

# **High Elevation Archaeology – Professional Workshops/Discussion Groups**

## **May 4-6, 2017**

### **1. Thursday 4 May 3:00-4:30 PM. Peterson, Marcia.**

#### **Historic context for high elevation archaeology**

Topics discussed will include what is "high elevation"? What is a site? What is an eligible site? I want to discuss site types, site recording procedures, and site evaluation for the NRHP. This information will then be used to prepare a document for the Wyoming SHPO on how to properly locate, document, and evaluate sites in the higher elevations. A projector for a power point presentation would be useful, but not necessary. I would like to have at least 10 participants, hopefully more. It would be helpful for attendees to prepare a bibliography of their reports and publications covering high elevation arch sites (especially those not easily available) and a summary of the types of sites they have located. Also, attendees should come prepared to discuss what they consider high elevation, a site, and how they have been recording and evaluating high elevation sites.

### **2. Thursday 4 May 7:00-8:30 PM. Pitblado, Bonnie.**

#### **Artifact Collectors in the High Country: Strategies for Archaeologist – Collector Interactions (or Not?) to Benefit Archaeology at Altitude**

This discussion session examines the role artifact collectors can/should play in high-altitude archaeology in North America. Unlike many parts of lower-elevation landscapes, the high Rockies tend to be held and managed by federal agencies, principally the USFS, NPS and BLM. This means that non-archaeologists who have collected artifacts from those regions have generally broken antiquities laws to do so. This is in contrast, for example, with a rancher who owns hundreds of acres and has collected artifacts from his or her property. Some may take moral offense to the latter activity, but it is clearly not illegal, and many archaeologists collaborate with such collectors to the benefit of all concerned. We are on different ground, literally, when on any public land, which again, disproportionately encompasses the high country of the Western U.S. Yet hunters, hikers, and other consumers of the high country do collect artifacts. What then, are appropriate ways of interacting with those who hold such collections to minimize the loss of scientific data that accompanies collecting and maximize the public education required to reduce collection in the first place?

### **3. Friday 5 May 8:30-10:00 AM. Boyer, Chris.**

#### **Aerial photography, high resolution mapping, and 3D land surface models**

Because the high elevation project sites are often both remote and dispersed, they are a good fit for monitoring and assessment with very high resolution aerial photography and mapping, allowing for the coverage of hundreds of sites in a matter of hours. This session begins with short presentation on recent projects that will touch on the following topic: 1) Capabilities of aerial photography, high resolution mapping, and 3D land surface models for showing context, and detailed spatial, and topographic features; and potential applications for infrared, hyperspectral and LiDAR; 2) Comparison of fixed wing and drone capabilities; 3) Regulatory issues on National Forest, Wilderness Areas, and National Parks. This is followed by an open format discussion for questions and brainstorming on needs and applications.

### **4. Friday 5 May 10:15-11:45 AM. Strait, James.**

#### **UAV Workshop: Toy to Tool?**

Archeologists have spent decades climbing ladders, erecting scaffolds and flying kites to get a birds eye view of their work. It should then come as no surprise that the use of Unmanned Aerial Vehicles (UAVs) for archeological work is at the forefront of UAV applications. However, one cannot simply pick up a UAV and start collecting data. This workshop will provide you the basic information on what you need to integrate UAV technology into your operations. Topics will include: getting legal, what you should look for in a unit, what accessories do you need, what software is available for collection and processing, and what costs are to be expected, all with the archeologist in mind. Some limited hands on experience with a DJI Inspire 1 Pro will be available, depending on permissions, space and weather.

## **5. Friday 5 May 1:00-2:30 PM. Cary, Karri.**

### **Melting Ice in the Greater Yellowstone Ecosystem**

This session will include dialog focused on understanding the potential overlaps of other high elevation work occurring in this ecosystem. Although the purpose for the work may differ, where are the connections between high elevation archeology and glacier studies? We will discuss the purpose of our work on both ice patches and glaciers, the methods being utilized to identify sites and monitor trend, the projected duration, the field work involved, and the overall strategy for our work. Through these conversations, can we identify opportunities for supporting one another, sharing data, or obtaining funding? This session is for both information sharing and brainstorming to identify and strategize on partnership opportunities.

## **6. Friday 5 May 2:40-4:20 PM. Lee, Craig.**

### **Ice Patch Methods**

This workshop will review the results of GYCC sponsored research projects (Phases I and II) that helped to identify c. 450 promising snow and ice resources with archaeological and paleobiological potential in the GYA. Copies of the Phase I report, GIS and ArcGIS shapefiles, as well as Google Earth (.kml) files, and aerial photos were shared with all cultural resources staff managing lands in the GYA in 2013. Phase II included three multi-day field training events attended by c. 30 researchers in 2015 and additional aerial photography. The results of this study provide a powerful management tool for formulating strategies for ice patch protection and preservation in response to climate change, but much remains to be done (of course). Depending on the interest of participants, we can discuss survey techniques, virtual globes and post-collection stabilization of artifact and paleobiological specimens as well as options to help us keep track of what's been visited and when.

## **7. Friday 5 May 4:30-6:00 PM. Haas, Randy and Spencer Pelton.**

### **High-elevation game drives and communal hunting**

Game-drive features are well known in high-elevation environments including parts of the Intermountain West. While it is clear that such features indicate communal hunting, the social and economic implications remain unclear. Were game drives conducted by small kin groups, multi-kin bands, or large multi-band cooperatives? What environmental and social conditions encouraged communal hunting in some times and places but not others? How can we approach answers to such questions using the archaeological record? Our collective knowledge will be used to identify the frontiers of high-elevation game-drive research in the Intermountain West. Participants are encouraged to bring relevant data (e.g., maps or photographs) to facilitate conversation. Haas and Pelton will kickstart the dialogue with brief introductions to two case studies--an ethnoarchaeological study of vicuña drives in the Andes Mountains of Peru and an archaeological study of game drives in the Rocky Mountains.

## **8. Saturday 6 May 8:00-9:45 AM. Kelly, Robert and Craig Lee.**

### **High Elevation Research Perspectives**

General discussion on how the research community can collaborate on future high elevation studies. Discussion may begin with several topics: 1) Academics should be doing what CRM isn't or can't do – and CRM isn't working at altitude because there's no development there. 2) There is a critical mass of people working at altitude, and they have already documented variation in the way high altitudes are used in different areas 3) Funding agencies, especially NSF, has a proclivity to support multi-disciplinary/multi-institutional grants 4) And, finally, all of us probably think that high altitudes are not just beautiful places, but as extreme environments are also interesting places to pursue intellectual questions: the role of climate change and demography is one example.

The goal here is not to create a single plan that everyone must buy into, but to work jointly in such a fashion that everyone (academics, land managers, tribes) achieves some of their goals (including outreach, education, inventory). It's win-win or nothing.