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La Pintura

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arara.wildapricot.org

Time to Gear Up for Grand Junction Conference

By Donna Gillette, with contribution by Troy Scotter

Time is fast approaching for our ARARA Conference in Grand Junction, Colorado. The dates are June 1–4, 2018. Pre- and post-conference field trips will take place on Friday and Monday, with one workshop offered on Thursday, two on Friday, and one on Monday. Conference papers will be presented on Saturday and Sunday. The conference will also feature the ever-popular Silent and Live Auction, and the high quality vendor room. The conference will be held at the Double Tree Inn, Grand Junction. The Double Tree is located just a short distance from the airport and provides a facility that really meets our needs in every way. Rooms for two are \$119 and include free parking and internet, with a refrigerator and microwave in each room. Reservations for the event can be made by contacting the Reservations Department at 970-241-8888, or through the hotel's central reservations number 800-222-8733. Be sure to identify yourself by our Group name, ARARA, to receive our special group rate. American, United, and Delta airlines serve the Grand Junction area.

We are pleased with and appreciative of the assistance of the Grand Junction Chapter of the Colorado Archaeological Society, with Doug Van Etten serving as the local chair.

Student presenters will receive a \$500 travel grant, free registration, and a banquet ticket.

With the help of the folks from Grand Junction, we are preparing field trips in western Colorado and eastern Utah for the upcoming conference. Field trips will range from Cañon Pintado in the north, to Paradox in the south. Utah trips will focus in the Moab and Green River areas. We will also be providing, via our website, brochures of some public rock art sites if you would like to do some exploring on your own. If you prefer an alternative to a field trip, we are preparing several workshops: site recordation, using a GPS, and using Gigapan and a 3D technique for photography.

ARARA 2018



This year, descriptions of the field trips are not provided in *La Pintura* out of concern with confidentiality issues aimed at site protection. Descriptions will be available to registrants on the website after registration fees are paid.

We will use the same system as last year to register for the conference, field trips, and workshops. Registration will be done on our new website at arara.wildapricot.org. The registration system for the conference and for field trips allows only one person per email address. If two or more individuals share an email address and plan on attending, then please establish and use a separate, unique email address for each. Free email addresses are easily obtained, provided by companies such as Google, Microsoft, and Yahoo.

If you are among the handful of members who do not have internet access, you may contact Donna Yoder (520-882-4281) to register for the conference, or Troy Scotter (801-377-6901) for field trip descriptions and registration.

When Conference and Field Trip Registration opens (soon and on-line) you will receive an email providing you with details.

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President's Message

Plans for our upcoming annual conference in Grand Junction are well in hand. As Co-Conference Coordinators, Donna Gillette and Monica Wadsworth-Seibel are leading a strong team of experienced and knowledgeable volunteers, including Patti Genack (Vendor Room), Chris Gralapp (PR), Teresa Saltzman (Education activities and Volunteer Coordinator), and Donna Yoder (Registration). Troy Scotter is organizing and coordinating field trips and Anne Stoll is our Program Chair. The Grand Junction Chapter of the Colorado Archaeological Society is providing local expertise and assistance; Jim Liewer has been especially helpful regarding field trip sites. These are only a few of the tireless volunteers who are committed to ARARA and to putting on a great conference. If you are interesting in helping, let one of us know. If you are interested in giving a presentation on rock art, make sure you send in an abstract (you do not have to be registered to submit an abstract). Conference registration and field trip signups will open soon using the same online system as last year (arara.wildapricot.org/Conference-Info).

The Board is happy to announce ARARA's new Graduate Student Research Award. Carol Garner suggested two new awards geared toward the needs of students. The Board discussed her proposals at length and, in the end, decided to combine them into one award aimed at supporting graduate student research. For more details, please see the accompanying article by Awards Committee Chair Troy Scotter. Our thanks, Carol, for the proposals that led to this award.

Speaking of the Awards Committee, Troy has served ably as Committee Chair for a number of years and would like to hand over these duties to another dedicated ARARA volunteer. This is one of the best committees to chair because it is always gratifying to give out awards recognizing outstanding achievements. If you are interested, or just have questions about what the duties entail, please let Troy (troycotter@gmail.com), Vice President Ann Brierty (imalaguna@aol.com), or me know.

I hope you've noticed that ARARA has moved its website to Wild Apricot, web-based software for non-profit associations such as ours. Check it out at arara.wildapricot.org. Troy Scotter took the lead on the transition and has taken on the role of ARARA Webmaster. Troy put in seemingly endless hours in developing the Wild Apricot site and appropriately porting information over, ably assisted by Ken Hedges and Chris Gralapp. Membership files were also moved over, thanks to considerable effort by Jan Gorski, Membership Coordinator.

There are two aspects of the new website that I want to bring to your attention.

- Donations are now handled separately from membership renewals and conference registration. This will help ARARA better track donations. An electronic receipt will be automatically generated and will state the amount and designated category of each donation.
- Electronic *La Pintura*. Currently, the decision to receive an electronic version of *La Pintura* is made when joining or renewing membership. With Wild Apricot, you will be able to change to e-receipt at any time. Log into the website, click on your name at the top right of the screen, click on the "edit profile" button, and scroll down to the *La Pintura* field. There are definite advantages to electronic receipt: members see it sooner, and the pictures are in color! The Board encourages you to make the switch, and in an effort to show you what you may have been missing, this issue of *La Pintura* is being sent to ALL members with an email address.

The Board expects the website to continue to evolve to better meet ARARA's needs. Questions and/or suggestions can be addressed to Troy, VP Ann Brierty, or me.

I'm always happy to hear from you about any ARARA matter. I can be reached at dianehamann@sunwatcher.net. See you in Grand Junction!

—Diane Hamann, President 

Have You Renewed?

In case it slipped your mind, please renew your 2018 Membership!

This is easier now than ever. Go online to arara.wildapricot.org.

At the top of the opening page in the middle, click on Join or Renew, and a few clicks later you're done! 

Time to Gear Up... *continued from page 1*

Workshops

Three workshops are being offered at this year's conference.

Rock Art Site Recording (offered Thursday only). Learn the proper way to document a rock art site and record it on a Bureau of Land Management (BLM) site record form so that it meets the standards required to become part of the permanent, official records maintained by the Utah State Historic Preservation Office (SHPO) database. We will have a brief orientation in the morning, and then we will work outside for the majority of the day at a site in the Moab area. We will work in teams to complete every section of a site record so that, by the end of the day, you will feel comfortable with the entire process. Our completed and finalized site forms will be submitted to BLM and Utah SHPO. Maximum Number of Participants: 6.

GPS Tutorial (offered Friday morning only). Need to find your way back to that petroglyph panel? Or your car? This workshop will cover how Global Positioning System devices think and operate. In classroom and field segments, we'll learn about device settings, how to record tracks and waypoints, and how to download and organize them. We'll focus on Garmin devices and smartphone apps. Things to Bring: GPS device or smartphone, a notebook for taking notes and, for the short field session portion, sun protection and walking shoes. Optional: Bring your GPS device, its USB cable, and a laptop if you want to practice downloading your gpx files. Difficulty Level: The field part of this workshop will include a walk in a local public park, followed by classroom instruction. Maximum Number of Participants: 10.

Gigapan/SFM Instruction (offered Friday and Monday), by Dr. Bob Mark. The course will consist of photographing a local rock art site followed by classroom instruction. The classroom instruction will show participants how to stitch photographs together using Gigapan technology. We will also cover a 3D technique known as SFM (Structure from Motion); this will allow participants to stitch photographs together using a hand-held camera without the necessity for sophisticated equipment. Things to Bring: digital camera, hat, sunscreen, walking shoes, notepad, and pen. Laptops are not mandatory but may be helpful in the classroom. Maximum Number of Participants: No limit.

Plenary Speaker

The kick-off presentation Saturday morning will be by Mark Varien, Ph.D. Mark is the Executive Vice President of the Research Institute and the Ricky R. Lightfoot Chair for Research at Crow Canyon in Cortez, Colorado. Dr. Varien will present an overview of Ancestral Puebloan archaeol-

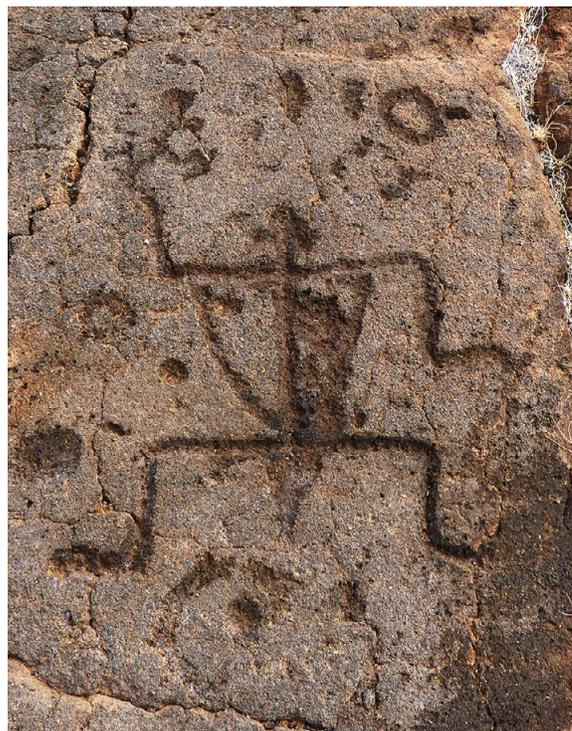
ogy in the central Mesa Verde region, including the origins of agriculture. He will also discuss the Village Ecodynamics Project that investigates population histories in the area.

If you have any question concerning the conference, please contact the Conference Coordinators, Donna Gillette (donna@dgillette.com) and Monica Wadsworth-Seibel (wadsworth-seibel@cox.net). ☉

Call for Nominations for Awards

Please consider nominating a deserving individual or entity for the ARARA annual awards. Whether it is someone who has provided great service to the rock art community, a wonderful photographer, an advocate for preservation, a great teacher, or an author of new rock art material, we would like to recognize them.

For more details on the ARARA awards, go to arara.wildapricot.org/Awards, and please send your questions or submissions to Troy Scotter at troyscotter@gmail.com. ☉



*Anthropomorph at Waikoloa Petroglyph District, Hawai'i Island.
Photograph by Ken Hedges.*

ARARA Announces New Graduate Student Research Award

by Troy Scotter

A couple of years ago, Carol Garner suggested that ARARA create two new awards specifically oriented toward the needs of students. The Board liked the idea and spent quite a bit of time developing a new award which combines both of Carol's suggestions.

Graduate Student Research Award

ARARA is seeking applicants for a research award of up to \$2500 for a graduate-level student. Award funds are for reimbursement of research expenses in order to publish a thesis, dissertation, or peer-reviewed academic paper as part of a student's academic program. This award supports:

- travel to a rock art site;
- fieldwork with a qualified mentor or program;
- laboratory work to further research study; and/or
- literature research.

As rock art research covers a broad spectrum of academic studies, a student could be enrolled in various programs such as anthropology, archaeology, art history, fine arts, chemistry/physics, geology, linguistics, or geography. For example, this award is open to students in chemistry working on rock art dating, in linguistics working on interpretation, in fine arts looking for aesthetic/production-oriented similarities, etc.

Types of reimbursable expenses include:

- reasonable out-of-pocket travel costs (airfare, mileage, meals, accommodation);
- field or laboratory equipment;
- materials for documentation and/or analysis.

This research award will not reimburse salary for research time or travel to meetings to present research.

The annual deadline for submitting a research award application to the ARARA Awards Committee Chair is January 31. The application should include:

- Research proposal no more than 3 pages in length (excluding references) that describes objectives, the project, and the type of expected product (thesis, dissertation, or peer-reviewed paper);
- Budget and budget justification;
- Two letters of support, including one from the thesis/dissertation chair that certifies that the student is conducting the proposed research as well as the expected date of degree completion.

Proposals are reviewed by the Education Committee and approved by the ARARA Board. Two-thirds of the requested funds would be granted at the beginning of the grant period and the remainder after the product of the research (thesis, dissertation, or peer-reviewed paper) is submitted and accepted to the ARARA Archives. Receipts for reimbursable

expenses will also need to be turned in at the end of the award period. The award recipient is encouraged to present their research at the subsequent ARARA conference.

Other Student Awards

Recipients of a Graduate Student Research Award are also eligible for the Student Travel Award if they submit an abstract to the ARARA Annual Conference. However, receiving a Graduate Student Research Award is not a pre-requisite to be considered for a Travel Award for our conference. ARARA encourages student participation in our Annual Conference, whether as a presenter or attendee. On an annual basis as determined by the Board, student presenters (paper or poster) at our conference who are registered in a college/university-level-related program may receive up to \$500 to defray travel and accommodation costs, in addition to complimentary conference registration and a banquet ticket. Students attending but not presenting may receive complimentary registration and a banquet ticket. Please consult the annual conference registration information on-line, arara.wildapricot.org/Conference, and indicate on the application form which author(s) for a presentation is a student so that the Education Committee can contact the student.

Students should also be aware of ARARA's Castleton Award which can be awarded for unpublished rock art research. This award is available to undergraduates, graduate students, or non-students. For more information see arara.wildapricot.org/Castleton-Award. A recipient of this Graduate Student Research Award is not eligible for the Castleton Award for the same research. ☼



A reminder that our Code of Ethics forbids potentially destructive recording procedures. This image from Pu'uloa at Hawaii Volcanoes National Park demonstrates unintended consequences of applying latex to make molds. Photograph by Amy Gilreath.

Response to “How Did That Get There?”

By Don Liponi, dliponi@yahoo.com

I would like to thank ARARA President Diane Hamann for the opportunity to respond to a recent set of comments (Harman 2017) regarding one aspect of our book, *La Rumorosa Rock Art Along the Border: A Survey of Kumeyaay and Related Artwork in Southern California, Colorado River Corridor, Western Arizona and Baja, California*, Volume 1, published in the summer of 2017.

Although I am the principal editor, the book was assembled with a long list of contributors and collaborators including: Daren Sefcik (photographer), Felton Bricker, Cheeyow, Ha-emah, J. Claire Dean, Lynn H. Gamble, Ken Hedges, Thomas Holcomb, Steven Lucas-Pfingst, Michael Wilken-Robertson, Polly Schaafsma, M. Steven Shackley, Ben H. Swadley, and the Viejas Band of Kumeyaay Indians. A book of this magnitude is certainly a symbiotic process, and I am personally indebted to the work of all the volunteers who gave their time and talent to its creation and publication over the past six years. Most of the photographic processing was performed about four to five years ago.

Much of the current review concerns the photographic images created and published in the book and their authenticity to the original images, and the use of post-processing software including Image J and DStretch (DS). DS is a “plug-in” to the Image J program. Neither has any formal manual despite their widespread use. Daren and I have both written of our experiences.

The previous discussion of the book does not relate to any of the scholarly contributions and narrative materials included. Recent reviews of the book (see William Hyder’s essay on page 13, as well as others by Polly Schaafsma, Douglas Peacock, Dennis Slifer, among others, summarized at larumorosarockart.com/the-book/reviews/) have heartily endorsed the text and photographs, indicating the great value of this wide-ranging volume to this desolate wilderness, with noteworthy and earnest involvement of the Native California Indian perspective. For that the book is somewhat unique in rock art circles and a most worthwhile contribution. It is certainly significant that the authors of the book sought out Native American resources and garnered their perspective. The contributors worked harmoniously, diligently, and in precarious isolation. The review in *La Pintura* (2017, No. 4) is the first to criticize this book.

Several months ago, the reviewer requested copies of our original, out of the camera photographs (OOC) and we made these available along with a detailed discussion

of the methods used to create them. Both the OOC and simple DS processing of these photographs supported their authenticity. Still, the reviewer, in his *La Pintura* review and in comments made at the San Diego Rock Art 2017 Symposium, used his own unquantified pre-DS images. Perhaps, these issues now deserve some further attention.

Basic Image J-DS enhancements and mainstream OOC post-processing produced the beautiful photographs in the book. In addition, there were some surprises in the apparent differences in compositions usually due to overpainting and to the selectivity of the various DS spectrums. It seems very possible that the different DS colorspace of the *La Pintura* reviewer also resulted in expected variances conveyed and compared to my processed and published photographs. The primary concept here is that there are potentially unlimited colorspace in Image J-DS and each one changes the color palette and the related composition of the image. There are many interrelated basic and advanced tools in DS and each produces its own unique “map.” Four photographs from the DS section of our book are included here for the reader to consider. They are of the same rockshelter wall space. Using the simplest tools of DS, we have created three separate images (see Figures 1–4). This does not even consider the changes that can be rendered with the advanced tools of DS such as Hue Shift, YXX, LXX, and Correlation, just to name a few of perhaps more than 100 tools of Image J-DS which can each be varied and interrelated.

Second, there are other factors that affect the original photographic images, namely the technology that created the pre-DS image, the camera (its functions), the lens (which most consider the primary factor of quality), flash capabilities and reflectors, software, tripod, depth of field, focus, and exposure.

For the book, we used the best lens and camera system we could afford to render file sizes, at times, of greater than 50 MB at 300 dpi. We discuss this technology and guidelines for its use in the DS section narrative in the front of the book.

In our opinion, the OOC images we obtained had a much greater resolution and capture of data than images that are typically seen and in the previous review. At the time these photographs were processed several years ago, the interest or need for such specific DS information was not foreseen. If you are truly using Image J-DS to its capacity, there will be a long list of qualitative and quantitative interventions to define along with camera specifications and refinements.

Response to "How Did"... *continued from page 5*



Figure 1. Rockshelter as it appears to the unaided eye.



Figure 2. Red layer.



Figure 3. Black layer.

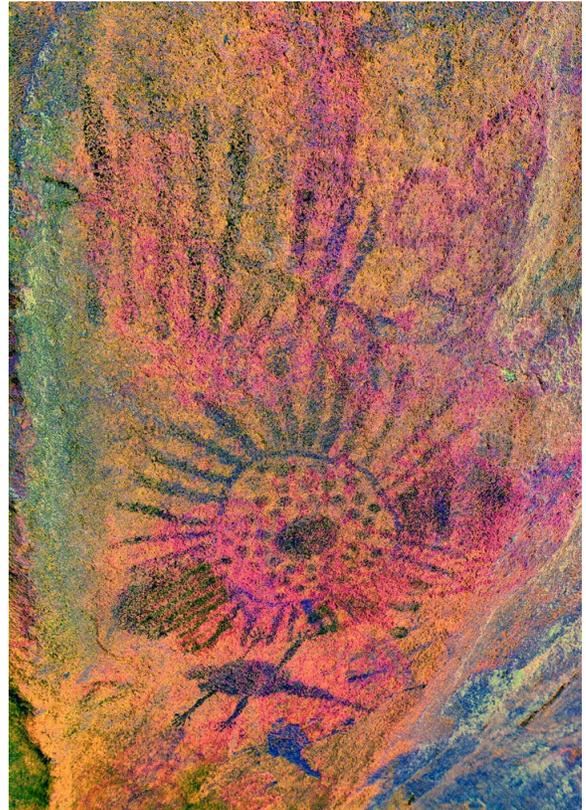


Figure 4. DS Polychrome.

In the realm of nature photography and in professional journals such as *Nature Photographer Magazine*, there are commonplace tools that have been around since the days of syringes full of developer and darkrooms with film exposures. Thankfully, these tools are now incorporated into computer software and they are rarely documented in the photographs that appear in such journals. Without such endeavors as burn and dodge, exposure adjustment, shade and highlight enhancement or selective color enhancement, clarity and focus or a diffusion gradient, many photographers would not be able to rise to the level of expectation for such publications. In my case, and I freely admit it, many of these tools are far less destructive than DS and help avoid that “hallucinogenic” look common to DS. This is especially important if the pictograph was included in a landscape setting.

Our intention was to remain as true as possible to the colors or look of the original image if at all possible without major compromises to the composition. I think William

Hyder, in his essay on Ethics and Rock Art Photography (see page 13), has made a good point that such photography may be better off termed “artistic,” but the honest intent in the present case was to stay as true to the setting and the pictograph itself as our skills and the technology would allow. DS, in my opinion, is a technological miracle. But often, if not always, you cannot have it all with DS; you have to choose what you want to emphasize.

Let’s look at some specific examples cited from the previous *La Pintura* issue. To save space, call Figures 5a-b “purple marks,” Figures 6a-c “sword,” and Figures 7a-c “shaman.” In Figure 5 the purple marks, legs, tail and the pale yellow were suggested as additions to the image as a function of post-processing. As is evident and antecedent to any processing, in the OOC image, all these elements are, in fact, present in our original photograph. Once the YBK colorspace is added, all of these parts are amplified and are more apparent (Figures 5a-b). I believe this demonstrates either a difference in photographic equipment or technique or both.

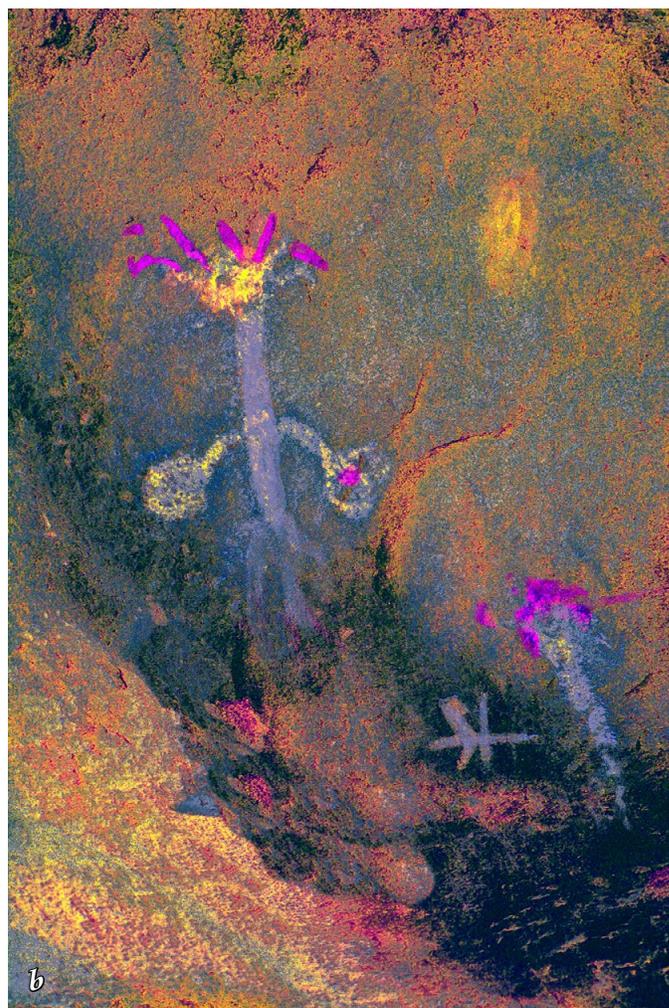


Figure 5. (a) Pre DS, out of camera. (b) Post YBK DS.

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Response to "How Did"... *continued from page 7*

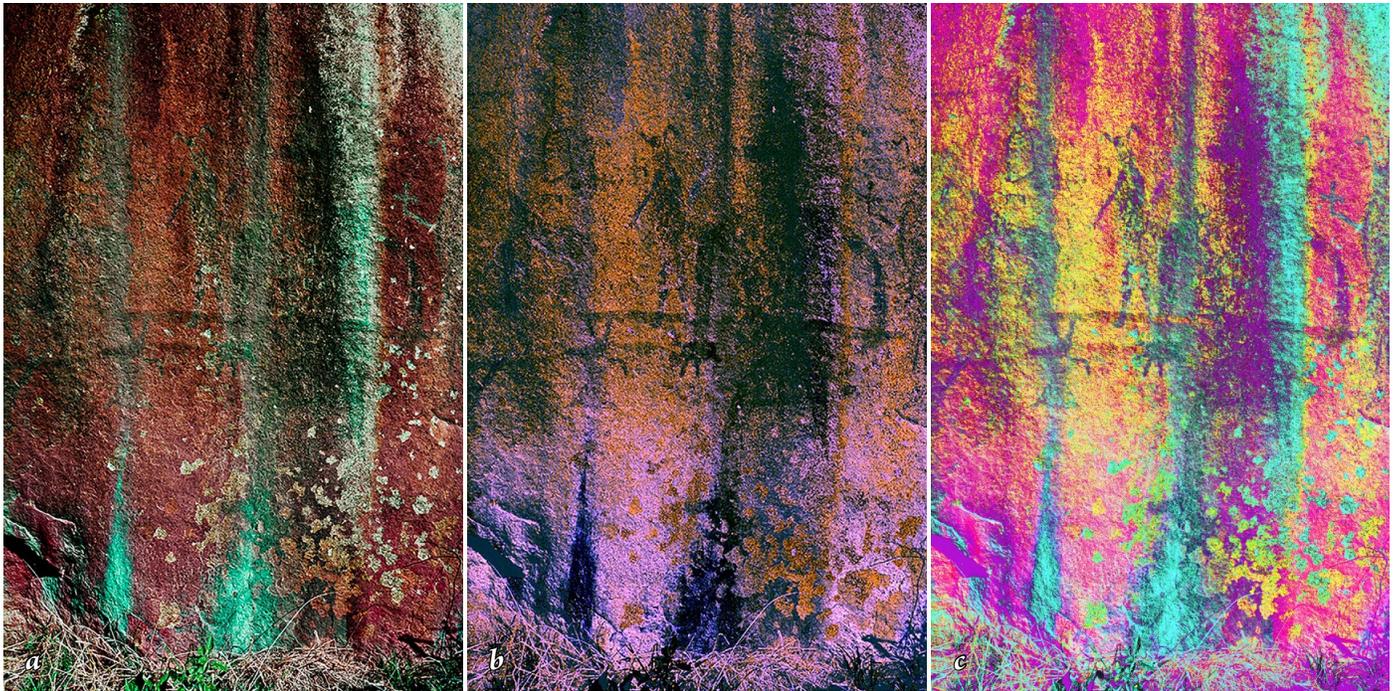


Figure 6. (a) Pre DS, out of camera. (b) DS xplor 2.00-0.62. Black no fingers left hand. (c) DS CMX Hue Shift 193.

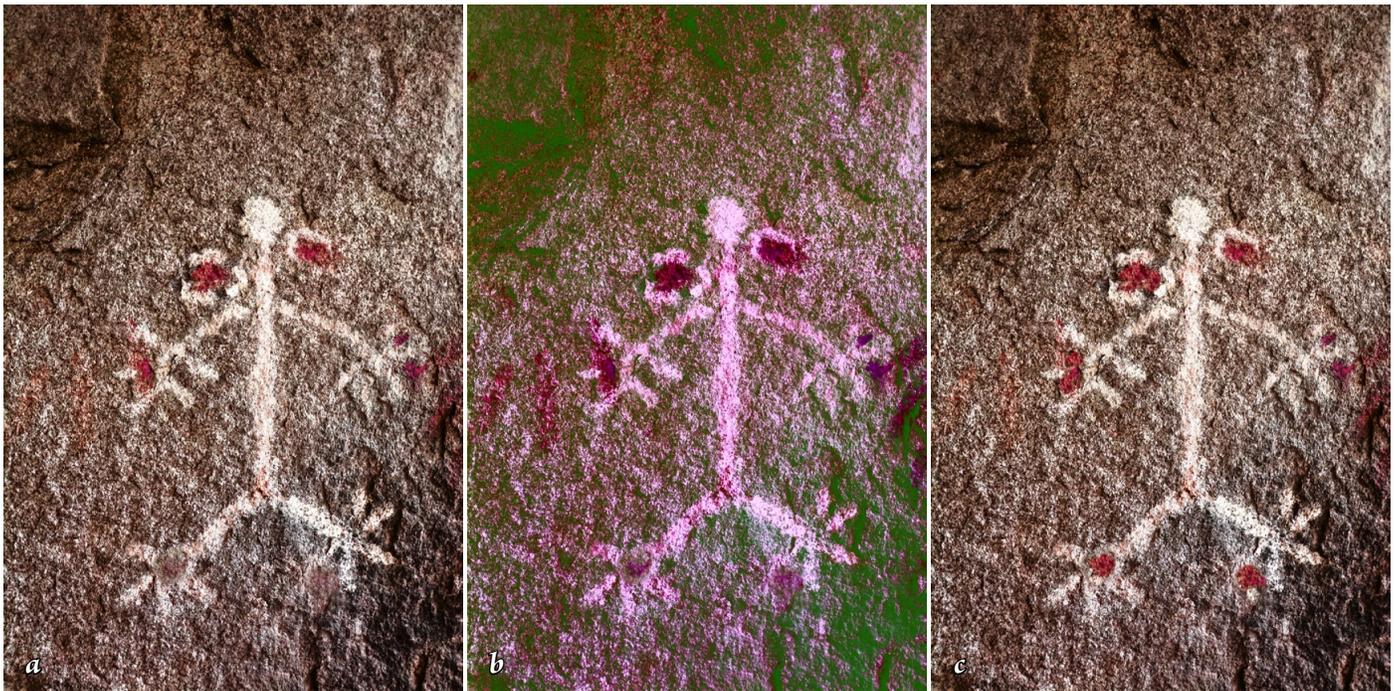


Figure 7. (a) Pre DS, out of camera. (b) Post DS_rgb0. (c) Post DS_rgb0 Dodge White Burn Red.

In Figure 6, the reviewer indicated that the “sword” appeared red, certain fingers of the left hand were eliminated, and legs of one of the smaller anthropomorphs were changed with the left arm being bulked up. I know the Kumeyaay did not have swords, but both the horizontal lines appear in the pre-DS photograph originally in black and the anthropomorph is clearly some different shade than that and doesn’t show at all. As you can see from Figures 6a-c (Pre DS, Xplor 2.00/0.62 and CMX Hue Shift 193), the fingers come and go depending on which colorspace you select. Use of the Hue Shift in DS makes the image more vibrant. Notice that both horizontal lines take on a red-brown hue. There is no intent to make an anthropomorph holding a blood red sword or even a sword. The warmer tone is a result of Hue Shift in DS.

Finally, the reviewer refers to Figure 7 with what appear to be “hair or ear embellishments,” an enhanced white body, missing red fingers on the sides of the body and added red dots to the feet. These are apparent in Figures 7a-c (Pre DS, rgb0, and rgb0 with burn red and dodge white). Most of these remarks are directed at the Pre DS image where these characteristics are present. They are enhanced with rgb and the burn and dodge brighten the white body and deepen the red areas. DS does not amplify white very well. The fact that we repeatedly see so much more data on the Pre DS images may have to do with the enhanced resolution of the camera, lens, and flash/reflector that is a \$3,000 instrument used for the book. In the extensive caption next to the photograph in the book is a discussion that these ear embellishments are not hair bobs that would be associated with the Hopiland area of Arizona, so their intent is unknown.

In summary, we can say that there are so many available variables that go into the look of a photograph, it is almost impossible to duplicate a given image. If this were not the case, then anyone of us could point our cameras somewhere breathtaking in the wilderness or at a rock art panel like Neon Hands and, presto, out would come a David Muench or a Tom Till masterpiece. There is a reason their photographs cost hundreds or thousands of dollars. I have been told and have seen in their books that they each have their own computer processing person. When their images are published, invariably the images are significantly modified to optimize the look. We are of course aware that there is a huge difference between what your eyes see and a camera’s ability to recreate it. Again, these efforts are simulating what our eyes can see, but the camera cannot directly simulate. These principles are basic photography—light is so important.

The reviewer is right that, inadvertently, in an effort to capture reality, we did wander into the arena of artistic photography. We went to great length to describe our post processing and communicate to the reader that most of these panels are invisible or nearly so. Of course, starting from nothing, we try to do our best to create a canvas that has never been seen—there is no template to follow for color shades or composition. I do not know the capabilities of a given camera at a given site, but I have seen enough to know that there are differences and they are most apparent with landscapes and pictographs. Change the lens and you change the photograph.

We also know for certain that the *La Rumorosa* book gives the reader a deep and abiding vision of a shared passion for regional rock art that otherwise would have been unknowingly lost to time. It also represents a labor of love over more than five years by Native Americans, professionals, and avocationalists. We believe it best to emphasize the more substantive contributions of such a text and not higggle and haggle over the minor details of photographic subtleties that require enlargements to prove that two different DS methods produce two different outcomes. Not only were these certainly unintended, they would be impossible to avoid. Anyone can create multiple DS outcomes from any given site. Also, we did not take photographs on the fly, we took the time and effort to set up quality images.

If there is a next volume, we will certainly have a section on which interventions were used on which photograph, or present the material as artistically rendered, and to preserve the ancient art, as the window to do so is very short. That is what is meaningful to me and the other people who have looked at and purchased this book. For many of the sites in the book, these are the only existing images of them—there is nothing else. Let’s be grateful that our dedicated group stayed focused on the prize or we would have nothing at all to share. I hope to see anyone interested in saving this heritage on the trail to further discoveries, rock art and otherwise.

References Cited

- Harman, Jon
2017 *How Did That Get There?: A Book Review from a DStretch Perspective. La Pintura* 43(4):11-14. Available at arara.wildapricot.org/La-Pintura . 

Rejoinder to Liponi's Response

By Jon Harman, Ph.D.

The nature of rock art makes it ephemeral. What we see is what there is, and tools as extraordinary as DStretch, created by Jon Harman, allow us to see objectively even what is no longer visible to the human eye. To idealize and deform the paintings of El Vallecito or any other rock art site by inventing elements that are not faithful reproductions of the pictographs, not only shows a lack of respect and common sense to all the serious researchers of rock art that work there, it is also a sad offense creating in people expectations of seeing something that is totally non-existent.

Statement by Antonio Porcayo Michelini,
Archaeologist, Centro INAH Baja California
Archaeologist in charge of research in El Vallecito

As I wrote in my original review, my concern about the book is that it implies that DStretch was used to create the images when, in fact, many of the images contain alterations that were not due to DStretch. I am glad that Liponi admits this now, but this is not disclosed in the book. A methods section that honestly discussed all the things he did to the images would have satisfied my objections. As it is, he has still not disclosed all of the modifications he used, but the images he submitted in his response to my review contain a clue. Understanding that clue is what I call “cracking the Liponi code.” It explains how he got some of the pictographs very wrong.

Liponi includes images in his response that he calls “OOC.” This is a term used in photography (often called straight out of the camera, SOOC). It means that the image came straight from the camera without any post processing. Liponi’s response contains three images that he labels OOC: His figures 5a, 6a, and 7a. Those figures contain the clues that allow one to crack the “Liponi code.” Because the color in the images is at issue, *La Pintura* readers of the paper copy may have trouble visualizing this. I encourage readers to take advantage of the online color version of *La Pintura*. There are subtleties in the images that are interesting and good training for looking at rock art images.

I won’t comment on his Figure 6a except to say that the wild colors in it make it extremely unlikely that it is really an OOC image. For the other two images, I have photographs taken by Antonio Porcayo, archaeologist, and Isidro Madueño, photographer, on January 31, 2018, with the Instituto Nacional de Antropología e Historia (INAH). I have cropped the images to reduce size, but have not otherwise changed them. They are truly OOC.

My Figure 1 compares Liponi’s Figure 7a (left) with an OOC image from INAH (right). Liponi’s image has bright reddish purple added to it in many places. In most cases the addition was over fainter red already present in the pictograph, but in one case, the anthropomorph’s hand on the right side, color was added to the image where no red is

present in the pictograph. This sort of change is something no camera can do. Notice also the strange smudges that appear in Liponi’s image on the feet of the anthropomorph. He has painted these in with a different color similar to the background. These spots become bright red in his Figure 7c.

Liponi’s mistake can be seen more easily in my Figure 2. It shows a close-up comparison of Liponi’s “OOC” image on the left and INAH’s OOC image on the right. The white arrows point to the same place in both images. Liponi’s addition of color on the left is clear. Notice how contrasty Liponi’s image is. It has already been heavily processed.

This is the most extreme of his alterations. My Figure 3 is a comparison of INAH’s OOC image on the right and Liponi’s on the left. There are no purple streaks and no orange paint on the INAH image or on the actual pictograph. Notice also that the actual pictograph does not have legs and tail as added by Liponi. These must have been additions made by hand to Liponi’s photograph. It cannot be an “out of camera” image.

Cracking the Liponi Code

Why did Liponi submit obviously edited images as “out of camera”? This is a mystery to me, but it reveals an aspect of his technique that he did not disclose. Liponi labels his images “OOC” and also “Pre DS.” In these three cases and possibly in many other images in his book, this implies that he retouched the images before applying DStretch. In his Figure 7a Liponi painted colors into the pre-DStretch image in order to emphasize the paint he saw. But he made mistakes. So he got the results he wanted, but those results got the rock art wrong. This is not the fault of DStretch.

Liponi may have meant well. He may have just wanted to make sure that what he saw in the rock art was obvious to others. His technique is new to me and is definitely not recommended by me. DStretch is an impartial tool for enhancing rock art. That is a good thing. It can reveal amazing details not seen by human eyes. It can also correct preconceived notions of what the art should look like.



Figure 1. (a) Liponi's Figure 7a. (b) INAH photograph by Isidro Madueño at El Vallecito, January 31, 2018.



Figure 2. (a) Close up of Liponi's Figure 7a. (b) Close up of INAH image by Isidro Madueño at El Vallecito, January 31, 2018.

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Rejoinder to Liponi... *continued from page 11*



Figure 3. (a) Close up of Liponi's Figure 5a. (b) INAH photograph by Isidro Madueño at El Vallecito, January 31, 2018.

Retouching the image before doing DStretch destroys that impartiality. In his Figure 5a we see an extreme case of this. He has added colors in areas that were never painted and has produced a fantastical image from his imagination that has little fidelity to the actual rock art.

Liponi confuses the purposes of traditional darkroom style manipulation (primarily for adjusting exposure and tone values to improve the esthetics of a fine art print), with the purpose and mechanism of DStretch (to accurately extract subject content information that is actually there and can't be seen). These are apples and oranges.

There is a lesson in this for both professional rock art researchers and amateurs. It raises issues relevant also to the many fine photographers who are members of ARARA. There are now many tools for digital manipulation of images. It can be easy for documenters to document what they want to see, rather than what is actually there. Field checking, or at least checking against original photographs is needed

for drawings and enhancements. If enhancements are used, they need to be clearly disclosed. The digital tools Liponi thinks are necessary to "rise to the level of expectation" are easy to misuse and should be used only with careful attention to the validity of the result. The desire to present pretty pictures should not override the need to be faithful to the original.

ARARA does not officially say much about rock art documentation except as regards the protection of the rock art. Perhaps it is time for ARARA to be a source of best-practice information for photography and enhancement. This could help researchers and amateurs avoid mistakes.

Acknowledgement

Thanks to *La Pintura* for giving us the opportunity to respond to Don Liponi. 

Ethics and Rock Art Photography

By William D. Hyder

Board Member, California Rock Art Foundation

The September 2017 issue of the California Rock Art Foundation online newsletter included a link to a review and recommendation of the book *La Rumorosa Rock Art Along the Border*, with photography by Don Liponi and Daren Sefcik. The CRAF board received a protest that CRAF was promoting the book when it contained retouched images without identifying them as such, some of which get the rock art wrong. The writer concluded with the admonishment:

It is a terrible mistake for CRAF to promote this dishonest book. I looked at your ethics page and see that you do not include the ethic of honestly presenting images of rock art in publications. Neither does ARARA. This book should cause us to revisit the ethics.

The board agreed to revisit the review of the photographs presented in the book and report back in the CRAF Newsletter. In drafting this response to the complaint, I am not revisiting the review of the text.

Rock art recorders have long argued over issues of the accuracy of photography, versus drawing versus tracing. Each method has its strengths and weaknesses and each involves elements of human subjectivity. Painted sites are particularly difficult as none of us see color in exactly the same way and what we perceive is subject to the changing conditions of light as influenced by the time of day, cloud cover, and the use of reflectors or various forms of artificial lighting.

For whatever reason, rock art triggers strong emotions. Campbell Grant's color plates in *The Rock Paintings of the Chumash* were criticized for being too cartoonish. The effect that some complained about was a product of the method used to produce the plates in 1964. Grant's original paintings are beautiful works of art in their own right and show detail

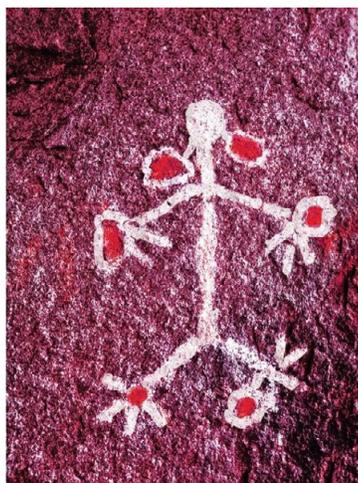
that was lost in the conversion to the printed page.

The University of New Mexico Press book *Marks in Place* generated controversy for the inclusion of images with fires in front of rock art panels and images printed from scratched (distressed) negatives. The fires were small and contained in a pan. No debris was left to contaminate the site archaeology and even though the fires were small, their size appeared to be quite large because of the long exposures required to expose the film. Concerns were raised that others would try to duplicate the images and cause harm from smoke damage to sites. Others were concerned that the scratched negative images would inspire graffiti.

And now we have a new controversy. Liponi and Sefcik devote a chapter to their use of DStretch to "amplif[y] faint pigment color remaining on the rock that cannot be seen with the human eye or a regular camera" (Liponi 2017:3). They differentiate their DStretch photographs with a small DS icon at the end of captions. The problems arise in that it appears they have further manipulated their images without noting the fact. The viewer is left with the impression that they are looking at a DStretch image when in fact they are not.

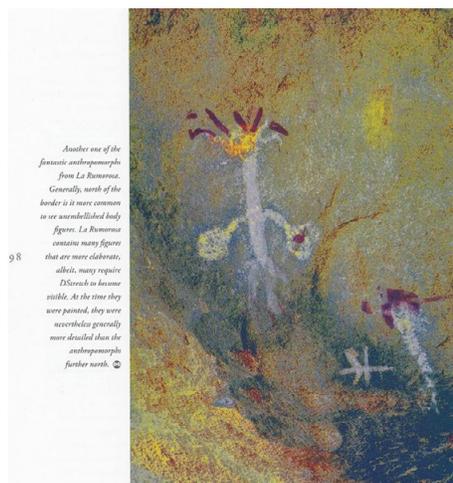
We reached out to Jon Harman for DStretch images he has created for the same sites pictured in *La Rumorosa Rock Art Along the Border*. Two examples are presented below. Liponi and Sefcik photographs are on the left and Harman's are on the right.

In the first image, the white appears to have been "filled in" using a paintbrush or other tool such as that found in Photoshop. The result is that the red and white circles on either side of the head are connected to the head and interpreted as hair buns. The hands and feet of the anthropomorph are



distorted beyond recognition with additional red spots that do not appear to be present in the actual painting.

The second photograph shows the addition of legs and a tail on the larger figure not visible in Harman's photograph, a yellow head, and red rays coming from the head not present in Harman's photograph. In a conversation with Don Liponi, I learned the photographs used Photoshop tools to enhance selected colors in their raw photographs before processing them with DStretch. If I understand their post processing correctly, they then combined the output of several different DStretch color space treatments to enhance the colors they believed were revealed.



purports to be an accurate representation of reality. Many tools are available to make a photograph look like what we saw in the field. Brightness, contrast, and saturation adjustments can emphasize faint elements. Graffiti, gunshot damage, and natural damage can be repaired to show what an image looked like before the damage. Ideally, one can make a photograph and it will accurately represent what is on the rock. That is true to an extent, but light, shadow, differences in films, and differences in digital capture sensors and software introduce differences between the recorded image and what we see.

How do we deal with the uncertainties and artifacts introduced by photography? Providing the viewer with more



Deciphering faint imagery can be problematic and your perception of what you see might be quite different from mine. I am not offering my opinion to adjudicate which is correct and which is wrong. That must be left to the viewer to form their own opinion, but they must have sufficient information to make an informed opinion. In these two instances, we can only assume that the leftmost images have been over manipulated, rendering incorrect representations of the original paintings.

The problem then follows that we begin to question other images. Photographer Nasim Mansurov (2016) warns fellow photographers:

The moment we are introduced to a nature photograph that clearly looks unrealistic, or worse yet, when we discover that a photograph that we perceived as real was in fact not, it leaves us with a feeling of distrust towards the photographer. We feel cheated and faked.

As rock art recorders and photographers can attest, the temptation to record what we see is strong, but it is often not what is on the rock. How one controls for subjective recording has generated endless discussion in our field. Every effort must be exercised to control our subjectivity even when we are certain of what we see.

Photography requires extra care when the printed image

information about the photographer's toolkit and post capture image processing employed is critical. Liponi and Sefcik share information about their cameras and their use of DStretch, but they engaged in further post processing techniques (selective color enhancement pre-DStretch processing) without informing us when they were employed.

I prepared an example of an image shot at Painted Rocks in Utah (see below). The raw image with brightness and contrast adjusted along with minor color correction is on the upper left. The image on the upper right was produced using DStretch to bring out the red pigment and then using the new image to enhance the contrast of the red in the first image. Completing the eroded areas of pigment could further enhance the rake figure in the upper left, but it was not done. The three concentric circle images could be further strengthened with a paintbrush or color selection tool to make them more obvious, but it was not done. The temptation though is there because it is clear what the original image was meant to be.

The next pair of illustrations compares the image on the right above with the additional elements I believe I can see in DStretch, yet it did not bring the elements out when applied to the original image. The image on the lower right is posted on my Flickr site with the notation it was enhanced using DStretch. What notation would you expect to see for



the image below on the lower left? Without seeing these two images, would you suspect the image on the left was retouched with the paintbrush tool?

We will leave it to the viewer to assess the images and make their own judgments. Perhaps more importantly, I used DStretch as a tool to enhance my photograph, I did not use DStretch to produce the photograph. The error Liponi and Sefcik make is in describing their images as DStretch products when they are in fact their own creations using DStretch as one tool in processing and creating images.

Mansurov (2016) poses the question of manipulation more eloquently than we can:

How much manipulation should be allowed and what are the limits? Photography purists will argue that photographs should never be altered in any way—that they should retain their originality. Some even argue that cropping should be a prohibited practice. On the other side of the extreme, we've got people who take no shame in severely manipulating images; sometimes in order to influence people's minds, alter their perceptions or their opinions. Is there a sweet middle that satisfies photography ethics? I believe there is, but it is not an easy answer by any means—we need to look at each photography genre in detail, as it is a very complex topic.

We accept the use of DStretch as a tool in our work so

we accept that manipulation can be used to reveal otherwise difficult to see images. For the most part, we know that selective cropping can be done in the camera or at the computer. Cropping is a subjective decision that can alter what the viewer perceives or direct their attention to what the photographer deems important. We accept these manipulations as appropriate applications for rock art photographers to employ.

Our photographs become records that future researchers will rely on in their research and they are documents of the expressions of another culture. What level of explanation about how we created and manipulated our photographs do we owe them?

Mansurov (2016) again provides relevant thoughts in discussing landscape photography. Rock art photography is not exactly landscape photography, but it is close in that it is making a record of something that exists in a natural state.

I consider it acceptable to adjust exposure, colors, shadows, tones and contrast, to perform selective boosting / dodging and burning, to crop images for better composition and to perform other adjustments, as long as they don't make the image appear too unrealistic and fake. I am not against HDR photography either—in fact, it can be a great technique to use in order to recover data that cannot be otherwise captured by modern camera sensors, as long as it looks natural at the end.... I am not

against blending techniques to bring out details from different parts of the scene either, as long as they are not overdone. Lastly, I also find it acceptable to remove distracting objects from the scene. Basically, I don't mind most types of editing!

In Mansurov's thoughts, using DStretch to recover data that cannot normally be captured is acceptable, as are other post processing tools to help reveal what the artist painted on the rock. Rock art photographers must be careful about removing distracting objects. Graffiti can sometimes be digitally removed to produce a pleasing image, but it must be properly annotated to avoid confusing future researchers. Just as art conservators document their work, so to must the photographer.

So where do we go from here? The National Press Photographers Association subscribes to a Code of Ethics.

From their preamble:

Visual journalists operate as trustees of the public. Our primary role is to report visually on the significant events and varied viewpoints in our common world. Our primary goal is the faithful and comprehensive depiction of the subject at hand. As visual journalists, we have the responsibility to document society and to preserve its history through images.

Relevant points from their code:

- Be accurate and comprehensive in the representation of subjects.
- Be complete and provide context when photographing or recording subjects. Avoid stereotyping individuals and groups. Recognize and work to avoid presenting one's own biases in the work.
- Editing should maintain the integrity of the photographic images' content and context. Do not manipulate images or add or alter sound in any way that can mislead viewers or misrepresent subjects.
- Strive to be unobtrusive and humble in dealing with subjects.
- Respect the integrity of the photographic moment.
- Strive by example and influence to maintain the spirit and high standards expressed in this code. When confronted with situations in which the proper action is not clear, seek the counsel of those who exhibit the highest standards of the profession. Visual journalists should continuously study their craft and the ethics that guide it.

We do draw a distinction between recording and presentation of rock art and the work of artists that is clearly presented as a derivative work of art. Again, a thought from *Photography Life* (Anonymous 2017):

Fine art photography, on the other hand, is first and foremost about the artist. It is not about capturing what the

camera sees; it is about capturing what the artist sees. In fine art photography, therefore, the artist uses the camera as one more tool to create a work of art. The camera is used to make an art piece that reveals the vision of the artist and makes a statement of that vision rather than documenting the subject before the lens.

Fine art should be clearly presented as such.

So where does that leave us? We stand behind the recommendation for *La Rumorosa Rock Art Along the Border*. It is the personal opinion of a CRAF principal and we do not take exception to that recommendation when considering the book in its totality. We do take exception to the rock art photographs that have been manipulated to the extent that they no longer represent what is on the rock. Sadly, the presence of a few demonstrably inaccurate images calls the accuracy of many other images into question. Liponi and Sefcik could have avoided this situation with a better description of the techniques applied to their images and a better notation of when they were applied to specific images.

A more accurate presentation of the region's rock art, in our opinion, can be found in Manfred Knaaks's *The Forgotten Artist: Indians of Anza-Borrego and Their Rock Art*. The introduction of digital photography and manipulation tools such as Photoshop and DStretch place a great deal of power in the hands of rock art recorders with little to no guidance as to what is appropriate or where to draw the line. It is past time to have that conversation.

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Acknowledgment

This essay appears in the March 2018 Newsletter of the California Rock Art Foundation. Our thanks to the CRAF for permission to reprint the essay in *La Pintura*. 

Remembering Paul P. Steed, Jr.: A Founding Father Passes

By Jane Kolber

Paul Steed, who has left us at age 94, was a man with both practical and humorous outlooks who early on forwarded the recognition of rock art as a serious study and cause for protection. As a charter member he pushed for the establishment of ARARA as a strong organization to take the leadership in these goals. Rarely did he miss a meeting, and he was always anonymously there whenever ARARA needed emergency funds to get through problematic times or provide assistance for guest speakers.

I met Paul at the Archaeological Society of New Mexico's Rock Art Field School in Chaco Canyon. Paul was a great team leader, added his vast general knowledge about archaeology, and introduced tracing into the school's techniques. He would arrive, set up his camp, and after fieldwork would be around to share stories (usually amusing ones that occasionally included reference to far-off lands) except for about 20 minutes when he would disappear around dinner time. We later found out that he brought a specific number of cans of food to eat so that he would not have anything to take home. His tent was quite old and tattered to begin with, and it continued to deteriorate until he finally decided he wouldn't be going to field school anymore and gave it to a homeless person. He mostly wore the same clothes every day. We always wondered what he did, if anything, as he looked so ragged.

Paul was born and grew up in Texas, was in the Army Air Corps in World War II, attended Southern Methodist University, and eventually took over as president of his family's oil company (little did we know or would have guessed). Those mentions of far-off places referred to the extensive travels him and his wife Violet made to over 100 countries including all seven continents plus all 50 states. He was very active in the Texas Archaeology Society and many other organizations. Paul's book on the rock art of Chaco Canyon published by the El Paso Archaeological Society is the only one available on that subject. He has been instrumental and supportive of our efforts in producing another one. In 1998, ARARA presented him with the Klaus Wellmann Memorial Award for Distinguished Service in the Field of Rock Art Research for his many contributions to the organization and the world of rock art.

When I last saw him in Massachusetts in 2016, where he and Vi had moved from Dallas to be near his daughter Jane and her family, he laughed while reminding me of a time in Chaco in the 1970s. He was in the superintendent's office and was proudly shown the locked cabinet where the pencils were kept so that the staff would not be able to take them from him.

We will miss him and remember his wonderful stories and wise guidance. ☼



Paul and Vi.

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. Members may choose to have the newsletter delivered to an email address, or via regular mail to a physical address or P.O. box. Back issues of *La Pintura* are available electronically on the ARARA website, arara.wildapricot.org. The current issue of the newsletter is posted to the website approximately four weeks after distribution to members.

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:

- January 15 (February)
- April 15 (Conference Issue)
- July 15 (August)
- October 15 (November)

La Pintura is edited by Amy Gilreath. 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.

All submitted material should be sent to Amy Gilreath, ajgwinters@yahoo.com. If necessary, postal mail for the *La Pintura* Editor may be sent to Amy Gilreath, 456 Russell St., Winters, CA 95694.

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 arara.org/documents/arara_style_guide.pdf for proper formats for body copy, citations, and References Cited. Articles are subject to editing for length. Include author(s) name, title or profession, affiliation, city, state, and return e-mail address. Since rock art is a visual medium, particular effort is spent to present solid quality photographs, figures, and illustrations in each issue. Your help is needed to achieve this goal. Line drawings should be submitted as 1200 dpi bitmap .tif files. Photographs (whether black-and-white or in color) should be submitted as 300 dpi or higher-quality .jpg files. The cumulative size of all files attached to a single email may not exceed 25 MB; if they do, the email will not be delivered. Please email ajgwinters@yahoo.com to receive alternative email delivery instructions for file transfer protocol instructions (ftp is easy).

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 Tania Ryan via email to araraonline@googlegroups.com or tryan.arara@gmail.com for inclusion in ARARA's monthly electronic newsletter, *ARARA Online*.

Opinions expressed in signed articles are those of the author(s) and do not necessarily represent the views of the American Rock Art Research Association.

ARARA Membership

For all Membership matters contact:

ARARA Membership
Beth Buhler

aramembership@rockart.us

Common matters include new membership and renewals; corrections or changes in membership information; change delivery mode for *La Pintura* from regular mail to email (or vice versa); and replacement of undelivered issues of *La Pintura*.

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 annual fees are:

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

*Requires photocopy of current student ID.

**Foreign members, please add \$10 (all 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 membership 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.

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.

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 world-wide. These goals are communicated through the quarterly newsletter, *La Pintura*. Annual four-day conferences give both members and others interested in rock art the opportunity to share professional papers, presentations, and informal discussions.

Code of Ethics: ARARA 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 subsurface rock art.
4. Potentially destructive recording and research procedures shall be undertaken only after careful consideration of any potential damage to the rock art sites.
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 Officers and Board.

The ARARA Code of Ethics, points 1 through 5, was adopted at the annual business meeting on May 24, 1984. The Code of Ethics was amended with the addition of the opening paragraph at the annual business meeting, May 28, 1988.

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Vice-President: Ann Brierty, imalaguna@aol.com
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-Troy Scotter, troyscotter@gmail.com
-Karen Steelman, ksteelman@shumla.org

Additional Contacts and Information

Annual Meeting, 2018, Grand Junction, Colorado

- Local Arrangements, Doug Van Etten, douglasvanetten@gmail.com
- Conference Coordinators, Donna Gillette, donna@dgillette.com and Monica Wadsworth-Seibel, wadsworth-seibel@cox.net/wadsworth@gatewaycc.edu
- Program Chair, Anne Stoll, araraprogram@rockart.us

ARARA Online e-Newsletter

ARARA has a monthly newsletter that is distributed via e-mail. It is managed by Tania Ryan, araraonline@googlegroups.com. Its purpose is to provide information about any late-breaking conference updates, news affecting our rock art communities, and issues of interest that may need quick attention. It is open to the general public. To be added to the distribution list, send a request to ARARABoard@gmail.com and provide your e-mail address.

ARARA on Facebook

ARARA maintains a social media presence that is open to the public on Facebook. Join the 600+ individuals who "like" it. Content for consideration should be submitted to Scott Seibel, scottseibel@cox.net; alternatively, "like" the page, and "message" it to the moderator.

ARARA's Official Website: arara.wildapricot.org

Considerable information about our organization is provided at our official website. Tabs of particular interest include Who We Are; Contacts and Officers; Constitution and ByLaws; Management, Protection, & Conservation; For Kids, Teens, & Teachers; Awards; Membership; Newsletter & Publications; and Upcoming Conference. Contact information is ararawebmaster@rockart.us.

All Other Correspondence:

The official mailing address for ARARA is: ARARA c/o Jack Wedgwood, 1884 The Alameda, San Jose, CA 95126-1733.

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