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Cover: Art by Jane Kolber.

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ROCK ART AND ITS PRESENCE IN COCHISE COUNTY

by Jane Kolber

Rock art is the common term given to the carvings and paintings found on rock surfaces which were made by unknown people from very distant times to the present. These images are located throughout the world, with those of western Europe, Africa and Australia being the most well-known. All sections of America from Alaska through Mexico contain examples. Evidence of the work of people in all areas and of all eras has been found in the United States; the greatest concentration of rock art is in the southwest and is usually attributed to the prehistoric peoples who inhabited the area from approximately 400 B.C. until the 15th century. Some of their descendents, the present-day American Indian, have perpetuated their heritage. There have been suspicions that one day the scrawlings of early Paleolithic people will be discovered in hidden recesses of caves. Inscriptions by the early Spaniards and today's graffiti exist as questionable forms.

There are two basic categories that have been used to describe rock art. PETROGLYPH is the term for the type wherein part of the rock surface is eliminated. A pecked petroglyph is executed by pounding a stone against the rock surface or by using a hammer stone and sharpened stone or other hard material together. The two-stone method produces a more precise picture. Incised images are engraved into the rock surface with a sharp-edged stone, or in later times a metal tool. Often areas are scraped or rubbed to form an abraded surface. A series of pits and grooves are another variation. Phenomena that incorporate rocks themselves to create images have assorted defining terms such as: terraforms, geoglyphs, intaglios, and rock alignments. The most famous have been found in Peru, but impressive examples also occur near Blythe, California and Gila Bend, Arizona where flat surfaces covered by small black pebbles, referred to as desert pavement, are located. Sections and lines are cleared exposing a light lower surface. Other figures are created by lining up rocks on top of the flat surface. Humans, animals and geometrics are most prevalent. There are disputes as to whether these are rightfully classified as rock art.

PICTOGRAPH is the term commonly associated with rock paintings. They are usually executed in one color, but frequently polychrome paintings are found. The enduring pigments are earth colors made from iron oxides, ochres, chalky deposits, charcoal, manganese ore, copper ore, and also clay and mud. Some were directly applied, but generally binding materials like animal and vegetable oils, or less frequently blood, egg whites, and urine were employed. The paint was applied with brushes made from chewing the ends of yucca leaves, sticks, fingers, or by blowing paint from the mouth. In several instances combinations of the aforementioned methods were used.

Rock art in the southwest occurs predominately on cliff faces, in caves, under caves, under shelters or on boulders. Sandstone, basalt and granite are the most commonly decorated rocks. There is some evidence of a definite choice of placement. Many sites in this area tend to face an easterly or southerly direction. Occasionally, expansive areas of fine smooth work surfaces have been untouched in areas where rock art appears on difficult rough surfaces. Frequently, rock art is placed in spots with vast panoramic views or particularly unusual geologic formations. Locations may be important as indicators of sacred places, trails, or hunting regions. Rock drawings could also have been created on less sheltered places that have since disappeared.

Since people see differently from each other, it is often difficult to distinguish the subjects portrayed by the prehistoric artists. Many have been executed in a realistic style that appear very recognizable. The most common rock art element in the world is the hand. Hands have been found which have been pecked, incised, abraded, painted by brush, stick, finger, placed into paint to produce a print, swirled on palm with finger to produce a swirled print, placed against a wall and blown at with paint for a negative image. Human-like forms are quite prevalent. Many include depictions of clothing, ornaments, and accessories and have distinguishing sexual features. Proportions vary perhaps according to the visual understanding of the artist or possibly in accordance with the characteristics of the individual tribe. All poses and directions are shown although they are commonly frontal and still. Forms encompass the entire animal world including quadrupeds, birds, reptiles, insects and aquatic creatures. Figures which appear to represent celestial elements are found as well as tracks and plants. Geometric and amorphic shapes are numerous. There are many other subjects which are less conventional.

European cave paintings from 14,000 years ago show musculature detail and incorporate the natural form of the rock in exacting realism. In the Southwest we find considerable stylistic variations ranging from realistic to stylized to abstract. There are several researchers who believe that members of certain groups displayed similar styles. This discounts the presence of individuals and creativity which was encouraged in prehistoric people as evidenced in their other arts. Some styles do show an individual uniqueness whereas others are obviously group imitations.

As it is difficult to determine who created rock art, no method of definitive dating has yet been developed. Relative dating has been utilized by comparing amounts of patination or desert varnish on the surface. Superimposition of one figure on top of another is also considered; however, this time between the two creations is indeterminable. Association with ruins and artifacts has given hints, but these, too, may be invalid as this association is not absolute in its contemporaneousness. Attempts have been made at measuring lichen growth, covering deposits and the rate of erosion — with inconclusive results. Subject matter can also provide information toward relative dating. A bow and arrow

cannot have been illustrated prior to the year 300 AD when they were introduced in the southwest; nor can a carving or painting of a horse have been made before 1540 AD. Currently, more accurate dating methods are being developed. Patina is now known to build up at a particular rate in a particular area. By removing a tiny core of the rock, a fairly accurate date can be obtained. Scientific methods such as radiocarbon dating can also now be used in analyzing paints. In addition to being difficult and costly procedures, these recent developments require partial destruction of the rock art figures.

Our society is a curious one and requires answers and explanations. This need has led many to accept incredulous interpretations of the figures on the rocks—from their being created by creatures from outer space to the notion of being a universal language. The concept that we can possibly understand what, if anything, the people of another culture meant by their drawings on rocks one thousand years ago or more is absurd. Several have sought out native informants who, having the same separation, provide answers (which are sometimes provided by the interviewer's questions). Answers may also be given in exchange for some kind of reimbursement, to appear intelligent, or to not want to be rude, even to deceive.

Several plausible purposes have been attributed to rock art. Since American Indian life was permeated by religions, probably some of the figures were related to beliefs and rituals. Other possible reasons for creating rock art were hunting, remembrance of designs, maintaining traditions, recording events, totems and fetishes, fertility, humor doodling, and leaving one's sign. Studies have been done of the figures which appear to illustrate heavenly bodies. Researchers have attempted to attribute astronomical purposes to these sites. However, only a very few have been authenticated.

Much of this precious heritage is disappearing. Probably only a small fraction of those made are visible today. Many have weathered away from wind, rain, sun, and cold. Rocks have decayed or fallen. Covering by desert varnish and other minerals has obscured much. Vandalism has been found in many areas — from inadvertent damage to purposeful eradication. Circular forms have been used for target practice. Pictures have been removed with pneumatic drills and boulders have been carted away. Admiring persons wanting to capture the images have harmed them by chalking petroglyphs (which can never be completely removed and which erodes the surface), wetting pictographs, using improper methods or rubbing and mold-making. Entire sites have been destroyed for the sake of progress through construction projects; and modern society has left its imprint in the form of superimposed graffiti.

Serious investigations regarding rock art have only been undertaken in the last thirty years. Archaeologists were unconcerned with materials about which they could make no factual or scientific statements. A recent scholarly publication about Chaco Canyon, the largest prehistoric habitation area in the

United States, made only a brief reference to rock art. The Archaeological Society of New Mexico recorded over six hundred rock art sites there.

Currently, much effort is being expended in the field of research. Many professionals were spurred on in their endeavors by the efforts of amateurs who contribute the greatest amount of time in surveying and recording while forming both sound theories and incredible suppositions.

Groups have emerged to help preserve and study rock art. Foremost is the American Rock Art Research Association. Efforts have been successful in stopping destruction of a few sites, but many have been lost including those at dams such as at Lake Powell and the Columbia River. Protective barriers have been constructed around some sites. A volunteer protection and monitoring group has been established in Tucson. The Antiquities Act of 1906 and the Archaeological Resource Protection Act of 1979 protect rock art sites on federal land. Fines for a first offense are up to \$20,000 and two years in jail; and for a second, \$100,000 and eight years.

Some experiments have recently proved successful in protecting against natural deterioration. Numerous individuals and groups have undertaken the endless project of recording rock art so that at least there will be a permanent documentation after it has disappeared. Since rock art is located in so many isolated areas, the only hope for possible preservation can be through the education of the public.

A survey has begun of the rock art of Cochise County in order to inventory its presence with the express purpose of recording and preservation. Awareness of its existence can lead toward eventual protection and conservation. Primary habitation in Cochise County is attributed to a Paleolithic group from 10,000 B.P. (before present) and referred to as the Cochise Culture. These non-agriculturists and non-pottery makers left evidence of their existence near Hereford and Naco at the famed Mammoth Kill Sites and in many places along the San Pedro River. The Hohokams were either descendents of the Cochise people or migrated from Mexico and populated much of the arid desert country of Southern Arizona from about 300 B.C. to 1450 A.D. This agricultural group created elaborate irrigation canals near their early pit houses and later adobe house villages such as those at Casa Grande, Snaketown, and Pueblo Grande. They were adept at creating a red-on-buff pottery characteristically decorated with geometric and life forms and inlaid objects of shell, turquoise and other materials. Contemporaneous with the Hohokam were the Mogollon who lived in the more mountainous central and southeastern portions of Arizona as well as in large areas of New Mexico. Later groups, such as the Salado, from further north and west, sometimes intruded. The destiny of the Hohokam is uncertain, but the Sobaipuri who lived in their southern area later are supposed to be their descendents as well as the Pima and Papago who presently inhabit their region. Around the 13th and 14th centuries, nomadic Apaches moved into nearby locales.

There has previously been no research relating to the rock art of Cochise County. No publication has been discovered. There are but a few brief reports on file at the Arizona State Museum and The Amerind Foundation. Occasional inquiry has turned up information regarding about forty sites. There are possibly at least as many more in existence. Cochise County rock art sites tend to be typical in their locations and subject matter. Petroglyphs and Pictographs have been found in approximately equal number. Styles vary, though some are similar. None of the observed sites are very large; only a few have more than twenty or thirty elements. Subject matter is typical of any other rock art region. Care in execution ranges from poor, quickly done, to some effort toward well created works.

Three painted sites have been discovered in rock shelters in the foothills of the Dragoon Mountains (Figures 1 & 2). Stylistically, they bear resemblances. Simple elements mostly represent human and animal-like forms and geometrics. Abstract designs are prevalent. Several shades of red are the dominant colors while some black, white, orange, and yellow are also present. Two of the sites contain mortar holes and cupules. One with rock chambers contained potsherds, flakes and other proof of habitation. Since the Hohokam and Apaches are known to have lived in the region and carbon dates of 210 B.P., 340 B.P., and 870 B.P. were taken from a test pit in 1978, it is very difficult to determine who might have created them or when. Rock spalling and mineral deposits have deteriorated parts of these sites. Vandals have left smoke stains, scratches and charcoal marks.

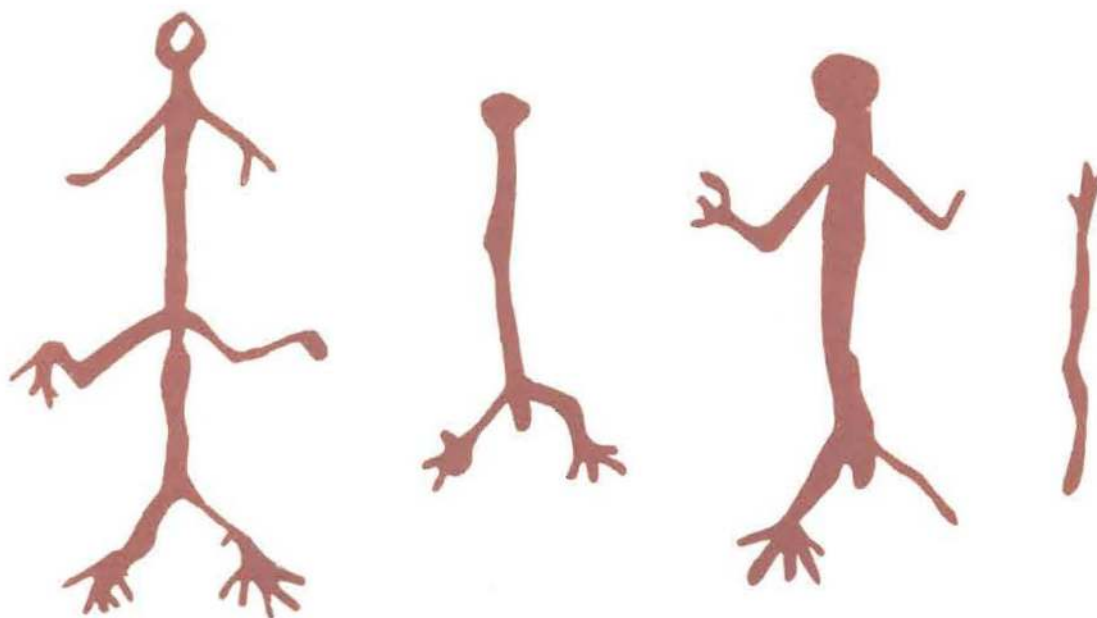


Figure 1

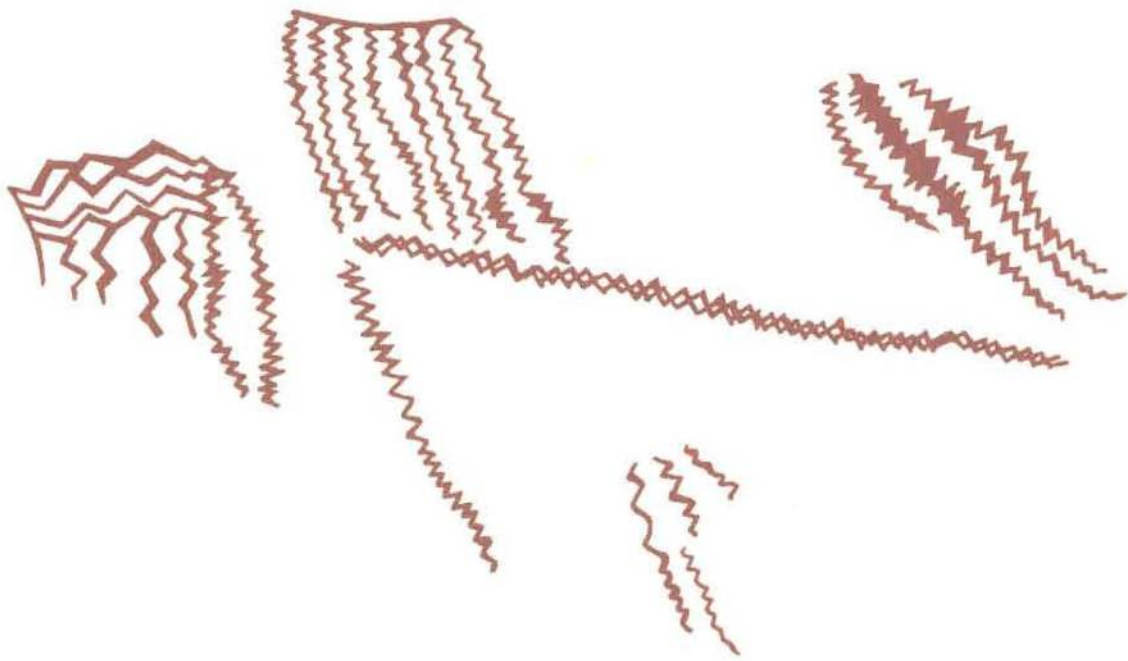


Figure 2

Along the San Pedro River several petroglyph sites have been encountered on hills of boulders (Figure 3). The land near this river was inhabited almost continuously from the early-man period until today. Cochise chipping areas and vertical slab pit house ruins are close by with red-on-buff sherds within close range. Each area contains perhaps fifty fair to carelessly pecked stick figures, animal-like forms, geometrics and abstracts.



Figure 3

In the extreme southeast portion of the county are two sites that are quite different from the others mentioned. One is a panel which occurs on a waterfall of a small side wash near a pass into Mexico (see cover). The highly complex configuration on this granite surface required much skillful precision and artistic ability. Stylistically, the panel bears similarity to some Mexican images. Again, the appearance of modern scratches mars the quality of the art. Close by is a rock outcrop at the junction of two washes which contains many elements reminiscent of the Mogollon people, such as long-tailed animals which also occur in Mexican mythology (Figure 4). Other figures displayed there include mazes, birds, masks, sawtooths, circles, lines, and meanders.

Perhaps the most interesting site yet located occurs in a cave at the top of a steep talus on the western edge of the county. This cave is covered with both painted and carved figures that are dissimilar to any other sited in the region. There is a depiction of small opposing colored animals with opposing colored tongues facing each other. Very delicately painted cross-hatching and grid patterns cover a sizeable area. Petroglyphs include human and animal-like forms, circles, and many spirals (Figure 5). The cave is located close to the Babocomari Village ruin which was inhabited by the Sobaipuri people who existed between the times of the Hohokam and the Pimas. Extensive exfoliation has caused damage while mineral seepage from the ceiling continues to cover forms. Vandals have inscribed their own symbols in the cave. Protection is needed to prevent further deterioration.



Figure 4

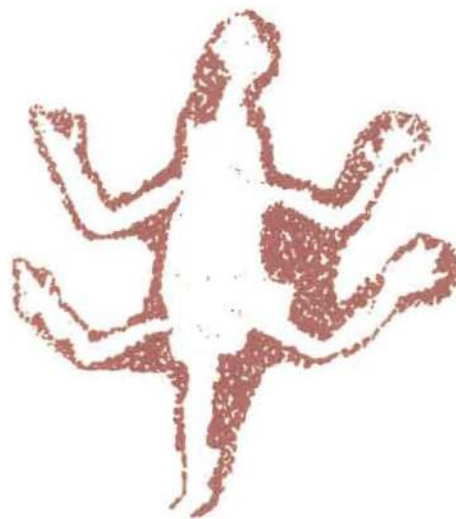


Figure 5

Cochise County's rock art sites are of great variety. The Chiricahua and Pedregosa Mountains have some painted shelters (Figure 6). Near Tombstone, pecked, large, rayed, concentric circles have been used for target practice. Only a very faint red stick figure is displayed at a rock outcropping containing about one hundred mortar holes and cupules. Near the town of Dragoon, two years ago there existed a flat rock slab covered with abstract shapes. Today only a gravel pit stands on that spot. The only location where conservation efforts have been made is in Garden Canyon on Fort Huachuca, where fencing has been erected to protect the painted white bird-like forms.

This is only a small portion of locations where rock art occurs in Cochise County. There are reports of sites to be encountered in most areas where a sizeable amount of rock, usually granite, is situated. Efforts are currently being attempted to locate and record this heritage of the first art created in America. In addition to being able to appreciate it for its artistic interest and value, rock art may eventually provide us with a greater understanding of the people who inhabited this land before we did.

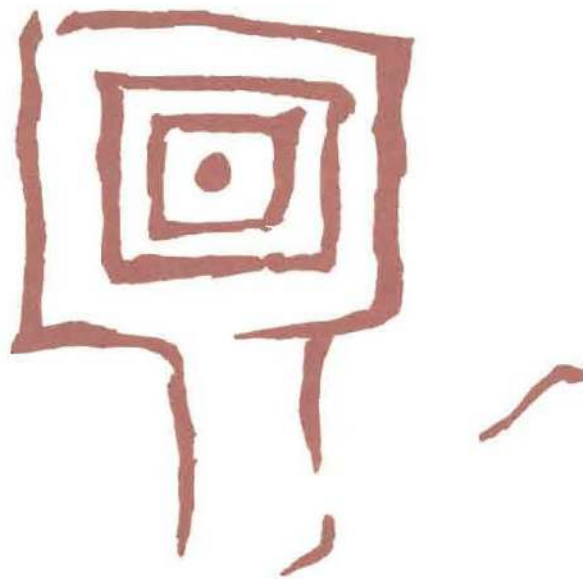


Figure 6

About The Author

Jane Kolber has been teaching art in the Tombstone Unified School District and at Cochise College (Sierra Vista Campus) going on five years. She has been interested and involved in Rock Art ever since moving to the Navajo Reservation in the late '60s. Her art training was acquired at Pratt Institute in New York and at Arizona State University, Tempe. She has travelled extensively in Europe and Central and South America.

ROCK ART SUGGESTED READING

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THE AMERIND FOUNDATION, INC.
Dragoon, Arizona 85609

by Anne I. Woosley

Origins and Purpose

The Amerind Foundation, Inc., grew from the lifelong interest in archeology expressed by its founder, William Shirley Fulton. A native of Connecticut, Fulton's curiosity in the Southwest was sparked during a 1915 inspection trip of his wife's family's operations at the Copper Chief Mine near Jerome. In 1917 on another visit, as he investigated the mine's water source in a nearby cave, he came across a small prehistoric jar. This discovery marked the beginning of Fulton's total dedication to the study of indigenous American cultures, and particularly the archeology of the Southwest.

Fulton began excavating Arizona Indian ruins in the 1920's, and his work soon became more sophisticated as he was influenced by professional anthropologists. He believed that one of the few means of interpreting ancient peoples was through the recovery and preservation of surviving material culture. He was also interested in the transformation of Indian culture through its contact with European, technologically advanced societies. Finally, he supported the idea that contemporary cultures could help to interpret the past, but that many native traditions were rapidly disappearing. These beliefs led him to establish the Amerind Foundation, Inc., as a nonprofit institution in 1937, whose express purpose was the study of New World cultures. To achieve this goal and as stated in its original charter, the Amerind Foundation commits its resources to three broad areas: Research; the Conservation and Preservation of Material Culture; and Education.

The Amerind encourages and pursues a policy of active research as the obvious means for increasing our knowledge of the cultures of the Americas. Because many Native American cultures have disappeared and are only visible in the archeological record, Amerind supports field investigations as the best vehicle for reconstructing this elusive past. Amerind also firmly believes that any resultant findings should be disseminated to the scholarly community as well as the general public through Foundation publications and its Museum collections and programs.

Amerind Sponsored Projects

Throughout its history, the Amerind Foundation conducted archeological research that contributed significantly to a knowledge of Greater Southwest prehistory. Fulton excavated sites in Texas Canyon before he actually established Amerind as a nonprofit institution. His work represents some of the first efforts to reconstruct the archeology of this area of Cochise County. During the years between 1925 and 1940, Fulton also worked in the mountains of southeastern Arizona and the Navajo country in the northern part of the state. The results

of these archeological investigations were published in a series of reports including reports on Texas Canyon, one on a ceremonial cave site in the Winchester Mountains, and another, though excavated by Fulton, was written by Emil W. Haury on a cave located in the Lukachukai Mountains in the Four Corners.

During this period Fulton employed the Amerind's first professionally trained archaeologist, Carr Tuthill. Tuthill was with the Amerind for some 10 years during its developmental years as an archeological research center and burgeoning museum. With the financial support of Fulton, Tuthill directed two of the Amerind's most ambitious excavations at that time, the first at Gleeson in the Sulphur Spring Valley and the second at Tres Alamos in the San Pedro River Valley. Tuthill also had curatorial responsibility for the Amerind's initial museums' collections.

When Tuthill left Amerind in 1947, he was replaced by Charles C. Di Peso. Di Peso was with Amerind for many years and became the Foundation's second Director (after Fulton) in 1954. Di Peso conducted many large-scale projects in the river valleys of southern Arizona including Babocomari Village, Quiburi, San Cayetano, and the Reeve Ruin. Under his direction and with Fulton's continued support, Amerind excavated the important urban center of Casas Grandes in Chihuahua. This study extended Amerind archeology into northern Mexico and remains one of the only extensive projects undertaken by an American institution in that area. Di Peso's last archeological project took him to Wind Mountain, north of Deming, New Mexico. Left unfinished by his untimely death in 1982, Amerind staff are currently completing the analysis and report of the site.

Facilities and Study Collections

Amerind's facilities are major contributing factors to the success of the many archeological projects conducted over the years. Archeological laboratories promote analysis of materials recovered during excavation. Well-equipped darkroom and drafting facilities permit preparation of manuscript illustrations. Additionally, prodigious ceramic and lithic study collections, representative of geographically diverse cultures throughout the Greater Southwest, provide valuable comparative reference materials. Such materials aid in the identification and interpretation of archeological assemblages and are of benefit to Amerind Staff and Visiting Scholars, alike. Hundreds of sites contained by the Amerind Archeological Site Files furnish another important resource for scholars working in the southern Southwest. Finally, the Fulton-Hayden Memorial Library holdings provide published and unpublished manuscripts, maps, and photo archives essential to Greater Southwestern research.

Amerind Museum and Art Gallery

Together, the Amerind Museum and Art Gallery constitute another dimension of the foundation's commitment to interpreting the diverse cultures of the Americas. Amerind's museum collections include archeological (some 20,000 objects) and ethnographic (some 5,000 objects); Spanish Colonial religious art and furniture (500 objects); and paintings, drawings, and sculpture of American and Anglo artists (some 300 objects).

The primary geographic focus of the archeological collections describes the Greater Southwest including northern Mexico, but the High Civilizations of Mesoamerica and Peru, as well as the Mississippian cultures of the Eastern United States, are also represented. The ethnographic collections also emphasize the Greater Southwest, though important smaller collections from the North American Plains, the Pacific Coast, and the Arctic Circle are impressive. Selections of these materials comprise museum exhibits for the enjoyment of all Amerind visitors. They also form the basis for scholarly study of the Native Craft Arts of the Americas.

The Amerind Today

Today the Amerind Foundation, under the leadership of its Director, Anne I. Woosley, strives to perpetuate the strong tradition of anthropological research maintained by the institution, while at the same time forging into new areas of institutional development.

Within the context of archeological field research, Amerind staff have recently embarked on a project entitled, "Amerind Pleistocene Lake Studies. I. The Archeology of the Willcox Playa." Staff are surveying some 50 miles of ancient shorelines surrounding the lake bed and adjacent environmental zones to document some 15,000 years of southeastern Arizona prehistory. Thus far, dozens of sites have been located which span the earliest known occupations of North America (that is, the Paleo-Indian peoples), include the Archaic foraging groups commonly associated with the Cochise Culture, document the emergence of technologically sophisticated farming villages, and proceed through the European Contact Period and into recent Anglo-American history. This study will help to interpret the lifeways of prehistoric peoples and chart cultural changes through time.

In keeping to its commitment to increase the general knowledge of the indigenous cultures of the Americas, Amerind has implemented plans to greatly expand and improve its museum programs. These plans include the conservation and preservation of objects in the Amerind Museum collections, the development of new permanent and temporary exhibits, and the establishment of educational programs for interested adults and children.

Many of the objects comprising Amerind Museum collections are not only rare and beautiful, but they are frequently made of highly perishable materials that require special care. Amerind staff are sensitive to these requirements and have recently instigated rigorous evaluation procedures for all fragile items —



The Amerind Foundation, Inc. — A winter view of the Museum Complex and administrative offices.



The Amerind Foundation, Inc. — The original Fulton family residence.



The Amerind Foundation, Inc. — Study area in the Fulton-Hayden Memorial Library.

such as textiles, baskets, beadwork, and watercolors on acid paper, among many others. These examinations have resulted in extensive cleaning, repairing, restoring, or otherwise stabilizing many objects in the collections. Such efforts are well worth the time and energy expended, since the lifetime of individual objects is greatly enhanced and specimens can be viewed for years to come.

Because Amerind philosophy embraces the notion that its museum exhibits provide one of the most informative and interesting vehicles for interpreting cultures, exhibit development is of primary concern to the Foundation at this time. Over the next several months, Amerind staff expect to create a variety of new permanent (in place for several years) and temporary (in place for one year) displays presenting many facets of New World archeology and ethnography.

To facilitate enjoyment and visitation to the Amerind Museum, the museum will be open on a daily basis after the first of October, 1985.

This fall Amerind will also offer special workshops, seminars, and other events for individuals of all ages. Adults will be able to participate in a Ceramic Workshop in which traditional Indian techniques of clay processing, coiling and paddle/anvil vessel construction, and subsequent pit firing will be taught. Special story-telling sessions of Indian legends, folk tales, and the frontier history of the Southwest are planned with children in mind.

Amerind has instituted a Museum Store in which the craft arts made by contemporary Southwestern Indian peoples may be purchased. In addition, books on the prehistory, anthropology, history, and natural history of the Americas, especially the Greater Southwest, are also available. These items complement objects in the Amerind Museum collections and exhibits, and provide a modern commentary on craft traditions that, in some cases, have existed for thousands of years. All proceeds from the Museum Store support Amerind research as well as assist the Foundation in its efforts to furnish better facilities and programs for its visitors.

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Amerind personnel anticipate a future of continued productive field research that will contribute to Southwest archeology. Within the context of the Amerind Museum, staff expect that a range of newly created programs will enable increased public participation in a variety of exhibits, workshops, and other activities. While promoting its own research and projects over the coming years, Amerind will encourage policies whereby scholars and interested lay persons can take advantage of its fine archeological, ethnographic, and archival resources.

PUBLICATIONS OF AMERIND-SPONSORED ARCHEOLOGICAL PROJECTS IN THE GREATER SOUTHWEST

--*Archeological Notes on Texas Canyon, Arizona*, by William Shirley Fulton. Museum of the American Indian, Heye Foundation, Vols. 1-3. 1934-1938. New York.

- No. 1 *An Archeological Site Near Gleeson, Arizona*, by William Shirley Fulton and Carr Tuthill, 1940.
- No. 2 *A Ceremonial Cave in the Winchester Mountains, Arizona*, by William Shirley Fulton, 1941.
- No. 3 *Painted Cave in Northeastern Arizona*, by Emil W. Haury, 1945.
- No. 4 *The Tres Alamos Site on the San Pedro River, Southeastern Arizona*, by Carr Tuthill, 1947.
- No. 5 *The Babocomari Village Site on the San Pedro River, Southeastern Arizona*, by Charles C. Di Peso, 1951.
- No. 6 *The Sobaipuri Indians of the Upper San Pedro River Vally, Southeastern Arizona*, by Charles C. Di Peso, 1953.
- No. 7 *The Upper Pima of San Cayetano del Tumacacori*, by Charles C. Di Peso, 1956.
- No. 8 *The Reeve Ruin of Southeastern Arizona*, by Charles C. Di Peso, 1958.
- No. 9 *Casas Grandes: A Fallen Trading Center of the Gran Chichimeca*, by Charles C. Di Peso, John B. Rinaldo, and Gloria J. Fenner, published in 8 volumes, 1974.
- No. 10 *The Wind Mountain People*, by Charles C. Di Peso (in preparation).
- No. 11 *The Archeology of the Willcox Playa*, by Anne I. Woosley and D. Carol Kriebel, 1985.

About The Author

Anne I. Woosley, Ph.D. (UCLA) was Associate Professor of Anthropology at Southern Methodist University for seven years prior to her appointment as Director of The Amerind Foundation, December 1983. Her interest in the development of agricultural societies in both the Old and the New World led her to conduct archeological explorations in Iran and Iraq prior to similar work for ten years in this area in the various portions of the American Southwest.

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- No. 11 *The Archeology of the Willcox Playa*, by Anne I. Woosley and D. Carol Kriebel, 1985.

About The Author

Anne I. Woosley, Ph.D. (UCLA) was Associate Professor of Anthropology at Southern Methodist University for seven years prior to her appointment as Director of The Amerind Foundation, December 1983. Her interest in the development of agricultural societies in both the Old and the New World led her to conduct archeological explorations in Iran and Iraq prior to similar work for ten years in this area in the various portions of the American Southwest.

ARCHAEOLOGY ON FOOT: THE SAN BERNARDINO VALLEY SURVEY¹

by John E. Douglas

For most people, archaeological fieldwork evokes images of a dig, including equipment like shovels, trowels, screens, and activities like digging test trenches, mapping recently uncovered finds, and cataloging thousands of artifacts. But there is another way archaeologists learn about past cultures, called archaeological survey. By walking over large pieces of land and discovering and recording artifacts already visible on the surface, archaeologists can piece together how the area was used by past cultures, including information about how people lived, what they traded, and how their lives changed through time. Archaeological survey has become an increasingly important way to learn about the past in the last 25 years.

In the summers of 1984 and 1985, the Anthropological Resource Center (ARC) at Cochise College conducted an archaeological survey in the southeastern corner of Cochise County. This work was supported by Cochise College and a grant administered through the State Historic Preservation Office. The primary goals of the study were to learn about the location, condition, kind, and density of sites in the area, so that these sites can be protected and preserved for future generations, and to gain a better understanding of the prehistoric inhabitants of the region. In addition, the surveys provided training to archaeology students at Cochise College and members of CCHAS.

Study Area

The focus of the survey was the San Bernardino Valley north of the international boundary. Geographically, this large Valley lies in southeastern Cochise County and northeastern Sonora; geologically, the Valley is in the southeastern corner of the Basin and Range Province. To the north, the San Bernardino Valley merges with the San Simon Valley, marked only with a gentle rise. To the south, the Valley ends in the Sierra Madre Occidental, where the Rio San Bernardino drains into the Rio Bavispe, a tributary of the Rio Yaqui. Therefore, the Valley forms a natural corridor for trade and travel from eastern Sonora to central Arizona.

The survey covered the Valley floor and the surrounding foothills on the American side to an elevation of 5000 feet. This is an area of about 350 square miles. Most of the land is open grassland, although some of the Valley has scrubby vegetation. In the study area, the Valley floor is dotted with volcanic cones from eruptions that occurred a quarter to 3 million years ago.

Most of the Valley today is privately owned or leased from the state for cattle raising by the scattered ranches in the area. For the San Bernardino Valley, this is just one of the number of distinctive land use patterns that have left tangible evidence in the archaeological record. Previous sporadic archaeological research in the area has shown four distinctive patterns in the 10,000-year prehistoric record. The Paleoindian Period (9500 B.C. to 8500 B.C.) was a time when now-extinct animals were hunted by groups of mobile bands. The Archaic Period (8500 B.C. to A.D. 300) was a long span of time when gathering wild plants and hunting medium-to-small game were major economic pursuits.

During the Mogollon Period (A.D. 300 to A.D. 1175) people began making pottery, lived in pithouse villages, and relied on farming, hunting, and gathering for their food. The Animas Phase (A.D. 1175 to A.D. 1425) continued the same economic pursuits as the Mogollon Period, but people moved into above-ground adobe pueblos, and acquired some of the fine, multi-colored pottery made in Casas Grandes in Chihuahua, as well as pottery from other areas. About 100 years before the arrival of the Spanish in northern New Spain, these pueblos were abandoned for reasons still unknown. There is no clear proof of who lived in the northern San Bernardino Valley again until the Spanish moved into the area in the eighteenth century; by this time, the Apache had also claimed the Valley as part of their territory.

Obviously, even before the survey, a very long history had been recorded in the San Bernardino Valley. However, there are many large gaps and questions about the cultures represented in the Valley that can be answered only by archaeological survey.

Methods

Just as archaeological excavation is more than just digging, archaeological survey is more than just looking for artifacts. Special methods are used to find, map, and record sites and artifacts. These procedures insure that the collected information is reliable and thorough.

Because the entire Valley could not be examined for archaeological remains, a sample of smaller areas was searched; most of these sample units are half a square mile in size. The sample units, chosen from state-owned land in the Valley, were selected at random, to make sure the land was a representative cross section of different environments in the Valley.

Once the sample was selected, the crew had to locate the areas to be surveyed. Frequently, driving as close as possible to the sample unit, and locating the exact position of the survey area on foot, was a difficult and time-consuming job. From one corner of the sample square, a long measuring tape and a compass mounted on a tripod were used to establish a baseline, defining one side of the survey area. Using this baseline as a guide, the crew walked back and forth from the line, using a hand-held compass and leaving lines of flagging to insure thorough coverage of the area. The crew of four to six walked about 20 yards apart; for each square mile covered, the crew had to walk over 80 miles.

As artifacts were found, the crew called them out, and approximate numbers of these isolated artifacts were recorded. If the number and density of artifacts were sufficient, using a definition established before the survey began, a site was recorded. Recording a site required defining the site size, locating the site on the appropriate topographic map, mapping the site, determining the range of artifacts, and establishing the relative frequency of the more common artifact types. A few artifacts, never more than twenty, were collected from some sites to help determine their age and the prehistoric trade patterns.

Three methods were used to date sites. First, some projectile point styles can be identified to time period. Unfortunately, many styles persist for a long time or are undated, making this generally the most unreliable method of dating. Second, decorated pottery fragments can be identified and the time period when the style was most popular estimated. For prehistoric sites, decorated sherds often date a site to within 200 years or so. Finally, obsidian, or volcanic glass, which was frequently used to make stone tools in the area, can be dated. When an obsidian nodule is broken to make a tool, the fresh surface absorbs water vapor from the atmosphere. This visually changes the obsidian, and the longer the time period, the deeper this "hydration rim" penetrates the obsidian. A special laboratory using microscopic techniques can determine when the obsidian was fashioned into a tool.

Findings²

Thirty sites and thousands of isolated artifacts were found in the 7.1 square miles covered in the survey. The artifacts and sites spanned a large part of the human occupation in the Valley, and range from a projectile point from the middle Archaic, starting about 5000 B.C., to a stone holding pen and dam (forming a stock tank), which are from ranching activities in the 1920's. Sites range in size from small chipping stations, where a single person may have shaped a tool in a few minutes, to a site about 70 acres in size that may have been used intermittently for 700 years.

Although the survey provides information on the entire range of occupation in the Valley, the results are particularly informative for the Late Mogollon Period and the Animas Phase. The Late Mogollon Period (A.D. 750-1175) is the best represented time period in the survey. Most of the dated sites in the survey were occupied during this time period. Many, if not all, of these late Mogollon sites were occupied seasonally; these were special-purpose camps, some revisited for many years, where people could gather wild foods or hunt. These sites are scattered throughout the Valley: on hills, on ridges, next to small drainages, and near small springs.

For the Animas Phase, no comparable sites were found. During this time period, people seem to have stopped using much of the Valley as intensively as during the Mogollon Period. Instead, people in the Animas Phase seem to have concentrated on spots that were well-watered with good soil for farming. The sites are more clustered at this time; the two Animas Phase sites found in survey are near known habitation sites. The change from the Mogollon Period to the Animas Phase in the Valley seems also to mark a change from part-time farmers, who moved around the Valley during the year, to full-time farmers, who stayed near their fields almost all of the time.

Finding new facts about the Mogollon Period and Animas Phase suggests, in turn, new questions. Some archaeologists have argued that the Animas Phase represents an influx of new people in the area, moving north into New Mexico and Arizona from Casas Grandes. However, in the San Bernardino Valley, there appears to have been a substantial population of Mogollon people in the Valley shortly before the Animas Phase. This makes it more likely that the indigenous Mogollon people, through trade with Casas Grandes and change in their culture, became the full-time farmers of the Animas Phase. But if this is what happened, how did change occur? Was it a swift change in a few generations, or did it happen more slowly? More research is needed to answer key questions like these.

An archaeological survey is a powerful tool for learning about past cultures. Best of all, survey is a non-destructive technique — the sites studied in this survey were not disturbed. This will allow future archaeologists, as new methods and questions develop, to study the same sites and learn more about the area.

Notes

¹ This survey has been funded with the assistance of a matching grant-in-aid from the Department of the Interior, National Park Service, under the provisions of the National Historic Preservation Act of 1966 as amended and as administered in Arizona by the Arizona State Parks Board through the State Historic Preservation Officer.

² The findings of the survey are discussed in greater detail in two technical reports by John E. Douglas and Linda J. Brown: "Archaeological Survey in the San Bernardino Valley, Southeastern Arizona" (1985). Both of these volumes are on file at the Cochise College Library, Douglas.

About The Author

John E. Douglas is a doctoral candidate in anthropology at the University of Arizona and Affiliate Faculty Member at Cochise College. John has participated in archaeological projects in Washington, California, and Arizona, and is currently teaching the Anthropological Resource Center's field excavation course.

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ANTHROPOLOGICAL RESOURCE CENTER

Cochise College-Update '85

by Diane Langston

Publication

Cochise College is approaching the culmination of almost 20 years of research in a previously little investigated area of the Southwest. East of Douglas lies a corner of the state virtually unexplored in archeological circles. Through the efforts of two men, Richard (Dick) Myers and John Douglas, the Anthropological Resource Center (ARC) finds itself accomplishing and recording more archeology than ever before.

Beginning in 1968, Dick Myers initiated salvage archeology at Cochise College, the first institution in Arizona to offer excavation at the junior college level. His efforts eventually extended to six different sites spanning sixteen years. The year 1985 will see fruition of his life's work in an archeological publication concerning these sites.

Seeing Mr. Myer's retirement quickly approaching, an Archeology Advisory Committee organized to obtain support for publishing the data. Jointly funded by the Cochise College and the Cochise College Foundation, the project is slated to be completed by December, 1985, and will report on five pueblo-style farming villages in the Sulphur Springs and San Bernardino Valleys: Reagan, J. Cowan, Price Canyon, Darnell, and Bernardino.

Survey

New to Cochise in 1984, John Douglas of Tucson, has continued to see the ARC flourish. The transition in staff has become an added bonus to the department, creating two projects highly complementary to each other. After obtaining a grant from the State Historic Preservation Office, Mr. Douglas conducted a systematic survey of the San Bernardino Valley during the summers of 1984-85. Investigating settlement patterns and cultural history has developed a regional overview to place in perspective ongoing projects and work previously completed by Cochise College. A final report on both phases of the study was compiled and released in August and is discussed in summary by John Douglas in "Archaeology on Foot" in this issue.

Excavation

In addition to the survey, Cochise College has continued to excavate at the Boss Ranch, east of Douglas. This site was first recorded by the ARC in 1981. Cochise College's field archaeology class began work at the ranch in the spring of 1982, under the direction of Dick Myers. Since the spring of 1984, the excavation class has continued work at the site, supervised by John Douglas.

The Boss Site is a pueblo village from the late Mogollon prehistoric period. Specifically, the site is from the Animas Phase, a term used to designate sites contemporary with the Medio Period (AD 1150-1425) at Casas Grandes and located throughout S.E. Arizona, S.W. New Mexico, and N. Central Mexico in the Casas Grandes periphery.

Animas sites are generally one-story rock and adobe pueblos encompassing a compound. The Boss Site conforms with this description, consisting of 15 to 20 possible rooms encircling one or two compounds. Eleven of these rooms have been fully or partially excavated thus far, suggesting a variety of hypotheses. Some definite rooms had well-finished floors and clay-lined hearths. Others, possibly used as small storage areas, had rough floors and no hearth. Some did not prove to be rooms. While a few rooms showed signs of burning, others did not, suggesting they were abandoned peacefully.

Located on a rise in the northern San Bernardino Valley, the site is situated in an open grassland near the confluence of several streams. The area where the streams join together was undoubtedly used for floodwater farming in the summer and fall. Charred common beans, corn, and cotton seeds have been recovered from the site, in addition to a fairly large quantity of animal bone. Although the bone is not yet analyzed, it is quite possible that parties traveled into the Chiricahua mountains to hunt game.

Searching for a time frame, a radiocarbon sample from some charred beans on a room floor has been dated to A.D. 1360 plus or minus 80 years. Assisted by a donation, the College is currently seeking more exact dating based on obsidian hydration. Judging from pottery types, the site must have been

inhabited between A.D. 1300 and 1380. There are many kinds of pottery at the site. Plainware and Cloverdale Corrugated are the most common, with a wide variety of decorated tradeware coming from east-central Arizona, the San Pedro Valley, Sonora, and the Casas Grandes region in northwestern Chihuahua.

Since the Animas Phase was first reported in 1949, the relationship between the Animas Phase and Casas Grandes has been debated. On one extreme, archaeologists see the Animas Phase as representing Casas Grandes people who moved north, displacing or absorbing people on the northern frontier belonging to earlier cultures. On the other extreme, archaeologists have suggested the Animas Phase was a completely separate population that evolved from earlier local cultures (Mogollon pithouse dwellers), and simply had trade relationships with the Casas Grandes culture. As students continue to excavate and disseminate facts, perhaps some of these theories can be resolved.

Certification

Cochise College has a long history of cooperation with the Cochise County Historical and Archaeological Society and other agencies working to examine and preserve our archaeological heritage. In conjunction with this goal, the College last spring offered a Southwestern Archaeology class which was eligible for Arizona Archaeological Society (AAS) credit. Eight of the students completing the course were successful in receiving certification with the Society. The College is currently working with the certification committee to enable its field course to be offered for AAS credit.

Technology

Throughout the excitement of exploration and excavation, the backbone of responsible research is the lab. Since the ARC has introduced the use of computers to store data and collect information, this new technology helps eliminate much time-consuming work.

Also new to the lab is the flotation tank, a device used to process soil samples for minute seed and plant particles.

Because new techniques are constantly being developed, often only portions of important sites are excavated, saving the other areas for a time when technology will enable the archaeologist to extract more accurate information. Thus, using this new technology eases the researcher's job by lessening the amount of data needed to be collected and reported on.

Cochise College Anthropological Resource Center continues its tradition of collecting, preserving, and recording the ancient cultures of Southeastern Arizona.

About The Author

A resident of Cochise County for eight years, Diane Langston has participated in excavations at the Cowan and Boss sites, and both phases of the San Bernardino Survey. After obtaining her Associate of Arts in Anthropology in 1982, she has remained with Cochise College as lab assistant for the Anthropological Resource Center.

About The Author

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THE CHRISTIANSEN BORDER VILLAGE SITE (AZ:FF:9:1)

by John L. Kurdeka

Art by Irma F. Andrews

An unnamed squatter started homesteading on a ranch on the Mexican border southwest of the present location of Paul Spur sometime after the end of the War between the States. A Mr. Greenbush [the same Greenbush after whom a draw near Naco is named] bought out the squatter, eventually selling the ranch to a territorial character now remembered only as "Step-and-a-Half". In 1883 Hans Christiansen, a Bisbee miner, joined Step-and-a-Half in a partnership to raise cattle. The ranch did not prosper. Too many cattle vanished, possibly to pay for whiskey for old Step-and-a-Half. Hans Christiansen dissolved the partnership with the payment of \$500 and the display of a shotgun. Shortly thereafter Step-and-a-Half left the territory.

The ranch is located in an easy passage between the Sulphur Springs Valley and the San Pedro Valley. In historic times this route was chosen for a railroad line providing access to the Pacific Coast. In prehistoric times this should have been a good route for foot passage between the valleys, and scattered traces of early man in the area seem to confirm this. Evidences of early occupancy are still present in the ranch house area. But over a hundred years of ranching have wiped out most of what was present when ranching first started.

Mr. Albert Christiansen, the grandson of Hans and the present owner, tells of metates, manos, points and potsherds found around the ranch house. Round and square rock alignments with the remains of central cedar posts were found, showing the location of dwellings, but all this has long been cleared away in the everyday operation of a ranch.

In 1938 or so, Jack and Vera Mills spent time living on the ranch while Jack worked on a number of carpentry jobs. In their spare time, both Jack and Vera Mills excavated in an area about a mile east of the ranch house. Pit houses and rectangular "pueblo" dwellings were found with pottery, stone and other artifacts, and a number of burials were excavated. Their findings were published, but the report has been out of print and copies are hard to find.

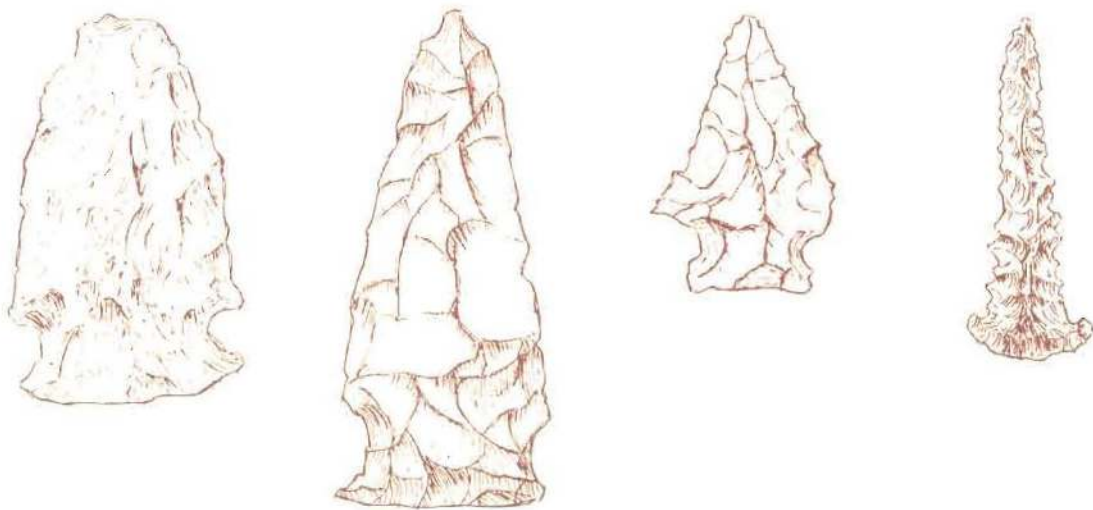
Just about forty years after the Mills started their digging, the CCHAS archaeology group received permission from Mr. Christiansen to dig in a part of the ranch not previously worked. The site was surveyed in mid-September of 1978, and digging has continued during cooler months on a bi-weekly basis on Saturdays, weather and other factors permitting. Now, after seven years of part-time operations, we hope to finish up explorations by the end of 1985.

Our site is to the west and south of the ranch house across a dry creek bed and along the Mexican border. The creek bed is presently eight to eleven feet below ground level. According to Mr. Christiansen, the creek was only a fraction of this depth until floods in 1946-47 caused extensive erosion. Up until 1928 or so, a spring a half mile south of the border in Mexico fed a small stream of water feeding permanent pools in the creek. Some water was present year round. The site itself is a flat bench of valley-fill sediment, a mixture of silt, sand and boulders, about 650 feet wide and not much longer. The land is covered with mesquite and creosote bush. A flood plain on the north and west sides of the bench is covered with sacaton grass. A few walnut trees are found on the east end of the area, two huge cottonwood trees grow on the opposite side of the dry creek, and a variety of desert growth can be found on site.

Until recently, there has been little surface indication of early man on this bench, except for a few traces of fires, and these fires could have been the result of early ranching operations. Heavy erosion on the site started with rains in 1932 and flash flooding in 1946-47. Metates, manos and lithic points were exposed. Casual collectors carted off the artifacts, but little or no digging was done. In the area chosen for our exploration a considerable amount of lithic debris has been found scattered widely. In a few small areas some potsherds were also found, most of which are the size of a five-cent piece — a result of being crushed by hooves of cattle.

When digging first started, the presence of sherds and the location upstream from a site rich in pithouses and pueblos, suggested that we might find more of the same. No such dwellings have been found. In a village where people use pottery, the predominant evidence of man is the large amount of broken sherds. It soon became evident that the sherds were not only quite scarce on the surface but were limited to the topmost few inches of soil. We did, however, find thousands of stone flakes — waste material left by prehistoric artisans. Broken stone tools were found in moderate numbers.

Parts of broken metates and manos strongly suggested that the lithic material found was from a culture preceding the use of pottery. The food grinding tools, one-hand manos, and basin-shaped metates were of a type associated with archaic cultures that ground seeds for food, and these tools did not resemble the trough-shaped metates and two-hand manos later used by people more dependent on agriculture for food, corn in particular. Stone projectile points were made of phyllite, were large and heavy, suitable for an atlatl (throwing spear), and not the smaller and lighter points associated with bow and arrow.



(Fig. 1) Projectile points shown actual size. The first two are probably atlatl points that weigh more than five times as much as the third "arrow head". The fourth is the delicate Hohokam style point. (Full Size)

The site had been surveyed and laid out in 6-meter square grids (20x20 feet). Our procedure was to clear a grid of grasses and brush, collect any surface materials for later analysis, logging and photographing any item of interest. Soil was then removed in 6" layers across the grid, sifting the dirt through a ½" mesh screen. Ordinarily, two or three people worked in cooperation, excavating a grid until further digging showed no signs of human occupancy.

The layers of soil on the site were found to be distinctive in some areas, scrambled by erosion in others. Where the layers were not confused by the works of nature, we could peel off the layers of dirt and simultaneously peel back layers of time. The top inch or so was recently blown-loose silt covering a more compacted mixture of adobe with stones and gravel. Artifacts were sometimes found in this layer. At a depth of four to ten inches the soil changed. A harder, denser subsurface was found, with artifacts concentrated in the boundary between layers and in the soil below. This suggests that the lower layer of dirt represented the ground surface on which earlier people lived and walked. A foot deeper, traces of man disappeared.

In the spring of 1979 on the extreme west edge of the site a freshly dug badger hole was found. The fresh dirt showed a few potsherds and bone fragment. The bone was calcinated (burned) and was part of a human jaw. The badger had found a cremation burial for us. Eventually four small pits were uncovered each with a handful of ash and burned bone fragments. Three grids were staked out but no further burials found. One small shell pendant was found. Any other funerary artifacts were destroyed by the heat of cremation. One particularly well made white chert point was found — apparently of Hohokam origin and in keeping with the Hohokam style of burial.

The spring of 1980 found a group working on a grid in the north edge of the site (grid A-144). Two intact basin-type metates were found in close association with several one-hand manos. Strangely, none of the manos exactly fit either metate. Also, the bottoms of three or four pots were found with the food-grinding tools. This was the largest concentration of pottery found on the site to date. The pots could have held a gallon of food each. The pottery was tentatively identified as Babocomari Micaceous, a type common in the San Pedro Valley. These items were concentrated in a small area, possibly a sheltered cooking area. A hard-packed adobe floor just a few inches lower than the surrounding hardpan surface extended in a circle six feet across. There were signs that two small posts may have supported a ramada of sorts.



(Fig. 2) Top view of a basin type metate. (20 inches long, 37 lbs.)

A number of small fire pits may have been uncovered, most of them nine to six inches wide, twice that in length, and from three to eight inches deep. Two distinctly different types of underground ovens were also uncovered. One was a vertical cylinder in the ground, 24" in diameter, lined in the bottom with fist-sized rocks. The second is harder to describe. An associate suggests that it was shaped like a pear standing on the big end with part of the stem cut off. This pit was 20" in diameter at the top, 30" wide on a flat bottom, and 36" deep. A smaller ash pit was located on one bottom edge of the large pit and extended below the bottom of the large pit. Total distance from ground level to the bottom of the ash pit was 42".

Within 20 feet of the underground pear-shaped oven just below the surface level a circular cist or storage pit was uncovered. This cist was six feet or larger in diameter with the center 18 inches lower than the edges. Large chunks of sun-baked adobe and numerous loose rocks were found within the cist, also scattered around the circumference. This suggests that the walls of the cist had been built up above ground level and the stone lining continued up the inner adobe walls. The rock lining was not laid so as to provide a smooth surface. No traces of ash or pottery were found in this stone-lined pit. Was this a granary for storage of corn? We can only guess that there was a covering for the pit . . . sticks interwoven and plastered with adobe would have made a good shelter. The granary, if that is what it was, would have been unsuitable for keeping food in ceramic pots; the rough stones would have cracked many of them and we found no sherds. If baskets were used, how much of a problem did the people have with mice? Jack and Vera Mills had found several similar stone-lined areas in their excavations to the east.

In excavating a site of this size, with a small crew working a few hours each month, it is impossible to do more than sample the whole area. We did concentrate efforts around the granary and excavate five other grids nearby. This seemed to be a place where stone tools were manufactured. Thousands of small stone flakes resulting from touching up edges of stone tools were found. Broken points, broken blades, scrapers and some grinding tools were also excavated. Here we also found two stone balls. These are about the size of a softball, one is nicely rounded and the other somewhat flat on both sides. Both of them work very nicely when rolled on the grass. Similar stone balls have been excavated in other sites in this part of the world.



(Fig. 3) The stone ball (half size) may have been used for a game of "foot-ball". The other item shown may be half of a stone pipe (shown full size).

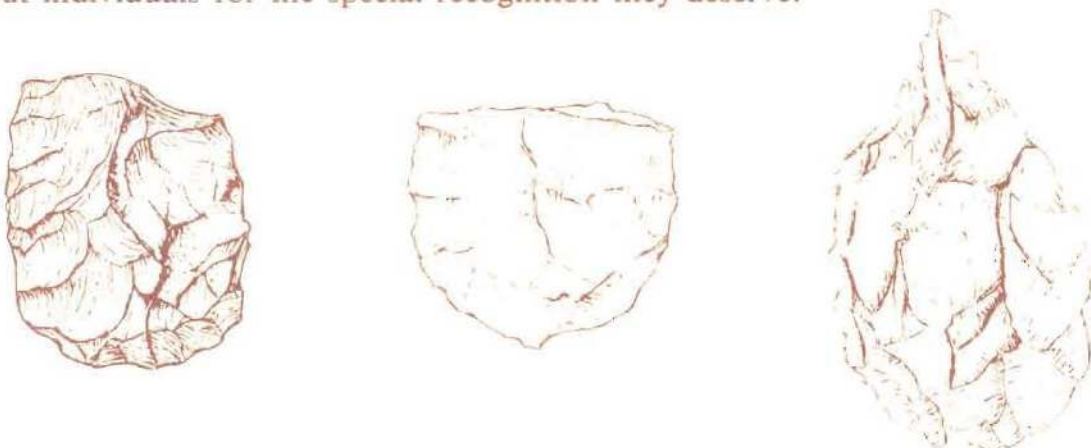
In digging we have been looking for bone tools and finding none. A bone awl makes an excellent tool for basketry work. If these people didn't have pots, then baskets were essential. Where are the awls? Some small scattered bone fragments have been scattered in and near fire pits, but these seem to be scraps from meals.

In summary, what have we found and what does it mean?

We found a concentration of stone flakes over the area telling us that a number of people spent considerable time living or visiting the site. (The more garbage, the more people.) The absence of permanent dwellings suggests that our people were nomadic wanderers or part-time farmers. Builders of pit houses or pueblos need to cut timbers to construct their dwellings, and stone axes are needed to cut timbers. Not one stone ax or fragment has been found. Very little pottery was found and much of that was near the surface. Food-grinding tools, metates and manos, point to an older culture. The large projectile points also indicate an archaic people. The late Chiricahua phase or San Pedro phase of the Cochise Culture would fit the clues fairly well. This would put the archaic people living here as early as 1000 B.C. or as late as 300 A.D.

There are more questions left than there are good answers. If the site was conducive to early human use, why didn't the later people (the ones who left a few potsherds on the site) build their pit houses or pueblos here also? Were the later people avoiding the site because of the evidence of earlier occupancy? What connection did the four Hohokam style cremation burials have with the site, and why only four burials? If the archaic people buried their dead, where are the bodies?

This story of our work on the Christiansen Ranch is not intended to be a typical report. That report is being compiled slowly and will be submitted later. All of our measurements were made in the metric system, and the translations here into English have been rounded out into even numbers. Forty workers spent 500 man-days digging and screening the soil in 20 grids, moving 8,000 cubic feet of dirt. I hope the diggers will understand why I cannot single out individuals for the special recognition they deserve.



(Fig. 4) The most common stone tool found. What is it? An eating utensil? Or? (Full Size)

About The Author

John L. Kurdeka, a retired electronic engineer, is now an amateur archaeology enthusiast. He has been able to devote more attention to his hobby the past nine years and most of that time has been Digs Director for the Archaeological Section of the Cochise County Historical and Archaeological Society. His especial interest is the study of local pottery types. He has had exhibits of his own hand-thrown pottery.

About The Artist

Irma F. Andrews retired recently to Dragoon, Arizona from New England where she designed small pieces of pewter for commercial silver companies. Her avocation was, and still is, oil painting, with exhibits throughout New England. Since moving to Cochise County, she has exhibited both her oils and pewter at The Little Gallery in Douglas.

For the past two years she has studied archaeology at Cochise College, been a member of the survey team under John Douglas' direction, and has drawn the maps and illustrated artifacts for his reports.