

Twenty-Sixth Annual  
FLINT HILLS ARCHAEOLOGICAL  
CONFERENCE

March 26-27, 2004

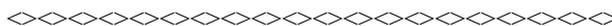
PROGRAM AND ABSTRACTS

Hosted by the St. Joseph Museum, St. Joseph, Missouri

in cooperation with the Pony Express National Memorial and  
the St. Joseph Archaeological Society

## Cover Photography—A King Hill Excavation

Scenes from a University of Nebraska excavation at the King Hill site, 23BN1, in southern St. Joseph, Missouri.  
Photography by Jim D. Feagins (summer of 1972). Note the museum display on the King Hill site at the Friday reception.



### King Hill, an Oneota Village in St. Joseph, Missouri

The King Hill archaeological site is located on a high, loess-covered bluff overlooking the Missouri River valley in the southern part of the city of St. Joseph, Missouri. The King Hill village location contains cultural materials associated with the Fanning Phase (Henning 1998:391-393) a protohistoric/early historic Oneota occupation. This Oneota site is thought to probably represent an early Kansa (Kaw) Indian site (Henning 1970:146, 1993:258; Wedel 1959:17; Ruppert 1974:2). Based on the artifacts recovered, it is felt to have been occupied around A.D. 1700 or very shortly thereafter.

The Oneota first appeared in the midwest about a thousand years ago. They inhabited an area that stretched from central Missouri to northern Wisconsin and from northeastern Kansas and eastern Nebraska to southwestern Michigan. They are thought to have developed into a number of historic tribes such as the Kansa, Ioway, Missouri, Omaha, Winnebago, Oto, and others, possibly the Osage.

At King Hill, the Oneota women made globular-shaped, shell-tempered pottery, usually with high flaring-rims. Often their jars contained strap or loop handles. Decorations often occurred on the lips, handles, and shoulders of their vessels, especially a variety of linear and punctuate designs (Raish 1979). Burned and crushed shell was used as temper to reduce the cracking that resulted from excessive shrinkage of the clay as newly made vessels were dried and fired. From the village, a variety of chipped-stone tools and manufacturing debitage have been recovered. Primarily made from what appears to be local, Plattsmouth cherts, these chipped-stone tools include small, unnotched, triangular-shaped arrowheads; elongated, blunt-end scrapers; beveled and unbeveled, ovate-shaped bifaces (knives); drills/perforators; and expediency flake-tools. A gun flint spall of European manufacture was also recovered from the site (Feagins 1994:6-7, 9). Among other types of artifacts are found grinding stones, elbow pipes, a catlinite tablet, bone awls, and armlets or bowguards. A variety of animal bones and charred, wild and domesticated plant remains have been recovered from the site (Ruppert 1974; Cutler and Blake 1968; Blake and Cutler 1982).

In addition to the gun spall, other Euroamerican trade items from the site include many small beads of various colors (blue, white, black, and green), larger blue glass beads, brass tubes or beads, tinklers, coils, a bail attachment from a brass kettle, a brass bell, an iron knife blade, and scraps of iron, brass or copper (Mike Fisher, personal communication; Anfinson 1975; Shippee 1967:9).

Over many years, most of the site was adversely impacted by city and school district owned facilities and residential development. A small portion of the site was jointly excavated in 1966, by the University of Missouri-Columbia, the St. Joseph Museum, and the St. Joseph Archaeological Society. The latter two organizations also worked there in 1967 and 1968. The last excavation conducted at the site was in 1972, by the University of Nebraska. Culturally rich middens, as deep as 3.7 meters (12 ft.), were discovered along the edge of the bluff top. The King Hill site was placed on the National Register of Historic Places in 1969. The same year that, due to the efforts of the St. Joseph Museum, a small portion of the site was purchased and donated to the St. Joseph Park System (Reynolds 1969; Fisher, personal comm.).

### References Cited

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1979 King Hill (23BN1), Fanning (14DP1) and Leary (25RH1): A Study of Oneota Ceramic Variability. Unpublished M.A. thesis, Dept. of Anthropology, University of Nebraska-Lincoln.
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(continued on inside back cover)

## 26<sup>th</sup> Annual

# FLINT HILLS ARCHAEOLOGICAL CONFERENCE

## PROGRAM—2004

### Friday Morning, March 26<sup>th</sup>—Symposium

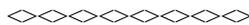
- 7:30 Registration—The Historic Christian Science Church (12<sup>th</sup> and Felix St.)
- 8:05 Opening of Conference and Announcements—Jim D. Feagins and Jackie A. Lewin, Co-Conference Chairs; St. Joseph Museum
- 8:15 Welcome—Alberto C. Meloni, Director, St. Joseph Museum
- 8:20 Introduction to **Symposium—“*Sourcing Cherts: Looking East from the Flint Hills*”**—Jim D. Feagins
- 8:30 Ray, Jack H. (Southwest Missouri State University, Springfield) **Workshop on Chert Resources from the Western Ozarks and Adjacent Eastern Border of the Central Plains**
- 9:20 Wetherill, Bert (Overland Park, Kansas) **Vertical and Areal Variability of Chert in the Winterset Limestone Member**
- 9:40 **BREAK**
- 10:05 Wetherill, Bert (Overland Park, Kansas) **Mid-Continental Pennsylvanian Cyclothems: Toward a Better Understanding of Chert Variability**
- 10:25 West, Ronald R. (Kansas State University, Manhattan) **Artifacts, Chert, Fossils, Provenance**
- 10:45 Anderson, Mark L. and Dan G. Horgen (both from University of Iowa’s-Office of the State Archaeologist, Iowa City) **The Lithic Raw Material Assemblage at the University of Iowa’s—Office of the State Archaeologist: An Improved Framework for Lithic Analysis**
- 11:05 Ray, Jack H. (Southwest Missouri State University, Springfield) **Late Prehistoric Quarries Along the Western Ozarks Border**
- 11:25 McGregor, Douglas S. (Kansas State University, Manhattan) **Neutron Activation Analysis at Kansas State University, A Powerful Tool for Trace Element Characterization**
- 11:35 Symposium Summary and Announcements—Jim D. Feagins and Jackie A. Lewin

11:40 View Chert Collections with Symposium Participants and **LUNCH** on your own

## Friday Afternoon, March 26<sup>th</sup>—General Session

- 1:25 Bill McMurray—Mini-Concert with the Historic Christian Science Church (World Class) Organ
- 1:45 Smith, Holly C. (University of Oklahoma, Norman) **The Cuesta Phase: A Case Study in Changing Mobility Strategies**
- 2:05 Wetherill, Bert (Overland Park, Kansas) **Mortuary Practices of the Middle Woodland Kansas City Hopewell Peoples**
- 2:25 Latham, Mark A. (Burns & McDonnell, Kansas City) **A Pit Surprise: Remnants of an Upland Kansas City Hopewell Site (14LV120)**
- 2:45 **BREAK\***
- 3:15 Feagins, Jim D. (Belton, Missouri) **Once Again Near the Fort that Clark Built: Recent Archeological Investigations at Ft Osage National Historic Landmark**
- 3:35 Dougherty, Jim (Wichita, Kansas) **Foss Reservoir Mammoth Tusk**
- 3:55 Scott, Frederick W. (Maryville, Missouri) **Lithic Resources in Nodaway County, Missouri: Glacial Till and Pennsylvanian Cherts**
- 4:15 Estes, B. Mark, Lauren W. Ritterbush, and Kirsten Nicolaysen (all from Kansas State University, Manhattan) **Vesicular Artifacts: Volcanic or Metasedimentary in Origin?**
- 4:35 Announcements

\*Don't miss the poster presentation by Susan Houghton (Burns & McDonnell, Kansas City) **The Quest for the Glass Lid Liner**



## RECEPTION

5:00 to 7:00 **Friday Evening Reception at the St. Joseph Museum, Wyeth-Tootle Mansion, 11<sup>th</sup> and Charles Streets [Located at the top of the hill; across (on the west side of) the street and two blocks south from the Historic Christian Science Church]**

## Saturday Morning, March 27<sup>th</sup>—General Session and Tour

- 8:00 Registration—The Pony Express Museum (914 Penn St.)
- 8:30 Logan, Brad (Kansas State University, Manhattan) **The Hypothesis That Would Not Die! The Late Prehistoric Frontier in Northeast Kansas**

- 8:50 Hoard, Robert J. (Kansas State Historical Society, Topeka), Donna C. Roper (Kansas State University, Manhattan), Robert J. Speakman (University of Missouri, Columbia), and Michael D. Glascock (University of Missouri, Columbia) **Instrumental Neutron Activation Analysis of Central Plains Tradition Pottery from Kansas and Nebraska**
- 9:10 Latham, Mark A. (Burns & McDonnell, Kansas City), Virginia Wulfkuhle (Kansas State Historical Society, Topeka), Martin Stein (Kansas State Historical Society, Topeka), and Harold Reed (Kansas Anthropological Association, Salina) **Modern Agricultural Destruction of Smoky Hill Phase House Features: A Preliminary Review**
- 9:30 Roper, Donna C. (Kansas State University, Manhattan) **The Whiteford Site and Ceramic Period Mortuary Practices in the Kansas River Basin**
- 9:50 BREAK
- 10:20 Scriven, Jennifer and Donald J. Blakeslee (both from Wichita State University, Wichita) **One Surface Collection from the Paint Creek Site, 14MP1**
- 10:40 Blasing, Bob (Bureau of Reclamation, Oklahoma City) **Creating a GIS Map of Cheyenne Place Names**
- 11:00 Feagins, Jim D. (St. Joseph Museum, St. Joseph) **The Trade Bell Inventory and the “Wolf River” Variety: A Proposed New Variety of Bell from Northeastern Kansas**
- 11:20 Announcements & Business—Jim D. Feagins and Jackie A. Lewin
- 11:25 **King Hill Site Slides & Tour**—(weather permitting)—gather in front of the Pony Express Museum for drive to the King Hill site, 23BN1, an Oneota (probable Kansa) village on blufftop in the southern part of the city of St. Joseph—a short (2 block) walking tour led by Michael R. Fisher (St. Joseph Museum) [For additional information on this site see inside covers.]
- 12:25 LUNCH and visit other local attractions or travel on home

# 26<sup>th</sup> Annual

## FLINT HILLS ARCHAEOLOGICAL CONFERENCE

# Abstracts—2004

Anderson, Mark L. and Dan G. Horgen (both from University of Iowa's-Office of the State Archaeologist, Iowa City)

**The Lithic Raw Material Assemblage at the University of Iowa's—Office of the State Archaeologist: An Improved Framework for Lithic Analysis** (*in Symposium—“Sourcing Cherts: Looking East from the Flint Hills*)

The UI-OSA lithic raw material assemblage encompasses over 250 in-state and 220 out-state samples. Multiple structural shortcomings in the assemblage have limited the efficacy of making clear geologic and geophysical associations. In turn, this has significantly limited the ability of making cultural inferences regarding prehistoric use. Consequently, the assemblage has been reorganized to align with the geologic column of Iowa, to represent geophysical regions, and to afford a more systematic and consistent approach to lithic identification. Multiple software packages (e.g. Excell, Arc View, Visual Basic, Trimble Pathfinder, Dream Weaver) have been used to provide for a GIS based assemblage that features a web-based component affording research/identification of Iowa lithic materials from a remote location. Lastly, this paper summarizes analytical tools in addition to the existing macroscopic identification key that may be applied to the assemblage for improved future use.

Blakeslee, Donald J.; see Scriven, Jennifer

Blasing, Bob (Bureau of Reclamation, Oklahoma City)  
**Creating a GIS Map of Cheyenne Place Names**

In response to a request from Gordon Yellowman, of the Cheyenne Tribe, Reclamation has set up an assistance agreement with the Tribe. Under this agreement, Reclamation has plotted over 160 locations provided by the Tribe, which stretched from the Canadian Border to central Texas. This list consists of landmarks mentioned in Cheyenne oral histories and events detailed and mapped in Powell's 1981 volumes, *People of the Sacred Mountain*. Maps will be produced showing both the landmark name that commonly appears on recent maps, and the traditional Cheyenne name for the landmarks. The resulting maps provide a visual representation of tribal movement and lands important in Cheyenne history. This aids both the Cheyenne Tribe and various government agencies, in determining lands traditionally occupied by the Cheyenne. It is particularly useful for determining when the Cheyenne should be included in NAGPRA and National Historic Preservation Act consultation. It also provides an educational aid for young members of the Cheyenne Tribe and others interested in studying Cheyenne history.

Dougherty, Jim (Wichita, Kansas)  
**Foss Reservoir Mammoth Tusk**

In 2001 a mammoth tusk was found eroding out of a cut bank on the west shore of Foss Reservoir in Custer County, Oklahoma. A bone flake found on the shoreline near the tusk gave support to the hypothesis that Paleoindians may have had some association with it. Working under a cooperative agreement with the Bureau of Reclamation, archaeology graduate students at Wichita State University, along with other volunteers, excavated the tusk in the Spring of 2002. Dr. Leland Bement et al, with the Oklahoma Archeological Survey, conducted limited coring and profile assessment, and collected samples of buried soils for humate dating. Their assessment is that the tusk was covered by alluvium approximately 20,000 years ago. These early dates, and the absence of any artifacts in direct association with the tusk, strongly suggest that it is a paleontological, rather than an archaeological find. The tusk was "refurbished" at Wichita State University and a museum display was created to

accompany it. The display was installed at the Foss Reservoir Interpretive Center. It consists of the tusk itself, a painting of a mammoth, four interpretative panels, a stratigraphic profile and four photographs.

Estes, B. Mark, Lauren W. Ritterbush, and Kirsten Nicolaysen (all from Kansas State University, Manhattan)

### **Vesicular Artifacts: Volcanic or Metasedimentary in Origin?**

In 1848, George Catlin noted a strange occurrence on his way up the Missouri River in North Dakota: floating rocks eroding out of the hills. In recent times, vesicular artifacts are found at archaeological sites all along the Missouri River. They've been referred to by a variety of names including 'pumice', 'scoria', 'paralave', 'floatstone' and 'clinker' names that imply two distinct geologic origins: volcanic and metasedimentary. The lithology and place of origin are important because a volcanic origin may imply trade networks or human transport, whereas a metasedimentary origin may be locally deposited by the Missouri River and exploited. I examined 14 of these vesicular artifacts found at the Leary Site (25RH1), a Late Prehistoric Oneota site in the southeastern corner of Nebraska. They were used as abraders as evidenced by grooved surfaces. The use of semiquantitative EDS analysis by Scanning Electron Microscope (SEM) was employed to determine rock type by chemical composition of their matrix. We found that they contained low iron/magnesium ratios and high aluminum/silica ratios that demonstrate that these artifacts are paralavas that closely resemble our comparative North Dakota paralava in composition.

### **Feagins, Jim D. (Belton, Missouri) **Once Again Near the Fort that Clark Built: Recent Archeological Investigations at Ft Osage National Historic Landmark****

A phase I (archaeological survey) and phase II (archaeological testing) cultural resource investigation was completed at the proposed Education Center location at Fort Osage National Historic Landmark, Sibley, Missouri. The center will occupy approximately 511 sq. meters of the blufftop and bluff slope overlooking the Missouri River in the present picnic area south of the reconstructed fort and within a portion of archaeological site 23JA266. The northwestern portion of the proposed building footprint was the most culturally productive. Below the upper soil horizon (containing abundant artifacts associated with picnic activities) a buried historic plowzone was encountered. This zone contained artifacts associated with the nearby fort (23JA45), historic Sibley and a prehistoric component containing late Kansas City Hopewell lithics and pottery sherds. Below the plowzone, a shallow midden remained also containing late Hopewell artifacts. This upland site maybe contemporaneous to the latter part of the Hopewellian occupation at the well know Sibley site (23JA73) on the terrace below. Ground breaking ceremonies for the new center will occur during the June 18-22, 2004, Lewis and Clark Bicentennial celebration at Fort Osage.

### **Feagins, Jim D. (St. Joseph Museum, St. Joseph) **The Trade Bell Inventory and the "Wolf River" Variety: A Proposed New Variety of Bell from Northeastern Kansas****

Bells from the fur/hide/annuity trade, commonly called the Indian trade, are among a small group of archaeological materials from that "era" that, in some cases, can literally

produce sounds from the past. These delightful artifacts, made of silver, brass, and other metals, were widely traded to Native Americans by French, Spanish, British, Russian, and later by traders from the United States. Several trade bells have come to light from the state of Kansas. Considerable data from these bells are being recorded on recently developed inventory forms that will become part of a nationwide data inventory. In spite of pioneering taxonomic work done by Ivan Brown and others, almost 30 years ago, the trade bell taxonomy is still being refined. During a preliminary Kansas survey, what appears to be a new trade bell variety was tentatively identified by this author. Since it was recovered from a site in the Wolf River drainage in Doniphan County, Kansas, it is being called the "Wolf River" variety. This paper will describe this bell, present a preliminary overview of trade bells in Kansas, suggest ways Native Americans may have used open-ended bells, and request that others join in the national trade bell inventory. The goal is to improve the classification of these fascinating artifacts and eventually refine a chronology for these bells in order that they can become another tool to help date associated artifacts and the sites from which they are derived.

Glascock, Michael D.; see Hoard, Robert J.

Hoard, Robert J. (Kansas State Historical Society, Topeka), Donna C. Roper (Kansas State University, Manhattan), Robert J. Speakman (University of Missouri, Columbia), and Michael D. Glascock (University of Missouri, Columbia)

**Instrumental Neutron Activation Analysis of Central Plains Tradition Pottery from Kansas and Nebraska**

Instrumental Neutron Activation Analysis (NAA) was used to determine compositional similarities and differences among clay samples and pottery sherds from seven western Central Plains Tradition sites in an attempt to determine relationships between sites. The data were compared to that of previous analysis of sherds and clay from the vicinity of Medicine Creek and from sites in eastern Wyoming and Colorado. The analysis resulted in the identification of eight compositional groups: Central Plains reference group, Seven Mile Point, Kohr Houses, Minneapolis, Coal Oil Canyon, Donovan 1 and Donovan 4. The Central Plains reference group includes all pottery from the Albert Bell and Le Beau sites, and the vast majority of pottery from the Medicine Creek sites. Thus, it is impossible to identify distinct reference groups for these sites. This study builds on previous work by Cobry and Roper by clarifying the grouping of Medicine Creek site sherds, establishing new compositional groups for Coal Oil Canyon, Minneapolis and the Kohr houses; and shows limited movement of pottery between these sites. Finally, analysis of an albeit small sample of clays shows that upland clays have a greater probability of membership with the Central Plains reference group than do clays collected from stream valleys.

Horgen, Dan G.; see Anderson, Mark L.

Houghton, Susan (Burns & McDonnell, Kansas City)

**The Quest for the Glass Lid Liner** (*Poster Paper Presentation*)

Humble glass canning jars provide mute evidence in historic sites since the late 1800's. Associated glass lid liners and glass flats, disks of glass with cryptic markings, serve testimony to the efforts of homemakers to preserve nutritious food for their family. Since

the patent date of 1869, the lid liner has protected food from the housewife's fears of metallic contamination from the zinc lid. Based on a review of the literature and collection of examples a study of the history of the glass jar lid liner and related glass jar lids and flats may result in useful dating information.

In search of: Advertising, Site Assemblages, and References.

Latham, Mark A. (Burns & McDonnell, Kansas City)

**A Pit Surprise: Remnants of an Upland Kansas City Hopewell Site (14LV120)**

This paper describes the results of a Phase III site evaluation of site 14LV120, which was recorded during an earlier survey of Fort Leavenworth. It was recorded as a lithic scatter, an interpretation supported by most of our investigation, but the presence a sheet midden over a trash-filled storage pit surprised everyone involved. The triangular-shaped midden was likely the remnant of a larger sheet midden that had been truncated by machinery or in a small area somehow set aside from the fort corrals. Underlying this midden was a bell-shaped storage pit filled with ash, burned earth, charcoal, and numerous artifacts. A total of 921 artifacts and ecofacts were recovered. Among those artifacts were rim sherds from at least four Kansas City Hopewell vessels. Radiocarbon assays were obtained for both features, with the midden dating at 1880+ 80 RYBP and the storage pit dated to 1850+ 70 RYBP. The landform and site have been severely disturbed by livestock trampling and later military housing development. Profiles of two hackhoe trenches, three test units, and 34 shovel tests, showed that the truncated terrace had neither integrity nor evidence of other intact features. These two features, however, changed the interpretation of the site and can contribute significantly to the recorded data on the Kansas City Hopewell of the area.

Latham, Mark A. (Burns & McDonnell, Kansas City), Virginia Wulfkuhle (Kansas State Historical Society, Topeka), Martin Stein (Kansas State Historical Society, Topeka), and Harold Reed (Kansas Anthropological Association, Salina)

**Modern Agricultural Destruction of Smoky Hill Phase House Features: A Preliminary Review**

During fall 2003 and winter 2004 the authors were involved in a search for a Middle Ceramic lodge site for the 2004 Kansas Archeology Training Program (KATP) field school. We visited numerous previously recorded Smoky Hill phase sites within Saline, Ottawa, and McPherson counties, Kansas, which were thought or known to contain intact subsurface lodge floors. After examining these sites, it was determined that most had been destroyed by cultivation and subsequent erosion within the last 20 to 30 years. This paper gives a preliminary review of the impact that modern agriculture has had on Smoky Hill phase lodge sites in Kansas, based on information gleaned from several sources and site visits. In essence the lodge construction technique used by the Smoky Hill phase people, which placed these lodge floors at or near the ground surface, has exposed these features to damage and ultimate destruction by modern cultivation.

Logan, Brad (Kansas State University, Manhattan)

**The Hypothesis That Would Not Die! The Late Prehistoric Frontier in Northeast Kansas**

Twenty years ago I suggested that some Late Prehistoric sites in northeastern Kansas, particularly in the “frontier” between the lower Missouri and Delaware Rivers, reflected interaction between populations of different archaeological cultures, specifically Steed-Kisker and Pomona. These include Keen, in the Delaware River area, and Zacharias, in Salt Creek valley, which contained ceramic wares associated with these cultures. Data from the Scott and Caenen sites in Stranger Creek valley now revive this dormant hypothesis. Excavations at Scott in 2001-2002 uncovered remains of a Steed-Kisker house; survey and testing by the 2003 Kansas Archaeological Field School (KAFS) at nearby Caenen found evidence of a Pomona house. The “frontier” concept is reviewed in anticipation of the 2004 KAFS investigation of the Caenen site.

McGregor, Douglas S. (Kansas State University, Manhattan)

**Neutron Activation Analysis at Kansas State University, A Powerful Tool for Trace Element Characterization** (in *Symposium—“Sourcing Cherts: Looking East from the Flint Hills*)

Kansas State University nuclear facilities include a Neutron Activation Analyses (NAA) Laboratory. Neutron activation analysis is a powerful technique for determining trace element composition of a family of elements including most metals, heavy metals, and rare earth elements. NAA does not require large sample volumes and does not generally affect the sample properties (i.e., is nondestructive). NAA has typical sensitivities of micrograms to nanograms, with virtually no potential for false-positive indicators. Because of these characteristics, NAA has been successfully used in geology, archaeology, paleontology, and forensics applications to determine provenance, origin, and environmental conditions leading to sample formation.

Nicolaysen, Kirsten; see Estess, B. Mark

Ray, Jack H. (Southwest Missouri State University, Springfield)

**Workshop on Chert Resources from the Western Ozarks and Adjacent Eastern Border of the Central Plains** (in *Symposium—“Sourcing Cherts: Looking East from the Flint Hills*)

This workshop will describe several chert resources of Ordovician, Mississippian, and Pennsylvanian age that are located in the western Ozarks of southwest Missouri, northeast Oklahoma, northwest Arkansas, and extreme southeast Kansas. It is a hands-on workshop in which samples will be passed around as identifying characteristics are discussed.

Ray, Jack H. (Southwest Missouri State University, Springfield)

**Late Prehistoric Quarries Along the Western Ozarks Border** (in *Symposium—“Sourcing Cherts: Looking East from the Flint Hills*)

True quarry sites in the western Ozarks appear to be restricted in space and time. All of the documented quarries are located on the Springfield Plateau subprovince along the western flank of the Ozarks. All of these quarries were excavated into chert deposits of Mississippian age. Rock formations of Mississippian age tend to produce large amounts of high-quality chert that often occur in large nodules and/or thick beds. All but one of the

quarries along the western flank of the Ozarks were in residual Burlington chert deposits of the Burlington-Keokuk Formation. Although temporal affiliation of quarry sites is difficult, circumstantial evidence indicates that several of these quarries date to Late Prehistoric times. This paper presents a few of these Late Prehistoric quarry sites along the western border of the Ozarks.

Reed, Harold; see Latham, Mark

Ritterbush, Lauren W.; see Estess, B. Mark

Roper, Donna C. (Kansas State University, Manhattan)

**The Whiteford Site and Ceramic Period Mortuary Practices in the Kansas River Basin**

My on-going and now nearly completed study of the Whitford site (Salina Burial Pit) has sought to describe that site in detail, analyze its composition and the spatial distribution of the remains interred within it, and interpret the cemetery's role in Middle Ceramic period society in the lower Smoky Hill River valley. This latter has led me to compile a regional mortuary data set for the Early and Middle Ceramic periods in the Kansas River basin, from about the Blue River to 100 degrees W. longitude. Analysis of these data has enabled me to understand both how the Whiteford site cemetery is at once characteristic of Central Plains tradition mortuary practices but yet distinct in its expression of those practices, and how Central Plains tradition mortuary practice varied across space. I present some of the high points of this analysis, with particular emphasis on the Whiteford site and its role. I will also discuss some of the implications of this particular mortuary expression.

Roper Donna C.; see Hoard, Robert J.

Scott, Frederick W. (Maryville, Missouri)

**Lithic Resources in Nodaway County, Missouri: Glacial Till and Pennsylvanian Cherts**

Presentation focuses on lithic availability at two localities in glaciated Nodaway County in Northwest Missouri. Study examines lithic assemblages as well as raw materials sampled from rock bars of both localities, the Nodaway River drainage in Northwest Nodaway County and the Platte River in Northeast Nodaway County. The former showing usage of glacial till lithics as well as extra-local lithics, and the latter being a river cut exposure of bedrock limestone bearing Pennsylvanian cherts, serving as a lithic quarry.

Scriven, Jennifer and Donald J. Blakeslee (both from Wichita State University, Wichita)

**One Surface Collection from the Paint Creek Site, 14MP1**

The Paint Creek site, 14MP1, is the type site for the Great Bend Aspect, the archaeological remains of the protohistoric Wichita bands. Beginning with Udden's investigations, published in 1900, and continuing through Waldo Wedel's work to later

investigations by the Kansas State Historical Society and the KAA, the site has remained prominent in our understanding of Great Bend. This paper describes a portion of a surface collection from the site made during the 1930s and 1940s. Donated by Roger Horn of MacPherson, Kansas, the extraordinary size of the collection makes possible several avenues of research.

Smith, Holly C. (University of Oklahoma, Norman)

**The Cuesta Phase: A Case Study in Changing Mobility Strategies**

Stylistic Traits and Material types of the Cuesta phase have long been presumed the result of influence from Hopewellian groups, but the dynamics of such interaction have not been fully explored. Some see Cuesta groups as devolved migrant groups, having ventured west or south from their more prestigious homelands. Others see Cuesta groups as Hopewell's country cousins, influenced by the more complex Hopewellian groups to the north and east. I propose that Cuesta groups do indeed represent local (rather than migrant) Woodland Populations. However, these groups were not merely the passive recipients of outsiders' knowledge. Rather, they exhibit a changing material culture (with purposefully borrowed stylistic elements) due to their own changing mobility strategies. Mobility does not decrease in importance as groups become more sedentary, but may actually increase in social importance as groups seek to mitigate the risks inherent to a more settled life.

Speakman, Robert J.; see Hoard, Robert J.

Stein, Martin; see Latham, Mark

West, Ronald R. (Kansas State University, Manhattan)

**Artifacts, Chert, Fossils, Provenance** (*in Symposium—“Sourcing Cherts: Looking East from the Flint Hills*)

Chert occurs widely in most carbonate units, and as such was a readily available resource for use by early hominids. Although chert occurs in numerous rock units in Kansas (Banks 1990) the focus here will be on chert in eastern Kansas.

Carbonate rocks, and associated chert, are exposed from the Mississippian in the extreme southeastern corner of the state to the Permian Units in north central Kansas. Chert gravels are associated with the weathered exposures of most of carbonate units even if chert is not conspicuous within the unit.

The provenance of flint artifacts is difficult. Physical properties, color, texture, etc. vary within and between different units and with the degree of weathering, and are thus not definitive. Chemical characteristics are often expensive and destructive. Banks (1990) contains more details, and stresses the need for a chert database.

Fossils within flint artifacts are potentially useful in provenance studies. Microfossils, radiolarians and foraminiferids, are potentially useful, but both require the expertise of well-versed specialists in these fossil groups. The presence of fusulinids, a group of foraminiferids, in a flint artifact indicates that the chert used was from a unit of Pennsylvanian or Permian age, and a specialist may be able to provide more specific provenance information. Other fossils that often occur in chert are: sponge spicules; corals; bryozoans; brachiopod and mollusk shells; echinoderm ossicles, plates, and spines; and

ostracode valves. These are potentially less useful, but may provide some provenance information in the hands of knowledgeable specialists.

Wetherill, Bert (Overland Park, Kansas)

**Mid-Continental Pennsylvanian Cyclothem: Toward a Better Understanding of Chert Variability** (*in Symposium—“Sourcing Cherts: Looking East from the Flint Hills”*)

Cyclothem is a term geologists apply to the series of rocks formed during one complete transgression-regression episode of seas over the mid-continent area of North America. This paper looks at the general concept of the cyclothem and at a specific study of the Winterset limestone member of the Dennis limestone formation, Kansas City group, Missourian stage, of the mid-continent Pennsylvanian system. The Winterset study and chert samples collected from the Winterset member suggest that distinct varieties of chert distributed north to south along the outcrop are likely due to the general transgressive-regressive nature of a cyclothem. Vertical variations of chert at specific locations are likely the result of phased transgression-regression episodes within the cyclothem. This model may help explain variability found in chert from other mid-continental rocks.

Wetherill, Bert (Overland Park, Kansas)

**Mortuary Practices of the Middle Woodland Kansas City Hopewell Peoples**

Approximately 50 prehistoric stone chambered burial mounds have been identified along the Missouri River and its tributaries in the Kansas City locality. These mounds are located on ridge tops overlooking larger stream valleys in an area from just east of Kansas City to just south of St. Joseph. Waldo Wedel of the Smithsonian Institution assigned these mounds to the Kansas City Hopewell culture based on artifacts recovered in the late 1930's from mounds in Platte County, Missouri. Virtually all the known mounds were looted in the past and no undisturbed mound has been excavated by a competent archaeologist using modern methods. This paper describes the construction of Kansas City Hopewell stone chambered burial mounds using a scale model based on data provided by Wedel and others.

Wetherill, Bert (Overland Park, Kansas)

**Vertical and Areal Variability of Chert in the Winterset Limestone Member** (*in Symposium—“Sourcing Cherts: Looking East from the Flint Hills”*)

The Winterset limestone member of the Dennis limestone formation, Kansas City group, Missourian stage of the Pennsylvanian system outcrops from southwest Iowa through northeast Missouri, eastern Kansas and into Oklahoma to the vicinity of Tulsa. Three Winterset chert varieties have been described in Iowa and a single variety has been described for the Kansas City locality. Additional varieties collected in western Missouri and eastern Kansas have brought the total to seven and possibly ten known varieties. Both vertical and horizontal distribution of identified varieties suggests much greater variability in this chert type than that found in other mid-continental Pennsylvanian limestone members.

Wulfkuhle, Virginia; see Latham, Mark

## 26<sup>th</sup> Annual

# FLINT HILLS ARCHAEOLOGICAL CONFERENCE

## Biographical Sketch of Symposium Participants

**Mark L. Anderson** received his undergraduate and graduate education at the University of Oregon and Ball State University, with a field school and follow-up season at the Mitchell Indian Village through the University of South Dakota. He has spent 16+ years with the University of Iowa's Office of the State Archaeologist, first with the General Contracts Program and subsequently with the Highway Archaeology Program. Lithic studies is a primary focus along with the archaeology of the Upper Midwest, Archaic and Paleo-Indian Periods, ancient technologies, GPS, GIS, and remote sensing applications, and education outreach programming.

**Dan G. Horgen** received his undergraduate education at the University of Iowa and has been with the University of Iowa's Office of the State Archaeologist, since the Fall 2000. He currently serves as crew chief for the Highway Archaeology Program overseeing field, lab, and report preparation activities. He is interested in lithic studies and participates in the Lithic Raw Materials project and other geologic studies. He is also interested in the archaeology of the Upper Midwest, the Woodland Period, and prehistoric settlement patterns.

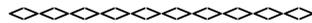
**Douglas S. McGregor** has undergraduate and masters degrees in electrical engineering from Texas A&M University and masters and Ph.D. degrees in nuclear engineering from the University of Michigan. He has over 17 years of experience in the fields of semiconductor device theory and fabrication, radiation detection and measurements, and semiconductor radiation detector design, fabrication and characterization. Dr. McGregor has authored or co-authored over 50 research publications on semiconductor radiation detectors. He has recently joined the faculty in the Dept. of Mechanical and Nuclear Engineering, Kansas State University.

**Jack H. Ray** (M.A., University of Missouri, 1981) is a Research Archaeologist/Assistant Research Professor at the Center for Archaeological Research at Southwest Missouri State University. Mr. Ray's research interests include early prehistoric cultures, geoarchaeology, and lithic analysis. His area of specialization is the identification and analysis of cherts and other chipped-stone resources found in the Ozarks.

**Ronald R. West** received his Ph.D. in 1970 from the University of Oklahoma. He is a professor of geology, with an adjunct faculty appointment in biology, at Kansas State University. His research interests are paleoecology and paleozoology of Permian and Carboniferous organisms, Carbonate geology, taphonomy and organism-sedimentary relationships, and recent marine invertebrate ecology. He has published extensively on a variety of topics including the carbonate rock fossils in eastern Kansas.

**Bert Wetherill** of Overland Park, Kansas earned a Bachelor of Arts degree in Sociology with an emphasis on anthropology at the University of Missouri at Kansas City. His graduate work was done at the University of Kansas, Lawrence where he received his Masters degree in Anthropology. His thesis topic, Paleoindian artifacts found along the lower Kansas River, led to an interest in lithic source identification. He has continued his education at both the University of Kansas and at the University of Missouri at Kansas City where he has studied geology. His goal is to better understand the stratigraphy and sedimentology of the midcontinental region to provide insights into the distribution and variability of chert sources. He has assembled a comparative collection of chert from the region and has exchanged chert samples with other researchers. Bert also continues to actively work in field archaeology on both prehistoric and historic sites, and to give presentations to public groups on a variety of topics in archaeology and related fields.

## Conference Notes



Thank you for attending and contributing to the 2004 Flint Hills Archaeological Conference! We hope that the conference was personally educational, useful and enjoyable. You are welcome to return to the facilities of the St. Joseph Museum for research or just to visit. For now, may you have a safe trip home!

#### Addendum

The following was not received in time to include in the regular program; however, this paper was given at 8:10 a.m. Saturday, March 27<sup>th</sup>.

**Brosowske, Scott D. (University of Oklahoma) Obsidian Procurement and Distribution during the Middle Ceramic Period of the Southern High Plains: Evidence for the Development of Regional Trade Centers**

The process of describing exchange involves three interrelated steps: a) description of the spatial patterning of nonlocal items, b) identification of source areas for these items, and c) the reconstruction of the organization of exchange. This investigation represents an initial step toward reconstructing Middle Ceramic period exchange on the Southern High Plains. Although some aspects Plains-Southwest trade are considered, the primary emphasis of this study is on interaction and exchange among resident populations of the Southern High Plains. In particular, this study concentrates on the spatial distribution of obsidian artifacts and their source areas as a means for understanding the organization of exchange. Data for this investigation is provided by an X-ray fluorescence analysis of 139 obsidian artifacts from 23 Middle Ceramic period settlements. The results of this analysis provide important information regarding the means by which obsidian, and by extension, other Southwestern exotics were obtained by occupants of the region. This study concludes that the period witnessed the emergence of large communities that participated in direct exchange with the eastern Pueblos and served as regional redistribution centers for Southwestern trade items.

(continued from inside front cover)

Shippee, J. Mett

1967 Belated Archaeological Excavation on King's Hill, St. Joseph, Missouri. (St. Joseph Museum) *Museum Graphic* 19(1):5-9.

Wedel, Waldo R.

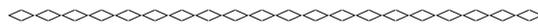
1959 An Introduction to Kansas Archaeology. *Bureau of American Ethnology, Bulletin* 174, Washington, D.C.

Jim D. Feagins



### FLINT HILLS ARCHAEOLOGICAL CONFERENCES

|                  |        |      |   |
|------------------|--------|------|---|
| 1 <sup>st</sup>  | Annual | 1979 | University of Oklahoma, Norman                                      |
| 2 <sup>nd</sup>  | Annual | 1980 | University of Kansas, Lawrence                                      |
| 3 <sup>rd</sup>  | Annual | 1981 | Wichita State University, Wichita                                   |
| 4 <sup>th</sup>  | Annual | 1982 | University of Tulsa, Tulsa  |
| 5 <sup>th</sup>  | Annual | 1983 | Kansas State Historical Society, Topeka                             |
| 6 <sup>th</sup>  | Annual | 1984 | Kansas State University, Manhattan                                  |
| 7 <sup>th</sup>  | Annual | 1985 | University of Oklahoma, Norman                                      |
| 8 <sup>th</sup>  | Annual | 1986 | Nebraska State Historical Society, Lincoln                          |
| 9 <sup>th</sup>  | Annual | 1987 | Wichita State University, Wichita                                   |
| 10 <sup>th</sup> | Annual | 1988 | Kansas State Historical Society, Topeka                             |
| 11 <sup>th</sup> | Annual | 1989 | University of Kansas, Lawrence                                      |
| 12 <sup>th</sup> | Annual | 1990 | University of Missouri, Kansas City                                 |
| 13 <sup>th</sup> | Annual | 1991 | University of Nebraska & Nebraska State Historical Society, Lincoln |
| 14 <sup>th</sup> | Annual | 1992 | Kansas State University, Manhattan                                  |
| 15 <sup>th</sup> | Annual | 1993 | Wichita State University, Wichita                                   |
| 16 <sup>th</sup> | Annual | 1994 | Kansas State Historical Society, Topeka                             |
| 17 <sup>th</sup> | Annual | 1995 | University of Oklahoma, Norman                                      |
| 18 <sup>th</sup> | Annual | 1996 | St. Joseph Museum & Pony Express National Memorial, St. Joseph      |
| 19 <sup>th</sup> | Annual | 1997 | Kansas State University, Manhattan                                  |
| 20 <sup>th</sup> | Annual | 1998 | Wichita and Affiliated Tribes, Anadarko                             |
| 21 <sup>st</sup> | Annual | 1999 | University of Kansas, Lawrence                                      |
| 22 <sup>nd</sup> | Annual | 2000 | Wichita State University, Wichita                                   |
| 23 <sup>rd</sup> | Annual | 2001 | University of Oklahoma, Norman                                      |
| 24 <sup>th</sup> | Annual | 2002 | Kansas State University, Manhattan                                  |
| 25 <sup>th</sup> | Annual | 2003 | Kansas State Historical Society, Topeka                             |
| 26 <sup>th</sup> | Annual | 2004 | St. Joseph Museum, St. Joseph                                       |



The Archives of the Flint Hills Archaeological Conference are curated by the Archeology Office, Kansas State Historical Society, Topeka