GREAT BASIN GLYPH NOTES
THE NEVADA ROCK ART FOUNDATION

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Spatial Patterning in Nevada Rock Art

By Angus Quinlan, Executive Director

At the 2016 Great Basin Anthropological Conference, NRAF Executive Director Angus Quinlan participated in the Plenary Session, presenting "Social Perspectives on Rock Art's Variable Distribution in Great Basin Archaeology." Below is an edited version of his presentation.

Abstract — *After more than a decade of fieldwork and data analysis by the Nevada Rock Art Foundation, patterning in rock art's distribution can be identified and its basis in social practices explored. Rock art is not evenly distributed in the settled landscape known to prehistoric populations. Two broad periods of use are apparent when rock art was seemingly made in pursuit of two divergent social strategies, one focused on social competition and the other on economic reorganization. Both strategies exhibit the shared theme of rock art being used to manage social and economic change.*

Introduction

The Nevada Rock Art Foundation has devoted almost thirteen years to the in-depth recordation of rock art sites and analysis, seeking to place rock art in its wider archaeological context. Patterning in Nevada rock art's distribution (both spatial and chronological) indicates that much of it may have been made in concentrated episodes. During certain periods people marked specific places with symbolic images as one way of managing internal group relations. Although rock art is widespread in Nevada, it is found at only a fraction of the landscapes settled by prehistoric foragers. It is clustered in distribution, highlighted by the small proportion of sites where rock art is either abundant or forms dense site concentrations.

Many explanations have been offered for rock art's patterned distribution in time and space: population replacement, settlement expansion, shifts in foraging patterns, adoption of shared religious institutions, use of hunting magic, and so on. These approaches may help

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Great Basin Cultural Chronology (from C. S. & D. D. Fowler, 2008, The Great Basin: People and Place in Ancient Times. SAR Press)

Paleo-Indian/ Pre-Archaic	14,000-8,000 years ago	Highly mobile big game hunters
Early Archaic	8,000-6,000 years ago	Atlatl adopted
Middle Archaic	6,000-1,500 years ago	Introduction of smaller notched and unnotched points
Late Archaic	1,500-650 years ago	Bow and arrow adopted
Formative	1,500-700 years ago	Fremont and ancestral Puebloan cultures in southern and southeastern Nevada
Late Prehistoric	700-150 years ago	Numic cultures in place

Fieldwork at Massacre Lake and High Basins

During the summer and fall, NRAF continued long-term projects at Massacre Lake and Dry Lakes in northern Nevada. Fieldwork at both areas is focused on exhaustive recordation of rock art and documenting its archaeological context. Massacre Lake has proved to be a challenging site to fully record as it is a large and spatially extensive concentration of rock art and other features. Its remoteness and rugged access limits the size of field crews and time that can be spent in the field. The benefit is that these conditions protect the site from large-scale visitation at the expense of making detailed archaeological investigations logistically difficult. Previous work at Massacre Lake has generally been summary in

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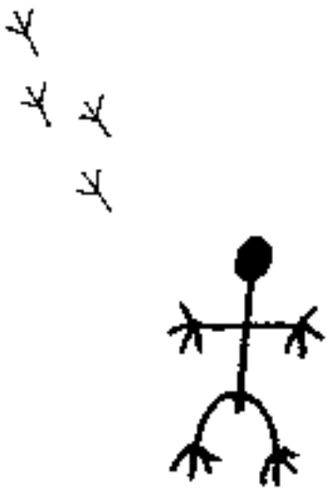
Great Basin Anthropological Conference 2016 Recap

This year, NRAF encouraged members to attend the 2016 Great Basin Anthropological Conference as the annual gathering of members. From an organizational point of view, it was a very successful meeting. Many NRAF members attended; local artists were showcased at the NRAF vendor table; NRAF staff and board members participated in multiple sessions; and Executive Director Gus Quinlan led a rock art field trip to the High Basins area. NRAF staff and board members also had the opportunity to meet with archaeologists from the larger region to discuss ongoing and future work in the Basin.

Current trends in archaeology, both theory and practice, were evident at the sessions. Landscape formation (soil deposition and wind drifts, for example) is receiving renewed focus as it impacts the discovery of sites; field use of photogrammetry by both drones and people is promoted by many, particularly for public interpretation; Optimal Foraging Theory continues to be refined and applied to the endless question of how early people lived in the Basin; and earlier and earlier dates are finding their way into the corpus.

Bryan Hockett reports that 620 people registered for the meeting, the best attended GBAC thus far. The conference was held at the Silver Legacy Hotel in downtown Reno. It was a very well run meeting, and the few minor glitches were easily resolved by the staff of the Silver Legacy. All in all, both NRAF and Reno made a good showing among the larger, regional community of archaeologists and anthropologists.

Thank you to Janice Hoke, Carolyn Barnes-Wolfe, and the Artists Co-op for organizing and staffing the NRAF Vendor and Hospitality Table. ■



Spatial patterning... continued from Page 1 ...

explain certain sites but do not address rock art's specialized distribution as a large-scale phenomenon. If rock art was at certain periods a widespread hunter-forager cultural expression, then why does it only accompany a small number and narrow range of prehistoric site-types?

Nevada is home to tens of thousands of prehistoric archaeological sites and more than 1,500 rock art sites (Figure 1). Very little rock art is known that can be associated with the early peopling of the Great Basin (Pre-Archaic and Early Archaic). Instead, Nevada rock art is mostly Middle and Late Archaic in age, associated with field camps rather than villages or base camps. During the Middle Archaic, major rock art concentrations appear to be associated with field camps that were focused on hunting. In contrast, during the Late Archaic rock art relates to the expansion of settlement activities into places that previously were peripheral or of marginal economic significance to the settled landscape. Associated field camps seem to have focused on harvesting a broad range of plants and animals. One aspect of the changing economic usage of rock art's environs is that the composition of groups using rock art broadened over time from male hunting parties during the Middle Archaic to inclusive family-based social groups in the Late Archaic.

Site distribution

That Nevada rock art is not simply a casual hunter-forager cultural expression (an art for art's sake, for example) becomes apparent from its patterned distribution. Nevada rock art is generally found in lowland and mid-elevation upland environments that were used for logistical economic purposes; high elevation sites are conspicuously rare. It is concentrated in the northwest, west, and southeast; the northeast and central portions of the state have significantly fewer as well as smaller sites (Figure 1). Concentrations or significant clusters of sites are found in the northwest (Massacre Bench), the west (Truckee Meadows/Virginia Range), the southeast (Pahranagat Valley), and south (Colorado River drainage and the eastern Mojave desert) (Figure 2).

The size of sites in these concentrations ranges from small sites that were short-term in use, to very large sites that represent long-term or more intensive use. Most rock art sites in Nevada are small, that is, they have 16 panels or fewer. In the Pahranagat Valley area (southeastern Nevada), for example, 70 per cent of sites have 16 or fewer panels; 80 per cent of sites in the Dry Lakes Complex (western Nevada); and 84 per cent of sites in the Gold Butte complex (southern Nevada).

Site size (measured by quantity of rock art panels) is greatest in the north, decreasing southwards. The largest sites and concentrations in northern and western Nevada may contain 1,000-2,500 panels, in contrast to southern Nevada where the largest sites/concentrations do not exceed 400-500 rock art panels (Figure 3).

Site distributions become more dispersed in nature as one moves southwards across the state. That is, in the north and west, rock art is more clustered in distribution and represented by fewer but large sites compared to southern Nevada. The latter, in contrast, is represented by a greater number of individual sites that are smaller in size

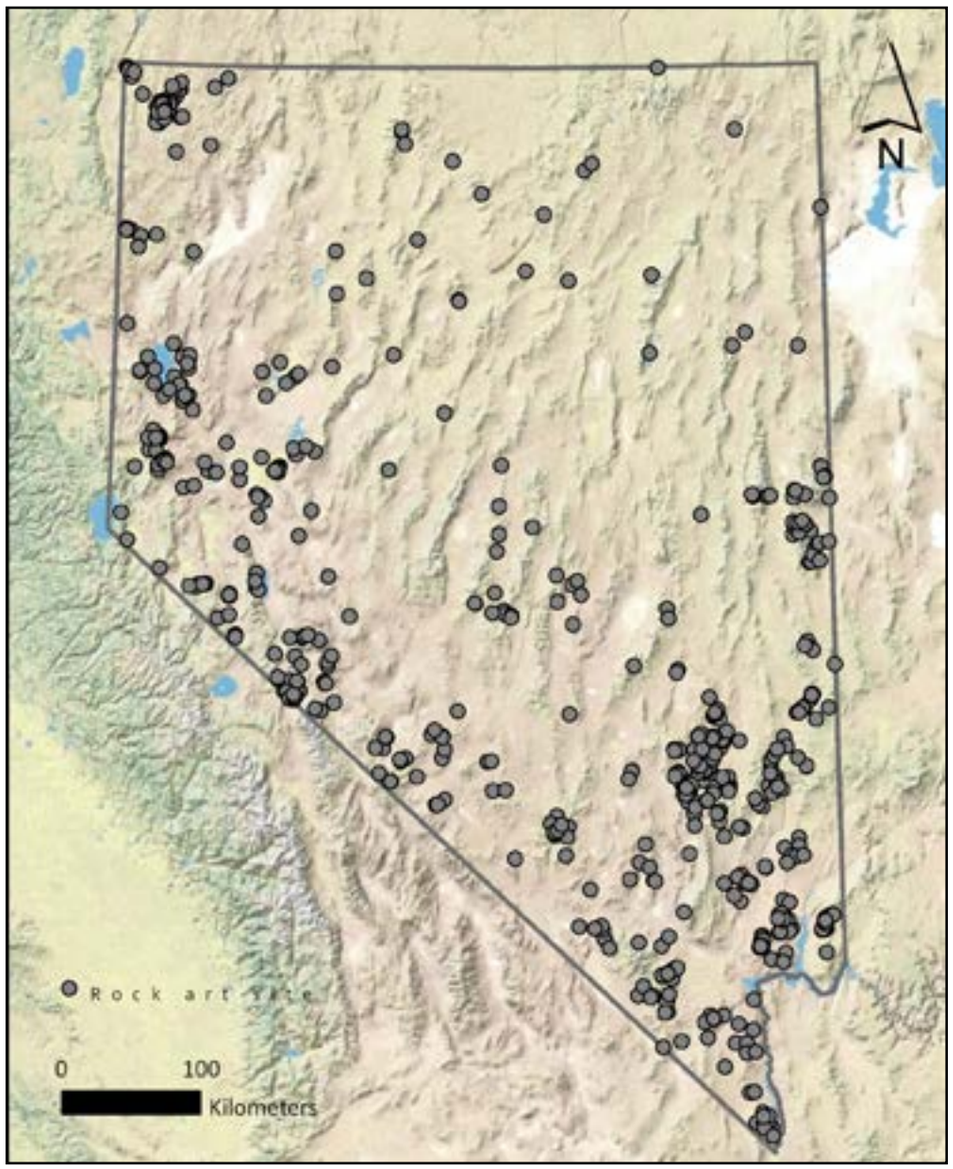


Figure 1. Distribution of Nevada rock art sites

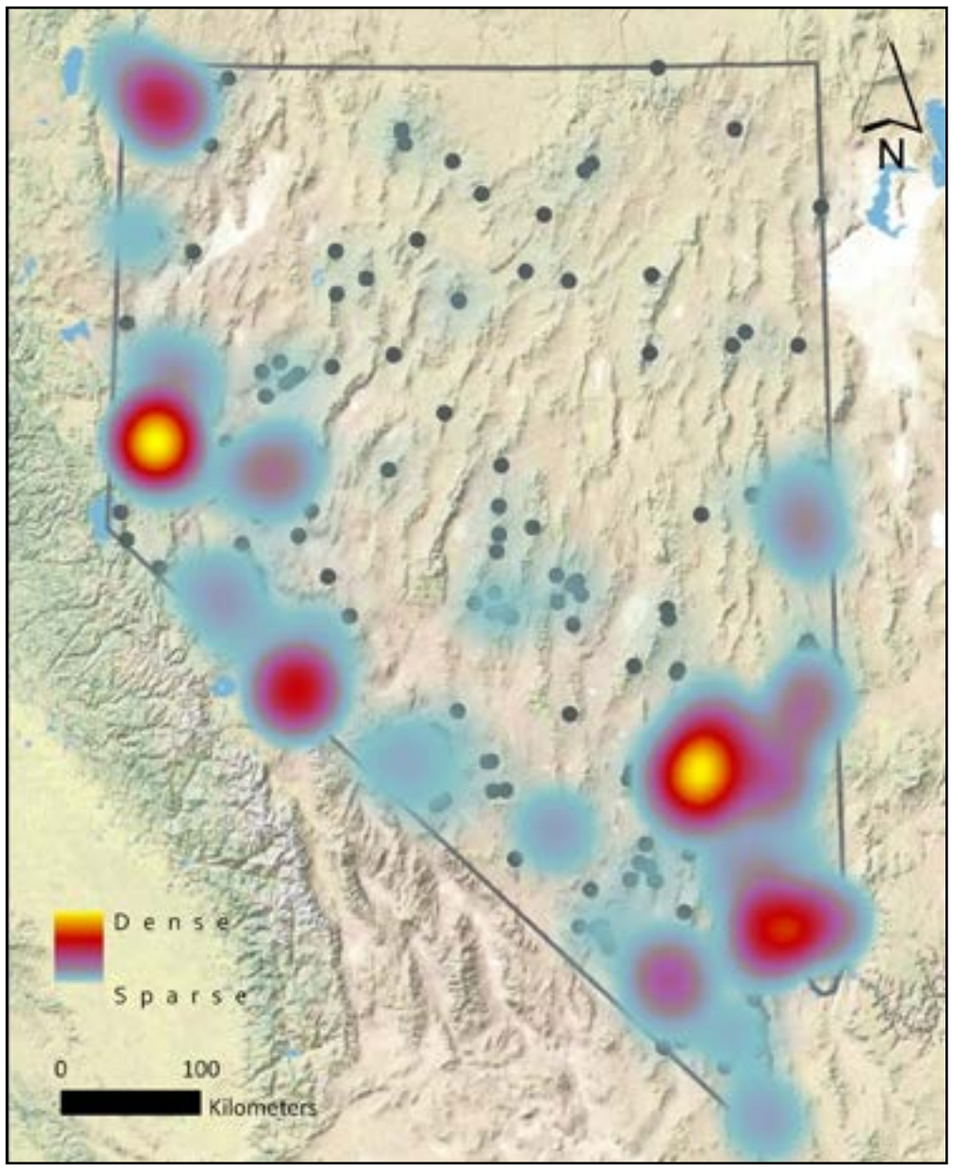


Figure 2. Site density measured by spatial proximity

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Spatial patterning... cont'd from page 2...

and more dispersed, though clustering is still evident at important rock art complexes such as Valley of Fire and Gold Butte. These patterns suggest that intensive settlement history and rock art are not invariably connected as would be expected if rock art was merely a backdrop to the routines of daily hunter-forager life.

Stylistic characteristics

Identifying spatial variability in Nevada rock art's styles and themes is made difficult by its predominantly abstract character. Rectilinear and curvilinear designs are accompanied by only a very small percentage of stick-figure anthropomorphs and zoomorphs. This is an art tradition that is highly ambiguous in character, well-suited to manage internal group dynamics rather than communicate inter-cultural group relations. This abstract-dominated art characterizes Middle and Late Archaic rock art sites throughout the state. However, in the south and southeast, it is complemented during the Late Archaic and Formative by the emergence of regional anthropomorph styles, the distinctive geometric Grapevine Canyon style, and animal imagery (chiefly bighorn sheep) becoming a more prominent component in site assemblages.

In southeastern and southern Nevada, although zoomorphic imagery is more prominent than in the north or west, it still represents a small proportion of the overall record (ca. 15% or less of all images). The distribution of large numbers of animal imagery is highly patterned. In the Pahranagat Valley area, for example, just two rock art locales account for more than half (60%) of all bighorn sheep motifs, with two sites alone accounting for more than a quarter of this total. Similarly, out of forty-two sites in the Gold Butte rock art complex, just three sites account for almost half of all bighorn sheep motifs.

These data draw attention to the fact that *particular places* were appropriate for specific sets of symbols *at particular times*. More generally, it can be noted that only certain places became the focus for intensive or long-term rock art production, evidenced by dense concentrations of abundant rock art. When site density also takes into consideration site size (measured by number of rock art panels), three notably large, dense concentrations of rock art sites emerge: Massacre Bench, Truckee Meadows, and Pahranagat Valley (Figure 4).

These three concentrations span the Middle through the Late Archaic and are found in environmental settings that were used primarily for logistical economic purposes (specialized task-based groupings). Although the economic focus of the field camps found in association with rock art varies by period, these are never indicative of large-scale settlement activities. This suggests that rock art sites were visited from seasonal field camps when social groups had dispersed into small work parties—not from winter villages where the full social group gathered.

Middle Archaic: Prestige

Rock art's enduring association with field camps does see a shift in their economic focus that indicates a significant change in the social composition of the groups visiting rock art and the economic relations and organization of labor that rock art's symbolism was directed at.

During the Middle Archaic, major rock concentrations in north and west Nevada

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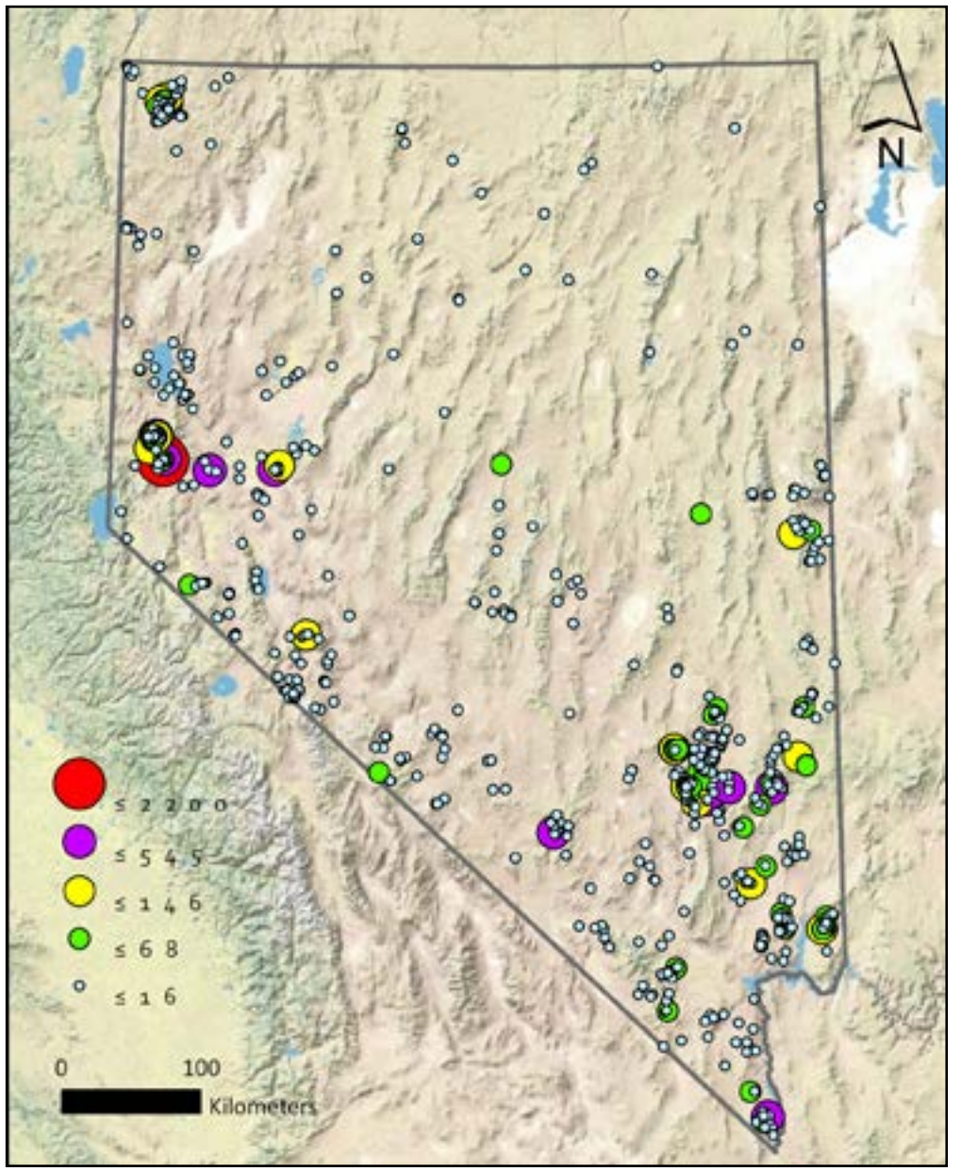


Figure 3. Site size measured by rock art abundance

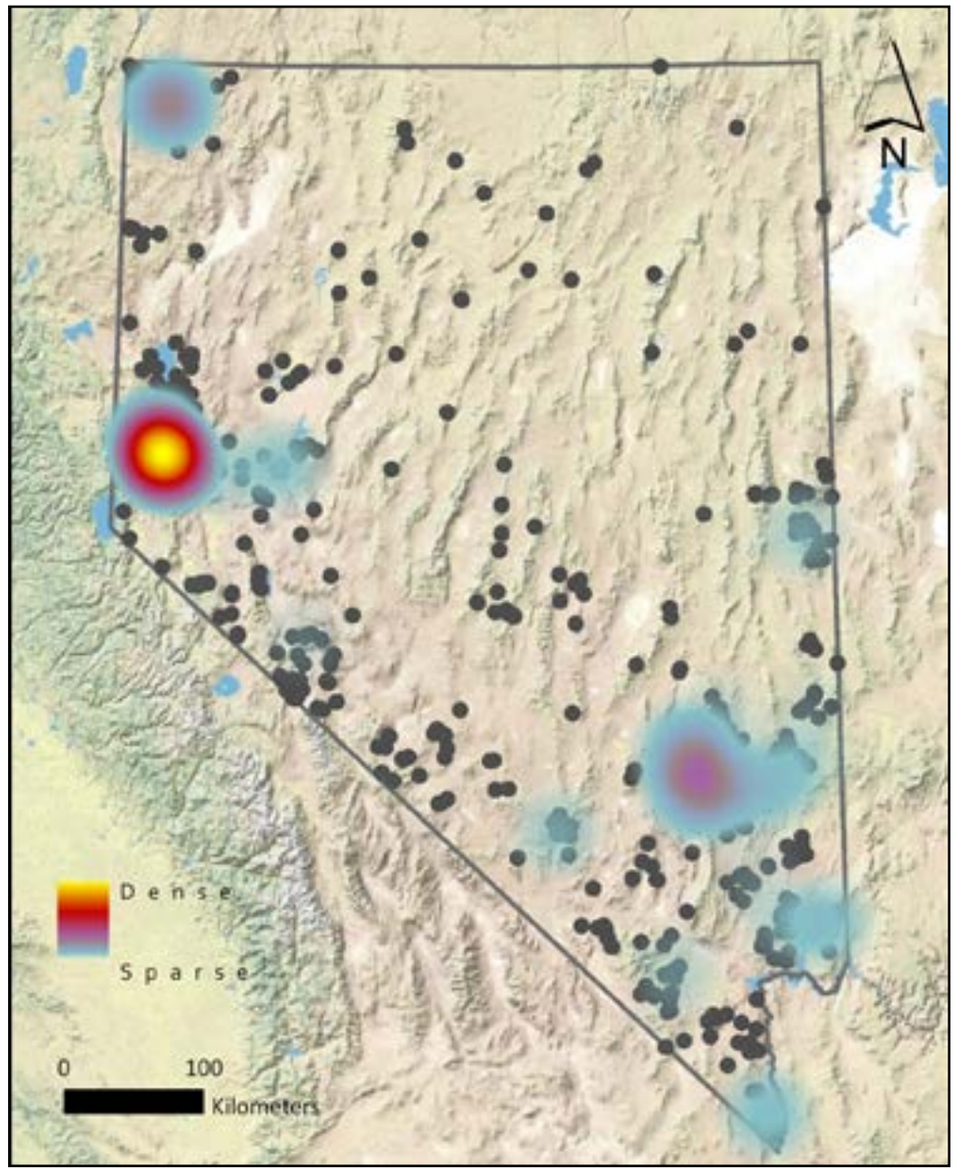
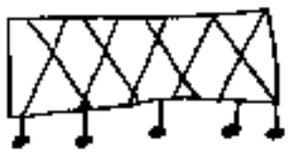


Figure 4. Site density measured by spatial proximity and weighted for rock art abundance

Spatial patterning... cont'd from page 3...

appear to have been visited mostly by male hunting parties. Lagomarsino Canyon, the largest rock art site in Nevada with 2,500 panels, is only associated with short-term task-based small camps and its surrounding environment was used mostly for hunting and travel. Likewise, the Massacre Bench area comprises abundant rock associated with small field camps used predominantly by hunters during the Middle Archaic. Despite the massive number of individual motifs at both these concentrations, images of bighorn sheep and other animals are noticeably rare.

It has been hypothesized that hunting large and medium game by specialized hunting parties reflects prestige competition among men, as it is a high-risk, high-reward strategy relative to its nutrient returns. The rarity of bighorn sheep and other animal imagery at Lagomarsino Canyon and Massacre Lake suggests that their rock art did not symbolize the cultural values embedded in this male prestige acquisition strategy. Instead, these sites' ambiguous abstract imagery was likely drawn upon in negotiating relationships and social identities among male hunters. Prestige may have been gained by demonstrating privileged knowledge of the cultural commentaries paired to rock art images. Alternatively, hunters may have symbolically treated the trade-off that male prestige acquisition had for optimal economic behavior through rock art. Legitimizing the cultural value of male prestige hunting may have been necessary as it was, to some extent, underwritten by the products of women's labor, but was a sphere of social competition from which women were excluded.



Late Archaic: Settlement

During the Late Archaic major rock art concentrations are related to settlement expansion into environments that were of limited economic importance in the Middle Archaic. Massacre Lake and Lagomarsino Canyon saw declining use during the Late Archaic, seemingly replaced by significant rock art concentrations elsewhere in the settled landscape. This pattern is exemplified by major rock art complexes at Sloan Canyon, Black Mountain, and Dry Lakes. Rock art was now used by task groups composed of family groupings, in contrast to the preceding Middle Archaic pattern of hunting parties.

Sloan Canyon (southern Nevada) with its lack of predictable water resources was little used in the Middle Archaic other than for occasional hunting and foraging. Around 1,500-300 years ago it was more intensively used for harvesting of both specialized plant resources and hunting. Only temporary field camps occur near the main rock art concentration and these document male and female economic activities.

The Dry Lakes complex (western Nevada), was similarly used sporadically during the Middle Archaic but saw more intensive use in the Late Archaic. Small family groups visited the area from larger residential camps elsewhere in the Truckee Meadows. More intensive use in the Late Archaic represented a broader economic focus to include seasonally available seeds and large game, which accounted for the family-based field camps, and were evidenced by dense concentrations of ground stone, lithic scatters, and rock rings.

The Black Mountain complex (western Nevada) was ideal habitat for large and medium mammals but was little used for game hunting until the Late Archaic and Late Prehistoric. Intensive settlement use seems related to the Late Archaic spread of pinyon into the area. Family-based field camps left behind evidence of men and women's activities: game drives; rock rings that functioned variously as hunting blinds, house foundations, and/or pinyon caches; and evidence of secondary butchery of game.

These moves into environments that were previously peripheral in their economic significance likely reflect social *change* in economic relations and settlement structure that allowed human settlement of these landscapes. Changes in economic practices are usually accompanied by social changes in the organization of labor through which humans interact with their physical environments. Rock art may have been used to "legitimize" changing social and economic roles, and new cultural valuations of the differing products of male and female labor. Men's and women's hunting and foraging activities were more closely coordinated and interdependent than was previously the case; prestige hunting was no longer an arena for male social competition.

Summary

As a highly visible and enduring symbolism, Nevada rock art had considerable cultural resonance. Its strong preference for abstract imagery made it well-suited to function as a cultural symbolism aimed principally at internal social dynamics. Its enduring imagery marked culturally significant places that linked social and economic changes in the present with the authority of cultural precedents and the legitimizing power of the past. For stratified social groups, monumental architecture and cultural texts serve as legitimizing institutions that present the lived social world as the natural state. Among Nevada foragers, rock art perhaps functioned as a legitimizing institution in certain contexts. Doubtless other social behaviors and cultural symbolism were also used, but these have left no physical trace.

Based on its patterned distribution, Nevada rock art was only placed in a fraction of the environments that prehistoric populations used. Rock art concentrations were perhaps perceived as places where seasonally available resources differed notably from surrounding areas and included important cultural resources that were important to visit. During the Middle Archaic, major rock art concentrations may have been related to male social competition and prestige hunting. During the Late Archaic it may relate to social and economic reorganization associated with broad-based foraging and hunting strategies that were more interdependent than previously. ■

Summer Fieldwork
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nature. The most detailed work, by Dr Alanah Woody for her Master's thesis, estimated that some 75% of its rock art was fully inventoried, though this applies only to the core concentration at the site.

Volunteer Cary Ingbar updates the photo log

Our approach was to intensively record the core concentration and as much as possible of the northern and southern reaches of the site as time permitted. The latter are characterized by clustered distributions of rock art and other features that are widely spaced, in contrast to the core of the site. Our field investigations exhaustively recorded some 213 rock art panels in the core, western, and southern parts of the site. Another 120 panels, distributed over 450-m farther the north, were recorded more summarily through geospatial data capture and photo documentation. The results of NRAF's fieldwork is that the core of the site has been fully recorded and its boundaries mapped. While future fieldwork can continue to supplement the information collected for the northern portion of the site, sufficient exhaustive information has been recorded that Massacre Lake's characteristics, chronology, and archaeological context can be described in detail.

The site is associated with an extensive but sparse lithic scatter that extends for some 700-m and is composed of materials associated with tool making and maintenance indicative of a hunting focus for economic use of the vicinity. Ground stone tools are almost completely absent, supporting the idea that the general area was used mainly for logistical hunting. The age of these materials is Middle Archaic and early Late Archaic, fitting with the results of other archaeological research in the general area for when the Massacre Bench as most intensively used in prehistory. Time-sensitive themes in Massacre Lake's rock art are not common but broadly fit this age range

Volunteer Justin Parrish scouts for petroglyph panels

(e.g., a small number of depictions of atlatls). Rock art extends along a 1,000-m long stretch of rimrock and talus, but the densest concentration is found in a 200-m area. Away from the core concentration, rock art is distributed in clusters of varying density but in much lower abundance than the core of the site.

Massacre Lake's rock art is well-known for its high formality, large-scale compositions, and dense arrangement. It was these factors that drew Dr Alanah Woody's attention, who observed that common super-positioning and variability in the appearance of surface patination allowed a relative sequence of rock art production to be identified. Tying this to specific motifs and styles would allow the general evolutionary

Gus Quinlan records site data

trajectory of northern Great Basin rock art to be identified and is one of the reasons Massacre Lake has such great research potential.

Fieldwork also continued NRAF's long interest in the Dry Lakes area, northern Nevada, by recording 12 sites. Here, archaeological features and rock art provide evidence of episodic logistical use, starting around 3,500 years ago, but most intensively from 1,300 years ago. Previously (2004-2007) NRAF recorded some 28 sites in the Dry Lakes area, mostly the best-known that were likely to receive visitation.

Our current work is focused on an additional 100 rock art localities that have been identified but not recorded. Although Dry Lakes has seen numerous archaeological surveys since the late 1960s, its rock art is not known exhaustively. Previous work has either concentrated on other archaeological features (to determine the purpose and chronology of settlement use) or focused on identifying rock art rather than relating to it the wider archaeological landscape. Accordingly, one focus of our ongoing fieldwork at Dry Lakes is documenting the relationship of these localities to other archaeological features and rock art. The results of our fieldwork help to better understand the relationship of small-scale rock art sites to major campsites and rock art concentrations elsewhere in the Dry Lakes landscape. This is important for identifying wider trends in Great Basin rock art regarding changes over time in its associated social and economic contexts of use. ■

It's time to renew your annual membership to the Nevada Rock Art Foundation.

On the next page is the membership form, with an active link to the website for on-line renewal. Otherwise, print out the membership form on page 6 and mail into the office.

Please remember to make your contributions to the Nat Canyon project: The Foundation needs to raise $5,000 to meet the match for the project.

The Massacre Bench Crew takes a much needed lunch break in the shade. L to R: Tom Burke, Cary Ingbar, Wendy Antibus, Gus Quinlan, and Justin Parrish; Darla Garey-Sage is not pictured (as she took the picture)

2017 Membership

Membership levels, Annual Dues, and Benefits

As a member of the Nevada Rock Art Foundation, you will support the protection and preservation of the rock art of Nevada through programs of documentation, research, and public education. As a member, you will receive the *Great Basin Glyph Notes*, the e-newsletter of the Nevada Rock Art Foundation and special invitations to lectures, events, and programs.

Membership Levels

☐  Spiral, Individual, $25/yr

☐  Bighorn, Family, $50/yr

☐  Atlatl, $100/yr

☐  Archer, $250/yr

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☐  Sunburst, $1000/yr

☐  Alanah Woody, Field of Dots, $5000/yr

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NEVADA
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Working for the Conservation of Nevada's Rock Art Heritage

Code of Ethics

The Nevada Rock Art Foundation subscribes to the following code of ethics and its members, as a condition of membership, agree to abide by the standards of conduct stated herein.

1. NRAF respects the cultural and spiritual significance of rock art sites and shall not engage in any activity that adversely affects site integrity. NRAF members will be respectful at rock art sites—many are regarded as sacred by indigenous peoples and as such will be treated as a valued part of our shared cultural heritage.

2. NRAF members will strictly adhere to all local, state, and national antiquities laws. All research or educational activities taking place at rock art sites shall be subject to appropriate regulations and property access requirements.

3. All rock art recording shall be nondestructive with regard to the rock art itself and any associated archaeological remains that may be present.

4. No artifacts shall be collected unless the work is done as part of a legally constituted program of archaeological survey or excavation and with express permission of the landholder.

5. No excavation shall be conducted unless the work is done as part of a legally constituted excavation project and with the express permission of the landholder. Removal of soil shall not be undertaken at any time for the sole purpose of exposing subsurface rock art.

The Nevada Rock Art Foundation's principal objectives are to document rock art sites at risk and to work to conserve and ensure the integrity and future protection of all Nevada rock art sites.

The Foundation respects the cultural heritage and traditions of all indigenous people in all its activities.

The Past
Deserves a Future

GREAT BASIN GLYPH NOTES

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