No May Webinar

See details of the June La Jara field trip on p. 4

Upcoming Conferences, Meetings, and Events compiled by Lucy Burris

**On-going**

- Through September 8, **University of Colorado, Museum of Natural History** (Hensderson), Anthropology Hall, Boulder. Exhibit of works by Master potter Maria Martinez, "Poveka" of San Ildefonso Pueblo, New Mexico. While you are at the museum check out the new "Unearthed: Ancient Life in the Boulder Valley" stone tool exhibit.
2018-19 Colorado Rock Chapter Officers and Board

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<td>President</td>
<td>Teresa Weedin</td>
<td>Membership</td>
<td>Keith Fessenden</td>
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<td>Vice-President</td>
<td>Joel Hurmence</td>
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<td>Secretary</td>
<td>Betsy Weitkamp</td>
<td>Newsletter</td>
<td>Lucy Burris</td>
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<td>Treasurer</td>
<td>Randy Tatroe</td>
<td>Field Trip Coordinators</td>
<td>Anne Whitfield &amp; Betsy Weitkamp</td>
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<td>Board Members</td>
<td>Donna Morgan, Darwin Thompson, Anne Whitfield (1 position open)</td>
<td>CAS Representative</td>
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<td>Education</td>
<td>Betsy Weitkamp</td>
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To contact any of the above, email: coloradorockartassociation@yahoo.com

Upcoming Conferences, Meetings, and Events compiled by Lucy Burris

On-going continued

- Through Dec 15, 2019. University of Colorado Boulder, Print exhibit "Protect This Land: Making Change Through Visualization", Jerry Crail Johnson Earth Sciences and Map Library. [https://calendar.colorado.edu/event/protect_this_land_making_change_through_visualization](https://calendar.colorado.edu/event/protect_this_land_making_change_through_visualization)

May

May is Colorado Archaeology and Historic Preservation Month, [https://www.historycolorado.org/archaeology-historic-preservation-month](https://www.historycolorado.org/archaeology-historic-preservation-month)

- May 1, 7-8:30pm, CU Museum Of Natural History, Paleontology Hall, Boulder. Steve Lekson presents his newest book "A Study in Southwestern Archaeology". Includes a book signing. Free. [https://calendar.colorado.edu/event/a_study_in_southwestern_archaeology_with_steve_lekson](https://calendar.colorado.edu/event/a_study_in_southwestern_archaeology_with_steve_lekson)
- May 3-5, Wyoming Archaeological Society Spring Meeting, Casper, WY. [http://www.wyomingarchaeology.org/2019-was-spring-meeting.html](http://www.wyomingarchaeology.org/2019-was-spring-meeting.html)
- May 4, 2-3:30pm, Fort Garland Museum & Cultural Center, Borderlands Lecture Series. Dr. Derek Everett presents "Walk the Line: The Creation & Consequences of Western State Boundaries". [https://www.historycolorado.org/event/walk-line-creation-consequences-western-state-boundaries/2019/05/04](https://www.historycolorado.org/event/walk-line-creation-consequences-western-state-boundaries/2019/05/04)
- May 9, 7pm, Indian Peaks Chapter of the Colorado Archaeological Society, Boulder. Monthly speaker. [http://www.indianpeaksarchaeology.org/ipcas-lectures/upcoming-lectures](http://www.indianpeaksarchaeology.org/ipcas-lectures/upcoming-lectures)
- May 11, 9am-5pm, Spiro Mounds Archaeological Center, 14th Annual Archaeology Day, Spiro, OK.

(Continued on page 3)
Upcoming Conferences, Meetings, and Events (cont.)

- May 11, 10am-12pm, **Ute Indian Museum**, Tour of Shavano Petroglyphs, **Montrose**, https://www.historycolorado.org/event/tour-shavano-petroglyphs/2019/05/11
- May 14, 7pm, **CU Museum of Natural History**, Paleontology Hall, **Boulder**. Cecil R. Ganteaume presents on overview of the National Museum of American Indians "Americans" exhibit. https://calendar.colorado.edu/event/curators_talk_the_national_museum_of_the_american_indians_highly_acclaimed_americans_exhibition
- May 18, 10-3pm, **Idaho Archaeological Society, 7th Annual Archaeology Fair, Boise**. https://www.idahoarchaeology.org/
- May 21, 1-2pm, **History Colorado Center, Denver**. Members Only Behind the Scenes tour: Archaeology and Historic Preservation Month. History Colorado Members only, reservation required. https://www.historycolorado.org/event/members-only-behind-scenes-tour-archaeology-and-historic-preservation-month/2019/05/21
- May 23, 9am-2pm, **Ute Indian Museum**, Eagle Rock Shelter field trip, **Montrose**, Members $70, non-members $50. Reservation required. https://www.historycolorado.org/event/eagle-rock-shelter-colorado-canyons-association/2019/05/23
- May 23 – June 9, CU students and educators will be offering visitor activities at **Mesa Verde National Park**. See the CU Museum web site for specifics. https://www.colorado.edu/cumuseum/

**June/July**

- June 14-17, **American Rock Art Association, Conference**, Northern Arizona University, **Flagstaff**. https://arara.wildapricot.org/Conference-Info-2019
- June 17, 1-2pm and 7-8pm, **History Colorado Lecture Series, Denver**, Dr. Tom Noel presents the “State Historian's Address: Rethinking Colorado's Native American Heritage”. https://www.historycolorado.org/event/state-historians-address-rethinking-colorados-native-american-heritage/2019/06/17. Members $9, non-members $11.
- July 5-6, **Town of Deer Trail**, 150th Anniversary of the World's First Rodeo. https://www.historycolorado.org/event/deer-trail-rodeo/2019/07/05

**August/September/October**

- August 6-12, **History Colorado American Southwest Adventure trip**, guided by Andrew Guilliford, Fort Lewis College. Register with deposit by June 7. History Colorado members $1,500, nonmembers $2,050. https://www.historycolorado.org/event/american-southwest-adventure/2019/08/06
- September 7, 10am-3pm, **5th Annual Wyoming Archaeology Fair**, Territorial Prison, **Laramie**. http://www.wyomingarchaeology.org/2018-archaeology-fair.html
- September 26-30, **Utah Rock Art Research Association Symposium, Saint George, UT**. https://urara.wildapricot.org/
CRAA Field Trips

Signup new open!

CRAA La Jara Canyon  -submitted by
Darwin Thompson

What: Rock Art Petroglyphs on Canyon walls
When: June 8, 2019. This is a Saturday all day field trip (9:00 am–4:30pm)
Meeting Location: Monte Vista Dairy Queen Parking Lot, 705 1st Avenue (intersection of US Hwy 160 and US Hwy 285). We will meet at 9:00 am, then caravan south of Monte Vista on County Road 15 to Capulin, approximately 23 miles, then south another 12 miles to the site. 37 miles total one way.
Maximum Participants: 22
Lodging: Motels in Monte Vista or Alamosa. There is no onsite camping!
Road and Driving Conditions: Paved, graveled and dirt. County and BLM properties fairly smooth, but dusty road beds, OK for cars.
Hiking Distance and Difficulty: Hike up to rock art located on cliff faces. Will require moderately strenuous skills up unmarked trails. You will encounter loose rock and brush. Snakes may be present, so be aware!
Food: Bring your own water, lunch and snacks.
Facilities: No Restrooms
Items to Bring: Weather should be good, but be prepared! It may be sunny and hot. Hat, sun protection, rain protection, long pants advised, boots, trekking poles, camera, binoculars will help you locate features from below.
Signup and registration: April 30 to May 24. Sign up required. Please email: dthompson0481@gmail.com with the following:
  names of those attending
  mailing address
  email address
  phone number where you may be reached.

*Participants must be a current CRAA and or CAS member
*All Participants must sign a CRAA waiver
CRAA Field Trips (cont.)

Late Summer/Fall trips—Mark your calendar

**August 2-4** (long weekend) - **Northwest Colorado** (possible stops include Irish Ranch, Vermillion Canyon, Brown's Park, Medicine Wheel). Coordinator: Betsy Weitkamp.

**September 16-20** (week long) - **Central Wyoming** (possible stops include Legend Rock, Medicine Lodge State Park, Castle Gardens, Ring Lake Ranch). Coordinator: Teresa Weedin

Both these trips are still in the planning stage for destinations and logistics. Contact the coordinator if you'd like to help with a trip or have suggestions on places to stay and visit. See the February issue of *Pictures of the Past* for more information about potential destinations. Watch the CRAA web site for details of the August trip as *Pictures From the Past* will be on hiatus until September.

Notes from the CRAA Board compiled by Lucy Burris

- Consider serving on the board—a position is open. Elections for positions on the Board are coming in May, contact Teresa Weedin if interested in a position.
- Upcoming board meeting:
  - Saturday, May 11, time to be determined, at Fort Warren Library, Denver
- Contact Teresa Weedin to add agenda items or participate.
- State CAS is looking for a Recording Secretary and a Webmaster

PAAC Class Schedule compiled by Lucy Burris

There is one remaining Program for Avocational Archaeology (PAAC) class this spring offered through Office of the State Archaeologist. Classes are hosted by local chapters of the Colorado Archaeological Society. Get registration information and details at [https://www.historycolorado.org/paac-event-schedule](https://www.historycolorado.org/paac-event-schedule)

- May 31-June 3—**Geophysics and Remote Sensing**, San Juan Basin Chapter, Durango
Peter Faris Rock Art Blog

Peter posted the following blogs on April 20 (1), April 13 (2), and April 27 (3) at https://rockartblog.blogspot.com/ Reprinted with permission. As the weather warms and more of us are able to get out and view rock art in person, the ideas of animation and questioning our assumptions about what we see seem especially appropriate.

1. PREHISTORIC ANIMATION - PALEOLITHIC THAUMATROPES?

Even if we do not remember, or ever knew, what they are called, we all remember thaumatropes from our childhood as the classic illustration of the bird in a cage thaumatrope will remind us. Another popular one from history is made with a vase on one side and a bunch of flowers on the other. As you spin it the flowers appear to be in the vase, and the bird in the cage. Now it seems possible that the thaumatrope was invented a very long time ago.

In their 2012 paper from Antiquity, Azema and Rivere propose that engraved bone discs found in Paleolithic excavations might function as thaumatropes. In 1997 Florent Rivere was studying paleolithic bone discs cut from the shoulder blades of large animals (bison or deer). These had almost universally been classified as buttons or pendants by their discoverers. (Another suggestion was spindle whorls, but small size suggests that they would be ineffective in that role). Noting that some were decorated on both sides with animals shown in different positions he and Azema hypothesized that they could be strung on a cord of sinew or plant fiber and rotated as a thaumatrope.

"One of the most convincing cases is that of a bone disc some 3.1cm in diameter found in 1868 by M. Hardy in the Laugerie-Basse rockshelter in the Dordogne and published in 1872. One can see a herbivore, a doe or more likely a chamois from the shape of the ear and horn, the shape of the tail and small lines along the head. The animal is shown in two

(Continued on page 7)
different positions, standing on one side of the disc and lying on the other. We then had the idea that rapidly pivoting the object at 180 degrees (back and forth) would induce an optical effect in terms of retinal persistence, the capacity of the eye to retain an image already seen superimposed on the images being seen." (p. 321) In other words, by rapidly rotating the object about a horizontal pivot both sides would be seen in rapid succession, and the images would fuse because of retinal persistence.

"Other Magdalenian bone discs, whole or fragmented, seem to offer similar examples of animation. A mammoth from Raymonden (Dordogne) has an eye that opens (circular profile) and closes (almond shaped profile) while the mouth half opens. - A disc found at the site of La Tuiliere at Saint-Leon-sur-Vezere (Dordogne) shows the movement of an equid, from right to left, in three successive images. At Mas d'Azil (Ariege), a bone disc shows a sort of 'morphone', recording the passage of a young calf to adulthood." (p. 323)

Does any of this prove anything, well no, in fact I find myself a little skeptical of most of these conclusions. Based upon the listed subject matter I am not convinced that most of these would be effective illusions (on the order of the bird in the cage or the flowers in the vase). The mammoth winking it's eye does sound like an effective illusion however. But, if true, all this suggests a wonderful insight, that our Paleolithic forebears had invented this 19th century toy many, tens of thousands of years ago. An exciting possibility indeed. We know they were smart enough.

NOTE: Images in this posting were retrieved from the internet with a search for public domain photographs. If any of these images are not intended to be public domain, I apologize, and will happily provide the picture credits if the owner will contact me with them. For further information on this you should read the original report listed below.

REFERENCES:
2. ANIMATION IN PALEOLITHIC CAVE PAINTING - THE FLICKER EFFECT

One aspect of cave art that has garnered considerable speculation is the existence of animal portrayals that are repeated, or that have elements that are repeated many times. Some researchers classify these as corrections, or purposeful changes to the animal image, others have speculated that these represent a number of other animals, behind and partially (or mostly) obscured by the animal in front. A proposition that is heard less often, but seems to be gaining more traction, is that they represent a form of animation, implying motion of the animal (or actually imparting the appearance of motion under the right lighting conditions).

Azema and Rivere (2012) addressed the question of imparting the illusion of motion. "In France, 53 figures in 12 caves represent movement using superimposition, shown by multiple images in the same place of the legs (31 cases), thus depicting rapid paces (trot or gallop), less often the tossing of the head (22 cases) and more rarely that of the tail (8 cases). Representation takes two forms: either by the addition of a second version, more or less complete, of the part of the body concerned, or by the multiplication of barely sketched contours (lines) around the head or legs, which generates a sort of dynamic flux. Lascaux is the cave with the greatest number of cases of split-action movement by superimposition of successive images. Some 20 animals, 8-legged bison, (see the black and white diagram below), Chauvet cave, France. Photo electrummagazine.com, Public Domain.

Rhinoceros, Chauvet cave, France. Photo ctvnews.ca, Public Domain. (Continued on page 9)
principally horses, have the head, legs or tail multiplied." (p. 318)

This is an excellent description of the assumed intention of the Paleolithic artists, but I do not think that it goes nearly far enough. Picture, if you will, the animal images painted on the uneven surface of the cave wall, illuminated by the flickering light of a flame. Especially if the flame was moved side to side the different elements of the multiple view would be selectively illuminated (depending upon the position of the light and the angle of the portion of the wall), imparting the illusion of motion to the animal's image.

Examples from Chauvet Cave include the bison with multiple legs, the rhinoceros with multiple horns, the lion panel, and the multiple horse heads. The bison example and the rhinoceros example are pretty much self explanatory. With the lion panel you would have to see each of the lions across the lower part of the grouping in successive positions so the lion would appear to be lunging forward in four stages. Under the right lighting conditions the lion might open and close his mouth as well. The bison image's legs would be moving imparting the appearance of running, the rhinoceros moving his head, and lunging forward, and the horse raising his head, in other words - animation.

Azema and Rivere approach this proposition with the following statement: "An eight-legged bison drawn in the Alcove des Lions in Chauvet Cave proves that split action movement by superimposition was already used from the Aurignacian. This graphic illusion achieves its full impact when the light from a grease lamp or torch is moved along the length of the rock wall." (p. 319)

Now, I doubt that they were allowed to test this proposition with a grease lamp or torch in Chauvet Cave, so their statement, like mine, is only conjecture. But, at least, they did imagine some of the same effect I am describing.

(Continued on page 10)
If the motion of the light source were smooth, and the flickering of the torch at the right frequency, the effect could take advantage of the same neurological illusion that makes our motion pictures so effective - flicker fusion, sometimes called persistence of vision (Wikimedia).

Of course, I cannot state with certainty that this happens, I do not have measurements of the various angles of the differing sections of wall that the multiple images are painted on (or even if there is more than one angle) so my conjecture above is just that - conjecture. It would be interesting to see this tested with some sort of strobe light under controlled conditions. Just imagine if 

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REFERENCES:

3. FERTILITY, WEALTH, OR ANIMAL TRACKS?
On October 14, 2017, I posted a column titled Fertility or Wealth? in which I pointed out that some variations of the symbols traditionally interpreted as vulvas and used worldwide, might also be portrayals of shells, also used worldwide by cultures as symbols of wealth or adornment. There is also another possibility, that some of these images might have been intended to represent animal tracks. While many of these images seem to be obvious vulvar representations, there are also many that actually look more like the tracks of large game animals than symbols of fertility.

New discoveries on carved blocks of stone from Abri Cellier in France have led to the identification of a number of symbols as vulvas (White 2017:8-14). Also Abri Blanchard, Laussel, and Abri Castanet have these images (Hodgson 2018). Hodgson pointed out that "the notion that the "Q" shaped motifs in Upper Palaeolithic art represent vulvas has become accepted dogma. This assumption is critically examined by
showing that such motifs more closely resemble hoof prints. A number of hoof prints made by large herbivores are illustrated highlighting this correspondence, which suggests that such motifs should be reclassified as representing tracks made by certain animals. The idea that such motifs represent vulvas is deemed to result from prior assumptions regarding the pre-eminence of the male gaze." (Hodgson 2018:1)

These ancient cultures hunted Paleolithic megafauna: horses, aurochs, bison, and cervids (deer, reindeer, elk) and images of the tracks of these animals would make considerable sense in the repertoire of rock art themes. Whether these images would be pertinent to rites of increase for the game animals, or function as flash cards in the education of hunters, or have another purpose altogether, we might not be able to know, but we should acknowledge the possibility. Hodgson pointed out this possibility in connection with his "'Q' shaped motifs" (2018:1) but there are, in fact, a number of related shapes that also might represent animal tracks instead of vulvas.

Just imagine, if the pictures on the cave walls had been originally discovered by American buffalo hunters

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Peter Faris Rock Art Blog (cont.)

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some of these images might have been designated animal tracks all along.

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REFERENCES:

Upcoming Conferences, Meetings, and Events (cont.)

- September 27, Utah State Historical Society 67th Annual Meeting, West Valley City. [https://history.utah.gov/ushs-conference-cfp/](https://history.utah.gov/ushs-conference-cfp/)
- October 11-13, Colorado Archaeological Society Annual Meeting, Pueblo.
- October 11-13, Texas Archaeological Society 90th Annual Meeting, Amarillo, TX. [https://www.txarch.org/tas-annual-meeting](https://www.txarch.org/tas-annual-meeting)
- October 16-19, 77th Plains Anthropological Conference, Bloomington, IN. [https://plainsanthropologicalsociety.org/meeting](https://plainsanthropologicalsociety.org/meeting)

Information is accurate at the time of preparation but check the listed web sites for specific details and any changes. Check the listed web sites for any fees, membership, and advance registration requirements

Pictures from the Past Submission Guidelines compiled by Lucy Burris

*Pictures from the Past* is published monthly September through May for the purpose of sharing information with members and friends of the Colorado Rock Art Association. Submissions are welcome and are used at the editor’s discretion and may be edited for content, length, and format. Common submissions include book reviews, event announcements, volunteer help requests, activity reports, and news items. Please follow the guidelines in the February 2019 issue of *Pictures from the Past*. Contact the editor with any questions or to submit content LBurris2@comcast.net. Submit materials by the 25th of the prior month.

*Pictures from the Past will be on hiatus until fall.*

Watch the CRAA web site for information on summer activities. Watch your email for the next *Pictures From the Past* around September 1st.

On April 24, Becca Simon, Colorado Assistant State Archaeologist and State PAAC Coordinator, passed along this message from the Smithsonian National Museum of Natural History Sant Director, Dr. Kirk Johnson, concerning the recent the passing of Dennis Stanford.

It is with great sadness that I write to tell you that our friend and colleague, Dennis Stanford, Curator of North American Archaeology and Director of the Paleoindian Program, passed away this morning at Georgetown University Hospital after a long illness. Dennis was a beloved member of our community and could always be counted upon for a kind word and a smile. He was also a gifted and passionate archaeologist.

After receiving his PhD from the University of Wyoming, Dennis joined the Department of Anthropology in 1972, launching a 47-year career at the museum. He became one of the best known archaeologists in North America, with a gift for communicating research to both scholarly and public audiences. At a time when Paleoindian archaeology was still in its formative stages, Dennis helped advance the field through his studies of lithic materials, especially the distinctive stone tools known as Clovis points. His early-career fieldwork at the Jones-Miller Bison Kill Site in Colorado was an exceptionally careful excavation and study of a rich bison butchery site that dated to the Folsom period, roughly 10,000 years ago, and helped set the stage for the rest of his career. The last few decades of his research focused on the origins of the first inhabitants of North America, along with human adaptations to the changing environment as the last Ice Age was ending. He conducted fieldwork in Siberia, northern China, the western Arctic, the Rocky Mountains and, most recently, in the Chesapeake Bay region. Early on, his experimental research in using traditional stone tools to butcher an elephant that recently died, was covered by National Geographic.

During his career Dennis authored 136 publications, including several books. Across Atlantic Ice, which described his theory for an Atlantic route taken by the earliest Americans, was his most recent book. It was translated into multiple languages and was made into an audiobook.

Dennis was generous in his service to the museum and academic community, serving as chair of the Anthropology department from 1993 to 2000, serving as head of the archaeology division multiple times, hosting 32 fellows and serving on many dissertation committees. However, his substantial research and service accomplishments are almost outstripped by his extraordinary contributions to the archaeology collections. Dennis was the excavator/donor of 20 acquisitions totaling 475,000 objects and was the curator of record when an additional 32 acquisitions joined the collections, representing an additional 673,000 items. He will remain one of the foremost contributors to the North American archaeological collections for decades, if not centuries, to come.

I know all of you join me in sending our deepest sympathies to Dennis’ wife Pegi and his family, friends, and colleagues.

Sincerely,

Kirk Johnson