Rock Art Sites at Palo Verde Point

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The unique assemblage of petroglyphs on limestone at Palo Verde Point in Imperial County stands out in a greater region marked by glyphs pecked into the patinated surfaces of basalt outcrops and boulders. While the general inventory of design elements shows affinity with other sites in a Late Archaic to Late Prehistoric continuum in the far Southwest, the unique landforms at Palo Verde with vertical cliffs, large talus boulders, and exposed horizontal surfaces combine to produce rock art associations with other site features that are unique to this location. Of particular interest are petroglyphs carved directly into the surfaces of trails over exposed limestone, and combined assemblages of rock art, bedrock mortars, and cupules. This descriptive presentation illustrates these and other outstanding features of the Palo Verde rock art sites.

The Palo Verde rock art sites are located in eastern Imperial County approximately 32 km south of Blythe, California, along State Highway 78. For the present investigations, the study area was entirely east of the highway. This area includes four major petroglyph concentrations in the context of known archaeological resources including trail systems, geoglyphs and rock alignments, habitation areas, and lithic procurement sites extending north-south for approximately 2.4 km. The Palo Verde petroglyphs were originally recorded in the 1930s under the number C-42 by Malcolm Rogers of the San Diego Museum of Man. Documentation of rock art at Palo Verde Point by the author and Diane Hamann in 1986-1988 resulted in the definition of four major divisions for the C-42 area, extending the C-42 designation to C-42-A (CA-IMP-268/6905), C-42-B (CA-IMP-8238), C-42-C (CA-IMP-8188), and C-42-D (CA-IMP-8187/H).

The petroglyph sites are located on a dissected terrace of the lower Colorado River. This terrace is composed of a base of coarse limestone/sandstone obscured in most places by volcanic and gravel-bearing sedimentary deposits. Numerous arroyo channels originating in the higher country around the base of the Palo Verde Mountains to the west have exposed the limestone in vertical faces. Additional surface exposures of limestone occur in areas where erosion of the gravel overburden has exposed the underlying rock. Petroglyphs occur on soft limestone boulders and cliff faces in the small canyons formed by the arroyos and on the surface exposures of limestone, often in direct association with aboriginal trails. The trail system associated with the rock art follows a course generally parallel to the river. Boma Johnson (2001) suggests that this trail system was part of the ethnographically reported *Xam Kwatcam* Trail (see Forbes 1965).

The first archaeological recording of this site was done in the 1930s by Malcolm Rogers, whose unpublished field notes, photos, and sketches are on file at the San Diego Museum of Man under site number C-42. By comparing his photos and sketches with the present condition of the site, one can see how much it has changed in the last 70 years. The limestone matrix in which the petroglyphs were carved is very susceptible to weathering and erosion, and these factors have affected the rock art at Palo Verde. Nevertheless, the hardness of the limestone varies considerably, and many panels remain in essentially the same condition as when they were photographed by Rogers.

The rock art at Palo Verde fits well into a general desert context for this region, consisting of both anthropomorphic (stick figures, with and without digits) and nonfigurative (circles, arcs, concentric circles, diamonds, parallel lines, wavy lines, zigzags, dot patterns, etc.) elements. Zoomorphs occur on two panels at site IMP-268/6905. Horizontal petroglyph panels may incorporate both bedrock mortars and cupules, and the latter often occur with glyphs in vertical panels. The four site areas do not exhibit obvious differences in either element inventory or complexity, although detailed tabulations and analyses of design element frequencies planned for future research may reveal patterns that are not immediately evident.

The present report is focused on the southern portion of the site complex, IMP-268/6905, the primary site visited by Malcolm Rogers in the 1930s.

IMP-268/6905

IMP-268/6905 includes 12 loci with petroglyph panels. Located in the southernmost portion of the

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Proceedings of the Society for California Archaeology, Volume 18, 2005, pp 95-105

study area at the southern end of the terrace that makes up the greater IMP-268/6905 site, IMP-268/6905 is defined by two small, open canyon complexes and the low ridge that separates them.

The 12 loci identified for IMP-268/6905 contain a total of 175 panels. Of these, the original record at the Museum of Man includes detailed photographs of five panels, three general views of Locus 2, an overview of Locus 7 (photographed in the 1930s, but not relocated until the 1986-1988 fieldwork), and a photograph of one major panel at the "island" (Locus 2) that has completely disappeared since Rogers' work in the 1930s. This was ascertained by comparing Rogers' photographs of this panel with the area as it appears today. A careful examination of aerial photographs taken in 1961 shows a large boulder in the location formerly occupied by this petroglyph panel. On aerial photos taken in 1983, this boulder is no longer present. Thus it appears that the missing panel at IMP-268/6905 is the victim of theft rather than erosion, having been hauled away after the construction of Highway 78 provided easy access to the site.

IMP-268/6905 has suffered more impact from human forces over the last 50 years than the other site areas. Directly to the north, a rock quarry has been worked on an intermittent basis by the Bureau of Reclamation. Although direct evidence of damage is not obvious, blast debris is scattered throughout the site area and thick layers of quarry dust cover many panels. In addition, one panel in Locus 5 is now inaccessible because of the dislocation of a massive boulder, possibly from a blast close to the panel, as evidenced by limestone rubble nearby. It must also be considered that one major set of fallen panels in Locus 2 and a smaller petroglyph boulder now lying face down in Locus 3 may have been dislodged by the effects of blasting, although seismic activity might be responsible.

Locus 1 consists of one small cliff-face panel with a straight line, circle, and wavy snake-like element, one set of bedrock mortars with a single v-shaped element, and a grouping of bedrock mortars with interspersed cupules.

Locus 2, a large remnant of eroded limestone standing as an "island" between two drainages, has a total of 60 panels on the cliff faces and on boulders clustered around the island, with a few on top of the island. One panel (Figure 1), recorded in the 1930s but now missing, was completely covered with deeply carved geometric elements exhibiting at least three generations of superimposed rock art. An extensive series of petroglyphs, comprising three main panels and several smaller designs, once covered the entire northeast face of the island. These panels included several examples of lightly pecked and abraded anthropomorphic figures (Figure 2) and a variety of geometric elements, in addition to older, more deeply carved wavy line and arc motifs. This entire face, last seen by the author in 1996, has fallen, with the carved surfaces now fractured and situated face down. The cause of this unfortunate loss is unknown, but blast impact from the nearby quarry is a possible cause. Another possibility is earthquake activity, but there are few known candidates in the five-year span during which the panels fell.

Locus 3 consists of a single excellent panel (Figure 3) containing a lizard-like anthropomorph, concentric circles, and a variety of other elements. This rock has also fallen. This panel was photographed on March 7, 1988. The field notes for a revisit to the site on March 26 have the comment that the panel had "fallen face down." Therefore, the panel fell during a 19-day period in 1988 when there was no known weather or earthquake activity that might have caused it to fall. Blasting and natural erosion remain as possible causes in the absence of any evidence of deliberate vandalism.

Locus 4 is a single circular element pecked into a horizontal limestone surface adjacent to a trail coming into the Locus 2 area from the north.

Locus 5 is one of the major divisions of the site, with 70 panels ranging from large-scale glyphs on the upper surfaces of huge boulders to miniature cupule panels on horizontal outcrops. This locus is located in a small, boulder-filled canyon coming in from the north. At some time in the past, the largest boulder in the canyon has tilted to the west, blocking a panel that can be observed beneath the lower edge of the boulder, but it cannot be accessed for photography or measurement. Directly opposite is a deposit of limestone rubble resulting from past blasting activity that could also have been the cause of the tilted boulder. Design elements in this locus include six examples of digitate anthropomorphs (Figure 4), a simple anthropomorph in the hard limestone on the west side, a number of circular elements on many panels, cupules in a variety of situations, miscellaneous nonrepresentational elements, and an assortment of carved names and initials. One interesting panel is a crude carving of a house with the probable date of 1919. Several of the panels exhibit vandalism including bullet marks, graffiti, and complete removal of panel elements as evidenced by scars on the rock faces. One panel with abraded and lightly pecked designs (Figure 5) has the only examples of quadrupeds at the site.

Locus 6 is a grouping of six small modern graffiti panels near the entrance to the site.

Locus 7 is on the low ridge between Locus 5 and Loci 10 through 12, directly associated with a trail segment that leaves the upper margin of Locus 5 and continues to the high country to the northeast, where it is lost in the quarry area. In the main area of Locus 7 the trail consists of exposed limestone bedrock, with four petroglyph panels (Figure 6) carved directly into the trail and a fifth panel with less obvious eroded glyphs. In essence, this is a single long panel, consisting mostly of circular elements.

Locus 8 is a bedrock mortar location with associated cupules, broken in two by grading activity to clear the adjacent road.

Locus 9 is a series of small panels in the passageway to Loci 10 through 12 with curvilinear elements, cupules, and a few modern elements. Panel 10 is an abraded area on a small basalt boulder—the only panel in the site that is not on limestone/sandstone.

Locus 10 begins on the boulders and exposed ledges on the west side as one enters the east canyon from the passageway and includes a large cluster of highly eroded rocks containing many weathered glyphs. The locus includes 31 panels with circles, concentric circles, and cupules as the most common elements. Other elements include an outline cross, snake-like wavy lines, and two digitate anthropomorphs.

Locus 11 has a spectacular large panel (Figure 7) with a central digitate anthropomorph, several smaller anthropomorphs, and geometric elements overlooking its small canyon location and the Colorado River beyond. Three additional panes have small cupules and shallow straight lines.

Locus 12 includes additional examples of the kinds of curvilinear and circular elements that characterize Locus 10. A large, shallowly pecked and abraded panel (Figure 8) has numerous elements including chains of circles, diamond chains, wavy lines and dot patterns. This panel also has at least five anthropomorphs, two of which are drawn head-down with digitate arms and fan-like tails, like descending bird-men.

IMP-8238

This site, located approximately 1 km north of IMP-268/6905 and separated from the southern site area by the quarry, has six loci with 61 recorded panels and a minimum of 21 rock alignments, rock rings ("sleeping circles"), and lithic workshops. To the south of this area, two isolated petroglyph panels and two small geoglyphs occur along trail segments leading to IMP-268/6905.

IMP-8188

The two northernmost site areas consist of milling features, cupules, and petroglyph panels located on horizontal surfaces on or closely adjacent to aboriginal trails which form part of the major trail system running north-south parallel to the river. IMP-8188 and IMP-8187/H are separated by a major arroyo. IMP-8188, south of the arroyo, includes 12 loci containing 151 panels and one additional group of five rock alignment features. Locus 4 is an extensive bedrock milling area with only a few petroglyphs among many cupules and very large bedrock mortars. Locus 8 is characterized by numerous petroglyphs in extensive panels on nearly horizontal limestone outcrops at ground level in direct association with one of the main trails; the same trail leads to a major petroglyph locus in IMP-268/6905, 2 km to the south, where similar exposures with petroglyphs occur along a major branch trail in Locus 7.

IMP-8187/H

This is the northernmost site area, north of the arroyo, with 14 recorded loci containing 100 panels. The arroyo system drains eastward from the Palo Verde foothills, turns north, and then runs east again, separating IMP-8188 and IMP-8187/H. Loci 1 through 6 consist primarily of milling features and cupules with a few petroglyphs in the lowest portion of the site where the trail comes out of the river bottom. A major panel with a number of petroglyph elements, numerous cupules, and very large and deep bedrock mortars occurs at Locus 8 on the main trail. Farther south, where the trail crosses the arroyo, petroglyphs occur on horizontal exposures at the edge of low cliffs in Locus 10. The site area encompasses several scattered petroglyph and milling loci on rocky points and in drainage bottoms along the north and west edges of the arroyo system.

Palo Verde in Stylistic Context

In southern California, styles are best defined for rock paintings. Petroglyphs of the Colorado Desert are part of a more generally characterized tradition arising in Archaic times and continuing nearly to the present, providing a generalized base for later styles.

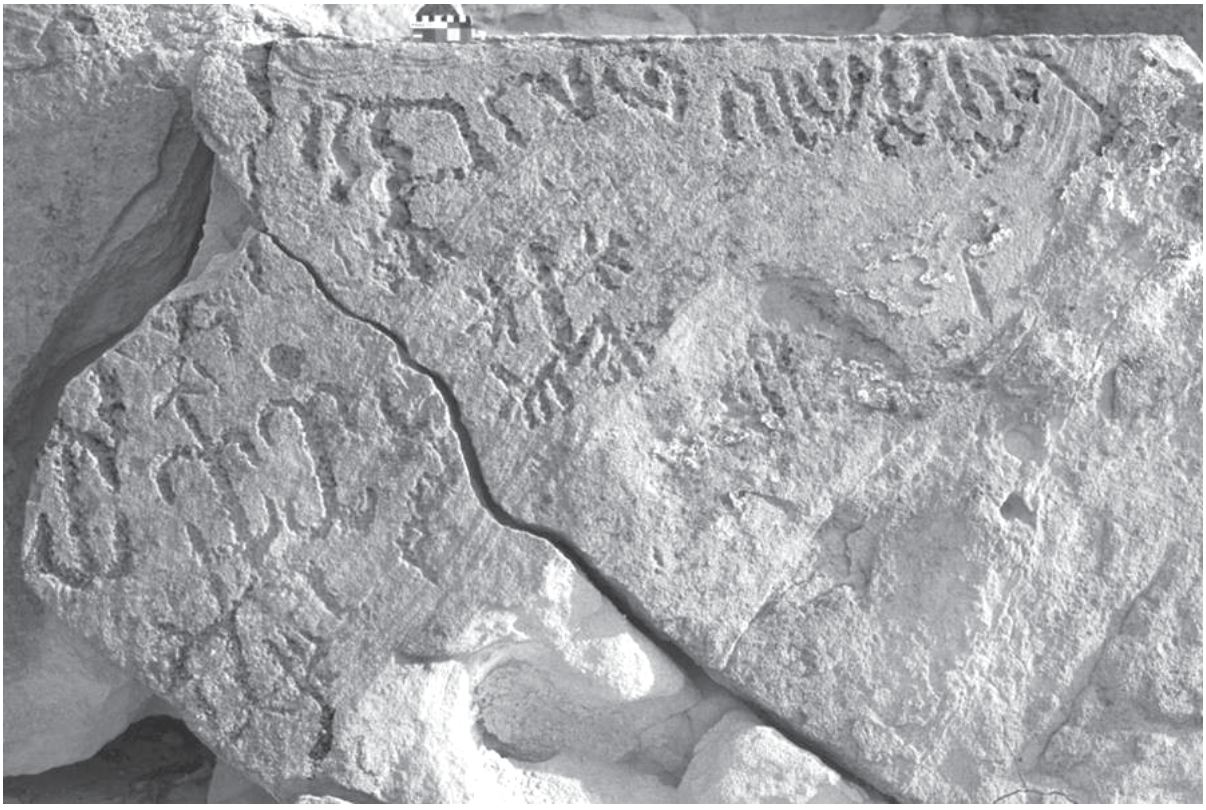
As early as Mallery's pioneer report on "Picture-Writing of the American Indians" (1893), archaeologists recognized a widespread rock art tradition prevalent over the entire Great Basin, including eastern

Figure 1: CA-IMP-268/6905, Locus 2, Panel 63. Source: Malcolm Rogers, 1930s.

Figure 2: CA-IMP-268/6905, Locus 2, Panel 46.

Figure 3: CA-IMP-268/6905, Locus 3, Panel 1.

Figure 4: CA-IMP-268/6905, Locus 5, Panel 1.



California, and adjacent areas. Furthermore, it was recognized that petroglyphs of similar type formed the basis for many later regional styles, and that the so-called "abstract" elements persisted in rock art throughout California and the Southwest. The first major study to deal primarily with this issue was accomplished by Steward in 1929.

These early studies formed the basis of the well-known Great Basin curvilinear, rectilinear, and representational rock art styles proposed by Heizer and Baumhoff (1962) and Heizer and Clewlow (1973), and sites in the California deserts have traditionally been assigned to the Great Basin styles. Critical examination of these styles shows that they lack discrimination, and that a widely varied collection of rock art sites has been lumped into three simplistically defined categories that are so vague as to have little utility.

In general, impressions gained by various investigators from decades of familiarity with far western rock art indicate the presence of a widespread and ancient rock art tradition that underlies a wide variety of rock art styles throughout the American west. The concept of a widespread Western Archaic rock art tradition—extending far beyond the boundaries of the Great Basin—has shown its utility in rock art research from the Mojave Desert to southern Arizona. In southern California, it provides the backdrop for rock art developments in the Colorado Desert, where petroglyphs fit comfortably into the concept of a Western Archaic tradition that continues into relatively recent times.

In ongoing research, the digitate anthropomorph is being reexamined in the light of rock art in the broad area occupied by ancestral Yuman cultures, from the lower Gila River in Arizona (Hedges and Hamann 1992) through the southern California deserts to the eastern Mojave. Throughout this vast area—including the La Rumorosa pictograph style—the defining element in rock art based on the continuing Western Archaic Tradition is the digitate anthropomorph, a motif that remains relatively constant against a changing background of local styles. Based on relative patination, the anthropomorphs frequently appear to be among the latest elements at the sites. Along the eastern boundary of the La Rumorosa style, petroglyph sites such as Palmas de Cantú and Pinto Canyon demonstrate the close relationship between the painted and pecked art. It appears that Late Prehistoric Colorado Desert petroglyphs form a major, though generalized, variant of a widespread Patayan tradition that consists of an overlay of certain elements onto a continuing Western Archaic background.

In the Colorado Desert, digitate anthropomorphs continue as a distinctive motif, and there is an almost seamless blend with the La Rumorosa painted style farther west. Circles also show up frequently, but it is difficult to define styles in terms of such basic and universal forms. Nonetheless, their very frequent occurrence at Palo Verde testifies to the importance of the motif.

Age and Cultural Affiliation

The earliest known inhabitants of the Colorado Desert were the San Dieguito, a Paleoindian culture adapted to gathering and big-game hunting prior to 5000 B.C. At the present time, no rock art is securely identified with Paleoindian occupation. Within the period between 5000 B.C. and A.D. 500, archaeologists recognize the Pinto tradition, which is from 5000 to 2000 B.C., followed by the Amargosa tradition. In more recent work, the more generally accepted categories of Early, Middle, and Late Archaic are used by most archaeologists working in the field. These archaic cultures subsisted by hunting and gathering and made use of milling to process seeds.

Throughout the desert west, Archaic populations produced rock art of the Western Archaic Tradition, the enigmatic nonfigurative, so-called abstract art that has so far eluded stylistic analysis (Hedges 1982). Petroglyphs in this tradition are endlessly variable, with sites often exhibiting striking similarities even though separated by hundreds of miles, while adjacent sites may exhibit completely different appearances. In most rock art sites in the desert west, petroglyphs were pecked into basalt surfaces. Because basalt repatinates, it is possible, though inexact, to assign relative ages to petroglyphs on the same rock surface, and through this technique one can say that digitate anthropomorphs tend to be among the more recent elements at sites in southwestern Arizona and southeastern California. This is not the case at Palo Verde, since the petroglyphs occur on limestone, which is not subject to patination in the sense of the formation of desert varnish.

The basic sequence for petroglyphs at Palo Verde appears to be (1) deeply pecked broad-line glyphs that survive as weathered remnants, intergrading into (2) deeply pecked geometric elements, followed by (3) deeply pecked elements with abraded interiors or interiors showing peck marks and with well-defined margins, including anthropomorphs and a wide range of nonfigurative elements made up of narrow grooves, with a late phase of (4) lightly pecked/abraded glyphs including geometric elements, nondigitate

anthropomorphs, and quadrupeds, present on only a few panels. Even though the information provided by relative patination studies is lacking, it is suggested here that petroglyphs of type 1 and some of type 2 may represent late Archaic forms that intergrade into Patayan or ancestral Yuman glyphs of type 3, with types 3 and 4 representing the Yuman cultures of protohistoric times.

The scarcity of Archaic remains in Colorado Desert sites has been discussed by various authors including McCarthy (1993) for McCoy Spring, Schaefer (1986) for the Picacho Basin, Cook and Fulmer (1980) for the desert foothills of the Peninsular Range in San Diego County, and McDonald (1992) for Indian Hill. In terms of the general archaeological record, the scarcity of Archaic period remains in the Colorado Desert may be more apparent than real. Most of the major sites with Archaic tradition rock art in the desert west have petroglyphs on basalt. Even though direct dating methods are still problematical, one can look at relative dating based on degrees of repatination. In many cases the differences are obvious, and the general pattern is well established. For Palo Verde, there is not the luxury of patination, and the rock itself is of variable hardness. The relative absence of Archaic cultural remains in both the Colorado and Gila river valleys presents a puzzle that remains to be solved, but this does not preclude an Archaic component in the rock art. Most of the rock art at Palo Verde is early to protohistoric Patayan, in keeping with the general archaeological record, but it seems reasonable to suggest that here, as elsewhere, the rock art has Archaic roots.

The protohistoric or early historic date for type 4 is supported by the recent appearance of some panels and by the presence of certain elements that occur in known late prehistoric and historic sites in the region. In his field notes, Malcolm Rogers also entertained the idea that some of the later panels could have been produced by outside groups such as the Chemehuevi.

Beginning about 2,000 years ago, cultural traits emerge that, taken together, make up the late cultural tradition known as Patayan, direct ancestors of the historic cultures of the lower Colorado River valley. In historic times, dominant tribes of the lower Colorado River were the Mohave, between present-day Needles and Parker, and the Quechan, at the confluence of the Colorado and Gila rivers near present-day Yuma. The cultural history of the river valley is confusing, but all of the groups spoke Yuman languages. Groups such as the Halchidhoma, Kohuana, Kaveltcadom, Maricopa, and Halyikwamai once lived on the river, with frequent shifts in location in response to attacks from the Mohave and Quechan. Thus, it is not certain who may have carved the petroglyphs at Palo Verde, and many groups are likely involved. For most of the early historic period, the Halchidhoma lived along the lower Colorado River below Parker. To further complicate the picture, the Shoshonean Chemehuevi occupied much of the California desert from south of Death Valley to the present boundary between Riverside and Imperial counties and established settlements on the Colorado River, where they coexisted with the Mohave (Kroeber 1925). The Chemehuevi did not claim territory below the Maria Mountains north of Blythe, but their ceremonial song cycles indicate intimate knowledge of enemy territory as far south as Palo Verde Valley in the vicinity of the study area (Laird 1976).

Interpretive Comments

Rock art is one of the most visible elements of the prehistoric record, yet one of the most difficult to understand in terms of possible meanings. For the lower Colorado River, there are no ethnographic accounts to document the production of rock art, and scant information exists on the role such major sites as Palo Verde may have played in traditional culture.

The interpretation of rock art as shamanistic art related to the shaman's acquisition of supernatural power and the portrayal of visionary imagery stands as one of the most prevalent explanations in contemporary rock art studies (Hedges 1992). While such imagery is present in the art at Palo Verde, there is no evidence to link it to the type of individual shamanistic experience that is suggested for other parts of California and the west. Shamans in lower Colorado cultures derive their powers and curing songs from mythic dreams. Elaborate song cycles are full of references to the mythic past and to the activities of the primordial beings who created man and established social order. Dreamers travel the mythic landscape and are present at the mythic events they experience in their dreams (Kroeber 1925:784). Certainly major anthropomorphic figures could represent gods, creators, mythic heroes, or legendary warriors, but such identifications would be arbitrary, unless these could be confirmed through oral history or ethnographic interviews.

Song cycles name places in the landscape that have special significance. Certainly, the Palo Verde Mountains are a commanding presence in the local landscape, and the sheer magnitude of the petroglyph sites suggests that they played a major role in traditional life. However, the petroglyph sites do not seem to appear in the recorded song cycles, perhaps because

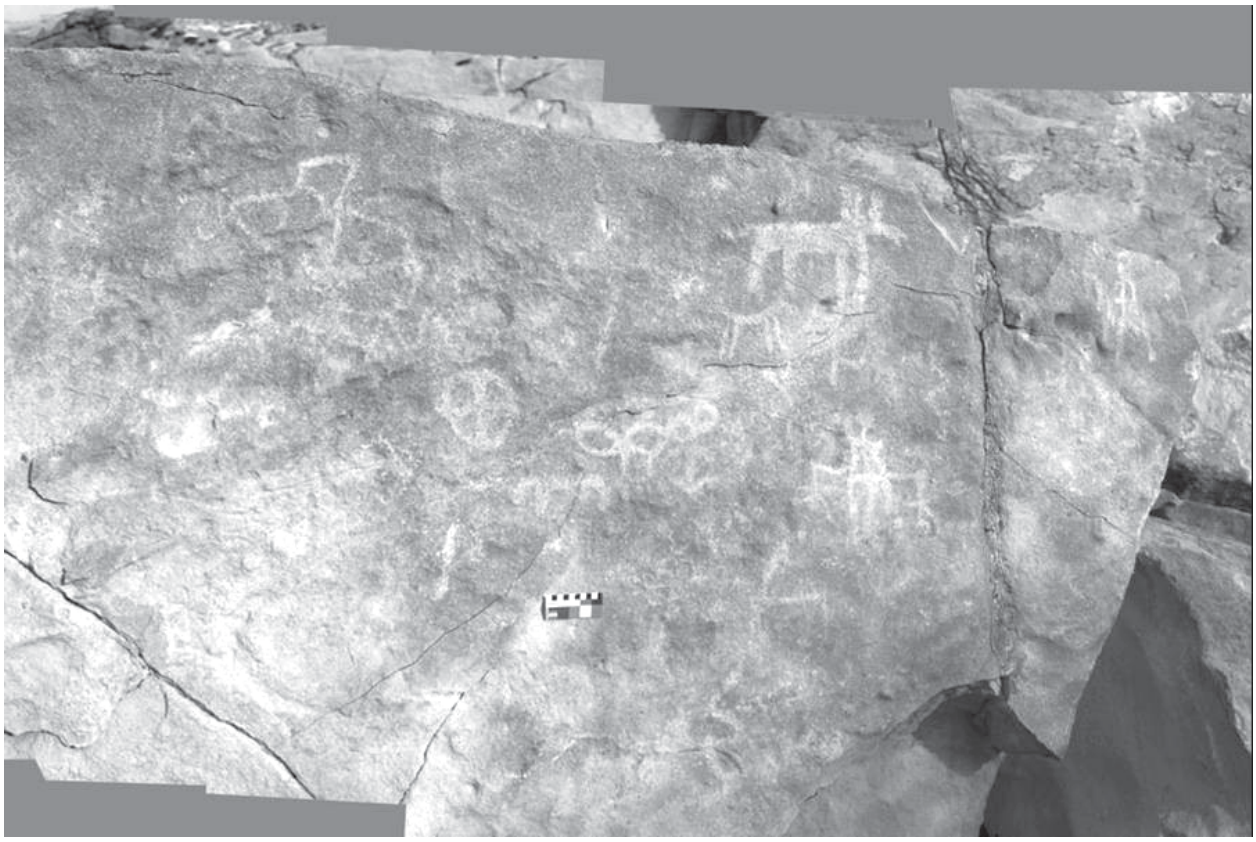


Figure 5: CA-IMP-268/6905, Locus 5, Panel 24.

Figure 6: CA-IMP-268/6905, Trail, Locus 7, Panels 1-4.

Figure 7: CA-IMP-268/6905, Locus 11, Panel 1.

Figure 8: CA-IMP-268/6905, Locus 12, Panel 11.

there is no direct ethnography from groups such as the Halchidhoma that may have occupied the Palo Verde area in early historic times. As mentioned above, a Chemehuevi song cycle mentions the Palo Verde Valley as a named locality in enemy territory; unfortunately, the account does not specify either the mountain or the rock art.

Rock art styles may reflect cultural boundaries, but there is no real evidence that they were produced specifically for this purpose. The association of petroglyphs at Palo Verde with a major trail system is obvious, although it is not known if the glyphs are associated with the trail or vice versa. It is most likely the case that the glyphs and the trails providing access are associated with some more overriding characteristic of the site. For rock art studies in general, the overwhelming evidence suggests that rock art is a ritual activity. The sheer magnitude of the sites at Palo Verde tells us that this was no casual activity—if it were, the effort required to make so many petroglyphs might well have been put to more practical use. There was some compelling force that led to the production of so many glyphs, and that force may have been the perception of the Palo Verde petroglyphs as part of a sacred landscape.

PRESERVATION ISSUES

The Palo Verde petroglyphs have had their share of troubles. Many travelers have stopped to carve their names in the inviting limestone bluff of Locus 2, beginning so early that the names themselves have taken on historical significance. Nevertheless, visitation poses the greatest ongoing threat to the rock art. Cable barriers and signage provide some protection, but it relies most on the good graces of unsupervised visitors for protecting the art. The nearby quarry has provided its share of damage, most obviously in the form of blasting dust and debris, sometimes found a surprising distance from the source of the blasts, and in the possibility that quarry blasting has caused the rock falls in Loci 2 and 3.

Preservation lies in continuing public education on the need to respect rock art as a significant component of traditional cultures, one that is to be valued as one would value the ritual art of any culture. Experience in Australia and elsewhere tells us that rock art benefits from clear indications that the site is maintained, from explanatory signs to alleviate visitor frustration at not knowing what it means, and from a visitor's log that encourages comment, providing a place other than the rocks to write one's name.

There is no practical way to protect exposed petroglyph panels from natural weathering and erosion without modifying the landscape. Preservation of site integrity precludes intrusive measures such as buildings to protect glyphs from the weather, or fences to protect glyphs from visitors. Fences often serve to challenge those who would breach them. The natural setting is an integral part of the petroglyph site. Eventually the petroglyphs will be gone as natural forces take their toll, but recording the site will preserve the record of what is there, and the prevailing philosophy today is to keep artificial intervention to a minimum. This approach often is in keeping with traditional philosophies of letting human works go back to nature, and the Quechan Tribe and other concerned Native Americans must be consulted in any preservation plans.

CONCLUSION

The Palo Verde petroglyphs are unique in southern California. Their setting on limestone cliffs and outcrops is matched only by one very small site near Blythe, published as a previously unknown site in 1979 (Musser 1979) but actually recorded by Malcolm Rogers as site C-61 in 1929. Palo Verde contains one of the largest assemblages of rock art in the southern California desert (exceeded by the extensive McCoy Spring rock art complex) and it contains the largest known panels in this area. IMP-268/6905 stands by itself as a major rock art site but takes on added significance by virtue of its natural and cultural context. Situated in the shadow of Palo Verde Peak and linked to trails, additional rock art loci, geoglyphs and rock alignments, habitation sites, lithic production sites, and food processing localities, the rock art of Palo Verde provides a superb archaeological laboratory and stands as an unparalleled cultural resource for Native Americans and the general public.

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