



New Hampshire Archeological Society

2017 Spring Meeting
Saturday, April 29, 2017

American-Canadian Genealogical Society
4 Elm Street, Manchester NH

9:00 am - Registration opens. Morning refreshments.

9:50 am - Welcome and opening remarks.

10:00 - 10:30 am - *Reexamining Vinette I Pottery: Were Early Pottery Forms Suitable for Stone Boiling?* Donna Thompson, graduate student in archaeology, University of Exeter, Exeter, UK.

Abstract: Many archaeological texts assume that direct fire cooking in pottery replaced cooking with heated stones in perishable containers as soon as earliest pottery forms began to appear. This experimental archaeological study of manufacture and use of early Vinette I pottery is attempting to prove that an intermediary step, stone boiling in pottery, may have occurred. Experimental replication of Vinette I pots used in the experiments are based on new analyses of the technological attributes of the Beaver Meadow Brook pot, one of the earliest Vinette I pots in the northeast.

10:30 - 11:00 am - *The Altica Project: Reframing the Formative Basin of Mexico.*

Speaker: Deborah L. Nichols, Dept. of Anthropology, Dartmouth College. Co-author: Wesley D. Stoner, University of Arkansas.

Abstract: The Altica Project, which began in 2014, is an important step in addressing the limited problem-oriented research at Formative sites in the Basin of Mexico for over two decades. Altica is the earliest-known settled village in the Teotihuacán Valley and one of the only first-farming village sites in the Basin of Mexico that has not been engulfed by the urban sprawl of Mexico City. Despite its small size and remote location, Altica was an important piece in Early and Middle Formative exchange networks as it played a role in the early trade of Otumba obsidian and imported other goods from distant places in Mesoamerica. In this presentation, I frame the research project and outline major goals. Survey and excavation results are introduced.

11:00 - 11:15 am - Break.

11:15 - 11:45 am - *Sight Lines and Site Types: Paleoindian Landscape Use.*

Richard Boisvert, State Archaeologist, NHDHR.

Abstract: Research in New Hampshire's North Country over the past two decades has developed a substantial database of Paleoindian sites. Assessment of the site contents in context with the site locations on the landscape suggests a sophisticated settlement pattern centered on a caribou hunting economy.

11:45 am - 1:15 pm - Lunch on your own.

1:15 - 1:45 pm - *Late Pleistocene and Holocene Environmental Conditions in the Upper Valley of New Hampshire and Vermont Based on Lake and Bog Sediments.*

Speaker: Meredith Kelly, Department of Earth Sciences, Dartmouth College, Hanover, NH.

Co-authors: Justin S. Stroup, Department of Earth Sciences, Dartmouth College, Hanover, NH.

Matthew F. Bigl, Cold Regions Research and Engineering Laboratory, Hanover, NH.

Laura C. Reynolds, Department of Earth Science, University of California Santa Barbara, Santa Barbara, CA.

Andrew Smith, ExxonMobil, Houston, TX.

Abstract: The Upper Valley of New Hampshire and Vermont experienced significant environmental changes during late Pleistocene and Holocene time including the deglaciation of the Laurentide Ice Sheet, the formation and drainage of Glacial Lake Hitchcock, and recent land use changes. Climate changes also influenced Upper Valley environments during this time. Sediments in local lakes and bogs register environmental and climate conditions and provide valuable information for assessing surficial processes in the Upper Valley since deglaciation. Here we present sediment records from Occom Pond and Trescott bog in Hanover, NH, Lily Pond in Norwich, VT, and Post and Pout Ponds in Lyme, NH and describe environmental conditions registered in these records. In particular we determine the timing of deglaciation, the timing and style of Glacial Lake Hitchcock drainage, and Holocene climate conditions.

1:45 - 2:00 pm - Break.

2:00 - 2:30 pm - *High-Frequency Ground Penetrating Radar for Real-Time “Digital Bisection” of Archaeological Features.*

Speaker: Peter A. Leach, Geophysical Survey Systems, Inc.; Dept. of Anthropology, University of Connecticut.

Co-author: Richard Boisvert. State Archaeologist, NHDHR.

Abstract: Ground-penetrating radar is an efficient means for non-invasive archaeological mapping. Archaeologists generally use low frequency antennas (200MHz—900MHz) across expansive project areas. Delineation of features is common, but resolving detailed internal characteristics is not. During excavation, interpretation of features is often complicated by their variable size and nature and similarities to naturally occurring disturbances. Traditional field methods often require manual (and destructive) bisection to distinguish natural from cultural origins. We therefore have been experimenting with high-frequency GPR data (2.0GHz—2.6GHz) across newly-exposed features. Our goal is to develop a means of “digital bisection” with GPR that will allow field workers to remotely characterize features prior to manual bisection and complete excavation. The benefits of a streamlined digital bisection method include: 1) the ability to differentiate between natural and cultural features and provide enhanced mission planning for feature investigation; 2) collection of a gridded GPR dataset that produces a digital archive of a feature, effectively ‘preserving’ it digitally. In this presentation we discuss recent high-frequency GPR experiments at multiple sites and across numerous types of features. We are beginning to refine the method, and are working to fine-tune real-time interpretations, identify ideal GPR frequencies, and establish best practices for grid spacing and data density.