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THE WYOMING **Archaeologist**

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INFORMATION FOR CONTRIBUTORS

The Wyoming Archaeologist accepts papers from professional archaeologists, students, and avocational archaeologists. Subjects published in The Wyoming Archaeologist include, but are not limited to, archaeological reports on sites in Wyoming and adjacent areas, descriptive project summaries, preliminary results of

On the Cover:

Busycon contrarium, lightening whelk, shell reportedly from Garret-Allen site, Carbon County, Wyoming. Eckles, this issue.

significant studies, archaeological method and theory, ethnographic studies, regional history, and book reviews. Submissions by professional archaeologists will be sent for peer review before acceptance.

Authors submitting manuscripts for consideration should follow the style guidelines of the journal *AMERICAN ANTIQUITY* as revised in June 2017 and updated in July 2018. These guidelines can be found at www.SAA.org. Complete instructions for authors were published in *THE WYOMING ARCHAEOLOGIST*, Volume 62(1), 2018, and can also be found on the inside back cover of this issue. Deadline for submission of copy for spring issues is January 1 and for fall issues is July 1. Reports and articles received by the Editor after those dates will be held for a following issue.

The society membership period is from January 1 through December 31. All subscriptions expire with the Fall issue and renewals are due January 1 of each year. Continuing members whose dues are not paid by March 31 of the new year will receive back issues only upon payment of \$5.00 per issue. If you have a change of address, please notify the Executive Secretary/Treasurer. Your *WYOMING ARCHAEOLOGIST* will not be forwarded unless payment is received for return and forwarding postage. Back issues in print can be purchased for \$5.00 each, plus postage. Back issues out of print are available at \$0.25 per page plus postage.

Checks for chapter subscriptions and renewals should be sent to the chapter secretary involved. All other checks, subscriptions, and renewals should be addressed to the Executive Secretary/Treasurer. Correspondence and orders for back issues should be addressed to the Executive Secretary/Treasurer.

A list of chapters and their officers can be found at: <http://www.wyomingarchaeology.org/was-chapters.html>

Society yearly subscription rates are as follows:

Individual Associate Member - \$20.00

Institutional Member - \$30.00

Canada and Other Foreign - \$34.00

Other memberships may be available. Contact the Executive Secretary/Treasurer for information. Local chapter dues are in addition to state society dues. The Wyoming Archaeological Society is a Nonprofit Organization.

The Wyoming Archaeological Society, Inc. and its local chapters do not discriminate on the basis of age, gender, sexual orientation, gender identity, gender expression, ethnicity, disability, national origin, political affiliation, or religious belief.

Neither the State of Wyoming, the Wyoming Department of State Parks and Cultural Resources, the Office of the Wyoming State Archaeologist, the Wyoming Archaeological Society, Inc, nor their employees or appointed or elected officials can be held responsible for any comment or viewpoint expressed in any issue of *The Wyoming Archaeologist*. The author(s) of each article or issue are totally responsible for the content and views expressed in their paper(s).

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WYOMING ARCHAEOLOGICAL SOCIETY
MEMORIAL GIFT or CONTRIBUTION FORM

Given by: Miss, Mrs., Mr., Ms., Dr. \$ _____ (Amount)

Name: Last _____ First _____ Middle _____

Address: _____ City & State _____ Zip _____

Donor phone number () _____

TYPE OF GIFT: General Contribution [] Specific Contribution []

In Memory of: _____
Name City & State

In Honor of: _____
Name City & State

Specify where you would like your money to go (e.g., Mulloy or Frison Scholarship Funds, The Wyoming Archaeologist, ????????)

Please make your check payable to THE WYOMING ARCHAEOLOGICAL SOCIETY
Send to Carolyn Buff, Executive Secretary/Treasurer, 1617 Westridge Terrace, Casper, WY 82604

WYOMING ARCHAEOLOGICAL FOUNDATION
MEMORIAL GIFT or CONTRIBUTION FORM

Given By: Miss, Mrs., Mr., Ms., Dr. \$ _____
Amount

NAME: LAST FIRST MIDDLE

ADDRESS: CITY & STATE ZIP

Donor phone number: _____

Type of Gift: General Contribution [] Specific Contribution []

In Memory of: _____
Name City & State

In Honor of: _____
Name City & State

Please specify where your donation is to be placed.
Jensen/Robson Research Grant _____; Jensen/Robson PhD Travel Award _____;
Hell Gap Research _____; WAF General Operations _____; Other _____.

Please make your check payable to the WYOMING ARCHAEOLOGICAL FOUNDATION and mail to Marsha Peterson,
WAF Treasurer, P.O. Box 2168, Laramie, WY, 82073; 307-766-5564.

Any funding for the George C. Frison Institute please contact Dr. Jason Toohey at University of Wyoming Anthropology, Dept. 3431, 1000 E. University Avenue, Laramie, WY 82071; or email jtoohey2@uwyo.edu.

NEWS AND INFORMATION

2022 WYOMING ARCHAEOLOGY AWARENESS MONTH

September brings a much beloved time of year to the residents of Wyoming, the beginning of autumn and Wyoming Archaeology Awareness Month (WAAM)! We had over 30 events spread across the state to celebrate Wyoming's rich cultural heritage. These events included hands-on Archaeology Day programs in Laramie, Riverton, Casper, and Gillette, numerous lectures hosted by museums and local archaeological groups, and several site tours. On September 15, 2022, Governor Mark Gordon signed a proclamation declaring September Wyoming Archaeology Awareness Month.

The Laramie Archaeology Fair is the largest event celebrating WAAM, and is sponsored by the Wyoming State Historic Preservation Office (SHPO), the Office of the Wyoming State Archaeologist (OWSA), the University of Wyoming Anthropology Department, and various state and Federal partners. Over 1,000 visitors came to the Archaeology Fair who were able to participate in hands-on activities such as cordage making, atlatl throwing, flint knapping, pottery making, hide painting, yucca processing, and food grinding. Demonstrations included hide working, firing ceramic vessels, and blacksmithing; the Wind River Dancers provided a beautiful performance and educational presentation on various Indigenous dance traditions. This event would not be possible without the almost 100 volunteers who make the experience so special and successful with their knowledge and passion for cultural resources.

The 2022 WAAM poster features a photograph of a stone enclosure site perched just below the peak of the Grand Teton. The educational brochure was developed in consultation with the Crow Tribal Historic Preservation Officer (THPO), Aaron Brien. The brochure discusses stone enclosures and suggests the Grand Teton Enclosure site is the location of a fasting bed, where Indigenous peoples would go to seek visions. Not only is the photograph of the Enclosure site stunning, but the accompanying materials educate the readers about an important part of Indigenous cultures. The Enclosure is Judy Wolfe's final poster in her impressive tenure of WAAM 26 posters, most of which won awards from the Society of American Archaeology. We wish her a happy retirement! The 2022 poster, brochure, and a list of events can be seen at <https://wyoshpo.wyo.gov/index.php/events-training/archaeology-awareness-month>.

The poster is available free of charge, and may be

picked up at the State Historic Preservation Office, Barrett Building, 2301 Central Avenue in Cheyenne, or in Laramie in the Anthropology Building located at 12th and Lewis, Room 312.

The posters are also available via mail with a \$14 charge to cover mailing costs. Send your request along with a check or money order payable to "Wyoming Dept. of State Parks and Cultural Resources" and your name and mailing address to:

Amanda Castaneda
State Historic Preservation Office
Wyoming Archaeology Month
Dept. 3431, 1000 E. University Ave.
Laramie, WY 82071.

WYOMING STATE MONUMENTS AND MARKERS NEW SEARCHABLE DATABASE

Wondering what those historic markers along the highway are all about? Never have time to stop as you drive by at highway speeds. Wyoming State Parks and Cultural Resources announces a new and searchable Monuments and Markers Interactive Map at <https://wyparks.wyo.gov/index.php/home-mm>

The GIS-based database contains a profile for each of the 1,000+ monuments and markers, including the name, longitude/latitude and a description of the significance to Wyoming's history or prehistory.

In addition, approximately half of the markers also contain a photograph of the monument or marker. This program will greatly aid the public searching for information on geological features, historical events, and people who have shaped Wyoming's rich history, be it for educational, tourism or other purposes.

Wyoming's Monuments and Markers Program operates through a partnership between State Parks and Cultural Resources, Wyoming Department of Transportation, the Wyoming Office of Tourism, local governments, Tribes, and private individuals and organizations.

The program is one of the oldest programs in the nation.

At a time when few thought to mark history, interested and concerned residents of Wyoming realized the need to commemorate the past and began placing monuments and markers that served to preserve a piece of the state's heritage.



Wyoming Archaeology Awareness Month proclamation signing day. From left to right: Cultural Trust Fund Representative Mary Hopkins, WAAM State Coordinator Amanda Castañeda, Judy Wolf, Gov. Mark Gordon, Wyoming State Archaeologist Spencer Pelton, SHPO Archaeologist Richard Currit, SHPO Archaeologist John Laughlin, and Deputy State Historic Preservation Officer Brian Beadles.

For more information, please contact Wyoming State Parks' Monuments and Markers Coordinator Mr. Dan Bach at 777-6314 or email him at dan.bach@wyo.gov

**PRELIMINARY ANNOUNCEMENT
WYOMING ARCHAEOLOGICAL SOCIETY
ANNUAL MEETING, APRIL 28-30, 2023
WASHAKIE MUSEUM AND CULTURAL CENTER,
WORLAND, WYOMING**

Absaroka Chapter, Cody and Pumpkin Buttes Chapter, Gillette will co-host the 2023 WAS/WAPA Spring Meeting. We are very excited to be able to hold the Conference at the Washakie Museum and Cultural Center in Worland, Wyoming. This beautiful museum lends itself well to the space requirements for our Spring Meeting.

The Museum and the Town of Worland are enthused about hosting WAS/WAPA and welcome this opportunity.

Representatives from each Chapter forming the 2023 committee traveled to Worland in October: Absaroka Chapter – Wes Huber, Sylvia Huber, Gary Miller;

Pumpkin Buttes – Robin Carlson, Leroy Dike. We met with Washakie Museum staff, toured the facility, and outlined a preliminary schedule.

OWSA has offered several workshops for Friday morning. The Chapters' Silent Auction and SHPO's T-Shirt sales will have an excellent space through out the weekend. The Museum will also be able to accommodate both the Friday evening social and the catered banquet.

The Committee has a lot of planning and scheduling to do in the next few months. We send out a thank you, in advance, to WAS/WAPA membership and all the State and Local groups who will be there to help.

Plan on attending the 2023 Spring Meeting. We believe the Washakie Museum and Cultural Center venue will make for a great conference!

WYOMING ARCHAEOLOGICAL FOUNDATION BOARD MEETING
Sunday – May 7, 2017 – Cody, Wyoming

WAF president Bonnie Smith called the meeting to order at 7:30 am in the Best Western hotel, Cody, WY. Attendance: Barb Nahas, Bonnie Smith, Judy Wolf, Denise Tugman, Danny Walker, Sylvia Huber, Mary Lou Larson, Marcel Kornfeld, George Frison, Greg Pierce, Todd Surovell. Guests: Marit Bovee, Marcia Peterson.

Bonnie asked if there were any changes or additions to the agenda. Hearing none, she asked if people had looked at the 2016 meeting minutes. Judy moved to approve the 2016 meeting minutes, and Greg Pierce seconded the motion. The motion to approve the May 8, 2016 Cheyenne, Wyoming minutes was approved unanimously by voice vote. **Treasurer's Report -- Barbara Nahas.** She summarized her financial report and explained that she took money from the money market account to pay taxes on Hell Gap. She filed the taxes on April 4, 2017. The fiscal year ended with \$4,261.56. The money market account ended the year with \$21,092.39. The Jensen trust was \$24,439. The research grant was \$21,164.33. The Frison Endowment Fund already made a \$10,000 payment on December 30. We have net worth of \$76,100.76. That was a gain over last year of \$4,061.09. Motion was made and seconded to approve the treasurer's report. The motion passed unanimously by voice vote.

Financial Statement
Fiscal Year 2016 / 2017

Balance In Checking as of 04/01/2016		\$3,542.99
<u>Income:</u>		
Henry Jensen Estate (Oil Royalties)	\$1,012.68	
Book Royalties	\$ 25.85	
WAS Dues 2016	\$ 350.00	
Clovis to Cowboy Posters	\$ 50.00	
Total Income	\$1,438.53	\$1,438.53
<u>Expenditures:</u>		
Wells Fargo – Safe Deposit Box	\$ 35.00	
Goshen County Treasurer	\$556.56	
Wyoming Secretary of State – Annual Report	\$ 25.00	
Postmaster – Annual P.O. Rental / Postage	\$103.40	
Total Expenditures	(\$719.96)	(\$719.96)
Balance In Checking as of 03/31/2017		\$4,261.56
<u>Reserve Funds</u>		
<u>Foundation Operations</u>		
Money Market Account (a/o 04/01/2016)	\$22,935.90	
Interest Paid 2016/2017	\$ 19.96	
Withdrawal (4/29/2017 - Travelers Ins.)	(\$ 1,865.00)	
Balance Ending (a/o 03/31/2017)	\$21,090.86	
Foundation Operations Sub-Total		\$21,090.86
<u>Henry E. Jensen Trust</u>		
Money Market Account (a/o 04/01/2016)	\$24,417.53	
Interest Paid 2016/2017	\$ 19.89	
Withdrawal 2016/2017	\$	
Balance Ending (a/o 03/31/2017)	\$24,437.42	
<u>Jensen / Robson Research Grant</u>		
Money Market Account (a/o 04/01/2016)	\$21,143.25	
Interest Paid 2016/2017	\$ 19.43	
Withdrawal 2016/2017	\$	
Balance Ending (a/o 03/31/2017)	\$21,162.68	
Jensen Trust Sub-Total		\$45,600.10
<u>George Frison Endowment</u>		
Money Market Account (a/o 04/01/2016)	\$ 0.00	
Deposits 2016/2017	\$15,145.00	

Interest Paid 2016/2017	\$ 3.24	
Withdrawal (12/13/2017 - UW Foundation)	(\$10,000.00)	
Balance Ending (a/o 03/31/2017)	\$ 5,148.24	
George Frison Endowment Sub-Total		\$5,148.24
Total Net Worth as of March 31, 2017		\$76,100.76

Respectfully Submitted By: _____
Barbara Nahas, WAF Treasurer

Audited By: _____

Date of Audit: _____

(Accounting note: Interest rates declined on Checking, and Money Market Account due to: Federal Reserve elected to keep interest rates low for another year. Drop in Oil Royalties due to: Reduction in crude oil prices and production. 2016 was a Presidential election year. New \$50,000.00 pledge entered into with UW Foundation for George C. Frison Endowment October 2016.)

Auditor’s Report -- Bonnie Smith gave the auditor’s report. The auditor’s committee for 2016 included Bonnie Smith (Chair), Greg Pierce, and Danny Walker. Our net worth in March 21, 2017 is \$76,100.76. Sylvia Huber moved and Barb Nahas seconded a motion to approve the auditor’s report. The motion passed unanimously by voice vote. Next year’s auditor’s committee will be Danny Walker and Denise Tugman.

Correspondence

Note from Paula Lutz, Dean of the College of Arts and Sciences at UW, thanking WAF for their donation of \$10,000 to the Frison endowment. She writes that “WAF helps [UW] provide support for one of our signature departments.”

OLD BUSINESS

When Henry Jensen died, he bequeathed several thousand dollars to WAF. WAF established the Jensen/Robson doctoral travel award for UW PhD students and the Jensen/Robson research grant was created in Henry Jensen’s name. Prior to this year she had not requested that the recipients of the research grant (2008-2014) provide a report to the *Wyoming Archaeologist* or a presentation to the spring WAS meeting. People have asked what was happening to the research money. No one had established a tracking system for the funds that we had given out. In 2013-2014 Mary Lou and Barb created a letter for recipients stating they need to submit a 2-3 paragraph report to be published in the *Wyoming Archeologist* within a year of receiving the grant. These 2008-2014 reports are now on file with the treasurer (Barb will give these to the new treasurer, Marcia Peterson). The project needs to be presented at the _____ Called the Grant – Project Completion Reports (**Tab 3**). Danny added a header in the journal that says Wyoming Archaeological Research Reports. Two reports have been published in the *Archeologist* and a few others have been published elsewhere. Barb asked recipients to submit reports, although not every recipient has submitted one. Marcel asked if someone who gets this grant basically agree to submit the paragraph. He asked if the short paragraph reports are reviewed. Danny Walker said they are not, but a full report will be reviewed like any other article. Danny will put a short note on treatment of the report inside the front cover journal. He reported that Todd Surovell should be submitting a manuscript on his grant research soon. Discussion continued. Articles are not necessary. Barb asked why Greg isn’t mentioned on cover of archaeologist. Danny will check this. Barb and Mary Lou will modify the letter and form.

NEW BUSINESS

Jensen/Robson. Research Grant Application(s) – Barbara Nahas

We had two applicants for the travel award, but no research grant applicants. To apply for the grant, the person has to have been a member of WAS for three years. It is available to anyone, not just students. Discussion continued. Very few people are applying. Grants don’t affect scholarships for students. Marcel reminded everyone else that these are not for students.

Hell Gap Report -- Marcel Kornfeld/Judy Wolf

***** Care and Upkeep**

Marcel - Not much new since last year. George Zeimens put a new stove range in the kitchen and fixed a faucet and the pump. Mary Lou and Marcel have been working on repairs for a number of years and have received help from one of our students and his father. Barb noted that she has reserved just under \$2,000 to fix things. Marcel noted the

house will need a new roof in a couple of years and we need to fix the cattle guard. This coming summer the husband of one of our students is going to come out and work on handicap accessibility for Mary Lou and other things. We will need to touch up the paint on the house too. Marcia asked about PIRL paying. Marcel reminded the board that PIRL is already contributing money and time to the project. He promised we would provide information on matching. Our lessee Matt Martin is willing to help with things. Marcel gave him a key so he could turn on the water heater. Mary Lou reminded everyone that Matt pays the electricity. Is quite a lot in the summers. Marcia could figure out the cost for this summer if she wants to.

*****Use in 2017**

George Zeimens and George Frison plan to use the house at same time as UW this summer. George Frison noted that anyone who uses house should take care of it. Leave it in better shape than when you came.

*****Hell Gap National Historic Landmark**

The WAS summer meeting is July 21-23 at Hell Gap at the same time as the dedication of the National Historic Landmark monument. There will be tours of the site and SHPO will provide lunch for the group. We've invited a lot of state, county, and local dignitaries including the governor and our federal representatives. There will be a plaque thanking those who donated the land. Judy noted that WAF and WAPA each pledged a thousand dollars for the monument and plaque. SHPO will cover honoraria for the speakers.

*****Solar Eclipse**

Marcel said that anyone related to WAS is welcome to come stay for the eclipse on July 21. He said we could make a lot of money on camping access, but decided that it would be more trouble than it is worth. The board discussed the issue of security.

OTHER BUSINESS

Barb said that we need a second signature for the WAF checkbook. Danny noted that this person needs to be mentioned in our minutes and approved by our board. It was moved and seconded that Greg Pierce should be second signature on the WAF checkbook. Motion passed unanimously by voice vote.

Todd Surovell reported that the UW foundation offered a match for any donation of \$10,000 to 25,000 in fall of last year. The WAF committed a \$50,000 pledge to be fulfilled over five years. The Frison Institute/WAF has already made \$30,000 of that pledge and Todd just received a check from Bill Tyrell for \$10,000. Marcel noted that WAF does not have to make the money, it just serves as a conduit to group smaller donations. Barb commended Todd on his fund-raising efforts.

ELECTION OF OFFICERS

Nomination of new officers for 2017/2018

Barb nominated Judy Wolf for President, Mary Lou Larson as Secretary – Barb moved and Marcia Peterson seconded. Passed unanimously. Discussion deteriorated into a discussion of who was the drunkest at last night's banquet.

ANNOUNCEMENTS

Jensen/Robson Doctoral Travel Award Recipient(s) for 2017 is Maddie Mackie from the June Frison chapter.

Bonnie presented a gift to Barb from the board of the original Hell Gap type point which was a cast (by Jim Chase). Bonnie thanked Marcia and Marcel for working on the gift.

SUMMER MEETING/2017 -- July 21-23 at the Hell Gap site.

FALL MEETING 2017 --

Could have one at the Fall Frison Institute meeting, but it is not required in the by-laws. Have had occasional meetings in the fall. The Institute meeting will be Sept 28, 2017, and Charles Stanish will be the Frison Institute speaker.

ANNUAL MEETING 2018 --

Will be a joint meeting in Billings, MT with the Montana Archaeological Society.

MOTION TO ADJOURN -- Bonnie moved, Barb seconded, approved unanimously by voice vote.

MISCELLANEOUS --- (Tab 4)

*****WAF Board of Directors/Officers**

***WAF Board of Directors Directory
 ***Award Summary

**Wyoming Archaeological Foundation
 2017/2018 Officers
 Board of Directors**

Title	Name	Expiration
President (member-at-large)	Judy Wolf	2018
Secretary (Department representative)	Mary Lou Larson	2018 Ex-Officio
Executive Treasurer (WAS/Member-At-Large)	Marcia Peterson	Ex-Officio
WAS / Members – At – Large	Danny Walker	2018
	Denise Tugman	2019
WAS President	Sylvia Huber	2019
Immediate Past WAS President	Judy Wolf	
University of Wyoming (Emeritus)	George Frison	Lifetime
State Archaeologist	Greg Pierce	Ex-Officio (non-voting)
UW Anthropology Department	Mary Lou Larson	Ex-Officio (non-voting)
George C. Frison Institute	Todd Surovell	Ex-Officio (non-voting)
Hell Gap Site Manager & Co-PI	Marcel Kornfeld	Ex-Officio (non-voting)

**WYOMING ARCHAEOLOGICAL FOUNDATION BOARD MEETING
 Saturday, April 28, 2018–Billings, Montana**

WAF President Judy Wolf called the meeting to order at 5:00 pm in the Billings Hotel and Convention Center, Billings, MT. Attendance: Marcia Peterson, Judy Wolf, Denise Tugman, Sylvia Huber, Mary Lou Larson, Marcel Kornfeld, George Frison, Greg Pierce, Jason Toohey, Brigid Grund, Mavis Greer.

Introduction of New Members—Jason Toohey was introduced as the new Frison Institute director since Todd Surovell moved to UW Anthropology Department head. Also, Brigid Grund was introduced as the new WAS member at large, and Mavis Greer was introduced as the WAS President.

Judy asked if there were any changes or additions to the agenda. Hearing none, she asked if people had looked at the 2017 meeting minutes. One correction was requested for the draft minutes. Motion was made and seconded to approve the 2017 meeting minutes as corrected, and the motion was approved unanimously by voice vote.

Treasurer’s Report—Marcia Peterson summarized her financial report. She filed taxes on April 11, 2018, and filed the WAF non-profit corporation annual report with the Wyoming Secretary of State on December 4, 2017. At the end of the fiscal year, WAF had \$2,995.02 in the checking account. The savings account ended the fiscal year with \$76,303.90, and total net worth was \$79,298.92. That was a gain over last year of \$3,198.16. Motion was made and seconded to approve the treasurer’s report. The motion passed unanimously by voice vote.

**Financial Statement
 Fiscal Year April 1, 2017-March 31, 2018**

Balance In Checking as of 04/01/2017		\$4,261.56
<u>Income:</u>		
Henry Jensen Estate (Oil Royalties)	\$1,200.17	
Book Royalties	\$60.90	
WAS Dues		\$357.00
Clovis to Cowboy Posters	\$50.00	
PO Box Refund	\$73.50	
Jensen/Robson Travel Award (WAS/WAPA) \$500.00		
	Total Income	\$2,241.57
<u>Expenditures:</u>		
Wells Fargo–Safe Deposit Box	\$35.00	
First Interstate—Safe Deposit Box	\$8.00	

First Interstate—New Checks	\$26.30	
Travelers Insurance	\$2,036.00	
Goshen County Treasurer	\$599.08	
Wyoming Secretary of State—Annual Report	\$27.00	
Postmaster—Annual P.O. Rental/Postage	\$26.73	
Jensen-Robson Travel Award	\$750.00	
	Total Expenditures	(\$3,508.11)
Balance In Checking as of 03/31/2018		\$2,995.02
<u>Reserve Funds</u>		
<u>Foundation Operations</u>		
Savings Account (a/o 04/01/2017)	\$21,090.86	
Interest Paid	\$22.25	
Withdrawals	\$	
Balance Ending (a/o 03/31/2018)	\$21,113.11	
	Foundation Operations Total	\$21,113.11
<u>Henry E. Jensen Trust</u>		
Savings Account (a/o 04/01/2017)	\$24,437.42	
Interest Paid	\$23.38	
Withdrawals (Hell Gap NHL)	(\$4,000.00)	
Deposits (Lease Bonus)	\$5,333.50	
Balance Ending (a/o 03/31/2018)	\$25,794.30	
	Jensen Trust Total	\$46,980.38
<u>Jensen / Robson Research Grant</u>		
Savings Account (a/o 04/01/2017)	\$21,162.68	
Interest Paid	\$23.40	
Withdrawals	\$	
Balance Ending (a/o 03/31/2018)	\$21,186.08	
	George Frison Endowment Total	\$7,688.91
<u>George Frison Endowment</u>		
Savings Account (a/o 04/01/2017)	\$5,148.24	
Deposits	\$32,535.00	
Interest Paid	\$5.67	
Withdrawals—UW Foundation	(\$30,000.00)	
Balance Ending (a/o 03/31/2018)	\$7,688.91	
	Hell Gap Monument Fund Total	\$521.50
<u>Hell Gap Monument Fund</u>		
Savings Account (a/o 04/01/2017)	\$0.00	
Deposits	\$15,960.00	
Withdrawals	(\$15,438.50)	
Balance Ending (a/o 03/31/2018)	\$521.50	
	Hell Gap Monument Fund Total	\$521.50
	Total Net Worth as of March 31, 2018	\$79,298.92

Auditor's Report

Committee: Denise Tugman (Chair), Greg Pierce, and Sylvia Huber (replaced Danny Walker because he could not attend the meeting)

Sylvia Huber gave the auditor's report. A motion was made and seconded to approve the auditor's report. The motion passed unanimously by voice vote.

The auditor's committee for 2019 is: Sylvia Huber (Chair), Greg Pierce, and Mavis Greer.

The following correspondence was acknowledged:

1. Thank you for the Frison Institute Endowment:
 - Three note cards and two letters from Paula Lutz, Dean of the UW College of Arts and Sciences

- Two letters from Katrina McGee, Direction of Foundation Development for the UW Foundation
- 2. Holiday cards from the UW Foundation and UW President, Laurie Nichols
- 3. Letter from Loren J. Thomson on behalf of the Wyoming Army National Guard inviting WAF to review and comment on the PA between the Wyoming Military Department, National Guard Bureau, Wyoming SHPO, and ACHP
- 4. Wyoming Game and Fish correspondence about capturing elk on Hell Gap site property
- 5. Correspondence regarding the Hell Gap NHL:
 - Letter from J. Paul Loether, Chief of the NRHP NHL program informing WAF of the NHL designation
 - Letters from Sen. John Barrasso, Rep. Liz Cheney, and Governor Matt Mead congratulating WAF on the Hell Gap NHL designation
 - Letters from Renee Bovee of the WCTF congratulating WAF on receiving a WCTF grant for the NHL monument and thanking WAF for the Final Report on the Hell Gap Monument and returning \$3,156.57 to the WCTF

OLD BUSINESS

No old business was presented.

NEW BUSINESS

Jensen / Robson Research Grant Application(s)—No applicants

Hell Gap Report—Marcel Kornfeld

- Excavation: 3/10-day sessions: field school, crew, volunteers
 - Nearly done with witness block started in 1999
 - About ½ done with remains in Agate Basin to Goshen deposits
 - 2017 – 1st time since 1992 (beginning of reinvestigation) that we see the entire cultural sequence from Goshen to Late Prehistoric.
 - Several rehabbed trailers are serving as labs, storage, and guest quarters (UW and MK/Pinner trailers)
 - Metcalf Archaeological Consultants donated a Weatherport for large events
 - Fixed Cattle guard (Darren Garhart/Tank Farm)
 - Removed posts—installed beam in over the site building, so we can excavate Locality IE (Darren Garhart/Tank Farm)
 - New steps into Lab trailers (Parts courtesy Darren Garhart/Tank farm)
 - ‘Bridge’ over drainage (Parts courtesy Darren Garhart/Tank Farm)
 - Temporary load of water pumps (Darren Garhart/Tank Farm)
 - Gift of pump intake hoses (Darren Garhart/Tank Farm)
 - Summer WAS meeting was held from July 21-23, 2017, in conjunction with the Hell Gap NHL monument dedication
- Eclipse: Hell Gap <10 km from center
 - Worry of vandalism so NO TRESPASSING posted at end of July and removed by September/October, but not really a problem
 - Invites to WAS associated people (Donors, former excavators, WAF board) to have a presence in case of need; a few others asked and we accepted them, nearly all archaeologists related to Wyoming Archaeology in some way
 - Only minor incidents
 - Visited by some 1960 crew members, which was very useful!

Judy Wolf summarized the activities at the Hell Gap NHL monument/dedication—the NHL monument was completed and the dedication was held on July 22, 2017; over 200 people in attendance

New WAF logo -- Judy Wolf proposed hiring Mariko Design LLC to design a new logo for WAF. The estimated costs = \$250.00. A motion was made and seconded to hire Mariko Design LLC to design the new logo, and the motion passed unanimously by voice vote. Judy Wolf will take the lead in coordinating with Mariko Design and will circulate draft designs for vote to the Board when available.

OTHER BUSINESS

Frison Institute Briefing—Jason Toohey

The Frison Institute has almost completed the \$50,000.00 WAF/UW Foundation match fundraising. At the time



Submitted By: Date: 4/25/2018
 Marcia Peterson, WAF Treasurer

AUDITING COMMITTEE REPORT

In accordance with the bylaws, the Auditing Committee has reviewed the Treasurer's books and records for the Wyoming Archaeological Foundation, Inc. for **Fiscal Year 2017** (Fiscal year ends March 31st of each year).

Audited and Found Correct By:

1. Date: 4/28/18
 Signature
Denise D. Tugman
 Printed Name
2. Date: 4-28-18
 Signature
Greg Pieu
 Printed Name
3. Date: 4-28-18
 Signature
Sylvia Huber
 Printed Name

Financial Statement
 Fiscal Year 2017-2018
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of the meeting, it only had an additional ~\$2,200.00 to raise and anticipated raising that amount by the Frison Institute meetings in September 2018.

2018 Frison Institute speaker will be Dr. Stuart Fiedel on September 20, 2018, at 4:00 pm in the Education Auditorium.

WAF Board voted unanimously to change the time of the annual meetings from Sunday morning to Saturday immediately following the WAS paper presentations.

ELECTION OF OFFICERS

Brigid Grund was nominated for WAF President and Mary Lou Larson was nominated for WAF Secretary. A motion was made and seconded to approve Brigid Grund as President and Mary Lou Larson as Secretary, and the motion carried by unanimous voice vote.

ANNOUNCEMENTS

Jensen/Robson Doctoral Travel Award Recipient(s) for 2018—No applicants

FOR THE GOOD OF THE ORDER

Nobody had any additions for the good of the order.

SUMMER/FALL MEETINGS

The summer meeting will be held in conjunction with WAS at the Hell Gap site from July 21-23, 2017. No fall meeting will be held.

2019 WAS SPRING MEETING

The 2019 WAS annual meeting is currently scheduled for Rock Springs, Wyoming.

A motion to adjourn was made and seconded at ~6 pm, and the motion passed unanimously by voice vote.

**Wyoming Archaeological Foundation
2018/2019 Board of Directors**

Title	Name	Expiration
President (WAS member-at-large)	Brigid Grund	2019
Secretary	Mary Lou Larson	2019
Executive Treasurer (WAS member-at-large)	Marcia Peterson	Ex-Officio
WAS Members-at-Large	Denise Tugman	2019
	Brigid Grund	2020
WAS President	Mavis Greer	2019
Immediate Past WAS President	Sylvia Huber	
University of Wyoming (Emeritus)	George Frison	Lifetime
State Archaeologist (non-voting)	Greg Pierce	Ex-Officio
UW Anthropology Dept. (non-voting)	Mary Lou Larson	Ex-Officio
Frison Institute (non-voting)	Jason Toohey	Ex-Officio
Hell Gap Site Manager & Co-PI (non-voting)	Marcel Kornfeld	Ex-Officio

**Wyoming Archaeological Foundation
2018/2019 Board of Directors Contact Information**

<u>President</u>	<u>Secretary</u>	<u>Treasurer</u>
Dr. Brigid Grund 1625 West Pine Street Pinedale, WY 82941-0768 brigidsky@gmail.com 307-367-5300	Dr. Mary Lou Larson Dept. 3431 1000 E. University Ave. Laramie, WY mlarson@uwyo.edu 307-766-5566	Marcia Peterson Dept. 3431 1000 E. University Ave. Laramie, WY 82071 marcia.peterson@wyo.gov 307-766-5565
<u>WAS Members at Large</u>	<u>WAS President</u>	<u>WAS Past President</u>
Denise Tugman P.O. Box 1630 Mills, WY 82644 dtugman@usbr.gov 307-261-5671	Dr. Mavis Greer 2599 Paradise Dr. Casper, WY 82604 mavis@greerservices.com 307-473-2054	Sylvia Huber P.O. Box 522 Cody, WY 82414-0522 eagleofcody@tctwest.net 307-527-7523
<u>Dr. Brigid Grund</u>	<u>State Archaeologist</u>	<u>Frison Institute Director</u>
1625 West Pine Street Pinedale, WY 82941-0768 brigidsky@gmail.com 307-367-5300	Dr. Greg Pierce Dept. 3431 1000 E. University Ave. Laramie, WY 82071 greg.pierce@wyo.gov 307-766-5564	Dr. Jason Toohey Dept. 3431 1000 E. University Ave. Laramie, WY 82071 jtoohey2@uwyo.edu 307-766-3229
<u>Ex Officio</u>	<u>Hell Gap Site Manager</u>	
Dr. George Frison Dept. 3431 1000 E. University Ave. Laramie, WY 82071 307-745-9277	Dr. Marcel Kornfeld Dept. 3431 1000 E. University Ave. Laramie, WY 82071 anpro1@uwyo.edu 307-766-3548	

**WYOMING ARCHAEOLOGICAL FOUNDATION BOARD MEETING
Saturday, May 4, 2019–Casper, Wyoming**

WAF President Brigid Grund called the meeting to order at 4:30 pm in the Ramkota Hotel, Casper, Wyoming. Attendance: Marcia Peterson, Denise Tugman, Sylvia Huber, Mary Lou Larson, Marcel Kornfeld, Jason Toohey, Brigid Grund, Mavis Greer, Bill Elder, and Rachael Shimek.

Introduction of New Members—Bill Elder was announced as the new WAS member at large.

Brigid asked if there were any changes or additions to the agenda. Hearing none she asked if people had looked at the 2018 meeting minutes. No changes were requested for the draft minutes. Mavis Greer moved to approve the 2018 minutes and Marcia Peterson seconded her motion. The motion was approved unanimously by voice vote.

Treasurer's Report—Marcia Peterson summarized her financial report. She filed taxes on April 30, 2019, and filed the WAF non-profit corporation annual report with the Wyoming Secretary of State on December 20, 2018. At the end of the fiscal year, WAF had \$4,038.00 in the checking account. The savings account ended the fiscal year with \$71,970.26, and total net worth was \$76,009.25. That was a loss over last year of \$3,289.67, which is a combination of more expenses than income and the differences in money that we were or are holding for others (Frison Institute and Hell Gap). Sylvia moved to approve the treasurer's report and Mavis seconded. The motion passed unanimously by voice vote.

Financial Statement
Fiscal Year April 1, 2018-March 31, 2019

Balance In Checking as of 04/01/2018		\$2,995.02
<u>Income:</u>		
Henry Jensen Estate (Oil Royalties)	\$1,589.93	
Book Royalties	\$55.83	
WAS Dues	\$317.50	
Clovis to Cowboy Posters	\$0.00	
Frison Endowment	\$12,943.20	
Hell Gap Residue Analysis	\$500.00	
Savings Transfer for Travelers Insurance	\$2,240.00	
	Total Income	\$17,646.46
<u>Expenditures:</u>		
First Interstate—Safe Deposit Box	\$10.00	
Travelers Insurance	\$2,240.00	
Goshen County Treasurer	\$632.29	
Wyoming Secretary of State—Annual Report	\$27.00	
Frison Endowment	\$12,943.20	
Hell Gap Residue Analysis	\$500.00	
New WAF Logo	\$250.00	
	Total Expenditures	(\$16,602.49)
Balance In Checking as of 03/31/2019		\$4,038.99
<u>Reserve Funds</u>		
<u>Foundation Operations</u>		
Savings Account (04/01/2018)	\$21,113.11	
Interest Paid	\$27.48	
Withdrawals (Insurance)	(\$2,240.00)	
Deposits	\$521.50	
Balance Ending (03/31/2019)		\$19,422.09
		\$19,422.09
<u>Henry E. Jensen Trust</u>		
Savings Account (04/01/2018)		\$25,794.30
Interest Paid	\$33.18	
Withdrawals	(\$0.00)	
Deposits	\$0.00	
Balance Ending (03/31/2019)		\$25,827.48
<u>Jensen / Robson Research Grant</u>		
Savings Account (04/01/2018)		\$21,186.08
Interest Paid	\$33.25	
Withdrawals	(\$0.00)	
Balance Ending (03/31/2019)	\$21,219.33	

Jensen Trust Total		\$47,046.81
<u>Frison Endowment</u>		
Savings Account (04/01/2018)		\$7,688.91
Deposits	\$5,250.00	
Interest Paid	\$4.29	
Withdrawals—UW Foundation		(\$12,943.20)
Balance Ending (03/31/2019)		\$0.00
Frison Endowment Total		\$0.00
<u>Hell Gap Monument Fund</u>		
Savings Account (04/01/2018)	\$521.50	
Deposits	\$0.00	
Withdrawals		(\$521.50)
Balance Ending (03/31/2019)		\$0.00
Hell Gap Monument Fund Total		\$0.00
Hell Gap Donations		
Savings Account (04/1/2018)		\$0.00
Interest Paid	\$1.36	
Deposits	\$6,000.00	
Withdrawals		(\$500.00)
Balance Ending (03/31/2019)		\$5,501.36
Hell Gap Donations Total		\$5,500.00
Total Net Worth as of March 31, 2019	\$76,009.25	

Auditor’s Report

Committee: Sylvia Huber (Chair), Greg Pierce, and Mavis Greer

Mavis Greer and Sylvia Huber gave the auditor’s report. A motion was made and seconded to approve the auditor’s report. The motion passed unanimously by voice vote.

The auditor’s committee for 2020 is: Sylvia Huber (Chair), Mavis Greer, and Marcel Kornfeld.

The following correspondence was acknowledged:

1. Letter from First Interstate Bank notifying WAF that its safe deposit box fee is increasing to \$15.00/year
2. Letter from Travelers Insurance that insurance premiums increased from \$2,240 in 2018 to \$2,331 in 2019; and increase of \$91
3. Letter and notecard from Paula Lutz, Dean of the College of Arts and Sciences, thanking WAF for its gifts to the Frison Institute Endowment
4. Letter from Katrina McGee, Director of Foundation Development, thanking WAF for its gifts to the Frison Institute Endowment
5. Correspondence from Wyoming Game and Fish about its ongoing elk capture on or around WAF property and the results of the elk tracking

OLD BUSINESS

WAF has a new logo thanks to Judy Wolf and logo designer Elizabeth Rahel

WAF wrote a letter of support for Wyoming Cultural Trust Fund Grant for continued research at Hell Gap in the Fall of 2018 and the project was funded in November 2018

NEW BUSINESS

Jensen / Robson Research Grant Application(s)—No applicants

Hell Gap Report—Marcel Kornfeld

- Maintenance this year includes painting, painting and some board replacements on handicap ramps, and re-excavating the cattle guard;
- Excavation will be done in 2-3 years and wants to do a more complete job of closing up the pole barn;
- Wants to replace a gate with telephone poles
- June 22 to July 29—three 10-day sessions at Hell Gap

- Open house on July 13, including flintknapping, atl atl, and artifact roadshow
- Wants to host the OWSA Avocational Archaeology program on Hell Gap property
- Discussed the Martins’ lease and Peterson, who wants the lease; Martins’ lease needs to be renewed (background—Peterson was turned off to WAF when the rest of the property was purchased; WAF was supposed to get the land from Travelers after foreclosed; Travelers sold it to Peterson and then tried to strong arm them to sell, which angered Peterson; Martins have a lease that needs to be renewed, but Peterson wants the lease); the question was would leasing the property to Peterson help get him to sell the parcel with Locality 3

Brigid asked what WAF will have to do 2-3 years from now when the excavations are done. Marcel said that he has helped researchers do projects out there and would continue to want to do some coordination with additional researchers and in the near future, Marcel and Mary Lou would continue to monitor the site.

Also, OWSA will probably do some avocational archaeology training out there.

OTHER BUSINESS

Frison Institute Briefing—Jason Toohey

The Frison Institute completed the \$50,000.00 WAF/UW Foundation match fundraising. The endowment value is ~\$791,000.00 with a market value of ~\$820,000.00; that is down \$30,000.00 from last year

The Frison Institute gave away ~25-26,000.00 in 18 different grants.

2019 Frison Institute speaker will be Dr. John Verano from Tulane University on September 26, 2019, at 4:00 pm in the Education Auditorium.

ELECTION OF OFFICERS

Brigid Grund was nominated for WAF President and Mary Lou Larson was nominated for WAF Secretary. A motion was made and seconded to approve Brigid Grund as President and Mary Lou Larson as Secretary, and the motion carried by unanimous voice vote.

ANNOUNCEMENTS

Jensen/Robson Doctoral Travel Award Recipient(s) for 2019—No applicants

FOR THE GOOD OF THE ORDER

Nobody had any additions for the good of the order.

SUMMER/FALL MEETINGS

The summer meeting will be held at the LaPrele Mammoth site from June 28-30, 2019. No fall meeting will be held.

2020 WAS SPRING MEETING

The 2020 WAS annual meeting is currently scheduled for Sheridan, Wyoming.

Brigid Grund made a motion to adjourn at ~5:30 pm and Marcia Peterson seconded. The motion passed unanimously by voice vote.


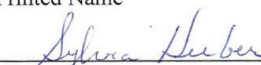
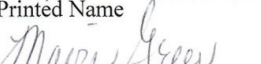
**Wyoming Archaeological Foundation
2019/2020 Board of Directors**

Title	Name	Expiration
President (WAS member-at-large)	Brigid Grund	2020
Secretary	Mary Lou Larson	2020
Executive Treasurer (WAS member-at-large)	Marcia Peterson	Ex-Officio
WAS Members-at-Large	William Elder	2021
	Brigid Grund	2020
WAS President	Mavis Greer	2020
Immediate Past WAS President	Sylvia Huber	
University of Wyoming (Emeritus)	George Frison	Lifetime
State Archaeologist (non-voting)	Spencer Pelton	Ex-Officio

AUDITING COMMITTEE REPORT

In accordance with the bylaws, the Auditing Committee has reviewed the Treasurer's books and records for the Wyoming Archaeological Foundation, Inc. for **Fiscal Year 2018** (Fiscal year ends March 31st of each year).

Audited and Found Correct By:

1.  Date: 5-1-19
Signature
Guy Powell
Printed Name
2.  Date: 5-3-19
Signature
Sylvia Huber
Printed Name
3.  Date: 5-3-19
Signature
Mavis Greer
Printed Name

Financial Statement
Fiscal Year 2018-2019
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UW Anthropology Dept. (non-voting)	Mary Lou Larson	Ex-Officio
Frison Institute (non-voting)	Jason Toohey	Ex-Officio
Hell Gap Site Manager & Co-PI (non-voting)	Marcel Kornfeld	Ex-Officio

**Wyoming Archaeological Foundation
2019/2020 Board of Directors
Contact Information**

<u>President</u> Dr. Brigid Grund 1625 West Pine Street Pinedale, WY 82941-0768 brigidsky@gmail.com 307-367-5300	<u>Secretary</u> Dr. Mary Lou Larson Dept. 3431 1000 E. University Ave. Laramie, WY mlarson@uwyo.edu 307-766-5566	<u>Treasurer</u> Marcia Peterson Dept. 3431 1000 E. University Ave. Laramie, WY 82071 marcia.peterson@wyo.gov 307-766-5565
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<u>WAS Members at Large</u> William G. Elder 3 Elizabeth Circle Lander, WY 82520 307-349-1282	<u>WAS President</u> Dr. Mavis Greer 2599 Paradise Dr. Casper, WY 82604 mavis@greerservices.com 307-473-2054	<u>WAS Past President</u> Sylvia Huber P.O. Box 522 Cody, WY 82414-0522 eagleofcody@tctwest.net 307-527-7523
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Dr. Brigid Grund 1625 West Pine Street Pinedale, WY 82941-0768 brigidsky@gmail.com 307-367-5300	<u>State Archaeologist</u> Dr. Spencer Pelton Dept. 3431 1000 E. University Ave. Laramie, WY 82071 spencer.pelton@wyo.gov 307-766-5564	<u>Frison Institute Director</u> Dr. Jason Toohey Dept. 3431 1000 E. University Ave. Laramie, WY 82071 jtoohey2@uwyo.edu 307-766-3229
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Ex Officio

Dr. George Frison
 Dept. 3431
 1000 E. University Ave.
 Laramie, WY 82071
 307-745-9277

Hell Gap Site Manager

Dr. Marcel Kornfeld
 Dept. 3431
 1000 E. University Ave.
 Laramie, WY 82071
 anpro1@uwyo.edu
 307-766-3548

**WAF BOARD OF DIRECTORS
 2020-2021 MEETING MINUTES
 Friday, April 30, 2021—Virtual Via Zoom**

WAF President Brigid Grund called the meeting to order at 4:02 pm. Attendance: Marcia Peterson, Sylvia Huber, Mary Lou Larson, Marcel Kornfeld, Jason Toohey, Brigid Grund, Mavis Greer, Tyson Arnold, and Spencer Pelton.

Introduction of New Members—Jenny Aeillo and Sylvia Huber were announced as the new WAS members at large. Because WAS did not have an annual meeting last year, no new member at large was elected for the term that originally expired in 2020; as a result, Jenny Aeillo agreed to serve a 1-year term to accommodate. Sylvia Huber will serve the standard 2-year term.

Brigid asked if there were any changes or additions to the agenda. Hearing none she asked if people had looked at the 2019 meeting minutes. No changes were requested for the draft minutes. Marcia Peterson moved to approve the 2019 minutes and Mavis Greer seconded her motion. The motion was approved unanimously by voice vote.

Treasurer's Report—Marcia Peterson summarized her financial reports for 2020 and 2021.

2020 WAF TREASURER'S REPORT

- Filed taxes on 6/5/2020
- Filed with the Secretary of State on December 27, 2019
- Started with a checking account balance of \$4,038.00 on April 1, 2019; ended with a balance of \$2,957.70 on March 31, 2020
- Started with a savings account balance of \$71,970.26 on April 1, 2019; ended with a balance of \$72,044.47 on March 31, 2020
- Total net worth on April 1, 2019 = \$76,009.25; total net worth on March 31, 2020 = \$75,002.17; difference is a loss of \$1,007.08—this loss represents the difference between WAF's annual income and expenses—we lose about \$1,000-\$1,200 per year if no additional income posts to our account (like the occasional oil and gas lease agreement, etc.)
- Regular expenses of \$3,027.29 and total expenses of \$3,562.29 (\$535.00 for Hell Gap advertising and obsidian sourcing taken from donations collected from Marcel and held by WAF); income of \$2,481.00 (income includes Hell Gap donations; spent \$1,081.29 more than income)

2021 WAF TREASURER'S REPORT

- Filed taxes on 4/19/2021
- Filed with the Secretary of State on December 16, 2020
- Started with a checking account balance of \$2,957.70 on April 1, 2020; ended with a balance of \$691.17 on March 31, 2021—The drastic difference is due to the payment of property taxes and insurance without transferring money from savings to checking
- Started with a savings account balance of \$72,044.47 on April 1, 2020; ended with a balance of \$72,051.65 on March 31, 2021—no deposits other than monthly interest, which is abysmal now
- Total net worth on April 1, 2020 = \$75,002.17; total net worth on March 31, 2021 = \$72,742.82; difference is a loss of \$2,259.35—this loss represents the difference between WAF's annual income and expenses—we usually lose about \$1,000-\$1,200 per year if no additional income posts to our account (like the occasional oil and gas lease agreement, etc.); however, in 2020, our income was down significantly and we lost over \$1,000.00 more than usual
- Regular expenses of \$3,131.14; income of \$871.79 (income plus savings account interest); spent \$2,259.35 more than all income; last year we spent \$1,081.29 more than income

- We did not receive the WAF portion of WAS dues last year, which usually accounts for over \$300.00 of income.
- We did not receive oil royalties in June 2020. I contacted the company, and they informed me that they did not pay royalties in June 2020, but rolled those into the July 2020 payment. The royalties went down significantly in 2020, but are rebounding now.

Brigid Grund moved to approve the treasurer’s report and Mavis seconded. The motion passed unanimously by voice vote.

**Financial Statement
Fiscal Year April 1, 2019-March 31, 2020**

Balance In Checking as of 04/01/2019		\$4,038.99
Income:		
Henry Jensen Estate (Oil Royalties)	\$1,424.09	
Book Royalties	\$93.41	
WAS Dues	\$374.50	
Clovis to Cowboy Posters	\$54.00	
Hell Gap Advertising	\$500.00	
Hell Gap Obsidian Sourcing	\$35.00	
Total Income		\$2,481.00
Expenditures:		
First Interstate—Safe Deposit Box	\$15.00	
Travelers Insurance	\$2,331.00	
Goshen County Treasurer	\$654.29	
Wyoming Secretary of State—Annual Report	\$27.00	
Hell Gap Advertising	\$500.00	
Hell Gap Obsidian Sourcing	\$35.00	
Total Expenditures		(\$3,562.29)
Balance In Checking as of 03/31/2020		\$2,957.70
Reserve Funds		
Foundation Operations		
Savings Account (04/01/2019)		\$19,422.09
Interest Paid	\$15.98	
Withdrawals (Insurance)	(\$0.00)	
Deposits	\$0.00	
Balance Ending (03/31/2020)	\$19,438.07	
Foundation Operations Total		\$19,438.07
Henry E. Jensen Trust		
Savings Account (04/01/2019)		\$25,827.48
Interest Paid	\$19.33	
Withdrawals	(\$0.00)	
Deposits	\$0.00	
Balance Ending (03/31/2020)		\$25,846.81
Jensen / Robson Research Grant		
Savings Account (04/01/2019)		\$21,219.33
Interest Paid	\$19.37	
Withdrawals	(\$0.00)	
Balance Ending (03/31/2020)	\$21,238.70	
Jensen Trust Total		\$47,085.51
Hell Gap Donations		

Savings Account (04/1/2019)	\$5,501.36	
Interest Paid	\$4.53	
Deposits	\$550.00	
Withdrawals	(\$535.00)	
Balance Ending (03/31/2019)	\$5,520.89	
Hell Gap Donations Total		\$5,520.89

Total Net Worth as of March 31, 2020 \$75,002.17

2020 Auditor’s Report

Committee: Sylvia Huber, Mavis Greer, and Marcel Kornfeld

Mavis Greer gave the auditor’s report. Brigid moved to approve the auditor’s report and Mavis seconded. The motion passed unanimously by voice vote.

Financial Statement
Fiscal Year April 1, 2020-March 31, 2021

Balance In Checking as of 04/01/2020		\$2,957.70
Income:		
Henry Jensen Estate (Oil Royalties)	\$835.73	
Book Royalties	\$28.88	
WAS Dues	\$0.00	
Total Income		\$864.61
Expenditures:		
First Interstate—Safe Deposit Box	\$15.00	
Travelers Insurance	\$2,426.00	
Goshen County Treasurer	\$663.14	
Wyoming Secretary of State—Annual Report	\$27.00	
Total Expenditures		(\$3,131.14)
Balance In Checking as of 03/31/2021		\$691.17
Reserve Funds		
Foundation Operations		
Savings Account (04/01/2020)	\$19,438.07	
Interest Paid	\$1.96	
Withdrawals	(\$0.00)	
Deposits	\$0.00	
Balance Ending (03/31/2021)	\$19,440.03	
Foundation Operations Total		\$19,440.03
Henry E. Jensen Trust		
Savings Account (04/01/2020)	\$25,846.81	
Interest Paid	\$2.29	
Withdrawals	(\$0.00)	
Deposits	\$0.00	
Balance Ending (03/31/2021)		\$25,849.10
Jensen / Robson Research Grant		
Savings Account (04/01/2020)		\$21,238.70
Interest Paid	\$2.31	
Withdrawals	(\$0.00)	
Balance Ending (03/31/2021)		\$21,241.01
Jensen Trust Total		\$47,090.11

Hell Gap Donations

Savings Account (04/01/2020)	\$5,520.89	
Interest Paid	\$0.62	
Deposits	\$0.00	
Withdrawals	(\$0.00)	
Balance Ending (03/31/2021)		\$5,521.51
Hell Gap Donations Total		\$5,521.51

Total Net Worth as of March 31, 2021 \$72,742.82

2021 Auditor’s Report

Committee: Sylvia Huber, Mavis Greer, and Marcel Kornfeld

Mavis Greer gave the auditor’s report. Brigid moved to approve the auditor’s report and Mavis seconded. The motion passed unanimously by voice vote.

The auditor’s committee for 2022 is: Sylvia Huber, Mavis Greer, and Marcel Kornfeld.

The following correspondence was acknowledged:

1. Travelers Insurance—two notices of changes or additions to our property insurance policy; notification that our 2020-2021 policy renewal premium was \$2426.00 (up from \$2,331.00, an increase of \$95.00); notification that our 2021-2022 policy renewal premium is \$2,520 (up from \$2,426.00, an increase of \$94.00)
2. University of Wyoming Foundation’s Annual Report on Giving for fiscal years 2019 and 2020 (July 1, 2018 to June 30, 2020)
3. Colorado State Forest Service—Sent a letter asking for access to the Hell Gap property to conduct a Forest Inventory and Analysis survey

OLD BUSINESS

It was announced that the Martin lease was renewed and filed with Goshen County; the lease is good from 2019 to 2024 with an option for an additional 5-year extension.

No additional old business needed to be addressed at this time.

NEW BUSINESS

Jensen/Robson Research Grant Application(s)—Amanda Castaneda and Charles Koenig submitted an application for the Jensen/Robson Research Grant. We allowed them to submit a late application since we had not received any other applications, and they had recently received partial funding for their project from the Frison Institute Wyoming Archaeology Fund. Their proposal is entitled *Rock Art Documentation at the Greybull South Site (48BH92)*. Some discussion ensued about the proposal and the applicants’ qualifications for the grant. The grant requires applicants to have been members of the Wyoming WAS for at least 3 years. Amanda and Charles have not been in Wyoming for three years, but they have participated in a significant amount of Wyoming archaeology since they arrived. I followed up with Amanda, and they have paid dues to the June Frison Chapter for 2019, 2020, and 2021. The WAF Board decided that their proposal meets the intent of the grant and that Amanda and Charles have demonstrated enough commitment to completing archaeology in Wyoming to receive the award. We discussed possibly making an addition to the grant application saying the Board will consider exceptions to the grant requirements if they deem it appropriate under the circumstances to accommodate applications from people like Amanda and Charles who have demonstrated a commitment to Wyoming archaeology and the ability to fulfill the intent of the grant. Sylvia Huber moved to approve the proposal and Marcia seconded. The Board voted unanimously to approve the application. Marcia said she would draft the official letter and send it to Amanda and Charles with the check for \$1,000.00 and the project completion form they will need to complete when they are done.

Hell Gap Report—Marcel Kornfeld and Mary Lou Larson presented a PowerPoint presentation of their work at the Hell Gap site in 2020 and proposed for 2021. The complete PowerPoint is incorporated at the end of these minutes.

- 2021 Field Schedule
- 19-28 June Session 1
- 29 June-2 July Break
- 3-12 July Session 2 (9-11 July Open House and Exhibition Events)
- 13-16 July Break
- 17-26 July Session 3

Marcel said they were happy to accept volunteers—fill out the volunteer application at:

<https://www.uwyo.edu/anthropology/paleoindian-research-lab/index.html> and look for application form link

Spencer Pelton and Tyson Arnold discussed potential future plans for the Hell Gap property and facilities once Marcel Kornfeld and Mary Lou Larson finish their investigations. Spencer reiterated that there was a lot of stuff to take care of out at the Hell Gap site, including the excavation site and all of the facilities. We cannot let the property sit idle or it will deteriorate quickly. It is a huge task and the property needs constant upkeep and maintenance like Mary Lou and Marcel have been doing for years. So, what's the best way to keep people out on the property annually and maintain the property? He suggested opening the property up to other field schools and research outside of the University of Wyoming and outside of archaeology. We could charge people to use the facilities. This would require infrastructure improvements, reliable water, internet, shower facilities, etc. Tyson and Spencer discussed leasing the property out to other groups and hiring a manager to be out there to supervise. We would require research designs, adherence to certain research standards, etc. We could expand the research conducted at the site, which will in turn expand our knowledge about the archaeology and other fields (ecology, biology, etc.) on the property, produce a library of research reports from a variety of disciplines, and overall create a diverse research facility that could draw people from a variety of academic fields and from outside of Wyoming (nationally and internationally). Marcel said that in the past they had considered other field schools and they had talked to ecologists and others. The problem was people didn't want to stay in just one location. They considered the property could be a field station for southeastern/central Wyoming, but most of the surrounding property is private and requires landowner permission for field projects, which can be hard to secure. He said it is too overly optimistic to think the property can be self-supporting, but it could be used for WAS workshops, like surface survey and excavations for society members. Marcel suggested we might partner with the Frison Institute to devise a plan. Jason was amenable. Mavis suggested we review the property insurance policy to make sure that we are covered for any of the endeavors we are suggesting. Marcia agreed to review the insurance policy prior to our next discussion on this issue. Marcia suggested we consider other legal requirements or standards and guidelines we will require, such as leases, cooperative agreements, etc. before the next meeting. We decided to consider their ideas for the property between now and the next in person meeting to be held in Sheridan in late April or early May 2022.

We need to figure out who the voting members of WAF are and how many WAS members at large we are supposed to have on the Board. The last changes to the articles and bylaws were in 2006, but those changes do not reflect how the Board has operated or the composition of the Board. Marcia said she would go back through the meeting minutes from the time the last changes to the articles and bylaws were made and see what happened, how the Board was supposed to operate, and who the voting and non-voting members of the Board are or should be. If she found any useful information, she would email the Board. Marcel said he would contact Barb Nahas, who was the Executive Treasurer at the time, and see what she recalled from their discussions and the changes that were made. The Board decided to postpone any additional discussion on the matter until the in-person meeting in the spring in Sheridan, Wyoming.

OTHER BUSINESS

Frison Institute Briefing—Jason Toohey

In 2020, the Frison Institute Board meeting was held via Zoom. They funded 21 grant proposals last year and 15 this year; awarded about \$45,000.00. Last year's grants were extended 12 months to accommodate COVID-19 restrictions because many researchers were unable to complete their projects. Right now, the Frison Fund has over \$1,100,000.00, which includes endowed funds over \$878,000 and over \$100,000 in non-endowed funds. With these funds, the Institute can award \$29,000-\$30,000 per year. All of the money the Institute fund generates is available for the Institute to grant/use. An in-person Board meeting will be held on September 23, 2021. The Institute is also hosting a public lecture and celebration of the life and work of Dr. George Frison on September 24, 2021, at the Train Depot in Laramie, Wyoming from 3:00-5:00 pm.

Marcel and Mary Lou suggested we get another UW Anthropology representative for the Board since Mary Lou (our current UW rep) retired. The Board agreed. Marcel suggested that Jason Toohey could serve as the UW Anthropology rep and on behalf of the Frison Institute. Jason said he would serve in both positions. The Board voted unanimously

in favor.

ELECTION OF OFFICERS

Mavis Greer volunteered for WAF President and Sylvia Huber volunteered for WAF Secretary. Marcia moved to approve Mavis Greer as President and Sylvia Huber as Secretary and Brigid Grund seconded. The motion carried by unanimous voice vote.

ANNOUNCEMENTS

Jensen/Robson Doctoral Travel Award Recipient(s) for 2020 and 2021—No applicants

FOR THE GOOD OF THE ORDER

Nobody had any additions for the good of the order.

SUMMER/FALL MEETINGS

The summer meeting will be held at the Hell Gap site from July 9-11, 2021. No fall meeting will be held.

2022 WAS SPRING MEETING

The 2022 WAS annual meeting is currently scheduled for Sheridan, Wyoming.

ADJOURNMENT

Brigid Grund made a motion to adjourn at ~5:37 pm and Mavis seconded. The motion passed unanimously by voice vote.

**Wyoming Archaeological Foundation
2021/2022 Board of Directors**

Title	Name	Expiration
President	Mavis Greer	2022
Secretary	Sylvia Huber	2022
Executive Treasurer	Marcia Peterson	No Date
WAS Members-at-Large	Jenny Aeillo	2022
	Sylvia Huber	2023
WAS President	John Laughlin	2023
Immediate Past WAS President	Mavis Greer	2023
State Archaeologist (non-voting)	Spencer Pelton	Ex-Officio
UW Anthropology Dept./		
Frison Institute (non-voting)	Jason Toohey	Ex-Officio
Hell Gap Site Manager & Co-PI (non-voting)	Marcel Kornfeld	Ex-Officio

**Wyoming Archaeological Foundation
2021/2022 Board of Directors
Contact Information**

President: Mavis Greer, Ph.D., RPA, Greer Archeology, PO Box 51874, Casper, WY 82605, mavis@GreerServices.com, 307-267-2037 (cell)

Secretary: Sylvia Huber, P.O. Box 522, Cody, WY 82414-0522, sylvipro.dconsult@gmail.com, 307-527-7523

Executive Treasurer: Marcia Peterson, Dept. 3431, 1000 E. University Ave., Laramie, WY 82071, marcia.peterson@wyo.gov, 307-399-7914 (cell)

WAS Member at Large: Jenny Aeillo, jennyaiello1117@gmail.com

WAS Member at Large: Sylvia Huber, P.O. Box 522, Cody, WY 82414-0522, sylvipro.dconsult@gmail.com, 307-527-7523

WAS President: John Laughlin, john.laughlinwy@gmail.com

WAS Past President: Mavis Greer, Ph.D., RPA, Greer Archeology, PO Box 51874, Casper, WY 82605, mavis@GreerServices.com, 307-267-2037 (cell)

Frison Institute Director/UW Anthropology: Dr. Jason Toohey, Dept. 3431, 1000 E. University Ave., Laramie, WY 82071, jtoohey2@uwyo.edu, 307-766-3229

State Archaeologist: Dr. Spencer Pelton, Dept. 3431, 1000 E. University Ave., Laramie, WY 82071, spencer.pelton@wyo.gov, 307-399-2827 (cell)

Hell Gap Site Manager: Dr. Marcel Kornfeld, Dept. 3431, 1000 E. University Ave., Laramie, WY 82071, anpro1@uwyo.edu, 307-766-3548

**WYOMING ARCHAEOLOGY FOUNDATION
BOARD MEETING MINUTES**

Saturday, April 30, 2022, Sheridan, Wyoming

1. Call to Order – Mavis Greer, President
Mavis called the meeting to order at 4:51pm
Members present: Mavis Greer, Sylvia Huber, Marcia Peterson, Tyson Arnold, Barb Vietti, John Laughlin, Spencer Pelton, Marcel Kornfeld
Members absent: Jason Toohey
Also in attendance: Rachael Shimek
2. Additions / Changes to Agenda
No changes made
3. Approval of July 10, 2021 minutes – Hell Gap
John moved to accept the minutes as written. Tyson seconded.
Motion carried unanimously.
4. Treasurers Report – Marcia
2021-2022 WAF Treasurer’s Report attached
Update to investment account research:
Marcia will talk to Hilltop Bank-Casper and/or bank in Laramie
Invest a minimum of \$20,000
5. Auditor’s Report (fiscal year 2021-2022)
Committee formed to conduct audit: Tyson, John, and Barb
6. Correspondence – Marcia
No correspondence to report.

OLD BUSINESS

PI Agreement

Vote to extend was unanimously at July 10, 2021 WAF meeting.
Marcel and Mavis will sign agreement.

Jensen / Robson Grant

John completed the update of eligibility information.

WAF By-Laws Review

Marcia distributed amended copies of the By-Laws and Articles of Incorporation to all members via email 30 days in advance of meeting.

Sylvia moved to accept the amended By-laws, Tyson seconded.

Motion carried unanimously.

Tyson moved to accept the amended Articles of Incorporation, John seconded. Motion carried unanimously.

New Business

Hell Gap Report—Marcel Kornfeld

Marcel recapped the past two years.

2020: No field work was scheduled.

Maintenance completed on house: fixed siding, painted inside and out.

2021: Constructed a more permanent closure for the excavation structure, which can be removed and replaced when working on site.

Deck and ramps on house repaired and repainted.

Fencing around house repaired.

Cattle Guard repaired with help from Jon Kovac and Sam Sunderland.

Outside water hydrant repaired.

Suggestions for additional repairs and maintenance:

Roof on the house needs repair, metal roof suggested.

Install a hand washing station and shower outside using a 280 gal. tote for water.

Security storage (current storage and guest trailers are UW property) 20' to 40' shipping container, cost up to \$5,000.

Install game cams. Ask site steward, Joe Danielle to install. Marcel has a camera, will also ask SHPO for one.

Committee formed to study and assess long-term sustainability: Tyson, chair; John, WAF board member; Marcel, Hell Gap Site Manager; Rachael, Hell Gap Site.

Frison Institute Briefing—Jason Toohey

Jason was not able to attend the meeting. Barb Vietti as a Frison Institute Board member reported. The Institute has enough funding to award spring and fall scholarships to all applicants.

NOMINATION & ELECTION OF OFFICERS 2022-2023

President and Secretary (1-year terms)

Mavis and Sylvia agreed to serve as President and Secretary respectively through 2023 if elected.

John moved for election, Tyson second. Motion carried unanimously.

ANNOUNCEMENTS

Jensen/Robson Doctoral Travel Award Recipient(s) for 2022

There was no grant recipient.

SUMMER MEETING—2022

Summer meeting is scheduled for Saturday, June 25, at Willow Springs.

ANNUAL MEETING—2023

2023 Annual meeting will be held in Worland at the Washakie Museum, Absaroka and Pumpkin Buttes Chapters will co-host.

FOR THE GOOD OF THE ORDER

The WAF Board wishes to honor Mary Lou Larson. Suggestions were made and will be discussed further.

Make the Hell Gap site more handicap accessible

Construct a loafing shed for shade on the SW corner of the excavations structure.

Develop displays to erect in the SW corner of the excavations structure. Funding may be provided by donations from WAS/WAPA and/or dedicated fundraising

Meeting was adjourned at 6:03pm.

Office	Member	Term Expiration	
President		Mavis Greer	2023

	P.O. Box 51874, Casper, WY 82605-1874, 307-267-2037, mavis@greerservices.com		
Secretary	Sylvia Huber	2023	
	P.O. Box 522, Cody, WY 82414-0522, 307-250-7305, sylviaapro.dconsult@gmail.com		
Executive Treasurer	Marcia Peterson	Ex-Officio	(non-voting)
	Assistant State Archaeologist, 1000 E. University Ave., Dept. 3431, Laramie, WY 82071-3431, 307-766-5565, marcia.peterson@wyo.gov		
WAS Members-At-Large	Sylvia Huber	2023	
	P.O. Box 522, Cody, WY 82414-0522, 307-250-7305, sylviaapro.dconsult@gmail.com		
	Tyson Arnold	2024	
	P.O. Box 146, Granby, CO 80446-0145, tyson@middleparkagency.com, 303-912-1839		
	Barb Vietti	2025	
	130 Carter Ranch Rd, Thermopolis, WY 82433, viettibarb@gmail.com		
WAS president	John Laughlin	2023	
	john.laughlin@wyo.gov, 307-777-3424		
Immediate Past WAS President	Mavis Greer	2023	
State Archaeologist	Spencer Pelton	Ex-Officio	(non-voting)
	Office of the Wyoming State Archaeologist, 1000 East University Ave., Dept. 3431, Laramie, WY, 82071-3431, 307-399-2827, spencer.pelton@wyo.gov		
Department of Anthropology Representative			
George C. Frison Institute	Jason Toohey	Ex-Officio	(non-voting)
	George C. Frison Institute Director, 3901 Grays Gable Road, Laramie, WY 82072-6901, 307-399-5437, jtoohey2@ywyo.edu		
Hell Gap Site Manager	Marcel Kornfeld	Ex-Officio	(non-voting)
	2418 Crazy Horse Lane, Laramie, WY 82070-5550, 307-745-9636, anpro1@uwyo.edu		

REQUEST FOR ASSISTANCE:LOOKING FOR INFORMATION ABOUT BOW STAVE TREES IN WYOMING, submitted by Gene Smith

Documentation of culturally modified trees in the state of Wyoming is rare. Among those documented are a small number of sites with trees identified as probably bow stave trees. A query to Wyoming archaeologists of the Bureau of Land Management, Medicine Bow National Forest and the Wyoming Association of Professional Archaeologists yielded eight locations within Wyoming (Figure 1). Of these locations, six have been photo documented, and of those six sites, only three have been documented on Wyoming Cultural Records forms.

There are known trees in Fremont County (2), Sweetwater County (7), Carbon County (2), Park County (1) and Laramie County (1) A literature search for culturally modified trees turned up dozens of references for marker trees which were bent, shaped or marked; trees used to make baskets and other items from bark; and harvesting the nutritious inner bark (cambium). These were locations from across North America. There are many anecdotal references to the practice in Nevada, Colorado and Wyoming from ethnographic resources (Curtis 1926), online sources (O-N-E online Nevada encyclopedia) and even regional archaeological handbooks (Frison 1978, 1991 and Kornfeld et al. 2010). However, when looking specifically for trees modified

to harvest bow staves (Figures 2-5), only two reports of similar trees in Nevada were found: *Bow Staves Harvested from Juniper Trees* (Wilke 1988) and *A Bow Stave Site in White Pine County, Nevada and a Simple Probability Model for Bow Stave Trees* (Hauer 2015). In spite of the dearth of known comparisons in Wyoming, it appears the data presented from both of these reports do compare well data been documented so far in the state.

So, the question to you Wyoming Archaeologists that read this journal: Do you know of bow stave or other culturally modified trees in Wyoming or adjacent states?

If so, please contact Gene Smith at grvsmith@wyoming.com with any information about these trees.

REFERENCES CITED

- Curtis, Edward
 1926 Southern California Shoshoneans. The Diegueños. Plateau Shoshoneans. The Washo. *The North American Indian: Being a Series of Volumes Picturing and Describing the Indians of the United States, and Alaska*. Volume 15, page 61. The University Press, Cambridge, Massachusetts.

Frison, George C.

1978 *Prehistoric Hunters of the High Plains*; First Edition; Academic Press, New York.

1991 *Prehistoric Hunters of the High Plains*. Second Edition; Academic Press, New York.

Hauer, A. Craig.

2015 A Bow Stave Site in White Pine County, Nevada and a Simple Probability Model for Bow Stave Trees. *Nevada Archaeologist* 28:29-42.

Kornfeld Marcel, G.C. Frison and M. L. Larson

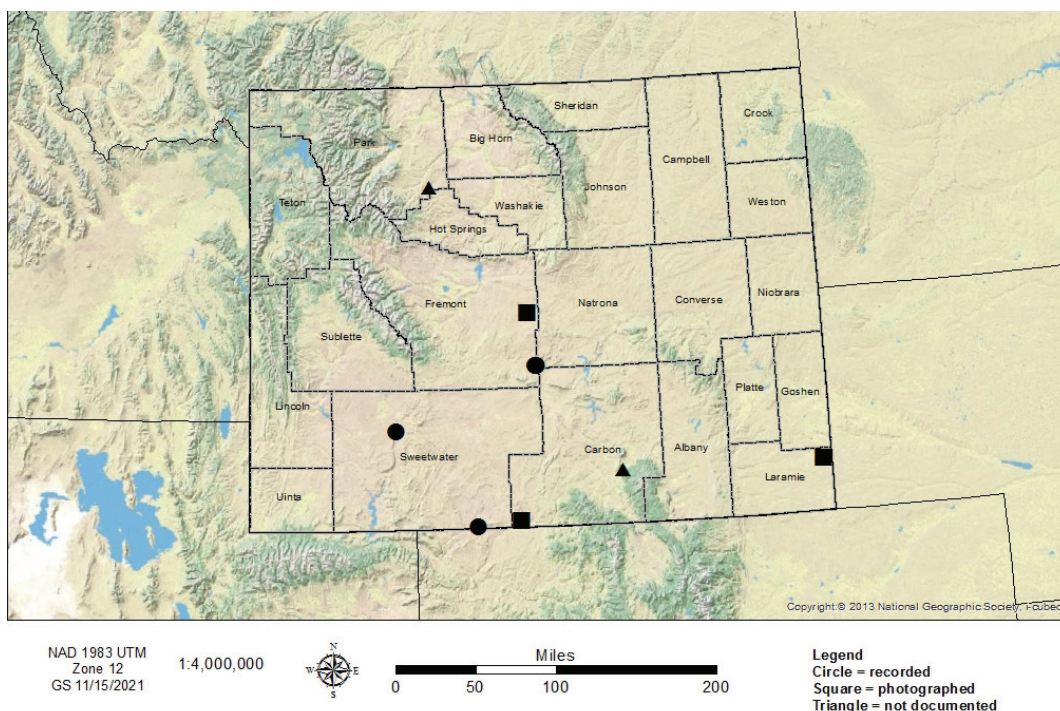
2010 *Prehistoric Hunter-Gatherers of the High Plains and Rockies*. Third Edition; Left Coast Press, Walnut Creek, California.

Wilke, Philip J.

1988 *Bow Staves Harvested from Juniper Trees by Indians of Nevada*. *Journal of California and Great Basin Anthropology* 10(1):3-31.

Gene Smith

Rock Springs, Wyoming



Map showing distribution of known and purported Bow stave trees in Wyoming.



Bow stave tree near Rock Springs, Wyoming. Upper: overview of tree trunk. B: Closeup view of upper cut to remove bow stave. C: Closeup view of lower cut to remove bow stave. Note lower cuts indicate two stave had been removed from this tree.

AN AFTER-THE-FACT MITIGATION ALTERNATE TO TRADITIONAL ARCHAEOLOGICAL DATA RECOVERY EXCAVATION, TETON COUNTY, WYOMING, submitted by Charles A. Bello, Charles A. Bello, Environmental / Historic Preservation Section (EHP) Advisor, U.S. Department of Homeland Security, Federal Emergency Management Agency, Region VIII, Denver Federal Center, Denver, Colorado

An early February 2017 winter storm (Disaster Declaration #4306) caused failure of seventeen 115Kv transmission towers on the west side of the municipality of Jackson Hole, Teton County, Wyoming. Shortly after the storm, Lower Valley Energy (LVE) (Applicant) received Federal Emergency Management Agency (FEMA) funding under the Public Assistance Hazard Mitigation (Section 406) Grant Program to underground power cables, mitigating future outages and damage.

The Undertaking is located mostly on private land along a ca. 12,000-foot-long route at an elevation of 6,350 feet. The electrical lines service a major ski area, airport, and many homes and businesses. The underground route follows the overhead placement. The trench is 36 inches wide x 48 inches deep, following a ditch on the edge of pastureland.

Teton County lies in the northwest corner of Wyoming, south of Yellowstone and Grand Teton National Parks, close to the border with Idaho. The region is mountainous and geologically active and contains extensive alpine and sub-alpine environments as well as glacially derived moraines, outwash, and kettles. The project site lies at the base of the Teton Range and is immediately adjacent to the east side of the Gros Ventre Mountains.

Consultation with the Wyoming State Historic Preservation Office (SHPO) began in June 2017, as part of a Programmatic Environmental Assessment. Research indicated the adjacent area was subject to a variety of cultural resources surveys within the past two decades, with no historic properties noted within or immediately adjacent to the current project Area of Potential Effects, despite its archaeologically sensitive nature. WY-SHPO determined that, based on the negative findings of the previous surveys, there was a low likelihood historic properties would be impacted by the proposed project and found no further survey efforts were warranted. SHPO did however stipulate that a qualified archaeologist would monitor ground disturbance during construction. An archaeological monitoring plan was prepared by Cannon Heritage Consultants (CHC), Logan, Utah, and approved by FEMA Environmental & Historic Preservation (EHP) Section and SHPO. Two qualified archaeologists from CHC were present on site for a total of 62 days (July to November 2017).

The monitoring protocol outlined by SHPO contained the provision that “salvage” excavation of features, if found, could occur as construction proceeded, provided that both FEMA and SHPO were consulted. CHC contacted FEMA EHP and SHPO shortly after construction began as a series of aboriginal features came to light (Sites 48TE2027 and 48TE2096). All parties agreed the features could be excavated as part of the monitoring protocol – and that they would be duly reported.

Upon the discovery of the archaeological sites, ground disturbing activity was halted within a 100-ft buffer. The sites were then evaluated by the field archaeologists, who made a recommendation of National Register of Historic Places “eligibility.” Salvage excavations were carefully controlled (10-cm levels) and included auger probes, shovel test units, geomorphic trenches, and surface skimming. CHC reported the results of monitoring and excavations in February 2018, applying the Wyoming SHPO’s definition and criteria of sites and isolated finds, and excavation/analysis/reporting protocols.

Site 2027 is a prehistoric campsite with three thermal roasting pits (fire-cracked rock and charcoal staining), containing 282 chipped stone artifacts (mostly local obsidian sources) – including 10 bifacial and ground stone tools. Radiocarbon dating showed the site was occupied multiple times between 1410 and 1100 calendar years Before Present (BP). No temporally diagnostic artifacts were recovered. Initial macrofloral analysis of the features indicated that geophytes (bulb, tuber, or a thick rhizome), cactus pads, and grass seeds were processed. The site minimally measures 572 m² in area and was positioned on the western side of a flat hill, buried in a loess deposit on glacial moraine. The occupations were short-term and focused on processing root/tuber resources. Additional sediment was collected from the features and retained for later flotation and further analysis.

Site 2096 contained one hearth feature and a charcoal stain. Radiocarbon dating showed the site also had repeat occupations (1410 and 1018 calendar years BP). The lithic assemblage was limited to fire-crack rock, 11 flakes (quartzite and obsidian), and two modified quartzite cobbles. Macrofloral analysis of the feature fill did not identify plant processing. No temporally diagnostic artifacts were recovered. The site minimally measures 259 m²

in area and was positioned within a valley flood adjacent to a small stream and covered by alluvium. Based on the limited assemblage and limited diversity of the artifact classes, the site likely functioned as a short-term, special-use site processing unknown resources. Fill was collected for future processing.

CHC recommended the archaeological sites eligible for listing on the National Register (Criterion D) for their potential to provide important information on chronology, hunter-gatherer settlement and subsistence (seasonal transhumance), lithic procurement, and landscape history of mountain adaptations by pre-contact Native Americans within the greater Yellowstone Ecosystem. The discrete, short-term occupations also have significance based upon their location within glacial moraine loess and alluvium deposits in a transition zone between meadow-sagebrush community and high elevation zones of the Teton Mountains – areas not frequently reported in the regional archaeological literature.

FEMA and SHPO accepted the in-field findings of significance and agreed that the monitoring phase of the project met its objectives. Minimal damage occurred to each site prior to salvage excavation and recording and the salvage excavation was effective. All parties concluded that both sites likely contain buried cultural material outside the APE. However, the sites extend onto private land, and for legal reasons CHC was unable to pursue the investigation.

FEMA continued Section 106 consultation with SHPO and the Advisory Council on Historic Preservation (ACHP) in June 2018 – providing additional documentation for a determination of effect for the “eligible” sites. SHPO and the ACHP concurred with FEMA’s finding of adverse effects and recommendations to develop a Memorandum of Agreement (MOA) to address subsequent (after-the-fact) mitigation (i.e., data recovery) efforts. The MOA was quickly finalized between FEMA, SHPO, ACHP, the Applicant, the Wyoming Office of Homeland Security; various tribes, and other interested parties.

The CHC monitoring report recommended additional analyses should be performed as part of the future mitigation. FEMA, SHPO, CHC, Tribes, and the interested parties concluded that a variety of specialized lab procedures/analytical techniques should be conducted on the material remains recovered from excavations. The following elements were incorporated into the MOA for the (after-the-fact) treatment of adverse effects (based on an Archaeological Data Recovery Analysis and Reporting Plan drafted by FEMA EHP – approved by SHPO, ACHP, Tribes, and other interested parties).

- Continued and focused background research and developing a prehistoric regional context (including Late Holocene hunter-gatherer seasonal transhumance in the context of high-altitude subsistence/settlement).

- Developing a geomorphic context for the sites.
- In-depth analysis of the artifacts recovered (including macrobotanical analysis of the feature fill, residue analysis of stone tools, and geochemical analysis/optical stimulated luminescence dating (OSL) of obsidian artifacts – to be explicitly explained and otherwise documented in the report.
- Public involvement (including Tribes and local historic and archaeological groups).
- Functional analysis of the salvaged features.
- Publicity of the analysis, including non-technical publications and presentations, and a summary publication in a regional archaeological journal.
- The results of the archaeological data recovery will be reported following the Wyoming State Historic Preservation Office Format, Guidelines, and Standards for Class III Reports.

Consultation occurred with a variety of Tribes with ancestral interest in the project area as the sites were discovered and while the SHPO/ACHP negotiations were occurring. FEMA addressed tribal concerns relating to religious sites, traditional places, cultural and environmental resources, and especially the archaeological analysis and reporting. The Tribes consulted included the Shoshone-Bannock; Eastern Shoshone; Northern Arapahoe; Crow Nation; Fort Belknap Indian Community; and the Northern Cheyenne.

Additional parties contacted included the Jackson Hole Historical Society and Museum; Wyoming State Historical Society; Teton County Historic Preservation Board; Wyoming Association of Professional Archaeologists; Wyoming Archaeological Society; and the Office of the Wyoming State Archaeologist.

Cannon Heritage Consultants completed the Data Recovery Analysis (meeting the terms of the MOA) and produced a final report in July 2019. The report included the following appendices (from additional consultants): a geoarchaeological context for the wider area as well as outlining a landscape-scale site burial model for the region; an analysis of the light fraction (macrofloral component) flotation processing of feature fill; starch grain analysis of the grooved stone maul; Energy Dispersive X-ray Fluorescence analysis and sourcing of over 30 obsidian specimens; and six radiocarbon dates (processed by the University of Georgia Center for Applied Isotope Studies) – with charcoal identification collected from the feature (prior to radiocarbon assay).

Cannon Heritage Consultants presented a paper on “Bone Preservation Suitability Model Using Fuzzy Logic Overlay Analysis” (geometry of spatial data) at the October 2019 Rocky Mountain Anthropological Conference. The consultant is currently in negotiation with University of Utah Press to publish a monograph based their comprehensive reporting for this project entitled “The

Geoarchaeology of Jackson Hole, Wyoming.”

CRC nicely summarized this project in stating “while archaeological investigations have been conducted in Jackson Hole, and specifically Grand Teton National Park, much of the work has been surface surveys with limited excavations. Data recovered during salvage excavations at sites 48-TE-2027 and -2096 provide an important opportunity to assess previous work and add to the understanding of precontact humans in Jackson Hole and how they relate to larger Great Yellowstone Ecosystem.” From a FEMA EHP perspective it has been a most interesting and creative project.

I gratefully acknowledge the assistance of Kenneth

P. Cannon (Cannon Heritage Consultants, Inc., Logan, Utah), Richard L. Currit (Senior Archaeologist, Wyoming State Historic Preservation Office, Cheyenne, Wyoming), and Jon Hougland (CFO, Lower Valley Energy, Afton, Wyoming).

Information derived from *The Results of Archaeological Investigations at 48TE2027 and 48TE2096, Teton County, Wyoming (Project DR4306 - Lower Valley Energy)*. Prepared for the Federal Emergency Management Agency, FEMA Region VIII, Denver Colorado. Submitted by Houston L. Martin, Kenneth P. Cannon, and William Eckerle, Cannon Heritage Consultants, Logan, Utah. July 2019.



Feature 3, 48TE2027 facing southwest (dated to 1430 ± 25 yrs BP). Photographs courtesy of Cannon Heritage Consultants, Inc., Logan Utah.

FAUNAL REMAINS FROM THE GARRETT ALLEN (ELK MOUNTAIN) SITE (48CR301)

by
David G. Eckles

Excavations at the Garrett Allen (Elk Mountain) archaeological site recovered a large and diverse faunal assemblage. The purpose of this article is to summarize data on the faunal remains with emphasis on the unusual aspects of the assemblage. A brief introduction to the site excavations and chronology is presented first. More detailed information about previous investigations at the site is discussed in Eckles (2013).

The site is located in southeastern Carbon County, Wyoming at the northern end of the Medicine Bow Mountains and southern edge of the Hanna-Carbon Basin. It is within a homoclinal valley near the perennial Quealy Spring which forms an ephemeral drainage flowing north-northwest. Archaeological deposits are present south, southwest and southeast of the spring, and are from 10-12 feet above the spring.

Excavations began in late 1968 and continued each year through 1980. Units were established from a north-south, east-west grid. Most units were 5x5 feet blocks with some as large as 10x5 and 10x10 feet. Most units were excavated to 12 inches below surface with some units reaching 60 inches below surface. Excavations were performed by members of the Wyoming Archaeological Society with assistance from the Office of the Wyoming State Archaeologist and University of Wyoming Anthropology Department. Garrett Allen, who found and reported the site, participated in nearly all of the excavations.

After excavation artifacts were washed, numbered and cataloged using three by five-inch file cards. A coding system was established which identified artifacts by type. For example, the code "PP" was used for projectile points, "S" for scraper, "CT" for cutting tool, "PS" for pottery sherds, "BT" for bone tool, "H" for hearth, etc. The file cards are the primary, and in most cases, the only record of where artifacts were found. A different catalog coding was used for materials recovered during the field school project conducted from 1979-1980. It was a sequential numbering system using 38,000 as the beginning number, ending in the 39,000s. Some faunal remains were cataloged using a "C" prefix followed by sequential numbers (Eckles 2013). Unit provenience data were recorded by block units and individual 1x1 foot units.

During the 1979-1980 field school, five carbon

samples were taken and submitted for radiocarbon dating. Three additional samples were submitted in 2013. One sample is from the early excavations and was taken from a five-by-five-foot unit (N-S Trench East End) at a relatively tight depth measurement of 44-48 inches. Two samples were obtained from residue on two large ceramic fragments (Table 1).

In the analysis of soils from the site, Hayter (1981:30) correlated four of the dates with his Soil Profile 1 which was placed within the archaeologically excavated area in the southwest quadrant of the site grid. It is assumed Hayter obtained depth information from the archaeological investigations to allow this correlation. Hayter's Soil Profile 2 appears to have been located at or near the North-South Trench excavated in the 1970s. A fifth date appears to have been obtained at a relatively deep location within this trench. The fifth date of 3120+/-250 (RL1420) is not shown on Hayter's Soil Profile maps by depth, but he states this date is from a cultural level above a grey gleyed clay subsoil. Based on his discussion of the soils and one of the profile maps in the field records which shows a one-foot-wide section from which soil samples and a carbon sample were taken, the depth of the 3120 B.P. date is estimated at 56 inches.

METHODS OF ANALYSIS

Faunal remains from the site were identified by comparison with known skeletons in the University of Wyoming Comparative Osteology Collection, managed by the Office of the Wyoming State Archaeologist. Published osteological keys and anatomy references, including Getty (1975), Gilbert (1980, 1981), Lawrence (1951), Olsen (1960, 1968), and Sobolik and Steele (1996) were also consulted. The goal was to document both the type of animal and specific element represented by the faunal specimen. If a bone specimen did not have the necessary morphological traits for positive identification to taxon, it was ranked by observable traits in a descending order from a higher level (e.g., Aves-bird, Canid-wolf, dog, coyote, Rodentia-rodents), or size category including large artiodactyl (bison elk), medium artiodactyl (pronghorn, deer, sheep), medium mammal (canid, badger, porcupine), small mammal (rabbit, ground squirrel) to an unidentified level if no traits were definable.

Table 1: Radiocarbon Dates, 48CR301.

Sample Number	Date Submitted	Radiocarbon years B.P. (uncorrected)	Area of Site	Depth Correlation by Hayter (1981:30) and 2013 samples
RL1406	1979-1980	510+/-110	SW Quadrant, 1979-1980	4-5 inches
D-AMS 004548	2013	591+/-25	Ceramic rim sherd residue	Unknown depth
RL1227	1979-1980	630+/-100	SW Quadrant, 1979-1980, Hearth, Level II	8-11 inches
D-AMS 004547	2013	797+/-33	Ceramic rim sherd residue	8 inches *
RL1228	1979-1980	920+/-110	SW Quadrant, 1979-1980, Level III	17 inches
RL1414	1979-1980	1670+/-120	SW Quadrant, 1979-1980, Hearth	22 inches
D-AMS 004549	2013	2363+/-30	N-S Trench	44-48 inches
RL1420	1979-1980	3120+/-250	N-S Trench	56 inches

*Depth of ceramics from catalog cards.

In addition to identification by taxon and element, other attributes were recorded. They are element portion, segment, side (where relevant), fusion of articular ends (i.e., mature or immature), type of breakage (if present), and total number of specimens. Unfortunately, many of the faunal remains from the site exhibit varying degrees of weathering on the bone surfaces and few butchering marks were observed. Most bones from the site are fragmented, also reducing the chances for preservation of butchering marks.

The minimum number of individuals (MNI) was calculated for each taxon by enumeration of the most common complete or nearly complete element representing the taxon. In this sense, MNI refers to the minimum number of individual animals necessary to account for all of the identified specimens in each element category (Casteel and Grayson 1977). The level of fragmentation of the assemblage limits the value of any MNI calculation, and so it should be considered only an estimate of overall taxon composition.

THE ASSEMBLAGE

Taxa represented in the assemblage include *Bison bison* (bison), *Antilocapra americana* (pronghorn), *Cervus elaphus* (elk), *Odocoileus* sp. (deer), *Ovis canadensis* (mountain sheep), *Canis* sp. (wolf, dog, coyote), *Castor canadensis* (beaver), *Taxidea taxus* (badger), *Erethizon dorsatum* (porcupine), *Procyon lotor* (raccoon), *Vulpes vulpes* (red fox), Mustelidae (mink, weasel), *Didelphis virginiana* (opossum), *Lepus* sp. (jack rabbit), *Sylvilagus* sp. (cottontail rabbit), *Spermophilus* sp. (ground squirrel), *Cynomys* sp. (pocket gopher), Aves (medium-large bird), Emydidae (pond/marsh turtle), Unionidae, (riverine bivalve mollusk), *Busycon contrarium* (lightening whelk), and *Pleurocera* sp. (aquatic gastropod mollusk)

The number of individual specimens (NISP) of

faunal elements identified by taxon is presented (Table 2). The assemblage is dominated by elements of bison and pronghorn with fewer remains of elk, canid, rabbits, ground squirrels, medium to large birds and riverine bivalve mollusks. The other taxa are represented by only one to five specimens.

Minimum number of individuals by taxon for each depth increment is also presented (Table 3). In general, the MNI analysis shows a similar result based on NISP: bison is represented by more elements and individuals compared to pronghorn in most depth increments. Still, bison and pronghorn bones clearly dominate the assemblage. The other taxa are represented by only one individual in most depth increments. The MNI count of five canid individuals from 43-48 inches is the result of a bone concentration discussed below.

BISON REMAINS

Bison bone elements are represented by nearly all portions of the skeleton, and are represented in nearly all of the depth increments (Table 4). Front and hind leg elements appear to dominate the assemblage. Interestingly, mandibles are relatively common but cranial fragments are relatively rare. Phalanges are also fairly common but vertebrae are less so.

With the exception of phalanges, most of these elements are broken, either by human activity (most likely), or natural causes. Butchering marks in the form of green bone spiral breaks, blow marks and (rarely) cut marks are evident on many of the fragments (see Figures 1-2).

PRONGHORN REMAINS

Pronghorn bone elements are second only to bison in the absolute numbers of identified specimens. They are represented by nearly all portions of the skeleton, and are represented in nearly all of the depth increments (Table

5). As with bison, front and hind leg elements appear to dominate the assemblage; mandibles are relatively common; cranial fragments are relatively rare; phalanges are also common; and vertebrae relatively uncommon. The pattern of butchering is similar to bison (Figures 3-4). Of note are several pronghorn incisors from 0-24 inches below surface. Many of these were found in possible concentrations and are discussed below.

BONE FRAGMENTS

Most of the bone fragments recovered from the site can only be identified to group-size categories. These include large artiodactyl, medium artiodactyl, medium mammal, small mammal, and medium-large sized bird. Most of these fragments were recovered from 0-24 inches below surface (Tables 6-7). Similar distributions of unidentified fragments are present in the deeper depth increments, but with far fewer absolute frequencies.

As with the identified elements, large and medium sized artiodactyls are represented in relatively large numbers. Bone fragments, or bone splinters, derived from long bones and ribs are likely the result of relatively intensive processing of bison and pronghorn skeletons for the purposes of manufacturing bone grease and the manufacture of bone tools. The processing of relatively low numbers of smaller animal bones could be from cultural preferences, biases in data recovery during the excavations, or non-cultural breakage.

ELK REMAINS

Compared to bison and pronghorn, relatively few elk bones were recovered from the excavations (Table 8). Half of these remains are fragments of antler. There are two unmodified, probably shed, antler fragments and one unmodified tine fragment. The other antler time fragments show use wear on their distal ends, likely the result of

Table 2: Identified Bone Elements (non-tools) by Depth (inches), NISP.

Taxon	Depth 0-6	7-12	13-18	19-24	25-30	31-36	37-42	43-48	49-54	55-60
Bison	146	241	69	91	51	11	18	59	2	9
Pronghorn	57	108	45	47	21	8	2	27	2	5
Elk	1	1	3	2	3	2		7		1
Deer	1	2	2	6	1		2			1
Mt. Sheep	1							1		
Canid	7	16	4	2	1		2	10		1
Fox		2		1						
Raccoon								1		
Mustelid			1							
Beaver				1						
Badger					1			4		
Porcupine								1		
Opossum								1		
Jack Rabbit		2			2			2		
Cottontail	2	2	1	3	1					
Ground squirrel		5	3	1	7					
Pocket gopher		2	2							
Turtle	1									
Aves		6	2					2		
Riverine bivalve		8		2		1		3		
Aquatic gastro-pod.	1									
Totals	217	395	132	156	88	22	24	118	4	17

Table 3: Minimum Number Individuals, MNI (non-tools) by Depth (inches).

	Depth	0-6	7-12	13-18	19-24	25-30	31-36	37-42	43-48	49-54	55-60
Taxon											
Bison		7	9	4	6	3	1	2	4	1	1
Pronghorn		4	6	4	5	1	1	1	2	1	2
Elk		1		1	1	1	1	1	1		
Deer			1	1	1			1			
Mt. Sheep		1							1		
Canid		1	1	1	1	1		1	5		1
Fox				1	1						
Raccoon									1		
Mustelid				1							
Beaver					1						
Badger						1			1		
Porcupine									1		
Opossum									1		
Jack Rabbit			1			1					
Cottontail		1	1	1	1	1					
Ground squirrel			1	1	1	1					
Pocket gopher			1	1							
Turtle		1									
Aves			1	1					1		
Riverine bivalve			1		1		1		1		
Aquatic gastropod		1									

percussion or pressure flaking of lithic tools (Figure 5). Other elements include maxilla and mandible fragments, one radius, metapodials, one phalanx, and three teeth. The radius, metapodials and phalanx exhibit green bone breaks, consistent with butchering breakage.

Elk (*Cervus elaphus*) remains in Wyoming archaeological sites occur with some frequency, but as with the Garrett Allen assemblage, they occur in relatively small numbers. Kornfeld et al. (2010:332-335) present the most current synthesis of elk remains in Wyoming sites and conclude elk remains are relatively rare in the archaeological record before the Protohistoric period. One exception is the Late Archaic age Joe Miller site in Albany County in which butchered remains of eleven elk were recovered (Burnett et al. 2008; Kornfeld et al. 2010:334-335). The Joe Miller site is located at the western edge of the Laramie Basin near the Medicine Bow Mountain range, about 30 miles east of the Garrett Allen site.

Elk remains in smaller numbers have been found in a few sites from Paleoindian to Late Prehistoric times,

including several sites in Wyoming and Montana in which elk antlers were gathered and used for tools (see Burnett et al. 2008:378-381).

During fieldwork at the site in 2014 and 2015, which included limited testing outside the main excavation areas, mapping and surface survey of areas surrounding the site, a relatively large number of shed elk antlers were noticed. A group of over 20 elk was also observed both on site and nearby the site. At least in modern times, elk have gathered in and near the site area, which, similar to the Joe Miller site, is located at the edge of a large basin close to the Medicine Bow Mountains.

The historic range of elk in Wyoming includes nearly all of the state. This includes shortgrass prairie and sagebrush-steppe habitats, as well as concentrations around all forested mountain ranges. Seasonal shifts in range include use of higher elevation areas in summer where vegetative diversity is greater, but also use of more arid basins where water sources are present (Buskirk 2016:342).

Table 4: Identified Bison Bone Elements (Non-Tools) by Depth (inches), NISP.

Element	Depth	0-6	7-12	13-18	19-24	25-30	31-36	37-42	43-48	49-54	55-60
Horn core		1		1		2	1	1			
Cranial			4	2		2		1			
Maxilla						1		1			
Mandible		5	13	2	2	3	2		3		2
Incisors		2	10		3				1		2
Molar		2	9	3	11	1	2	5	3	1	5
Hyoid		1	1						1		
Atlas				1							
Axis				1							
Cervical vert.			1	2	1	2					
Thoracic vert.		1	3	2	3	1	1	1			
Lumbar vert.		1	3	1		1			2		
Caudal vert.									1		
Rib		9	11	6	3	1		2	3		
Scapula		10	16	2	1	1		1	3		
Humerus		14	16	5	7	5		1	3		
Radius		12	20	2	8	3	2		3		
Ulna		6	16	4	5	2			1		
Metacarpal		6	7	3	2	4	1		3		
Carpal		8	16	3	2				1		
Innominate		3	4	2	3	1	1		1		
Femur		13	21	6	6	3			3		
Patella		5	5	1	1	1			3		
Tibia		11	18	7	10	4		1	7		
Metatarsal		3	7	2	3	1			4		
Astragalus		5	4	1	4			1	1		
Calcaneus		1	2	1	1	2	1		3		
Tarsal		9	9	1	3	1					
Phalanx		17	25	8	12	9		3	9	1	
Totals		146	241	69	91	51	11	18	59	2	9

CANID REMAINS

Canid faunal remains were found in most of the depth increments (Table 1). They include at least one specimen of the cranium, mandible, vertebrae, and long bones such as the tibia and scapula. No obvious butchering marks were observed. One bone awl was made on a canid left ulna. A concentration of faunal remains including several

canid bones is discussed below.

MOLLUSK SHELL

Fourteen examples of riverine bivalve mollusk shells were recovered from the site. Eight of these were found at 12 inches below surface, one at two specimens at 24 inches, one at 36 inches and three from 44-48 inches below surface. Four of the shells from 12 inches and one



Figure 1: Typical long bone breakage, bison radius, proximal portion.



Figure 2: Typical long bone breakage, bison metatarsal, distal portion.

from 36 inches have been cut and snapped (Figure 6). The others are unmodified fragments of shell. In addition, one small shell pendant fragment was found at 48 inches below surface. It is too small for taxonomic identification, but is presumably made from mollusk shell. No hinge portions are among this sample of shell, so no identifi-



Figure 3: Typical long bone breakage, pronghorn humerus, distal portion.



Figure 4: Typical long bone breakage, pronghorn metacarpal, distal portion.

cation to genus/species was possible. They all appear to be similar to bivalves of the family Unionidae, (riverine bivalve mollusk) which occur with some frequency in Wyoming prehistoric sites.

GASTROPOD SHELL

One large unmodified aquatic gastropod shell (Figure 7) was recovered from the surface, or perhaps from an unspecified depth as the specimen showed some encrusted sediment and staining likely from burial below surface. The shell has been identified by Dr. Robert Dillon of the College of Charleston, South Carolina to the genus *Pleurocera*. The range of this genus is typically from the Mississippi River throughout the eastern portion of North America. Some specimens have been reported along the Missouri River as far west as far eastern Nebraska (Robert Dillon, personal communication, 2015). Shells

Table 5: Pronghorn Bone Elements (Non-Tools) by Depth (inches), NISP.

Element	Depth	0-6	7-12	13-18	19-24	25-30	31-36	37-42	43-48	49-54	55-60
Horn core			2								
Cranial		1	1								
Maxilla											
Mandible		4	10	2	3	3			3		1
Incisors		6	20	1	5						
Molar			2	2	1						
Hyoid											
Atlas				1					1		
Axis					2						
Cervical vert.		2		1		1			1		
Thoracic vert.				1	2						
Lumbar vert.									1		
Caudal vert.											
Rib				2		2					
Scapula		3	3	8	3				1		
Humerus		5	9	2	2	4	1		3	1	1
Radius		4	10		4				2		1
Ulna		5	6	1		2					
Metacarpal		4	7	6	2	3	4		3		
Carpal		2	2							1	1
Innominate		1	6	3	1				2		
Femur		3	4	3	2				1		
Patella											
Tibia		4	6	1	6	1			1		
Metatarsal		5	4	3	3	2	3		3		1
Astragalus		3	2	1	1						
Calcaneus		1	2	1	2	1					
Tarsal		3	1	2	1				1		
Phalanx		2	11	4	7	2		2	4		
Totals		57	108	45	47	21	8	2	27	2	5

of the genus *Pleurocera* were of some significance as a food source in the eastern half of North America, but were infrequently used for decorative purposes. There is some evidence they were associated with mortuary practices in Tennessee Archaic sites (Claassen 2015:219). In general, freshwater snail shells were not used prehistorically as much as some marine taxa (Gibbon 1998:720).

Another example of an exotic gastropod comes from the Middle Archaic component at Mummy Cave in northwestern Wyoming (Husted and Edgar 2002:67). A bead was made on the shell of *Leptoxis praerosa*, whose range includes the Cumberland River, Tennessee River, and lower Ohio River drainages (Goodrich 1940). An undated site from southwestern Wyoming (48UT38) with Middle

Table 6: Bone fragments, 0-12 inches below surface, all units, NISP.

Group	Long bone*	Scapula	Innom.	Vert.	Ribs	Cranial	Teeth
Large artiodactyl	891	30	12	58	562	22	74
Medium artiodactyl	738	11	17	19	364	3	44
Medium mammal**	14	1	1	4	2	1	1
Small mammal***	9		1	1	1		
Medium-large bird	4						
Totals	1656	42	31	82	929	26	119

* includes fore and hind limbs

** canid to raccoon size

*** rabbit size and smaller

Table 7: Bone fragments, 13-24 inches below surface, all units, NISP.

Group	Long bone*	Scapula	Innom.	Vert.	Ribs	Cranial	Teeth
Large artiodactyl	274	3	1	3	126	9	45
Medium artiodactyl	311	2		1	97	1	64
Medium mammal**	2	1	1	1			
Small mammal***	1			1	2	1	1
Medium-large bird	1						
Totals	589	6	2	6	225	11	110

*includes fore and hind limbs

** canid to raccoon size

*** rabbit size and smaller

Archaic to Late Prehistoric diagnostics contained a cache of snail and bivalve shells, one of which was identified to the genus *Cancellaria*, whose range covers an area of the western Atlantic Ocean from North Carolina to Brazil and the Gulf of Mexico coast (Zier 1977).

MARINE SHELL

A modified fragment of marine shell was reportedly found on the surface near the site. Dr. Emmett Evanoff of the University of Colorado identified this shell fragment in 1983 and determined it to be of *Busycon contrarium*, the lightning whelk, which is a common marine shell along the Gulf Coast states. This artifact and a large chipped stone biface are reported from a sandstone outcrop just northwest of the site. Both are illustrated in Frison (1991:355-356) and Kornfeld et al. (2010:445-446). Frison (1991:355) has stated:

“... A large notched biface was reported to have been found on the surface in southern Wyoming and its authenticity was questioned. However, part of a large *Busycon* sp. shell was found a year or so later by a different person in the same location and it is now believed the two items were from a human burial that

had eroded out nearby. Both items are diagnostic of materials from the lower Mississippi Valley that somehow found their way onto the Plains.”

In addition to the possible location of these two artifacts at the sandstone outcrop, one human occipital bone may also be from the location. It was cataloged in the Garrett Allen site collection, although it is missing from the collection. There is no provenience information on the catalog card. Conversations with individuals who participated in the site excavations indicated a general consensus that human remains had been found in the area of the sandstone outcrop. Unfortunately, we do not know what these remains are or where they might be located if they were collected.

The area of the sandstone outcrop was examined in September of 2013 and in August of 2014 by staff from the Office of the Wyoming State Archaeologist and Wyoming SHPO, as well as students from the University of Wyoming. No artifacts or bones were located in or near this outcrop at these times. If a burial was present in this area and the marine shell artifact and notched biface were associated with the burial, it would appear all evidence

Table 8: Elk (*Cervus elaphus*) Remains, 48CR301.

Unit	Depth (inches)	Element	Tool	Count	Comments
0-10N 10-15W	6	Antler proximal portion		1	Shed antler fragment
21N 77W	8	Antler tine	Yes	1	Flaking tool
78N 49W	18	Antler tine	Yes	1	Flaking tool
80N 33W	18	Maxilla fragment and teeth		1	
88N 8E	18	Antler tine	Yes	1	Flaking tool
78N 30W	24	Incisor and molar		2	
E-W Trench 30W	28	Antler tine	Yes	1	Flaking tool
E-W Trench 32W	30	Molar		1	
25-30S 25-30W	30	Metatarsal proximal portion plus central and fourth tarsal plus calcaneus fragment		1	Articulated unit, exhibits green bone break
North across draw	32	Second phalanx		1	Exhibits green bone break
85N 44W	33	Mandible distal portion		1	
N-S Trench N. end	44	Radius proximal portion		1	Exhibits green bone break
N-S Trench N. end	44	Metacarpal distal portion		1	Exhibits green bone break
N-S Trench 25" NW	44	Antler tine	Yes	1	Flaking tool
E-W Trench E. end	44	Antler tine		1	
78N 38W	44	Maxilla fragment		1	Missing from collection
E-W Trench 40W	46	Antler tine	Yes	1	Flaking tool
E-W Trench 40W	46	Antler proximal portion		1	Shed antler fragment
E-W Trench 40W	60	Antler proximal portion	Yes	1	Flaking tool

of the burial has vanished.

The presence of marine shell in a Wyoming prehistoric site is quite unusual. Association with a burial might explain its presence, but it would remain a rare find. Claassen (2015:167) has argued, while widespread, the amount of *Busycon* shell in eastern archaeological sites does not fit a fall-off model of distribution as might be expected if it was traded. Rather the quantity and spatial distribution of this marine shell can be accounted for if it was made as offerings or gifts at the time of intercommunity rituals.

TURTLE REMAINS

One fragment of a turtle carapace was recovered from 0-4 inches below surface. It is a portion of the costal and neural carapacial bone with a portion of the rib visible on its ventral side. It does not exhibit any butchering marks or other signs of modification. Based on comparison with specimens in the University of Wyoming faunal collection, it most closely resembles those of pond and

marsh turtles of the family Emydidae. There are two species in the family Emydidae occurring in Wyoming, *Chrysemys picta* (painted turtle) and *Terrapene ornata* (ornate box turtle) (Ernst and Lovitch 2009). The range of the former includes roughly the eastern third of the state while the range of the latter includes only a small portion of eastern Goshen County in extreme east-central Wyoming. Other turtle species known from eastern Wyoming include a snapping turtle (*Chelydra serpentina*) and the spiny softshell turtle (*Apalone spinifera*, formerly *Trionyx* sp.) (Ernst and Lovitch 2009).

Turtle bone is quite rare in Wyoming archaeological sites. Only nine sites were found to contain turtle remains in their assemblages (Table 9). Dated components include Paleoindian to Historic periods. This list does not include paleontological (fossil) turtle remains. These data were compiled from searches of the SHPO WYCRIS and UWAR data bases, as well as a search through several excavated sites with relatively large faunal assemblages.

What is interesting here is all the turtle remains are



Figure 5: Elk antler knapping tools (a and b), large artiodactyl rib tool (c).

carapace fragments. It would appear turtles in Wyoming were gathered primarily for their shells, suggesting use for containers such as food bowls or rattles (see Driver and Massey 1957). A similar conclusion was reached regarding the Clary Ranch Paleoindian sites in southwestern Nebraska, whose turtle carapace remains showed evidence of cut marks and scraping on the ventral surfaces (Hill et al. 2008:127).

FETAL BONE

Eighteen whole and partial faunal elements appear to be from near term fetal or newborn animals. Elements



Figure 6: Cut and snapped mollusk shell



Figure 7: Gastropod shell, genus *Pleurocera*.

include longbones, vertebrae and one phalanx (Figure 8). Taxa include bison, pronghorn and deer (Table 10).

The presence of near term/newborn artiodactyl bone suggests a late spring to early summer occupation of the site. Bison typically give birth to calves from mid-April to the end of June (Roe 1970:94). The timing for mule deer birthing in Wyoming is from late May through June (Wyoming Game and Fish Department 2002:2). For pronghorn, fawning typically occurs in late May to early June, but a few births can occur earlier in April and later into July (O’Gara and Yoakum 2004:291).

Given these bones were recovered from nearly all depths and across the excavated areas within the site, it would appear groups visited the site and hunted these artiodactyls at roughly the same time of the year over a period from about 500 to nearly 3100 years before present. It is not known how many separate occupations occurred during this time frame, but the fact the occupations took place at the same time of the year suggests the site was used periodically in the prehistoric past for



Figure 8: Pronghorn near term/newborn humerus.

Table 9: Turtle Remains in Wyoming Archaeological Sites.

Site	Location	Taxon (if known)	Dating	Reference
48GO305 (Hell Gap)	EC Wyoming	Unidentified carapace fragments	Paleoindian (pre-Agate Basin stratum)	Moore et al. 2015
48PA29 (Horner)	NC Wyoming	<i>Chrysemys</i> cf. <i>picta</i> -painted turtle, incised and unmodified carapace fragments	Paleoindian (Cody)	Walker 1987
SW13156 (Battle Spring Draw)	SW Wyoming	Unidentified incised carapace fragment	Paleoindian (Cody and Pryor Stem.)	Craven 2005
48LN2331 (Many Chiefs)	SW Wyoming	Unidentified carapace fragments	Middle Archaic	Reed 2005
48CR301 (Garrett Allen)	SE Wyoming	Family Emydidae, pond/marsh turtles, unmodified carapace fragment	late Late Prehistoric	This article
GO123 (Rock Ranch)	EC Wyoming	<i>Trionyx spiniferus</i> (now <i>Apalone spinifera</i>), soft-shelled turtle, unmodified carapace fragments	Protohistoric to early Historic	Zeimens 1987
48NA288 (Seminole's Trading Post)	Central Wyoming	Family Emydidae, cf. <i>Terrepene ornata</i> , ornate box turtle, unmodified carapace fragments	Historic, mid-19 th century	Walker 2009

Table 10: Near Term/Newborn Faunal Remains.

Taxon	Element	Unit	Depth in inches
Bison	Ulna diaphysis	30-33S 35-40W	4
Bison	Radius diaphysis	30-33S 35-40W	8
Pronghorn	Radius diaphysis	30-33S 30-35W	8
Deer	Ulna	E-W Trench 30-35E	12
Pronghorn	Humerus	30-33S 40-45W	17
Pronghorn	Scapula	30-33S 40-45W	17
Medium artiodactyl	Long bone diaphysis	30-35S 20-25E	17
Pronghorn	Scapula (burned)	23-30S 45-50W	22
Bison	Thoracic vertebra	33N 80W	22
Pronghorn	Tibia distal portion	23-30S 45-50W	22
Pronghorn	Femur diaphysis	78N 20W	24
Pronghorn	Ulna proximal portion	30-35S 10-15E	30
Medium artiodactyl	Femur diaphysis	30-35S 15-20E	30
Pronghorn	First phalanx	E-W Trench 25-30E	40
Pronghorn	Femur diaphysis	N-S trench N. End	44
Bison	Lumbar vertebra	E-W Trench E. End	44
Bison	Metatarsal diaphysis	E-W Trench E. End	44
Bison	Tibia	E-W Trench	48

similar purposes.

BONE CONCENTRATION

In one unit, 78N 38W, crania, mandibles and other elements of canid, badger, raccoon, porcupine, opossum, bison, pronghorn and elk were recorded at 44 inches below surface. According to the catalog cards, twenty-six bone elements were recorded at this depth (Table 11). The unit was excavated on April 28, 1974 by Garrett Allen. It appears the unit in question was part of a larger block or trench excavated from the edge of the site deposit (just above the spring) oriented north to south. This conclusion is reached on the basis of the general practice to dig in 5x5 feet blocks (see Eckles 2013) and from photographs showing larger block areas in the process of excavation at the northern end of the site, just above the spring. Unfortunately, there are no recording forms or photographs of the bone concentration from the 1974 excavations.

Seventy-seven percent of the remains are crania, maxillae and mandibles or elements anatomically close to the cranial bones such as the hyoid and atlas vertebrae. Most of the remains are from medium to small mammals (canid, raccoon, badger, porcupine and opossum). No butchering marks were observed on any of the bones (Figure 9).

The bone concentration has not been directly dated. Assuming the correlation of radiocarbon dates is applicable across the site’s deposits, the canid and small mammal bone concentration could date to the early part of the Late Archaic period as a charcoal sample from 44-48 inches below surface returned a date of 2363+/-30 radiocarbon years before present.

The presence in a confined area of such a diverse group of mostly canid and other small mammal cranial bones and mandibles is unusual in Wyoming archaeological sites. It is made even more unusual given the presence

Table 11: Faunal Remains from Unit 78N 38W, 44 inches Below Surface.

Taxon	Element	Side	Portion	Count	Cat No.
Canid	Mandible	L	Complete	1	C3792
Canid	Mandible	R	Nearly complete	1	C3793
Canid	Mandible	R	Nearly complete	1	C3794
Canid	Mandible	R	Proximal portion with partial tooth row; teeth are quite worn	1	C3795
Canid	Mandible	L	Nearly complete	1	C3796
Canid	Mandible	L	Nearly complete	1	C3797
Canid	Mandible	R	Nearly complete	1	C3799
Canid	Maxilla	R	Fragment with partial tooth row	1	C3807
Canid	Maxilla	R	Upper front tooth row	1	C3808
Canid	Thoracic vertebrae (immature)		Nearly complete	4	C3820
Badger	Cranium		Complete	1	C3798
Badger	Mandibles	L, R	Complete	2	C3806
Badger	Maxilla		Maxillary tooth row	1	C3814
Badger	Atlas vertebra		Complete	1	C3815
Raccoon	Cranium		Complete	1	C3810
Porcupine	Cranium		Complete	1	C3809
Opossum	Humerus	L	Complete	1	C3817
Bison	Hyoid		Complete	1	C3813
Bison	Molar		Complete	1	C3819
Pronghorn	Atlas vertebra		Complete	1	C3816
Pronghorn	Metatarsal	R	Proximal end	1	C3818
Elk*	Maxilla		Fragment	1	C3812

*missing from collection, information from catalog card



Figure 9: Sample of canid mandibles from concentration area.

of an opossum (*Didelphis* sp.) humerus. The historic range of opossum probably did not include Wyoming or other Rocky Mountain states, nor the plains areas of North and South Dakota and Montana. The westernmost extension of the opossum range includes eastern Nebraska, most of Kansas and Oklahoma, and roughly the eastern half of Texas. The northern limit includes southern Wisconsin, southern Michigan and the southern half of the upper New England states (Neumann 1984:290). Buskirk (2016:76) shows a less expansive historic range with opossum lacking in the Rocky Mountains states and most of Nebraska, Kansas, and Iowa. The Garrett Allen site opossum element appears to be the only recorded instance of *Didelphis* in the Wyoming archaeological record.

There is some question about the historic range of raccoon. It has been assumed raccoons (*Procyon lotor*) were limited in their distribution by the need to be close to water sources and did not occur in most arid regions of North America, including the western Great Plains and Southwest (Hall and Kelson 1959). Warren (1910:219) stated raccoons and its subspecies were distributed over most of the United States with the exception of the Rocky Mountain states north of Colorado. In Colorado it was

rarely found and only east of the Continental Divide. Early American historic and ethnographic accounts suggest raccoons were extremely rare or non-existent in the northern Great Plains (Finley 1995:4) The expansion of the range of *Procyon* into the Rocky Mountain west seems to have occurred as a result of agricultural expansion into this area starting about the 1870s (Finley 1995:3). The establishment of urban areas, irrigation canals, stock ponds and other water impoundments may have been the impetus for raccoon expansion (Kamler et al. 2003). Surveys of Late Pleistocene and Early Holocene paleontological sites in Wyoming and Idaho indicate no *Procyon lotor* remains in assemblages containing most of the mammalian taxa currently extant in the state (Anderson 1974; Walker 1986). Buskirk (2016:322-323) states *Procyon lotor* was likely not present in Wyoming at the time of Euro-American settlement, except for a few anecdotal recordings of raccoon in the 1870s. Its range expanded into Wyoming after the late 1800s to include the eastern one-fifth of the state by 1965.

Raccoon bones in Wyoming sites are rare. A cranium and mandibles were recovered from an historic era (ca. early to mid-1900s) trash midden at site 48CK1417 in the Wyoming Black Hills (Reust et al. 1996). One possible raccoon mandible was recovered from 48BH206 (Bottleneck Cave) in north-central Wyoming in probable late Late Prehistoric deposits (Husted 1969). Another mandible tentatively identified as (fossilized?) raccoon (*Procyon* sp.) was found at 48SH301 (Bentzen-Kaufman Cave) in north-central Wyoming in Early Archaic deposits (Grey 1962a). This bone was reported to be mineralized (Grey 1962b) as were other bones in the assemblage, but the degree of mineralization was not discussed. It is unclear if it is part of the archaeological faunal remains or a fossil of considerable age. Unfortunately, it cannot be found in any collections and unavailable for further analysis.

It is tempting to suggest the Garrett Allen site bone concentration represents a ritual disposal. There are several other sites in Wyoming in which canid skulls were purposefully interred in what was considered a ritual burial (Table 12). There are a variety of contexts represented at these sites: canid skulls and other canid elements interred in bison bone beds, as single burials, burial with other, usually bison bones, one canid interment with a human burial, and coyote skulls interred with a protohistoric horse.

The Vore site includes one skull, mandible, axis and atlas vertebrae of coyote (*Canis latrans*), multiple skulls and mandibles of probable wolf-dog hybrids (*Canis* cf. *lupus* or *familiaris*), and post-cranial elements of *Canis* sp. which appear to be larger than coyote (Walker 1980: 156-163). Reher and Frison (1980:19) suggest a ceremonial role for canid bones in the bison bone middens at the

Vore site, as well as for the Glenrock and Wardell sites. While not positing a ritual interment, Frison et al. (1976) reported mandibles and post-cranial remains of wolf (*Canis lupus*) from the Hawken site, an Early Archaic bison trap in northeastern Wyoming.

Interestingly, the Bentzen-Kaufman Cave, 48SH301 (Grey 1962a), yielded crania or mandibles of skunk, rabbit, elk, pronghorn, deer, cf. raccoon, prairie dog, pocket gopher, as well as bear canines in addition to canid mandibles and teeth. The context of these remains was not discussed, but the association of such a diverse assemblage of cranial and mandibular elements in relative proximity somewhat mirrors the Garrett Allen bone concentration.

There is evidence in Wyoming archaeological sites dating from the Early Archaic to Protohistoric of ritual interment of canid remains. The Garrett Allen site also appears to have such an interment, and is particularly unusual given the presence of other small mammalian taxa, especially the opossum humerus and raccoon cranium.

CONCENTRATION OF INCISORS AND OTHER FAUNAL REMAINS

Concentrations of artiodactyl incisors and other faunal remains were recovered in an excavation unit from 8-12 inches below surface and one from 24 inches below surface (Tables 13 and 14). None of the specimens show signs of modification.

Artiodactyl incisors were sometimes modified for attachments of string to serve as clothing decorations.

“Deer and elk milk teeth, bear canines, rodent incisors, horse incisors, and bison teeth have all been mentioned by early observers as decorative devises, although the most highly valued were the permanent canine teeth of the elk...” (Koch 1977:47).

Wood (1957) discusses the presence of perforated elk canines in late Late Prehistoric sites in North Dakota

and elsewhere, as well as ethnohistorical documentation of elk teeth as clothing decoration. The modification of elk canines appears to have been a relatively late phenomenon in the northern Plains among the Mandan, Hidatsa, Crow, Blackfoot and Dakota with Cheyenne, Arapaho and Dakota having adopted the practice after about 1800. Archaeologically, five bison incisors from the Piney Creek site (48JO312) exhibit encircling grooves at the juncture of the root and enamel (Frison 1967:20). Presumably, these modifications were for attachments of the teeth to some other object such as clothing, bundles, pouches, etc.

The diversity and type of faunal remains from the Soil Unit 3A2 might be suggestive of the contents of a bundle or other artifact designed for ritual use. Bundles of various types and designed for various ritual purposes could include a wide variety of plants, animal feathers, skin, bones, shells, unmodified and chipped stones, minerals, fossils, and decorative items such as beads and modified teeth. For example, the Wind River Shoshone used bison teeth for necklaces and in medicine rattles (Shimkin 1947:265) and a necklace of bison incisors was found in an Arikara medicine bundle (Howard 1974:267-268).

BONE AWLS

Bone awls were recovered from all depth increments across the excavated portions of the site, including 47 complete and fragmentary specimens (Table 15; Figures 10-11). Bone elements used to manufacture these tools have been identified as pronghorn (16), canid (2), and possible bird (1). Most of the awls are made on fragments of long bone (fore and hind limbs) and ribs of medium sized artiodactyls with a few from large artiodactyls. The preferred element for use in awl manufacture appears to be medium sized artiodactyl (often pronghorn) metapodials (Figure 10). Bone splinters from long bone diaphyses were also made into awls (Figure 11).

Table 13: Faunal Remains from Soil Unit 3A2, 8-12 inches below surface. *

Taxon	Element	Count
Bison	Incisors	10
Pronghorn	Incisors	17
Porcupine	Incisors	2
Small carnivore (fox size)	Canine	1
Artiodactyl	Molar fragments	8
Medium artiodactyl	Bone tool on rib	1
Mollusk	Cut and snapped shell fragments	4
Fossil bone unidentified	Vertebrate long bone	1
Artiodactyl long bone fragments	Probable fore and hind limbs	8

*Other items recovered include two sandstone shaft abraders.

Table 14: Faunal Remains from unit 78N 30W, 24 inches Below Surface.

Taxon	Element	Count
Bison	Incisors	3
Pronghorn	Incisors	6
Elk	Incisor	1
Elk	Molar	1
Artiodactyl	Molar fragments	28

BONE BEADS AND TUBES

Thirteen bone beads/tubes were recovered from nearly all depth increments across the site. They include beads made on canid, bird, pronghorn, small mammals, and medium sized artiodactyl long bones (Table 16; Figure 12). One probable gaming piece with cross-hatched design was made on a small-medium sized mammal rib (Figure 13).

DISCUSSION

Previous articles on the Garrett Allen site assemblages have emphasized the evidence for special place

gatherings over the course of its prehistory. Chipped stone raw materials, many from considerable distances and multiple directions made their way into the site (Eckles and Guinard 2015). Atypical stone artifacts and minerals, also from distant sources, are also represented in the collections (Eckles 2019). Several projectile points with affinities to the Great Basin and Central Plains were recovered (Eckles and Miller 2019), as well as one exotic notched biface, possibly derived from the lower Mississippi River valley (Eckles 2019). As Hoffman (1994:354) has argued, the presence of artifacts from multiple sources and directions is one type of evidence for an aggregation site.

The faunal remains provide additional support to the idea the Garrett Allen site represents a gathering site. There are number of faunal taxa extralimital to the site from considerable distances and from multiple directions. Four of the taxa represented, *Pleurocera*, *Busycon*, *Didelphis*, and probably *Procyon lotor*, are exotic, their



Figure 10: Examples of bone awls made on pronghorn metapodials.



Figure 11: Examples of bone awls made on long bone shaft splinters, medium sized artiodactyls.

Table 15: Bone Awls.

Taxon	Element	Depth (in.)	Awl Portion	Length
Pronghorn	Metacarpal distal	4	Fragment	34.2
Medium artiodactyl	Rib	4	Fragment	50.6
Pronghorn	Humerus diaphysis	4	Complete	74.8
Medium artiodactyl	Rib	6	Complete	117.6
Medium artiodactyl	Long bone diaphysis	6	Fragment	47.7
Medium artiodactyl	Long bone diaphysis	6	Fragment	41.1
Large artiodactyl	Rib	6	Complete	109.8
Pronghorn	Metacarpal distal	6	Complete	110.8
Pronghorn	Metapodial diaphysis	8	Fragment	45.5
Medium artiodactyl	Metatarsal diaphysis	8	Fragment	67.3
Medium artiodactyl	Long bone diaphysis	8	Fragment	91.2
Large artiodactyl	Long bone diaphysis	8	Fragment	73.7
Medium mammal (canid size?)	Ulna diaphysis	8	Fragment	51.9
Canid (wolf/large dog size)	Ulna complete	11	Complete	145.2
Pronghorn	Humerus distal	12	Complete	52.0
Medium artiodactyl	Long bone diaphysis	12	Fragment	55.0
Medium artiodactyl	Long bone diaphysis	12	Fragment	53.8
Pronghorn	Metapodial diaphysis	13	Complete	122.7
Pronghorn	Metapodial diaphysis	15	Complete	142.4
Pronghorn	Metapodial diaphysis	16	Fragment	84.1
Medium artiodactyl	Long bone diaphysis	17	Complete	93.9
Pronghorn	Metatarsal diaphysis	18	Complete	131.2
Medium artiodactyl	Rib	18	Fragment	93.8
Large artiodactyl	Rib	18	Complete	132.2
Medium artiodactyl	Metapodial diaphysis	21	Complete	96.9
Medium artiodactyl	Metacarpal distal	21	Complete	115.2
Medium artiodactyl	Long bone diaphysis	21	Fragment	41.8
Pronghorn	Metatarsal diaphysis	22	Complete	120.0
Large artiodactyl	Rib	22	Complete	160.3
Medium artiodactyl	Rib	26	Fragment	35.9
Medium artiodactyl	Rib	27	Complete	88.6
Medium artiodactyl	Rib	20	Fragment	73.8
Pronghorn	Metacarpal distal	32	Complete	147.5
Pronghorn	Metacarpal distal	36	Complete	85.3
Pronghorn	Metatarsal proximal	36	Complete	137.4
Pronghorn	Metatarsal, distal	36	Complete	145.5
Medium artiodactyl	Long bone diaphysis	36	Complete	68.5
Medium artiodactyl	Rib	42	Fragment	54.7
Medium artiodactyl	Long bone diaphysis	44	Fragment	115.8
Medium artiodactyl	Long bone diaphysis	44	Fragment	73.5
Medium artiodactyl	Long bone diaphysis	44	Fragment	20.5
Medium artiodactyl	Metapodial diaphysis	45	Complete	139.4

Medium artiodactyl	Long bone diaphysis	45	Complete	110.6
Pronghorn	Metatarsal diaphysis	46	Complete	147.9
Medium artiodactyl	Metatarsal diaphysis	46	Fragment	58.9
Pronghorn	Metatarsal proximal	60	Complete	141.2
Large bird (?)	Long bone diaphysis	61	Fragment	75.9

Table 16: Bone Beads/Tubes and Other Worked (Decorative) Bone.

Taxon	Element	Depth (in.)	Type	Count
Small-medium mammal	Rib	11	Incised piece	1
Canid	Metapodial	22	Bead	3
Medium bird	Long bone diaphysis	22	Bead	1
Pronghorn	Metatarsal proximal end	28	Bead? (other decorative?)	1
Small mammal	Long bone	33	Bead	1
Medium carnivore	Tibia diaphysis	38	Bead	1
Medium bird	Long bone diaphysis	38	Bead	2
Small mammal	Long bone diaphysis	46	Bead	1
Small mammal	Long bone diaphysis	60	Bead	1
Medium artiodactyl or large carnivore	Long bone diaphysis	N/A	Bead	1



Figure 12: Examples of bone beads/tubes.



Figure 13: Incised bone fragment, probable gaming piece.

historically known ranges being far from the site.

Another type of evidence for a special place gathering site is the probability of ritual activity. The canid and other small mammal bone concentration is a probable example of this. A concentration of incisors and other bone may be indicative of a ritual bundle. The single turtle carapace fragment may suggest another ritual use. The site is located adjacent to a spring, and springs held spiritual significance for many Native American groups (see e.g., Benedict 1992:4-5). The interment of ritual items may be in part offerings to the spirits of the spring. The presence of near term/new born bone elements (and no other fetal elements) throughout the depth sequence (suggesting late spring/early summer occupations) is further evidence gatherings were planned to occur at the same time over several thousand years.

The frequencies and diversity of bone tools and use of bone for decorative items suggest not only typical daily living activities were carried on, but they occurred in similar proportions throughout the prehistoric sequence and were carried out by more than the “normal” number of individuals at an occupation site. A considerable amount of manufacturing of bone tools and decorative items took place in all depth increments. This includes bone awls, tubes, beads, one possible gaming piece and other worked bone. A relatively large number of sandstone “shaft abraders” were recovered (Eckles 2015), which were likely used in the manufacture of bone awls, atlatl and arrow shafts. Considering the number and sizes

of end scrapers (total of 254) from all depth increments, hide, wood and bone working were major activities. There is great variability in the size of the end scrapers, from long, wide and thick examples, to tiny “thumbnail” sized specimens. This suggests a variety of applications. Many of these tools have been extensively used and retouched to a point where the tools are useless for further applications (see Eckles 2016). Exotic raw materials were preferred in the manufacture of end scrapers (Eckles and Guinard 2015). Elk antler was likely gathered on-site for production and use of knapping tools.

The faunal assemblage contains large numbers of bison and pronghorn bone, taxa which appear to be the primary focus of hunting, food preparation, hide working and whose bones were used in the manufacture of bone tools. The site contains a diverse assemblage of other taxa, although in significantly lower absolute numbers. The composition of faunal remains and taxa appear to be consistent throughout the depth sequence, indicating similar procurement and use of animal resources occurred during the prehistoric occupations.

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REFERENCES CITED

Anderson, Elaine
 1974 A Survey of the Late Pleistocene and Early Holocene Mammal Faunas of Wyoming. In *Applied Geology and Archaeology: The Holocene History of Wyoming*, Michael Wilson, ed. Wyoming Geological Survey, Report of Investigations No. 10:79-87. Laramie, Wyoming.

Benedict, James B.
 1991 Sacred Hot Springs, Instant Patinas. *Plains Anthropologist* 37:1-6.

Buenger, Brent A.
 2011 The East Cottonwood Creek Site (48FR5611). In, *Data Recovery Excavations Along the Anadarko Howell CO2 Pipeline: 8,000 Years of Hunter-Gatherer Adaptation in Central Wyoming*, edited by Brent Buenger and Stacy Oodrick. Report by Western Archaeological Services, prepared for Anadarko Exploration and Production, pp 677-752. On file, SHPO Cultural Records, Laramie, Wyoming.

Burnett, Paul, Charles Bollong, John Kennedy, Chris Millington, Cary M. Berg, Venesa Zietz, Ashley Fife, Karen Reed, and Maxine Seletstewa
 2008 Archaeological Data Recovery for the Rockies Express/Entegra Pipeline Project at the Joe Miller Site (48AB18), Albany County, Wyoming. Prepared by SWCA Environmental Consultants for Kinder Morgan, Inc., Federal Energy Regulatory Commission, and Bureau of Land Management, Broomfield, Colorado.

Buskirk, Steven W.
 2016 *Wild Mammals of Wyoming and Yellowstone National Park*. University of California Press, Oakland.

Casteel, R. L., and Donald K. Grayson
 1977 Terminological Problems in Quantitative Faunal Analysis. *World Archaeology* 9:235-242.

Claassen, Cheryl
 2015 *Beliefs and Rituals in Archaic Eastern North America: An Interpretive Guide*. The University of Alabama Press, Tuscaloosa.

Craven, Cynthia D.
 2005 *Battle Spring Draw Paleoinidian Site (Site 48SW13156)*. In Craig S. Smith, ed., *The Archaeology along the Lost Creek Pipeline, Fremont and Sweetwater Counties, Wyoming*. Report by TRC Mariah Associates, Inc. On file at SHPO Cultural Records, Laramie, Wyoming.

Darlington, David G., Dirk Murcay, and Kevin W. Thompson
 1998 Archaeological Investigations at Three Sites along the Skull Creek Pipeline, Sweetwater County, Wyoming. Report by the Archaeological Services Western Wyoming College, prepared for Questar Pipeline Company. On file at SHPO Cultural Records, Laramie, Wyoming.

- Driver, Harold E., and William C. Massey
1957 *Comparative Studies of North American Indians*. Transactions of the American Philosophical Society (n.s.) Vol. 47, Pt. 2. American Philosophical Society, Philadelphia.
- Eckles, David G.
2013 An Introduction to the Excavations at the Garrett Allen Site, 48CR301. *The Wyoming Archaeologist* 57(1):27-39.
2014 Atypical Stone Artifacts from the Garrett Allen (Elk Mountain) Site, 48CR301. *The Wyoming Archaeologist* 63(2):26-46.
2015 Ground Stone Artifacts from the Garrett Allen (Elk Mountain) Site, 48CR301. Unpublished manuscript on file at the University of Wyoming Archaeological Repository, Laramie.
2016 End Scrapers from the Garrett Allen (Elk Mountain) Site, 48CR301. Unpublished manuscript on file at the University of Wyoming Archaeological Repository, Laramie.
- Eckles, David G. and Adam Guinard
2015 Chipped Stone Raw Materials from the Garrett Allen (Elk Mountain) Site, 48CR301. *The Wyoming Archaeologist* 59(2):13-43.
- Eckles, David G., and Mark E. Miller
n.d. Projectile Points from the Garrett Allen (Elk Mountain) Site, 48CR301. *The Wyoming Archaeologist* 63(1):22-43.
- Eckles, David G., Dale Wedel, and Danny N. Walker
1994 An Early Historic Horse Skeleton from Southwestern Wyoming. *The Wyoming Archaeologist* 38:55-68.
- Ernst, Carl H. and Jeffrey E. Lovich
2009 *Turtles of the United States and Canada, Second Edition*. The Johns Hopkins University Press, Baltimore.
- Finley, Robert B.
1995 The Spread of Racoons (*Procyon lotor hirtus*) into the Colorado Plateau from the Northern Plains. *Proceedings of the Denver Museum of Natural History* 3(11):1-6.
- Frison, George C.
1967 *Archaeological Evidence of the Crow Indians in Northern Wyoming: A Study of a Late Prehistoric Period Buffalo Economy*. Unpublished PhD. Dissertation, Department of Anthropology, University of Michigan.
1970 The Glenrock Buffalo Jump, 48CO304. *Plains Anthropologist Memoir* 7, Volume 15, No. 50 Pt.2. Lawrence.
- 1973 The Wardell Buffalo Trap 48SU301: Communal Procurements in the Upper Green River Basin, Wyoming. *Anthropological Papers of the Museum of Anthropology, University of Michigan* No. 48.
- 1991 *Prehistoric Hunters of the High Plains, Second Edition*. Academic Press, San Diego.
- Frison, George C., Michael Wilson, and Diane J. Wilson
1976 Fossil Bison and Artifacts from an Early Altitheal Period Arroyo Trap in Wyoming. *American Antiquity* 41(1):28-57.
- Getty, Robert
1975 *The Anatomy of the Domestic Animal*. W. B. Saunders, Philadelphia.
- Gibbon, Guy
1998 *Archaeology of Prehistoric Native America: An Encyclopedia*. Garland Publishing, Inc. New York.
- Gilbert, B. Miles
1980 *Mammalian Osteology*. Modern Printing, Laramie, Wyoming.
1981 *Avian Osteology*. Modern Printing, Laramie, Wyoming.
- Goodrich, C.
1940 The Pleuroceridae of the Ohio River Drainage System. *Occasional Papers of the Museum of Zoology University of Michigan* 417:1-21. Laramie.
- Grey, Donald C.
1962a The Bentzen-Kaufman Cave Site, 48SH301. *Plains Anthropologist* 7:237-245.
1962b Fossil Mammoth Bone from Kaufman Cave. *Plains Anthropologist* 8:53-54.
- Hall, E. R. and K. R. Kelson
1959 *The Mammals of North America*. Ronald Press Company, New York.
- Hayter, Michael A.
1981 *Soils of the Garrett Allen (Elk Mountain) Archaeological Site, Carbon County, Wyoming*. Unpublished Master's Thesis, Department of Geography, University of Wyoming.
- Hill, Matthew G., David W. May, David J. Rapson, Andrew R. Boehm, and Erik Otarola-Castillo
2008 Faunal Exploitation by Early Holocene Hunter/Gatherers on the Great Plains of North America: Evidence from the Clary Ranch Sites. *Quaternary International* 191:115-130.
- Hofman, Jack L.
1994 Paleoindian Aggregations on the Great Plains. *Journal of Anthropological Archaeology* 13:341-370.

- Howard, James L.
1974 The Arikara Buffalo Society Medicine Bundle. *Plains Anthropologist* 19:241-271.
- Husted, Wilfred M.
1969 Bottleneck Cave. In, Bighorn Canyon Archaeology. *Smithsonian Institution River Basin Surveys, Publications in Salvage Archaeology* No. 12, pp. 42-137.
- Husted, Wilfred M., and Robert Edgar
2002 *The Archaeology of Mummy Cave, Wyoming: An Introduction to Shoshonean Prehistory*. National Park Service, Midwest Archaeological Center and Southeast Archaeological Center, Special Report No. 40, Technical Report Series No. 9.
- Kamler, Jan F, Warren B. Ballard, Brent R. Helliker, and San Stiver
2003 Range Expansion of Raccoons in Western Utah and Central Nevada. *Western North American Naturalist* 63(3):406-408.
- Koch, Ronald P.
1977 *Dress Clothing of the Plains Indians*. University of Oklahoma Press, Norman.
- Kornfeld, Marcel, George C. Frison, and Mary Lou Larson
2010 *Prehistoric Hunter-Gatherers of the High Plains and Rockies, Third Edition*. Left Coast Press, Walnut Creek, California.
- Larson Thomas K. and Dori M. Penny
1992 Results of the Archaeological Investigations at Eight Sites on the Rawhide Mine, Campbell County, Wyoming. Larson-Tibesar Associates, Laramie. On file at SHPO Cultural Records, Laramie.
- Lawrence, Barbara
1951 Post-cranial Characteristics of Deer, Pronghorn, and Sheep-goat, with notes on *Bos* and *Bison*. *Papers of the Peabody Museum of American Archaeology and Ethnology, Harvard University* 35(3):1-43.
- Moore, Amanda, Heather Hilson, Christie Huber, Sarah Jacobs, Bradley Saint, Anthony Vizina, and Keatton Wilson
2015 Examining Early Paleoindian Strata at Hell Gap: The 2015 Field Season. Paper presented at the 73rd Annual Meeting of the Plains Anthropological Conference, Iowa City, Iowa.
- Neumann, Thomas W.
1984 The Opossum Problem: Implications for Human-Wildlife Competition over Plant Foods. *North American Archaeologist* 5(4):287-313.
- O’Gara, Bart W., and Jim D. Yoakum
2004 *Pronghorn Ecology and Management*. University of Colorado Press, Boulder.
- Olsen, Stanley J.
1968 Fish, Amphibian and Reptile Remains from Archaeological Sites. *Papers of the Peabody Museum of Archaeology and Ethnology* 56(2).
- Partlow, Megan and Dirk Murcay
2011 Appendix A, Faunal Remains. In, Data Recovery Excavations Along the Anadarko Howell CO2 Pipeline: 8,000 Years of Hunter-Gatherer Adaptation in Central Wyoming, edited by Brent Buenger and Stacy oodrick. Report by Western Archaeological Servces, prepared for Anadarko Exploration and Production, pp 677-752. On file, SHPO Cutural Records, Laramie, Wyoming.
- Reed, Alan D.
2005 Kern River 2003 Expansion Project, Wyoming: Cultural Resources Mitigation Report. Alpine Archaeological Consultants, Inc. On file at SHPO Cultural Records, Laramie.
- Reher, Charles A. and George C. Frison
1980 *The Vore Site, 48CR301, A Stratified Buffalo Jump in the Wyoming Black Hills*. Plains Anthropologist Memoir 16. Lincoln, Nebraska.
- Reust, Thomas P., William E. Batterman, Bruce R. McClelland, and Craig S. Smith
1996 Testing Results and Data Recovery Plan, Hulett-Alladin Road Project, Alva and Forest Boundary Sections PREB-0601 (29 and 29), Crook County, Wyoming. Report by TRC Mariah Associates, Inc. On file at SHPO Cultural Records, Laramie, Wyoming.
- Roe, Frank G.
1970 *The North American Buffalo*. University of Toronto Press, Toronto.
- Shimkin, D. B.
1947 Wind River Shoshone Ethnogeography. *Anthropological Records* 5(4). University of California Press, Berkeley.
- Sobolik, Kristin D., and D. Gentry Steele
1996 *A Turtle Atlas to Facilitate Archaeological Identifications*. Fenske Companies, Rapid City, South Dakota.
- Walker, Danny N.
1980 The Vore Site Local Fauna. In, *The Vore Site, 48CR301, A Stratified Buffalo Jump in the Wyoming Black Hills*, Charles A. Reher

- and George C. Frison, editors. Plains Anthropologist Memoir 16:154-169. Lincoln, Nebraska.
- 1986 Studies on the Late Pleistocene Mammalian Fauna of Wyoming. Unpublished PhD. Dissertation, Department of Zoology and Physiology, University of Wyoming.
- 1987 Horner Site Local Fauna: Vertebrates. In, *The Horner Site: The Type Site of the Cody Cultural Complex*, George C. Frison and Lawrence C. Todd, editors. Academic Press, Orlando.
- 1992 A Canid Skull from 48CA582, Campbell County, Wyoming. In, *Results of the Archaeological Investigations at Eight Sites on the Rawhide Mine, Campbell County, Wyoming*, edited by Thomas K. Larson and Dori M. Penny, Appendix 1. Larson-Tibesar Associates, Laramie. On file at SHPO Cultural Records, Laramie.
- 2009 Archaeological Investigations at Seminoe's Trading Post, 48NA288, Natrona County, Wyoming. Report by Office of the Wyoming State Archaeologist, University of Wyoming, Department of Anthropology. On file at SHPO Cultural Records, Laramie, Wyoming.
- Walker, Danny N., and George C. Frison
 1982 Studies on Amerindian Dogs, 3: Prehistoric Wolf/Dog Hybrids from the Northwestern Plains. *Journal of Archaeological Science* 9:125-172.
- Warren, Edward R.
 1910 *The Mammals of Colorado*. G. P. Putnam's Sons, New York.
- Wood, W. Raymond
 1957 Perforated Elk Teeth: A Functional and Historical Analysis. *American Antiquity* 22(4):381-387.
- Wright, Gary A., Robert Proulx, and Thomas Koenig
 1982 A Native American Burial from 48YE1, Fishing Bridge Peninsula, Yellowstone National Park. *The Wyoming Archaeologist* 25:2-26.
- Wyoming Game and Fish Department
 2002 *Mule Deer*. Habitat Extension Bulletin No. 28, Cheyenne.
- Zeimens, George M.
 1987 The Rock Ranch Fauna: A Preliminary Analysis. *The Wyoming Archaeologist* 30(3-4):93-101.
- Zeimens, George M., Geri McIvver, Harry Earl, R. Clayton Housh, Dennis Eisenbarth, Gary Alkire, and Dewey Baars
 1992 The Sommers Site: A Progress Report from the High Plains Chapter. *The Wyoming Archaeologist* 36(1-2):11-26.
- Zier, Christian J.
 1977 Archaeology of the Rocky Mountain Energy Rail Spur between Cumberland Gap and the South Haystack Mine, Uinta and Lincoln Counties, Southwest Wyoming. Report by Metcalf-Zier Associates. On file at SHPO Cultural Records, Laramie, Wyoming.
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GUIDELINES FOR CONTRIBUTORS TO THE WYOMING ARCHAEOLOGIST

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As noted on the inside front cover of each issue of The Wyoming Archaeologist, authors submitting manuscripts for consideration should follow the style guidelines of the journal *American Antiquity* as updated in July 2018. The style guide is available on the Society for American Archaeology website at: https://documents.saa.org/container/docs/default-source/doc-publications/style-guide/saa-style-guide_updated-july-2018c5062f7e55154959ab57564384bda7de.pdf?sfvrsn=8247640e_6

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