Introduction

• Quartz Lake/Shaw Creek Flats (QL/SCF) Multidisciplinary Project: landscape evolution and human paleoecology within lowland settings of interior Alaska since the earliest occupations (~14,000-13,000 cal. yrs. B.P at Broken Mammoth, Mead and Swan Point) (Refs 1-2)

• 2014 field season: limited testing and excavation at two deeply buried, well-stratified sites in SCF: Keystone Dune site (KDS) (Fig. 1-2, 4-7) and Cook site (Fig. 1, 3, 8-9)

• Goals: 1) expand previous archaeological excavations (see Acknowledgments) and geoarchaeological research; 2) collect faunal and charcoal remains to refine current chronologies of human occupation and environmental change in the region (Fig. 6-8) (Refs 1-5)

• Major findings at KDS: cultural hearth dug into buried Ab4 soil horizon (Fig. 5. 7), lithic artifacts and Cervus elaphus remains (extinct elk [wapiti]) recovered from and adjacent to the hearth — the first in situ archaeological materials from this locale (Fig. 7)

• Major findings at Cook site: new component associated with older soils (dating to ~9300 cal. yrs. B.P.), large ungulate long bone fragments and charcoal in close association (Fig. 9)

14C Analysis

• Collected 1 charcoal sample from hearth matrix at KDS, 4 samples from excavation unit at Cook site

• Pretreated and submitted charcoal for AMS 14C dating at UA NSF-AMS Laboratory

Conclusions

• Elk and large ungulates = typical of mTV archaeological sites at Pleistocene/Holocene transition…our faunal data fit this pattern

• New 14C dates add to existing Shaw Creek chronologies…KDS occupation is same period as CZ3 at Broken Mammoth, Mead, and Swan Point; the Cook site adds another rare data set at ~9,000 cal. yrs. B.P.

• This study contributes more data to better understand human paleoecology and environmental change within lowland subarctic setting since the earliest human occupations ~14,000 cal. yrs. B.P.

References

1. Reuther, J., 2013, PhD dissertation, UA

2. Reuther, J., et al., 2014, Cultural resources report: UAF and Museum of the North


Acknowledgements

*This work continues the research of the late Carol Gelvin-Reymiller, Doctoral student at UAF—Dr. Charles Holmes, Dr. Ben Potter, & Dr. Robert Bowman, Department of Anthropology UAF—Dr. Jay Quade and Doctoral student Adam Hudson, Dept. of Geosciences, UA—NSF-AMS Laboratory, UA—Graduate and Professional Student Council (GPSC), UA

Figure 1. Detailed map of the study area, showing the locations of archaeological study sites (modified from Reuther 2013).  
Figure 2. Overview of Keystone Dune field.  
Figure 3. Lidar image of Cook site, located on the toe of a ridgeline along southeastern margin of Quartz Lake.  
Figure 4. Exhumed buried soils exposed at KDS.  
Figure 5. Sequence of burned, buried soils at KDS.  
Figure 6. KDS stratigraphic sequence, showing provenience of 14C and OSL dates (OSL italicized).  
Figure 7. Excavation unit at Cook site, showing newly discovered cultural component at 85-90 cmbs. Large mammal bones were found in situ.  
Figure 8. Cook site stratigraphic sequence, showing provenience of 14C dates.  
Figure 9. Cook site stratigraphic sequence, showing provenience of 14C and OSL dates (OSL italicized).