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La Pintura

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<http://www.arara.org>

ARARA 2011 Idaho Falls

By Donna Gillette

We hope you are making your plans to attend the ARARA 2011 Conference at the Shilo Inn in Idaho Falls, May 27–30. If you have not made your room reservation be sure to call the Shilo Inn at (208) 523-0080 and ask for the special ARARA rate, \$72. This includes a full breakfast. Pre-registration and Field Trip Registration closes on April 23. The opening reception will be Friday evening (6–8 p.m.) at the Shilo Inn and feature a “Taste of Idaho.” Also of general interest may be the “Body Exhibit” at the Idaho Museum during our conference dates. Contact the museum at www.museumofidaho.org. Additional information about the area is available from the Idaho Falls Chamber of Commerce at www.visitidahofalls.com. Be sure to read ARARA Online and check the ARARA website for any further Conference announcements.

Friday Pre-Field Trip Meeting

Those signed up for Friday Field Trips are required to attend the pre-meeting on Thursday afternoon at 5 p.m. at the Shilo Inn. The time for a meeting for participants in Monday’s Field Trips will be announced during the Saturday session. Any available space for Monday Field Trips will be announced during the conference.

ARARA Conference and Field Trip Registration Has Gone Green

Beginning with the 2011 Conference, Field Trip Information and Registration Forms may be downloaded from the ARARA website, www.arara.org. Those without internet access may contact Ken Hedges (619) 589-8050 to receive a packet by mail. Both Field Trip and Conference Pre-registrations are due April 23. With this move to digital packets, ARARA will save several hundred dollars.

How Do You Get to Idaho Falls?

The Idaho Falls Regional Airport is serviced by Skywest/Delta airlines which offers daily fast flights to Salt Lake City, Utah. Horizon/Alaska airlines offers daily flights to Boise, Idaho. Idaho Falls Regional Airport is also serviced by Northwest, Allegiant, and United Airlines. Rental cars are available at the airport. For those willing to make the easy, 3-hour drive from Salt Lake City, Southwest and other airlines provide a more economical fare.

ARARA DStretch Workshop

For the 2011 ARARA Conference, Jon Harman will conduct a 2-hour DStretch workshop on Thursday evening at 7 p.m. at the Shilo Inn in Idaho Falls. Using images from around the world, Jon will discuss the basics of DStretch enhancement and more advanced topics. Bring your computers! Jon will install DStretch for those who do not have it, and will help you to get the best enhancements from your own images. The workshop fee is \$20 and can be paid along with your Conference registration. Visit the Conference Information link on the ARARA web site for complete details.

Where to Park Your RV in Idaho Falls

If you plan on bringing your RV to the Idaho conference, there are two RV parks nearby. The Snake River RV Camp is just up the road (less than ½ mile) from the conference venue at the Shilo Inn. The Targhee Inn also welcomes tent camping. Contact information is:

<http://www.snakeriverrvpark.net/index.html>, and
<http://www.targheenn.com/>

Educational Program for ARARA 2011

Carolynne Merrell will be conducting a children’s rock
...continued on next page

RAIG at the SAA Sacramento Meeting

The Rock Art Interest Group of the Society for American Archaeology will be offering two full symposium sessions and a workshop at the Society's Annual Meeting to be held this year in Sacramento, California, from March 30–April 3. The Group will also hold its own annual meeting during the event to plan future activities. Many long-time ARARA members will be participants in these sessions, and everyone interested in rock art is invited to attend. (For those unable to attend, full coverage of the sessions will be available in the next issue of *La Pintura*.)

On Thursday afternoon, March 31, Lenville Stelle will chair a symposium on the topic: "Technique and Interpretation in the Archaeology of Rock Art," with fourteen papers scheduled to be presented. The second symposium on Friday afternoon, April 1, was organized by Donna Gillette and Nancy Olson, and will focus more specifically on "Enriching Archaeological Studies: The Contributions of Rock Art to Archaeological Understanding in the Prehistoric Western United States and the Pacific Rim." Josephine McDonald will be the discussant for the fourteen papers in that session.

In addition, a workshop on Rock Art Site Management is being offered on Wednesday afternoon, March 30, led by RAIG's immediate past president, David Whitley, and the Group's current co-chairs, Linea Sundstrom and Johannes Loubser. It will focus on basic principles of site conservation and visitor control, Native American consultation, and state-of-the-art recording techniques, and will feature two case studies of successful management programs presented by Whitley and Loubser.

Further information and details about the SAA Sacramento Meeting are available at the Society's web site; www.saa.org. If you do attend, be sure to stop by at the ARARA booth and say hello. ☉

A Brief History of IFRAO

Peggy Whitehead

After the successful Australian Rock Art Congress in September of 1988, rock art researchers from nine organizations met to discuss common interests and international cooperation. During this meeting they lamented that so many discrepancies existed within rock art research between countries and even regions throughout the world. By the end of the meeting they had drafted a constitution and a plan to work together to resolve the differences. Each organization would remain autonomous, but the Federation would help initiate policies in the common interests of all. Other world rock art organizations were invited to join this endeavor, and so the International Federation of Rock Art Organizations (IFRAO) was formed.

Ratification of the final constitution paved the way for the organizations to operate independently but exchange ideas and offer support to member organizations. The constitution states, "IFRAO shall: 1) Provide guidelines for global standards of rock art study, conservation, recording and inventorying (documenting and assessing); 2) Serve as a clearing house for the dissemination of rock art data; 3) Encourage intellectual and monetary support of rock art projects endorsed by IFRAO; 4) Promote high scholarly standards of rock art research and publication; and 5) Undertake educational programs with the public to help ensure maximal appreciation and protection of rock art resources."

The Federation operates as a democratic advisory body with each member organization having one vote which is exercised by an official representative. The international meetings are held by member conferences serving as an official IFRAO Congress. Over the years this has evolved into a member organization issuing an invitation for the IFRAO Congress to be held in conjunction with their local conference. A discussion is held to determine the ability of the organization to hold such a large undertaking, and a vote is taken to confer acceptance of the location. IFRAO has no

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Idaho Falls... *continued from page 1*

art program and workshop at the Museum of Idaho in Idaho Falls, April 16. As in previous years, note cards will be available featuring the art work from this workshop.

Auction Update—Volunteers Needed

Volunteers are needed to make this year's auction a success. At this time we are still in need of a Chairperson. There is help available on how to do this job. We also need

committee people. This is ARARA's fun event, and we need help to make this happen. Please also be thinking of what you can contribute to the auction, and bring your items to the auction table in the Vendors Room on Saturday. If you are willing to help in any way, please contact Donna Gillette (rockart@ix.netcom.com) as soon as possible. I know we can count on ARARA members to come through—we will have an Auction! ☉

ARARA Banquet Features Jim Keyser, Invited Speaker

At this year's annual banquet on Saturday, May 28, long-time ARARA stalwart Jim Keyser will be the featured speaker. His announced topic will be "Recounting Days of Glory: Warrior Art of the Northern Plains."

James D. Keyser was raised in western Montana on the Flathead Indian Reservation. His interest in rock art began at age nine when he saw his first site. He participated in his first rock art recording project in 1973, after entering the University of Montana where he earned his B.A. (1972) and M.A. (1974) degrees in Anthropology. He earned his Ph.D. in Anthropology from the University of Oregon in 1977. His M.A. thesis was on a high-altitude mountain sheep trap in southwestern Montana, and his Ph.D. dissertation was on the excavation of bison jumps and village sites in northern Montana. He has been a professor of Anthropology at State University of New York at Buffalo and the University of Tulsa (Oklahoma).

Keyser has conducted rock art research across western North America, including projects in Alberta, South Dakota, Montana, Wyoming, Colorado, Utah, Oregon, Washington, and Alaska. He also has an ongoing research interest in European rock art in France, Spain, and Italy. He is a member of the Science Advisory Committee for the Study of Chauvet Cave (France), and is listed in Who's Who in Rock Art.

He was employed by the U.S. Forest Service, as Regional Archaeologist, first in Billings, Montana, and then in Portland, Oregon, for 27 years. Having just retired, Keyser keeps busy with research projects done in conjunction with the Oregon Archaeological Society, and is immersed in personal rock art research, with six articles currently in press, while working on two major projects, planning three other projects, and in his "spare" time conducting "a little research on a couple of problems in European rock art." In addition, he maintains faculty affiliation with the University of Montana. His other research interests include Northern Plains archaeology, and Archaic and Late Prehistoric period archaeology. In the past, he has been deeply involved with studying bison jumps, ceramic chronologies, ledger art, and long-term occupation sites of the Plains Indians.

Dr. Keyser is the author of more than 110 publications in archaeology, with more than 60 of those on the subjects of rock art, robe art, and ledger art. He is the author of seven books, among which are *Indian Rock Art of the Columbia Plateau*, *The Five Crows Ledger: Warrior Art of the Flathead Indians*, *L'Art des Indiens des Grandes Plaines* (LeSeuil, France),

Art of the Warriors: Rock Art of the Great Plains, and *Plains Indian Rock Art* (with Michael Klassen).

He currently splits his time between homes in Portland, Oregon, and Italy.

His presentation will focus on what we can gain interpretively by understanding the relationships between Plains Indian biographic rock art to robe art, ledger art, and the rich Plains ethnographic record. ☉

ARARA Archives Announcement

ARARA maintains an archive at the Deer Valley Rock Art Center in Phoenix, Arizona, containing research collections and papers related to ARARA history. The Archives Committee is organizing the ARARA history papers, which include files of the standing committees, financial records, bylaws, Board meeting minutes, membership lists, and conference registrations. If any current or former officers, board members, or committee chairs have such papers in their possession and are no longer using them, the archives would like to have them. If you would bring such files to the Idaho Falls meeting and hand them over to Archives Committee members Diane Hamann, Peggy Whitehead, or Sandy Rogers, we will make sure they get to Deer Valley (and save you the shipping costs). ☉

Call for Board Nominees

Our Nominating Committee asks you to help them identify candidates to fill four position on the Board for 2011–2013. Please suggest a fellow ARARA member, or you may put yourself forward as a potential candidate to the Committee. The Committee carefully considers all suggestions in preparing the slate of nominees.

If you have any questions or wish to nominate a candidate please contact any Committee member: AnneCarter@embarqmail.com, 702-869-3219; BillWhitehead@att.net, 303-426-7672; Lloyd Anderson; Mavis Greer; or Bill Hyder. Our President Ron Smith at RWSintheNW@comcast.net would also welcome your suggestions. ☉

Advances in Rock Art Field Assessment

Casey D. Allen¹, Austen K. Cutrell¹, Niccole V. Cerveny², and Jay Theurer³

¹University of Colorado, Denver, Department of Geography and Environmental Sciences; ²Mesa Community College, Department of Geography, Mesa, Arizona; ³Petrified Forest National Park, Arizona.

Most integrative approaches to rock art management necessitate far greater financing and specialty skills than land managers have at their disposal. The rock art stability index (RASI, Dorn et al. 2008) remedies this drawback for cultural heritage resource managers by offering an accessible technique to assess a rock art panel's stability. Unlike other rock art assessment methods (cf. Fitzner 2002; Viles et al. 1997), RASI was created as a non-invasive, cost-effective field assessment technique focusing on approximately three-dozen easily identifiable rock weathering forms (or the breaking-down of rock in place) brought on by different geological processes. By combining these key factors, RASI offers an efficient method to help researchers establish the condition of a rock art panel (Cerveny 2005; Dorn et al. 2008). While still scientifically rigorous enough to yield valid scientific results, RASI also remains available to the amateur student of weathering (Dorn et al. 2008), and has also been shown to be a replicable tool for rock art assessment (cf. Cerveny 2005; Cerveny et al. 2006; Dorn et al. 2008), as well as helping people connect science and art in a field setting (Allen and Lukinbeal 2010). Helping to establish a sense of the most endangered rock art panels, RASI permits rapid evaluation of panels, allowing users to categorize, sketch, and assign a "score" to each panel, noting inherent weaknesses based on weathering phenomena

that can be immediately analyzed by a cultural resource or land manager (Figure 1).

To illustrate RASI in action and demonstrate the effect it can have on rock art panels, sites, researchers, and volunteers, this essay uses anecdotal examples from our current study areas at Petrified Forest National Park to express how RASI functions as a field method. The first anecdote demonstrates how student researchers involved with RASI continue to take the initiative regarding rock art management, while the two following it express how RASI can have an immediate impact for cultural resource managers. Then, before a quick conclusion on how RASI entwines cultural appreciation and science, we briefly discuss the potential for adding cutting-edge technology to RASI, enhancing the overall examination and management of rock art.

The Dog Panel

In the summer of 2009, our National Science Foundation(NSF)-funded RASI project brought us to a site in the central portion of the Petrified Forest National Park. A rock art panel containing three canine glyphs had completely detached along the bedding plane of the sandstone bedrock (Figure 2). Student researcher Janica Webster completed a RASI analysis, and determined a raw score of 62 for the panel.



Figure 1. Student RASI recorders in the Petrified Forest National Park analyze damage to a rock art panel impacted by the natural weathering process of case hardening (photograph by Niccole V. Cerveny).



Figure 2. Student researcher Janica Webster evaluating detached rock art panel positioned to erode down a steep, bentonite clay slope (photograph by Niccole V. Cerveny).



Figure 3. Loss of rock due to fractures independent of the sandstone bedding plane cut across the sun motif on this rock art panel in Petrified Forest National Park (photograph by Niccole V. Cerveny).



Figure 4. This image has many glyphs, but also much weathering. Trained RASI researchers can distinguish between natural weathering forms and processes—such as flaking, lithobiont pitting, and weathering rind flaking—and anthropogenically carved images (photograph by Casey D. Allen).

Raw scores over 60 indicate that the stability of the rock art panel is in severe danger. Due to the precarious position of the stone slab on the steep slope, the student researcher decided to take matters into her own hands by using her academic skills to petition the National Park Service (NPS) for its entry into the museum collection, rather than lose the panel and its cultural context to the erosion of the underlying bentonite clay. Although NPS initially declined the petition, the student researcher was authorized to periodically reassess it, and update the site managers on the condition of the rock and slope. On each visit to the park, this student always makes it a point to reassess this panel, keeping close tabs on it, and reporting even the slightest change in its position. Overall, this student gained experience in NPS policy, communication skills, and environmental analysis. She also decided to major in Physical Geography, and is now pursuing her bachelor's degree at Arizona State University.

Immediate Impacts

Although not on a steep slope, the second panel highlighted is of an apparent sun motif (Figure 3). The loss of this element is due to fracturing of the rock across the sandstone bedding planes, and lack of support at the edge of the rock due to undercutting. This panel earned a raw RASI score of 26, a stability status of good. The core of the rock is very stable, yet an entire glyph has been lost on its edge. Noting this overall condition is part of the RASI assessment, and seeing the researcher's analysis, a site manager might

choose to increase the weight of a RASI variable (or two) so that the overall RASI score better reflects the impending loss of the resource. RASI scores can also provide important baseline data to site managers for better site recording and resource allocation decisions.

Over the summer 2010, student researchers trained in RASI canvassed large areas of petroglyphs, both concentrated and dispersed. This necessitated hiking to backcountry sites not normally available to the general public. Student researchers worked alongside NPS archaeologists, paleontologists, historians, and non-NPS scientists conducting research in the park. The focus was two-fold: identify panels based on previous maps, and assess panel stability via RASI. Locations were logged with precision via global positioning system (GPS) units and collated with NPS archaeologists' in-the-field maps. As an aside, this served as a great learning experience for student researchers on the importance of keeping good records, as previous maps were over two-decades old and often contained unclear data regarding panel location and glyph description. For example, where previous researchers with no apparent experience in weathering science sometimes mistook common weathering forms for glyphs, student researchers trained in RASI readily identified these and made the necessary corrections (Figure 4). This type of in-depth scientific analysis is of great help to NPS historians and archaeologists, giving them not only a more scientific assessment of their petroglyph sites, but also a more accurate recording of the panel content.

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RASI 2.0: Integrating GPS for In-the-Field Analysis

Two major concerns remain paramount when it comes to managing the priceless cultural resource of rock art: cost-effective assessment and quantifying qualitative data. Created in part to address these issues, the RASI has proven a worthy field mechanism by which to “triage” endangered rock art panels (Dorn et al. 2008). With RASI’s creation and subsequent implementation, however, new concerns arose about the amount of potential information RASI produces. Researchers and users began to see the need to further systematize and streamline data between various end-users, while still maintaining precise spatial location detail that could be incorporated in a geographic information systems (GIS) database, and other potential correlations to be used during later research stages. One solution rests in the creation of a portable GIS attuned specifically for RASI parameters.

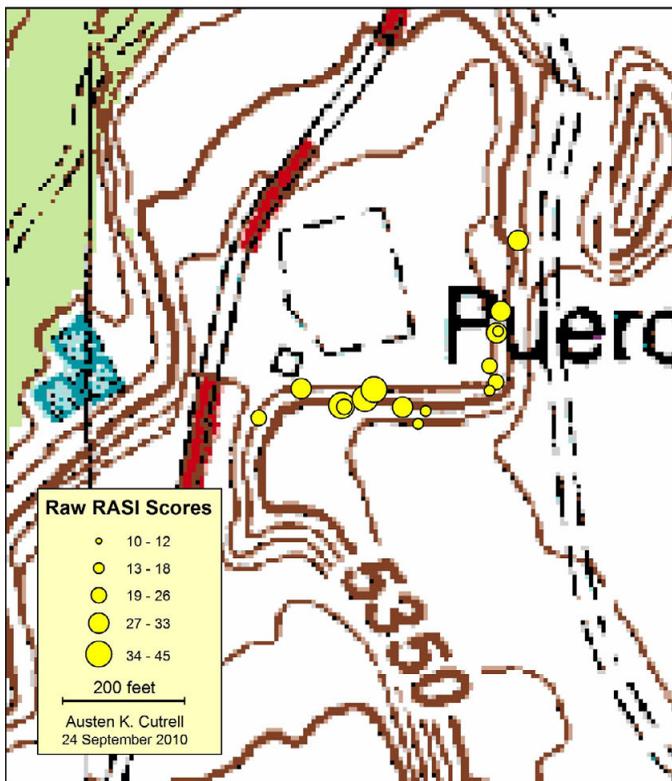


Figure 5. An example of a quick visual analysis using raw RASI scores for 16 separate panels at a public overlook in Petrified Forest National Park. The larger the circle, the less stable and more endangered a panel is. This map was created in less than 10 minutes after scoring the panels. While not especially cartographically appealing, this demonstrates the powerful and rapid analyses that RASI 2.0 can offer cultural resource and land managers. Within minutes of assessing a site, those areas and panels most in danger can be visually displayed (map by Austen K. Cutrell).

Using a software program called ArcMap, a RASI-specific attribute table was created and then customized with drop-down menus using an extension of the software called ArcPad Studio Builder. These resultant forms were then field-tested by researchers conducting fieldwork at Petrified Forest National Park (November 2009 and June-July 2010) using handheld GPS units (Trimble Juno SB) running the ArcPad program. After initial refining of the attribute table while in the field, this effort’s outcome demonstrates the potential power for cultural resource managers and/or volunteers from diverse backgrounds to complete RASI in a 21st-century manner, providing the end-user with standardized data that permits quick and efficient decision-making—even on the spot in the field!—regarding rock art management (Figure 5). As a bonus, specific processes are being developed and tested to link an image taken by the in-GPS camera (if the unit has such a device) to an exact location, while also linking the image to the specific, completed RASI assessment.

Integrating Cultural Studies

Another interesting activity throughout the summer was interaction with members of the local Hopi Tribe. Several times throughout the summer, Hopi tribal members visited field sites where student researchers were performing RASI. After explaining the concept of RASI to them, the tribal members treated participants to their view of the rock art, and sometimes to their view of specific glyphs. Student researchers found this interaction to be one of the highlights of this summer experience. Perhaps due to their enthusiasm and willingness to learn, the student group was invited to attend a sacred Native American solstice event at Zuni Pueblo. While this event is open to the public, it is not well-advertised. Yet because of RASI’s proactive nature, researchers were able to partake in this particularly culturally rich experience. And this incident, perhaps more than any other, highlights the connection RASI has not only with geology and weathering science, but also cultural and human perspectives as well. After being trained in RASI, volunteers become more aware of how science can inform cultural resource management agendas, while at the same time learning that their service can have great impact on a culture.

References

- Allen, C. D., and C. Lukinbeal
2010 Practicing Physical Geography: An Actor-Network View of Physical Geography Exemplified by the Rock Art Stability Index. *Progress in Physical Geography* 34.

The Hooper Ranch Pueblo Sun-Dagger Shrine

John A. Ruskamp, Jr., Ed.D.

Dedicated to Roxanne Hooper Knight, whose thoughtful guidance and love for her historic family ranch made this discovery possible.

Located above the Little Colorado River in east-central Arizona, a natural rock formation allows a pointed shaft of sunlight to illuminate a panel of ancient petroglyphs during the summer months. At the summer solstice, this dagger of light divides a spiral glyph in half, as it links several other images together to tell a story. On the rock surface above this panel of glyphs is a drilled hole, which in ancient times may have held prayer-sticks. This hole forms the head of what appears to be a highly symbolic stickman glyph. When viewed together, these two sets of images appear to depict a story from native folklore about Püüikonhoya and his younger brother, Palunhoya.

The Story of Two Brothers

Preserved in the folklore of numerous Native American peoples are several similar stories about the adventures of twin brothers, children of the Sun Father, and how they saved humanity by defeating various evil monsters. The Zuni call these brothers *Áhaiyúta* and *Mátsailéma* (Cushing 1901:368), while the Hopi refer to them as Püüikonhoya and Palunhoya (Fewkes 1895:132). In English, the name of the older brother is often translated as Youth, and his slightly younger sibling is named Echo. In much of the folklore related to these twins, the older brother frequently goes forth armed with lightning bolts given to him by his father, the Sun, to free humans from numerous menacing creatures. One story tells how he fights with a particularly evil creature, a cannibal demon called *Átahsaia*, by the Zuni, who has been feeding upon humankind (Voth 1905:82). Ultimately, he overcomes this beast and destroys it with a bolt of his lightning. In many of

their adventures, Püüikonhoya battles the evil demons alone, while Palunhoya keeps watch over their prayer-sticks. These prayer-sticks would burn or turn blood red when the older hero was in danger and needed help.

Site Description

On the top of a ridge overlooking the Hooper Ranch Pueblo near Springerville, Arizona, there is an overlooked cluster of ancient petroglyphs carved into a small ledge, located beneath an overhanging rock formation. From April through August a slight opening at the top of this protective formation allows a dagger-shaped beam of sunlight to pass through and illuminate several of the glyphs on the ledge below (Figure 1). Significantly, in an article on solar markers, Zeilik notes that “In addition to establishing a ritual calendar, the Sun Priest also uses solar observations to establish a planting calendar (Stephen 1936), which, at Hopi, runs from roughly the middle of April to the summer solstice (Beaglehole 1937)” (Zeilik 1985:S72).

During the spring months, each day the path of this sun dagger shifts southward across the rock art panel until, on the date of the yearly summer solstice, frequently June 21, its transverse movement ceases. It is at this time of year that a narrow shaft of sunlight passes through the rocks above the Hooper Ranch Pueblo and slowly grows from a tiny speck (Figure 2) into a sharply pointed sun dagger attaining a maximum length of approximately 30 centimeters (Figure 3). For a few days during the time of the summer solstice, as this sunlight image grows and then recedes, it passes



Figure 1. The sunlight dagger and petroglyphs on May 21.



Figure 2. Sun dagger begins to form.

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over the right arm of a petroglyph stickman, bisects a spiral glyph, and then terminates as it slices through the center of a horizontal S-shaped image. For only a few minutes, it appears as if the stickman is holding a shield with his left arm and a spear of light (a bolt of lightning?) in his right hand. Shortly thereafter, this dagger of light slowly drifts across the rock art (Figure 4), shrinks, and after approximately three hours of illuminating the petroglyphs, it moves off of the panel and vanishes from sight. After a few more days, the sun reverses its seasonal path through the sky and the sun dagger retraces its lateral movement until, by the end of August, its light no longer falls upon the ledge.

In addition to the images described above, this protected panel of petroglyphs contains the depiction of four connected bulls eyes (refer to Figure 2, lower left), an Eagle Clan symbol (refer to Figure 2, lower center), a second stickman figure (refer to Figure 2, center), possibly a Quetzalcoatl “cross” enclosed within a rectangular border (refer to Figure 2, left of second stickman), and a rectilinear figure which, on certain



Figure 3. Sun dagger dividing the spiral glyph (photography by Ken Zoll).



Figure 4. Sun dagger exiting the panel.

dates, forms the hilt of the sun dagger (refer to Figure 2, right of second stickman). Of all these secondary images, only the image of the dagger’s hilt interacts with the sunlight.

Drilled into the highest point of the large rock roof above this panel of petroglyphs there is a manmade hole (Figure 5) approximately two inches deep and one inch in diameter. Adorning this hole are several rectilinear lines which, when viewed together, appear to form a stickman. With the drilled hole as its head, this figure has two sets of long pointy fingers and two legs with large rake-like feet. A second illustration drawn alongside this stickman appears to depict an open-mouthed monster. Finally, a large, horned-snake glyph, similar to a symbol used by the Hopi Snake Clan, and two smaller wavy lines, representing additional snakes or maybe water, are carved into the surface of this rock (Patterson 1992:181). Significantly, in *Book of the Hopi*, Waters verifies that, indeed and according to Hopi tradition, the Snake Clan was at one time associated with the Water Clan (Waters 1963:61).

An analysis of the floor plan for the nearby Hooper Ranch Pueblo (Martin et al. 1961:31) reveals that each of its three kivas was constructed so that it would be in alignment with the location of the nearby sun-dagger shrine (Figure 6). The purposeful orientation of these religious rooms reveals the overriding focus that the shrine must have provided for this pueblo community. Significantly, in 1960, when the floor of the largest kiva at this site was uncovered, a carved sandstone figure of the Water Clan god *Panaiyoikyasi* (“Short Rainbow”) was discovered laying face down in a small crypt (Figure 7). Traditionally, only the most important villages surrounding the Hopi center of Oraibi buried an effigy of their god immediately prior to their abandonment. To date, this is the only known example of this historic practice in a prehistoric context. Finding this revered statue in a kiva aligned with the sun

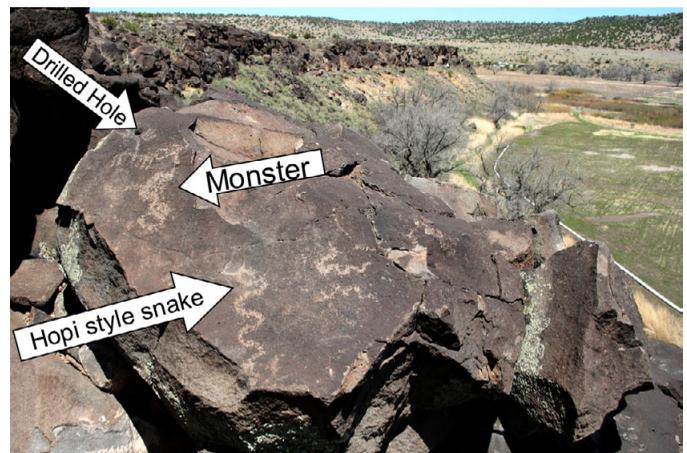


Figure 5. Hole drilled into the top rock, with stickman, monster, and snake.

dagger shrine indicates that a relationship exists between this deity and the shrine's images. As such, this effigy provides an important clue for understanding the shrine's petroglyphs.

Interpreting the Rock Art

When viewed as a whole, the images associated with the Hooper Ranch Pueblo sun dagger shrine are reminiscent of the widespread Native stories about Püükonhoya and Palunhoya. At the time of the yearly summer solstice, a very important period for the indigenous people of this region, the dynamic sun dagger at this location appears to interact with the rock art to relate the story of how Püükonhoya kills a demon. During only the longest days of the year, the light of this sun dagger travels down the panel of glyphs until it perfectly aligns with the right arm of an anthropomorphic figure, making it appear to be holding a bolt of lightning. As the minutes pass, this dagger of light continues to elongate, until the stickman's weapon divides a spiral in half, marking the longest day of the year, and cuts a snake-like figure "S" into two equal portions, symbolically killing it.

In addition, the large rake feet attached to the stickman on the top rock of this location, suggest that this individual is somehow associated with a large quantity of water. To represent rain, ancient rock artists frequently used this rake-like style of glyph (Patterson 1992:165). With the prayer-stick hole as its head, this figure also appears to have been involved with some form of spiritual communication. This petroglyph may be an early depiction of the younger of the legendary twin brothers, Palunhoya, guarding the prayer-sticks while his older brother is away on the rock ledge below, slaying the cannibal demon, *Átahsaia*.

However, there is a plausible alternative explanation for this particular stickman glyph. Nearby at the site of the sun-dagger shrine, there is a panel of rock art comprised of images of Hopi Water Clan identifiers (Figure 8) estimated to date to about A.D. 900 (Eaton 1999:186). Significantly, the central image on this rock art panel depicts the Water Clan



Figure 6. Google map satellite image of the Hooper Ranch Pueblo, with a diagram of the ruins superimposed, illustrating the center-line of the kivas aligning with the location of the sun-dagger shrine.

deity, *Panaiyoikyasi*. Together these drawings along with the presence of the *Panaiyoikyasi* effigy in the nearby kiva crypt, and the purposeful orientation of the pueblo kivas with the sun-dagger shrine, strongly suggest that the stickman carved upon the top rock of the shrine site may be an illustration of *Panaiyoikyasi*.

Discussion

This paper describes what to date has been an unreported sun-dagger site. The sunlight dagger at this location demonstrably marks the annual occurrence of the summer solar solstice for the northern hemisphere. The ancient people of this region viewed such solar markers as religious messengers and agricultural indicators. Certainly the petroglyphs carved on the rocks at this site, those associated with the dagger of sunlight and the stickman located above them, were very important icons, and



Figure 7. *Panaiyoikyasi* effigy. Courtesy, The Field Museum.



Figure 8. The Water Clan glyph panel.

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exhibit a high degree of correlation with the ancient widespread stories of Püükonhoya, Palunhoya, and the Water Clan deity, *Panaiyoikyasi*. The published date for the creation of the glyphs at this site, circa A.D. 900, suggests that this natural sun dagger could have been used as a template for creating other similar-looking solar markers, as its overall shape is significantly similar to other well-known but man-made sun daggers.

In the summary report published for their excavations at the Hooper Ranch Pueblo, Martin et al. (1961) state that there is evidence indicating that at least some of the inhabitants of this site migrated northward into what are today Hopi and Zuni lands. They suggest that “a northern movement of Mogollon peoples up the Little Colorado Valley” took place, and that “this late Mogollon influx into the plateau resulted in a very strong influence upon the Anasazi centers of the present Zuni and Hopi areas. Here, the Chaco-influenced Anasazi traits mingled with the Mogollon traits to produce in these two areas a florescence extending into historic times” (Martin et al. 1961:16). They further mention that earlier research supports their hypothesis: “Working on the chronology for the Zuni area, Leslie Spier suspected Zuni antecedents in the Little Colorado River Valley. A brief survey in the area was undertaken in 1917. Time was spent visiting selected ruins in the area. From the results of his work, Spier suggests that the antecedents to historic Zuni were, indeed, the later ruins in the Little Colorado Valley.”

Research focused upon the early habitation patterns



Figure 9. Hooper Ranch Pueblo sun dagger.

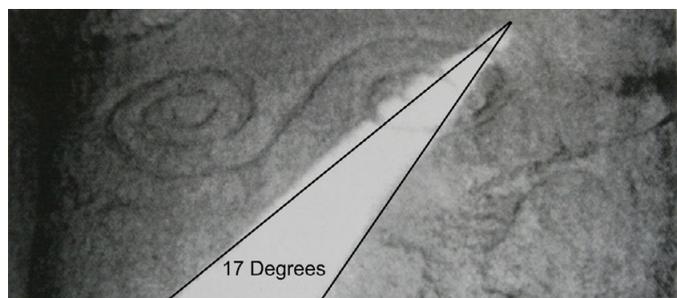


Figure 10. Fajada Butte sun dagger (adapted from Sofaer 2008:62).

of this area has found considerable evidence for long-term regional interaction. Duff (2002:1), for example, writes: “The upper Little Colorado River region possesses a rich archaeological heritage that documents the arrival and departure of thousands of Pueblo people. Zuni and Hopi oral histories relate connections to many of the region’s latest prehistoric sites.” In a related article, Duff (2002:4) states:

From about A.D. 900 to 1150, the Chacoan regional system influenced populations throughout the Colorado Plateau, including those in the upper Little Colorado region. Chacoan developments had the greatest effect in the eastern part of the region, where several Chacoan great houses along Carrizo Wash are located in areas with little previous settlement. These are of interest because they are among the southernmost Chacoan great houses and also because they are dominated by plain ceramics characteristic of southern origins.

If these migrations took place as is suggested, it is highly probable that the earlier residents of the Hooper Ranch Pueblo were also familiar with the land located immediately to their north and the people living upon it. Having experienced the usefulness of the natural sun dagger as a timepiece for marking religious and agricultural dates, the early occupants of this site may have shared knowledge of it with their allies. In their final report upon the archaeological investigation of this site, Martin et al. (1961:169) speculate that such events may have actually taken place: “Commonly, we have assumed that the Mogollon peoples were forced, by some as yet unspecified reason or causes, to migrate from the Pine Lawn-Reserve area to the Little Colorado River drainage and later to the Zuni country. Perhaps they were asked by a disturbed community to join with it to create a stable, purposeful society.”

The knowledge that the first occupants of the Hooper Ranch Pueblo site had of this sun dagger and how it worked would have been of great regional importance. As a natural prototype for making additional solar timepieces, those who knew how to duplicate its form and then use it for religious and agricultural purposes would have possessed a unique advantage. Considering the religious nature of the large kiva at this site—one of the largest in the Southwest, and with a blend of Anasazi and Mogollon attributes—and the presence of the effigy of *Panaiyoikyasi* buried within it, this location may have been an important destination for religious pilgrimage. Not without significance, there is a modern Hopi saying that when it rains, *Panaiyoikyasi* is standing to the southeast of Oraibi in the direction of his home at Wenima, Arizona, which is another name for Hooper Ranch.

Curiously, the dimensions of the Hooper Ranch Pueblo

sun dagger are similar to those of another sunlight dagger located on the west side of Chaco Canyon's Fajada Butte. Each of these light daggers points to an S-shaped petroglyph with an acute angle of approximately 17 degrees. While daggers of all sorts will exhibit similarities, the remarkable correlation between these two images, one natural (Figure 9) and the other engineered (Figure 10), may not be purely coincidental. In *Book of the Hopi*, Waters suggests that there is evidence of an early exchange of information between these two locations. He writes that, at the Hooper Ranch Pueblo, the "original walls of the ruin seemed to indicate that the village was the site of three different settlements. The walls consisted of successive layers of large stones alternating with small stones, the same construction as the walls of the ruins at Chaco Canyon" (Waters 1963:64). Further research on these congruencies is encouraged. ☉

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Vandalism Report

Linea Sundstrom, Conservation Committee Chair

The year 2010 was bad for vandalism at rock art sites in the Southwest. At Agua Fria National Monument, vandals defaced several panels of rock art with large spray-painted jack-o-lantern faces and obscenities. The Bureau of Land Management has offered a reward for information leading to the arrest of the vandals. At another Arizona site, Keyhole Sink, a vandal painted a large ACE over petroglyphs, using silver spray paint. The site is on the Kaibab National Forest. A third location in Arizona, Picture Rocks, has been vandalized with graffiti and chipping away of rock surfaces, within the last two years. The site is privately owned, but open to the public.

One arrest has been made in connection with gang graffiti that damaged several rock art panels at Red Rock National Conservation Area in Nevada, on BLM land. Thanks to an alert National Park Service concession employee in Glen Canyon National Resource Area in Arizona, a graffiti-maker was arrested within hours of carving his name over a rock art panel. The perpetrator pled guilty to felony violation of the Archaeological Resource Protection Act, and agreed to pay \$10,000 in restitution to repair damage to the rock art panel.

With Arizona's state park system under severe budget cuts, these cases (five in Arizona and one in Nevada) may be a portent of future problems with site vandals. ☉

Membership Renewal Reminder

Membership Renewal reminders have been sent to all ARARA members. If you have not already done so, we urge you to pay your 2011 dues now. Please fill out the postcard form you received in the mail (or download the Membership Form from the "Membership" link at www.ARARA.org) and send it along with your check made payable to "ARARA," to the Membership Coordinator now:

ARARA Membership
Donna Yoder
2533 W. Calle Genova
Tucson, AZ 85745-2526

If our records as of this mailing show your membership has not been renewed, the word "EXPIRED" appears on your address label. If you have recently renewed, please disregard this reminder. Remember, if your 2011 dues are not paid, this is your last issue of *La Pintura*. Renew now! ☉

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Acknowledgements

The fieldwork to create, test, and continually refine this process is made possible through cooperation with Petrified Forest National Park personnel and limited funding through the National Park Service's Cooperative Ecosystems Study Unit grant program. Our utmost thanks to these wonderful people and all of our student researchers! Research has also been greatly informed by a grant from the National Science Foundation, Award No. 0837051. ☉



Mojave Workshop Features New Research

Amy J. Gilreath

For the last 15 years, a group of some 30 Mojave Desert rock art aficionados have come together for a weekend in January, to give year-in-review presentations of their work completed and in progress. Like a good *vin ordinaire*, participants are a balanced blend of rock-art specialists (a second-career calling for many) and archaeologists. The venue is typically rustic, with camping and dorm-like accommodations in the middle of the Mojave Desert, usually at one of the various little gems in the National Park Service's Mojave Preserve.

The Mojave Rock Art Workshop (MORAW) is a progeny of Don Christensen, who, over the years, has coached a number of individuals in documenting rock art. As testimony to a good coach, a number of them now regularly set out on their own, giving over weekends, vacations, and other free time to advance what we know of this region's rock art. Some give their attention to disciplined, detailed recordation of sites in need; others embark on discovery or re-discovery expeditions, checking on the condition of sites known only by vague rumor or one-page records and notes in agencies' and archaeology information centers' files. Each individual's motivation is different, but what they have in common is an interest in the diversity of rock art in the region and respect for one another's contributions.

This year's meeting was held at Zzyzx, a short distance from Baker, California on January 16-17, 2011. The agenda for the weekend included a series of individual talks, followed by a handful of round-table workshops on issues of interest. Of the thirteen presentations, five reported on individual projects within the Mojave Desert and adjacent southern Great Basin.

John Bretney discussed University of California-Los Angeles' Cotsen Institute of Archaeology's rock art recordation work at Little Lake, California. His presentation focused on Atlatl Cliff, one of nine rock art loci nestled between Fossil Falls and the lake, itself (and a site visited by some ARARA field trippers at the Bakersfield meeting). He announced that the synthetic report of their decade-long project is currently in lay-out. *Captured Visions*, by Jo Anne Van Tilburg (Director), Gordon Hull, and John C. Bretney, should be available by mid-year. Doug Brotherton, the graphics artist handling lay-out, was also present, confirmed the announcement, and anchored a Sunday-morning workshop on Photoshop Layers.

Other regional presentations were by Jarrod Kellogg, on the highlights of his recently completed M.A. thesis out of California State University (CSU)-Northridge on Halloran

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Springs Petroglyphs. Courtney Smith, a gifted and devoted outdoor photographer, presented images of rock art in and around Eureka Valley, adjacent to the northwest of Death Valley, California, demonstrating its style, condition, and natural context. Amy Gilreath summarized the ethnographic study, small-scale archaeological survey, and full-scale rock art documentation of the Pahrnatag-style type-site at Black Canyon, in the Pahrnatag National Wildlife Refuge, Nevada.

Another talk by Jerry Dickey and Don Christensen recounted "The Saga of Cow Cove," an extensive rock art complex in the middle of the Mojave Preserve. This was an historical account of a documentation project that began twenty-five years ago by others, which Western Rock Art Research (WRAR) recently adopted, and brought to completion. Four years ago, organized, accumulated notes, photographs, and other support materials were transferred by Anne Duffield to Don Christensen. The site map, cross-referenced to a photograph inventory of the nearly 1,000 boulders with petroglyphs, and a motif analysis are now complete. Christensen filed the results with BLM in late 2010. With this closure on a study conducted under a BLM Cultural Resource Use Permit pulled in 1986, the materials will shortly be transferred to the California Historical Research Information System (CHRIS) clearinghouse in San Bernardino.

Two papers provided briefs on recent rock art vandalism. Anne McConnell talked about the graffiti in Red Rock National Conservation Area, at the west edge of Las Vegas. This event is shocking because of its visual impact and its scale. By some estimates, seven cans of spray paint were emptied across an extensive sandstone exposure where pictographs and petroglyphs occur. Don Christensen spoke about the graffiti at Keyhole Sink on the Kaibab National Forest, near Flagstaff, Arizona. The former occurred in early November, and a formal damage assessment is scheduled within the next two months or so, a step that precludes any remediation in the near term. The latter occurred in late August, and within two months, the USFS had engaged a remediation expert who aggressively removed the brush-applied latex paint from the panel.

A lively discussion ensued, revolving around the cost of removing paint damage to rock art, the vastly different techniques used to remove graffiti, the limited availability of the pitifully few rock art conservators, the potential risks associated with not quickly removing graffiti, the risks of long-term effects from aggressive removal techniques (solvents, steel-wool scouring, etc.), and so on. That discussion left no one up-beat.

Three other presentations were overviews of multi-component research and preservation programs. Dave Nichols, NPS archaeologist, discussed highlights of the Mojave Preserve's 2010 program, including the discovery of many high-altitude (7,000+ feet) agave ovens and flake scatters in the Providence Mountains; the status of CSU-

Fullerton's multi-year archaeology field school at Soda Lake adjacent to their research facility at Zzyzx; the successful restoration of the 1930s Hilltop House in the Hidden Hills Mining District; and the initiation of a micro-lamina desert varnish research project by Tanzhuo Liu, with the Lamont-Doherty Earth Observatory, Columbia University.

Don Christensen and David Lee provided travelogue-like presentations of the various sites they and their colleagues documented, located, reconnoitered, or visited in 2010, highlighting those in the 3-Corners area (western Arizona, southern Nevada, and southeastern California), and reaching into southwestern Utah. Even farther afield, attendees were provided an update on the field season activities on David and Charlotte Lee's long-term, ethnographic rock art study, the Wardaman Project, in Arnhem Land, Australia.

The four remaining presentations were on places outside the Mojave Desert, relevant because of their implications to this region's culture history, or to rock art study methods. Ken Hedges demonstrated the shared motif repertoire at six ancient petroglyph sites in San Diego County, and offered a concluding hypothesis that they represent ancestral Yuman work (pre-Takic/Shoshone Intrusion), which has a successor in the Grapevine Style. Jerry Dickey made use of the sympathetic audience, to good-naturedly share his uncertainty on how to turn his passion for the rock art on the Esplanade in the Arizona Strip, into a meaningful contribution to Southwestern archaeology and rock art studies. Steve Freers ruminated on the possibility that some interior designs in elaborate anthropomorphs depict skeletal structure, organs, and other soft tissue. Jon Harman provided a technical description of DStretch transformations. The famous site of Cueva San Borjitas in Baja California, which he argues is the birthplace of Great Mural art, served as a case-study of the analytical utility of DStretch. While presenting a history of rock art research at the site, he showed many DStretched images of the elaborate polychrome designs that reveal the superpositioning of diagnostic elements, allowing him to document the relative chronology of the different styles on the ceiling of this cave.

The half-day session held the following morning was devoted to workshops and round-table discussions. Along the line of honing skills, in addition to the Photoshop Layers session mentioned above, were workshops on making the most of GPS field units, and how to overcome common frustrations in photographing rock art. Completing the program were two round-table discussions, one addressing ethics and rock art websites; and the concluding one, in which participants looked at future directions.

Our hats-off to Don Christensen and colleagues for spearheading these annual data-sharing meetings, and for continuing to energize rock art studies in the Mojave Desert. 

Rock Paintings and Carvings Presented at Mexican Students' Conference

William Breen Murray

The Fourth Annual Student Conference on Rock Paintings and Carvings was held in Mexico City from November 22–26, 2010 at the National School of Anthropology and History (ENAH), located in the shadow of the great circular pyramid of Cuicuilco—and Perisur, Mexico City's largest shopping mall. During the week-long morning and afternoon sessions, 26 papers were presented by student participants at various academic levels. Seven invited lectures (including one by your editor) and the presentation of two recent books completed the program of activities.

As in previous years, this meeting was dedicated to someone chosen by the students who made a significant contribution to Mexican rock art studies. This year's tribute was for Dr. Ramón Viñas Valverdú, who taught rock art studies at the National School for over a decade, and made important studies of the Great Mural rock art of Baja California.

Viñas is now a researcher at the Institut Català de Paleocologia Humana i Evolució Social in Tarragona, Spain. Due to prior fieldwork commitments, he was unable to attend personally, but sent a specially taped lecture which discussed his current research in European Paleolithic rock art, and neatly summarized his view of the whole field. Former students of Viñas reviewed his unique career using photos he provided of his fieldwork in Africa, Europe, and Mexico, and added their personal remembrances of him as a teacher. Perhaps the best tribute to him is the conference cycle itself, and the excellent papers given by his former students.

The students' papers covered Mexican rock art from border to border, and addressed a wide range of theoretical and practical questions. Space limitations obviously prohibit a complete review, but a few comments on common themes are appropriate.

On this occasion, there was a special emphasis on rock art in the Mexico City area, where many sites are now being massively affected by urban development. What were once hills in the countryside have now become city parks and recreation areas. The practical problems of management and protection of sites present new challenges to the authorities each day, as highways, agricultural development, and urbanization impact the landscape all over the country, but this impact is especially dramatic in the Valley of Mexico.

At Cerro de Cuauhilama, for example, ENAH students Neftalí Galvan and Isaac Ramirez showed some of Mexico's most stunning sculptured Aztec petroglyphs. They now border the walkway of an open-access city park and are regularly covered with painted graffiti by youths from a middle school nearby. Despite recent efforts at protection and restoration,

the students were concerned that these might not be enough, and they discussed whether community involvement with the youth gangs might address the problem more effectively.

Conservation issues also cropped up in other papers, ranging from restoration of Olmec rock paintings in Oxtotitlán cave (Guerrero), described by Beatriz Isela Peña, which is in a location still used for ritual purposes; to the salvage documentation of petroglyphs along a 90-mile highway bypass around Saltillo (Coahuila), reported by José Antonio Reyes. Here, most of the damage had already been done prior to the construction project.

Other rock art sites along the US-Mexican border, like the ones in the Arenoso region in Sonora that were presented by two of Viñas's former students, Luis Fernando Gómez and Gustavo Cruz, and the small cave sites on the Mexican side of Falcon Reservoir in Tamaulipas, reported by Victor Hugo Valdovinos, are no longer accessible to researchers for security reasons.

Several papers focused on the current ritual use of rock art sites, especially in the Otomí region of central Mexico, the topic of papers by Aline Lara and Domingo España, and for the Maya/Zoque region of Chiapas, as discussed by Ximena Ulloa and Victor Hugo García. In these areas, traditional ritual continues to provide a meaningful framework for interpreting rock art iconography and context. On the other hand, in Northern Mexico, the living ritual context has largely disappeared and only iconography and archaeological context are left as clues to the meaning and former use of rock art. Difficulties arise when ethnographic analogies are extended too far in space and time, and only enigmatic imagery remains as a clue to the creator's intentions.

Shamanic interpretations of this non-figurative rock art were explored in a paper on the La Proveedora site in Sonora by Andrea Pérez Martínez. Another paper by Rodrigo Islas compared Mexican rock art more generally with the French Paleolithic rock art attributed to shamans. This was also the starting point from which Dr. Roberto Martínez González of the National University of Mexico launched his invited lecture on "The Symbolism of the Absent: Hunting in Paleolithic Art," which closed the conference and was, in a sense, its highlight.

Martínez noted that while animals are well-represented in Paleolithic paintings, actual hunting scenes are almost totally absent. Depictions of hunting appear only in the later rock art of Neolithic agricultural peoples, for whom the hunt became more important as a sport or status symbol than an adjunct of subsistence. These considerations have led him to

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focus on the cultural meaning of animals and their graphic representation among hunting peoples around the world.

This approach provided a global view which linked rock art imagery to “shamanism” through the evident depictions of real animals, without resorting to abstract geometrical imagery associated with the entoptic hypothesis. Each animal has powers beyond human limits, and provides them to those who learn to use them. Hallucinogenic plants or ASCs may play a part in this process, but the relationship between human and animal is its more fundamental axis and provides a perspective which fits rock art tightly into the hunting way of life. To use a Huichol analogy, he would focus on the deer—its attributes and manifestations—instead of the peyote which marks its footprints.

In Mexican indigenous cultures, the acquisition of animal spirit helpers, called *nahuales*, was a frequent method for establishing this link and acquiring the magical powers attributed to each animal. These same animals are richly represented in Mexican art of all ages and genre. They are even preserved in the animal nicknames which modern Mexicans sometimes give to each other: Chango (Monkey), Perro (Dog), Halcón (Hawk). Nahualism is a particularly Mexican expression of “shamanism,” which Martinez has studied for some time. It provides a rich and ample range of symbolic associations in art, ritual, and even calendrics, some of which can be traced through rock art to the hunting context which preceded the advent of agricultural cultivation. Just as in the Paleolithic paintings, scenes of real hunting are extremely rare in Mexican rock art, and can be attributed mainly to later periods after cultivation replaced hunting and gathering as the main subsistence strategy. The original meaning of the animal as a symbol of power was transformed in this process, and survives today only in specific ritual contexts.

While his focus refers specifically to the Mexican context, Martinez suggested that similar patterns of symbolic transformation might be found in other parts of the world where rock art spans the transition from hunting/gathering to agricultural cultivation. This kind of indirect analogy to the conditions of the hunting way of life may be a more adequate comparative framework than the direct analogies drawn from contemporary indigenous cultures where hunting and gathering is now only a memory.

The conference cycle this year was a success largely due to the efforts of the student organizing committee headed by Juan Carlos Romero. Unfortunately, due to scheduling problems, attendance at the sessions was lower than in previous years. One can only hope that this student initiative will continue again next year as a unique forum for sharing and stimulating rock art research among the future archaeologists of Mexico. ❁

IFRAO... *continued from page 2*

monies, and it is through the voluntary generosity of people who are willing to work to support the values they believe in, that IFRAO and its mission thrives.

The member organizations recognized the need for a Code of Ethics, which was drafted after thoughtful discussions and agreements made at ensuing meetings. An agreement for unrestricted re-publication of material is a building block of the cooperation among members. Collaboration may extend to multiple publications of important material. The member organizations have been effective in rock art protection and preservation. Individual organizations may appear to have a small effect, but with the entire federation supporting the eradication of poor recording practices, successful education has occurred. IFRAO is an unobtrusive organization that does not meddle in local politics. They are about protection of this unrenowned resource to the past.

More detailed information may be found at:

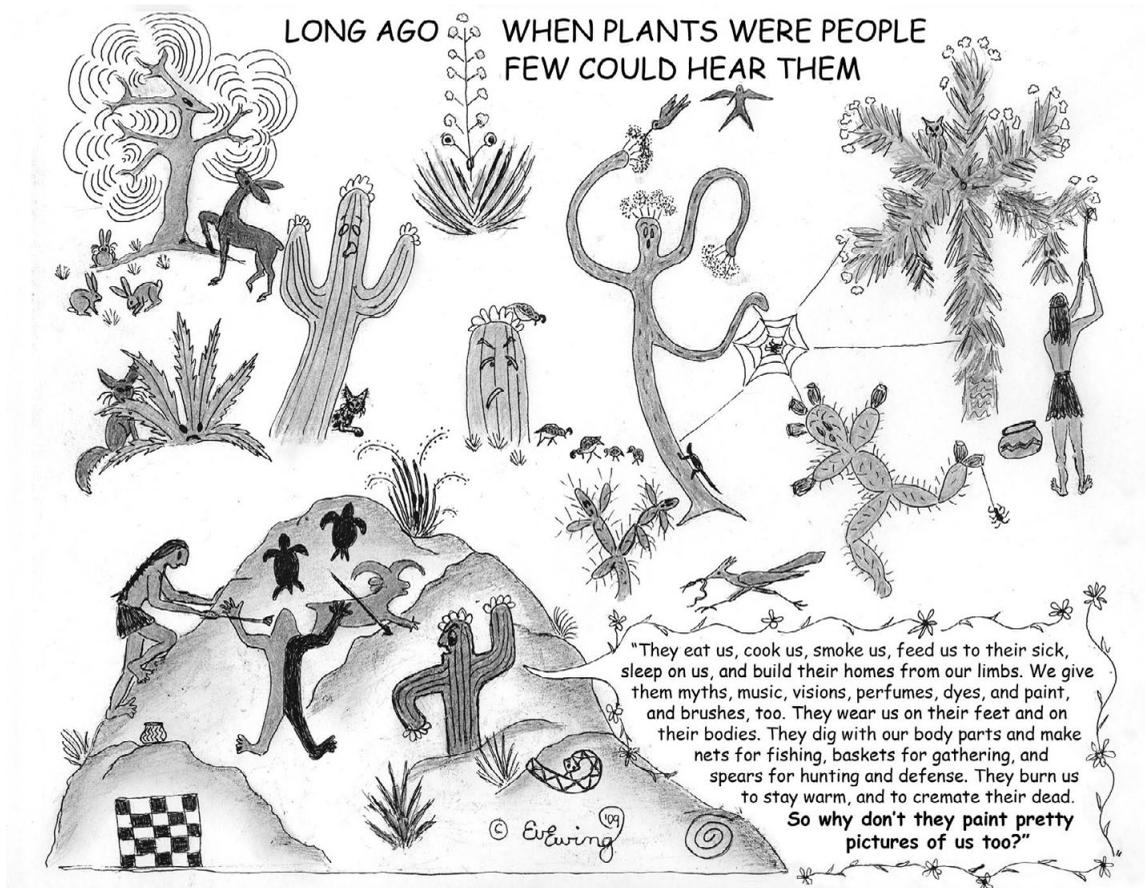
www.cesmap.it/ifrao/ifrao.html or

<http://mc2.vicnet.net.au/home/ifrao/web/hist.html>

Over the years many accomplishments have been achieved. Some of these endeavors include development of a standardized photo scale, a worldwide acceptance of non-destructive recording practices, support for saving the Côa Valley in Portugal from destruction, and a draft Glossary of Rock Art Science published in 1999, with a five language Glossary published in 2010. These have happened through the enthusiasm of individuals willing to forego personal advancement in favor of what is best for rock art. Sometimes this is by opposition of powerful interests and at great personal costs. As a member of the Federation hosting the Congress, it is our responsibility to provide a place for the exchange of ideas and concerns without outside pressures which would violate the objectives of IFRAO.

By the Third Congress, ARARA had joined IFRAO but did not always have an appointed delegate in attendance to give our report. Frank and A.J. Bock understood the great need for international cooperation and support to save rock art sites from destruction worldwide and issued an invitation for ARARA to hold a Congress. The 1994 Flagstaff Conference was designated an IFRAO Congress, and scholars and researchers worldwide came. It was a heady experience for those who were fortunate enough to attend. ARARA then co-hosted the Ripon 1999 IFRAO Congress. Plans are now underway for the IFRAO 2013 Congress in Albuquerque. Look for a separate web site announcing the Congress, which will provide up-to-date information on the events and provide an opportunity for your participation.

The 2012 Congress will be in Bolivia. Information on it can be obtained at <http://www.siarbcongress.org/>. ❁



Bylaws Changes Proposed by the Board

NOTE: The Bylaws are not presented here in full. Only Sections with proposed changes occur below. Membership will vote to adopt or reject these changes at the annual meeting in Idaho Falls in May 2011.

ARTICLE IV: MEMBERSHIP

Section 1.

- (a) Individual Member. One person with one vote.
- (b) Family Members: ~~all adults over the age of 18, and their dependent children under the age of 18, living in the same household~~ One or two adults residing in the same household and their children under age 18. Each adult shall have one vote and all share one mailing.
- (c) Student Member: individuals enrolled in accredited schools possessing current student identification cards. Students over the age of 18 have one vote per membership.
- (d) Society or Institution Member, such as libraries or other rock art or archaeological societies. Each society or institution has one vote. The voting member will be determined by the Society or Institution.
- (e) Donor member. One who pays a higher fee for membership. One vote.
- (f) Institution member

Section 2. Voting members shall be Individuals, individual adult Family members, Students, and Donor members, who are over the age of 18. Only voting members may vote on measures brought before sanctioned meetings. A Member, Society, or Institution in good standing shall be one whose dues and charges are not delinquent.

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Section 3. ARARA members shall have the privilege of attending and participating in the meetings of ARARA and all other ARARA activities. Members in good standing shall have the privilege of voting on measures brought before sanctioned meetings.

Section 4. The Members shall receive a newsletter (La Pintura) ~~at the member or family address; and the AIRA journal each year.~~

Section 5. Individuals, Families, Students, Institutions, Societies, and Donors shall be members of ARARA upon payment of annual dues.

ARTICLE V: DUES AND FEES AND FINANCES

Section 1. ~~Dues~~ ARARA dues are assessed by calendar year. ~~of ARARA; renewals~~ Renewals are payable ~~July~~ January 1 and shall be delinquent ~~September~~ March 1.

Section 2. The Board shall assess dues for each class of members.

ARTICLE VI: BOARD

Section 4. The Board:

- (a) Shall perform all duties imposed on them collectively or individually by law, by the Articles of Incorporation of ARARA, or by these Bylaws;
- (b) Shall appoint and remove, employ and discharge, and, except as otherwise provided in these Bylaws, prescribe the duties and fix the compensation, if any, of all officers, agents, and employees of ARARA;
- (c) Shall appoint the Chairs of ~~standing Committees~~ and members to serve on special and ad hoc committees or projects. The Board does not appoint Chairs of Standing Committees except as required by these Bylaws;
- (d) Shall supervise all officers, agents, and employees of ARARA to assure that their duties are performed properly;
- (e) Shall meet at such times and places required by these Bylaws;
- (f) Shall register their addresses with the ARARA Secretary so that notices of meetings may be communicated (postal, email, fax, telephone) on a timely basis.

ARTICLE VII: QUALIFICATION, ELECTION, AND TERMS OF OFFICE

~~Section 1. Qualification:~~

~~Any voting member in good standing may serve as an Officer or Director of ARARA. Officers shall be elected by mail ballot in even numbered years and serve for a period of two years. The Board shall appoint one standing Director to the position of Conference Coordinator with a term and responsibility established by the Board that will allow continuity and commitment for the planning horizon of future Conferences. Remaining Directors shall be elected in odd numbered years and serve for a period of two years. Elected Directors can serve for no more than two consecutive terms without a break in service. The President and Vice-President may serve for no more than two consecutive full terms of office. Terms of office shall begin July 1 following the election.~~

~~Section 2. Time of Election:~~

~~Each election shall be completed before the Annual Business Meeting of ARARA.~~

~~The Nominating Committee shall issue a call for nominations for the elected positions to be filled no later than February 1. The Nominating Committee shall ensure that at least one candidate is nominated for each open position. It shall be the privilege of any five members of ARARA to nominate in writing or email with RSVP a willing candidate who is a voting member, or, if there is more than one position to be filled, candidates not exceeding the number of positions to be filled by March 1. This statement shall certify that the nominee(s) will accept the nomination(s).~~

~~Section 3. Ballots: By March 15, a ballot shall be sent to all voting members in good standing of ARARA stating the date on which the returned ballot shall be postmarked. The ballot shall contain, in alphabetical order, the names of those persons who~~

have been nominated for each position, and shall indicate whether the person was nominated by the Nominating Committee or by members. The ballot should contain brief biographical information about each nominee. This statement shall certify that the nominee(s) will accept the nomination(s).

Section 1. Qualification:

Any member in good standing may serve as an Officer or Director of ARARA.

No member of the Nominating Committee may nominate themselves to serve as an Officer or Director of ARARA. For a member of the Nominating Committee to be a nominee, he or she must be nominated by a group of five members of ARARA who are not members of the Nominating Committee.

Section 2. Election:

Officers (President, Vice-President, Secretary, Treasurer) shall be elected by mail ballot or electronic ballot in even numbered years. Directors (non-officers) shall be elected by mail ballot or electronic ballot in odd numbered years.

Ballots shall be sent to all voting members in good standing of ARARA stating the date on which the ballot shall be returned either by email or postmarked if by USPO.

Section 3: Terms of Office

Terms of office shall begin July 1 following the election at the annual meeting.

Officers and Directors shall serve for two years.

The President and Vice-President may serve no more than two full consecutive terms of office. Secretary and Treasurer may serve unlimited consecutive terms.

Directors may serve no more than two consecutive terms without a break.

Section 4: Time of Election

Each election shall be completed before the Annual Business Meeting of ARARA.

The Nominating Committee shall issue a call for nominations for elected positions to be filled no later than February 1. The Nominating Committee shall ensure that at least one candidate is nominated for each open position, and that nominees are willing to serve.

Any five members of ARARA may nominate a candidate in writing or email with RSVP. Candidates shall be ARARA members, and the nomination statement shall certify that the nominee(s) will accept the nomination(s).

Section 5: Conference Coordinator

The Board may appoint one ARARA member in good standing to the position of Conference Coordinator for a period of four years, with an option to renew that position by Board vote in four-year terms, with no limitation on number of terms. The Conference Coordinator is a voting member of the Board of Directors. At any time during the term, the Conference Coordinator may be removed by a vote of the Board of Directors.

ARTICLE XI: QUORUM

A majority of the Board shall constitute a ~~establish its own~~ Quorum for the transaction of business. Subject to the more stringent provisions of the California Nonprofit Public Benefit Board Corporation Law, every act or decision done or made by the majority of the Board members present at a meeting duly held at which a quorum is present shall be regarded as an act of the Board. A meeting at which a quorum is initially present may continue to transact business, notwithstanding the withdrawal of Board members, if any action taken is approved by at least the required Board quorum for that meeting.

ARTICLE XIII: COMMITTEES

Section 1. Awards Committee:

The Awards Committee shall consist of ~~three (3)~~ a Chair and at least two (2) voting members in good standing in ARARA. The Committee shall issue a call for nominations for the Castleton, Wellman, ~~and~~ Conservation, Education, Bock Extraordinary Achievement awards, and any other awards duly established by the organization, to the membership of ARARA in La Pintura, ~~volume Number 1 of the current year, on ARARA Online~~, or in another manner deemed appropriate by the Awards Committee with permission of the Board. The Committee will determine which Awards, if any, will be presented at the Annual Business Meeting of ARARA. The Committee shall choose with Board consent appropriate prizes for each category of approved Awards. The Committee shall make a report of the Awards at the Annual meeting and in a subsequent issue of La Pintura. The Awards Committee shall prepare a budget request for committee expenses to be presented to the Board at the beginning of the fiscal year on July 1: at the time the President calls for Committee Budget reports.

(a) Klaus Wellman Award: This award is for distinguished service in the field of Rock Art research, conservation, and education. No less than five voting members in good standing of ARARA shall sign the nomination for this Award. Nominations will be accepted any time prior to an established and published deadline before the annual meeting. The nominations shall cease by March 1 of the year of the nomination. The Awards Committee shall decide if the Award is to be presented at the Annual Business Meeting. The Board will affirm the nominee selected by the Awards Committee.

(b) Castleton Award: This competitive award shall be for excellence in an original essay in heretofore unfunded Rock Art research. The recipient shall make a thirty (30) minute presentation on the research at a time selected by the Board in conjunction with the Annual Meeting. A letter of application and five copies or an electronic copy of the presentation shall be received by February 15 an established and published deadline before the annual meeting. The Awards Committee shall decide if the Award is to be presented at the Annual Business Meeting. The Board will affirm the nominee selected by the Awards Committee.

(c) Conservation and Preservation Award: The Conservation and Preservation Award nomination shall be for an individual (professional or avocational), group, organization or agency that has taken a leadership role in significantly contributing to the promotion of Rock Art conservation or protection. The application shall include a detailed description of the work that qualifies the nominee for the award. Nominations will be accepted any time prior to an established and published deadline before the annual meeting. The nomination shall be received by December 31, and the Awards Committee shall decide if the Award is to be presented at the Annual Business Meeting. The Board will affirm the nominee selected by the Awards Committee.

(d) Education Award: The Education Award nomination shall be for a professional or vocational individual, group, organization or agency that has made a scientific or an artistic contribution through lesson plans or programs that include the visual arts and/or creative writing or creates educational materials (e.g., films, handouts or books). Nominations will be accepted any time prior to an established and published deadline before the annual meeting. The Education Committee in cooperation with the Awards Committee will review nominations for the education award and make recommendation to Awards committee. The Board will affirm the nominee selected by the Award Committee. This award is privately funded, and if donated funds are not available, ARARA may choose not to make the award that year.

(e) Bock Extraordinary Achievement: The ARARA Board may present the Frank & A. J. Bock Award for Extraordinary Achievement from time to time to candidates with extraordinary achievements over their lifetime in the fields of rock art studies, documentation, education, conservation, and outreach. Nominations will be accepted any time prior to an established and published deadline before the annual meeting. The Board will affirm the nominee selected by the Award Committee.

Section 2. Publication Committee:

The Publication Committee shall consist of members of ARARA in good standing. This Committee shall select from committee members a Chairman, ~~Vice Chairman~~, and Secretary. The Editors (Content and Layout) of La Pintura are members

is a member of this Committee. The Committee shall select an editor for the AIRA volume published each year by ARARA and any other publication that the Board approves. This Committee shall edit committee brochures, pamphlets, and publications. The Publication Committee shall promote the sales of the AIRA volumes and other publications of ARARA.

The Publication Committee Chairman shall appoint members to special committees to assist in the Committee's goals as approved by the Board.

The Publication Committee shall prepare a Budget request for the La Pintura and AIRA Volume expenses to be presented to the Board at the beginning of the fiscal year on July 1. at the time the President calls for Committee Budget reports.

Section 3. Education Committee:

The Education Committee shall

- (1) inform and educate the public about Rock Art;
- (2) promote respect for the Rock Art heritage;
- (3) foster Rock Art preservation.

The Education Committee shall consist of members of ARARA in good standing. This Education Committee shall select from voting committee members of the committee membership a Chairman, Vice Chairman, and Secretary. The Chairman may appoint special committees to further the Education Committee's goals with the prior approval of the Board.

The Education Committee shall prepare a budget request for their committee expenses to be presented to the Board at the beginning of the fiscal year on July 1. at the time the President calls for Committee Budget reports.

Section 4. Conservation Committee:

The Conservation Committee shall

- (1) inform and educate the public about Rock Art conservation;
- (2) communicate, publicize, and be active in concerns of Rock Art conservation worldwide;
- (3) sponsor and advocate modern scientific and non-destructive conservation techniques and technology.

The Conservation Committee shall consist of members of ARARA in good standing. This Committee shall select from voting committee members of the committee a Chairman, Vice Chairman and Secretary. The Chairman may appoint special committees to further the Education Conservation Committee's goals with the prior approval of the Board.

The Conservation Committee shall prepare a budget request for their committee expenses to be presented to the Board at the beginning of the fiscal year on July 1. at the time the President calls for Committee Budget reports.

ARTICLE XIV: AMENDMENT OF BYLAWS

A Bylaws Committee and Chair shall be appointed by the Board as the need arises. Amendments to the Bylaws shall be submitted to the Board for approval at least sixty (60) days prior to the Annual Meeting. Following such approval, the Bylaws may be amended by a two-thirds (2/3) vote of those voting members present and voting at any Annual Meeting, provided that the text of the proposed amendments has been transmitted to the members at least thirty (30) days prior to the meeting.

Adopted

May 30, 2004

Revised

May 30, 2005 to be voted on May 2011

Call for Papers for *La Pintura*

ARARA members would love to read about your new rock art discovery, recording project, or new idea for interpretation. *La Pintura* needs members to submit articles on current research or fieldwork. Doing so will make *La Pintura* a better journal. Editorial guidelines can be found on the inside back cover of every issue.

Editorial Deadlines for *La Pintura*

To insure timely publication of each issue of *La Pintura*, please follow the following schedule of deadlines for all editorial copy and other submissions:

Issue 1: February 1

Issue 2: May 1

Issue 3: August 1

Issue 4: November 1

Send all materials for inclusion in *La Pintura* to:
William Breen Murray, Editor
WBMurray1@yahoo.com

International Newsletter on Rock Art

INORA — *The International Newsletter on Rock Art*, edited by Jean Clottes and published in French and English three times a year (February, June, November) — is available to ARARA members for \$25 a year. Subscribe through ARARA and save the \$10 French bank charge. The 32-page newsletter contains the latest international rock art news. To subscribe, send a check for \$25 **made out to ARARA** to:

Donna Gillette
1147 Vaquero Way
Nipomo, CA 93444-6657
rockart@ix.netcom.com

La Pintura is the official newsletter of the American Rock Art Research Association. Subscription to this publication is a benefit of membership in ARARA. Back issues of *La Pintura* are available electronically on the ARARA website, <http://www.arara.org>.

ARARA Addresses

ARARA has several addresses. To get the most timely response, please send your inquiry to the right place.

Membership

For **all Membership matters**, including new and renewal memberships (see full membership information on inside back cover), replacement of undelivered issues of *La Pintura*, and corrections or changes in membership information and addresses, contact:

ARARA Membership
Donna Yoder
2533 W. Calle Genova
Tucson, AZ 85745-2526
donnayoder@cox.net

La Pintura Editorial Matters

For **editorial matters relating to *La Pintura***, including letters and articles for publication (see guidelines on inside back cover), **preferred contact is by e-mail:**

William Breen Murray, Editor
WBMurray1@yahoo.com

Postal mail for the *La Pintura* Editor may be sent to:

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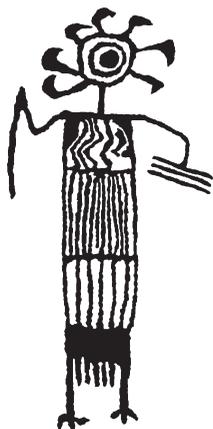
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Archive, Library, Book Orders

For information on the **ARARA Archive, Library, and publications** available for sale, contact:

ARARA Archive
3711 W. Deer Valley Rd.
Glendale, AZ 85308-2038
(623) 582-8007
dvrac@asu.edu



The **American Rock Art Research Association** is a non-profit organization dedicated to encourage and to advance research in the field of rock art. Association members work for the protection and preservation of rock art sites through cooperative action with private landowners and appropriate state and federal agencies.

The **Association** strives to promote non-destructive utilization of rock art for scientific, educational, and artistic purposes. This is accomplished through a wide-ranging program to inform and educate the members as well as the general public regarding the rock art heritage of the United States as well as worldwide. These goals are communicated through the quarterly newsletter, *La Pintura*. Annual

three-day conferences give both members and others interested in rock art the opportunity to share professional papers, slide presentations, and informal discussions.

Membership in the **American Rock Art Research Association** is open to all with an active interest in research, non-destructive use, and preservation of rock art, regardless of their nationality or country of residence. Membership fees are:

Donor	\$120.00
Family	\$50.00
Individual	\$45.00
Society/Institution	\$60.00
Student	\$35.00

*Student rate requires photocopy of current student ID. Foreign members please add \$5.00 for Canada/Mexico, \$10 for other countries.

Membership runs from January 1 through December 31 of each year. The Association is concerned primarily with American rock art, but membership is international in scope. Benefits include *La Pintura*, one copy of *American Indian Rock Art* for the year, reduced conference fees, and current news in the field of rock art. More importantly, membership means a shared concern for the ongoing conservation and preservation of one of the most significant elements of our heritage. Send memberships to:

ARARA Membership
 Donna Yoder
 2533 W. Calle Genova
 Tucson, AZ 85745-2526
 e-mail: donnayoder@cox.net

ARARA Code of Ethics

The **American Rock Art Research Association** subscribes to the following Code of Ethics and enjoins its members, as a condition of membership, to abide by the standards of conduct stated herein.

1. All local, state, and national antiquities laws will be strictly adhered to by the membership of **ARARA**. Rock art research shall be subject to appropriate regulations and property access requirements.
2. All rock art recording shall be non-destructive with regard to the rock art itself and the associated archaeological remains which may be present. No artifacts shall be collected unless the work is done as part of a legally constituted program of archaeological survey or excavation.
3. No excavation shall be conducted unless the work is done as part of a legally constituted excavation project. Removal of soil shall not be undertaken for the sole purpose of exposing sub-surface rock art.
4. Potentially destructive recording and research procedures shall be undertaken only after careful consideration of any potential damage to the rock art site.
5. Using the name of the **American Rock Art Research Association**, the initials of **ARARA**, and/or the logos adopted by the **Association** and the identification of an individual as a member of **ARARA** are allowed only in conjunction with rock art projects undertaken in full accordance with accepted professional archaeological standards. The name **ARARA** may not be used for commercial purposes. While members may use their affiliation with **ARARA** for identification purposes, research projects may not be represented as having the sponsorship of **ARARA** without express approval of the Executive Committee.

The **ARARA** Code of Ethics, points 1 through 5, was adopted at the annual business meeting on May 24, 1987. The Code of Ethics was amended with the addition of the opening paragraph at the annual business meeting, May 28, 1988.

ARARA Officers & Board

e-mail: ARARABoard@gmail.com

President	Ron Smith
Vice-President	Diane Hamann
Secretary	Caroline Maddock
Treasurer	Garry Gillette
Conference Planner	Donna Gillette
Board Members	Jennifer Huang
	A. K. "Sandy" Rogers
	Marvin Rowe
	Peggy Whitehead

<http://www.arara.org>

La Pintura is published by the American Rock Art Research Association. All Editorial material for *La Pintura* should be sent via e-mail to the Editor, William Breen Murray, at WBMurray1@yahoo.com. Opinions expressed in signed articles are those of the authors and do not necessarily represent the views of the American Rock Art Research Association. *La Pintura* solicits articles, news, letters to the editor, and other items of interest to its readers. Please observe the following criteria for all manuscripts submitted. **Letter to the Editor:** No special format necessary. **News Items:** Please indicate all pertinent information such as the event, time, place, cost (if any), group or person in charge, who to contact, addresses, and deadlines. Rock Art current events and news items of interest to our members that need public notice prior to the next issue of *La Pintura* should be sent to ARARA's monthly electronic newsletter "ARARA Online." Contact Amy Gilreath at amy@farwestern.com. **Articles:** Manuscripts of original research are always welcome. They should embrace sound principles of investigation and present data in a clear and concise manner. Consult *American Antiquity* for body copy, notes, literature citations, and the proper format for References Cited. Articles are subject to editing for length. Please submit all materials intended for publication via e-mail (WBMurray1@yahoo.com). Please include author's name, title or profession, affiliation, city, state, and return e-mail address. Send illustrations as e-mail attachments. Submit line drawings as 1200dpi bitmap .tif files and black-and-white or color photographs as grayscale 300dpi high-quality-level .jpg images. Materials that cannot be e-mailed may be sent to the mailing address: ARARA, Attn: Amy Gilreath, Far Western, 1180 Center Point Circle, Suite 100, Henderson, NV 89074.

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