

ALL POINTS BULLETIN



Make friends with... ..the past, through the....

Colorado Archaeological Society - Denver Chapter

“...in the future, as in the past, the gathering of information will depend to a great extent on cooperation between avocational and professional archaeologists.” (H.M. Wormington, 1978)

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ONE FOR THE TUFA, TWO FOR THE PLUVIAL PLEISTOCENE LAKES: DATING 14ka ROCKART By Kenneth Andresen

A recent talk by Larry Benson at the University of Colorado Boulder on February 27, 2014, described dating of rockart in the Great Basin. The date is very old, near the end of the last ice age. During the ice age the Laurentide Ice Sheet covered Canada from the Atlantic Ocean to the snow covered mountains on the Pacific Coast. The climate was cool and an embedded polar jet stream brought precipitation to the Great Basin. Precipitation with lower evaporation due to the cooler climate resulted provided more water coming in than leaving. The enclosed Great Basin lakes grew to large size. Two large pluvial (rain fed) lakes formed: Lake Bonneville in NW Utah and Lake Lahontan in NW Nevada. Later, when the ice sheet retreated, the evaporation overcame precipitation and the lake levels declined.

Lake Bonneville, named by geologist G. K. Gilbert for Benjamin Louis Eulalie de Bonneville (1796-1878), began to be formed about 32ka (32,000 years ago). It eventually became almost as large in area as Lake Michigan and was much deeper at 1000 ft. The lake level rose and fell at various times. The level was also stable for extended periods. During a long lasting level a shore line can develop on slopes at lake edge. When one drives along I-84 between Ogden and Brigham City there is an obvious ancient shore line high on the Wasatch Mountain Front. The first of these stable levels, during the lake rise phase, was the Stansbury Level at about 4500 ft. lasting from 21ka to 20ka. The lake continued to rise to the Bonneville Level at 5090 ft. which lasted from about 16ka to 14.5ka.

At about 14.5ka, close to an edge of the Great Basin, the lake washed away a natural dam formed by opposing overlapping alluvial fans at Red Rock Pass in Idaho. The lake water spilled through the pass resulting in the Bonneville Flood. It is estimated the volume of water released was 1000 cubic miles in the first few weeks. The lake level fell 350 ft. to the Provo Level at about 4740 ft. It held at this level from 14.5ka to 11.8ka then slowly declined to the Gilbert Level where it stayed from about 11.0ka to 10.0ka.

Lake Lahontan formed in a time frame similar to that of Lake Bonneville. There was a stable level at about 1265m above current sea level from about 20.5ka to 15.8ka. The lake eventually rose to its highest level, the Lahontan Highstand, of 1335m about 15ka. The level then declined in 300 to 500 years to about 1163m. At this level only much smaller remnants remained. The most prominent of these are now Pyramid Lake, Winnemucca Lake Basin, Smoke Creek/Black Rock Basin, Honey Lake Basin, Carson Desert Basin, Buena Vista Basin, and Walker Lake.

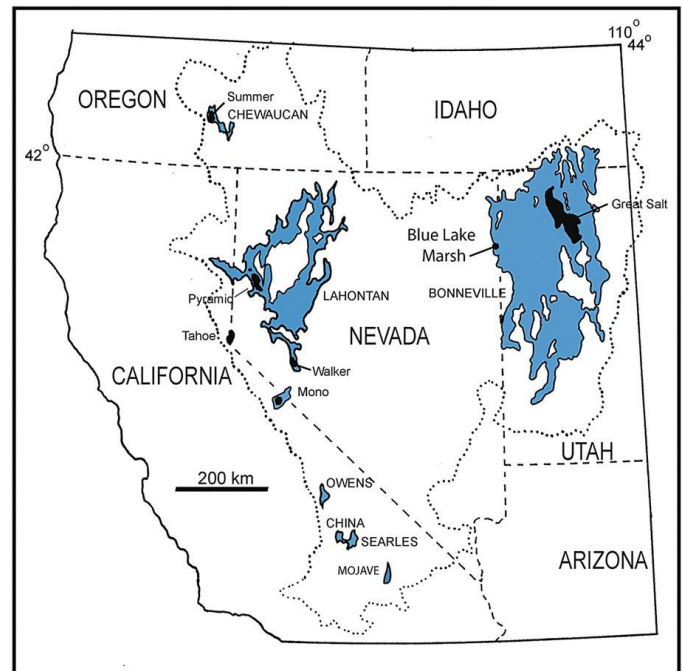


Figure 1 The two large Pleistocene lakes.

The main source of water to these remnants was the Truckee River which drained glacier and snow melt and rainfall from the Sierra Nevada range on the west. The Truckee River flows into Pyramid Lake. When Pyramid Lake filled up to the 1183m level it spilled through the Mud Lake Slough pass into Winnemucca Lake. This pass has now been worn down to 1177m. Water levels reaching higher levels spill over other passes to the other basins, some of which have passes to additional basins. The spill sequence following the spill into Winnemucca Lake Basin is: Pyramid Lake spills into the Smoke Creek/Black Rock Basin at 1207m and into Honey Lake Basin at 1222m. The Smoke Creek/Black Rock Basin spills into the Carson Desert Basin at 1262m. At 1265m Pyramid Lake also spills into the Carson Desert. The Carson Desert Basin spills into the Buena Vista Basin at 1292m and into Walker Lake at 1308m. The Walker River now supports Walker Lake.

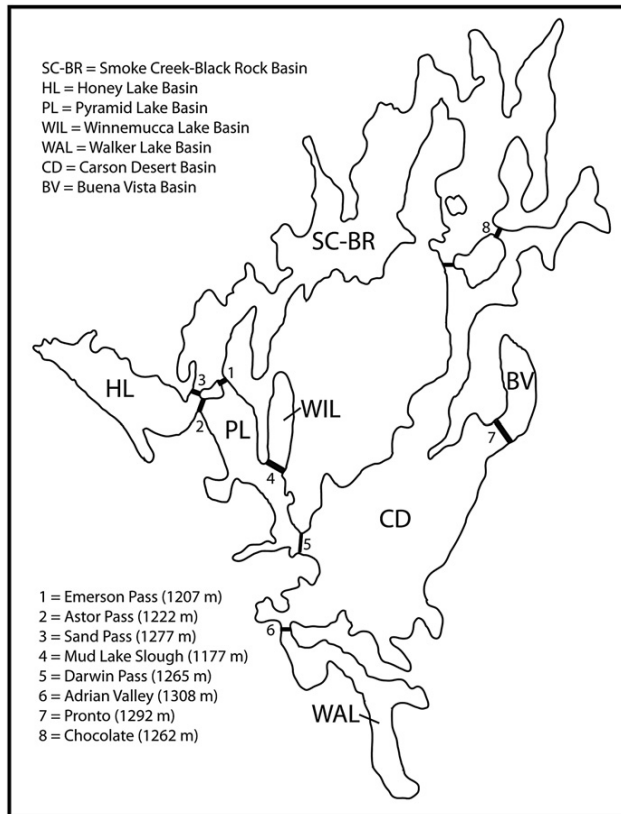


Figure 2 Lakes and Basins After Lake Lahontan

A C14 date of the carbonate crust covering the tufa is 10.2ya. Benson acknowledges that modern rain has CO₂ that contaminated the crust. The rainwater carbon contamination of the deposited carbonate carbon likely makes the 10.2ya date somewhat too young.

A date from Paisley 5-Mile Point Cave in south-central Oregon of 14.4ya suggests to Benson that pre-Clovis hunter gatherers may have moved to Great Basin wetlands during the dry Bolling period of 14.7ka to 14.1ka. Thus the rockart could have been made earlier than say 14.1ka.

Photos of rock shown at the talk showed petroglyph cupules, lines, and arrays of small cupules. Similar rockart is accessible at the nearby Grimes Point-Hidden Cave Archaeological Site on Highway 50 east of the Fallon Naval Air Station southeast of Fallon, NV. When the author stopped at Grimes Point, about a decade ago to view the rock art there, watching hot shot Navy pilots landing and taking off was an added attraction.

Reference

Benson, L.V., et. Al., Insights from a synthesis of old and new climate-proxy data from the Pyramid and Winnemucca Lake basins for the period 48 to 11.5 cal ka, *Quaternary International* (2012), doi:10.1016/j.quaint.2012.02.040

Carbonates in the lake water are deposited in both lake-bottom sediments and also in the form of massive “reefs” and tufa mounds (Benson et al 2012). Since the tufa was formed it has been exposed and retreated back into the lake water many times as the lake level has fluctuated over the millennia. During an exposure, long after Lake Lahontan disappeared, when the level was less than 1200m rockart was carved into a few of the tufa mounds. Subsequent lake level rise again submerged the tufa. During this submergence carbonate from lake water was deposited on the tufa surface. This was followed by another retreat of the lake level re-exposing the carbonate covered rockart.

The tufa is now exposed and the rockart is on approximately shaped spheroids of Winnemucca Lake tufa mounds on Paiute Reservation property. Benson was given permission to visit the area during a time when the tribal leaders were accommodating. Now subsequent tribal leadership prohibits access.

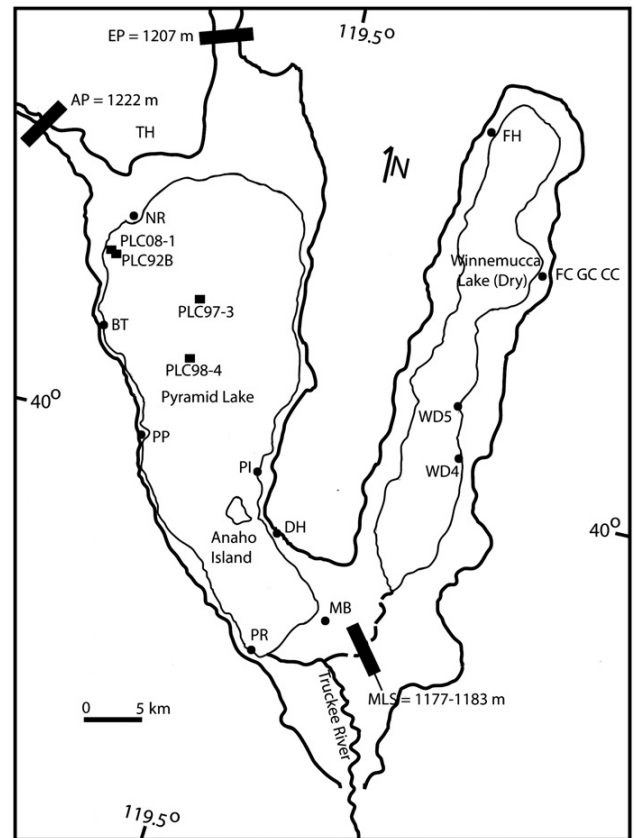


Figure 3 Truckee River Inflow

April General Meeting: Monday, April 14 in Ricketson Auditorium at 7 PM at DMNS.

Speaker: Dean Saitta

Title of talk: Excavating--and Remembering-- Ludlow

Abstract: The Ludlow Massacre was the most important event of the 1913-1914 Colorado Coal Field Strike. However, most Americans know nothing about it. This session describes the DU Anthropology Department's first-ever excavations of the Ludlow Tent Colony and its award-winning involvement in gaining National Historical Landmark status for the site. On the 100th anniversary of the strike, the lessons of Ludlow have considerable contemporary relevance.

Bio: Dean Saitta is Professor and Chair of the Anthropology Department at the University of Denver. He teaches courses in archaeology, evolutionary anthropology, and urban studies. He has researched social change in ancient Zuni society of west-central New Mexico, where he directed DU archaeological field schools throughout the 1990s. He co-directs the Colorado Coal Field War Archaeological Project, dedicated to better understanding events related to the 1913-14 Colorado Coal Field strike including the infamous Ludlow Massacre. He is the author of *The Archaeology of Collective Action*, and co-author of *Denver: An Archaeological History*. In 1998 he earned the University Scholar-Teacher of the Year award, and from 2000-2003 he served as University Professor of Social Science. He currently directs DU's Urban Studies program and is researching and writing about issues facing the contemporary city from an intercultural and archaeological perspective

(<http://www.interculturalurbanism.com/>).

The DC-CAS Board met at Metro State University Denver Campus March 4, 2014

Meeting was called to order at 7:01PM by Jack W

Attending were Jack Warner, Preston Niesen, Jan Dillon, Neil Hauser, Craig Banister, Ken Andresen and Kendra Elrod.

Vice Pres/Speakers (Jack W for Linda S) announced Steve and Kathy Holen will speak at the March DC-CAS General Meeting. Speakers are lined up for the next several months.

Scientific (Neil H) announced the grant proposal submittal for Douglas County field work funding has been delayed to October. Upcoming and potential field work for 2014 include but are not currently limited to the following:

- Survey for Ken Caryl Ranch is in final planning stages for summer field work, the area to be surveyed is on the northern most hogback slope and ridge areas/north of Dutch Creek
- Potential work for fall include assisting Gordy Tucker with test excavations
- Blackfoot field work for 2014 is under discussion

There was discussion about dig equipment repairs and new equipment being required for the beginning of the field season, e.g. screen repairs or hanging screens, awnings for shade, buckets, brushes, etc.

It was moved and passed that Neil H has permission to use up to \$1500.00 from the Scientific Applications Fund to purchase and repair field equipment

Membership (Jack W for Rosalie H) reported 128 total memberships of DC-CAS as of March 1, 2014. March 1 is now the annual renewal date for all DC-CAS member dues.

Preston N raised an issue about DC-CAS members with a subscription to *Southwest Lore* and the switch to March 1 annual dues renewals. He asked for permission to pay the Colorado Archaeological Society (state) dues by March 1 to ensure all DC-CAS members who subscribe to *Southwest Lore* will continue to receive their issues.

It was moved and passed Preston N will pay State CAS member dues by March 1 for everyone subscribed to Southwest Lore.

CAS Jan D reminded the tour to History Colorado arranged by Teresa W will take place Saturday March 15 at 10:15 AM. The tour will include curation and behind the scenes look at History Colorado. Jan D has setup a field trip to the Sand Creek Massacre site the morning of Saturday, May 10 and will include a talk by a ranger. In the afternoon there is a self-guided tour of the Calhan paint mines.

Jack W also has expressed his thanks to Teresa W and Marie Baum for arranging the UC Boulder Museum Field Trip on January 25

PAAC Jack W (for Anne W) reminded that enrollment for the PAAC Lithics course is still active.

Treasurer Preston N briefly reviewed several treasury funds. Jack W expressed interest in reallocating money from the Lab/Library Space fund to the Scientific Applications fund. It was decided contact needs to be made to Dr Richard Marlar who was the primary donor of the fund before moving anything from the fund.

APB Kathy B, Bob R, and Ken A the March APB has been loaded onto the DC-CAS website for members to access. The security issue with only members having access to APB has been resolved.

DC-CAS Website Craig B Jack W expressed his appreciation for Craig's quick action on adding more information to the site regardless of how late any information is presented to him.

Old Business Past minutes correction: it was incorrectly stated at the January 2014 general meeting that Bob Rushforth had announced April 20 is the 100-year anniversary of the Ludlow Massacre. The individual who had raised the topic was Bob Tipton, not Bob Rushforth.

Past Board meeting minutes for January 2014, as amended, and for February 2014 were approved.

New Business Jack W raised an issue regarding the Douglas County Liability Waiver currently used for work at Blackfoot. The insurance renewal is due in the near future. It was suggested DC-CAS adopt their own waiver to cover any liability issues in lieu of renewing insurance through Douglas County. This issue will be discussed again in the near future.

The next DC-CAS Board meeting is scheduled Tuesday, April 8 at Metro State University Denver
Jack W adjourned the DC-CAS board meeting 8:19 PM.

Kendra Elrod, Secretary

DC-CAS General Meeting at the Ricketson Auditorium at the Denver Museum of Nature and Science Monday, March 10, 2014.

Approximately 55 people attended the General Meeting.

Jack Warner called the meeting to order 7:05 PM

Jack W announced the March APB has been posted online for members to access and thanked the APB team for their outstanding work on putting the newsletter together and to Craig B for getting APB posted on the website.

PAAC course Lithics registration is open; a link to the course details is available online on the DC-CAS website (www.cas-denver.org) as well as in the APB.

Trips/Events Teresa W announced that on Saturday, March 15, there will be a curation/storage tour of History Colorado with Colorado State Archaeologist Dr Richard Wilshusen. Tour begins at 10:15 AM at History Colorado. Jan D announced the Sand Creek Massacre site tour is set for Saturday, May 10. The Sand Creek site will have a guided tour followed by a self-guided tour to the Calhan paint mines. Signup for this field trip is now open.

Scientific Neil H announced field work for 2014 including excavation at Blackfoot and survey at Ken Caryl Ranch are in planning stages.

Jack W continued the meeting by introducing Steve and Kathy Holen, the general meeting's speakers.

Following the lecture Jack W thanked Steve and Kathy Holen for their fascinating and thought-provoking presentation.

Old Business Past General Meeting minutes from January 2014 and February 2014 were approved.

New Business

Jack W adjourned the DC-CAS General Meeting at 8:18 PM.

Kendra Elrod, Secretary

BLACKFOOT CAVE

Curation (Repository in Castle Rock)

April 5, 19

Analysis (5379 South Flanders Way)

April 8, 9, 22

Contact: Neil Hauser hauserndigger@gmail.com

LECTURES & COURSES

"Removing Bad Spray Tans & Fly Specks: Conserving Spanish Colonial Art", by Cindy Lawrence, Sunday April 13, 2:30 pm, Lower Level Lecture room, North Building, Denver Art Museum, Meeting of Alianza de las Artes Americanas

"The Restoration of Damaged Sarcophagi", by Edwin Brock, Royal Ontario Museum, Monday, April 21, 7 pm, Gates Planetarium, Denver Museum of Nature & Science, 2001 Colorado Blvd., Meeting of Egyptian Study Society

"Upper Paleolithic Human Migration", by Julien Riel-Salvatore, Tuesdays, April 8-29, 6:30-8:30 pm, Denver Museum of Nature & Science, 2001 Colorado Blvd. Cost: \$75 DMNS Member, \$105 Nonmember.

EXHIBITS

"Maya-Hidden Worlds Revealed", through August 24, 2014, Denver Museum of Nature & Science (www.dmns.org/maya-hidden-worlds-revealed)

CAS QUARTERLY MEETING

Saturday April 12, 2014, in Niwot, Colorado. The location is the Left Hand Grange #9, 195 Second Ave.

CAS TRIPS

Ute Mountain Tribal Park Work Trip, April 25-26, Contact: Teresa Weedon, 303-366-7843, (weedon@comcast.net)

Sand Creek National Historic Site & Calhan Paint Mines, May 10 Contact: Teresa Weedon (weedon@comcast.net)

PAAC COURSE

Denver: "Lithics Description & Analysis", April 3, 10, 17, May 1, 8, 15, and 22

Register by making out a check for \$12 made payable to "Colorado Historical Society" and sending it to the Denver Chapter PAAC Coordinator, Anne Winslow, (Phone: 303-866-4670, email: anne.winslow@state.co.us)

PAAC SUMMER TRAINING SURVEY

Pawnee Buttes: June 10-14 & 19-22 Contact: Kevin Black (Kevin.black@state.co.us)

CONFERENCES

American Research Center in Egypt, April 4-6, Portland, OR (www.arce.org)

Society for American Archaeology, April 23-27, Austin, TX (www.saa.org)

Lamb Spring Archaeological Preserve Talks & Tours-- Learn about the Paleo-Indian and Columbian mammoth archaeological site in the SW Denver Metro area. Talks and tours are scheduled on Saturdays 5/3, 6/7, 7/19, 8/2, 9/6, 10/4 from 9:30 AM-- 12:30 PM. Contact Laura at laker@metcalfarchaeology.com for reservations. More information is on www.lambspring.org

DCAS February, 2014 Financial Report

Prepared by Preston Niesen, Treasurer

Assets

	January	February
Key Bank checking	\$ 2,015.09	\$ 2,153.63
TD 182 day to 01/02/14 @0.2%	\$ 5,682.42	\$ 5,682.42
TD 182 day to 10/23/13 @0.15%	\$ 4,798.58	\$ 4,798.58
TD 91 day to 12/25/2013 @0.1%	\$ 4,107.51	\$ 4,107.51
TD 1 year to 2/14/14 @ 0.2%	\$ 4,982.52	\$ 4,983.49

Total checking/savings \$ 21,586.12 \$21,725.63

Total Assets \$ 21,586.12 \$21,725.63

Liabilities & Equity

Current Liabilities	January	February
AH Scholarship Fund payable	\$ 80.00	\$ 80.00
State CAS Dues payable		

Funds

Scientific Applications	\$ 2,302.20	\$ 2,324.95
Swallow Report Project	\$ 2,556.81	\$ 2,556.81
D Bucknam Memorial Speaker Fund	\$ 1,747.10	\$ 1,747.10
Blackfoot Cave	\$ 130.00	\$ 130.00
Library	\$ 302.45	\$ 302.45
Education	\$ 182.00	\$ 182.00
Field Trips/Social	\$ 483.01	\$ 483.01
Lab/Library Space	\$ 4,224.31	\$ 4,224.31
Student Membership	\$ 21.50	\$ 5.50
Speakers Meal Fund	\$ 661.37	\$ 691.37

Total Liabilities & Funds \$ 12,690.75 \$ 12,727.50

General Fund \$ 8,895.37 \$ 8,998.13

Total L E F's \$ 21,586.12 \$ 21,725.63

ARE YOU MOVING OR DO YOU HAVE AN ADDRESS CHANGE??? Please update your address for the APB with our Membership Chairperson.

MEMBERSHIP APPLICATION or RENEWAL
Denver Chapter/Colorado Archaeological Society

Please check the address label on your APB to determine when your membership expires.

___ Application or ___ Renewal

Membership Type

___ Individual \$30.00 ___ Individual w/o SW Lore \$22.00

___ Family \$45.00 ___ Family w/o SW Lore \$35.00

___ Student (include copy of ID) \$16.00

___ Current State CAS Life member or Full member of another chapter \$14.00. Primary chap. _____

Contributions to these funds:

\$___ General \$___ Swallow Site

\$___ Scholarship fund \$___ Contribution Total

TOTAL of membership and contributions \$_____

Name(s)_____

Address_____

City_____ State_____ Zip_____

Phone #_____

Email_____

___ Exclude my/our contact information from printed roster

Note: Payment of dues for renewal is considered reaffirmation of your consent to the CAS Code of Ethics.

Make checks payable to: **Denver Chapter/CAS**

Mail to: **Denver Chapter/CAS**
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