

ARCHAEOLOGY SOUTHWEST *magazine*

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Archaeology Southwest (formerly the Center for Desert Archaeology) is a private 501 (c) (3) nonprofit organization that explores and protects the places of our past across the American Southwest and Mexican Northwest. We have developed an integrated, conservation-based approach known as Preservation Archaeology.

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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Archaeology Southwest

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Preserving Archaeological Landscapes

Chip Colwell-Chanthaphonh, Center for Desert Archaeology

THE RECENT EXPLOSION of Arizona's population can be expressed in two simple figures. In 1990, the state's population was 3,665,228. A decade later it was 5,130,632. Practically all of these modern migrants chose to live in just a dozen communities; for example, Gilbert, Arizona, a part of greater Phoenix, grew by 213 percent in the last 10 years alone. While Arizona swelled by 40 percent between 1990 and 2000, in the same period New Mexico grew by 20 percent, Utah by 30 percent, Colorado by 31 percent, and Nevada by a dizzying 66 percent.

Growth benefits local economies and makes communities dynamic. Yet such concentrated expansion has a dramatic effect on our shared natural and cultural resources. Although the American West is often celebrated as a land of limitless possibility, it is in fact both finite and fragile. Archaeological sites—testifying to more than 13,000 years of human history—are particularly vulnerable to development because they are often ephemeral and lack strong legal protection.

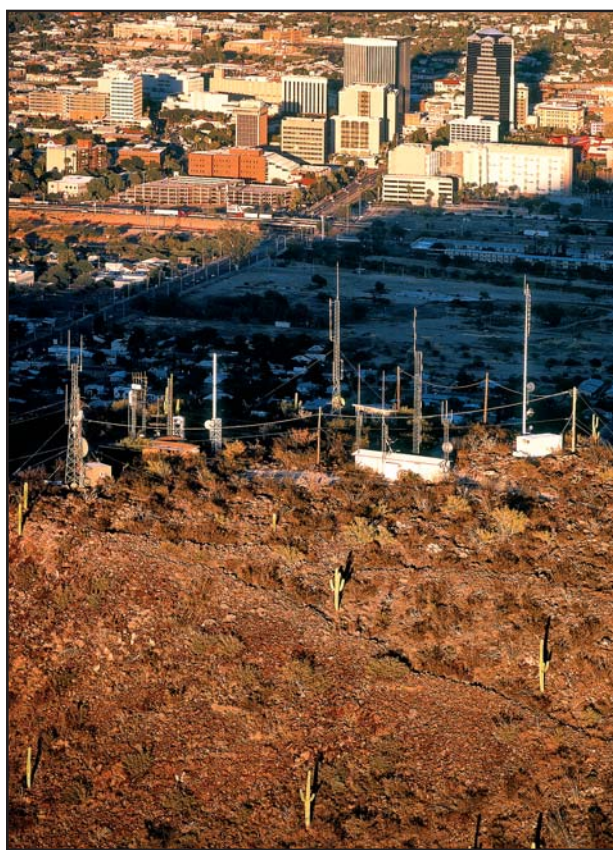
Those who seek to safeguard the vestiges of the past frequently must focus their energy on immediate local problems like graffiti (*Archaeology Southwest* 15[3]). Preserving large tracts of land is usually left to the federal government, as when President Clinton established nearly a dozen national monuments in the late 1990s (*Archaeology*

Southwest 15[1]). These efforts, while necessary, are at times limited because they do not fully address the ways in which local communities can work on the “big picture.”

In this issue of *Archaeology Southwest*, we explore the preservation of archaeological landscapes on multiple levels—local, regional, and national. We begin by exploring the goals of conservation archaeology: public education, selective preservation-oriented research, and site protection. We consider the damage done over the last century, focusing on a conspicuous site type, Hohokam ballcourts. These problems are not strictly urban or rural, as they are inseparable from the changes of the broader environment. The second part of this issue thus examines positive preservation efforts that focus on the landscapes of the Greater Southwest—work that draws no discrete boundaries around the local and national, rural and urban, or culture and nature.

This kind of work also recognizes the connection between the past and the present, as we

realize the Southwest is neither timeless nor without limit. The ultimate value of our collective history should be found within our own communities. These ideas, presented here, are at the heart of the Center for Desert Archaeology's preservation mission.



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Ancient walls of stacked rock cross Tumamoc Hill—today engulfed by Tucson and crowned by communication towers.

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A Conservation Model for Archaeology

William D. Lipe, Washington State University

IN THE UNITED STATES, “salvage” archaeology—now known as contract archaeology—developed as a response to the recognition by archaeologists that the supply of archaeological sites was not infinite, and that important sites, once lost, could never be duplicated among the supply of sites remaining, let alone replaced. The response was to excavate sites threatened with immediate destruction—to retrieve as much information as possible with the time, money, and methods available.

We now realize that all sites are rather immediately threatened, if one takes a time frame of more than a few years. In this sense, all of our archaeological efforts are essentially “salvage.” I submit that we not only need to know how to do “salvage” archaeology, but also how not to do it. The latter involves creating a model of resource conservation.

There are three positive conservation measures that archaeologists can take in order to manage archaeological resources for maximum longevity. These are public education, involvement in planning, and archaeological preserves.

First, public education and its objective, public support, are the key to the whole undertaking. If more of the public understood and respected archaeological values, greater self-restraint would be exercised, land-holding agencies would find it easier to justify the expenditures for archaeological patrols, and law-enforcement and judicial agencies would be more eager to use existing antiquities laws. The tremendous energies of avocational archaeological groups should be channeled for the benefit of archaeology, so that their members can serve as educators of the general public and as advocates for archaeological conservation. The best protectors of archaeological resources are often the people who live near the sites. The inhabitants of these areas could be of great service to archaeology by re-

fraining from pot hunting, by chasing vandals away from sites, or at least reporting them, and by blowing the whistle on land-alteration projects that threaten sites.

Second, archaeologists must also make strenuous efforts to acquire institutionalized access to the planning and management process whenever land-surface alterations are involved. In this way, projects can be designed so that destruction of archaeological sites is minimized.

The third basic conservation strategy is to establish and protect archaeological preserves, areas where land alteration is prohibited or at least very rigidly controlled.

The guiding principle in setting up archaeologically relevant land preserves should be representativeness rather than current significance. For example, many of our archaeologically based national parks and monuments were established on the presumption that the largest, most spectacular, and most unique types of archaeological sites were the most significant. At the time those preserves were set up, this was probably an accurate reading of both the public’s and the archaeologists’ assessment of significance. Yet today, we have increasing num-

bers of projects designed to investigate functional variability among numbers of sites, small as well as large, and much greater interest in the statistically typical as well as the rare and unique. Fortunately, a number of our existing archaeological parks and monuments have been set up to cover districts rather than individual sites, so that there are resources available for a number of different research and display orientations.

In conclusion, a focus on resource conservation leads us to a responsibility for the whole resource base. Only if we are successful in slowing down the rate of site loss can the field of archaeology continue to evolve over many generations and thereby realize its potential contributions to science, the humanities, and society.



Lipe was assistant director at the Museum of Northern Arizona when the article that is abstracted here was published in The Kiva in 1974. He is now emeritus at Washington State University, Pullman (1976-2001), after a distinguished career in its Anthropology Department. He served as president of the Society for American Archaeology (1995-1997) and has maintained a long and productive association with Crow Canyon Archaeological Center of Cortez, Colorado. He is on the advisory board of the Center for Desert Archaeology.

Hohokam Ballcourt Villages in Peril

William H. Doelle, Center for Desert Archaeology

EMIL W. HAURY CONTRIBUTED as much new information about the Hohokam culture and its use of ballcourts as any single archaeologist will ever do. Yet a lifespan of 88 years was too brief to resolve all of his questions about ballcourts and the people who made them more than a millennium ago. Many archaeological questions require a slow accumulation of evidence before an-

formation from scholars investigating Mayan ballcourts in southern Mexico and Guatemala. He noted that at least several score of these features had been observed in Arizona from Tucson to Flagstaff. He also reported on a rubber ball that was found in a Hohokam plainware vessel near the town of Eloy in the 1930s. The available evidence largely convinced him that these features did function as

ballcourts. And even in 1937, Haury lamented the pace at which ballcourts in southern Arizona were being destroyed by land leveling for farming.

Haury's broad interest in the chronology, place of origin, and function of ballcourts stimulated further research. For example, David Wilcox, of the Museum of Northern Arizona, in Flagstaff, greatly expanded the inventories compiled by several of Haury's students and has been a leader in new research to understand ballcourts and their role in Hohokam society. Henry Wallace, of Desert Archaeology, Inc., has greatly refined our understanding of the chronology of Hohokam pottery and recently re-examined the pottery that Haury excavated from the large ballcourt at Snake-

town. It appears that the ballcourt was constructed late in the Gila Butte phase, soon after A.D. 800, several hundred years later than Haury originally surmised. David Abbott, of Arizona State University, in Tempe, has recently become a strong advocate for the important role of ballcourts in the context of Hohokam commerce. He argues that ballcourt networks were markets, structuring the regional flow of goods, especially pottery.

Haury believed that ballcourt use extended to at least 1300 and perhaps later. However, most current research-



Emil Haury worked with the tribal government of the Gila River Indian Community to gain National Historic Landmark status for the site of Snaketown in 1964. He notes that on April 3, 1965, a ceremony to commemorate that status "took place in the amphitheater formed by Snaketown's old ball court. About 500 Indians, rising to the spirit of the occasion, made it both momentous and joyous." These photographs show the ballcourt context for that ceremony (left) and even show Haury joining in the dance held within the court (below). In 1972 Congress created the Hohokam Pima National Monument, which encompasses 1,690 acres, including the site of Snaketown. The monument is not open to the public. (Arizona State Museum, University of Arizona, Helga Teiwes, photographer.)



swers begin to emerge. Alarming, the pace at which Hohokam villages and their ballcourts are being lost is quickening. As a result, critical evidence that might yield answers may be lost forever. It is unfortunate that the pace of Arizona's growth is greatest where ballcourt villages were once the most abundant.

Large oval depressions were noted by archaeologists working in Arizona as early as the 1880s. Various called reservoirs, sun temples, and more fanciful names, their function was unclear. Limited excavation of the oval feature at Casa Grande Ruin in 1918 clearly established that it was built by humans. In 1934–1935, Haury excavated the two oval features at the site of Snaketown on the Gila River Indian Community (GRIC). In his 1937 report on those excavations, Haury made a far-reaching case for the features being ballcourts. For comparison, he drew on in-

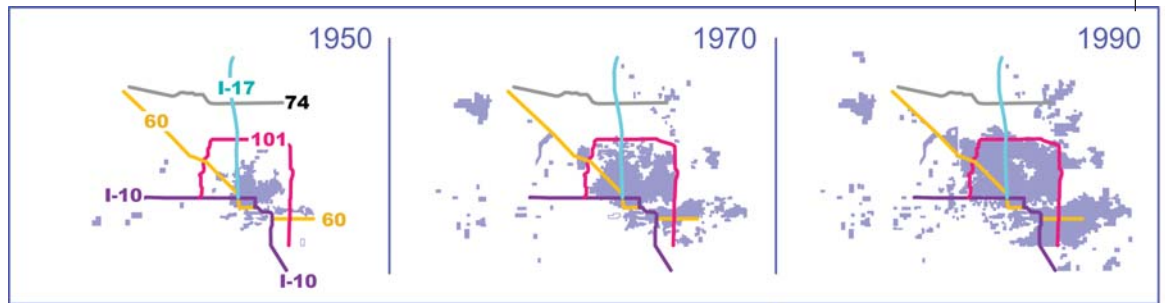
ers envision ballcourt use ending in southern Arizona by about 1075. Yet new ballcourts were constructed in the Flagstaff area about that same time. Even today, the story of ballcourts is still unfolding, but it is clear that they help to chronicle both stability and change in Hohokam society.

In a parallel with Haury's role among archaeologists, the site of Snaketown was preeminent in the Hohokam world. However, just as one archaeologist cannot resolve all of the important questions about the past, so the many

other sites that were contemporaneous with and interacted with the site of Snaketown are essential information sources for resolving questions about the origins, role, and decline of ballcourts. Many of the details to understand ballcourts come from excavations in the villages that contained them. In the greater Phoenix area, the GRIC has become the only area where ballcourt communities still exist on a landscape scale. Everywhere else, the scale of what remains is greatly diminished, which underscores that a conservation approach is extremely urgent.

Growth of Greater Phoenix

IN AN ARIZONA REPUBLIC ARTICLE dated May 2, 2004, former Arizona Governor Bruce Babbitt wrote: "A few years back Barry Goldwater lamented that greater Phoenix would soon extend in one unbroken urban strip from Wickenburg to Benson. He didn't live to see it happen, but we probably will. We have already reached Wickenburg via the planned developments in the Hasayampa Valley. In the other direction, Phoenix is extending toward Tucson so rapidly that we can plan

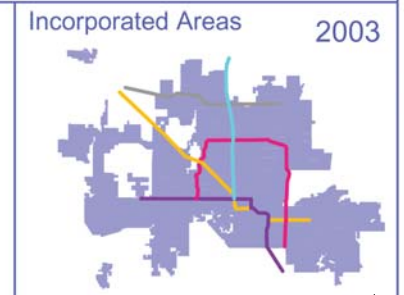


Population growth has exploded over the last 55 years in the greater Phoenix metropolis (data courtesy of Maricopa County Assessor's Office).

on a golden spike ceremony somewhere in Pinal County in the next 10 years. By that time another 2 million residents will have arrived to fill in the spaces."

This series of maps helps convey the rapid urbanization of the greater Phoenix area. The first three maps indicate developed areas, while the fourth shows current municipal boundaries and conveys the scale of current and imminent growth. The boxes enclosing each map represent an area 90 miles east to west by 70 miles north to south.

The inventory of known ballcourt villages in this mapped area is 30. Of those, 47 percent have been completely destroyed. The loss of all ballcourts is not inevitable, but it is a real threat, given the scale and pace of urban expansion. Ballcourts were defining attributes of Hohokam communities for many centuries. Decisions by Arizona's growing modern communities over the next few years will be critical to saving a sample of this Hohokam past.



O'odham Ancestral Lands

Barnaby V. Lewis, Cultural Resource Management Program, Gila River Indian Community

THE LANDS OF THE O'ODHAM cover the greater portion of southern Arizona, so we are familiar with development all over the state. The development we see in Phoenix is no different. We know this cannot be stopped, although it is the most common cause of archaeological destruction. Destruction is desecration in our view, but we

have no authority to stop development or find alternative places for development to be done. So site preservation is a matter of working within the law as much as possible. We have more legal rights on federal projects, but if there are no federal funds involved we can only attempt to ensure that people follow the Arizona burial laws and edu-

cate developers and the public of their legal obligations.

Archaeology does not physically save sites, but at least the information learned from excavations defines a distinct life way that is of benefit to everyone's heritage. Some archaeologists have had reputations with the tribes because they see burials as objects (artifacts) instead of as human beings. That is where the respect is lost. But archaeologists have come a long way in their understanding of the tribal viewpoint. I have worked for the Cultural Resource Management Program for seven years and have seen a real improvement among archaeologists in their sincere understanding and respect; I appreciate all they have done. Still, the development goes on.

What has not changed is that many developers and the people of Arizona do not know about the Arizona burial laws. It is hard for us to ensure people have proper knowledge of the law. It is frustrating to us that the issue often boils down to money—that is the reason some people do not want to deal with cultural resources.

Developers often see tribes as an annoyance in trying to ensure the dignified and respectful treatment of ancestral burials. It does not matter how many times we say that these archaeological sites are our ancestry, our bloodline, our lineage. Over and over again, I see how it is better to do archaeology in the early stages of a project than to start a project, discover cultural resources, and then have to stop the project to address them. That is where the pressure starts to build—when contractors are waiting—and that is where the frustration for developers begins to set in. That is why it is so important to make sure landowners and



©Adriel Helsey

More than 1,000 years ago, the ballcourt at Pueblo Grande held ceremonial games for the residents of the Phoenix Basin. The City of Phoenix owns the core of this large village.

developers are aware of the laws.

It is always difficult to convey to people why our ancestral sites are so important to us. I know some non-Indians do express similar feelings, for example about a house they grew up in and years later has to be demolished. The tribes in Arizona have a similar sense of loss, but it goes much deeper than sentimentality. It is about the connections we make with our

ancestors. A part of our spiritual being is cut, scraped away, every time a site is destroyed. It is a great sadness, especially when burials are disturbed. The sadness grows and lingers because the development goes on and on.

It is not just the O'odham—the Four Southern Tribes of Arizona—who have respect for the homes and remains of our ancestors, for their time on this earth. When we walk in the places they have been, we are experiencing the same things. We climb the same mountains that they did.

It is also important to understand how our ancestors survived in this environment. We think of their struggles and how they viewed nature, the universe, and all natural phenomena. The origins of our religious beliefs are found in the land. The wind and the rain are all involved and connected. It is all sacred—although with the laws as they are written today, we cannot say this.

People say that we need to improve the quality of life for everyone. The modern opinion seems to be “the present is for the living—ignore the past, ignore archaeology.” So it is always a continual effort to educate. We are not trying to convert people, just trying to get them to understand, to be sensitive and respect how we perceive the destruction of archaeological sites.

Palo Verde Open Space

Mark Hackbarth, Logan Simpson Design

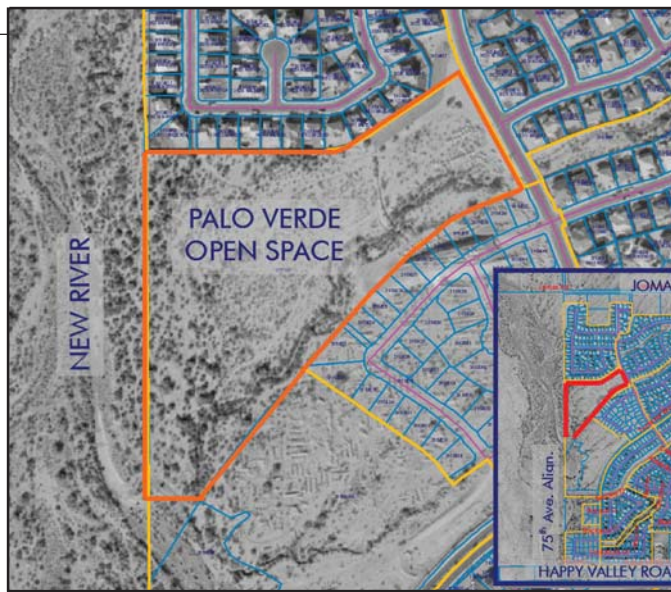
Jeffrey Sargent, City of Peoria

THROUGH THE GENEROSITY of a developer, a portion of the Palo Verde Ruin, an 80-acre Hohokam village, was donated to the City of Peoria, Arizona. This parcel, named Palo Verde Open Space at Terramar, lies just north of where the site's ballcourt was found and contains the site's central residential district. The City of

Peoria intends to manage the parcel as a cultural site with a small neighborhood park component.

It all began in 1998, when archaeologists from Northland Research, Inc., spent five months excavating at the site, which lies near the New River in Peoria, prior to the development of the Terramar housing community by

Richfield Investments. Archaeologists had known about Palo Verde Ruin since the 1930s, when Frank Midvale plotted it on a map of the New River vicinity showing prehistoric canals and large sites along the river. During the 1998 excavations, archaeologists determined that at its zenith, Palo



Palo Verde Open Space, in the Terramar housing development, is slated to contain a playground, picnic ramadas, an interpretive trail, a sport court, parking lot, and restrooms.

Verde Ruin—occupied from A.D. 850 to 1070—was a substantial village, containing 15 residential areas, large trash mounds, a ballcourt, and smaller trash mounds on the site’s periphery.

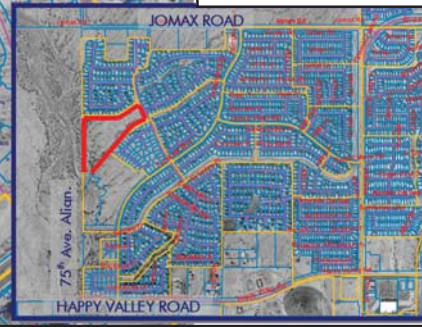
Palo Verde Open Space contains evidence for the longest and most intense occupation of the site. The 20 acres of open space are bisected by Old Frog Tanks Road, a remnant of a regional dirt road. After development of the Terramar subdivision, the road was severely eroded by runoff from heavy rainfall.

The city has hired consultants to determine how to control the road’s erosion without further damage to the site, as well as what type of park development can occur in

the four-acre area between the road and the eastern boundary of the open space. The city has also hired archaeologists to test excavate this area and provide recommendations on the

measures the city will need to take if archaeological features are encountered.

Creating a neighborhood park in the subdivision will also allow archaeologists another opportunity to learn more about the



central portion of Palo Verde Ruin. The development of a park will increase neighborhood awareness and appreciation of the importance and uniqueness of the remaining undeveloped open space in the community.

The City of Peoria intends to develop the park features with an archaeological and cultural theme in mind. The wash along the site’s southern boundary will become an environmental interpretive trail. Eventually, the trail will be expanded into the open space, with interpretive signage to educate the public about Palo Verde Ruin. What we have learned in the process of developing Palo Verde Open Space will be applied to future archaeological sites that come under the control of the City of Peoria.

The Las Vegas Springs Preserve

THE CITY OF LAS VEGAS is celebrated for transforming the unreal into the real—like the Eiffel Tower, an Egyptian pyramid, and the canals of Venice, replete with singing gondoliers. The 180-acre patch of greenery near the bright lights of the Strip therefore might easily be mistaken for another illusion of place. In fact, the park is the site of the original springs that first attracted people to the valley and allowed them to sustain their communities over the centuries. “It’s really the only reason that Las Vegas exists,” as University of Nevada–Las Vegas Professor of History Andy Kirk recently said in *UNLV Magazine*. “It was the reason Native Americans settled here; it was the reason the Mormons stopped here; it was the reason the Union Pacific built a railroad town here. And, ultimately, it was the reason that the resort community could even exist in its early years.”

The Las Vegas Valley Water District, a company responsible for supplying water in the region, owns the land but decided that it would best be used as a preserve and educational center. The Las Vegas Springs Preserve, which will open in the spring of 2007, will be a major new site for the interpretation of southern Nevada’s cultural and natural history—featuring a visitor center, desert living center, plant and wildlife habitats, and research, educational, and administrative facilities. Listed since 1978 on the National Register of Historic Places, the preserve presents a unique platform to teach residents and visitors alike about the area’s Native American inhabitants and American pioneers. In 2002, the voters of Nevada approved a bond that provided \$35 million to build a new Nevada State Museum and Historical Society building on the grounds. Thus, while conserving a rare and precious place, the preserve seeks to educate the public about how humans have lived—and continue to live—in the fragile Mojave Desert.

The Santa Lucia Ranch and Rancho Seco

Diana Freshwater, Arizona Open Land Trust

ON THE EVENING OF April 30, 2005, more than one hundred people—ranchers, neighbors, land trust members, and county and city officials—gathered at the Santa Lucia Ranch, just north of Arivaca, Arizona, to celebrate Pima County’s acquisition of the Santa Lucia Ranch and Rancho Seco, in a deal that had been negotiated by the Arizona Open Land Trust.

Together, the two ranches comprise nearly 10,000 acres of privately owned land. As part of the acquisition, nearly 30,000 acres of grazing leases will be assigned to the county but the ranchers will remain on the property and continue ranching for at least ten years. The stewardship of this land, in the stunning Altar Valley, is passing from the family-owned and operated Carrow Cattle Company to Pima County. It will be the largest purchase of private land in the county’s history.

The two ranches, which directly abut the Buenos Aires National Wildlife Refuge, consist of semidesert grassland and open mesquite woodland that measure 12 miles from east to west, across a landscape that is under considerable development pressure. The land’s biological, historical, and cultural resources are remarkable. For instance, all of the private lands in the acquisition are included in Pima County’s 2004 bond ordinance as habitat protection priorities, previously identified by the Arizona Open Land Trust using a multiyear grant. The conservation of the two properties will also be vital to building the biological reserve outlined in the county’s multispecies habitat conservation plan. Few formal cultural resource surveys of the landscape have been conducted, but informal investigation indicates a number of archaeological sites, concentrated for the most part along Arivaca Road and

the Cerro Colorado Mountains. A few prehistoric rockshelters have been encountered in the mountains, and two villages along the present-day Arivaca Road were occupied between A.D. 900 and 1200. In addition, the Heintzelman Mine, in the Cerro Colorados, dates to the Spanish Colonial and Mexican periods. A key part of this place’s story is that for more than one hundred years the landscape has supported cattle ranching. Threatened by fragmentation and intensive development, the Santa Lucia Ranch, like much of the landscape that surrounds it, exists

in its present state because the family who owns it has been able to keep it intact as a working cattle ranch.

At the celebration at Santa Lucia, several people spoke publicly about the acquisition. One of the most moving of these talks was made by one of the Carrow Cattle Company ranch owners, who recalled the long process of deciding the ranch’s ultimate disposition. She knew, she said, that some neighbors in the ranching community did not agree with the family’s choice to sell. But she also noted that while the sale was pending, she and her family never lost the support of neighbors, which is the backbone of any ranching community.

Over the years of the family’s negotiations with the county, she said she found a similar kind of integrity in those who spearheaded the deal. “They always kept their word,” she said. “Always.” Because of the relationship between the buyers and the sellers, the transfer of control of the ranch, which had been their family home since the 1950s, was less a discontinuation of the sellers’ own stewardship than an assurance of the continuity of the lifestyle that the Santa Lucia Ranch and other landscapes like it support.



Randy Prentice, courtesy of Dale Faulkner Land Company

Over the last century, the Santa Lucia Ranch has been kept intact, in large part, because it is a working cattle ranch.

Archaeological Conservation Easements

Jacquie M. Dale, Center for Desert Archaeology

CONSERVATION EASEMENTS are one of the most significant and powerful land-protection tools available to private landowners in the United States. While landowners can control what happens on their land as long as it belongs to them, they have no way to ensure what will be done by future landowners. Conservation easements allow landowners to restrict the type and amount of development that will occur on their land far into the future.

To understand the easement concept, think of owning land as holding a bundle of rights. A landowner may sell or give away the whole bundle, or just one or two rights. These can include, for example, the right to subdivide the land, to restrict access, to construct buildings, or to harvest timber. To give away certain rights while retaining others, a property owner grants an easement to an appropriate third party.

An archaeological conservation easement is a voluntary legal agreement between a landowner and a qualified organization. Created to protect archaeology and historic resources, an easement places permanent restrictions on land use while keeping the land in private ownership. Although an easement is a deed restriction that limits development, it allows the continuation of certain land uses, such as ranch-

ing and farming. Every easement is tailored to the property and the property owner's needs. It can cover, for example, a portion or all of the property. In many instances, conservation easements provide income and estate tax benefits, allowing land to be kept within a family, particularly for those who are "cash poor, land rich."

When a conservation easement is donated or sold, it typically goes to a public agency or a preservation organization. Holding an easement is a great responsibility because the recipient organization must have the time and resources to monitor the land and ensure future landowners adhere

to the easement. The Center for Desert Archaeology holds several easements, and it aims to build a modest endowment to accompany each new easement it holds.

For many years, conservation easements focused entirely on natural resources—the health of plants, wildlife, streams, and rivers. Environmental resources such as



Jacquie M. Dale

Harold Elliott, pictured here, and his wife Mignon donated a conservation easement to the Center for Desert Archaeology in 2002, permanently protecting a large fourteenth-century pueblo.

The Buried City Site in Texas

"IN OCHILTREE COUNTY, TEXAS, on the south bank of Wolf Creek, is a group of stone ruins which has aroused the interest and curiosity of all who have visited them, and caused much speculation among those who have tried to formulate a theory to account for their existence," pioneer archaeologist T. L. Eyerly wrote in 1907. Nearly eighty years later, the Buried City site, as it came to be known, still inspired fascination among Texans.

In 1984, the landowners of the site, the Harold Courson family, permanently protected the 700-year-old village with the first conservation easement in Texas to protect an archaeological site under the state's Conservation Easements Act of 1983. The following year, a second easement was created, preserving two more sites consisting of semisubterranean stone structures. The sites are well protected. The land today—an open grassland used for cattle ranching—remains in private hands. Although closed to tourists, a historical marker on a nearby highway explains the site's significance.

The Courson family not only took an active role in preserving sites, but also financially supported research to better understand local history. In 1985, the Courson family received the Texas Historical Commission's Award for Historic Preservation, and in 2000, Harold Courson received the Governor's Award for Historic Preservation.

plants, wildlife habitat, range land, agricultural land, wetlands, open space, and even a scenic view can all be preserved with a conservation easement. However, because many landowners are interested in protecting not only natural but cultural resources, conservation easements have been increasingly used to protect landscapes in a more holistic way. One recent example is the O-Bar-O ranch north of Willcox, Arizona. A conservation easement placed there in 2005 preserved thousands of acres of habitat for at-risk wildlife species while also explicitly protecting archaeological sites, most notably the fourteenth-century

Fort Grant Pueblo. Because vital natural and cultural resources are typically found in the same areas in the Greater Southwest—that is, wherever water can be found—a holistic landscape approach does the most to promote overall land stewardship.

Conservation easements are designed, in short, to protect sensitive natural and cultural resources, thereby benefiting both the private landowner and the larger community. Archaeological conservation easements ensure that our collective history can be used to create a sense of place for future generations.

Saving Sites, Preserving Communities

James B. Walker, *The Archaeological Conservancy*

FROM PUEBLOS AND PITHOUSES to geometric earthworks and Woodland villages, over the past 25-odd years The Archaeological Conservancy has established 300 preserves in 39 states. In the beginning, being the only nationwide organization preserving archaeological sites, we had the luxury of selecting the biggest and the best for our inventory. Clearly, it is easier to raise funds to preserve something truly outstanding.

However, we soon realized that there were problems associated with acquiring and preserving the one “big bump” on the landscape. There are numerous archaeological questions that cannot be answered by studying one large site in isolation, including community structure, growth, interaction, and trade. Most pre-Columbian communities are created around a unifying natural or cultural landscape element. The community using this landscape often consisted of small or large groups clustered in hamlets and villages and drawn together by political, religious, and family ties. To fully understand the culture, the researcher must examine all levels of the community, from the “big bump” to the smallest fieldhouse.

Lately, we at the Conservancy have been re-examining our early acquisition projects, such as our 2,000-room Pueblo San Marcos south of Santa Fe, New Mexico, with an eye on its archaeological landscape. Working with other

entities, like Santa Fe County’s Open Space Division, we have assisted in setting aside what remains of some of the turquoise mines in the nearby Cerrillos Hills that the San Marcos residents probably mined. We have been working



The Archaeological Conservancy’s preserve, located within AMREP Corporation’s River’s Edge III Subdivision, just north of Albuquerque, New Mexico, contains the remains of a buried pithouse village dating to the Basketmaker period.

with neighbors who own agricultural features adjacent to the pueblo to promote their preservation.

Often our acquisition strategies are driven by changes in the modern landscape, similar to the intense development pressure seen in the Phoenix and Tucson basins. With

James B. Walker

a development pace of “an acre an hour,” little of the archaeological record will remain for future archaeologists with improved techniques and new theories. Although there is a great deal of archaeological data recovery occurring within new development areas, much of our knowledge of the Hohokam will be locked into the archaeological technology of today. Archaeology is a changing science—we are always coming up with new ideas and methods.

With this in mind, the Conservancy has spearheaded a program to preserve Hohokam villages within new development areas in Arizona. The challenge has been to integrate these archaeological preserves into new residential communities with both neighborhood enhancement and archaeological preservation in mind. One solution

has been to create open-space parks with native vegetation, benches, ramadas, and trails. The Conservancy often leases the surface of the park to a homeowner’s association, which maintains the surface and protects the buried resources with the assistance of volunteer site stewards. The lease allows for future archaeological research to take place within the park. For archaeological preserves with abundant artifacts at or near the ground surface, we often install a one-foot-thick earthen cap over site areas to protect exposed resources.

Unless preservationists continually innovate and develop strategies that promote preservation in a positive way, archaeology and site preservation will be forever seen as an impediment to modern development. In a changing environment, we must adapt or become extinct.

Cultural Resources Preservation by Pima County

Roger Anyon and Linda L. Mayro

Pima County Cultural Resources

PLANNING AND PARTNERSHIPS are the key to successful preservation, and local governments can plan and implement long-term and large-scale preservation of cultural and natural resources. Pima County, in southern Arizona, uses a variety of approaches to promote preserva-

tural resources. The planning effort was extensive; data were collected on the numbers and types of known cultural resources on non-federal and non-Indian lands. More than 4,000 cultural resources have been recorded, even though only 12 percent of the county has been archaeo-

logically inventoried. The data were evaluated by teams of local experts, which led to the identification of resource protections and the threats to resources. The most significant known resources were identified as “priority cultural resources” for conservation and included in the county comprehensive plan. This planning effort to protect these resources has led to county partnering with tribes, federal agencies, local jurisdictions, ranchers, and the private sector to consider resources regionally. For example, the proposed Santa

Cruz Valley National Heritage Area is a joint effort by Pima and Santa Cruz counties, as well as all of the incorporated communities and tribal nations within the proposed boundaries.

One of the most successful preservation strategies employed by Pima County is the county bond program (www.bonds.pima.gov). In 1997 and 2004, Pima County asked its citizens to vote for bonds that included more than \$26 million for historic and cultural resources preservation.



Built in Spanish Colonial Revival style, the Curley School is located in Ajo, Arizona, a company town constructed during the “City Beautiful” movement in the early twentieth century (courtesy of the Pima County Cultural Resources & Historic Preservation Office).

tion, including planning, partnerships, local government bonds, and ordinances. When combined, these approaches create a powerful, synergistic, and practical preservation program.

Rapidly expanding development over the past two decades is dramatically increasing the threats to cultural resources. In the 1990s, Pima County initiated the Sonoran Desert Conservation Plan (www.pima.gov/sdcp). This countywide plan is designed to protect natural and cul-

Both bond elections were overwhelmingly approved by upwards of 60 percent of voters, a clear indication of public support for these efforts. These county bond projects fall into four major categories: historic building rehabilitation and reuse; acquisition of cultural resources for preservation; preservation planning; and development of the Juan Bautista de Anza National Historic Trail. Eleven projects involve historic building rehabilitations, including ranches, schools, community centers, and a performing arts center.

The goal for these projects is to save the structures, rehabilitate them in historically authentic ways, and then make them usable by local communities while acquainting the public with local history. Acquisitions include seven major Hohokam sites and four historic sites. These sites, especially the Hohokam sites, are the most threatened large intact sites that are still in private hands or owned by the state. By acquiring these sites, Pima County will preserve them for generations to come. The Pima County cultural resources bond program is demonstrating that

public policy coupled with public support is a powerful tool in making conservation a reality.

Pima County complies with Arizona state statutes, and in 1985, the county enacted local ordinances that were designed to protect cultural resources. All county projects must comply with these cultural resources requirements, and private development, re-zonings, and grading permits also require compliance with these policies. Cultural resources surveys are conducted, and data recovery and documentation are required when sites cannot be avoided. In many instances, however, sites can be avoided by designing open space around them, or by enacting conservation easements.

Pima County applies a variety of cultural resources preservation strategies designed to conserve as much as possible of its irreplaceable cultural heritage. Preservation is a key component of heritage education, public awareness, and cultural tourism. Preservation strengthens local cultural identities, celebrates cultural diversity, and enhances a sense of place for local residents and visitors alike.

New Mexico Tax Credit for Archaeological Site Protection

CREATED ON JANUARY 1, 1984, the State of New Mexico Investment Tax Credit Program is available to corporations, landowners, or lessees who stabilize or protect an archaeological site on their property. The site must be individually listed on, or contributing to a historic district listed on, the New Mexico State Register of Cultural Properties. Maximum tax credit is 50% of approved costs up to \$25,000. The credit is applied against New Mexico income taxes owed in the year the project is completed, and the balance may be carried forward for up to four additional years. Projects may be phased to realize maximum benefit from the program. Under this tax credit, protecting archaeological sites involves preapproved stabilization and maintenance, including activities such as fencing, planting grass, and erosion control. The cost of excavation is not eligible. *No government covenant or public visitation is required.* For more information contact Glenna Dean of the Historic Preservation Division, Department of Cultural Affairs at gdean@dca.state.nm.us or (505) 827-3989.

The Arizona Site Steward Program

Mary Estes, Arizona State Historic Preservation Office

PROTECTING CULTURAL RESOURCES in remote areas of Arizona is extremely difficult. Public land managers and tribal agencies have far too few patrol and range officers to oversee the lands under their jurisdiction. Public education and awareness is critical in preserving places that were inhabited for centuries and that are a part of Arizona's history. In the mid-1980s, members of the Governor's Archaeology Advisory Commission, an appointed body of professional and avocational archaeologists and citizens, partnered with the State Historic Preservation Office to develop a volunteer-based program called the Arizona Site Steward Program.

Today, the program has approximately 800 trained and certified volunteers assigned to more than 2,000 sites across the state. Site Stewards primarily monitor cultural resources and report site conditions to the land managers. Secondary to their mission is educating the public—making others aware of the importance of leaving the archaeological record intact. In 2004, Stewards reported 95 situations of site vandalism or damage, and logged more than 25,000 hours of site monitoring. Since January 1, 2004, Stewards also reported 2,600 hours of public education. In 2005, the Arizona Site Steward Program received national recognition from the Society for American Archaeology and



Volunteer Site Stewards inspect sites near Safford, Arizona.

the National Conference of State Historic Preservation Officers.

Prosecuting archaeological crimes that have been reported by Stewards is an even more daunting task. Often there is simply not enough information or evidence to determine who committed the crime. Even when a case has sufficient evidence, it rarely goes before a judge in a county court. However, when law-enforcement officers, prosecutors, and judges understand that these acts of desecration cause harm to both the scientific community and Native peoples, they gain a greater appreciation for what they for-

merly saw as victimless crimes. To this end, in May 2002, the Center for Desert Archaeology, the Arizona State Land Department, and the Arizona Site Steward Program—informally called the Heritage Education and Training (HEAT) team—sponsored training for county and municipal law-enforcement officers to instruct them in enforcing the Arizona State Antiquity Act, which has prohibitions similar to the federal Archaeological Resource Protection Act. The Arizona Site Steward Program and other members of HEAT are committed to continue with this outreach program.

Both state and federal laws have been enacted to protect our cultural heritage. Law-enforcement training and archaeology education events are conducted to heighten awareness about antiquity laws and the importance of the archaeological record. There has been an effort—largely unsuccessful, to date—to stop the publication of site location information in magazines, newspapers, and guidebooks, and on maps. If the vandalism reports made by Site Stewards are any indication, looting of cultural items appears to be increasing in our state. The Program, and its efforts at site protection and public outreach, is one way of protecting Arizona's unique, but disappearing, heritage.

The Spur Cross Ranch Conservation Area

JUST NORTHEAST OF PHOENIX, near the town of Cave Creek, is a 2,154-acre park with one of the few perennial streams left flowing naturally in Arizona, rare stands of a desert grass called tobosa, and native willows. The wildlife is abundant and, because of the urban interface with Cave Creek, the park is a critical natural buffer to the upland mountains. The park also has 98 known archaeological sites, ranging from agricultural terraces to large, compound-walled villages, petroglyphs, and historic mines. To protect the fragile ecosystem and archaeological landscape, the park has been designated a “limited-use public recreation and conservation area.”

This exceptional park was born from controversy, after the large Spur Cross Ranch was sold to a developer who planned a resort, dense residential housing, and a golf course. A grassroots coalition spurred the State of Arizona (with funds from the Arizona Heritage Fund and the Natural Areas Heritage Fund) and Maricopa County (in which Cave Creek is located) to contribute \$15 million to acquire the land in 2001. In an exceptional decision, the town of Cave Creek chose to tax itself \$6 million—with a limited property tax—to finance the rest of the purchase. Cave Creek now also has a permanent half-cent sales tax to fund the management of the area, generating about \$500,000 annually.

The Spur Cross Conservation Area is now managed by the Maricopa County Parks Department. Last year, Arizona State Parks, Maricopa County, and Cave Creek completed a master plan for the area, and visitors are now welcome to watch birds, ride on horseback, hike, and picnic. Visitors can see some of the archaeological sites by going on ranger-guided hikes. Vince Francia, the mayor of Cave Creek, when asked about what makes the area special, says, “It’s an example of grassroots efforts, that preservation is not just an exercise in frustration. It shows that places like Spur Cross can work.”

A Holistic Approach to Preservation Law Enforcement

Patrick D. Lyons, *Center for Desert Archaeology*

LOCAL COMMUNITIES and law-enforcement agencies have come to realize that archaeology is just one among many valuable and threatened components of the landscape and that a holistic approach to resource protection is needed. Law-enforcement agencies have also learned that those who commit archaeological resource crimes are

projects are completed in the context of considering the effects on natural and cultural resources. However, when environmental statutes are skirted as large-scale development proceeds, it is unusual that only a single class of resources, either natural or cultural, will be affected. The same processes that erase the subtle traces of past human communities result in the destruction of extant plant and animal communities.

An especially egregious example has recently been described by the *Arizona Daily Star*, which reports that the Arizona Attorney General's Office is suing a Scottsdale-based company, Johnson International, Inc., for violating several state environmental laws in the process of developing La Osa Ranch, in Pinal County. According to the *Star*, Johnson International illegally bulldozed state and private land, destroying portions of seven archaeological sites and more than 40,000 protected plants, and polluting the Santa Cruz River.

Smaller-scale threats to cultural resources are manifest in the form of looters and vandals. However, recent attempts to prosecute such offenders under the state's burial protection law and the Arizona Antiquities Act have resulted in very few convictions and, for the most part, ridiculously slight penalties. This is due in large part to technical issues involved in the interpretation of these specific statutes by judges and juries, but also

a lack of knowledge about archaeology among the judiciary and the general public. In response to these problems, prosecutors and law-enforcement officers have recommended investigating and prosecuting archaeological crimes in the same ways that state agencies pursue environmental crimes, through statutes prohibiting trespass on, damage to, and theft of state property.

The somewhat paradoxical goal here is to direct the attention of judges and juries away from the unique aspects of archaeological resources and toward the simple idea that our shared heritage is protected by law by virtue of the fact that the state holds the land in trust. Another idea behind this move is to hold future offenders equally accountable for destruction of cultural and natural resources.



Aurelia Nez

Law-enforcement officers from the Navajo Nation Forestry Department, Arizona State Parks, and Resource Enforcement departments of the Navajo Nation and Hopi Tribe work together at a training session on archaeological crime scenes.

involved in other types of illicit behavior that have deleterious effects on the landscape and on society as a whole, such as poaching, theft of native plants, and the manufacture and sale of illegal drugs.

New ways of thinking about archaeology and archaeological resource crime have led community leaders to develop and support planning programs that address both natural and cultural aspects of the landscape. This is an important shift, because it creates bonds between groups with different interests (birds, plants, ranching, archaeology), but the same goal—preservation. At the largest scale, and with increasing speed, residential and commercial development—urban sprawl—threatens both natural and cultural resources. When developers follow the spirit and the letter of the law, the community has a voice in preservation. A compromise is achieved whereby necessary

National Heritage Areas

Anne J. Goldberg

Center for Desert Archaeology

THE TERM **LANDSCAPE** implies that some areas have a special character, a unique sense of place, and evoke a feeling of interconnectedness in a region. Landscapes tie archaeological sites together or trace the movement of settlers across a territory. Landscapes allow people to understand how places relate to one another, putting them in a larger context shaped by time, people, and events.

The Center for Desert Archaeology has been pursuing a relatively new way of preserving and celebrating landscapes—National Heritage Areas (NHAs)—which recognize that a region gets a distinct sense of place from more than one important site. For example, the Spanish mission at Tumacácori is a good location to learn about Spanish colonization, but the Santa Cruz Valley contains other related structures, like San Xavier del Bac Mission and Tubac Presidio, that together create a landscape shaped by the Spanish Frontier.

NHAs are designated by Congress as regions with natural, cultural, and recreational resources that, when considered together, are nationally distinctive and significant. They are designed to stimulate economic growth by encouraging local stakeholders to “collaboratively plan and implement programs and projects that recognize, preserve and celebrate many of America’s defining landscapes.” In Arizona, Yuma Crossing is the only NHA (one of only two west of the Mississippi River). The Congressional delegation from New Mexico has introduced legislation to make the Northern Rio Grande an NHA, but Congress has not yet voted to designate the region. Once designated, an NHA is eligible to receive up to \$10 million in 50 percent match funding over 15 years for these projects.

Additionally, the federal funds act as seed money that can be leveraged to attract other sources of funding, averaging about \$9 for every federal dollar. This money is used for projects that support the defining themes of the landscape, and is administered and overseen by a local management entity. These projects could include preservation and stabilization of archaeological resources, education programs, or roadside signs. Importantly, a regional plan—envisioning the area as a unified landscape—allows separate communities, parks, or organizations to work collaboratively to meet common goals.

The Center has taken a leading role in two proposed NHAs: the Santa Cruz Valley and recently the Little Colo-



National Heritage Areas bring economic and conservation benefits while safeguarding private land use and ownership.

rado River Valley. A feasibility study, the first formal step in the designation process, has been completed for the Santa Cruz Valley. Archaeologist Jonathan Mabry oversaw the assembly of this comprehensive document, coordinated a working group that included a diverse and representative group of local stakeholders, worked to obtain local support, and conducted public outreach and fundraising. We hope to see the introduction of Congressional legislation supporting designation of the Santa Cruz Valley as an NHA in the next year.

The same process is underway in the Little Colorado River Valley, where Center staff members have been making public presentations and gathering formal letters and resolutions of support from communities, business owners, chambers of commerce, and other stakeholders. The overwhelming support for this project at such an early stage has confirmed the Center’s belief that cooperative, regional projects like NHAs hold great promise for preservation.

NHAs recognize that landscapes have value for people from diverse backgrounds and beliefs. For some, landscapes have vast economic potential for development that emphasizes heritage and nature tourism, especially in rural areas. The same area can be seen as an important spiritual link to the past or a place to make a living in the same way one’s ancestors did, or a vital element in archaeological research. Each of these values has a place within the parameters of an NHA, and the Center will continue to work toward preserving landscapes that encompass all of these perspectives. Landscapes tie together more than resources—they allow people to find common ground for the often-divergent goals of preservation and development by emphasizing a unique sense of place.

Urban Parks in Tucson, Arizona

SEVERAL RECENT PROJECTS in Tucson, Arizona, illustrate the ways in which urban development, preservation, and public education can be balanced.

One site, known as the Julian Wash site (1200 B.C.–A.D. 600), was going to be impacted by a major new highway interchange. Excavations carried out by Desert Archaeology, Inc., focused on the direct impact zone, while 12 acres were preserved in close consultation with the Arizona Department of Transportation and the Arizona State Historic Preservation Office. Through a federal grant, an additional 4.5 acres of the site were purchased. The resulting preserve is being developed into a neighborhood park that features an interpretive path which highlights four major time periods and cultural groups who have lived in the immediate area.

The Vista del Rio neighborhood worked with developer Pepper-Viner and the City of Tucson to preserve a 1,000-year-old Hohokam farming settlement in a “passive” archaeological park, a preserved area with little disturbance or formal construction. While no artifacts will be displayed to the public, the City Parks and Recreation Department has installed signs along walkways, and the park is protected through a conservation easement held in trust with the Center for Desert Archaeology.

The third site, Valencia Vieja (A.D. 400–700), is a large village that has provided insight into early Hohokam social, economic, and political organization. Placement of new buildings for the Desert Vista Campus of Pima Community College avoided sensitive archaeological areas. In

addition, a grant was obtained to build an underground drainage system and avert destructive grading to control runoff. Excavations were conducted in 1997 and 1998 to



The large scale of the interchange for Interstate 10 and Interstate 19 created open space that could be used as an archaeological preserve, which was expanded further with transportation enhancement grant funds.

offset impacts from parking lots and access roads. More than half of this large site is still preserved, and campus development has proceeded. In fact, the project architects created a large circular open space at the main entry area to the campus. Within that space, outlines of prehistoric structures were re-created and interpretive signs were placed. They serve as a small monument to Tucson’s beginnings and as a reminder that much more is buried right underground and must be cared for into the future.

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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Henry D. Wallace

Back Sight

PRESERVING ARCHAEOLOGICAL LANDSCAPES is no longer possible across much of the American Southwest because so much has been transformed by new development. As an archaeologist, my sense of loss is great. More eloquently, Barnaby Lewis (pages 4-5) conveys the O'odham perspective: "A part of our spiritual being is cut, scraped away, every time a site is destroyed." Rather than grieving, the necessary response is intensified action. How can the community-based archaeology that is central to the Center for Desert Archaeology's mission help to direct that action?

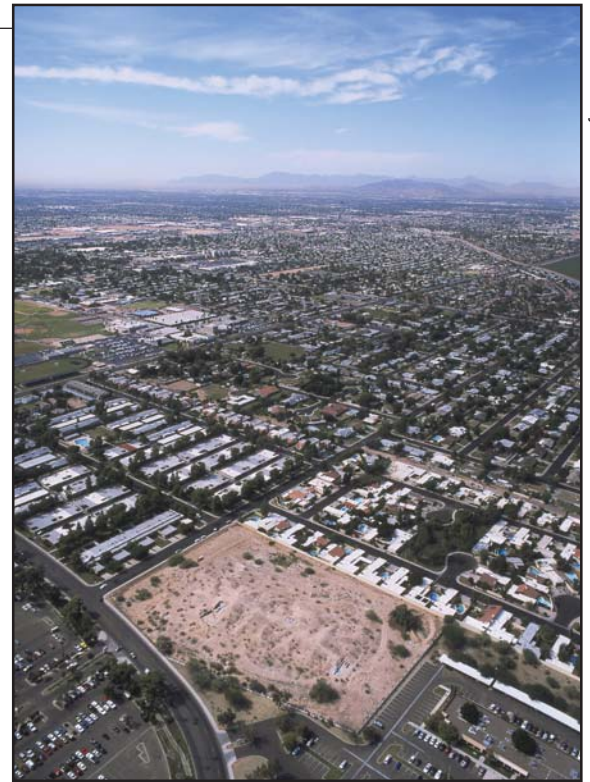
We can help counties and incorporated communities realize that they have a great opportunity to exert local control—through adoption and implementation of archaeological ordinances. Ordinances do not stop development. Effective ones ensure that samples of artifacts and information about the past are recovered, studied, and preserved before a site is destroyed. They also promote preservation in place where possible.

Albuquerque, New Mexico, is drafting an archaeological ordinance, an effort led by City Councilor Martin Heinrich. He says, "In a city like Albuquerque, where cultural resources are so much what makes us a unique city and draws people here from all over the country, it's even more important to protect those resources because it's a big part of the basis of our economy."

The connections to local identity and to the economy are critical reasons for local communities to develop ordinances. Communities build their future on their unique identity and on a solid economy. Balancing the role of community heritage with other interests is not simple, and Albuquerque's ordinance wisely proposes a new position for a city archaeologist. An archaeologist brings essential technical expertise as well as the ability to work with historic preservationists, Native Americans, and others to ensure that a broad perspective about community identity and heritage is brought to bear when planning for the future. A well-conceived ordinance guarantees that such dialogue will take place. As part of that dialogue, community-based initiatives such as bond issues for preservation can also be explored (see Pima County's example, pages 10-11).

Not every community can afford a full-time archaeologist. To some extent, State Historic Preservation Offices (SHPO) can assist to fill that gap. However, more is needed, because SHPOs are already stretched thin. The Center for Desert Archaeology is seeking to expand its assistance to local communities. Part of an endowment campaign we are preparing will fund two additional people to work with local communities on a full-time basis. Even two more people are not enough, but action must begin soon, and two will make a tremendous difference.

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.



©Adriel Heisey

The Mesa Grande platform mound was purchased by the City of Mesa, Arizona, to create a small, but vital, preserve in a sea of urban development.

*William H. Doelle, President & CEO
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