

La Pintura

The Official Newsletter of the American Rock Art Research Association
Member of the International Federation of Rock Art Organizations
<https://arara.wildapricot.org>

New Dates for Old Art: Inside Two Iberian Caves that are Turning Back the Clock

By Peter Anick

THE IBERIAN Peninsula is thought to have been the last refuge for Neanderthals before they went extinct. Having evolved in Europe and Asia and survived there for hundreds of thousands of years, their disappearance around 40,000 years ago, just when modern humans were arriving in Europe, has raised questions about interactions between the species and the role that modern humans may have played in their demise. It has long been assumed that a superior capacity for symbolic thinking, as evidenced by the sudden explosion of cave art during the Upper Paleolithic, contributed to the success of modern humans relative to their Neanderthal predecessors. But recent finds have had researchers rethinking whether the brutish, dim-witted image of the Neanderthal is still warranted. This reassessment is currently challenging long-held beliefs about Ice Age rock art. In this article, I describe two caves that are at the heart of the recent controversy.

The Cave of Ardales sits on a hillside above the pictur-

esque “white village” of Ardales in southern Spain’s Málaga province. Discovered after an earthquake in 1821, it served for a while as a tourist attraction for visitors who came to enjoy the nearby mineral springs. The presence of cave art was not noticed until Henri Breuil surveyed the walls in 1918, finding painted and engraved animal figures along with stenciled handprints and red dots. The cave was reopened to visitors in 1985 but serious archaeology only began as recently as 2011, with annual month-long excavations led by Dr. José Ramos from the University of Cadiz in collaboration with the German Neanderthal Museum in Mettmann (Ramos 2014). Neanderthals were known to have camped just outside and the excavation team was keen to determine whether they had made use of the cave’s interior as well.

During a road trip to Andalusia’s prehistoric sites in the fall of 2016, I had the opportunity to visit the cave with Dr. Ramos just as the season’s dig was drawing to a close. The team had opened several small excavation areas at various...

—continued on page 4

In This Issue...

- 1 New Dates for Old Art: Inside Two Iberian Caves that are Turning Back the Clock
- 2 President’s Message
- 3 Check Out Our #FridayRocks Posts!
- 10 Ancient Rock Art Vandalized
- 10 Call for ARARA Officer Nominations
- 11 Spider Grandmother and the Case for National Historic Register Nomination for Three Rivers
- 13 Cowboys of Science Versus Indigenous Rock Art
- 15 Recording the Rocky Ridge Site
- 18 Backmatter

President's Message

SEASON'S GREETINGS and Happy New Year ARARA Membership! This is the season to bring family and friends together with precaution, and after almost two years of separation and many online meetings and conversations, we are slowly making it back into a place where we can engage in person. Although many continue to work virtually, some are conducting fieldwork along with their research, and attending online workshops and conferences. However, we cannot forget that some are in the kitchen preparing meals and providing aid to those in most need of support. During this time of year, one of the best places to be is in an area that one can watch the winter solstice emerge on a rock panel of petroglyphs, with the thought of who the original artists were and their intent.

ARARA's nominating committee is in full swing; they are facilitating the nominating process for next year: 2022. The election for President, Vice President, Secretary, and Treasurer occur during even-numbered years (ARARA Bylaws-Article VI, Section 2 [a]). The membership election will take place next spring; please take time to check out ARARA's website, and check your emails to obtain additional information. Also, we have an online question portal in case you have specific questions for us that we may direct to our Nominating Committee Chair, Jim Royle.

ARARA's conference committee continues coordinating and collaborating with the conference hotel and presenters to bring us together in Great Falls, Montana, from June 17 to 20, 2022. Postings will be in various places: ARARA's website, Facebook, and via email. We continue to applaud the Conference Committee, led by Mavis Greer and Jim Keyser and their team, to produce another fantastic and enriching conference.

The online lectures committee will continue to host online presentations, which will return in January 2022.

Should you wish to watch or catch up on these online presentations, check out ARARA's YouTube channel. We have found that this is another avenue to bring us together. Come join us before all presentations at the online Happy Hour; it is our social hub. Spread the wealth and invite others to join this educational and exciting online experience!!

The Board will spend their weekend together, virtually, on February 5th and 6th to conduct the mid-year business meeting. During this weekend meeting, we will discuss the ARARA business, financials, plans for the new year, pending and new action items, and bring new ideas to ARARA. Along with this, we bring good humor and willingness to work with each Board member.

The Conservation Committee continues to conduct outreach to agencies and entities to inform and state the importance of the preservation and protection of rock art, from ARARA's standpoint. ARARA supports the educational outreach by providing information, such as our backpack tags. Margaret Berrier participated in the BLM-New Mexico archaeology day fair, and she passed these tags out at her rock art booth. Also, we are sharing these tags with Joshua Tree National Park, in California. ARARA plans to set up their booth at the 2022 Society of American Archaeology (SAA) conference, to be held in Chicago, Illinois; ARARA Vice President Linda Olson will be overseeing ARARA's booth.

ARARA continues to keep active during this time of COVID-19 and its variants; we have adjusted and will continue to keep ARARA on pace. Wishing the ARARA Board and membership a wonderful, peaceful, and healthy Holiday, as we move into the New Year: 2022. Please continue to remain safe and healthy in body and mind and continue to conduct your research and encourage others to join us in fulfilling ARARA's mission statement.

Respectfully, Ann Brierty
ARARA President



Monthly Online Lecture Series

ARARA MEMBERS would love to hear about your new rock art discovery, recording project, conservation effort or new idea for interpretation. Please contact us at: <https://arara.wildapricot.org/Contact> to submit your idea. You can view previous monthly lectures on our YouTube channel:

<https://www.youtube.com/c/ARARARockart/videos>

Check Out Our #FridayRocks Posts!

by Belinda Mollard

AS THE Pandemic hit and everyone was forced to “stay home” (or more accurately, not travel), Board member Belinda Mollard wanted to figure out a way to keep folks engaged, and still be able to visit sites. That came in the form of virtual tours of rock art sites! Every Friday a different publicly accessible site is featured in a post on our Social Media accounts, dubbed as #FridayRocks. In each post, a public site is featured to include a brief description, any unique information about the site and/or the rock art present, accessibility and photos of some of the panels and motifs present at the site.

As this content began to gain popularity, members were asked to share site information to be featured. The response has been fantastic! We have virtually visited sites all over the world over the last several months! And we’re not ready to stop yet! Visit our Social Media sites and join us for rock art adventures as we take “trips” to major sites, as well as many that are off the beaten path!

ARARA has both a Facebook page (<https://www.facebook.com/American-Rock-Art-Research-Association-ARARA-168945413304430>) and an Instagram Account (username: arara_rockart) that this regular content is posted on each Friday morning. If you would like us to feature a site, please contact us via Social Media or email and tell us why your favorite site should be a #FridayRocks destination! Our goal is to be able to all travel virtually together and enjoy new sites, or maybe just re-visit some old favorites! An example of a recent #FridayRocks post is presented here. Please go check out our Social Media pages and follow along! 🌀



Images and blog posts for the Pu’uloa site on the Big Island of Hawaii.

American Rock Art Research Association ARARA

May 21 • 🌐

...

To get to today's #FridayRocks destination, we have to go where the roads end..... Let's take a trip to the Big Island of Hawai'i, to Volcanoes National Park.

Located on the southern flank of Kilauea volcano, Pu’uloa is the name of the site that encompasses a huge area covered with petroglyphs made in the hardened lava. The archaeological site of Pu’uloa contains over 23,000 petroglyph images; motifs include cupules, circles, geometrics, abstract designs, anthropomorphs, Honu (sea turtles), canoe sails, and even feathered cape motifs.



The petroglyphs are thought to document the life and culture of the native Hawaiian people and spiritually, cradle the piko (umbilical cord) of their children. It brought hopes of receiving the blessings of a long and prosperous life. This interpretation of Hawaiian petroglyphs is not a solely aesthetic one. In 1914 anthropologist Martha Beckwith documented mothers as they visited Pu’uloa; "Here is a large pahoehoe mound used as a depository for the umbilical cord at the birth of a child. A hole is made in the hard crust, the cord is put in and a stone is placed over it. In the morning the cord has disappeared; there is no trace of it. This insures long life for the child." Thus Beckwith interpreted some of the images as:

- A dot was "the hole for a child"
- A dot in a circle "the hole for the first born"
- A dot with two circles "the first born of an ali'i [a ruling chief]"

(Beckwith, Martha. "Field notes." Hawaiian Sources Collection, Bishop Museum Library, Honolulu. No date, pp. 384-397).



*Figure 1. Negative handprint in Ardales Cave, as viewed from a location marked by a cluster of stationary lamps.
Photo from Peter Anick.*

IBERIAN CAVES, continued from page 1

distances from the cave's original entrance and were working their way down through a well-defined layer cake of cultural epochs. Evidence of human activity had been found in Magdalenian and Solutrean layers, but, as of yet, the older soil below had only yielded microfauna. Work was also underway to study what the prehistoric illumination of the cave might reveal about how the interior space was utilized. Portable stone lamps had been found left on the floor in some places. Elsewhere, stationary lamps had been constructed by converting the bases of stalagmitic columns into bowls capable of holding animal fat and a wick. At one juncture, a cluster of these stationary lamps marked the spot from which an

oddly shaped hand stencil could be viewed on the far wall of a large chamber (Figure 1). "Negative" handprints, one of the earliest known forms of Ice Age art, were produced by blowing paint over a hand pressed against the wall. A very effective aerosol spray can be achieved by blowing air through a horizontal tube held just above the opening of a second tube dipped in a bowl of pigment. Remarkably, two hollow bird bones suitable for the task were found on the floor just below this image.

At another zone close to what would have been the original entrance to the cave, Dr. Ramos took a seat alongside a bulging stalagmitic column made up of many thin speleothems



Figure 2. Stalagmitic column near the original entrance of Ardales Cave and close-ups showing red paint on speleothems. Note the line of white carbonate crust covering paint on the right edge of the third photo.

Photos from Pedro Cantalejo.

(Figure 2). Shining his flashlight into the maze of slender columns, he pointed out that many were decorated with red paint, sometimes applied in large blotches and other times in distinct slanted lines. Some of the speleothems in front had been broken off during the Paleolithic, possibly to make it easier to reach and apply paint to more recessed columns. The famed French prehistorian, André Leroi-Gourhan, had speculated that such decorated draperies found near the entrance of a cave might have served as a topological map of the cave's interior.

Small labels attached to some of the columns marked the spots where samples of white carbonate crusts had recently been extracted for uranium-thorium (U-Th) dating. This radiometric method, used for dating natural cave and coral formations, relies on the fact that uranium-234, which is soluble in water, decays into thorium-230, which is not water-soluble. Thus, in a closed system, such as the dried crust formed by calcium carbonate dripping from a cave wall, the ratio of uranium and thorium isotopes can be used to calculate the age of the crust. If by chance a carbonate concretion has formed over a painted area, then successive slivers of the crust can be removed to compute a minimal date for the application of the paint.

Neither of us knew it at the time, but these blotches of red pigment would soon call into question one of the long-held tenets of European prehistory – that the creation of cave art was a behavior unique to modern humans. A cover story in the February 2018 issue of the journal *Science* broke the news that dates obtained from three different Spanish caves anteceded the arrival of modern humans by over 20,000 years (Hoffmann 2018). The dated items included the red painted speleothems at Ardales, an abstract linear design in La Pasiega Cave and a stenciled handprint in the Cave of Maltravieso. If the results were correct, then the painters must have been Neanderthals.

Unlike the Cave of Ardales, the caves of La Pasiega and Maltravieso have not been open to the public. However, in 2019, when I was making another road trip through central Iberia, the Cave of Maltravieso initiated a one-year study to test whether limited public access could be offered without disrupting the small cave's fragile environment. I was fortunate to obtain a spot in one of their experimental 4-person tours.

The cave is located in a quiet suburb of Cáceres, the provincial capital of Extremadura. Discovered in 1951 after an explosion in a limestone quarry, it wasn't until five years later that a local researcher, Carlos Callejo, noticed faint fig-



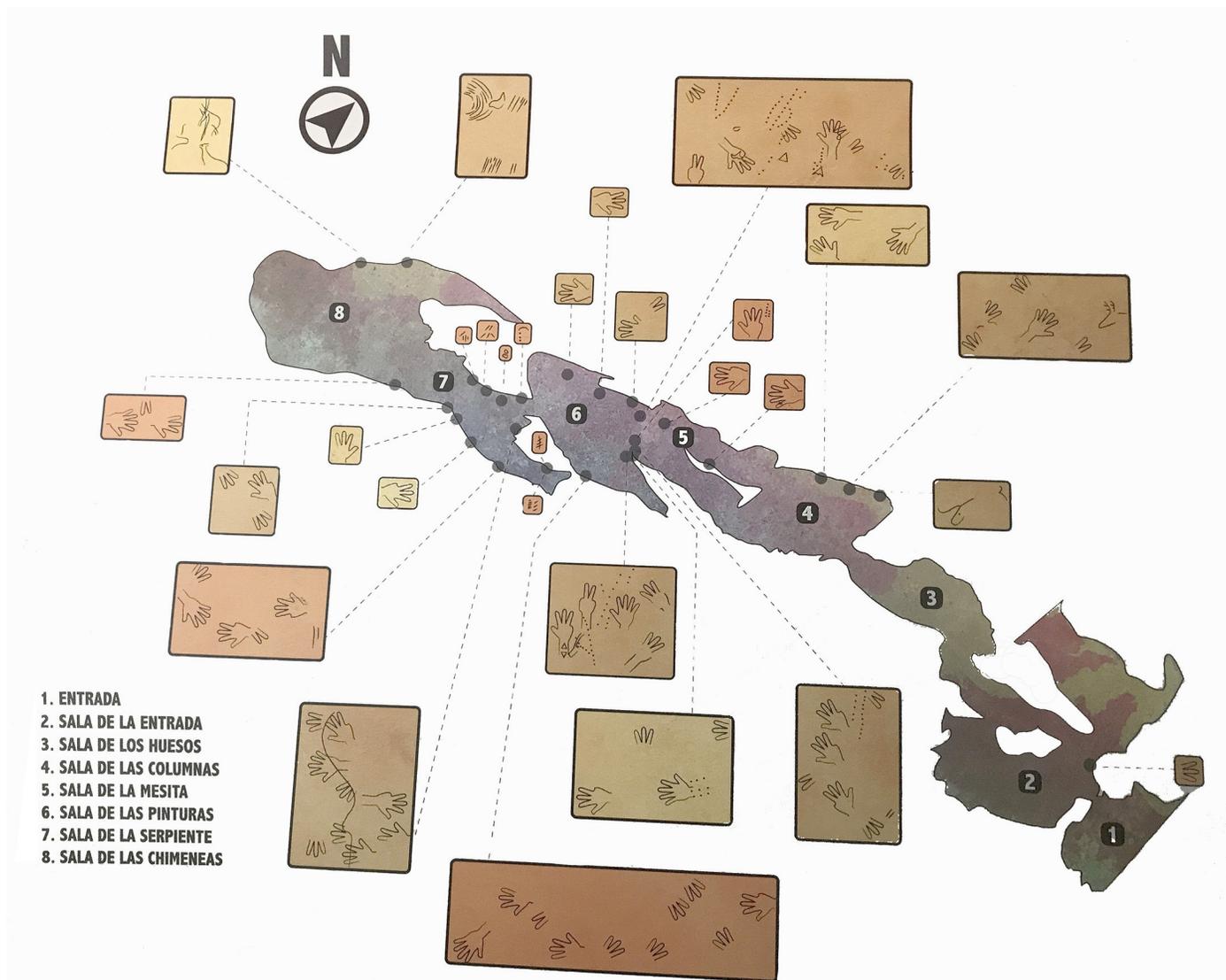
Figure 3. Tour group suited up for a visit to Maltravieso Cave (entrance in background). Photo from Peter Anick.

ures on the walls. The vast majority of these turned out to be hand stencils, although some animal outlines and “abstract” lines, triangles and dots also appeared. Quarrying was halted and eventually an interpretation center was constructed near the cave, which now offers information panels, a short film, and a virtual reality tour of the cave.

To undertake a non-virtual tour, I joined three other lucky visitors for an orientation at the interpretation center. Then we all suited up in protective clothing designed to minimize contamination of the cave (Figure 3). At the cave entrance, we donned helmets and masks and slid coverings over our shoes. Although it was hot with the extra layers, after squeezing through several tight apertures and crouching to examine images in the narrow rooms, I was thankful for the protection they afforded us from the rust-colored clay that coated the floors.

There are over seventy handprints documented within the cave (Figure 4), but detecting the negative images proved

to be a challenge. Our eyes were not used to looking for the absence, rather than presence, of paint on the unevenly colored walls. With some patient coaching by the guides, we gradually tuned our vision to recognize the ghostly traces of fingers, palms, wrists, and sometimes a whole forearm. Many of the hands were missing digits, an eerily common feature of handprints in Ice Age caves. Originally thought to be a consequence of frostbite or intentional amputation, missing fingers are now thought to be part of a visual sign language. Many of the stenciled images can be simulated by bending fingers. However, a careful inspection of Maltravieso’s many missing pinky fingers revealed that paint may have been added afterwards to obscure specific parts of the print (Ripoll 1999). The orientation of the hand may also have served some symbolic function. Most were positioned horizontally, extending either to the left or right, but some were vertically or diagonally oriented. The majority were left hands, as would be expected if the creators were holding



**Figure 4. Map of Maltravieso Cave, showing locations of figures (from Maltravieso Interpretation Center display).
From Peter Anick**

paint and/or a blowing device in their right hands.

The handprint with the oldest recorded date was located in a room called the Gallery of the Serpent after a red meander running down one of its walls. Handprints had been stenciled straddling the red line and at many other spots along the walls. But the panel containing the print in question was not visible from the center of the chamber. We had to maneuver on our backs to get underneath a hanging rock curtain along one edge of the room. Looking back up at the curtain while still lying on our backs, we found ourselves facing a small panel with four nearly invisible hand stencils, each oriented in a different direction—left, right, up and down (Figure 5). Two carbonate concretions over painted portions of the downward pointing hand near the center of the panel had yielded dates of approximately 65 and 40 kya, rendering this image the oldest dated painting in Europe.

Digital enhancement of the hands with DStretch (Harman 2008) seems to show that, in each case, the pinky finger was partially obscured with paint. If all of these prints were contemporaneous, this would suggest a very deep antiquity for this practice, and, by implication, for the use of visual codes by Neanderthals.

Given how little headroom there was in this cramped space, I had to wonder not only why such a secretive spot was selected but also how anyone—Neanderthal or otherwise—had managed to produce the stencils, particularly the upside down one. It would have required some tight maneuvering to hold one's palm in such a position while managing to blow paint over it, even if it was a team effort.

Whatever difficulty Neanderthals may have had in creating the images was dwarfed by the discomfort that many prehistorians felt with the unprecedented early dates and



Figure 5. Maltravieso panel with faint negative handprints (natural and enhanced with DStretch). Three out of four prints are barely visible. The downward pointing hand near the center of the panel was dated to 65 kya. Note the obscuring paint over all of the pinky fingers. From H. Collado.



the paradigm shift they implied. It didn't take long for the methodology to be challenged. A group of 44 experts published a critique in the *Journal of Human Evolution* raising a number of objections (White et al 2020):

- The vast majority of C-14 dates for European hand stencils places them during the Gravettian period between 25 and 34 kya. None have indicated an age earlier than 38 kya;
- The large variability in U-Th dates at each site suggests that the most ancient dates around 65 kya are outliers more likely explained by erroneous dating;
- If the crusts over the paint were not a completely “closed” system, uranium may have leaked out, thereby distorting the uranium/thorium ratio in favor of

an older date;

- The presence of ochre on stalagmitic columns at Ardales could have been due not to intentional painting but to naturally occurring ochre or accidental touching;
- Neanderthal use of Bruniquel Cave in France, where they fashioned complex stalagmite constructions, showed no evidence of cave painting, despite ample available wall space.

Responding to these objections, Hoffman et al. (2020) defended their methodology, arguing that the consistent temporal order of dates obtained for successive layers of the crust ruled out uranium leakage. Variation among dates, even on the same image, is to be expected since carbonate deposits could have started forming at different times. As



Figure 6. Replica (in Gibraltar National Museum) of engraving in Gorham's Cave found in Neanderthal strata. From Peter Anick.

for comparisons with previous carbon-14 dates, they noted just how few examples of Paleolithic cave art have yet been directly dated, either by carbon-14, which requires organic material in the pigments, or by U-Th, which requires mineral concretions over pigment. Since U-Th produces minimal ages which depend on when the concretions began to form over the paint, many dates may be underestimating the actual age by millennia.

A second paper (Martí et al. 2021) responded to the question concerning the source of ochre on the speleothems at Ardales Cave. Microscopic analysis revealed that the pigment on the columns differed from naturally occurring ochre within the cave and must have been brought in from outside. Variations in the composition of the paint, consistent with differences in dates, suggest that multiple painting episodes took place over the course of tens of thousands of years. The authors hypothesize that the splatterings of paint, some on hard to reach columns, served to ritually mark the stalagmitic dome as a significant territorial landmark, one likely associated with a long-running narrative concerning the underground world.

Other recent finds have offered further evidence that Neanderthals engaged in symbolic behavior. These include deliberately notched and engraved bones (Majkić et al. 2017; Leder et al. 2021), modified eagle talons apparently worn as jewelry (Radovčić et al. 2015), and the construction of a complex arrangement of broken stalagmites in Bruniquel Cave (Jaubert et al. 2016). In 2014, a configuration of deeply carved lines was discovered in Gorham's Cave in Gibraltar below sediment containing Mousterian lithics (Rodríguez-Vidal et al. 2014). Experiments attempting to replicate the lines as by-products of other activities such as cutting meat showed that they must have been intentionally abraded,

making this the first known example of Neanderthal engraved "rock art" (Figure 6).

The reassessment of Neanderthals' cognitive capabilities raises the possibility that more of the early non-figurative art long assumed to be the work of modern humans—red disks, finger marks, handprints and abstract patterns—may have instead been produced by Neanderthals. The symbolic functions of these marks might even have been shared across the two communities during the years they coexisted in Europe. While the phrase "rewriting history" is used way too often in the popular press, in this case the rock art research at caves like Ardales and Maltravieso appears to be doing just that.

Note: In May 2020, The ARARA Board of Directors submitted a letter in support of the nomination of the Cave of Ardales for UNESCO World Heritage status as part of the proposal for Caminito Del Rey and its surroundings. You can learn more about this nomination at <https://lagarganta.com/en/caminito-del-rey-nomination-proposal-unesco/>.

References Cited

- Harman, Jon
2008 Using Decorrelation Stretch to Enhance Rock Art Images. Electronic document, <https://dstretch.com/AlgorithmDescription.html>, accessed August 12, 2021.
- Hoffmann, Dirk et al.
2018 U-Th dating of carbonate crusts reveal Neanderthal origin of Iberian cave art. *Science* 359:912-915.
- Hoffmann, Dirk et al.
2020 Response to White et al.'s reply: 'Still no archaeological evidence that Neanderthals created Iberian cave art.' *Journal of Human Evolution* 144:102640.
- Jaubert, Jacques et al.
2016 Early Neanderthal Constructions deep in Bruniquel Cave in Southwestern France. *Nature* 534:7605.
- Leder, Dirk et al.
2021 A 51,000-year-old engraved bone reveals Neanderthals' capacity for symbolic behaviour. *Nature, Ecology & Evolution* 5:1273–1282. <https://doi.org/10.1038/s41559-021-01487-z>.
- Majkić, Ana et al.
2017 A decorated raven bone from the Zaskalnaya VI (Kolosovskaya) Neanderthal site, Crimea. *PLoS ONE* 12(3):e0173435. <https://doi.org/10.1371/journal.pone.0173435>.
- Martí, Àfrica Pitarch et al.
2021 The symbolic role of the underground world among Middle Palaeolithic Neanderthals. *PNAS* August 17, 2021 118 (33) e2021495118. <https://doi.org/10.1073/pnas.2021495118>.
- Radovčić D. et al.
2015 Evidence for Neanderthal Jewelry: Modified White-Tailed Eagle Claws at Krapina. *PLoS ONE* 10(3):e0119802. <https://doi.org/10.1371/journal.pone.0119802>.

—References continued on next page

Ramos, José et al. (eds.)
2014 *Cueva de Ardales, Intervenciones Arqueológicas, 2011-2014*. Ediciones Pinsapar, Malaga.

Ripoll López, Sergio et al.
1999 *Maltravieso: El Santuario Extremeno De Las Manos Memorias*. Madrid: Museo de Cáceres.

Rodríguez-Vidal, Joaquín et al.
2014 A rock engraving made by Neanderthals in Gibraltar. *PNAS* 111(37). doi: 10.1073/pnas.1411529111.

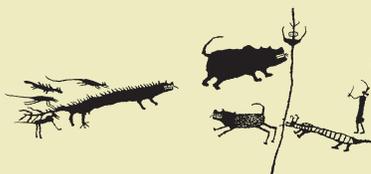
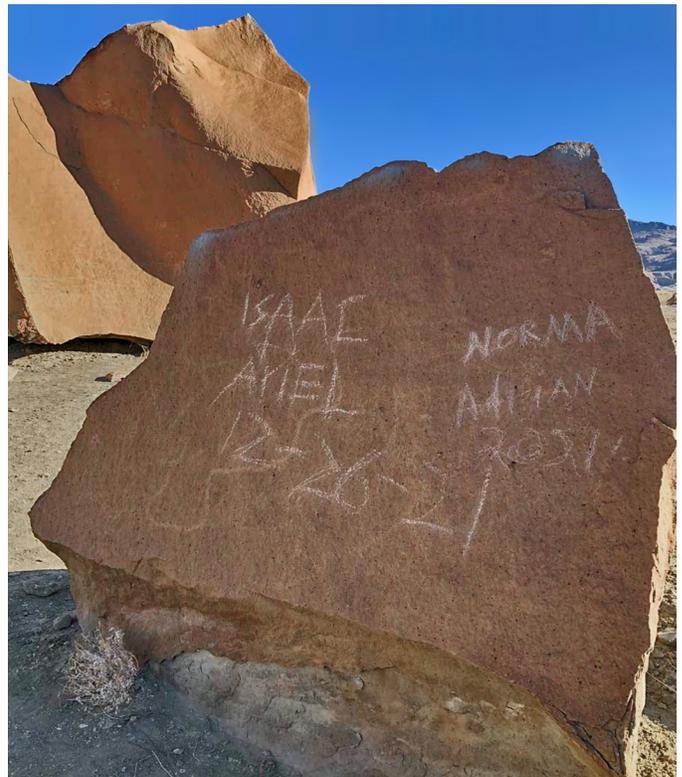
White, Randall et al.
2020 Still no archaeological evidence that Neanderthals created Iberian cave art. *Journal of Human Evolution* 144:102640. ❄️

In the News...

Ancient Rock Art Vandalized

ON DECEMBER 26th, a panel of ancient petroglyphs in the Indian Head area of Big Bend National Park was irreparably damaged when vandals chose to boldly scratch their names and the date across the prehistoric art. Park managers have seen an increase in vandalism and graffiti in the area, and ask anyone with information about these incidents, or the persons involved, to contact the law enforcement staff of Big Bend National Park. You can read the article here: <https://www.nps.gov/bibe/learn/news/ancient-rock-art-vandalized.htm>.

Anyone with information about these incidents, or the persons involved, should contact the Big Bend National Park Communication Center at 432-477-1187. ❄️



CALL FOR ARARA OFFICER NOMINATIONS

By Jim Royle, ARARA Nominating Committee Chair



NEXT APRIL, ARARA members will be voting for the officers who will serve two-year terms that begin on July 1, 2022. In accordance with Article VI of the Bylaws, the Nominating Committee has begun work to recruit a slate of candidates. You can find the full Bylaws on the ARARA webpage: <https://arara.wildapricot.org/Bylaws>.

Of the present officers, both President Ann Brierty and Vice President Linda Olson are terming out from their present positions. Secretary Karen Steelman and Treasurer Troy Scotter are eligible to serve another term.

The Nominating Committee welcomes recommendations from the members for potential candidates for the committee to consider. You can contact me at jwroyle@att.net with any suggestions for members you would like us to include in our consideration.

The Bylaws, in Article VI, Section 4(c)(ii), also make provision for members to directly make nominations by five members, and with a statement certifying that person will accept the nomination.

The deadline for nominations is February 1, 2022. Voting will begin on April 1, close on April 30, and the results will be announced on May 1. ❄️

Spider Grandmother and the Case for National Historic Register Nomination for Three Rivers

by Marglyph Berrier

THREE RIVERS has over 22,000 images along a mile and a half long ridge. The petroglyph site occupies approximately 0.56 km (Duran and Crotty 1999:38). The southern side of the west knoll at Three Rivers includes a complex series of “totem-like” boulders, many of which have distinct imagery including geometrics, masks/faces, anthropomorphs and zoomorphs. One of these is popularly (Sanders 2000:88, Cowart 2001:4-5, Schrab 2006) described as Spider Grandmother (Figure 1). Part of that dazzling array

for the interpretation of this figure as Spider Grandmother.

The west knoll has also been popularly called the “Hill of the Masks” because of the katsina-like faces and figures on the pillars of stone. One of these is a goggle-eyed figure, one of the signature elements in Jornada Mogollon rock art. The

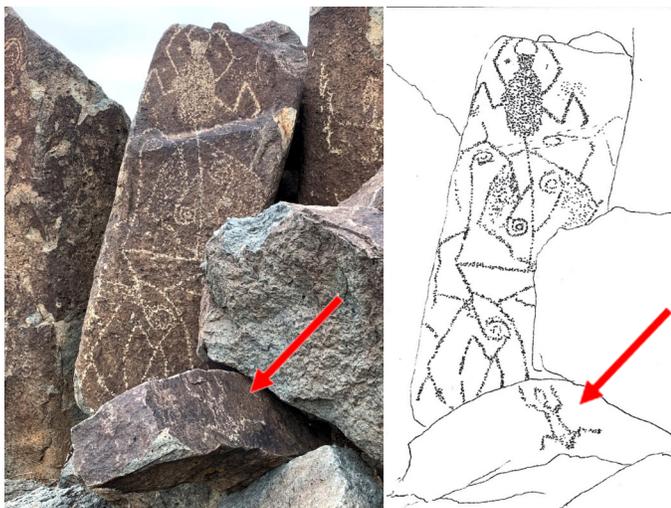


Figure 1: Three Rivers “Spider Grandmother” Boulder.

of boulders is shown in Figure 2. Cowart suggests that this is an anthropomorphized spider woman with only four legs. That panel faces south and is 125 cm tall! Located below the “Spider Grandmother” is a small anthropomorph (marked with red arrow in Figure 1) that resembles an anthropomorph in a possible birthing position. On the back side of the boulder above “Spider Grandmother” is a panel that includes a male anthropomorph, a cat paw print and a scroll (Figure 3).

There are numerous oral histories for spider grandmother, and she seems to have the strings of her web spread far and wide. A quick search for Native stories on spider and spider grandmother includes many oral histories. Some of these include helping others, giving advice, warfare, twins, healing, and rain. Sometimes she is associated with birthing and as a patroness of women (Parsons 192-193) and being the mother of all (Parsons 644). The birthing scene and male anthropomorph could be part of the supportive evidence



Figure 2: A portion of the west knoll including the “Spider Grandmother” boulder



Figure 3. Male anthropomorph, cat paw print, possible mask and scroll.

...arrow on Figure 3 points to the goggle-eye (Figure 4). At the base of the southwest corner is a boulder with an image of two facing birds and a cloud terrace which looks up at the anthropomorphic like pillars (Figure 5). As you can see, Spider Grandmother's story is only one of many to be seen at this site.

Currently the BLM has several projects in and around Three Rivers including resurveying the nearby habitation sites and lidar mapping. One of the most important projects

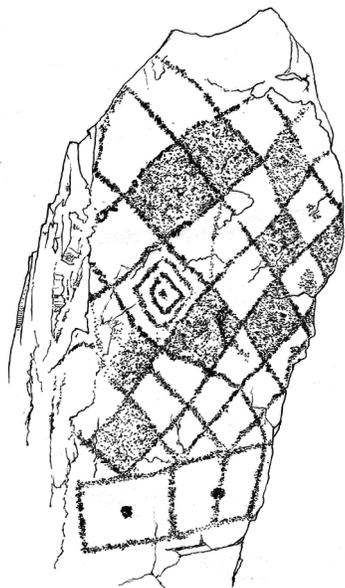


Figure 4. Goggle-eyed figure from one of the pillars overlooking the "Spider Grandmother."

is getting the area on the National Register of Historic Places. You say, "What? I thought it was already on the National Register?" The site was submitted for, and received nomination to, the State Historical Register in 1983. Due to a technicality, it was not automatically submitted for nomination to the National Historic Register which was commonly the case in those days. SHPO sent the nomination back for revisions. Many folks assume since it is on the State Register that it is also on the National Register, but it isn't. The forms and requirements for National Historic Register sites has changed and although several individuals working with the Bureau of Land Management have tried to get the site approved, the nomination has not been approved.

Three Rivers was recorded by the Archaeological Society of New Mexico (including members of ARARA) between 1987 and 1992. That recording included over 9000 hours of field work but also countless hours preparing reports afterwards (Duran and Crotty 1999:1). This site contains some of the most densely imaged areas I have seen. Living a mere 100 miles from this treasure, I must admit that I think all that is needed is one visit to the site to see its significance. This site deserves more protection and consultation with Native consultants.

Currently the Bureau of Land Management office in Las Cruces is working on the nomination along with a consultant from Sacred Sites, Inc. Wouldn't it be great if the state of New Mexico would get on board with this one so the National nomination could be moved along?



Figure 5. Facing Birds and Cloud Terrace facing up towards Spider Grandmother and other stories on stone.

References

- Cowart, Fredric H.
2001 *The Best of Three Rivers Sketchbook*. Self-Published.
- Duran, Meliha S and Helen K. Crotty
1999 Three Rivers Petroglyph Site: Results of the ASNM Rock Art Recording Field School. *The Artifact* 37:2. El Paso Archaeological Society, Inc. El Paso, Texas.
- Parsons, Elsie Clew
1939 *Pueblo Indian Religion*. University of Chicago Press. Chicago.
- Sanders, Joe Ben
2000 *The World's Oldest Book: Three Rivers, New Mexico*. Self-published
- Schrab, GERALYN E.
2006 *Weaving the Past with the Present: Coloring Book of Petroglyph and Pictograph Sites of North America*. Self-published. ❄️

Reminder!!!!

BOTH GRADUATE and Undergraduate Student Research Awards are Due by January 31st 2022! If you have any Questions please the Education Committee Chair Tim Dodson at tsd106@gmail.com. ❄️

Cowboys of Science Versus Indigenous Rock Art

by Linea Sundstrom

AN INCIDENT recently came to light in which a geology field expedition drilled numerous sample holes in a rock surface containing Native American rock art. The damage happened in 2017 when a professor from Caltech, a prestigious private university, drilled 29 core holes in a rock containing Indian petroglyphs near Bishop, California, further damaging the rock by marking each drill hole with blue paint. Some of the drill holes are within three feet of a petroglyph. The rock art site is on federal land administered by the Bureau of Land Management and lies within a designated area of critical environmental concern (ACEC), meaning that it receives special protection because it contains important and fragile resources.

In an out-of-court settlement this year, Caltech agreed to pay for repairs to the site and issued a statement that can only be described as a non-apology, making no credible assurances that they would take steps to prevent such incidents in the future or that they take the incident seriously either as wanton destruction of public resources or as a desecration of a site considered sacred by local Native American communities. Is this too harsh a judgment of the professor, his graduate students, and the university administrators? Perhaps not, given that Cal State Northridge geologists had been caught after drilling 41 sample holes into a petroglyph site on federal land near Bishop in 2008. It is hard to imagine that Caltech geologists were unaware of their colleagues' offense nine years before.

The Cal Tech story seems to be part of a larger pattern: the culture of the self-named Cowboys of Science. Cowboys of Science are not all geologists. Some, in fact, are archaeologists. They are researchers who view fieldwork as an enterprise that should either be unregulated altogether or exempt them from the regulations. To them, fieldwork seems to be more an opportunity to showcase their toughness and masculinity, with data-gathering a distant second.¹ An op-ed in a geology newsletter (see link below) addressing this culture was illustrated with a photo of a grad student wearing a T-shirt that reads "It's not trespassing if you're a geologist." These highly educated researchers seem to imagine they are living in some Wild West fantasy in which they are free, quite literally, to mark their territories and to wave off com-

mon courtesy and regulations.

Like his Cal State Northridge counterpart, the Caltech professor did not apply for a research permit from the Bureau of Land Management as required by law. Had he done so, the permit would have specified measures to prevent damage to archaeological sites. And it is highly unlikely that he would have been allowed to sample within the designated area of critical environmental concern. But instead, he decided to forge ahead and hope he didn't get caught, as happens more often than not. A volunteer site steward, ARARA stalwart David Lee, who happened to be visiting the site when the geologists were there, observed and reported the incident.

Is it indeed a larger pattern? Members of a geology class from Ohio State University spray-painted their names on rock art boulders in Utah in 2015. In 2018, a University of Dallas professor drilled 41 sample holes into a rock art site in Nevada, for which his university is now obligated to cover the costs of restoration. I personally have seen where an entire geology field class carved their names into a rock art site, which is also a prominent Native American sacred site. This photo shows sample holes for some sort of geological research project drilled directly into a petroglyph, as well as at short intervals all across the rock art panels. That one perhaps was legal, as the site lies on private land, but it is hard to imagine any reason why the drilling had to be done not just at a rock art site, but directly through the prehistoric carvings. The area in question contains many alternative locations for such research.

Other geologists have been caught illegally removing fossils from public lands. In 2003, a University of Washington professor was found to have removed thousands of fossils from public lands in the West without proper permits over the course of 35 years. Although his actions seriously tarnished the reputation of the esteemed Burke Museum in Seattle, which had housed the fossils, his only consequence was to be forced into retirement at age 70. The museum was left with the task of sorting out which of the professor's 45,000 fossil specimens had been obtained illegally. In 2015, five geology students and "sponsors" on a community college field expedition stole dinosaur bones from public lands during an unauthorized side trip. They pleaded guilty to theft and trespass. The college issued a statement saying the students had been instructed not to take fossils and that their professor was not aware of their illegal activities.

Cowboys of Science think the rules don't apply to them. They will sacrifice archaeological deposits that they consider

¹ A study of archaeological field conditions in Australia found a culture that "valorizes everything connected with the active (and actively) heterosexual male, or perhaps more specifically, everything connected with a certain type of masculinity; Stephanie Moser, On Disciplinary Culture: Archaeology as Fieldwork and Its Gendered Associations, *Journal of Archaeological Method and Theory* (2007) 14:235-263, p. 247.



Drill holes for geological research on a rock art panel, South Black Hills, South Dakota.

...uninteresting to get to the “good stuff.” They are not interested in protecting Native American sacred sites if those sites are in the way of their research. Perhaps not incidentally, many of them exploit students, allowing unsafe field conditions and sexual harassment and presenting students’ research as their own, all as the “initiation fee” for their club. Students who need course credit, on-campus jobs, and letters of recommendation have little recourse against such “mentors,” who meanwhile gain prestige and promotion by publishing on data that were acquired illegally or unethically. Inculcating students into this culture does them no favors. Most geology, paleontology, and archaeology students will end up working in industry, not academia, and in industry they will be required to understand and follow the laws regarding public lands. Their employers will not give a wink and a nod to potentially large fines for illegal activities.

BLM senior paleontologist Scott E. Foss has called for geoscientists to improve their ethical conduct in the field “both as individuals and as a discipline.” He sums it up neatly:

“Respect the values of other users of the land; consider the impact that your work will have on the environment; and teach by example.” Please listen to Scott. Let’s put these harmful practices to rest.

<https://www.earthmagazine.org/article/geoethics-field-leading-example/>

Additional sources:

<https://archive.seattletimes.com/archive/?date=20060128&slug=burke28m>

<https://www.latimes.com/environment/story/2021-07-19/caltech-fined-for-damaging-native-american-cultural-site>

<https://www.latimes.com/opinion/story/2021-07-26/editorial-caltech-petroglyphs-illegal-drilling>

https://wacotrib.com/news/police/ex-mcc-students-employee-charged-with-stealing-dinosaur-bones-in/article_ffbe0acc-080c-11e6-a25f-5357429b884a.html

https://wacotrib.com/news/police/ex-mcc-field-trip-attendees-plead-guilty-to-stealing-dinosaur/article_b1a71184-ac0a-517b-8260-c19b70aa580b.html ❄️

Recording the Rocky Ridge Site

By Lawrence Loendorf and Amanda Castañeda

ROCKY RIDGE (42DA14) is a major rock art site with hundreds of petroglyphs and a single pictograph that are found in 63 panels or groupings of figures along a sandstone outcrop a few miles south of Manila, Utah. The site is on private property and is well protected by its owners. While the bulk of the petroglyphs are found on the south-facing sand-

stone ridge, there are some important panels on large boulders that have rolled down to the flat below the ridge.

The Rocky Ridge site has been known to archaeologists for years and although the petroglyphs had been photographed and scale drawings made of some of the panels, the site was not intensively recorded until Sacred Sites Research, Inc., a



Figure 1. Recording Rocky Ridge petroglyphs. (a) Laurie White tracing while using an umbrella to shade part of the panel. Weighted poles used to hold the tracing film in place make it possible to avoid the use of tape. (b) Nina Bowen uses a reflector to highlight details in a panel while Charles Koenig is completing a panel form; (c) Susan Hovde is doing a scale drawing while Julie Francis is collecting panel form data; (d) Diana Acerson is completing a panel drawing.



42DA14
Rocky Ridge
Panel 4a-c
9-26-20
D. Kaiser

Figure 2. Panel 4 at the Rocky Ridge site. Early Archaic age panel that is dominated by anthropomorphs made as solid figures and as outline forms with interior lines.

non-profit company, organized an effort with the Utah Rock Art Research Association to intensively record the site in 2020. Support also came from the Utah State Historic Preservation Office.

The project was completed in two phases. The initial phase, conducted in June 2020, was by Sacred Sites Research, Inc. (SSR) and the Utah Rock Art Research Association (URARA). The recording team split in half, went to opposite ends of the site, and walked towards each other—marking panels along the way. The two groups eventually passed each other and continued along the cliff face, checking each other's findings. Then, working as a team, each panel was evaluated regarding the best technique(s) to record it. In addition to extensive photography, the potential recording techniques included tracing, scale drawing in the field, or drawing from photographs in a laboratory.

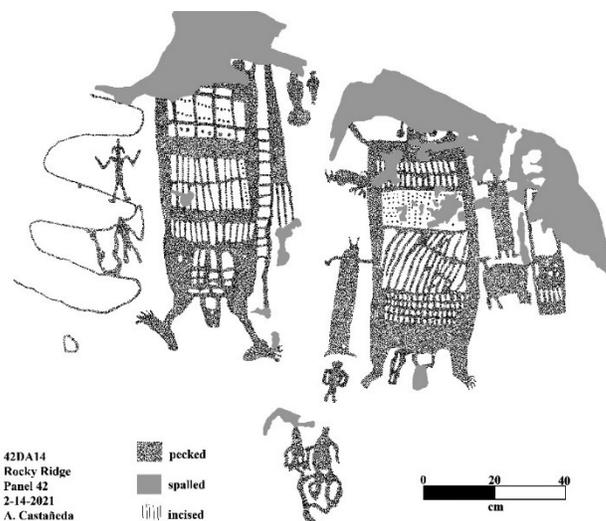
While each panel was evaluated, Mark Willis used an Em-lid Reach GPS system to collect coordinates for that panel. The system has sub-centimeter accuracy and although the cliff wall influenced some of the readings, the panel locations are within 10 centimeters of the actual location. Using these coordinates, anyone who has GPS technology can re-find the panels with confidence.

Another task during the initial site visit was to evaluate the difficulties in recording each panel. This included whether a ladder would be needed to access the panel, or if in some cases the conditions were so unsafe the panel needed to be recorded solely through photographs. Fortunately, only a few panels fit into the latter category.

Finally, we explored the logistical issues in housing, feeding, and transporting the field crew for the full recording session. This was especially important because Covid 19 re-

strictions meant that hand washing stations needed to be set up and people had to be prepared to wear masks for any indoor activities or when in close contact outside. Rocky Ridge Outpost is ideal for this part of the effort as they have cabins with separate bedrooms, ample places to camp in trailers or tents and an outdoor cooking and eating area that is covered.

We returned to Rocky Ridge September 2020 with a large crew consisting of Larry Loendorf, Cobe Chatwood, Laurie White, Mark Willis, Amanda Castañeda, Charles Koenig, David Kaiser, Julie Francis, Mary Hopkins, Nina Bowen, Darlene Koerner, Tim Sweeny, Diana Acerson, Steve Acerson, Ann Phillips, Dave Phillips, Susan Hovde, Meinrat Andraea, and Tracey Andraea. Upon returning to the site for the full recording session, the crews revisited the identified



42DA14
Rocky Ridge
Panel 42
2-14-2021
A. Castañeda

Figure 3. Panel 42 with large interior line figures associated with solid-form anthropomorphs.

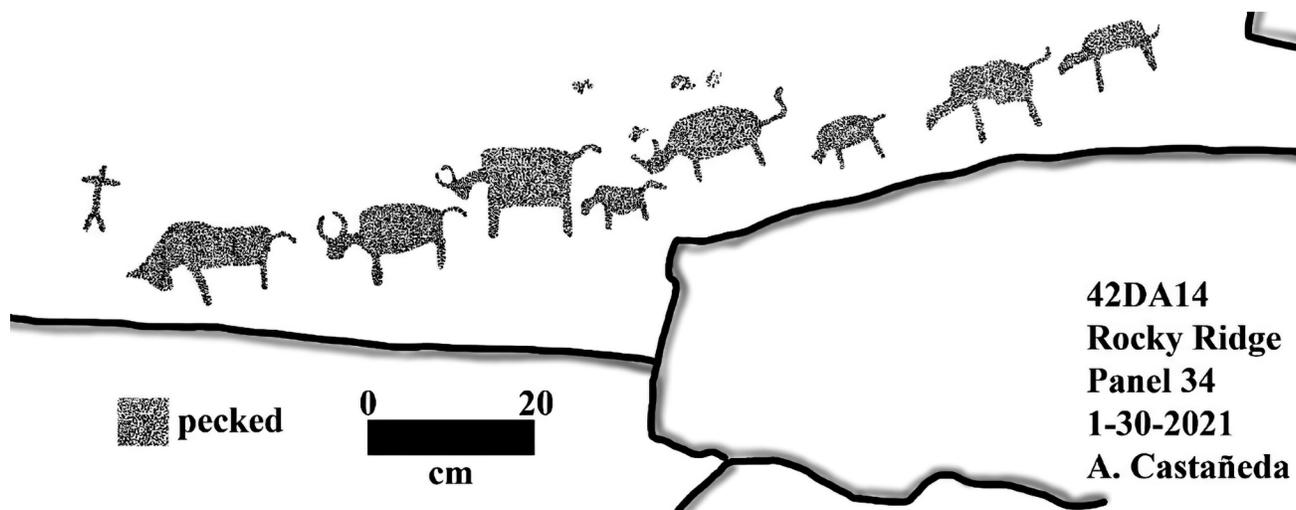


Figure 4. (Above) Row of bison that appear to follow a trail down slope.

panels and completed extensive photography, forms, and scale drawings for each panel. Amanda Castañeda cleaned up and typed the panel forms and made the drawings from photographs for those panels that needed to be recorded in that manner. We then wrote a report and submitted it to the Utah SHPO with copies of all the site records.

The Findings

We identified 135 anthropomorphs at Rocky Ridge. This comprises ~40% of the total number of representational imagery (bipeds and quadrupeds) at the site. The anthropomorphs were placed in five types—simple stick-like I, simple stick-like II, profile-view, oddly-shaped figures, and the Flaming Gorge Anthropomorph Type. The latter category is important because it includes solid pecked figures in combination with outline pecked, patterned body figures that the site is so well known for. The fascinating fact about these figures is that they appear to occur over a long time span from the Early Archaic to the Late Prehistoric periods.

The quadrupeds are dominated by bighorn sheep with 68 examples that were made in all time periods. Twenty-nine figures are elk, or possibly deer, although elk is more likely. They are more common in older panels. There are 22 bison with one row of eight that appear to be following a trail with an anthropomorph standing to the side. Four bears and eleven bear paws are represented in the mixture of quadrupeds. Mountain lions are found in one panel with four examples in a line. Few numbers of birds and snakes are found in the petroglyphs but there is a recognizable horned serpent.

Abstract figures include several sets of concentric circles and other geometric forms. The numbers of these figures are small, though, in comparison to the figures that are recognizable as anthropomorphs and quadrupeds.

Site Theme

A dozen panels at the site appear to be associated with hunting. One of these shows an individual hunter shooting an arrow at a bighorn sheep. The others, however, display communal hunting scenes with one that represents elk as they are driven into a wooden wall. Several show bighorn sheep associated with nets.

Although available water sources have been altered by irrigation there was at least one and perhaps two freshwater springs that attracted animals to the site. More important are the mineral-laden soils that we believe attracted bighorn sheep and elk, so the water and the minerals were a constant draw that brought herds of artiodactyls to the site.



Figure 5. Portion of Panel 58 that shows bighorn sheep, a net, drovers, and a hunt shaman that appears to use power to control the net.

It is possible the communal hunting scenes were made by hunt shamans in an effort to control the animals. Indeed, some of the large Flaming Gorge anthropomorphs may represent deities akin to the Mistress or Master of the Game. Whether this is correct or not, the Rocky Ridge site contains an important group of petroglyphs that are now preserved through recording. ❄️

La Pintura Information/Submissions

La Pintura is the quarterly newsletter published by the American Rock Art Research Association. Subscription to this publication is a benefit of membership in ARARA. Beginning with Volume 47-1, *La Pintura* is being produced digitally only. Back issues of *La Pintura* are available electronically on the ARARA website: arara.wildapricot.org.

ARARA members love to read about your new rock art discovery, recording project, or new idea for interpretation. For that to happen, *La Pintura* needs you to submit articles on current research or fieldwork. Doing so will make *La Pintura* a better journal.

Editorial deadlines insure timely publication of each issue. Deadlines for submissions are:

- May 1 (June)
- August 15 (September)
- November 15 (December)
- February 15 (March)

La Pintura is edited by Linda Hylkema, araraeditor@rockart.us

The editor extends an open invitation to members to submit articles, news, letters to the editor, book reviews, and other items of interest to ARARA members.

Letters to the Editor: No special format necessary.

News Items: Please provide pertinent information such as the event, time, place, cost (if any), group or person in charge, who to contact, address, and deadline.

Articles: Manuscripts of original research are welcome. They should embrace sound principles of investigation and present data in a clear and concise manner. Consult the ARARA Style Guide at: <https://arara.wildapricot.org/AIRA>

Current Events: Current events and news of items of interest to our members that need public notice prior to the next issue of *La Pintura* should be submitted to ararawebmaster@rockart.us.

American Rock Art Research Association

Mission Statement: ARARA is a diverse community of members with wide-ranging interests who are dedicated to rock art preservation, research, and education in order to communicate to a broad audience the significance of rock art as a non-renewable resource of enduring cultural value and an important expression of our shared cultural heritage.

About ARARA: ARARA is a 501(c)(3) 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.

Code of Ethics: ARARA subscribes to a formal [Code of Ethics](#) and enjoins its members, as a condition of membership, to abide by the standards of conduct stated therein.

ARARA on Facebook: Content for consideration should be submitted to Scott Seibel, scottseibel@cox.net

ARARA's Official Website: arara.wildapricot.org. Considerable information about our organization is provided at our official website.

Additional Contacts and Information: contact Conference Chairs via <https://arara.wildapricot.org/Contact>

Annual Meeting, 2022:

- Conference Chairs, Mavis Greer and Donna Gillette
- Local Committee, Jim Keyser

All Other Correspondence: The official mailing address is: ARARA c/o Troy Scotter, 569 East 320 North, Orem, UT 84097-4817.

ARARA Membership

For all Membership matters contact: Membership annual fees are:

ARARA Membership	Donor	\$120.00
Troy Scotter	Family	\$50.00
569 East 320 North	Individual	\$45.00
Orem, UT 84097-4817	Society/Institution	\$60.00
	Student*	\$35.00
	*Requires photocopy of current student ID.	

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 membership year, reduced conference fees, and current news in the field of rock art.

Officers & Board

Officers, Board Members, and Committee Chairs contact: <https://arara.wildapricot.org/Contact>

President: Ann Brierty

Vice-President: Linda Olson

Secretary: Karen Steelman

Treasurer: Troy Scotter

Board Members:

- Peter Anick
- Margaret "Marglyph" Berrier
- Amy Gilreath
- David Kaiser