



GLYPHS

The Monthly Newsletter of the
Arizona Archaeological and Historical Society
An Affiliate of the Arizona State Museum, University of Arizona
Founded in 1916



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Don Tomas Munguia and daughter, Dona Ysabel Munguia de Vasquez, at homestead in Cascabel.
Photograph courtesy of great granddaughter of Tomas, Monica Dunbar Smith. Date unknown.

Next General Meeting: May 15, 2006

RESIDENT'S MESSAGE**THE SAN RAFAEL RANCH, PART 1**

Two common western literature and movie themes relating to the development of the West are the conflicts between cattlemen and sheepmen and between cattlemen and homesteaders. In southern Arizona, however, antagonistic behavior between cattle ranchers and sheepmen was not a prominent issue primarily because many of the big ranchers in the nineteenth century began their careers as sheepmen. Only after they had gained some economic stability did they switch to cattle, but not always exclusively. The attitudes about homesteaders were similarly benign. Many ranchers began as homesteaders, or at least they acquired a parcel of land that had been homesteaded and patented. Often these parcels formed the core of a rancher's holdings. It was usually on the patented land that permanent headquarters facilities were situated. In fact, the homestead of 160 or 320 acres might have been the only patented land owned by a rancher who relied on federal lands for grazing his cattle or sheep.

Though rare, one case of vehement antihomesteader behavior, and probably the most egregious in southern Arizona, was initiated by Colin Cameron of the San Rafael Ranch (San Rafael de la Zanja land grant). This ranch began life as a large land grant in 1825 when the government of Mexico awarded four *sitios*, or about 17,354 acres, to Don

Ramon Romero, who was a resident of the Presidio of Santa Cruz. Romero managed to hold this land for 18 years, until, in 1843, he was forced to leave because of repeated and devastating Apache attacks. His heirs sold the property to Alfred A. Green in 1873. Green in turn soon sold to Rollin R. Richardson, who, in 1883, sold it to brothers Colin and Brewster Cameron and other investors. The Camerons sold the ranch in 1909 to William C. Greene of the Cananea Copper Company. Colin retired to Tucson and died in 1911. Part of this ranch is now in possession of Arizona State Parks.

Passage of the Public Land Act of 1885 raised the issue of ownership of the various Spanish and Mexican land grants in southern Arizona, including Babocomari, Arivaca, Calabasas, Tumacácori, San Bernardino, and several others. It wasn't until 1902 that the status of the San Rafael de la Zanja grant was resolved. The court awarded the original 17,354 acres to the Camerons but rejected their claim to an additional 135,536 acres to which they asserted ownership, but for which they had paid nothing. The original grant was centered along the upper Santa Cruz River. The larger acreage around this core extended to the Patagonia Mountains on the west, to the Huachuca Mountains on the east, to a point south of the Mexican border, and to the north, much of the area encompassing the headwaters of the Santa Cruz River.

The attempt to declare himself owner of the larger acreage outside the core

holding before 1902 immediately placed Cameron in conflict with many small homesteaders, squatters, and miners who were legitimately on the land. From the beginning, certainly as early as 1884, he began a program of harassment against these folks that included lying, manufacturing evidence against some of them, keeping some under surveillance, and even murder. We will explore some of these tactics next month in the conclusion of our summary of the history of the San Rafael Ranch and its primary owner, Colin Cameron.

A lot has been written about the San Rafael Ranch over the years, and often the facts presented contradict one another. For example, the total acreage involved, including the original land grant, ranges from 152,890 to 600,000, depending on the source. I have relied on the SHPO's 1996 "Cattle Ranching in Arizona" context by William Collins, John P. Wilson's 1995 *Islands in the Desert*, Janet Stewart's 1974 *Arizona Ranch Houses*, and Grace McCool's 1968 *So Said the Coroner*. I also have heavily used contemporary newspaper accounts.

James E. Ayres (Jim), President

Please note...

The editor of *Glyphs* wishes to issue a correction to the April issue (Vol. 56, No. 10). On the front page, one of the photo captions read to the effect that Elisa Villalpando received the Cummings award. In fact, she accepted the award on behalf of Beatriz Braniff.

AAHS MEETING TIME AND PLACE

The Arizona Archaeological and Historical Society's monthly meeting will be held on May 15th at 7:30 p.m. at Duval Auditorium, University Medical Center, 1501 North Campbell Avenue (north of Speedway). Free parking is available south of Mabel Street, across from the College of Nursing. The Front Entrance is on the top level of the parking structure. Duval Auditorium is on the 2nd level of the Hospital.

GLYPHS — Information and articles to be included in *Glyphs* must be received by the 10th of each month for the next month's issue. Write to me, Lynne Attardi, c/o AAHS, ASM, University of Arizona, Tucson, AZ 85737, or e-mail me at <ltatglyphs@aol.com>.

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



AAHS HAPPENINGS

Topic of the Monday, May 15, 2006 General Meeting



TRACKING THE SOUTHERN PACIFIC ACROSS ARIZONA

by Rick Karl, Arizona State Museum
University of Arizona

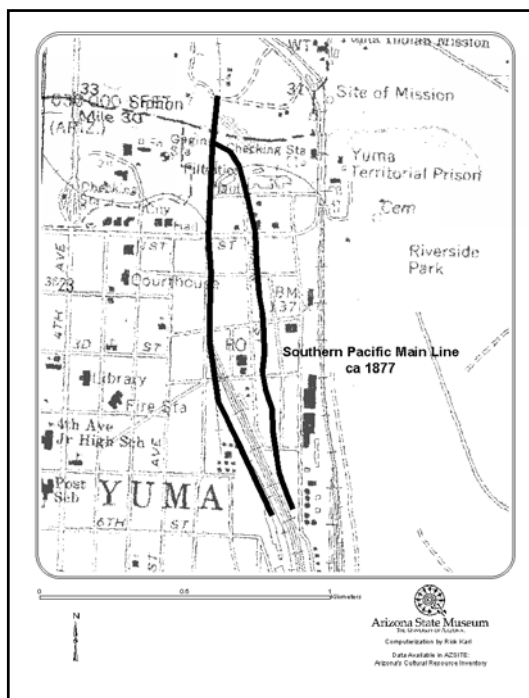
In the early hours of Sunday, September 30, 1877 the railroad snuck into Arizona despite an order from the military garrison at Fort Yuma Military Reservation. The Southern Pacific had built the crossing on the Arizona side and was ready to lay track in Arizona when the Commanding Officer decided an early agreement was not applicable to civilians crossing a U.S. Military Reservation. In the wee hours of the morning, however, and unbeknownst to the garrison, Chinese workers completed the track, and later that day Engine # 31 rolled in to Yuma and Arizona.

The Southern Pacific Railroad was originally set to follow the 32nd parallel, but engineers generally followed wagon ruts. Many segments of the original line were changed quickly due to flooding, geographical obstacles, and to accommodate settlements. The location of some segments of the original route is highly questionable and appears to lack any accurate recording.

Research for this project is going to attempt to accurately locate the entire original route and the work camps and tent cities erected during the SPRR march across Arizona to hook up with the ATSF at Deming, New Mexico.

Speaker **Rick Karl** has worked

at ASM since January 1997. He is currently the AZSITE GIS Database Administrator. In 1996 Rick received his BA in Anthropology and in 2000 he received his MA Archaeology, both from the University of Arizona. He has also received numerous Microsoft Certifications taking computer courses, including several GIS courses. Rick's current research includes *Tracking the Southern Pacific in Arizona* and *Lithic Technology in the Tucson Basin, Durham Wash area*.



**ARIZONA ARCHAEOLOGICAL AND HISTORICAL SOCIETY
SPRING CLASSES**

May 2, 9, and 16, Tuesday evenings, 7 p.m. - 9 p.m.

NATIVE MUSIC AND SONG TRADITIONS IN THE SOUTHWEST

May 2

HOPI KATSINA SONGS AND METAPHORS
Emory Sekaquaptewa
(Bureau of Applied Research in Anthropology, University of Arizona)

May 9

WAILA (“CHICKEN SCRATCH”)
SOCIAL DANCE MUSIC
OF THE TOHONO O’ODHAM
Angelo Joaquin, Jr.
(University of Arizona and co-founder of the Waila Festival)

May 16

SONGSCAPES AND CALENDAR STICKS:
THE ARCHAEOLOGY OF O’ODHAM TRAILS
AND SONG JOURNEYS
Barnaby Lewis and J. Andrew Darling
(Gila River Indian Community)

Cost is \$30 for AAHS members and \$40 for non-members; \$10 discount available for students and K-12 teachers. Pre-registration is required. To register, please contact Laurie Webster at 520/325-5435 or email her at <lwebster1@mindspring.com> (with a capital L).

SWCA WELCOMES SENIOR ENVIRONMENTAL PLANNER

PHOENIX, AZ - SWCA Environmental Consultants is pleased to announce the addition of Ralph Ellis to its team of environmental professionals. Ellis has more than 10 years of experience in government resource and regulatory agency coordination with the Arizona Department of Transportation; project scoping; and preparation, research, and analysis of National Environmental Policy Act (NEPA) environmental and design concept documentation. While his expertise centers primarily on road and highway projects, Ellis has taken a lead role in projects for both the state and private sectors. As a Senior Environmental Planner/Project Manager, Ellis will assist clients in navigating NEPA compliance documents and obtaining relevant regulatory permits. “I look forward to getting involved in interagency work and developing more client relationships,” Ellis says. Ellis has an associate’s degree in Engineering Technology, a BS in business administration, and an MBA.

SWCA is an employee-owned, Engineering News-Record Top 200 environmental consulting firm, with more than 25 years of experience in the industry. Since 1981, SWCA has achieved a national reputation for providing its clients with creative solutions based on sound science and professional integrity. With 19 offices located in 11 states, SWCA provides environmental consulting services to clients across the West, Pacific Northwest, and Pacific Islands.

For more information about SWCA, visit <www.swca.com>.

RECORDING THE MUNGUÍA HOMESTEAD

by Jacquie Dale, Preservation Archaeologist
Center for Desert Archaeology

Sitting amidst a thick mesquite bosque along the west bank of the San Pedro River is an old adobe home built ca. 1900. This is what remains of the homestead of Tomas Munguia, an early Mexican-American who settled near present day Cascabel in the late 1800s. Like many early settlers in the area, Tomas Munguia acquired his land under the Homestead and Preemption Acts. Although quite remote, his home was large and finely built, having a good strong foundation. Even today, the walls still stand but the roof has long since collapsed, and the trees and river are an ever encroaching threat.

For the last year I have been working with the Cascabel Volunteer Fire Department and the BLM on a wildland fire protection plan to help protect resources on both private and public lands in my community. The Munguia homestead was identified as being at-risk in the event of wildfire. Thinning the trees and clearing away any ground fuels would greatly reduce the risk of fire damage to the old home.

Prior to creating this defensible space around the home, I set to work documenting and recording the Munguia homestead and assembling biographical data on the Munguia family. The history of the Munguia property was compiled by visiting archives in Arizona, interviewing local individuals who have historical connections to the Munguias, as well as accessing published family histories. Recording the site was completed with the help of some very enthusiastic local volunteers.

Don Tomas Munguia was born in Tucson in 1863 to Jesus Maria Munguia and Luisa Campa Sosa. Tomas also had a younger sister named Ramona. In 1887 Tomas Munguia purchased 160 acres of land under the Preemption Act of 1841. In 1905 Tomas and Refugia, his wife, sold a right of way on their property to the Phoenix and Eastern Railroad Company for \$125. Twenty years later, Tomas Munguia acquired additional parcels under the Homestead Act of 1862, making his total holdings 320 acres. According to local informants, Tomas and Refugia farmed the land, growing cotton and alfalfa. Refugia passed away in 1939 and Tomas, in 1955, after transferring various pieces of property to their children and grandchildren. Refugia and Tomas were buried with their relatives in the Soza Family Cemetery in Cascabel. In 1959 the homestead parcel was bought by the Hughes family who built their home on the east side of the river and continued to care for the old homestead. In the 1990s the land was transferred to the BLM.

The four-room house is 53 feet long and 27 feet wide with 10 foot high walls on a stone block foundation. There is a central entranceway with doors on both sides. Vigas for the corrugated metal roof were supported by two large cut stone pillars, still standing. Nonarchitectural features at the homestead include a well, an out-house, a livestock area, and a workshop area. One of the more unique artifacts at the homestead is the frame of a ca. 1919 Dodge Touring car. It now rests quietly

in the mesquite trees, having become a home for packrats.

Local informants had told me a number of stories about the Munguias, many of which could be substantiated through archaeological evidence. One story mentioned that Munguia had constructed a cable to cross the river during times of high flow. While recording the site, we found evidence of a steel cable anchored to a tree on the west side of the river. Tomas' great-granddaughter gave me an old newspaper clipping that described how the cable was used:

Across the river is a strong cable that carries a tramway for people to cross to the other side when the river is high. The car rolls to the center itself, and

from there on the passenger pulls himself by grasping the wire in front with his hands ~ Arizona Daily Star, 1940.

This and many other stories have made the Munguia homestead much more than just an historic site to me. In recording the Munguia house, I had the pleasure of engaging with relatively recent and long-time residents of Cascabel as well as the family of Tomas Munguia. I became inspired by both the hardy settlers who lived here in the past and by the people who now live here and care about this place.

Living in Cascabel can sometimes be a challenge, with dusty washboard roads, seasonal floods, and no store for thirty miles, but we wouldn't trade it for anywhere else.



The remaining adobe walls of the Munguia homestead as they look today.
Photograph by Jacquie Dale.

THE CORNERSTONE**Measuring Viewshed and Site Inter-visibility: A Pilot Study for Assessing Potential Prehistoric Communications Networks**

by Richard C. Lange, ASM
research specialist, senior

Archaeologists in the U.S. Southwest have become enamored with so-called “tactical sites” (Welch and Bostwick 2001) that are presumed to have functions in communications and defense. Characteristic of such sites is that they are on high, isolated topographic features relative to the surrounding terrain, and sometimes have architecture that can be interpreted as fortifications. The sites are believed to be important in monitoring the landscape and allowing for communications over great distances, and are thus one line of evidence often cited for the presence of conflict, and even warfare, in the prehistoric Southwest.

Such systems have been defined in the Verde Valley area north of Phoenix and in the Kayenta area of northeastern Arizona. Another valley in central Arizona, the Cherry Creek valley to the east/northeast of Lake Roosevelt and the Tonto Basin, may be another instance of such monitoring and communication systems. I have been documenting sites in the Cherry Creek valley for over 20 years, and have become curious about the reasons for and nature of the settlement system there.

Simply being able to see one location from another is not enough to prove a communication network; there are many reasons for sites to be located where they are (Lange 2001). To date, the conditions

necessary for interpreting a particular arrangement of sites as defensive or aligned for communication have not been well defined. GIS offers the opportunity to examine and measure viewshed and assess intervisibility between two locations. This pilot study considered some measurable parameters that may be valuable for interpreting or evaluating prehistoric site distributions.

The attributes measurable through GIS 3-D applications for viewshed and line-of-sight are, again, not enough to prove the existence of a communication or defensive network. The nature of the message (need, complexity, urgency, potential for ambiguity, and so on), the type of signal that can be used (device, loudness, clarity, projectable distance), and environmental factors (time of day, sun angle, interfering noise, wind, topography or vegetation) are all critical factors in the effectiveness and distance that a communications network could cover (Lange 2001). However, the attributes measurable through GIS help suggest different types of roles particular sites may play in a communications network and the types of signals that could be used effectively. Archaeological data and on-the-ground checks may support such interpretations or suggest other factors.

One USGS 7.5-minute topographic map, the Sombrero Peak AZ quadrangle, was selected for this study. From the 104 archaeological sites known in the area covered by this quadrangle, a smaller subset of 20 sites was chosen. These sites include low-lying sites, sites on isolated, high topographic features, and cliff dwellings located in low and high elevation cliff settings. Each of the 20 sites was

used as the observation site for the GIS viewshed and line-of-sight analyses. The viewshed analysis was able to count all of the sites (N = 104) as visible or non-visible. The line-of-sight analysis compared only each of the selected sites to the other 19 members of the selected sites subset.

The site location data was in the form of Universal Transverse Mercator (UTM) northing and easting coordinates in a Microsoft Access table. Coordinates for the sites were determined in the field based on locating and plotting them on the Sombrero Peak quadrangle. The table was exported into a "*.dbf" format and imported into ArcView GIS, then it was added to the project as an event theme, and further converted into a shapefile. The landscape model required as background was obtained from the Arizona Regional Image Archive (ARIA) website. The Sombrero Peak and other quadrangles in the project area were downloaded as Digital Elevation Models (DEMs). The DEM files were unzipped, imported into ArcView GIS, and converted into Triangulated Irregular Networks (TINs) for the 3-D analyses. Several extensions available through the university license were necessary to fully activate the 3-D analysis package for the viewshed and line-of-sight functions (3D Analyst, Geoprocessing, and Spatial Analyst).

Two measurables were recorded for each of the analyses. For the viewshed analysis, the relative amounts of visible and non-visible areas (as determined by the number of 50 X 50 m cells in each category) can be determined from a histogram prepared by each viewshed

analysis; and the number of sites located in the visible and non-visible areas can be counted (by hand — unfortunately, I could not figure out how to convert the visible/non-visible areas into shapes that could be “summarized” for numbers of sites by ArcView GIS). For the line-of-sight, whether or not particular sites can be seen can be determined, as well as the total number of sites from a specified set. For future analyses, hopefully, it would be possible to write a script that would specify observer and target sites that could be tested “automatically” rather than the tedious process of testing each site-to-site link one at a time. The distance involved from site to site can also easily be determined during the line-of-sight analysis.

As expected, based on the test sites selected, a wide range of amount of landscape visible and number of sites “seeable” was found. In no case did any one site see more than approximately 1/3 of the total landscape, or more than 1/2 of the total number of sites. In general, high isolated sites saw more landscape and sites than others. The range of area and sites seen suggested several interpretations. Some sites are more important than others in potential communication or defensive networks. The high and isolated sites were located intentionally in order to provide greater visibility of landscape and other sites. Such sites can be regarded as “observers” and “monitors.” Sites with limited visibility can be significant, however. Such sites may be critical “relay” points. The pilot study, with unnatural edge boundaries, also indicated the need in studies of this type to extend to the horizons or all potential site

(Continued from page 9)

locations out to the limit of signaling, approximately 20 to 30 miles. The pilot study has also established some important background and foundation parameters for future studies of this type.

References

Arizona Regional Image Archive (<http://aria.arizona.edu/images/maps>) — under 1:024K DEMs/Mesa East are the seven 7.5-minute quadrangles for this project area: Rockinstraw Mountain, Dagger Peak, Meddler Wash, Sombrero Peak, Aztec Peak, Rock House, and McFadden Peak)

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OLD PUEBLO ARCHAEOLOGY CENTER'S MAY ACTIVITIES

(info@oldpueblo.org — 520/798-1201)

Saturday, May 13 — “Historic High Jinks Mine and Ranch” fundraising tour with Dr. Stephen H. Buck, departing from OPAC. 9 a.m. – 6 p.m. Fee \$89 (\$71.20 for OPAC and Pueblo Grande Museum Auxiliary members). ADVANCE RESERVATIONS REQUIRED

Wednesday, May 17 - Sunday May 21 — "Traditional and Modern Hopi Culture" fundraising tour of Hopi villages with Emory Sekaquaptewa departing from Hopi Cultural Center, Second Mesa, Arizona. 6 p.m. Wednesday - 9 a.m. Sunday. Fee \$795. ADVANCE RESERVATIONS REQUIRED

Thursday, May 18 — “Third Thursdays” program: [Speaker & topic to be arranged] at Old Pueblo Archaeology Center. 7:30 to 9 p.m. Free. No reservations needed.

Friday, May 19 — “FUNdraising Fridays” to benefit Old Pueblo Archaeology Center, at The Pines Golf Club, 8480 N. Continental Links Drive, Tucson-Marana. 7 a.m. – noon. Fee \$85. ADVANCE RESERVATIONS WITH THE PINES GOLF CLUB REQUIRED: Call Donn Hess at 744-7443, ext. 204 (866/746-3718 toll free) or go to <www.playthepines.com>, click on "Event" and then “FUNdraising Friday.”

Saturday, May 27 — “Pueblo Grande Museum & Archaeological Park, Desert Botanical Garden, and Casa Grande Ruins National Monument” tour with Dr. Stephen H. Buck, departing from OPAC, 8 a.m. - 7 p.m. Fee \$89 (\$71.20 for OPAC and Pueblo Grande Museum Auxiliary members). ADVANCE RESERVATIONS REQUIRED

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\$35 *Glyphs* membership receives the Society's monthly newsletter, *Glyphs*
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\$45 *Kiva* membership receives all current benefits, including four issues of *Kiva*, 12 issues of *Glyphs*
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Membership/Subscription Information

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

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

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

Robby Heckman, VP Membership
Arizona Archaeological and Historical Society
Arizona State Museum, University of Arizona
Tucson AZ 85721 USA

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The objectives of the Arizona Archaeological and Historical Society are to encourage scholarly pursuits in areas of history and anthropology of the southwestern United States and northern Mexico; to encourage the preservation of archaeological and historical sites; to encourage the scientific and legal gathering of cultural information and materials; to publish the results of archaeological, historical, and ethnographic investigations; to aid in the functions and programs of the Arizona State Museum, University of Arizona; and to provide educational opportunities through lectures, field trips, and other activities.

See inside back cover for information about the Society's programs and membership and subscription requirements.