



## 2002 FIELD WORK AT THE JAKE BLUFF AND CERTAIN SITES

*By Lee Bement*

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The 2002 Oklahoma Anthropological Society (OAS) spring dig and the University of Oklahoma Archaeology Field School started the summer at the Paleoin-dian-age Jake Bluff bison kill in northwest Oklahoma. Under the direction of Survey staff archeologists Lee Bement and Kent Buehler, the excavators spent a total of five weeks at Jake Bluff and then three weeks at the Late Archaic-age Certain site near Elk City. Goals for the summer included the exploration of the bedrock bench on the east side of the gully at Jake Bluff. We had hoped that this area would yield additional bison butchering areas similar to the pile of bones found in 2001 on the western bench. Unfortunately, the bench appears to have been scoured by sheet erosion, scattering the bison bone fragments, tools, and flakes.



*OAS members excavating at the Jake Bluff site in Harper County, Oklahoma.*

We also expanded excavation into the gully at Jake Bluff to determine

if the gully was the scene of the bison kill. The gully contained large amounts of bison bone in the lowest deposits. These bones appeared to be in two large concentrations, possibly the result of butchering practices after the kill. Additional flakes and hammerstones were found with these bones. It was not until the last day of planned excavation at Jake Bluff that we uncovered the first projectile point -- a Clovis point. This point was in a bone pile on the gully floor. A second Clovis point was found a few days later in the same bone pile.

Clovis points are generally associated with mammoth kills such as the one at Domebo in westcentral Oklahoma. The association of Clovis points with a bison kill site is unusual. However, when combined with the radiocarbon age of 10,750 years ago, this bison kill may represent a shift in Clovis hunting strategies following the extinction of mammoths.

Dr. Brian Carter, a soil scientist from OSU, and his students described the various profiles in the excavation trenches. He also provided instruction to the Field School students in soil formation and geomorphology.

The Field School moved to the Certain site in July to continue excavations at this important Late Archaic bison kill site. Excavations concentrated in Trench F where recent erosion has all but destroyed the bone beds in this arroyo. Also, we continued excavating in Trench C where at least five separate kill/processing episodes have been documented. A small salvage unit was opened in the Trench G area where Mother Nature is intent on eroding out another buried gully with bison kill remains. The erosion in this area is just now exposing the kill deposits. Our salvage excavation exposed and removed portions of an articulated half-skeleton (bison on the half shell!). Below this was a second layer of bison bone, suggesting the presence of at least two episodes of bison kill/butchery in the Trench G gully.

The Flying W Guest Ranch (owners of the Certain site)



*OU Field School students working at the Jake Bluff site, Harper County, Oklahoma.*

treated the Field School participants to a bison burger cook-out and mechanical bull ride. The bull ride inflicted new sore muscles to a crew of hardened excavators.

New to the instruction of the Field School this year was the use of GPS technology to locate sites. An Instructional Technology grant from the OU College of Arts and Sciences provided the funds to purchase five hand-held GPS units. The students learned to record locations and how to follow GPS coordinates to a destination. The ultimate test of the students' skill in applying the technology came at the end of the Jake Bluff excavation when the students had to follow a coordinate trail to various spots on the landscape to secure food and beverages for a cookout at the lake. Everyone arrived without incident.

We wish to thank the Oklahoma Anthropological Society, University of Oklahoma, National Geographic Society, Oklahoma Department of Wildlife Conservation, Oklahoma State University, Wes Lucas Family, and the Flying W Guest Ranch for supporting the excavations last summer. Without the help of these various entities, our understanding of Oklahoma prehistory would not advance.

## ADDITIONAL WORK AT THE HALE BUFFALO RUNNERS' CAMP

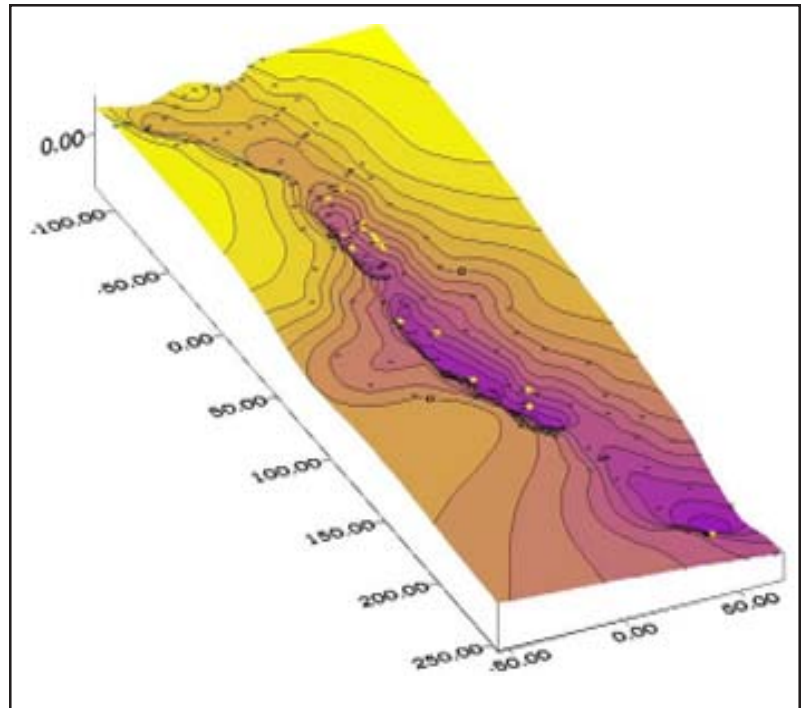
For three days in March 2002 staff archaeologists Lee Bement, Kent Buehler, and Marjy Duncan, OU students

Mike McKay, John Taylor-Montoya, and Travis Ellison, and Putnam City North High School senior Kathryn

Bradford conducted excavations at the 1870s age bison hunters' camp in Beaver County. This was a follow-up excavation to recover additional bison remains eroding from the edges of a gully cutting through the middle of the site and to probe areas where ground penetrating radar suggested the possible presence of buried features. Two previous excavations had identified the presence of two fire hearths and five bison bone concentrations. One of the hearths contained broken and melted glass, burned bison bone, and charcoal. The broken bottle was made of clear glass utilizing manganese as the clearing agent, a technique developed in 1875. The co-occurrence of bison bone suggests the site dates between 1875 and the early 1880s when bison were killed off in this area. Although Anglo bison hunters are presented as the inhabitants of this site, it is possible that Native Americans or military personnel are responsible. Only the discovery of a bullet, cartridge case, or metal arrow point will solve this dilemma. For now, it was important to retrieve the bison remains before they are destroyed by gully erosion, as we have very little bison bone that dates to this time period in American history.

Most of the bison bones were collected and shipped to fertilizer plants during the 1880s. The scant remains of these animals hampers research directed at comparing genetic variation in bison prior to, and then after, the 1880 kill off.

This excavation uncovered bison bones in three areas along the gully. The first contained bison foot bones, the second



*Topography of the Hale Buffalo Runners' Camp site*

were the neck vertebrae, and finally a number of bone fragments near a metal box cover. None of the ground penetrating radar indications held cultural remains other than a few bone fragments and a piece of charcoal. Monitoring of this site will continue and additional excavation will be planned as the need arises.

*Lee Bement*

## SURVEY HOSTS 60TH PLAINS ANTHROPOLOGICAL CONFERENCE

Last fall, October 23<sup>rd</sup> - 26<sup>th</sup>, 2002, the Oklahoma Archeological Survey hosted a major conference, the 60<sup>th</sup> Annual Plains Anthropological Conference, at Oklahoma City's Biltmore Hotel. Although Richard Drass, Marjy Duncan, and Kent Buehler chaired the conference, the entire Survey staff and many students contributed to its preparation and planning. Cosponsors included the Department of Anthropology, the Sam Noble Oklahoma Museum of Natural History, and the College of Arts and Sciences at the University of Oklahoma. Debbie Farris, the

Survey accountant, handled the financial paperwork and the OU Foundation provided fiscal services for the funds.

Approximately 360 people attended the conference. A variety of papers in four concurrent sessions were presented, including many by Survey staff and OU students. These included *The Manufacture and Distribution of Stone and Clay Pipes in the Turkey Creek and Washita River Phases, Central and Western Oklahoma* (Bob Brooks), *X-Ray*

Support of the *Bison antiquus* Fusion Sequence from the Cooper Bison Kills (Lee Bement and student Mike McKay), *Jake Bluff: A Clovis Bison Kill in Northwest Oklahoma* (Lee, Kent Buehler, and Brian Carter [OSU]), and *Two Sisters: Late Prehistoric Adaptations in the Short-Grass Plains* (Marjy Duncan and Sheila Bobalik Savage). Kent Buehler participated in a symposium on curation issues by presenting *A Five AM Phone Call Is Never Good News: Disaster Management and Temporary Collections*. In a symposium on the protohistoric period, Richard Drass discussed *The Wheeler Phase and Protohistoric Settlement/Subsistence at the Little Deer and Duncan Sites*.

In addition to papers, many of the Survey staff and students chaired sessions or symposia. On Saturday, Lee Bement conducted a tour of the Certain Bison Kill site in western Oklahoma which included lunch catered by the Flying W Ranch, the owners of this site. On Saturday, the Fall Meeting of the Oklahoma Anthropological Society was held at the Biltmore. Many speakers from the Plains Conference gave presentations to the OAS members. Kent Buehler, in

addition to his work co-chairing the conference, organized a band that provided music for the Plains Conference dance.

At the Conference banquet, the featured speaker, Dr. Doug Owsley of the Smithsonian Institution, gave an address on *Paleo-American Osteology*. His topic was timely because of recent court rulings on Kennewick Man, and was a very interesting presentation on the current thoughts on early human skeletal analyses and ethnic affinities.

At the banquet, Dr. Don Wyckoff, Curator of Archeology at the Sam Noble Oklahoma Museum of Natural History and former Survey Director, received the Plains Anthropological Society's 2002 Distinguished Service Award. This award recognized Don for his lifetime achievements in Plains area research, teaching, and professional service. It was a well-deserved honor for Don and significant recognition of his work in Oklahoma and the Southern Plains. The conference was very successful and the Survey received many compliments from participants.

*Richard Drass*

## EXPLORATION OF SITES IN THE WOODWARD AREA

Two prehistoric sites in the Woodward area received scrutiny during the Fall of 2002. The first, Patsy's Island, is a Woodland period site. The second, Smith No. 2, is a Plains Village age site.

The Patsy's Island site was recorded by Lee Bement and Debby Green as part of a Historic Preservation Grant project from the State Historic Preservation Office in 2001/2002. The site is a Woodland period camp overlooking the confluence of two spring-fed streams in the deep canyon lands north of Woodward. Subsequent to its discovery, Casey Carmichael led initial exploratory investigation of the site to substantiate its age and provide a basic description of the cultural deposits for use in his MA thesis. The site area is being eroded by two spring-fed streams. Two 1x1 m excavation units were placed at far ends of the site and excavated to sterile deposits. The excavations indicate the cultural deposits begin at a depth of nearly 70 cm below the surface and continue to a depth of over 1 meter below the surface. Charcoal from a level containing Scallorn arrow

points and cordmarked pottery yielded a radiocarbon date calibrated to AD 700 and confirms the Woodland period age of the site. Additional work at the site is needed to



*Profile of the pit from the Smith #2 site, Harper County, Oklahoma.*

determine if Patsy's Island is a single component site and to determine if any structures or features are preserved. Analysis of the cultural materials including stone, bone, and plant remains, should provide an impressive reconstruction of the Woodland period adaptation in this region of Oklahoma.

Smith No. 2 was brought to our attention by the landowner who attended the "Ask the Archeologist" program at the Plains Indians and Pioneers Museum in the spring of 2002. Artifacts including bison scapula hoes, bone awl, flakes, and pottery were exposed in a large pit feature eroding from a ranch road cut. The pit was nearly 1.5 meters in diameter and dug into clay to a depth of nearly 1.5 meters below the surface. A sample of the pit contents was removed for flotation at the Survey. The flotation revealed the pit was prob-

ably used for storage. Preliminary study of the flotation contents identified burned corn and sunflower seeds. A sample of burned corn yielded a radiocarbon age calibrated to a span between AD 1400 and AD 1450.

Continued investigation at this site will hopefully determine the likelihood of a house and additional pits nearby. These sites are just two of the many new discoveries that have the potential to provide important new information on the prehistoric inhabitation of Oklahoma. The discovery of the first resulted from the systematic investigation during a project designed to find and record new sites; the other resulted from the curiosity and interest of a landowner. The next important steps include the investigation, analysis, and reporting of the results to the people of Oklahoma.

*Lee Bement*

## THE FOSS RESERVOIR MAMMOTH

With funding from the Bureau of Reclamation, staff archeologist Lee Bement and graduate students Casey Carmichael and Stance Hurst aided students from Wichita State University in the documentation and removal of a mammoth tusk at Foss Reservoir. The tusk was eroding from a high bank at the edge of the lake. High water levels washed away the terrace deposits, exposing the tusk. Excavation revealed the tusk was approximately eight feet long and displayed the recurved shape typical of mammoths.

Soil samples were taken from below the tusk, around the tusk, and from a paleosol high in the terrace. Radiocarbon dates from these contexts indicate the terrace deposits began accumulating around 27,000 years ago. The tusk was deposited and buried sometime around 19,000 years ago. The terrace continued to build until the river moved away and cut a deeper channel. Soil developed on the terrace surface around 3000 years ago. After that time, little sedimentation occurred.

Also contained in the terrace deposits midway between the tusk layer and the 3000 year old paleosol was a portion of a bison skeleton, represented by neck vertebra. Other bison remains reported from the beach area included a large bone flake. This bone flake may indicate human association with the bison remains. Monitoring of this area of the terrace is warranted to see if additional materials erode from the bison locality.

Although no cultural material accompanied the tusk and no additional mammoth bones were found with it, this investigation provides valuable information on the age of terrace development in this area. The radiocarbon dates confirm suspected ages of these deposits and provide a context for other apparent Late Pleistocene bones reported from the Foss Reservoir.

The tusk will be prepared for display at the Foss Reservoir headquarters. It, and a report on its importance, should be available late in 2003.

*Lee Bement*

## ASK THE ARCHEOLOGIST

Staff Archaeologist Lee Bement held "Ask the Archaeologist" days at the Plains Indians and Pioneers

Museum in Woodward on March 29, 2003 and March 16, 2002. Dr. Bement was available to answer questions about

Indian artifacts, fossils, bones, and neat looking rocks. Artifacts from as far away as Tennessee found their way onto the table and over 50 people participated. In keeping with the general theme, Lee then presented the results of a survey project he and graduate student Debby Green are working on just north of Woodward. Artifacts including projectile points, pottery, bone, rifle cartridges, and other

stuff collected during the course of this project were discussed in show-and-tell fashion. This program was a lot of fun and not only aided in the identification of finds for area residents, but also provided Lee with the opportunity to meet more of the good folks of northwestern Oklahoma.

*Lee Bement*

## GREAT PLAINS MIGRATIONS

Staff archeologist Lee Bement attended the 26th Annual Interdisciplinary Great Plains Symposium held in Lincoln, Nebraska on March 30, 2003. The topic was Plains Migrations and included topics covering plant, animal, and human migrations onto the Great Plains of North America. Lee presented a paper on the possible correlation of Paleoindian and bison movements on the Southern Plains. This paper was based on his research on Folsom-age bison and bison hunters. As a result of this conference, Lee will have an article entitled "Constructing the Cooper Model of Folsom Bison Kills on the Southern Plains", published in the Spring 2003 issue of *Great Plains Research*.

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