

ARCHAEOLOGY SOUTHWEST *magazine*

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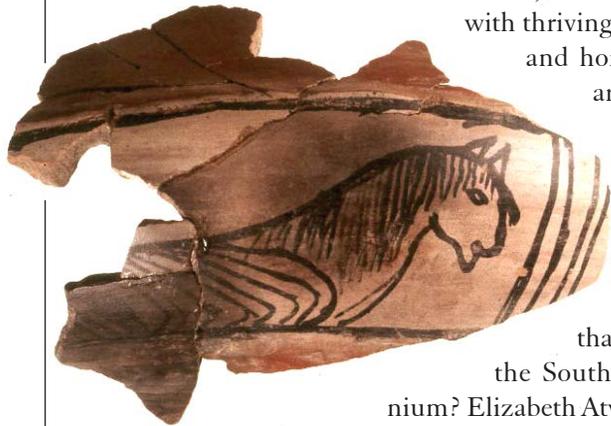
Summer 2004

Horses in the Southwest

Tobi Taylor and William H. Doelle, Center for Desert Archaeology

CATALYSTS FOR CHANGE: horses have affected almost every aspect of life in the Southwest since their reintroduction in the sixteenth century. They were integral to the investigation of the area first by Spaniards, and later by American explorers, immigrants, and soldiers. Native Americans, too, found horses useful and, eventually, indispensable. Nearly 500 years after

Coronado's *entrada*, the Southwest remains horse country, with thriving ranches, rodeo circuits, racing, and horse shows. And because of the area's long identification as a land of cowboys, ranching, and mustangs, movies and tourism brochures continue to emphasize this aspect of the Southwest.

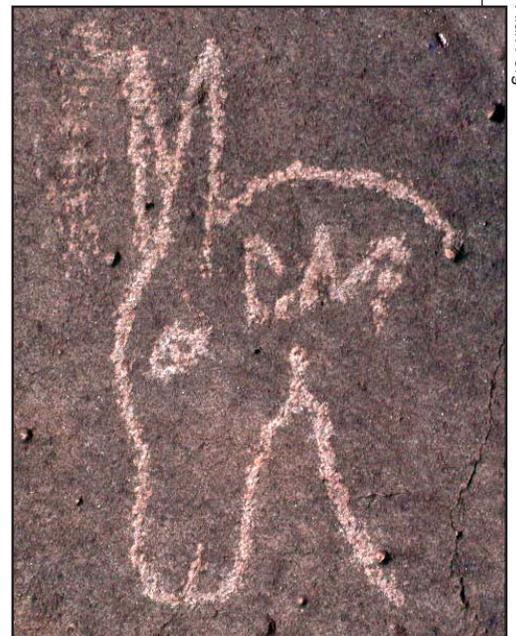


What is it about the horse that has made it such a symbol of the Southwest for nearly half a millennium? Elizabeth Atwood Lawrence, an anthropologist who looks at horse-human interactions, writes that, "It is not difficult to understand why the figure of a man on a horse has throughout history been a sign of conquest... Of all animals the horse is uniquely suited to represent, and demonstrate through constant recapitulation, the conquest of the wild—the extension of culture into nature."

In this issue of *Archaeology Southwest*, we examine this phenomenon by looking at horses in various spheres: their direct use in exploration (pages 3-4), transportation (page 9), war (page 10), as food (page 8), and in rodeo and racing (pages 13 and 15). We also examine their more indirect influence: their role in shaping the landscape (pages 11-12), as artistic and religious symbols (pages 5 and 14), as well as emblems of wealth and power—for both Native Americans and Europeans (pages 6-8).

These diverse articles illustrate a myriad of ties among horses and humans, and modern archaeology and historic preservation. Material culture—artifacts, buildings, special facilities, and even landscapes—provides the link that places this thematic issue well within the range of topics covered in previous issues of *Archaeology Southwest*. This issue is an opportunity to trace a complex web of connections across the modern Southwest and to explore the history and deep prehistory that lie behind that web.

A Mexican or early American Territorial period iron spur, found in Sabino Canyon, northeast of Tucson. The heel portion of the spur is broken off near the decorative element.



Above: Apache petroglyph of a mule or horse, circa 1900. At left: A Pojoaque Polychrome jar sherd from a seventeenth-century domestic trash deposit at a site near Santa Fe, New Mexico (courtesy of David H. Snow, photograph by Nancy H. Warren).

Robert Claccio

Alan Feig

Issue Editor: Tobi Taylor

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Ice Age Horses of Arizona and Sonora

Jim J. Mead, Northern Arizona University

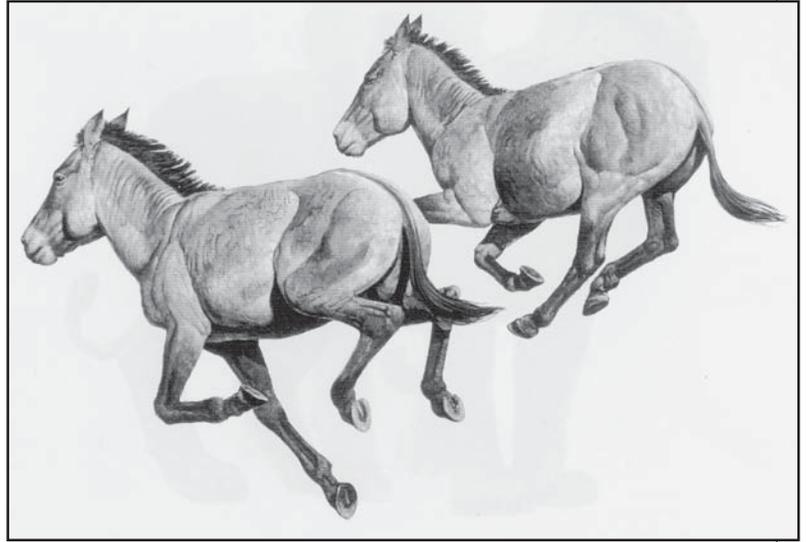
HORSES ACTUALLY EVOLVED IN NORTH AMERICA, even though many people assume that Spaniards introduced horses to this continent in the mid-1500s. By the earliest Eocene, 55–50 million years ago, the evolving horse lineage—what is today called the equids—was set in motion, and horses were well established in North America by this time.

The early equids were browsers, and because they had a woody, brushy, nonabrasive diet, they had low-crowned teeth. The late Eocene to the early Oligocene (37–28 million years ago) was a time of transition, precipitated by a major shift in global climate toward increasingly colder mean annual temperatures, amplified aridity, greater seasonal temperature fluctuations, and contraction of the tropical temperature belts. By Miocene times (24–5 million years ago), savannas and more open grasslands covered more of the continent, even in the Greater Southwest.

With this climatic shift, horses adapted to a more grazing type of diet, including grasses. Because grazing is highly abrasive, teeth for grinding became hypsodont, or ever-growing. With the exploitation of high-fiber, low-digestibility foods such as grasses, there was an associated rapid diversification of body sizes.

A host of equid genera and species have evolved and died out. Our most recent horse is within the genus *Equus*, and it first appeared around 4.9 million to 4.5 million years ago. By 2.2 million years ago, the world was locked into a developing Ice Age. *Equus* could be found throughout North America during the Ice Age, only to become extinct about 11,000 years ago.

Ice Age fossil horses are quite common in the Greater Southwest. I have recorded at least 45 localities in Arizona and about 10 in Sonora, Mexico. There are perhaps five species represented in this sample—from big, to medium sized, to small.

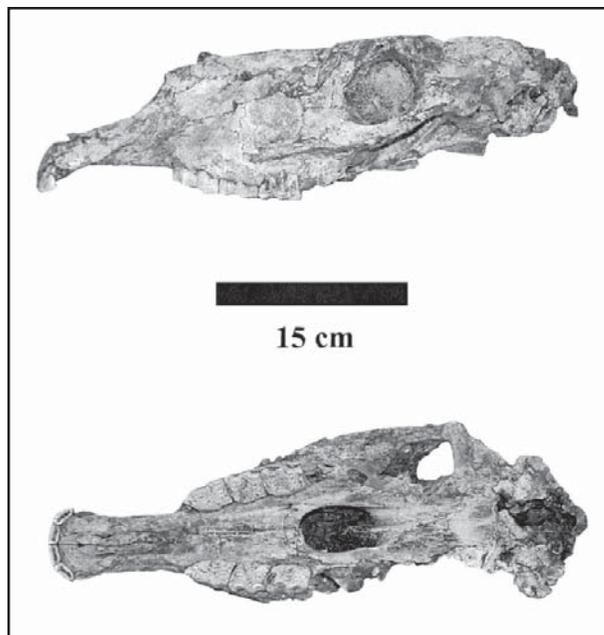


Horses like these roamed the Greater Southwest during the Ice Age, about two million years ago (from the Arizona Geological Survey).

It is unclear, however, how these species relate to one another. A small, burro-sized horse is known from cave deposits in the Grand Canyon. Larger horses are common in river deposits around Arizona, such as in Phoenix and Tucson. Horses may have been hunted by Paleoindians utilizing the Clovis tool kit, as recorded at the Lehner mammoth kill site, in Cochise County. Some horses were unfortunate, or simply clumsy, near natural trap caves. This

may explain the young horse, which dates to approximately 35,000 years ago, found in Kartchner Caverns State Park, in southeastern Arizona. Horses are also known from swamps and boggy areas in Sonora, Mexico.

Something happened, however, during the waning phase of the most recent glaciation. By 11,000 years ago, horses were gone. It is unclear whether their extinction was due to a catastrophic event, or to a process of extinction that occurred slowly, over 8,000 years of the late glaciation. Arizona and Sonora could hold the answer to this question.



Sandra Swift

Two views of the skull of a one-year-old horse (*Equus* sp.) from Kartchner Caverns State Park, in southeastern Arizona.

The Indian Adoption of Spanish Horses

Diana Hadley, Office of Ethnohistorical Research, Arizona State Museum

IN 1519, AFTER AN ABSENCE OF MORE THAN TEN MILLENNIA, horses returned to mainland North America. Essential to the conquest of Mexico, the 16 horses Hernando de Cortez brought to the New World amazed and terrified the native people of Mexico's east coast. Expedition member Bernal Díaz del Castillo recalled that, after the ship docked, Cortez placed one of the expedition's six mares downwind from a stallion, eliciting terrifying snorting and stomping. Fear of the strange creatures spread rapidly among native peoples, who often believed the awesome beasts were gods and considered horse and rider a single being.

As the Spanish empire pushed northward through Mexico, the primary agents of the state—the army and the Catholic Church—relied on the horse as a key element of expansion. Presidios carefully guarded separate herds of saddle horses and mares, with each soldier required to keep six to eight remounts.

Jesuit and Franciscan missionaries imported horses to the stock farms that accompanied new missions. The padres relied on horses to transport stores of rootstocks, seeds, and European agricultural implements, among which the plowhorse figured prominently. Within 20 years of Cortez's arrival, *estancias de ganado mayor* (stock farms) had been established across Mexico. As horses moved northward, native peoples regarded them with less fear, increasingly appreciating their inherent utility. Rather than kill the fearsome creatures, natives began to appropriate strays. Horses quickly entered native trade systems, often arriving at distant Indian settlements before Spaniards appeared on site.

The first recorded horses to enter the present southwestern United States came with Francisco Vázquez de Coronado's 1540 expedition, which took along 228

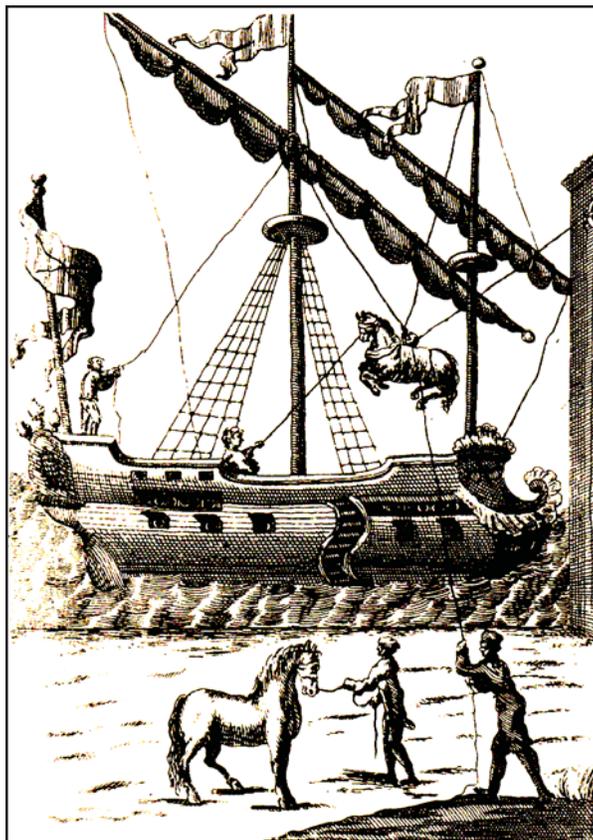
mounted horsemen, a herd of 559 saddle horses for remounts, some thousand packhorses and mules, as well as droves of cattle, sheep, and hogs. Expedition historian Pedro de Casteñada complained that, in contrast with the

southern Indians, northern tribes continually attempted to steal horses. For example, one Pueblo group scored a memorable theft while the Spaniards were in winter camp at Tiguex, near present Bernalillo, New Mexico. However, since only two mares were listed on the muster roles, it is unlikely that the mustangs (from *mesteños*, meaning wild horses) that later spread across the lower Great Plains were descended from Coronado's horses.

Between 1581 and 1593, at least five mounted expeditions entered the region between Arizona and the Pecos River (see page 9), each expedition likely experiencing losses or thefts of horses. In 1598, Juan de Oñate was the first Spaniard to import breeding stock into New Mexico to supply his 530 colonists and soldiers at Santa Fe. The colony enacted stringent laws,

consistent with official Spanish policy, prohibiting natives from owning or even riding horses.

New Mexico's first executions occurred during Oñate's initial year in Santa Fe, when two Indians were hanged for attempted horse theft. Yet, contrary to Spanish prohibitions against mounting Indians, the economy of New Mexico's *encomienda* system, in which Spaniards were issued grants of land and Indian labor, depended on native agricultural labor, thereby encouraging native use of horses. In 1621, New Mexican *encomenderos* were authorized to employ Indian converts as herders and teamsters. The Spanish army sometimes used Pueblo grooms. During the 1630s, New Mexican settlers petitioned the viceroy to distribute excess horses from the missions among residents and soldiers.

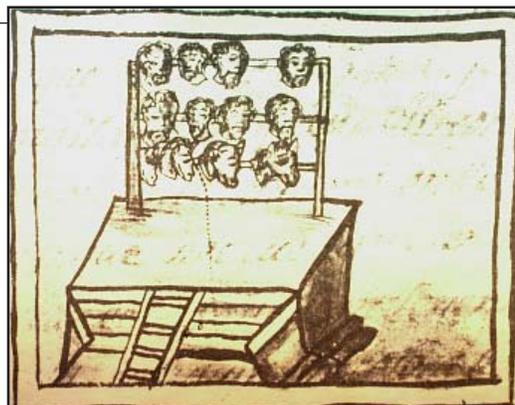


Courtesy of the Bancroft Library

This illustration, entitled *Embarcadero de los Cavallos*, from a 1769 Spanish riding manual, depicts Spaniards bringing their mounts ashore.

In the Pimería Alta, the territory of the northern Piman peoples (now northern Sonora and southern Arizona), horses arrived with Jesuit missionary Father Eusebio Kino during the 1680s. Kino established his *cabecera* (mission headquarters) at Mission Dolores in the San Miguel River Valley, approximately 25 miles east of present Magdalena, Sonora, and with it he founded Rancho Dolores, a stock farm where horses were bred for distribution at the missions, *visitas* (visiting stations), and ranches he founded. Kino brought horses to the Santa Cruz and San Pedro River valleys in the 1690s. In Sonora, the Spanish military employed friendly native groups as auxiliary troops, often mounting them on horses for expeditions. In the river valleys of central Sonora, the Opatas became indispensable allies of the Spaniards and served as mounted troops in many engagements with hostile tribes.

On the vast grasslands of northern New Spain, stray or stolen horses thrived and multiplied rapidly. Apaches and other native groups readily attached their travois to horses, rather than the large dogs they previously used in migrations. As early as 1650, Apaches used horses in conflicts against Spaniards in New Mexico. During the Pueblo Revolt of 1680, Indian horses contributed to the expulsion of Spaniards from New Mexico. By the early 1700s, the horse was becoming an integral cultural element among the Pueblos, Comanches, Utes, Navajos, Apaches, and nu-



The Florentine Codex, a manuscript written circa 1559–1575 by Fray Bernardino de Sahagún, contains this image of human and horse heads on a tzompantli, an altar where the skulls of sacrificial victims—often war captives—were placed. The tzompantli functioned as a tangible expression of political-religious control.

merous smaller groups such as the Sumas, Janos, and Jumanos, who since then have disappeared.

Horses played a key role in intertribal warfare. Those groups who relied on them for combat, such as Comanches and Apaches, expanded their areas of control. Horses also became a prized commodity at annual Indian trade fairs. Spanish, French, and Indian traders journeyed from distant areas of the Great Plains and Rocky Mountains to Taos or El Cuarteletejo, where they camped for weeks, exchanging weapons, hides, buffalo robes, dried meat, captives,

slaves, and horses.

The horses so readily adopted by American Indians were descended from the Spanish Barb, a small, feisty, courageous breed developed in Spain after the Moorish invasion of A.D. 711. The breed is a cross between the Berber horse, the African Barb, and the resident horse of the Iberian Peninsula (*Equus stenonius*, one of the six original types of wild horses).

Native American customs, riding style, tack, saddles, and weaponry associated with the horse are also of Spanish origin, with the exception of the rawhide moccasins many Indian groups substituted for iron horseshoes. The formidable lance used so adeptly by Apaches resembles the *garrocha* that Spaniards have used since the Middle Ages to work livestock. Even the word for horse in many Indian languages is derived from Spanish. The Hopi word *kawyo*, for example, is a derivative of *caballo*.

The Spanish Barb

TODAY, SEVERAL STRAINS OF COLONIAL SPANISH HORSES, or Spanish Barbs, are present in the United States and have been identified through DNA testing. The Wilbur-Cruce Mission strain, which originated at the Dolores Mission where Kino was based from 1687 to 1711, was imported into southern Arizona in the late 1870s, by horse trader Juan Sepulveda, who sold a *manada* (breeding group of horses) of 25 mares and a stallion to Dr. Rueben Wilbur of Arivaca. Dr. Wilbur turned the horses out in the rough upper pastures of his ranch and allowed them to run in wild bands. When the ranch was sold in 1990, the American Livestock Breeds Conservancy funded the distribution of the horses among conservation breeders, and the strain is now recognized in the registry of the Spanish Barb Breeders' Association.

Another strain of Spanish Barb is managed at the Elkins Ranch in northwestern New Mexico. Identified as Spanish Barbs, the horses in the herd were discovered on Bureau of Land Management land near Mount Taylor, in the location where horses escaped from Juan de Oñate's expedition in 1605, when a freak blizzard pinned down his soldiers seven leagues north of their destination at Acoma Pueblo. The horses are now managed and bred at the Elkins Ranch near Mount Taylor. Another herd in the El Rito District of Carson National Forest bears "Spanish markers" in its blood type. (Some of these Spanish Barbs are available for purchase or adoption.)



This Spanish Barb mare, owned by Silke Schneider, is a member of the Wilbur-Cruce Mission strain, which originated at Mission Dolores in Sonora.

Tobi Taylor

The Coronado Project

SCHOLARS DISAGREE about the exact route taken by Francisco Vázquez de Coronado and his followers during their 1540–1542 entrada (see page 9). Because of the expedition’s sheer size, great quantities of artifacts were likely lost or discarded on the trail. Horse-related items, especially caret-head horseshoe nails, are among the most common artifacts diagnostic of the Coronado era. This is particularly promising because Coronado’s expedition involved more than 500 saddle horses and 1,000 packhorses and mules (see page 3).

This fall, the Center will initiate a public awareness campaign aimed at finding Coronado’s route into the United States (see *Archaeology Southwest* 17[3]). The goal of the campaign is to make contact with local residents who might have, or know of, Coronado-era artifacts originally collected in the United States–Mexico border region. The campaign will culminate with four *Antiques Roadshow*–type events, where archaeologists and historians will give public lectures and study any artifacts brought to the events. The Coronado Roadshows are free and open to the public.

Dates and Locations:

- October 1, 2004 Willcox Community Center, Willcox, Arizona
- October 2, 2004 Lordsburg Civic Center, Lordsburg, New Mexico
- October 15, 2004 American Legion Post 30, Springerville, Arizona
- October 16, 2004 Lost Frontier Museum, Reserve, New Mexico

Time:

- 3:00–4:00 p.m. Preliminary artifact examination
- 4:00–6:00 p.m. Public lectures and viewing of artifacts

For more information, visit the Center’s website at www.cdarc.org.

Patrick Lyons



On July 1, 2004, Center archaeologists were shown this possible Coronado-era horseshoe in the private collection of a southeastern Arizona ranching family. If we can identify enough of these types of artifacts and the general locations where they were found, it may be possible to finally locate the Coronado Trail across eastern Arizona or western New Mexico.

San Martín Caballero: Patron Saint of Horsemen

Tobi Taylor, Center for Desert Archaeology

AMONG THE VOTIVE CANDLES found in drugstores on the northern side of the Mexican border are those with the image of San Martín Caballero, the patron saint of horsemen—as well as businessmen, beggars, drunkards, soldiers, innkeepers, and winegrowers. Saint Martín Caballero is depicted astride a horse, dividing his cloak in half for the beggar at his feet.

Known in Europe as Saint Martin of Tours, he was first a Roman soldier who gave half of his cloak to a beggar he met on the road. That night, Martin had a vision of Christ wearing the portion of the cloak he had bestowed upon the beggar. Martin converted to Christianity, and later founded a monastery. His feast day is September 11.

Altars to San Martín Caballero can be found in Mexican homes, restaurants, and stores. As Jim Griffith writes in *Saints of the Southwest*, “At such altars, many people will place a bit of grass or hay and a small container of water—for the horse. Everyone knows that, in this arid cattle country of the ‘far north,’ horses must be fed and watered. As long as there’s fodder and water for Saint Martin’s horse, the kitchen will never lack for food and drink. Saints, it would seem, can fend for themselves.”



This shrine to San Martín Caballero, which contains water for the saint’s horse, is in a Tucson Mexican-food restaurant (courtesy of Rio Nuevo Publishing).

Ross Humphreys

Horses in Navajo and Apache Rock Art

Lawrence Loendorf, New Mexico State University

PRIOR TO THE ARRIVAL OF THE HORSE, all North American ungulates were even-toed mammals whose tracks showed the two lobes of their cloven hooves. Indian hunters, who from childhood learned to recognize the footprints of every animal they encountered, must have been surprised when, for the first time, they saw the rounded, unbroken outline of hoofprints from a new, unknown creature. Horse tracks quickly became the symbol used to depict the alien quadruped, and paintings or engravings of horses—especially those ridden by priests—rapidly became symbolic of the dreaded Spaniards.

During the period of initial contact, the Spaniards maintained a tactical advantage in warfare by preventing Indians from having any access to horses. At first, the Navajos, Apaches, and other Southwestern Indians responded with little interest in horses as beasts of burden or as sources of food, and instead killed them because they were symbols of Spanish power. Other military paraphernalia, such as swords and guns, rapidly became emblematic of Spanish power as well.

Of all the symbols associated with the Spanish *entrada*, however, the Christian cross was most identified with the

ensuing political and cultural conquest. Attempts to Christianize the Navajos began in the early 1600s, and although these efforts were largely unsuccessful, missionaries demanded veneration of the cross and respect for the clergy.

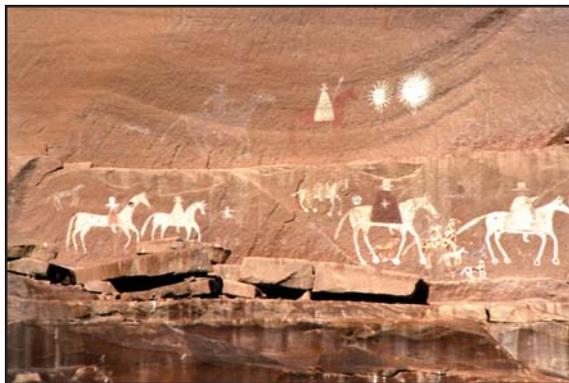
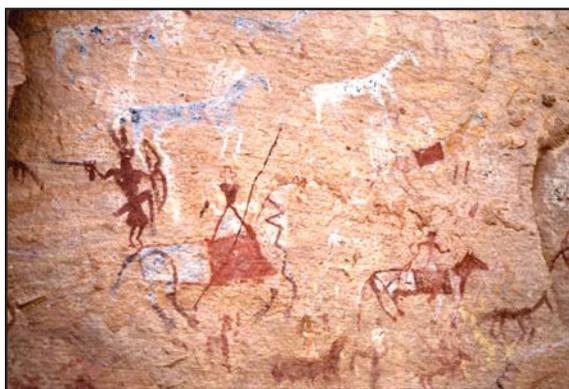
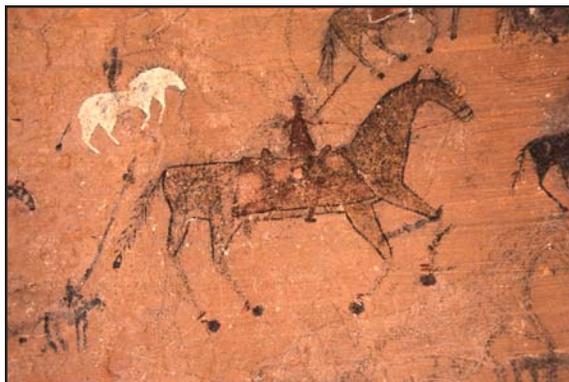
As part of their attempts to convert New World peoples, priests visited rock art sites and carved or painted crosses over the so-called pagan images.

Slowly, the symbols of Spanish power were added to, and sometimes replaced, the Athapaskan power symbols—paintings of shields, sinew-backed bows, lion-skin quivers, and animals with heart lines—that the Navajos traditionally used in their pictorial arts. The conflict between these two sets of power symbols is expressed symbolically at Navajo and Apache rock art sites, where the images are juxtaposed.

Early depictions of horses often co-occur with crosses in painted or engraved panels. A cross may appear on the head of a rider or on a mission church, but somewhere in the painting there will also be the traditional Athapaskan power symbols of a shield and sinew-backed bow. As time passed and horses became a treasured feature of Navajo and Apache everyday life, hundreds of images of horses, often drawn with a lump of charcoal, began to appear on canyon walls, frequently in the areas where boys were herding flocks of sheep. While most of these drawings are 10 to 20 centimeters across, there are larger examples measuring more than two meters in width.

In addition to the conventional images of horses, over time, more attention began to be focused on details like saddles and other tack. As a testament to rock art's role, reflecting both cultural tradition and innovation, the reservation-era horse drawings have been followed more recently by engravings

and charcoal depictions of the newly iconic pick-up truck.



Evelyn Billo and Robert Mark, Rupesarian CyberServices

Navajo and Apache rock paintings and petroglyphs of horses are grouped into three broad time periods. In the oldest category (top), prior to 1800, horses have pinnate (feathered) tails; between 1800 and 1860 (middle), tails point downward and there is little attention to detail; after 1860, images of horse have flowing, broomlike tails (bottom).

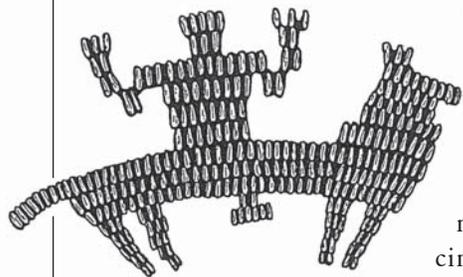
Horses in Chiricahua and Western Apache Culture

Alan Ferg, Arizona State Museum

EARLY APACHEAN GROUPS may have first seen horses when the Coronado Expedition entered the Southwest in 1540–1542. However, it was probably another 100 to 150 years before Chiricahuas and Western Apaches would have had regular access to horses, either through trade with Puebloan and Apache groups in New Mexico, or by raiding Spanish settlements in New and Old Mexico. Horses were used as pack animals, as food, as payment of debts, and, less often, as transportation or to run down antelope. Most often, horses stolen in one area found ready buyers in the next, with Sonora seemingly bearing the brunt: at the livestock market in Santa Fe, horses were just as likely to have Sonoran brands as not, and stock stolen in Sonora was welcome in Chihuahua. In early times, horses were replaced by stealing more; in later times, a few men who learned about raising horses became wealthy.

But for Apaches, like Navajos, once acquired, horses were quickly integrated

into traditional stories and ceremonies. While burros and mules were generally considered mere animals, horses were something more.



One could get sick from mistreating horses, and horses could become ill from some of the same dangers that sickened people; both might be cured by a medicine man who possessed horse power. One could say

prayers to a horse to give it endurance or make it surefooted. Men who knew horse songs could quickly tame wild horses, and, on a raid, men with rope power were first into a corral to lead out horses. And like all personal possessions of any value, horses might be destroyed and left at the owner's grave.

Near the Southern Four Corners area—where Arizona, New Mexico, Sonora, and Chihuahua meet—any rock art depictions of horses to be found were probably made by either Chiricahuas or Western Apaches. Our current knowledge of Apache rock art in Arizona is limited to a relatively small number of sites, and the number of horses appearing at those sites are few.

The seriation, dating, and interpretation of Apache rock art has not received the attention paid to its northern cousin, Navajo rock art. For the moment, rock art depictions of horses in the territories traditionally occupied by Apaches largely serve simply to identify the sites as Apache, and the age as historic. To be sure, other groups—including Sobaipuris; Sumas; Janos; Jocomes; and Spanish, Mexican, and American settlers, miners, military men, and

ranchers—may all have depicted horses in rock art, but those found so far are either definitely, or most probably, Apache.

For archaeologists (and Apaches) trying to reconstruct Apache culture history, or to interpret features found in traditional Apache territory, horses and horse paraphernalia can be important clues: unburned horse bones may indicate a nearby grave, burned horse bones may have been meals at a campsite, piles of bones or iron horseshoes would suggest butchering and jerking of meat, and horses in rock art may help to date and interpret the other designs at the site.

In locations protected from the elements, horses and Apaches might make themselves known in the form of horse gear—saddles, wooden spurs, quirts, ropes, and rawhide horseshoes, tack and saddlebags—as well as objects made from braided horsehair, and baskets and rawhide playing cards with depictions of horses.



Alan Ferg

Above: Apaches made rawhide playing cards based on the Spanish and Mexican packs they observed. On the left is a late-nineteenth-century Apache rendition of a Caballo (knight) of Oros (coins) card; on the right is the same card from a contemporary Mexican deck (Apache card courtesy of Elizabeth Barber and Ann Peters). At lower left: A horse and rider motif from an Apache basket (drawing by Ron Beckwith).

Horses in Archaeological Sites

Tobi Taylor, Center for Desert Archaeology

THOUSANDS OF HORSES have traversed the Southwest over the past 400 years, but they have left comparatively few remains. Evidence for the presence of horses at archaeological sites is generally in the form of metal horse gear, such as horseshoes, horseshoe nails, portions of bits, rings (for halters, saddles, or harnesses), as well as the occasional spur or stirrup. The horse remains that have been encountered at archaeological sites usually consist of teeth and burned or butchered bones. In a few cases, however, the horses were either buried or killed on site for reasons other than food.

At the Convento site in Chihuahua, Charles Di Peso, of the Amerind Foundation, found a very unusual burial: a horse had been interred in the church of San Antonio de Padua, apparently contemporaneous with its use (1660–1686). Di Peso suggested that the colt may have been involved in a re-enact-

ment of the legend of San Antonio, who, while attempting to convert a Jew, was said to have remarked that “it would be easier to make a wild ass kneel before the Sacrament than to make the Jew see the truth of Christianity.” According to the story, the Jew dared San Antonio to bring in an ass, which he did—and the animal knelt, resulting in the conversion of several onlookers.

In 1939, Emil Haury and E. B. Sayles, directing the University of Arizona field school, excavated at various sites in the Forestdale Valley of northern Arizona. At the Bluff site, they observed surface evidence of an Apache grave. They estimated that the burial had occurred at some point in the previous 20 to 30 years, and wrote, “at the same time, it appears that a horse belonging to the deceased was killed, and its bones subsequently became scattered over the site.”

The ethnographic literature for both Apaches and Navajos refers frequently to the phenomenon of killing a horse or horses atop their owner’s grave. A trader named Gladwell Richardson mentioned that, in the 1930s, when

he happened upon the grave of a prominent Navajo man, Spanish Horse, “probably a dozen head of horses had been killed...Whitened bones were scattered over two or three acres...[and] near a tree two saddles had been chopped useless; rotting leather was still clinging to parts of them.”

Recently, Bill Gillespie, the Coronado National Forest archaeologist, has recorded several rockshelters on the eastern face of the Chiricahua Mountains in southeastern

Arizona, some with horse bones (both burned and unburned) and some with rock art panels depicting horses.

As previously noted, horse-related artifacts are found with more frequency than equine faunal remains. Horse-related items associated with Coronado include horseshoes and caret-head horseshoe nails (see page 5). Another early find, not connected with the Coronado expedition, is a snaffle bit recovered



Courtesy of the Amerind Foundation

Church burial 17, at the Convento site in Chihuahua, consisted of a skeleton of a two-year-old colt, which was complete except for the cores of its hooves.

from the site of Cuyamungue, a Tewa pueblo that was abandoned around 1696.

Understandably less common are items made of more perishable materials, such as reins, bridles, saddles, and saddle blankets. In the 1990s, Arizona State University archaeologists excavated a Pima cemetery, dating from the 1860s to the early 1900s, and found two Western saddles, in fairly good condition, that had been interred with individuals who were likely their owners. Archaeologists from the Carson National Forest, in New Mexico, found a Navajo wooden-frame saddle, dating to 1650–1750, that had been hidden by juniper boughs and sheltered from the elements for centuries. The saddle, which had been left unfinished, was in excellent condition.

The contexts in which the faunal remains and other items have been found clearly demonstrate that horses were part of various activities, not only as beasts of burden, but also as sacrificial animals, symbols of wealth, and meat on the hoof.

Roads and Tracks: Horse Trails in the Southwest

Tobi Taylor, Center for Desert Archaeology

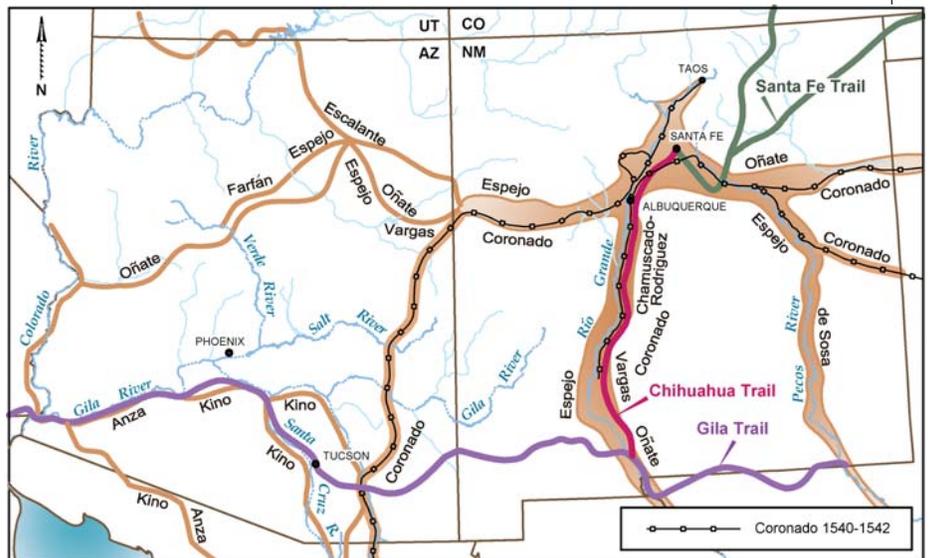
THE FIRST HORSEMEN to enter the Southwest were members of Coronado's 1540–1542 *entrada*. They followed a prehistoric trade trail from what is now Mexico through Arizona to the Pueblo of Zuni, New Mexico, in search of riches. From Zuni, smaller parties of Coronado's men were sent in various directions in present-day Arizona and New Mexico. By the fall of 1542, Coronado's force—which had traveled as far north and east as what is now Kansas—had given up the quest and returned, empty handed, to Mexico. Forty years passed until the next Spanish *entradas* into the Southwest, including trips led by Chamuscado and Rodriguez, Espejo, Castaño de Sosa, Farfán, Oñate, and Vargas.

The next major horseback explorations of the Southwest were conducted by Padre Kino, founder of more than two dozen missions and *visitas*. In 1691, Kino took what was to be the first of at least 15 horseback journeys into what is now southern Arizona, and, in 1694, may have been the first European to see the ruins at Casa Grande National Monument, near Coolidge.

In 1774, Captain Juan Bautista de Anza traveled from the presidio of Tubac, in Arizona, to Mission San Gabriel, in California. Part of his journey was likely spent on the Camino del Diablo, a route that roughly parallels the current international boundary. The next year, Anza led a group of emigrants along the Santa Cruz and Gila rivers to California. Additional Southwestern explorations during this period were led by Escalante and Dominguez, Vildosola, and various others.

In 1821, the same year that Mexico gained its independence from Spain, the Santa Fe Trail opened between Santa Fe, New Mexico, and St. Louis, Missouri. Until that time, New Mexicans had bought goods that had been manufactured in Chihuahua City and brought north on the Chihuahua Trail (El Camino Real), another road based on a prehistoric trade route.

With the outbreak of the United States–Mexican War, in 1846, it became important for the United States to take control of the Southwest and California. Various military roads were created during this period, including a wagon road from New Mexico to California known as the Mormon Battalion Route. Later called the Southern Emigrant



Major routes of exploration and transportation. The route taken by Coronado across modern southern Arizona is still unresolved (see page 4).

Route or the Gila Trail, this road became an important travel corridor through the Southwest.

In 1857, James Birch established a semi-monthly mail service, nicknamed “the Jackass Mail,” that ran on the Gila Trail, between San Antonio, Texas, and San Diego, California. A year later, the government canceled its contract with Birch's company, and the route was taken up by the Butterfield Overland Mail Company, which ran from Memphis, Tennessee, and St. Louis, Missouri, to San Francisco. Butterfield's contract was to deliver the mail from one end of the route to the other in 25 days. Passengers were charged \$100 for a one-way trip. However, Butterfield's use of the Gila Trail was short lived; with the commencement of the Civil War, in 1860, the mail was delivered via a more northerly route.

These and many other roads and trails—used for various purposes, including exploration, colonization, mining, cattle drives, and as military routes—are incised across the Southwest, and, in fact, some of today's highways were built over, or near the route of, these old roads. Early trails generally trended north–south, as Spanish explorers followed major river drainages, such as the Pecos River, Rio Grande, and the San Pedro River. Later trails generally trended east–west, reflecting the opening of the Southwest to Euroamerican settlement after the United States–Mexican War, the use of the Southwest as a travel corridor to California, and trade relations with the American Midwest.

The Fort Huachuca Cavalry

J. Homer Thiel, Desert Archaeology, Inc.

HORSES AND MULES were used by soldiers in the Southwest for nearly 400 years. From the Coronado expedition in the 1540s, to the closing years of the American cavalry in the 1930s, the military relied on equines to transport men, weapons, and supplies. Hollywood typically portrays cavalry soldiers with heroic and romanticized imagery, usually involving thrilling gun battles. While battles did occur, soldiers expended more effort on routine patrols or in caring for their mounts. Stables, corrals, tack rooms, blacksmith shops, and storage areas for hay and grain were constructed at military bases. Most bases were occupied for only a few years. As they were abandoned, structures were often demolished and materials salvaged.

One exception is the cavalry stables at Fort Huachuca, an army fort in southeastern Arizona adjacent to the modern community of Sierra Vista. Seven stables constructed in 1915–1916 are still standing. They played an important role in the history of the region in the early 1900s.

Fort Huachuca began as Camp Huachuca, established in March 1877, in an effort to keep Apaches from raiding into Mexico and to protect area ranchers and miners. Various cavalry and infantry units were assigned to the fort. The 1880s saw campaigns against Apaches, including Geronimo, who surrendered in 1886. A period of relative peace followed, and in 1892, four companies of the African-American Twenty-fourth Infantry were stationed at the fort. The American military was racially segregated at the time, remaining so until 1948. Black soldiers were sent to the fort primarily because their veteran cadre of troopers had extensive experience fighting hostiles on the Plains.

The end of the first decade of the 1900s brought difficult times along the border. Internal Mexican politics, which favored the rich over the poor, led to a series of revolutions beginning in 1910. Fighting frequently spread across the border, and intense battles took place at the border communities of Naco and Nogales.

Blacks continued to be sent to the fort, and in December 1913, C Troop of the Tenth Cavalry arrived. These men were known as Buffalo Soldiers. The origins of the term are uncertain—some think Native Americans thought the black men had curly, buffalolike hair. Others believe that the Indians thought the soldiers were tenacious and held their ground or charged when attacked, much like buffalo.

The Buffalo Soldiers were sent to small border towns, like Naco and Nogales, to enforce neutrality and to pro-



Courtesy of the Fort Huachuca History Museum

Members of the 10th U.S. Cavalry at Fort Huachuca in 1918, with ambulances (#1918.00.00.135).

tect American interests. As the tensions increased, more cavalry soldiers were sent to the fort. Seven new stables were completed at Fort Huachuca in January 1916. Each is about 220 feet long by 31 feet wide, with board-and-batten siding and high-pitched sheet-metal roofs. The stables housed horses and mules and included rooms for tack, forage, and grain. Nearby were hay barns, blacksmith shops, and other quartermaster structures.

The cavalry soon had additional duties. Pancho Villa was one of the rebels that the Mexican government pursued. Villa's raid on the town of Columbus, New Mexico, in March 1916 resulted in the deaths of 17 American soldiers and civilians. The United States mounted a punitive expedition, commanded by Brigadier General John Pershing, in an attempt to capture or kill Villa. Mexican government protests were ignored, and over the next nine months cavalry soldiers, including many Buffalo Soldiers from Fort Huachuca, participated in the expedition. Villa was never captured, and the American soldiers ended up fighting both rebels and Mexican government forces.

The expedition was the last major use of the U.S. Cavalry in the United States. The age of motorized vehicles was arriving, and by 1931 the remaining horses and mules of the Tenth Cavalry were shipped out of the fort. The stables remained. Although some stables have been heavily modified, they represent a rare example of military architecture. Currently, the plan is to renovate four of the stables and demolish three, constructing a corral in place of the latter. The B Troop Memorial group plans to have living history demonstrations at the stables, recreating the lives of the cavalry at Fort Huachuca.

Heritage and Homesteads

Pima County's Commitment to Ranch Conservation

Linda Mayo, Pima County Cultural Resources Office

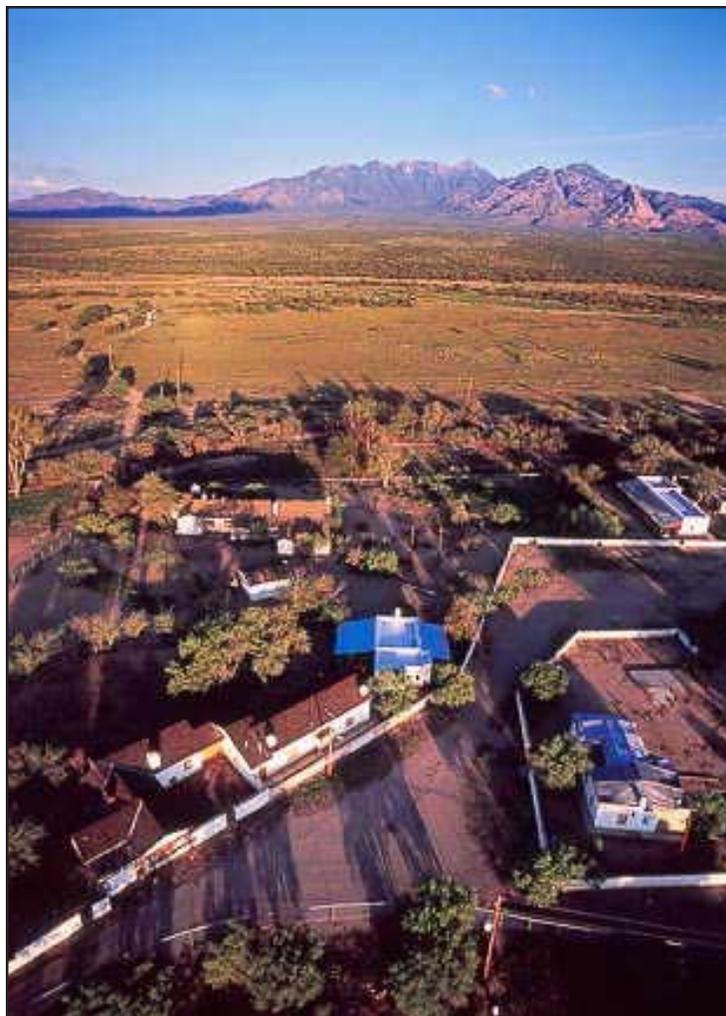
WHETHER CATTLE RANCHING, horse ranching, dude ranching, or any combination of the above, retaining our working ranch lands under the stewardship of a single land manager—the rancher—will preserve our natural and cultural landscapes far better than drawing urban boundaries, creating a “big park preserve,” or buying isolated archaeological and historic sites that eventually become surrounded by subdivisions.

Historically, ranching has probably been the single greatest determinant of a definable urban boundary in eastern Pima County, Arizona. While over half of our 2.4 million-acre region appears to be open, unused land, virtually all of this open space is used in ranching, often by the very same families who homesteaded the region in the 1800s. Through conservation of working ranches, which are all comprised of a mosaic of private, state trust, and federal lands surrounding the Tucson metropolitan area, vast tracts of natural open space can be preserved.

What is often overlooked is how working ranches also preserve our cultural landscape, with its archaeological, historical, and traditional cultural values. This landscape, which has been shaped by many peoples and traditions through time, retains our cumulative cultural heritage

because of the very nature of ranching, which requires vast connected areas.

Pima County has participated in ranch conservation efforts since the 1980s, facilitating the preservation of the



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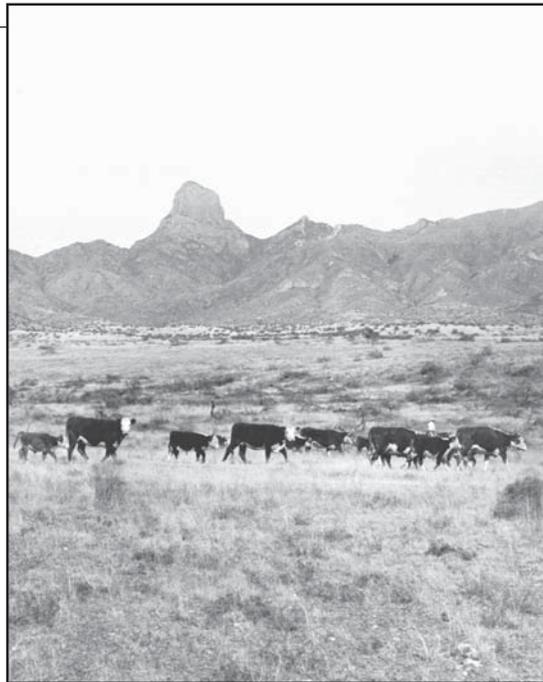
Canoa Ranch is located in the rapidly developing Santa Cruz River Valley south of Tucson. This view toward the east, with Canoa Ranch in the foreground and the Santa Rita Mountains in the background, shows that ranch conservation around urban areas can help to preserve extensive open spaces.

Empire, Cienega, Empirita, and Posta Quemada ranches as working ranches. In the 1990s, the remaining portion of the Agua Caliente Ranch was preserved as a natural area park and its ranch buildings were restored. More recently, Pima County purchased the Robles Ranch, portions of the Carpenter Ranch, and the Canoa Ranch to preserve the historic ranch buildings and open space for public uses. With the passage of the 2004 Open Space bond, the Pima County Board of Supervisors voted unanimously to purchase the Bellota Ranch (A-7 Ranch) from the City of Tucson to preserve more than 40,000 acres of intact ranch lands in the San Pedro Valley.

In addition to preserving open space, preserving private ranch lands is also an important strategy to protect

cultural resources for future generations. This involves identifying those locations where valuable cultural resources co-occur with valuable natural resources on ranch lands. Often, private lands near springs and riparian areas where homesteads were first patented have the highest number and diversity of cultural and natural values.

Because these private lands are the most vulnerable parts of any ranching operation, it is critical that options be made available to ranchers to allow them to retain these lands instead of selling them to real-estate developers. Methods to conserve ranches include voluntary donation or sale of conservation easements, limited or selective development, diversification of ranching operations, or acquisition. Acquisition in fee simple and acquisition of development rights have both been successful. The Empirita and Posta Quemada ranches were purchased by Pima County, while maintaining their grazing leases through cooperative ar-



Pete Phelps

Pima County has been working with ranchers in the Altar Valley southwest of Tucson. Baboquivari Peak, a place sacred to the Tohono O'odham, is visible in the background of this 1960s photograph.

rangements with local ranchers. However, purchasing ranches may not be the best answer for ranch conservation and resource protection, and in fact it should be the last option for conservation. Instead, ranchers should remain on the land to continue their economic activities, resource stewardship, and ranchland management. The most desirable way to conserve ranches in the long term is to purchase development rights and conservation easements. Through these measures, Pima County will continue its commitment to help retain working ranches and to “keep ranchers ranching” while preserving the natural and cultural landscapes of Pima County.

Barns in the Desert

Tobi Taylor, Center for Desert Archaeology

A NEWCOMER to the desert Southwest is struck by many aspects of the landscape: the shades of green—

Tobi Taylor



In the Southwest, substantial barns were occasionally made of adobe, like this one from early in the twentieth century, which still stands just south of Tumacacori National Historic Park in the Santa Cruz River Valley.

ranging from barely brown to such deep verdure as to become lost in—the vast skies, and, if that newcomer is from the Midwest, or points farther east, the lack of barns. In the

East, barns are omnipresent, timeless, and somehow reassuring. In the desert Southwest, barns appear to be few and far between. But are they?

The answer, of course, lies in the differing climate, resources, and animal husbandry practices of the respective regions. Whereas barns in the Midwest were usually constructed of wood, which was plentiful, those in the desert Southwest were often made from adobe. In the Midwest’s harsh winters, cattle and horses were brought inside, if possible. In the desert, livestock can generally live outside year-round, and summer shade is more of a priority here than is winter shelter. Even today, desert-dwelling horse owners often have no barns whatsoever. Instead, they house their horses in what are called “mare motels”—pipe corrals with corrugated-metal shades. Further, today’s barns are often manufactured from galvanized metal, with wide aiseways, high ceilings, and plenty of open windows, to allow good ventilation.

Just as prehistoric groups created different kinds of dwellings—aboveground structures, cliff dwellings, or pithouses—in response to climate and resources, farmers of the Midwest and desert Southwest built barns to meet their needs.

The Roots of Rodeo

Tobi Taylor, Center for Desert Archaeology

MODERN RODEO is derived from two main sources: informal contests among cowboys and Wild West Shows. As Diana Hadley has discussed (see pages 3-4), cattle were brought to the Southwest by Spaniards, and one activity of the Spanish missions was to raise cattle. Some of the padres who oversaw the missions had been trained in horsemanship and roping, and they, in turn, taught these skills to their assistants, who were known as vaqueros. The annual roundup and branding of cattle was referred to as a rodeo, from the verb *rodear*, meaning “to surround.” The best riders were referred to as *charros*, and today the national sport of Mexico, the *charreada*, although a relative of rodeo, emphasizes team competition and style, rather than speed.

During the Mexican period, mission lands were privatized, and after the end of the United States–Mexico War in 1848, the vaqueros who had worked on Mexican *ranchos* began to work alongside American cowboys. After the Civil War, as the cattle industry grew throughout the West, more and more cowhands were required to move these herds, over hundreds of miles, to large stockyards. Upon finishing a roundup, cowboys would often challenge each other to impromptu roping or cutting contests. However, by the late 1860s, as railroad tracks were laid farther west, large cattle drives were no longer necessary, and many cowboys hung up their spurs and looked for other employment.

Several locales vie for the honor of having staged the first rodeo. A bronc-riding contest took place at Deer Trail, Colorado, in 1869, and in 1872, an exhibition of steer riding and bronc riding was held in Cheyenne, Wyoming. However, Prescott, Arizona, is the home of the oldest continual annual rodeo in the United States, beginning in 1888. The well-known Cheyenne Frontier Days and Calgary Stampede are relative newcomers, originating in 1897 and 1912, respectively.

Buffalo Bill’s Wild West Show was first held in 1882. The show evolved to depict events such as the attack on the Deadwood Mail Coach, a Pony Express ride, a buffalo hunt, horsemanship demonstrations, Custer’s Last Stand, and what was called “Cowboy Fun.” The latter included bronc and mule riding, steer wrestling, roping, and riding. As anthropologist Elizabeth Atwood Lawrence writes, “often a cowhand who had performed in the Wild West [Show] returned home to demonstrate his skills at the local roundups and roping and riding contests which were becoming part of Fourth of July and other festive celebrations.”

By the 1920s, rodeo had become recognized as a professional sport, and within a few years, the Rodeo Association of America—as well as what would eventually become the Professional Rodeo Cowboys Association—had been formed. Today, the events presented at rodeos include bareback riding, steer wrestling, team roping, saddle bronc riding, calf roping, bull riding, and, often, barrel racing.

At the turn of the twentieth century, many Native Americans participated in various Wild West shows, and a few competed against Anglos in sanctioned rodeos. In the Southwest, the late 1930s saw the rise of the Tohono O’odham Fair and Rodeo, and soon Indian rodeos were also being held on the Navajo and various Apache reservations. In 1958, the All Indian Rodeo Cowboys Association was formed by a group of Navajo cowboys. Now, the Southwest has its own regional associations, including the Southwest Indian Rodeo Association and the Navajo Nation Rodeo Cowboy Association.

Today, the sport of rodeo—part Wild West Show, part impromptu cowboy’s challenge—is thriving throughout the Southwest and beyond.



At the 1926 Prescott Frontier Days Rodeo, Lawton Champie rides Fire Bug Fits (courtesy of the Sharlot Hall Museum).



Doyle Yazzie becomes the champion steer wrestler at the 2003 Tohono O’odham Nation Rodeo and Fair at Sells, Arizona.

Courtesy of the Indian Rodeo News

The Navajo Saddle Cinch Revival

Tobi Taylor, Center for Desert Archaeology

EVERY HORSEMAN KNOWS that a saddle is only as good as the cinch that secures it. Cinches have traditionally been made of natural materials, such as wool, horsehair, canvas, or leather. Navajos appear to have made saddles, based on Mexican types, from about 1860 to 1900, when Anglo-made saddles became more available. The cinches made by Navajos to rig their Mexican-influenced saddles were similar to “string” cinches, which consist of yarn, string, or horsehair that has been run back and forth between two metal rings. But Navajo weavers made a modification to them that is unique: they wove their cinches, producing items that were not only useful, but also decorative—almost like miniature rugs—and featuring striking color combinations and design motifs. However, once the inexpensive Anglo-made string cinches became easily available at trading posts, Navajos rarely wove their own.

In 2000, I published a summary of my thesis on cinches in *American Indian Art Magazine*. One of my findings was that the last Navajo cinches were made in the 1960s. However, publication of the article had some unexpected consequences.

In late 2002, while browsing on eBay, I discovered a recently woven Navajo saddle cinch for sale, which I bid on and won. While corresponding with the seller, Patricia Seltzer, I discovered that she had been trying to find me. It turned out that Seltzer, the principal of Monument Valley High School, in Utah, and her husband Jack, a teacher at the school, had been looking for a project for their students that would be instructional and would also help raise money for the school. Jack Seltzer thought that he had hit upon a perfect project when he saw my article on the cinches.

The Seltzers contacted Sandra Black, a Navajo weaver from Promise Rock, Utah, and invited her to teach some of the high school students how to weave cinches. Black had not woven a cinch before, but remembered watching her relatives weaving cinches. After looking at the photographs in the magazine, and doing some experimenting on her own, she was ready.

During a three-week summer program, called N’dahoo’ah—which is Navajo for “learning and relearning”—Monument Valley High School students learn to weave cinches, rugs, and wedding baskets, and to create beadwork. They also relearn the Navajo language. In a 2002 article for *The Navajo Times*, Don Mose, the director of the N’dahoo’ah program, remarked that “within the



Navajo weaver Sandra Black helps two Monument Valley High School students learn to make cinches.

traditional crafts of weaving, beading, and basketmaking are hidden mathematical ideas.” Students first use a computer program to create their weaving or beadwork designs, and discuss—often in Navajo—geometric patterns and mathematical concepts with the instructors and the Navajo elders who are involved with the program. Mose also noted, “We use culture to learn technology and math. It’s putting it together, tradition and technology.”

Patricia Seltzer estimates that the students, as well as Sandra Black, have woven more than 100 cinches, and they are marketing them through eBay and other venues (Seltzer may be contacted at pseltzer@frontiernet.net). Other Navajo weavers, such as Loretta Adakai, Roy Kady, Gladys Oliver, and Lula Yazzie, are also making and selling saddle cinches.

The original Navajo cinch incorporated the basic outline of the Anglo string cinch and transformed it. The cinch was a utilitarian object, made by Navajos for Navajos. Although it was a thing of beauty, it was usually obscured by the fender of the saddle while in use and discarded when it was worn out. Several years ago, the daughter of a weaver I was interviewing jokingly remarked that if my interest showed there was a market for cinches, weavers just might start making them again. And so they have. But, interestingly, many of those who have bought these new cinches are not using them for their original purpose—instead, they are hanging them on their walls as works of art.

Paul Natonabah, courtesy of The Navajo Times

Ruidoso and Rillito: Storied Racetracks of the Southwest

Sandra McCoy Larson, Office of the Arizona State Auditor General

Tobi Taylor, Center for Desert Archaeology

THE SOUTHWEST IS HOME to two influential racetracks, Ruidoso Downs and Rillito Park, which represent the highs and lows of horse racing over the last 60 years.

The older of the two tracks, Rillito, is in Tucson, Arizona. Although rather unprepossessing, Rillito is the birthplace of racing innovations that are used to this day. A portion of the 88-acre property, which was built in 1943, was nominated to the National Register of Historic Places in 1986 because of its contributions to Quarter Horse racing. The track, which first consisted of a three-eighths of a mile straightaway, served as the template upon which all Quarter Horse racing is based. Another innovation born at Rillito was the photo-electric timer. A high-speed clock and a movie camera were placed at the finish line, which allowed frame-by-frame examination of the horses and the clock. Today, the photo-finish camera is used at all racetracks.

In the 1960s, Rillito began its descent into hard times, changing ownership every few years, and it closed in 1982. But in 1984, voters in Pima County (where Rillito is located) approved a referendum that allowed racing and other commercial uses at the track for 25 years. After a few more troublesome years, as well as some \$450,000 worth of improvements, the track reopened in 1993. Racing, on a small scale, has been held at Rillito ever since, along with other activities, such as arts and crafts fairs, dog shows, heritage festivals, and Indian inter-tribal powwows.

The town of Ruidoso, New Mexico, founded in 1882 as Dowlin's Mill, was a gathering place for locals who held match races for their horses. In 1947, the racetrack, now

known as Ruidoso Downs, was built. Ruidoso (population 8,000), 75 miles west of Roswell, is primarily a tourist destination. Thousands of

spectators flock to the town during the yearly race meet at the downs, which runs from late May until mid-September. The highlight of the meet is the All-American Futurity, where the nation's top two-year-old Quarter Horses cover 440 yards—in about 20 seconds—and compete for a purse in excess of \$2 million (about twice the purse for the Kentucky Derby), making it the world's richest race.

Rillito and Ruidoso represent opposite ends of Southwestern Quarter Horse racing's economic spectrum. Many horses who now run at Rillito Park are what are known as "claimers"—they compete in races in which they may be "claimed," or bought, for as little as \$1,250. In contrast, Ruidoso—with its picturesque setting, beautiful barns, and tourist-oriented atmosphere—attracts the world's fastest and most expensive Quarter Horses. And whereas horse racing is a major attraction in the Ruidoso area, racing at Rillito Park competes against a myriad of other Tucson activities for spectators' entertainment dollars. Ultimately, Rillito's importance lies in its innovations, which Ruidoso has exploited to greater effect than any other Quarter Horse track.



Quarter horses vying for riches in Ruidoso Downs's All-American Futurity.

Courtesy of www.dymays.org

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

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Back Sight

HORSES HAVE A SUBTLE, BUT IMPORTANT, tie to the Center's pursuit of archaeological preservation at the landscape scale. Historically, horses made the extensive ranches of the American Southwest possible. In this arid environment, cattle need substantial territory to wander and forage. Horses allowed ranchers to maintain "control" over their widely dispersed cattle and thereby make a living. The result was a land-use pattern dominated by open space.

In the American West today, the rate of population growth continues to increase. The effects of this growth are transforming the traditional western landscape. A recent study by the Brookings Institution found that conversion of open space to urbanized land in the United States is exceeding the pace of population growth by a factor of three. We see this on a daily basis in the large cities of the Southwest: Albuquerque, Tucson, and especially Phoenix have dramatic growth rates. Population is pushing into more remote areas as well.

While implementing the Center's research and preservation programs, we find that preserved sites and historical landscapes co-occur in those places where ranching is still active. The modern-day conversion of ranch lands to urban use is a growing threat to a wide diversity of archaeological sites. In response to this threat, the Center is working directly with ranchers and with creative organizations that are implementing ranch conservation programs across the Southwest. Archaeological preservation can be accomplished in many ways, but the preservation of working landscapes can maintain the full range of sites—from large prehistoric villages to ancient field systems to single artifacts—in their overall context. In the past, people utilized entire landscapes. Making the effort to preserve at least some of these extensive areas for the future provides the greatest opportunities for studying and appreciating the full richness of the past.



Kevin Dahl

Rural landscapes, such as this corral in the Cienega Valley of southern Arizona, reflect a rich cultural tradition based on ranching. Partnerships with ranchers can assist in preserving archaeological resources on a scale that an organization such as the Center could not otherwise afford.

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

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.

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