



UNIVERSITY OF WYOMING

Department of Anthropology
1000 E. University Box 3431
College of Arts and Sciences
Laramie, WY 82071-3431
(307) 766-5136 • fax (307) 766-2473 • www.uwyo.edu/anthropology

Lon Johnson
Cultural Resource Specialist/Historical Architect
Division of Science and Resources Management
Glacier National Park
West Glacier, Montana 59936

November 30, 2011

Re: RM-CESU Cooperative Agreement Number H1200090004

Lon,

This was a bit of a frustrating year for the Ice Patch Archaeology project as record snow levels in the park prevented us from fieldwork. We had arranged to rent a manual coring device to take some samples from the snow fields themselves and to date the basal ice layers to obtain an idea of their maximum ages; we hope to pursue that aspect of the research next year.

In the meantime, we made some progress on the aerial imagery, video, and ethnographic components.

Major activities and product dates:

- 1) October 5-7, 2010, Lee prepared/presented a brief on the planning and completion of YR1 fieldwork for the 2nd International Glacial Archaeology Symposium (Frozen Pasts), Trondheim, Norway. The project brief delivered at the 2nd International Glacial Archaeology Symposium (Frozen Pasts) in Trondheim, Norway was well received. The single session format was attended by nearly 70 participants working on similar problems throughout Europe and North and South America.
- 2) Phone conference call of all participants as fieldwork follow-up, November 15, 2010.
- 3) Phone conference call of all participants as fieldwork follow-up, February 7, 2011.
- 4) March 30-April 3, 2011, prepared/presented a project paper coauthored by GCRMG participants Craig Lee, Robert Kelly, Ira Matt, Rachel Reckin and Marcia Pablo for an invited session at the 76th Annual Meeting of the Society for American Archaeology, Sacramento, California; this was a national stage for the GCRMG and the project's collaborative formulation.
- 5) March-May, 2011, completed independent budgets and associated paperwork for YR2 and YR3.
- 6) Maria Nieves Zedeño from the University of Arizona joined the Ice Patch Project in 2011 to assist the Blackfeet Tribal Historic Preservation Officer, John Murray (BTHPO) in developing a research strategy for this project and conducting background research and ethnographic fieldwork. John Murray and Maria Nieves Zedeño discussed names of elders who are familiar with the geography of Glacier National Park as well as knowledgeable about the cultural significance of the park's places and resources. Maria

Nieves Zedeño and her assistant have begun to compile background information on park use that may be mapped onto the project GIS layers. Thankfully there are two important reports (Campbell and Foor 2002; Reeves and Peacock 2001) commissioned by the park that may be incorporated into the database as well as Claude Shaeffer's (1934) unpublished manuscripts, which are available electronically through Glenbow Museum archives, plus sundry publications that will be combed for relevant information.

- 7) June 4-7, 2011, all members of GCRMG attended a meeting with GCRM Group, Kwataqnuq, Polson, MT.
- 8) June 6, 2011, as part of the community outreach aspect of the project, Lee and Kelly presented *Alpine Snow and Ice as a Source of Archaeological and Paleoecological Data in the Rocky Mountains* for Salish Kootenai College, Johnny Arlee/Victor Charlo Theater, Polson, MT; video copies were provided to the GCRMG group.
- 9) March- September, Lee worked to identify remotely sensed data (e.g., aerial overflights) that could refine the ice patch targets selected in YR1 based on geographic characteristics, including consultation with USGS, Maps, CSKT, Quaternary GIS Lab, and ERDAS. This imagery may be critical to assessing the degree of melt occurring at the ice patches selected for survey based on geographic characteristics; however, we encountered two issues: (a) A few personnel changes in the mid-winter at CSKT slowed our collective effort to work with the remotely sensed imagery obtained by the USGS. However, Pete Gilleard and Martin Zobel of the CSKT GIS Department has picked up the mapping effort. He has been working the planning and ethnographic maps for this project for the CSKT; (b) Throughout the spring and summer we attempted to work with/access extant digital copies, but unfortunately they are corrupt. Consequently, we are now gauging a path forward by examining the original 9" x 9" diapositives.
- 10) The CSKT were able to create a Golden Eagle nest layer created by the park and added it to the overall map. This was in response to the hypothesis that golden eagles might be responsible for the transport of the paleobiological materials recovered and dated in 2010. Kelly had consulted with some UW raptor specialists and decided that if a raptor was a vector for the movement of sticks to the ice patches from lower elevations, that golden eagles were the most likely species. However, there is all but no overlap between modern golden eagle nests and ice patches. While the past could have been different, the modern data shows no preference for nesting near ice patches by golden eagles and reduces the likelihood that raptors were responsible for the wood samples collected; this increases the likelihood that the samples reflect changes in the elevational distribution of the tree species.
- 11) The ethnographic section of the mapping is moving as well. The place name layer was added as well as Paul David's journey through the area. Using historic accounts, Martin Zobel has digitized a preliminary route used by David's family in his quest to meet the Peigan (Blackfoot) Tribe in an effort to carry a message of peace from the Salish/Kootenai Tribes.
- 12) April -July, Lee and Kelly worked to identify Ice Core Drilling Services and the PICO hand auger as the portable ice coring platform to assess depth, stratigraphy and age of GLAC ice patches.
- 13) October 2010-September 2011 (various dates), phone conferences regarding project goals, logistics, GIS, field scheduling, planned culture committee meetings/presentations, project video component, etc.; for YR3 we have a planned culture committee

meeting/presentation and are looking forward to further integration of traditional knowledge with respect to our survey locations.

Sincerely,

A handwritten signature in black ink that reads "Robert L. Kelly". The signature is written in a cursive, flowing style.

Robert L. Kelly
Professor
Director, Frison Institute
RLKELLY@uwyo.edu

REFERENCES

- Campbell, Gregory R., and Thomas A. Foor. 2002. An Ethnohistorical and Ethnographic Evaluation of Blackfeet Religious and Traditional Cultural Practices in East Glacier National Park and the Surrounding Mountains. The University of Montana, Missoula. Submitted to Glacier National Park.
- Reeves, Brian O.K., and Sandra Peacock. 2001. "Our Mountains are Our Pillows": An Ethnographic Overview of Glacier National Park. Submitted to Glacier National Park.