



## OKLAHOMA ARCHEOLOGY AT THE BEGINNING OF THE TWENTY-FIRST CENTURY

*by Robert L. Brooks*

### TABLE OF CONTENTS

#### Oklahoma Archeology at the Beginning of the Twenty-First Century

Research . . . . . 1

Management . . . . . 4

Education . . . . . 6

Technology . . . . . 7

In the last year of the old millennium (2000), the Oklahoma Archeological Survey celebrated its 30<sup>th</sup> anniversary, having been established by the state legislature in 1970. The Oklahoma Anthropological Society (OAS) observed its 50<sup>th</sup> anniversary on March 19, 2002. On April 5<sup>th</sup> and 6<sup>th</sup>, it held a “Golden Gala” at the new Sam Noble Oklahoma Museum of Natural History (SNOMNH) in Norman. SNOMNH, formerly

Stovall Museum of Natural History, is celebrating its 52<sup>nd</sup> year in a new facility after decades of being housed in makeshift quarters, such as old cavalry stables. In light of the years of dedicated research, management, and education in Oklahoma archeology by these organizations, I thought it would be informative to look back at our accomplishments in the areas of research, management, education, and technology over the past 25 - 30 years.

### Research

During the last quarter of the twentieth century, we made great strides in understanding the prehistory and early history of Oklahoma through a variety of research projects involving surveys, planned excavations, and salvage

operations. In many cases, what has been learned was a result of cooperative efforts of the Survey, OAS, and SNOMNH. One of the research areas that has been most productive is the peopling of the New World. Today,

this subject continues to be just as exciting and as full of challenges and controversy as it was some 75 years ago, when the first indisputable evidence of human activity associated with extinct Pleistocene animals was unearthed near Fol-



Figure 1. *Bison alleni* skull encased in plaster at the Burnham site in Woods County, Oklahoma.

som, New Mexico. This is very much the case here in Oklahoma where the discovery of the Clovis age Domebo mammoth kill and the 18,000-year old Cooperton mammoth sparked a statewide interest in paleoindians in the 1960s that continues today. Clovis period sites generally date around 11,000 years ago. In 1986, Don Wyckoff (then Director of the Survey), with assistance from the OAS, conducted excavations at the Burnham site in Woods County. At Burnham, the remains of *Bison alleni* and other Pleistocene fauna, some 75 pieces of chipped stone of uncontestable human manufacture, and a suite of radiocarbon dates with a central range of 28,000 to 32,000 years ago cannot be easily dismissed in any serious discussion of early arrivals in North America. Even without the presence of artifacts at this site, the multidisciplinary efforts at Burnham have established new insights into late Pleistocene environments on the Southern Plains. Were it not for the uncertainty of the context of deposits at Burnham and the 30,000 years ago dates, it could easily be regarded as the earliest evidence for people in the New World.

We also had the incredible good fortune to discover Oklahoma's second Clovis site in 2002. The Jake Bluff site in Harper County, an OAS Spring Dig/OU Field School under the direction of Leland Bement and Kent Buehler, yielded two *in situ* Clovis spearpoints. However, the significance of Jake Bluff transcended the finding of the Clovis material. The Clovis points at Jake Bluff were found in association with a *Bison antiquus* kill and processing locality. This marked the first occasion where Clovis has been identified with a multiple bison kill event. Jake Bluff also has radiocarbon dates in the 10,700 B.P. range, making it one of the latest identified Clovis sites.

For approximately 50 years, archeologists unsuccessfully searched throughout Oklahoma for Folsom period (about 10,500 years ago) kills or occupations. The absence of established sites was particularly vexing because surface finds of Folsom points had been documented throughout western portions of the state. Then, in a span of less than 10 years during the late 1980s - 1990s, two Folsom sites were identified in Harper County. One of these, the Cooper Bison Kill site, excavated by Survey archeologist Leland Bement

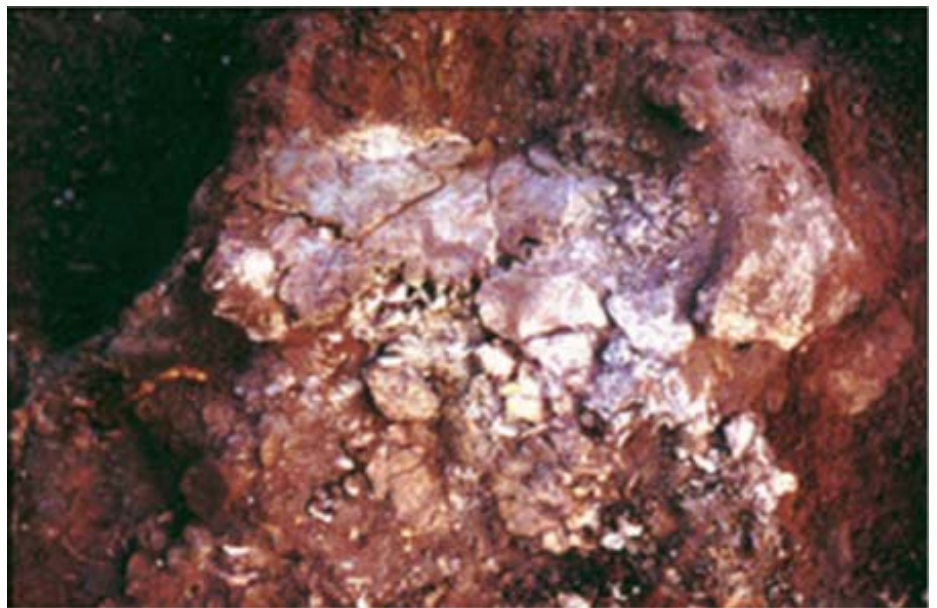


Figure 2. Painted bison skull at the Cooper site, Harper County, Oklahoma.

in the early 1990s, stands as one of the best preserved and documented kill sites on the Southern Plains. Incredibly, it also holds the earliest evidence for the use of ceremonial artwork in the western hemisphere, a painted bison skull placed at the base of the gully. Both Folsom sites (Cooper and Waugh) figure signifi-



Figure 3. Middle Archaic period Calf Creek point from north-central Oklahoma.

cantly in the revision of our knowledge of the technological and hunting behaviors which were part of Folsom culture.

Until nearly the end of the 20<sup>th</sup> century, our knowledge about the groups of people that lived in Oklahoma some 5000 to 6000 years ago remained problematic at best. This time is referred to as the “Altithermal”, a hot, dry interval for the Southern Plains. Cultural



Figure 4. Bison bone at Certain bison kill and processing site in Beckham County, Oklahoma.

traditions were either undocumented for entire regions of the state or mixed into a potpourri of poorly defined complexes. Since 1990 though, great strides have been made in the resolution of these complexes into distinct cultural units, one of the best studied and described being “Calf Creek”. Calf Creek sites have been found and studied throughout Oklahoma, from Lake Altus in the southwest to Newkirk in north-central Oklahoma’s Kay County, and from the panhandle to McCurtain County in the southeast. Working in cooperation with the OAS during the 1990s, Survey archeologists learned (and continue to learn) a great deal about how Calf Creek people lived in the harsh conditions of the time. They sought landforms which provided great vistas on which to work and live. The Calf Creek flintknappers used numerous, high-quality cherts in the manufacture of their large basally notched spearpoints and frequently cached the material for future use (Figure 3).

The transition between a more nomadic hunting and gathering way-of-life and one focused around logistical collecting of plants and animals, eventually leading to agriculture has been a critical subject of study for many years. However, it was not until the 1990s that progress was made in exploring these topics in Oklahoma. In western Oklahoma, long term study of the ca. 2000 year old Certain bison kill by Survey archaeologists Lee Bement and Kent Buehler have broadened our understanding of environmental

conditions during the Woodland period as well as giving us new insights into bison hunting practices from one of the largest kill sites for this time period on the Southern Plains. Survey archaeologist Richard Drass, meanwhile, has been looking at agricultural origins and how agriculture was tied to development of settled village life. As research continues in these areas, it is clear that corn and bison are integrally linked in the economic well-being of late prehistoric Southern Plains natives.

Although historically the Village Farmers period (1100 - 500 years ago) has been our best understood cultural unit, we have learned a great deal more about this period during the past 10 - 15 years. Through systematic study of known Plains Village age sites and by salvage work discoveries, our knowledge of village layouts, the design of dwellings, and subsistence practices has increased substantially. This new knowledge was summarized in Richard Drass' dissertation on Plains Villagers in west-central and south-central Oklahoma, for areas near the Washita River. Drass redefined the spatial and temporal definition of what is now known as the Red Bed Plains variant. Farther west, in the Oklahoma panhandle, new groups of village farmers are being documented, including groups who lived in pithouse structures not unlike those of the southwest. For eastern Oklahoma, James Brown of Northwestern University completed a thorough and provocative restudy of the Spiro Mounds site which was published in 1996 by the University of Michigan Museum of Anthropology. Brown has provided a wealth of new insights into the lives of the ceremonial and political leaders that

resided and were buried at Spiro. His studies of materials from this site began during the 1960s. Unfortunately, aside from Brown's study and work in the 1980s by Dan Rogers (a former OU student now at the Smithsonian Institution), few Oklahoma archeologists have turned their attention to the Arkansas River Caddoan area.

Before the 1980s, little research addressed the historic archeology of Oklahoma. There was some study of postremoval groups native to the southeastern United States, and investigation of military posts such as Fort Washita and Fort Towson. Because more information was needed to address managerial considerations and regulatory requirements, recent work has focused not only on postremoval Choctaws and Cherokees, but also on white settlement from the 1880s through the Dust Bowl era. This research, by Survey staff as well as agency and consulting archeologists, has brought about a balance in the archeological record that had been previously lacking. We can currently speak with some confidence of protohistoric/historic native village farmers as well as historic landrush settlers living in dugouts.

These gains in research addressed cultural-historical issues, but there also have been equally important strides in more thematic areas. There has also been corresponding research into diverse topics ranging from stone tool manufacture to prehistoric fish weirs. Thus, what has been learned recently of native people's subsistence and tool making behaviors has deepened our previous understanding of the cultural-historical perspective.

## *Management*

In the past 20 - 30 years, there has been a geometric increase in the quantity of information used in archeological resource management. For example, when the site files were turned over to the Survey by Stovall Museum of Natural History in 1970, examination of the files revealed that there were roughly 3400 recorded sites in 1960. Today, there are more than 17,850 prehistoric and historic resources

in the files representing cultural remains from paleoindian kill sites to historic brick plants. Although there was tremendous growth in the numbers of known sites during the decades of the 1970s and 1980s, the current growth rate is around 5% annually (Figure 5).

The increasing numbers reflect not only increased awareness of the archeological record, but also a more

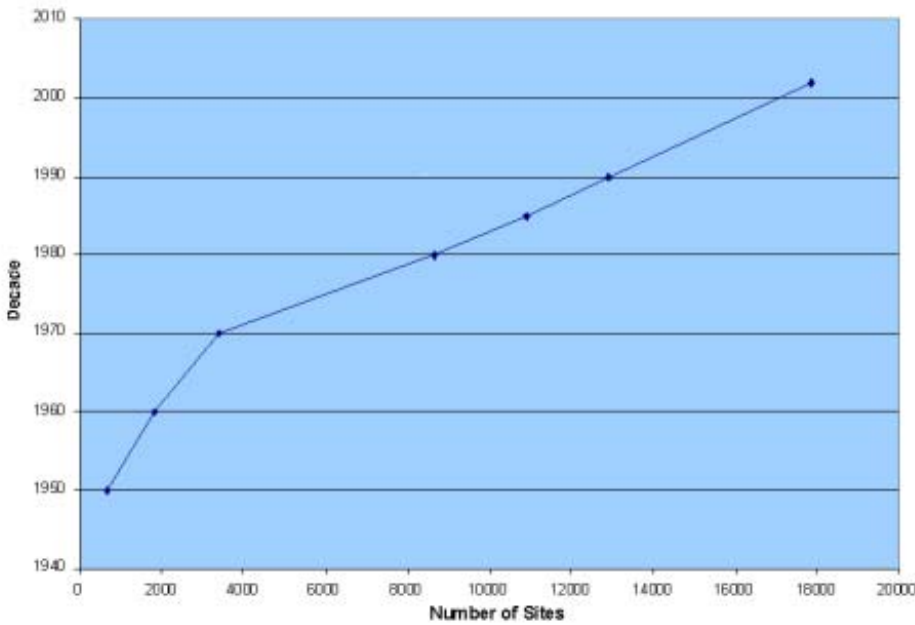


Figure 5. Increase in the number of known sites from 1940 to 2001.

diverse range of resources. For example, in the 1960s few of the recorded sites dated to historic times, compared to 30 - 40% today. While this is indicative of a more balanced managerial philosophy, it also reflects a time progression (sites dating to the land run are now a hundred years old). Beyond numbers, there is also increased precision in the location of these sites and what they hold. In the 1960s, most sites were plotted on county highway maps because there were few topographic maps available. Currently, 7.5 minute topographic maps are available for all of Oklahoma and all of the 17,850-plus sites are plotted on these. A more extensive, seven-page, site form also provides more detail than the one-page form from the 1960s that sometimes held no more than the site name, a sometimes imprecise location, and a general statement about cultural affiliation. Information concerning these resources is maintained in a computerized, searchable database of some 80 variables per site. Thus,

the site files have research applications as well. Over the past 15 - 20 years, there also has been a concerted effort to revisit and better document previously recorded sites.

The last 30 years also stand witness to more sustained and successful efforts to protect and preserve the archeological record, both in Oklahoma and nationwide. Passage of the National Historic Preservation Act in 1966 and the National Environmental Policy Act in 1969 gave archeologists and preservationists a much greater legal basis to search for and identify previously

unknown archeological sites on federally funded and licensed projects. This ensured that the information about the past that they held would not be irretrievably lost. The impact of this regulatory process has been profound. In 1982, the Survey's Community Assistance Program evaluated some 450 federally assisted or regulated projects for their potential disturbance of archeological resources. By 1990, this number had grown to 1220 and, by 2000, to almost 7200 (Figure 6). Today, some 25 state and federal



Figure 6. Increase in number of regulatory reviews from 1980 to 2001.

agencies work to ensure that their actions do not destroy important aspects of Oklahoma's cultural heritage. The dramatic increase in recorded sites noted above is largely due to these requirements. With passage of Oklahoma's Burial Disturbance Law in 1989, a stand was also taken against vandalism and looting of Native American's burial grounds, while other provisions in the law provided for consultation with tribes on appropriate treatment of remains inadvertently unearthed.

There has been a corresponding increase in the number of reports submitted to the State Archeologist for review as a consequence of this mandated archeological work. In earlier periods of Oklahoma archeology, most of the published reports dealt with lowland sites tested or excavated because of imminent destruction by lake construction (the Oklahoma River Basin Survey series) or were the product of

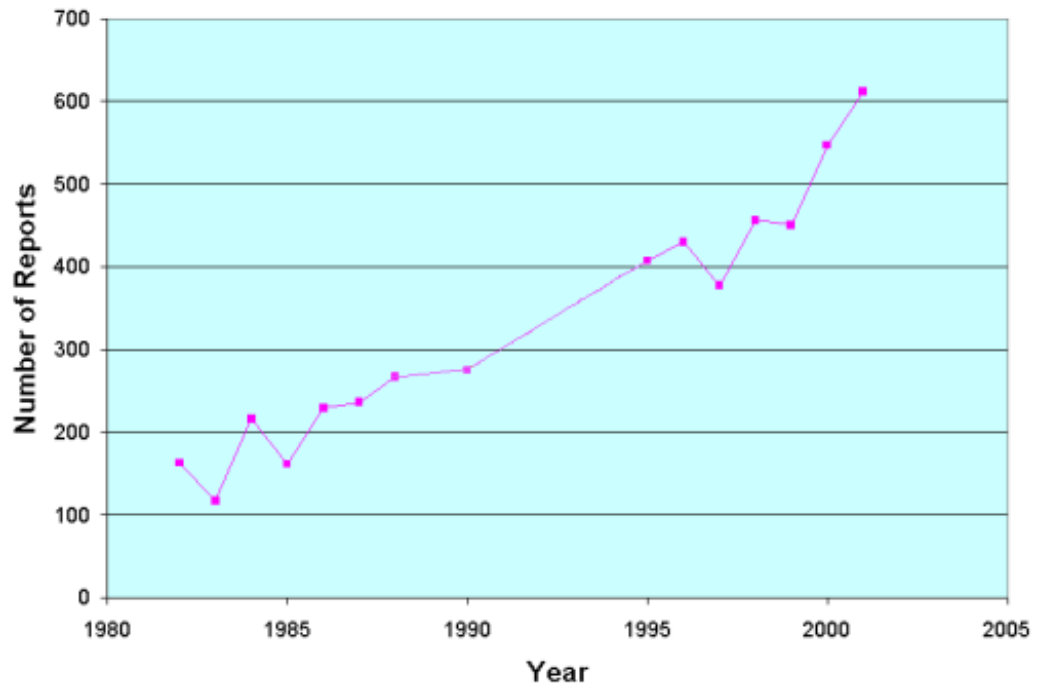


Figure 7. Increase in number of reports reviewed from 1980 to 2001.

independent research from projects such as field schools and research grants. However, recent reports cover more diverse landscapes and actions such as highway and water line construction. In 1982, about 150 reports were examined; by 1992, some 275 reports, and by 2001, more than 600 reports about surveys, testing programs, and data recovery excavation were reviewed (Figure 7).

## Education

Public outreach is a relatively new formalized aspect of archeology. During the 1950s through 1970s in many states, professional archeologists did not realize what a valuable resource the assistance of avocational archeologists could be. Consequently, few educational efforts were made. In Oklahoma, however, Dr. Robert E. Bell made an early effort to promote archeology to the general public through the formation of the Oklahoma Anthropological Society to replace an

earlier state archeological society disbanded at the beginning of World War II. In the early 1980s, the OAS in conjunction with professional archeologists established a certification program for more formalized training for avocational archeologists. Numerous OAS members have taken the seminars offered through this program, and a number of people have completed certificates at various levels and categories.

In the early 1970s, the Survey, in cooperation with the Stovall Museum, published a series of popular reports at the site specific level (e.g., Packard, Spiro, Roy Smith, and Domebo), as well as a general overview of the state's prehistory (*Oklahoma Prehistory*). Following this lead, in 1978 a slidetape program called *People Before Yesterday* was prepared by a group of individuals concerned with cultural heritage. Because of a lack of funding, this level of public outreach was not reached again until the mid-1990s. At this time, the Survey, in cooperation with the Oklahoma Museum of Natural History and a museum educator, put together an interactive program for school children called *Diaries in the Dirt*.

*Oklahoma Prehistory* was also updated and retitled *From Mounds to Mammoths*. Published by OU Press, this short overview of the state's prehistory is intended to serve as a complement to the high schools' Oklahoma history texts. In 1993, the Survey, the State Historic Preservation Office, and the OAS established a booth at the State Fair of Oklahoma. This extremely successful outreach effort lasted for almost 10 years and was only terminated because of escalating booth costs. Currently, our efforts are also being directed at the World Wide Web as this increasingly becomes an educational instrument for reaching everyone from school children to senior citizens.

## Technology

Many of the strides we have made in the areas of research, management, and education could not have occurred without the rapid technological breakthroughs that began in the 1980s with the advent of the computer chip. Computer technology now permits us to precisely determine the site location coordinates with a Global Positioning System, to accurately lay out site grids and excavation units with Total Mapping Stations and Laser Planes, and to document our work with video cameras and digital still cameras. Even determining the subsoil content (features and other disturbances) at sites has been altered. Computer-assisted technologies in the form of magnetometers and ground penetrating radar, as well as the mechanical hydraulic coring rig, allow us to map areas of underground soil disturbances which may be cultural features such as hearths, houses, pits, and bison bone beds. We can therefore develop cost effective excavation strategies and no longer need to rely on digging until we find test units empty of features and artifacts to ascertain where sites end. Analysis has progressed in a similar fashion.

There are digital calipers, digital microscopes, high resolution cameras, and a suite of techniques using mass spectrometry through which we can study artifacts and other remains of human activity. Although this equipment is expensive, it allows us to obtain information about sites in a shorter time, and sometimes with fewer workers.



Figure 8. Use of a magnetometer to locate unmarked graves in a historic cemetery.

Our reports and other publications are now produced with software and hardware that equal those of publishing companies only a few years ago. Although there is a learning curve as we use new software, these programs allow the archeologists to produce text and illustrations cost efficiently. Research results shown at professional meetings are increasingly computerized by using "Powerpoint" presentations rather than slides or overhead projectors. In other disciplines, the meetings have taken on a virtual flavor with most presentations being in electronic form at a web address. Even administratively, our work has changed markedly, with university department chairs/directors, state agency archeologists, and principal investigators of research grants guided along the appropriate paths by email, fax machines, web forms, and interactive budgets.

Undoubtedly, Oklahoma archeology has made great strides in recent years. However, we should not forget that it was the work accomplished by archeologists and avocationalists from the first three quarters of the century that established the foundation for our current understanding and the directions of our future efforts.

For additional information, we suggest that you consult the following sources:

**Web sites:**

*Oklahoma Archeological Survey* - [www.ou.edu/cas/archsur](http://www.ou.edu/cas/archsur)

*Sam Noble Oklahoma Museum of Natural History* - [www.snomnh.ou.edu](http://www.snomnh.ou.edu)

*Oklahoma Anthropological Society* - [www.ou.edu/cas/archsur/oas](http://www.ou.edu/cas/archsur/oas)

**Books:**

*From Mounds to Mammoths: A Field Guide to Oklahoma Prehistory*, by Claudette Marie Gilbert and Robert L. Brooks, published by the University of Oklahoma Press. [www.oupres.com](http://www.oupres.com) - click on search and search for title.

Newsletter editors: Lois Wilson Albert and Marjy Duncan  
ISSN 1522-0346

*The Oklahoma Archeological Survey NEWSLETTER is issued quarterly by the Oklahoma Archeological Survey, The University of Oklahoma, 111 E. Chesapeake, Norman OK 73019-5111. Two thousand copies of the NEWSLETTER were printed by xxxxxxxxxxxxxxxx at a cost of \$##### to the taxpayers of Oklahoma. Copies have been deposited with the Publications Clearinghouse of the Oklahoma Department of Libraries.*



The University of Oklahoma is an Equal Opportunity Employer



Oklahoma Archeological Survey  
The University of Oklahoma  
111 E Chesapeake  
Norman OK 73019-5111  
127-7427

Non-Profit Postage  
U.S. Postage  
PAID  
University of Oklahoma

**Address correction requested**

**PRESERVING OKLAHOMA'S  
PREHISTORY FOR THE FUTURE**