



GLYPHS

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Jeff Charest excavates one of two main roof support postholes in a pit structure at Honey Bee Village.

Next General Meeting: July 16, 2007

<<http://www.statemuseum.arizona.edu/aaahs/aaahs.shtml>>

PRESIDENT'S MESSAGE

Hunting in Nineteenth Century Tucson



After having written "Fishing in the Santa Cruz" for the June *Glyphs*, I thought it would be appropriate to follow up with a "President's Message" about hunting in the Tucson area during the late 1800s. Again, I am relying on Tucson newspapers as my primary source of information for the period after 1870.

Nineteenth century Tucsonans hunted a wide variety of birds, mammals, reptiles, and amphibians in large numbers for sport and food. In fact, the more one killed, the greater the approbation of one's peers. Sport hunting targeted everything that walked, crawled, swam, or flew. If an unusual bird were seen, perhaps one blown in during a storm over the Gulf of California, the first reaction was to shoot it. The newspapers duly reported many such occurrences of this type of behavior.

Among the large animals frequently shot for food were deer and antelope. These were often brought into town by Papago (Tohono O'odham) hunters, who would sell them to butcher shops for \$3.00 each (1882); the price could go as low as \$1.50 for antelope (1886). The newspapers recorded sales of deer over a 15-year period from 1870 through 1896. The peak years were 1885 (15 sold) and 1893 (10 sold). During this period, at least 57 deer were sold in Tucson. Invariably, the newspaper

mentioned only a few of the total sales and rarely mentioned those hunted by men for their own use.

Antelope were brought in by hunters every year from 1884 to 1888, and from 1893 through 1896, according to the newspaper; again, usually by Papago hunters. In 1893 alone, seven were sold. Based on these incomplete reports of deer and antelope sold, one could surmise that venison was more popular than antelope among nineteenth century Tucson consumers. In 1870, venison sold at butcher shops for 8 cents per pound, and 12 years later, it was available for 15 cents per pound.

The more difficult-to-obtain bear and mountain sheep were mentioned less frequently than deer or antelope. Hunter sales of bear were recorded in 1870, 1884, 1885, 1894, and 1896. In 1884, three were sold. Bears were hunted in the Santa Rita, Santa Catalina, and Rincon mountains during these years.

Eleven mountain sheep were sold in 1882, 1884, 1885, and 1893. The peak year was 1885, when six sheep were sold. Hunting for mountain sheep was confined to the Santa Catalina Mountains and the Tucson Mountains. No prices to the consumer were noted.

One mountain lion was sold for human consumption in 1896. Never popular as a source of meat, this tasty animal may have been consumed by

some of the poorer elements in Tucson society.

Very widely hunted smaller animals were the jackrabbit and the cottontail. In 1882, two men from the East shot 200 rabbits over a 3-month period. They received 25-50 cents each for the rabbits from local butchers.

Birds were also rapaciously hunted around Tucson throughout the nineteenth century. Ducks, doves, pigeons, and quail were the most popularly sought avifauna, although teal, mudhens, snipe, geese, grebes, and stilts were also bagged when encountered. In 1883, the two men mentioned above averaged a daily take of 12 dozen birds and rabbits over a 3-month period; included were 985 doves and 70 dozen quail. Local butchers paid the men 75 cents to \$1.00 per dozen for the doves and \$2.00 per dozen for the quail.

Ducks and other water birds were hunted on the Santa Cruz River opposite Tucson, at Warner's Lake, at Silver Lake, and on the river at San Xavier. The newspapers noted hunting of ducks, doves, pigeons, and quail from 1870 through 1907. In June 1885, 265 ducks were reported killed on the Santa Cruz and at Warner's Lake.

Pigeons and quail were often captured alive and used in live shoots at Silver Lake throughout the 1890s. As early as 1892, one newspaper commented that pigeons were becoming scarce, so they were replaced with quail. The depletion of the pigeon and quail populations brought this sport to an end around 1900.

To a lesser extent, frogs (legs) and turtles were also hunted and marketed from approximately 1882 to 1907. Frogs were hunted along the Santa Cruz River, at the cienega near Pantano, and as far away as Arivaca for the Tucson market. Turtles were caught locally, and sea turtles were imported from Sonora in the 1880s.

Beginning in the late nineteenth century, Territorial game laws were passed. These laws gradually stopped the wholesale killing of wildlife.

To put all of these "statistics" into perspective, the amount of wild game collected in the nineteenth century provided a relatively small percentage of Tucson's available food resources. Without question, the largest amount of food came from domestic cattle, pigs, sheep, and goats. For example, in 1906, when Tucson's population was a little over 10,000, 600 beeves were consumed per month.

Most of the historical archaeological projects in Tucson over the past 40 years have recovered at least some of the bones, teeth, beaks, and claws of the wildlife so wantonly slaughtered in the nineteenth century. These remains show up in trash deposits throughout the historic city and in association with people of every economic and social level. Historical faunal remains add a tangible sense of realism to the harvesting of wildlife that the articles in newspapers cannot convey.

—James E. Ayres (Jim), President

AAHS HAPPENINGS

TOPIC OF THE JULY 16 GENERAL MEETING

Large-scale Excavations at Honey Bee, a Hohokam Town in Oro Valley

by Henry Wallace

Nearly a year of excavations at Honey Bee, a prehistoric Hohokam ballcourt village in Oro Valley, resulted in the exposure of most of the preserved portions of the site outside a 13-acre parcel being set aside as an archaeological preserve. Portions of the project are funded by Pima County, Vistoso Partners, Cañada Vistas Homes, the Arizona Humanities Council, and a generous anonymous donor. The result is an unprecedented view of a settlement occupied for seven centuries or more from about A.D. 500 to 1200.

Over 350 houses and other types of structures were exposed during our backhoe stripping operations at Honey Bee, along with many cemeteries, 12 hornos or large pit ovens, over 1,400 pits of various types, and a range of trash mounds and midden

deposits. The scale of the excavations and excellent preservation at the site resulted in the discovery of a wealth of new information, including things never seen before. In my lecture, I will provide an overview of our field efforts and a preview into the interesting results coming from our ongoing analyses.

Doelle, William H., and Henry D. Wallace
1991 The Changing Role of the Tucson Basin in the Hohokam Regional System. In *Exploring the Hohokam: Prehistoric Desert Peoples of the American Southwest*, edited by G. J. Gumerman, pp. 279-345. University of New Mexico Press, Albuquerque.

Swartz, Deborah L., and William H. Doelle
1996 *Archaeology in the Mountain Shadows: Exploring the Romero Ruin*. The Archaeology Library. Center for Desert Archaeology, Tucson.

Speaker Henry Wallace received an M.A. in anthropology/archaeology in 1982 from the University of Arizona. His first formal archaeological field training was in Costa Rica, but he has been observing and recording archaeological sites in southern and central Arizona since 1974. Mr. Wallace first started working for the Institute for American Research, the firm that later evolved into Desert Archaeology, Inc., in 1982, and has been conducting research and directing projects in Arizona ever since. He is best known for his investigations at rock art sites in southern Arizona, and for his excavations at large Hohokam culture villages such as Los Morteros and Valencia Vieja in the Tucson area. Mr. Wallace has had a long-term interest in Honey Bee Village dating back over 20 years.

AAHS LECTURE SERIES

All meetings are held at the University Medical Center, Duval Auditorium Third Monday of the month, 7:30-9:00 p.m.

- July 16, 2007: Henry Wallace, *Large-scale Excavations at Honey Bee, a Hohokam Town in Oro Valley*
- August 2007: No meeting (Pecos Conference)
- Sept. 17, 2007: Suzanne Griset, *California Basketry*
- Oct. 15, 2007: Laurie Webster, *Out of the Museum Basement: The Textiles, Baskets, and Painted Wood from Aztec Ruins and Pueblo Bonito*
- Nov. 19, 2007: Eric Klucas, *Recent Archaeological Work on the Colonial Period in the Tucson Basin*
- Dec. 17, 2007: Doug Gann, *Preservation Archaeology at Casa Malpais*

WE NEED YOUR FIELD TRIP INPUT

One goal of your AAHS board is to have a full, interesting, and relevant field trip program. As the new AAHS Vice President for Activities, I would love to have your input. Are there places you would like to go? Do you know any neat archaeological or historical spots you think the group would enjoy? Is your preference for local half- or full-day trips, overnight trips to various locales around Arizona, or a mixture of the two? Would you be interested in organizing a trip for the group? Is Saturday generally a good day for field trips, or would you prefer a weekday? You get the idea... Please send your thoughts and ideas to me, Katherine Cerino, at <kcerino@gmail.com>.



Bill Hallett and Bridwell Williams (not pictured) set up and manned an exhibit at the 2007 Archaeological EXPO at the Yuma Crossing State Historic Park (March 17) (photographs courtesy of G. Donald Kucera).

Were Wildland Fires “Natural” Prior to Late Nineteenth Century Euroamerican Settlement of the Eastern Mogollon Rim Region?

by Christopher Roos, University of Arizona

In the era of human-induced global warming and its local environmental consequences, many of us in the Greater Southwest are left to ponder what, if any, part of the current wild-fire situation is natural. For example, were large, high-intensity fires similar to the Rodeo-Chediski or Aspen fires part of natural fire occurrence, or are they a consequence of twentieth century land use? Are such fires a natural part of the history of Southwestern forests?

Evidence from annually dated, fire-scarred trees suggests relatively light fires occurred quite frequently (every 2-10 years) in stands of ponderosa pine between A.D. 1700-1900. Fires of this low intensity and high frequency would have regularly prevented the accumulation of coarse fuels, such as downed limbs and dry shrubs, and created a more open canopy of pines relative to modern forests. It is assumed by many that this observed pattern is natural and is driven by inter-annual climate.

For archaeologists, however, the question remains relevant – was *this* pattern of fires “natural” or a consequence of past human behavior? Anthropologists have slowly warmed to the idea that Native Americans may have shaped their environments through the use of fire. More than 50 reasons for burning have been docu-

mented for Native American societies, including the application of fire to various aspects of hunting, agriculture, wild plant management, warfare, and pest control. Along the Mogollon Rim, Western Apaches were reported to have used fire in hunting, agriculture, and to improve the production of wild seed collecting areas. It has also been suggested that prehistoric residents of the Mogollon Rim region used fire as part of agricultural technologies.

In an effort to disentangle “natural” from “cultural” causes in the ancient fire history of the Mogollon Rim region, I have turned to methods and techniques from geology and paleoecology. The goal of my dissertation research is to evaluate if, when, and how the prehistoric and historic indigenous residents of the Mogollon Rim region affected the patterns and ecological consequences of fires on the surrounding landscapes. To do this, I use independent data sets concerning fire history and ecology, climate variability, and human occupation. By comparing the three data sets, the variation in fire regimes attributable to humans, climate, or both can be discriminated.

Occupational history along the Mogollon Rim has been reconstructed from over 100 years of archaeological investigation. Although

humans have been present in the Greater Southwest for at least 13,000 years, archaeological evidence for human occupation of the eastern Mogollon Rim region (the coniferous belt between Chevelon Canyon on the west and the White Mountains on the east) is scant until A.D. 200. Between A.D. 200-1000, small groups of pit-house-dwelling, gatherer-gardeners moved in and out of the region on a seasonal basis. After 1000, pueblo-dwelling people from the north and east joined local residents in what continued to be a mixed-economy, short-term sedentary society. Between 1250 and 1300, local residents aggregated into fewer locales in the region, with a greater commitment to agriculture. By 1400, the area was no longer the locus of habitation for Pueblo people. Although the timing of early Western Apache occupation is unclear, archaeological evidence from the Grasshopper area indicates their presence by 1600. Euroamericans settled the area in the late 1800s, after the establishment of the Fort Apache Indian Reservation.

Climate models for the southern Colorado Plateau indicate long-term variability in the frequency at which fire-conducive conditions occur. During the period 900-1300, coincident with the “Medieval Warm Period,” fire-conducive conditions were present in frequencies comparable to historic times (15-25 times per century). Between 1300-1450, frequencies of climate conditions amenable to low-intensity fires reached the lowest point in the record (less than 10 per

century). After 1600, fire-conducive climate frequency increased slowly until above average frequencies of such conditions between 1650-1900.

Fire regimes have been reconstructed using counts of sedimentary charcoal, stable carbon isotopes, soil phosphorous, mineral grain size analysis, and pollen analysis from stream-laid sediments along the Mogollon Rim. Together, these provide independent measures of the amount and type of fuels burned within a give period (charcoal), the proportion of shrubby and tree ground cover relative to grasses (isotopes and pollen), the frequency of burning (phosphorous), and stream dynamics (grain size).

Preliminary results for these analyses from two different sedimentary records in the Forestdale Valley on the Fort Apache Indian Reservation indicate large amounts of burning during the late 1200-1300s. The increase in charcoal at this time does not correspond with an expansion of grasses or herbs, or with a consistent increase in soil phosphorous or enrichment of carbon isotopes. Additionally, the charcoal abundance occurred in the context of sedimentary units that indicate burning prior to intense summer rains. This increase in low-intensity spring burning during poor climatic conditions – but coincident with the greatest agricultural commitment – supports the hypothesis that Pueblo farmers used fire as part of spring field preparation.

(continued on page 10)

THE CORNERSTONE

Deerskins and Domesticates

Research by ASM's Barnet Pavao-Zuckerman, Assistant Curator of Zooarchaeology, was recently published as the cover article in the academic journal, *American Antiquity*. The article focused on Dr. Pavao-Zuckerman's research on zooarchaeological (animal bone) remains from the Creek Indian site of Fusi-hatchee, located in present-day Alabama.

Tiny cutmarks on deer ankle and foot bones from the eighteenth century portion of the site indicated that the Creeks were heavily involved in processing deerskins for trade with the English and, to a lesser extent, with the French and Spanish.

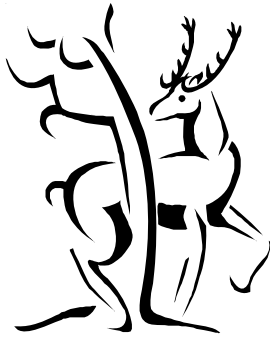
While in some regions, such as the Southwest, Native American groups quickly adopted European-introduced domesticated animals, such as cattle, sheep, pigs, and chickens, Dr. Pavao-Zuckerman found that the Creeks did not adopt animal husbandry until the 1790s, about 250 years after the introduction of domesticated livestock by Europeans.

In the warm, wet, and woodsy Southeast prior to the development of "improved" breeds, many domesticated livestock were at a disadvantage, suffering from heat stress and parasites. Domesticated animals also

require a lot of care and infrastructure, such as fences and outbuildings, and the only experience the Creeks or their ancestors had had with domesticated animals was the self-sufficient dog.

As long as hunting lands were preserved and human populations stayed low, deer, the Creek's most important game species, was plentiful. Under these conditions, animal husbandry was not necessarily a "better" strategy than hunting to obtain meat. Further, while the Creeks became dependent upon European trade goods, such as guns, ammunition, cloth, and metal implements, they could get these goods by trading deerskins with white traders.

Instead of radically changing their normal subsistence pattern to incorporate domesticated animals, the Creeks intensified one aspect of their traditional strategy, deer hunting, to obtain goods. However, loss of hunting lands due to white settlement, pressure from "Indian agents," and possibly the invention of the cotton gin (cotton replaced deerskins in some applications) eventually forced the Creeks to drastically alter their subsistence strategy by adopting livestock ranching at the turn of the nineteenth century.



Deer herds may also have begun to feel the strain of intensive harvesting; deer bones at Fusi-hatchee suggest a reduction in size of the animals over time, a common response to harvest pressure.

The Cornerstone is presented by:
Darlene F. Lizarraga, Marketing Coordinator
Arizona State Museum, University of Arizona
P.O. Box 210026, Tucson, AZ 85721-0026
Phone: 520.626.8381, FAX: 520.621.2976
<www.statemuseum.arizona.edu>
<dfj@email.arizona.edu>

UPCOMING ARIZONA STATE MUSEUM EVENTS

Archaeology Summer Camp for Adults

July 23-27, 2007

No bones about it – this summer camp is a unique experience! For the first time, ASM bioarchaeologists Lane Beck and John McClelland team up with ASM zooarchaeologist Barnet Pavao-Zuckerman to offer you a week-long course on human and animal bone identification. Experience first-hand how and what these bone experts learn through hands-on activities, lectures, tours, and more. Human bone of a non-archaeological nature will be used in this classroom setting. [\$270 ASM members; \$300 non-members]

Four Corners Learning Expedition

September 29-October 6, 2007

This popular trip fills quickly every year! Travel with museum archaeologists and explore the culture and beauty of the incomparable Four Corners region for 7½ days. Highlights include the Hopi Mesas, Canyon de Chelly, Chaco Canyon, and Mesa Verde, culminating in a trip down the San Juan River, past spectacular rock art and cliff dwellings. Limited group size ensures meaningful interaction and conversation with expert guides. For complete itinerary, visit <<http://www.statemuseum.arizona.edu/public/tours.shtml>>. [\$1,300 ASM members; \$1,400 non-members]

GLYPHS: Information and articles to be included in *Glyphs* must be received by the 10th of each month for inclusion in the next month's issue. E-mail me, Emilee Mead, at <emilee@desert.com>, or contact me at Desert Archaeology, Inc., 3975 N. Tucson Blvd., Tucson, AZ 85716; 520.881.2244 (phone), 520.909.3662 (cell), 520.881.0325 (FAX).

AAHS WEBSITE: *Glyphs* is posted each month and can be found on the ASM/AAHS website at: <<http://www.statemuseum.arizona.edu/aahs/aahs.shtml>>, and it can also be found at: <<http://www.swanet.org/zarchives/aahs/>>.

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After 1400 and Pueblo migration out of the area, charcoal content declined while other measures remained low but variable. Sometime in the 1500s, there was a change in all variables, indicating frequent, low-intensity fires promoting grassy understory vegetation and decreased sediment load that may represent an increase in autumn burning. This is in keeping with Western Apache traditions of post-harvest burning of wild seed plots. All records degraded prior to 1910, probably coincident with the establishment of the reservation in 1870.

The Forestdale Valley geoarchaeological record suggests humans were

intimately involved in creating the fire history of the Mogollon Rim region, at least over the last 800 years. However, the greatest ecological impact occurred when climatic conditions and Apache land use combined to create a more open, grassy forest through frequent, light burning.

The ancient Forestdale landscape cannot be accurately characterized as "natural" in the sense of being unaffected by human activity. Regardless, the landscape was resilient to climatic perturbations, such as multi-year droughts, which do not appear to have caused catastrophic fires in the distant past in the same way these climatic conditions can cause fires today.

OLD PUEBLO ARCHAEOLOGY

5100 W. Ina Rd., Tucson, AZ 85743
520.798.1201, <info@oldpueblo.org>

"Third Thursdays" Lecture Program 7:30 p.m., Old Pueblo Auditorium

July 19, 2007: Rebecca Waugh, Ph.D., *Archaeological Evidence of Women on the Spanish Colonial Frontier*

On the Spanish Colonial frontier in what is now Arizona, many different people made their lives at towns, presidios, ranches, and other settlements. The archaeological record at these historical sites helps us understand how different segments of society, like women, may have contributed to the culture, and this record enriches understanding of how Spanish Colonial society developed on the frontier. Archaeologists may infer that women were present in Spanish Colonial sites when excavations recover artifacts and personal items that probably belonged to women, or that were frequently used in the kinds of jobs women did. This presentation will show how archaeologists use historical supply invoices and records, paintings, and artifacts excavated at other early Spanish sites to identify the kinds of artifacts that may indicate women lived at a particular place.

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Monthly meetings are free and open to the public.

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Visitors are welcome at all of the Society's regular monthly meetings but are encouraged to become members to receive the Society's publications and to participate in its activities at discount rates.

Memberships and subscriptions run for one year beginning on July 1 and ending June 30. Membership provides one volume (four issues) of *Kiva*, the Journal of Southwestern Anthropology and History, 12 issues of the monthly newsletter *Glyphs*, and member rates for Society field trips and other activities.

For a brochure, information, or membership/subscription application forms, write to:

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Arizona Archaeological and Historical Society
Arizona State Museum
University of Arizona
Tucson, Arizona 85721-0026
USA

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