PATHWAYS TO THE PAST

REBECCA MCCORKLE APPLE

Information from Native Americans and ethnographic accounts identify the Colorado Desert as an area of extensive travel during prehistoric times. Preservation of these trails is important to the local Native Americans who maintain ties to the area and to the public agencies that own most of the land. Most of the archaeological data in the area are being collected in small block units or narrow linear corridors, which means that linear archaeological sites such as trails tend to be poorly represented in the regional database. This study integrates archaeological field investigations, archival results, and GIS modeling to address routes and associated materials of prehistoric trails.

Oral traditional and ethnographic data indicate extensive aboriginal travel throughout the lower Colorado Desert. Trails are still important to local Native Americans and they are a category of resources that pose a particular challenge for land managing agencies. Archaeological information pertaining to trails in the Colorado Desert is typically collected based on surveys of small blocks or narrow linear corridors. The goal of this paper is to integrate archival information, survey data, and geographic information systems (GIS) to address prehistoric travel routes across the landscape of the lower Colorado Desert (Figure 1).

Figure 1: Desert trail.

ARCHIVAL RESEARCH

Archival research has spurred some researchers to try and find on-ground alignments that corresponded with ethnographic accounts of travel reroutes. In the 1930s, Malcolm Rogers recorded several trails in the region and attempted to date them through associated ceramics. In the second half of the twentieth century, Boma Johnson also conducted surveys to find on-ground evidence of trails known through Native American contacts and archival sources. Even more recently as part of the investigations in the Indian Pass area, Jackson Underwood, Ph.D., has compiled numerous trail references for the area. While some of these routes have been verified, the existing level of documentation does not provide an adequate basis for detailed analysis and planning efforts (Figure 2).

TRAILS AND CHRONOLOGY

Rogers (1966; see also Waters 1982) thought that a relatively exact correlation between trail age and the age of associated ceramics could be assumed. As described by Waters (1982), Rogers' original seriation of Yuman ceramic types was based on inferred temporal relationships among trails. Furthermore, trails lacking in ceramics were assumed to be preceramic in age. Although this assumption is difficult to test, it may be generally correct. However, the absence of ceramics might also be related to trail function. Rogers concluded that much of the pottery left along trails was done so intentionally for ritual or symbolic purposes, rather than accidentally. Given this circumstance, the relative frequency of ceramics along trail segments could have behavioral

Rebecca McCorkle Apple, EDAW, Inc., 1420 Kettner Boulevard, Suite 620, San Diego, California 92101

Proceedings of the Society for California Archaeology, Volume 18, 2005, pp 106-112

Figure 2: Generalized trail locations.

correlates and thus might not be entirely reliable as an indication of relative chronology.

Trail segments utilized exclusively in preceramic days often lack any kind of temporal indicator other than the degree of weathering and desert varnish. There are problems with using these as temporal indicators (Davis 1966; Harry 1992). Unfortunately, weathering and patination are often the only characteristics available to the archaeologist. Therefore, ages assigned to trails (and other sites lacking clear temporal diagnostics) should be viewed with caution.

A number of travel routes that pass near or cross over the pipeline are attested in the ethnographic literature, in recent interviews, and in recent archaeological research. The term trail is often used to describe major trail systems across the desert, but in reality, the singular trail across the countryside is rare. Generally, there were trail networks of alternative routes connecting important places. Alternative paths came together to form one or very few routes in passes or near springs or waterholes (Davis 1961:10), after which they would again split and fan out over the more open terrain. One of the trails investigated for this project, CA-IMP-398, appears to be an exception to this generalization, with a single alignment over several kilometers.

Travel and Trade

Native American oral tradition and archival data indicate extensive travel through the desert Southwest by prehistoric peoples. Trade and travel for the Pan-Yuman people are well documented (Barker 1976; Davis 1961; Forbes 1965; Forde 1931; Harwell and Kelly 1983; Heizer 1978; Johnson 1985; Kroeber 1925; Rogers n.d., 1941, 1966; Sample 1950; Stewart 1983a; Trippel 1889; Woods 1982, 2001).

Based on a number of ethnographic accounts, James Davis (1961:45) provided a list of items that were traded to and from the Quechan (Table 1). It is obvious that many of these products were bulky, heavy, or otherwise difficult to transport in any quantity (e.g., maize, beans, melons, acorns, buckskin). The list can be considered in no way a complete account of commerce among the Quechan.

Features Associated With Trails

Trails in the lower Colorado River culture area often have features directly associated with them, some of which have symbolic or ritual significance. The major types of features include quartz shatter, spirit breaks, spirit deflectors, cairns or shrines, parallel trails, and power circles or cleared circles.

The Quechan also explained that power circles were used by travelers along the trail, both during actual travel and dream travel, to pray and meditate to obtain power for the successful completion of the journey. The larger cleared circles, or sleeping circles, in turn were used to rest along the way during physical travel or

Group	Product
Quechan Exports	
Western Yavapai	Glass trade beads, dried pumpkin, maize, beans, melons
Cahuilla	Gourd rattles
Kamia	Tobacco
Kumeyaay	Gourd seeds
Quechan Imports	
Western Yavapai	Rabbit-skin blankets, baskets, buckskin, other skins, mescal, finished skin dresses
Mohave	Gourds, eagle feathers
Pima	Martynia pods used in basketry
The Northeast	Buckskin
Kumeyaay	Acorns

Table 1: Quechan trade (after Davis 1961).

dream travel (Lorey Cachora, personal communication 1997).

In some places, power circles are found in clusters. The Quechan explained that spiritual leaders would come to places like that with a small number of students. The spiritual leader would tell traditional legends, myths, and parables to help students understand the connection between the material and spiritual realms. The students would be taught about the spiritual significance of desert landmarks and mountains. Part of the teaching and meditating took place at power circles. Clusters of these circles are analogous to classrooms where the spiritual leader and students sat during this meditation-dreaming process (Lorey Cachora, personal communication 1997).

The project included efforts to identify indicators of behavior associated with use of the trails. Utilitarian behaviors (e.g., subsistence, warfare, or trade related) were ascribed to lithic reduction areas, ceramic scatters, and rock circles. Rock alignments, rock art, rock cairns, and small cleared (dance or power) circles were interpreted as representing nonutilitarian activities (e.g., religious or ceremonial activity). Two features, "pot drops" and larger cleared circles, were not assigned to a category, based on ambiguities in their reported functions. The locations of the archaeological elements were mapped along three of the major routes (CA-IMP-398, CA-IMP- 8052, and CA-IMP-8179). The results were interesting, if inconclusive. The majority of features associated with IMP-398 were "pot drops." The trail (IMP-8052) near Pilot Knob had a number of features ascribed to nonutilitarian activities, while the trail (IMP-8179) closest to Palo Verde Peak was marked by cultural associations indicative of more utilitarian behaviors.

SPIRITUAL IMPLICATIONS

The cosmology and spirit life of the Yuman tribes are dominated by a belief in a plural reality: one is the "normal" material existence, and the other is the spiritual-mystical existence. This spiritual reality is accessed through dreams (Bee 1982; Forbes 1965; Forde 1931; Kroeber 1925; Stewart 1983b).

Among the Yuman peoples, dreams are tied closely to the natural and cultural landscape. Exact places and moments in time are related in dreams. Personal dreams parallel Yuman religious myth and legend in the sense that most are about journeys of spiritual discovery, often along trails leading to places of religious significance.

Dream travel, trails, and spirit mountains remain significant parts of this spiritual life among contemporary Yuman peoples. Spirit mountains and other places that occur in epic story and song cycles form an important part of the Pan-Yuman cultural landscape.

SURVEY AND DOCUMENTATION

In the spring of 2002 cultural resource surveys were initiated for the project. Some 20 trails were identified by these investigations. Subsequent surveys for reroutes and ancillary facilities located six additional trails. Based on the inventory results it was apparent that trails constituted a significant portion of the local cultural resource base. Although the survey corridor was wider (200 ft) than the project alignment (80 ft) to allow for rerouting to avoid cultural resources, it was apparent that investigative measures that focused solely on the project corridor would be inadequate to address the trails. Native American consultation had indicated that there was a strong and ongoing concern for the lower Colorado Desert as a whole, and that, as much as possible, this landscape and its elements should be viewed as an interrelated unit. Trails form an important physical and spiritual-based link that provides access to the sacred and the mundane. For the evaluation and data recovery phases, the research protocol involved documenting the trail alignments outside the project limits. A three-person team consisting of a Native American and two archaeologists with a Sokkia Axis-3 submeter global positioning system (GPS) followed the

trail alignments, mapping the trail and associated features for up to a kilometer during the evaluation phase. Under the treatment program, the same protocol was employed for several trails (n=10), with the teams following the alignments up to 10 km in each direction. Where the trails were obliterated by drainages or modern disturbance, the teams followed the compass bearing for the known alignment until an intact portion of the trail was encountered. In some areas (Figure 3) the soil conditions were such that the trail was not preserved, but the alignment was evident based on the location of associated features.

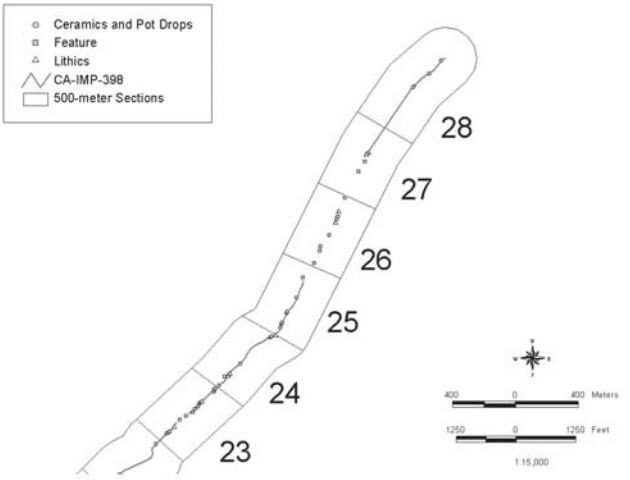


Figure 3: Documentation results for trail CA-IMP-398.

Modeling

The field data were plotted using GIS to show trail direction, major intersecting trails, and associated features. Three of the trails were found to continue a considerable distance. A Least Cost Digital Elevation Model was used to plot hypothetical extensions of the known alignments for three of the major trails, one in the north (IMP-8179), one in the south (IMP-8052), and one in the central portion of the project (IMP-398). These have yet to be verified by fieldwork.

In an attempt to assess how accurate the Least Cost Model is, a known starting point and a known end point for each trail were put into the model. The resulting route was then compared to the "real" alignment of the trail based on the data collected in the field. At IMP-398 near the center of the project, the model predicted the route slightly north of the recorded location (Figure 4). Near Pilot Knob, the model indicated a trail alignment that was similar to the southern extent of IMP-8052 (Figure 5). The northern segment produced an alignment farther west than the actual trail alignment. To the far north, the predicted alignment of IMP-8179 and the prehistoric trail alignment effectively are the same (Figure 6). The more constrained topography of the area probably accounts for the similarities of the alignments. Clearly, there are refinements needed in the model to more closely reflect human activity in a variety of terrains. One of the obvious areas of potential research is how factors other than terrain may have also influenced prehistoric travel patterns.

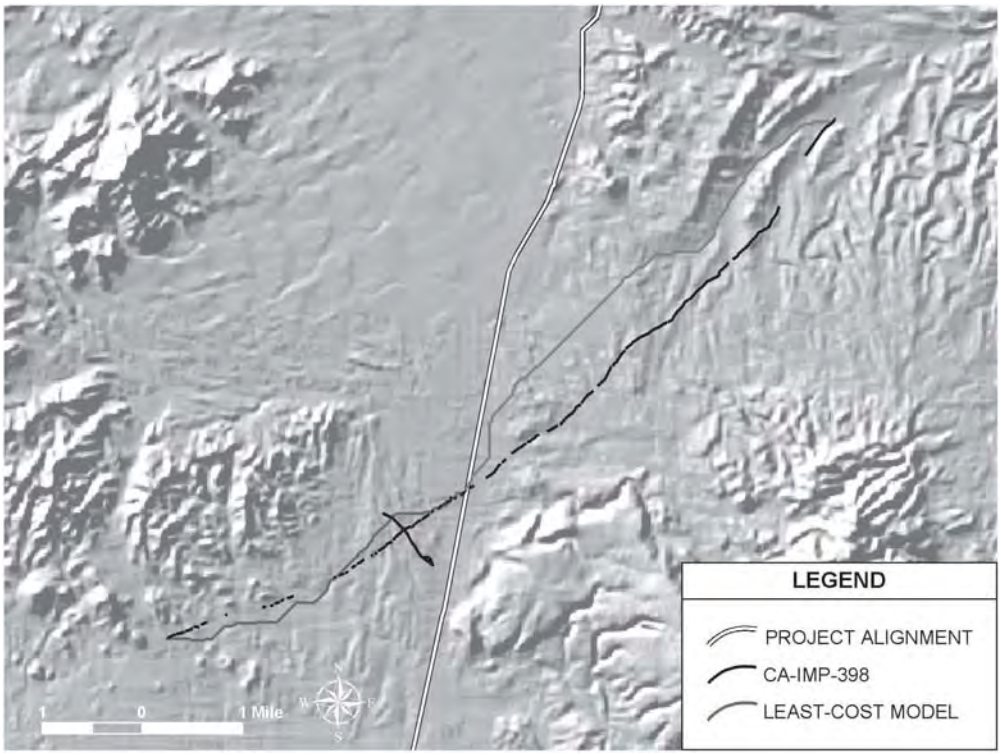


Figure 4: Actual and modeled trail alignment for CA-IMP-398.

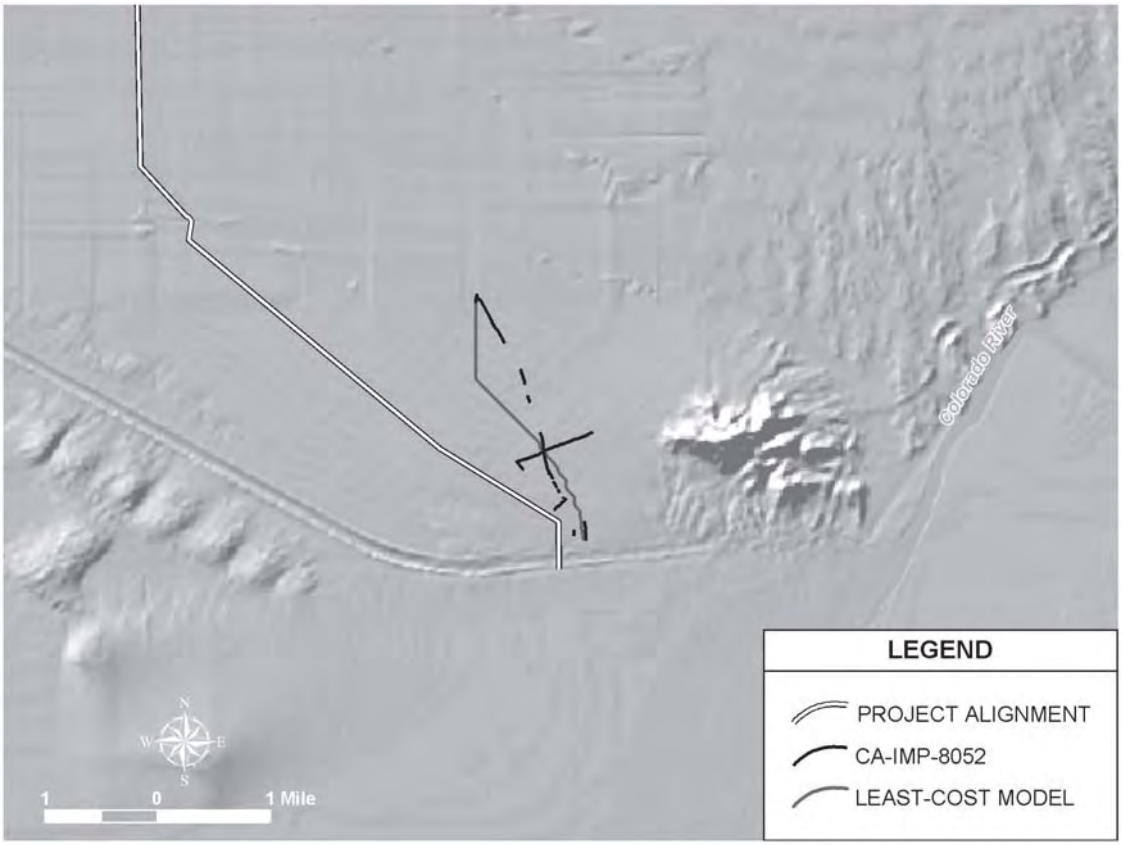
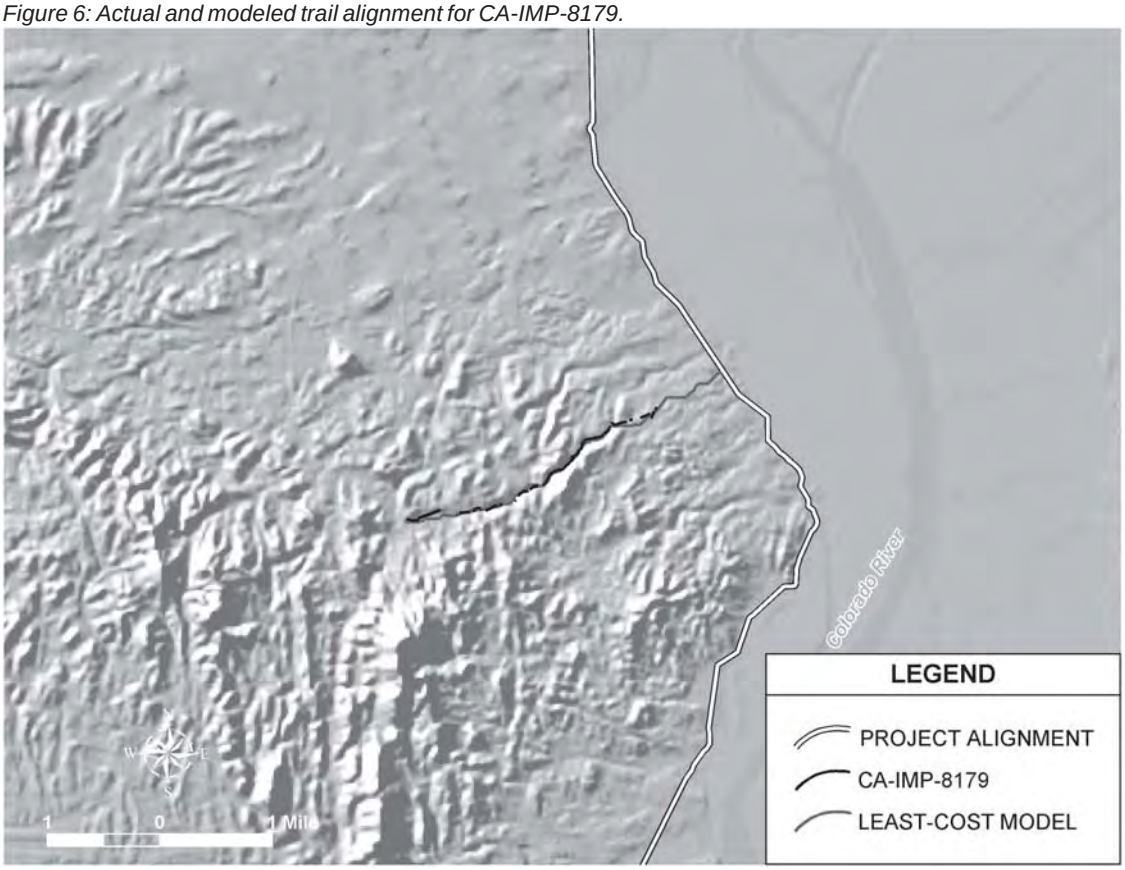


Figure 5: Actual and modeled trail alignment for CA-IMP-8052.

Figure 6: Actual and modeled trail alignment for CA-IMP-8179.



References Cited

Barker, James P.
1976 Ethnographic Sketch of the Yuha Desert Region. In *Background to the Prehistory of the Yuha Desert Region*, edited by Philip J. Wilke, pp. 21-42. Ballena Press, Ramona, California.

Bee, Robert L.
1982 The Quechan. In *The APS/SDG&E Interconnection Project, Miguel to the Colorado River and Miguel to Mission Tap: Identification and Evaluation of Native American Cultural Resources*, edited by Clyde M. Woods, pp. 34-55. Document on file with San Diego Gas & Electric Company.

Davis, Emma Lou
1966 New Prospects for Dating Ancient Man. In M. J. Rogers, *Ancient Hunters of the Far West*, pp. 125-138. Copley Press, San Diego, California.

Davis, James T.
1961 *Trade Routes and Economic Exchange Among the Indians of California*. University of California (Berkeley) Archaeological Survey Report No. 54.

Forbes, Jack D.
1965 *Warriors of the Colorado: The Yumas of the Quechan Nation and Their Neighbors*. University of Oklahoma Press, Norman.

Forde, Daryll C.
1931 Ethnography of the Yuma Indians. *University of California Publications in American Archaeology and Ethnology* 28(4):83-278. University of California Press, Berkeley.

Harry, Karen G.
1992 *Lithic Procurement and Rock Varnish Dating: Investigations at CA-KER-140, a Small Quarry in the Western Mojave Desert*. Statistical Research Technical Series No. 36, Tucson.

Harwell, Henry O., and Marsha C. S. Kelly
1983 The Maricopa. In *Southwest*, edited by Alfonso Ortiz, pp. 71-85. Handbook of North American Indians, Vol. 10, William G Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Heizer, Robert F.
1978 Trade and Trails. In *California*, edited by Robert F. Heizer, pp. 690-693. Handbook of North American Indians, Vol. 8, Smithsonian Institution, Washington, D.C.

Johnson, Boma
1985 *Earth Figures of the Lower Colorado and Gila River Deserts: A Functional Analysis*. Arizona Archaeological Society, Phoenix.

Kroeber, Alfred L.
1925 *Handbook of the Indians of California*. Dover Publications, New York.

Rogers, Malcolm J.
n.d. Fieldnotes, Colorado Desert Region. On file at the San Diego Museum of Man, San Diego, California.

1941 *Aboriginal Culture Relations Between Southern California and the Southwest*. San Diego Museum of Man Bulletin 5:1-6.

1966 San Dieguito I in the Central Aspect. In *Ancient Hunters of the Far West*, edited by M. J. Rogers, H. M. Wormington, E. L. Davis, and C. W. Brott, pp. 37-58. Copley Press, San Diego, California.

Sample, L. L.
1950 *Trade and Trails in Aboriginal California*. University of California Archaeological Survey Reports 8:1-30, Berkeley.

Stewart, Kenneth M.
1983aYumans: Introduction. In *Southwest*, edited by Alfonso Ortiz, pp. 1-3. Handbook of North American Indians, Vol. 10, W. C. Sturtevant, general editor, Smithsonian Institution, Washington D.C.

1983b Mohave. In *Southwest*, edited by Alfonso Ortiz, pp. 55-70. Handbook of North American Indians, Vol. 10, W. C. Sturtevant, general editor, Smithsonian Institution, Washington D.C.

Trippel, Eugene H.
1889 The Yuma Indians. *Overland Monthly* 13(78):561-584 and 14(79):3-11.

Waters, Michael R.
1982 Trail Shrines at Site SDM C-1. In *Hohokam and Patayan: Prehistory of Southwestern Arizona*, edited by Randall H. McGuire and Michael B. Schiffer, pp. 533-536. Academic Press, New York.

Woods, Clyde M.

1982 *Miguel to the Colorado River and Miguel to Mission Tap: Identification and Evaluation of Native American Cultural Resources*. APS/SDG&E Interconnection Project. Document on file with San Diego Gas & Electric Company.

2001 *North Baja Pipeline Project Native American Studies*. Prepared for EDAW, Inc., San Diego, and Foster Wheeler Environmental Corporation. Prepared by Woods Cultural Research, LLC, Evergreen, Colorado.