EXARC JOURNAL 2012/1
34 Articles | Open Access

Unreviewed Mixed Matters Article:

Conference Review: Report on the 1st Annual REARC Conference

Persistent Identifier: https://exarc.net/ark:/88735/10034

EXARC Journal Issue 2012/1 | **Publication Date:** 2012-01-15

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Mark Butler organized the First Annual REARC Conference, which was held on October 16-17, 2010 at the Schiele Museum in Gastonia, North Carolina.
The conference was a great success. Dr. Ann Tippet, Schiele Museum Director, and Steve Watts, Director of Southeast Native American Studies (SENAS), welcomed an international group of forty-five attendees.

> Through a concentrated outreach effort by the REARC Board of Directors and other organizations, the annual conferences will spearhead support in reconstruction and experimental archaeology research for beginners and experts alike.

New bonds were created, former connections were reaffirmed, and to keep the positive momentum going, a time and place was agreed upon for the Second RE-ARC Conference; October 14-15, 2011 at the Schiele Museum. Annual REARC conferences will promote interest in reconstructive and experimental archaeology and continue an open exchange of information between all related groups including independent researchers, academic institutions, open air museums, and national and international organizations.

The attendees came from a wide range of backgrounds. There were professional and avocational archaeologists, primitive technologists, university professors and their students, K-12 grade teachers, and cultural resource management (CRM) personnel. Also two organizations that focus on experimental archaeology were represented: Society of Primitive Technology (SPT) and EXARC, the international organization of Archaeological Open-Air Museums.

During the conference the attendees shared information about their recent research, discussed how to advocate and aid in the conservation and development of related data, and the importance of shared information among organizations. There were discussions about ways to encourage high standards and support for the scientific application of reconstructive and experimental archaeological research. In the evenings other issues of mutual concern were informally discussed by the light of a full North Carolina moon around a campfire at the SENAS center.

There were two components to the conference: twelve formal papers presented in the museum auditorium and several interactive sessions. During the formal component, the papers covered topics in experimental archaeology, reconstructive archaeology, archaeometry, subsistence or foodways, and information technology.

Dave Wescott gave the keynote address: *A Personal Journey: To Resolve Theory and Practice*. He began his wide-ranging presentation with the books and people who influenced him (Bordes, Coles, Crabtree, Callahan) and the influence of Larry Olsen's School. With Olsen he mastered skills and went on to develop the Boulder Outdoor Survival School. With a great crew and philosophy, combined with unique teaching methods, he created the best school of its kind to connect others to Stone Age skills. To place Stone Age skills in context, Wescott quoted Steve Watts:

- The learning and practice of aboriginal skills can help us all get in touch with our own roots – no matter what our particular heritage may be (American Indian, European,

African, Asia, etc.).

- Here in North America we look to the Indian peoples and the ancestors of these people to teach us the skills that are 'native' to this place.
- Yet, if we go back far enough into our own pasts, we discover that we are all aboriginal at some time in some place.
- The 'Stone Age' is the great common denominator of humanness. 'Primitive' ('first') skills are our shared inheritance.

(Steve Watts, *Practicing Primitive: A Handbook of Aboriginal Skills*, 2004:xi, Gibbs Smith Publisher, Salt Lake City, Utah.) After a discussion of Callahan' three levels of experimental work (play, experiential, and experimental), Wescott presented his own theory about the relationship of skill levels in Stone Age technology. The important point is intent and this determines the model and the methods are modeled in training. For example, in experimental archaeology the intent is documentation, the method is note taking, observation, and testing. The training is in the process and the experience is influenced by process. In primitive technology the intent is to teach or learn, the method involves experience, repetition, and mastery. The training is mastery by experience and teaching others. In developmental technology the intent is invention based on tradition, the method is thinking out of the box, and training comes from learning the principles and expanding upon them. Wescott believes the goals for primitive and reconstructive technologists should be: refine the theory, set standards, share resources, and silence the critics.

In his concluding remarks, Wescott raised concerns about the continued viability of SPT, where he has been editor of the Bulletin of Primitive Technology for over twenty years. Would the survival of SPT be threatened if another organization such as RE-ARC solicited memberships among the same group of technologists and experimental archaeologists? Was the concept of a new RE-ARC Journal with a Peer Review Board premature at this time since the Bulletin, with a 20 year history, has trouble eliciting submissions for some issues? These and other issues raised during the formal presentations were discussed briefly at the end of each speaker's talk and later at length during the informal sessions.

Jack Cresson described an experiment to monitor movement, or bioturbation, of artifacts in his paper, *Environmental Variables and Surface Displacement and Deposition of Lithic Artifacts*. His astonishing results documented the movement of large rocks as well as changes in lithic patina and edgeware over a period of only one year. He concluded that bioturbation can be due to many forces such as animals or weather and should be taken into consideration during archaeological excavations.

The bottom line is that most archaeological surfaces no matter when they were formed contain inherent error (unless immediately sealed under rock, water or some other capping

agency) as to where we as archaeologists see, think and interpret the position of artifacts. From beginning to end these surfaces are not static, but constantly active, driven by the actions of gravity, weather and other natural phenomena. In this study, some of the test artifacts moved up to seven feet across the study universe and subsided 3+"into the subsoils in the18 months during the test observations. Cresson took a quote from American archaeologist, Joffrey Coe, who often liked to say about archaeological contexts, " things are not what they seem", which he modified into "things move, things are not what they seem".

The next speaker, Roeland Paardekooper, is Director of EXARC. This international organization of eighty Archaeological Open-Air Museums and Experimental Archaeology seeks to establish high standards of scientific research and public presentation and to facilitate international exchange of knowledge, human resources, and publications. Paardekooper travelled from the Netherlands to discuss ways of cooperation between EXARC and North American institutions and individual "archaeotechnicians".

From the European point of view, Paardekooper explained, experimental archaeology consists of a wide range of public activities and scientific experiments mostly conducted in government supported Archaeological Open-Air Museums. In these popular museums throughout Europe, where many are EXARC members, the main focus is on building life-size reconstructions, experimental programs for kids, demonstrations for the public, and "back-to-the-old-days" programs where a visitor may occasionally try out a technique. These events create an atmosphere of nationalistic feelings and an appreciation for the ancient heritage of each country.

In his talk, *Performance in experimental archaeology, any possibility for unambiguous statement?*, Paardekooper answered the question by quoting Kelterborn and Lammers who identified the scientific processes to achieve unambiguous statements in experimental work. Scientific experiments are based on analysis of original artifacts, conducted according to academic laws, and are often carried out in the open-air museums. It is possible to make unambiguous statements when the emphasis is on the scientific approach. Analysis of archaeological data, long term monitoring of reconstructions, and the application of the results of multidisciplinary research have bridged the gap between archaeologists and other people.

Cooperation is an important key to success in experimental work for the beginner or an experienced archaeotechnician. This can be achieved through a strong infrastructure composed of international organizations and journals, websites such as the on-line experimental bibliography with over 9,000 titles (www.exarc.net/bibliography), and even the social network Facebook where 1,500 people have registered their interest in experimental archaeology.

Mark Butler recounted his experiences with a reconstructive archaeology project in a well illustrated paper titled *The Cherokee House Project: 1992-1994*. Based on data from an archaeological report about a winter and a summer house at the Warren Wilson site, Butler first made a drawing of the winter house and the built a 1": 1'scale model. These preliminary steps helped to investigate potential problems that might occur during the full reconstruction and aided in calculations of resource quantities. For the full scale reconstruction of the winter house on the grounds of the interpretive center of the Cherokee Museum, his crew built walls with woven wattles, placed central roof support posts, and lashed together rafter poles to support a bark roof. Once the roof was raised mud/clay was daubed to cover the interior and exterior wattles and a clay hearth was installed to create a cozy atmosphere within the winter house. The second phase of the project was to reconstruct an open sided summer house adjacent to the winter house. Butler documented his construction processes, recorded adjustments he made to the small scale model as work progressed, and detailed the maintenance that was necessary to protect both houses.

Since Ötzi the Iceman was uncovered in 1991, his bodily and material remains continue to challenge many scholars including experimental archaeologists. In *Frozen in Time: The Iceman Quiver*, Guy Neal described how he applied his skills as a bow hunter to an experimental investigation of Ötzi's quiver. Unfortunately the only Neolithic quiver in existence in the world, survived into the modern era without any direct evidence of how it was originally carried.

When Neal constructed a quiver based on the archaeological example he concluded that the only practical way to wear the quiver was to be attached to the hunter's left shoulder with the quiver running down the side of his body in the front. He added a "belt-like" strap to hold the quiver flat, which went from the back of the quiver, under the right shoulder and attached through a loop to the front top of the quiver. This attachment was a simple pull and loop knot that was infinitely adjustable. Among the many advantages the author identified during his hunting sessions with the experimental quiver were: the ease of drawing an arrow, the protection of vital organs, and the lack of difficulty in removing the quiver at the end of the day.

In their paper, *Identifying Grog in Archaeological Pottery*, Joseph Herbert and Michael Smith described the results of the first stage in a series of experiments to formulate standards regarding inclusions in North American prehistoric pottery, with a focus on the North Atlantic Coastal Plain. Since crushed or ground ceramic material added to clay is a key feature for the classification of several archaeological types, it is critical that it be accurately described. This first stage of experiments was designed to provide baseline information characterizing the visual properties of grog, to allow comparison of experimentally produced and

archaeologically tempered pottery, and to resolve the ambiguity concerning the identification of grog. In fact there are few studies from the Eastern Woodlands that present explicit descriptions of grog or consider the ways in which naturally occurring argillaceous clots may be mistaken for grog.

Herbert and Smith discussed their analysis of ceramic briquettes tempered with grog made from clay accessed from several different sources, and the comparison of these briquettes to archaeological samples of Hanover series pottery from the Coastal Plain in North Carolina. Since clay clasts or argillaceous concretions have the potential to be misidentified as grog, two categories were distinguished by the authors. However they determined that only the most obvious examples of crushed sherd inclusions could be confidently distinguished.

Jane Eastman, in her paper *Reconstructing Early Cherokee Foodways*, discussed how she used experimental and archaeological pots to explore questions about procuring, processing and preparing food at an early Cherokee site. Eastman processed local clay to form small vessels and used them to cook a single type of food. The small vessels are sent for residue analysis and serve as a base for a comparative collection to interpret the results from analysis of archaeological sherds. Eastman described the sherds in terms of temper, interior surface finish, exterior surface finish, rim form, decoration, and orifice diameter. The most frequent orifice diameter was 21.5 cm, which indicates a good size cook pot. Based on the results of comparative residue analysis from the two groups of pottery, Eastman concluded there was differentiation of vessels for food types, which were dominated by hickory nuts and corn.

The title of Maria-Louise's paper was *Middle Range Theory: An approach for Experimental Work*. Using examples from studies in prehistoric Peruvian material culture she illustrated how the middle range theoretical approach, when constructed on a scientific foundation, can provide data for social and behavioral inferences.

The Effects of Drying on Antler Blank Reproduction Rates: Some Preliminary Conclusions was presented by Oberlin College students Katherine Lamp and Sunjana Supekar. Their research was conducted under the direction of their professor, Amy V. Margaris, who initiated the Osseous Materials Research and Education Project (OMREP) at Oberlin in 2007. The project has two primary goals. The first is to investigate the properties of diverse skeletal materials and their patterns of use as media for prehistoric and early historic tool manufacture.

The students described their study regarding how natural drying affects workability of Elk antler and how collaboration between individuals affects workability. They concluded that antler workability decreased significantly from start to end of experiment and, despite both training and working under the same conditions, they found that different working styles produced different cut rates.

The functions of ~2500 stone tools from >35 PaleoIndian through Historic Cherokee sites are determined through high-power, Keeley Method, in a study of microwear analysis by Larry Kimball, Appalachian State University, over the past 20 years. His paper, *The Functions of Stone Tools from Eastern North America*, described the methodology and conclusions of this long term project.

Through a comparison with microwear polishes from experimentally used tools, it is possible to discuss the following actions in specific terms: projection, butchery, hideworking (cleaning, dry hide, fresh hide), bone working, antler working, soft plant cutting, wood working, and soft stone cutting (mica and soapstone). The relationship between tool form and use is discussed for projectile points, arrowpoints, knives, end scrapers, side scrapers, drills, burins, gravers, bipolar tools (bipolar cores, bipolar flakes, and pièces esquillées), denticulates, retouched flakes, and utilized flakes. In addition, the recognition of microwear traces due to hafting enables a comprehension of how flaked stone tools were placed into handles of wood, bone or antler which are not usually preserved on archaeological sites in the region.

Generally, the results of this investigation reveal that functional data from microwear analysis can provide useful insights into site activities, the relationship between tool design and function, and highlights the prevalence of hafting stone tools in native lithic technologies.

Tom Manke, the naturalist -in-residence at the Hammond School, has observed first hand how today's students are immersed in technology. In his paper, *Into Wilder Places: Authentic Experiences in a Virtual Culture*, he pointed out the advantages of programs in primitive skills. Most importantly, such programs connect young and older people to the wilderness so they can move in the natural world as users of nature rather than observers.

In his paper, *Finish Your Plate! Rethinking Relative Utility Factors to Better Model Resource Potential in Prehistoric Diets*, Bill Schindler argued that previous attempts at calculating relative utility factors have been significantly influenced by modern western perceptions of food and diet. The subjective nature of this approach therefore limits the usefulness of models whose calculations rely upon such data. In its place, he proposes that the construction of an "optimal utility factor", to account for all edible and nutritional components of a resource and provide a more accurate number that can be factored into optimal foraging model calculations.

To understand the value of the white tail deer in the prehistoric diet, Schindler and colleagues developed an experiment to obtain accurate percentages of all edible and non-edible portions of a white tailed deer. When a 37 kg deer was butchered the results broke down as follows: 30% organs, 53% meat, fat and connective tissue, 14% bone, marrow, and grease,

leaving 3% unaccounted for which he believes was primarily blood lost during transport to the prepared butchering location.

According to Schindler's calculations the organs and their contents, blood, meat, fat, connective tissue, bone marrow and grease were all edible and nutritious leaving only the hair and large intestines. This left only a total weight of 1.4 kg, or 3.8% of the total weight of the deer that does not provide safely consumed nutrition. Based on these data, he proposed that an optimal utility index be used in lieu of subjectively defining the utility of a resource. The optimal utility index (OUI) would include all parts of the animal that provide nutrition to humans with the exception of hair and intestines, the factor is 96%.

Interactive sessions at the RE-ARC conference included two digital photo sessions presented by professional photographer Jamie Walker, *Gathering and Gardens: Natural Resources for the Native Walk* by Dr. Gail Wagner, demonstrations of the southeastern blow gun by Doug Myers, and a pottery firing by Joe Herbert.

A wide range of topics was covered during the informal discussions each evening. For example, how electronic distribution of the proceedings of each annual RE-ARC conference would foster communication and cooperation. The complex issue of publication in peer review journals was raised since this is fundamental to faculty promotions in American universities. Unfortunately there are few peer review journals that will accept articles about experimental research.

Through a concentrated outreach effort by the RE-ARC Board of Directors and other organizations, the annual conferences will spearhead support in reconstruction and experimental archaeology research for beginners and experts alike.

See you next year at the Schiele Museum.

Keywords conference
experimental archaeology
review

Country USA

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