites had ballcourts, and, based on their large size, Hardy and Julian Wash probably also had ballcourts. MAP: CATHERINE GILMAN

pinyon, oak, and juniper.

Wallace argues that the Sutherland Wash Rock Art District comprises an important ceremonial center that helped bind the more dispersed population of the eleventh through thirteenth centuries into a regional community. Recent research on Hohokam petroglyphs supports the idea that they played an important part in ritual. Furthermore, the least-cost trail from Honey Bee Village to the top of the Catalinas, along which people gathered wood and other resources, passes right through the Sutherland Wash petroglyph area.

Other features within the district also suggest special ritual activities. In addition, archaeologists have not found settlements of this time range between the edge of Pusch Ridge just south of the Romero Ruin and the Santa Cruz River to the southwest, suggesting one of the boundaries of the Cañada del Oro community.

important aspect of the cycle of ballcourt visits. Finding marriage partners was almost certainly another.

Recent excavations at Honey Bee Village provide insights into how multiple Hohokam settlements interacted as a larger local community, in this case, what archaeologist Henry Wallace calls the Middle Cañada del Oro community. Although ballcourts were part of the "social glue" that encouraged people to live in fairly densely packed villages between A.D. 800 and 1000, at Romero, in particular, available evidence indicates that many villagers in the region dispersed to nearby small settlements soon after 1000. But at roughly the same time—from These detailed insights about change in this one particular community reveal previously unknown dimensions of our overall understanding of the Hohokam World. Communities over a broad region shared many core beliefs and behaviors, but each community had its own unique trajectory. The rich story that has emerged about the Middle Cañada del Oro valley builds on information gathered slowly over more than a century, but much of the information derives from recent major studies. The process of reacting to and building upon the latest ideas and insights is just getting underway.

—William H. Doelle

Growing Preservation Archaeology from Romero Ruin Roots

WILLIAM H. DOELLE, ARCHAEOLOGY SOUTHWEST

The history of Archaeology Southwest is closely tied to Catalina State Park. Archaeology Southwest's roots extend back to 1982, and Catalina State Park opened in 1983. Our first public tours of the Romero Ruin took place in the spring of 1986, well before there was a public trail or even a high-quality map of the site. Later that year, we established our membership program and published the first issue of Archaeology in Tucson Newsletter, now Archaeology Southwest Magazine. In the spring of 1987, we were in the field documenting the Romero Ruin and other archaeological sites in the park.



Top: Archaeology Southwest celebrated its thirtieth anniversary with a gathering at Catalina State Park in April 2012. Longtime members Connie Allen-Bacon (our original tour program leader) and Valerie Davison (pictured here immediately right of the sign) and Archaeology Southwest President Bill Doelle led tours of the Romero Ruin. PHOTO: LINDA J. PIERCE Bottom: A birding tour in progress. PHOTO: COURTESY OF THE ARIZONA STATE PARKS

Even in those very early days we practiced Preservation Archaeology—though we only formalized that label in 2000. Preservation Archaeology is an integration of: (1) big-picture research using low-impact methods, (2) public outreach to share research results, and (3) direct efforts to protect archaeological sites for the future. Detailed mapping and careful collection of artifact samples from the surface of the Romero Ruin provided insight into the habitation span and even the pattern of settlement within the village over nearly a millennium. There were essentially no impacts to the site, and all 11,500 artifacts we recovered from the surface reside permanently at the Arizona State Museum, where they are available for continued study.

In the 1980s, Archaeology Southwest did not have any permanent staff. We relied on generous volunteers and occasional grants to conduct the Catalina State Park survey and others that followed it. Partnerships with park personnel and with the U.S. Forest Service allowed the concept of an interpretive trail to come together in gradual steps between 1985 and 1994.

Today, Archaeology Southwest has a dozen staff members, and we practice Preservation Archaeology throughout the American Southwest. Our quarterly magazine and our growing databases of archaeological information also cover Northwest Mexico.

And Catalina State Park has expanded greatly, as well. It has developed multiple overnight camping areas, built restroom facilities, and created specialized trails for birding, equestrian use, nature loops, and, of course, the Romero Ruin trail. The value of this place to the region as an amenity for relaxation, recreation, and celebrating natural beauty is incalculable. Its economic impact to Pima County has been estimated at \$19.6 million annually. Archaeology Southwest is pleased to renew our commitment to this place that gives back to our community in so many ways.

Hohokam Archaeological Preserves

WILLIAM H. DOELLE, ARCHAEOLOGY SOUTHWEST

We see the Hohokam archaeological signature on the regional landscape in the distribution of ballcourts, buff- or brown-colored pottery with red-painted designs, shell jewelry, and other relatively rare artifacts. In 1900, a mere 30,000 people lived in the former Hohokam homeland. Today, the number of residents in that area has burgeoned to more than five million.

The accompanying construction activity transformed thousands of square miles into urban and suburban landscapes. This growth and development damaged or destroyed much of the Hohokam archaeological heritage.

Nevertheless, the Hohokam region has several preserves, and there is a positive trend of establishing new ones. In 1892, President Benjamin Harrison proclaimed the 480 acres around the Casa Grande, a four-story adobe building built by the Hohokam in the 1300s, as the nation's very first archaeological reserve. It is now a national monument located on the northern edge of Coolidge, Arizona.

Municipal governments hold preserves on a number of sites. In metropolitan Phoenix, the City of Phoenix protects 95 acres around Pueblo Grande platform mound; Mesa owns 6 acres around Mesa Grande platform mound; and Peoria holds 16 acres at Palo Verde metro, the Town of Gila Bend owns the Gatlin site, an early platform mound on around 100 acres.

In metropolitan Tucson (see map on page 17), the City of Tucson has preserves at Julian Wash, the Hardy site (Fort Lowell Park), and Vista del Rio. Archaeology Southwest holds a conservation easement on Vista del Rio. Pima County estab-



The Hohokam archaeological tradition once extended over much of what is now the desert region of southern Arizona. It shared a boundary with the other desert tradition known as Patayan. The nation's first archaeological preserve, now Casa Grande Ruins National Monument, was established in 1892. Other regional preserves are shown here, and Tucson Basin preserves are shown on page 17. MAP: CATHERINE GILMAN

Ruin, a ballcourt village. The cities of Phoenix and Scottsdale have recently added large open-space preserves that contain important nonriverine archaeological sites. West of Phoenix development has seriously diminished the Hohokam legacy, the increased investment in protecting open spaces and the multiple resources of undeveloped desert are cause for optimism.

lished preserves at Honey Bee Village, Los Morteros, Dakota Wash, and the Valencia site. The county also preserves an important area along a well-watered segment of the Santa Cruz River at Canoa Ranch, south of Tucson, as well as the Cienega Creek preserve southeast of Tucson.

What makes Catalina State Park so significant is the scale and landscape diversity of the preserve. The 8.6 square miles of the park include important segments of the Sutherland Wash and Cañada del Oro drainages and the adjacent upland areas. It is a minimally disturbed natural setting that is continuous with the higher elevations of the Santa Catalina Mountains, most of which are managed as the Coronado National Forest. This district includes small sites, farming sites, special use areas, and the central place of the Romero Ruin. It is a significant portion of the larger landscape.

Although the magnitude of population growth and



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back sight

When a place has special qualities, each return deepens one's ties or reveals new insights into why that place is special. Visitors return to Catalina State Park to picnic, bird watch, hike, ride. As we prepared for this issue of *Archaeology Southwest Magazine*, we revisited the park, too—literally and figuratively—in order to reassess archaeological knowledge about the place and its meaning in light of seventeen more years of research.

Every time I come to Catalina State Park, my visit strengthens my own sense of place and renews ties to Archaeology Southwest's own history, especially our origins. Although our past work was limited in scope, it established a solid baseline archaeologists continue to examine in a broader context. Archaeology is very much a cumulative endeavor, after all.

The fact that we helped create the interpretive trail is also satisfying, because we know many thousands of visitors have gained even a brief exposure to this special place and its



As I hike the 1.2 miles from the Romero Ruin to a group of very reliable tinajas (rock tanks), I contemplate their use by so many generations in the distant past. Snoop, my dog, is not the contemplative type. PHOTO: WILLIAM H. DOELLE

traces of regional heritage. When I give public tours of the Romero Ruin, one of the most common questions I hear is, "When are you going to excavate more of this site?" It's the perfect opportunity to make the key point of Preservation Archaeology—sharing why we preserve our nonrenewable resources whenever possible.

As the discussion of Hohokam preserves (see page 19) underscores, many Hohokam sites have already been lost, and we are rapidly accumulating a vast body of knowledge from those that must be excavated prior to destruction by

development. At present, there are no real threats to the Romero Ruin, so we must take the long view and plan for future fieldwork with new ideas, methods, and technologies.

As archaeological work outside Catalina State Park progresses, archaeologists will reassess the many sites and features within the park and fit them into new interpretive frameworks. There may come a time when archaeologists undertake limited excavation—or, preferably, wield a new, nondestructive technology—in Catalina State Park. But, for now, this is a special reserve you can experience in print or on the ground. Your imagination can wander and your mind can wonder at the people who called it home, in times very different from today.

6) illa: 21. Doelle

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 Archaeology Southwest's mission.