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ILLINOIS ASSOCIATION FOR ADVANCEMENT OF ARCHAEOLOGY
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PRESIDENT'S POINTS

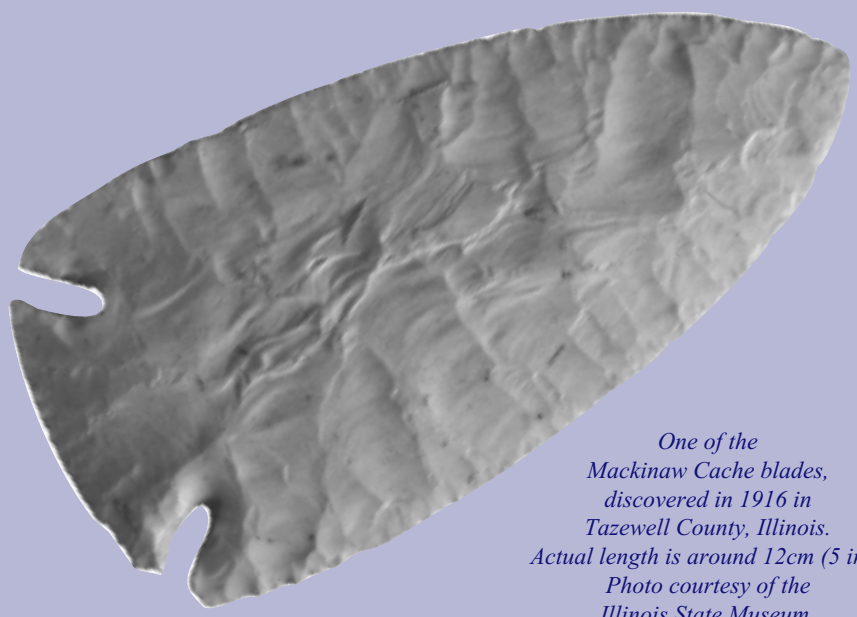
Ah, the leaves are turning and the frost will soon be on the pumpkin -- the digging season is winding down and it's time to get those volunteer hours to the Recognition Committee. Send your hours on the forms provided in issues of *Illinois Antiquity* after Halloween but before Thanksgiving. Also, if you know of someone deserving of either the Service to the Organization, Lifetime Volunteer, or Professional Service Awards, send your letter of nomination to the committee.

All not-for-profit organizations need volunteers to run smoothly and IAAA is no exception. In recent board meetings, we have discussed the need for more participation from our members. We'd like to invite all members to become more involved in IAAA by serving on board, as an officer, or on the Permanent Fund or other committees. The nominating committee tries to keep the representation balanced statewide, and sometimes that's hard to do. Let your officers and board members know if you can serve on the board or on a committee, or ask members of your chapter or at-large members to consider serving. We encourage diversity on the board -- look at your present officers and board and notice what varied skills and backgrounds they have. A good place to start getting more involved is to attend the IAS fall workshop and/or the IAAA annual meeting, where we can get to know one another and learn about current archaeological projects in Illinois.

Soon it will be time to clean those shovels and Wd40 them for the winter. Here's a helpful hint: have you seen the soft sponge-like sandpaper squares (about 3" X 4" X 1") used for sanding molding and hard-to-reach places? Well, they will clean shovels and trowels in a flash.

I hope to see you at the IAS and IAAA meetings.

Larry Kinsella



One of the Mackinaw Cache blades, discovered in 1916 in Tazewell County, Illinois. Actual length is around 12cm (5 in.). Photo courtesy of the Illinois State Museum.

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IAAA CHAPTER CONTACTS AND MEETING DATES

Cahokia Archaeological Society:
Meets at Cahokia Mounds Interpretive Center, Collinsville, IL; 7:30 p.m. the third Thursday of the month except July and August. Contact Gloria Iseminger, 414 N. Morrison, Collinsville, IL 62234.

Central Wabash Archaeological Society:
Meets at north end of Lincoln Trails College, Robinson, IL; 7:00 p.m. the first Monday of the month. Contact Vera Kirts, 304 N. Division St., Oblong, IL 62449.

Chicago Archaeological Society:
Meets at Evanston Public Ligrary, 1703 Orrington Ave., Evanston, IL at 3:00 p.m. the 4th Sunday of the month. Contact Robert Stelton, 12 S 675 Knoebel Dr., Lemont, IL 60439.

East Central Illinois Archaeological Society:
Meets at Urbana Free Library the third Sunday of the month. Contact Brenda Beck, 3002 E. Oaks Rd., Urbana, IL 61802.

Grand Prairie Archaeological Society:
Contact Kim Lehnus, 765 S. Main Ave., Kankakee, IL 60901.

Illinois Valley Archaeological Society:
Meets at Dickson Mounds Museum, Lewistown, IL at 7:00 p.m. the first Tuesday of the month. Contact Alan Harn (309) 547-3721.

Kaskaskia Archaeological Society:
Meets at Shelbyville Visitors Center, Shelbyville, IL; 7:00 p.m. standard time (7:30 daylight savings time) the third Monday of the month. Contact Laura Mentzer, Rte 1, Box 61, Assumption, IL 62510.

Mississippi Valley Archaeological Society:
Meets at Salem Lutheran Church, Mendon, IL; 7:00 p.m. standard time (7:30 daylight savings time) the third Wednesday of the month. Contact Mary Hanning, RR 1, Box 63, Huntsville, IL 62344.

Quad Cities Archaeological Society:
Meets at the Tom-Tom Room, Blackhawk State Park; 7:30 p.m. the last Tuesday of the month. Contact Ferrel Anderson, 1923 E. 13th St., Davenport, IA 52803.

Sauk Trail Archaeological Society:
Contact Nancy Marcotte, 6317 Anvil Rd., Crystal Lake, IL, 60012 or Margaret Lindsley, 2 S. 526 Arrowhead, Wheaton, IL 60187.

South Suburban Archaeological Society:
Meets at the Marie Irwin Community Center, 18120 Highland Ave., Homewood, IL; 7:30 p.m. the third Thursday of the month. Contact Barbara McDonough, 18442 Gottschalk, Homewood, IL 60430.

Three Rivers Archaeology Society:
Meets at the Stone Church, Route 75 & Union Sts., Rockton, IL; the second Monday every month. Contact John Paustec, 6170 Canyon Woods Dr., Rockford, IL 61109.

FROM THE EDITOR . . .

In this issue, we highlight PREHISTORIC TECHNOLOGY, the theme of the 2001 Illinois Archaeology Awareness Month (IAAM). Michael Wiant prepared an article on the Mackinaw Cache, discovered in 1916 in Tazewell County. Five of the Mackinaw Cache blades are depicted on the stunning IAAM poster, photographed by Pete Bostrum. In the article, Mike presents background information on the find and discusses problems in determining the cultural affiliation of the Mackinaw Cache.

Prehistoric technology is not limited to studies of stone tools. David Nolan examines an aspect of prehistoric ceramic technology, the use of woven nets in the production of pottery during the Late Woodland South Branch phase in western Illinois. Gordon Howe describes bone and antler tools from the Woodland period (Allison-LaMotte) Roy Morris site in Crawford County.

Getting back to more traditional studies, Brian Adams presents a detailed analysis of lithic artifacts from the Stemler Bluff site, excavated at the new location of the town of Valmeyer in Monroe County. He discusses how the lithic assemblage fits into American Bottom regional models of stone tool use, and shows that assumptions about use wear should not rely on initial visual inspections. Our thanks to all of these authors for articles that give a glimpse into the wealth of information available about prehistoric technology in Illinois.

We are also pleased to include Tim Pauketat's review of a new book by Robert Salzer and Grace Rajnovich about Gottschall Rock Shelter. For many years, Gottschall excavations had the participation of avocational volunteers, including many IAAA members. Many thanks to Tim Pauketat for preparing the review.

We hope you are enjoying the new *Discover Illinois Archaeology* reprint. An order form for additional copies is included in this issue, and there is also information about how you can obtain your own Mackinaw Cache poster.

Alice Berkson

Illinois Antiquity **is published quarterly by the Illinois Association for Advancement of Archaeology. Editor, Alice Berkson; Asst. Editors, Kelvin W. Sampson (layout and design) Duane Esarey and Karen M. Sank (copy and circulation).**

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Submission deadlines are January 10, April 15, August 10, and October 15. Material may be prepared using a word processing program and submitted, either accompanied by a disk or through electronic mail. Artifact photos should be accompanied by a scale or label of size. Citations should be in a "References Cited" section rather than in footnotes.

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RECONSIDERING THE MACKINAW CACHE: CLASSIC OHIO HOPEWELL OR EARLY ARCHAIC?

By Michael D. Wiant

"They are too delicate to be of practical use—and not the right size for warfare. They are pure examples of art for art's sake" (Frank W. Aldrich, 1916).

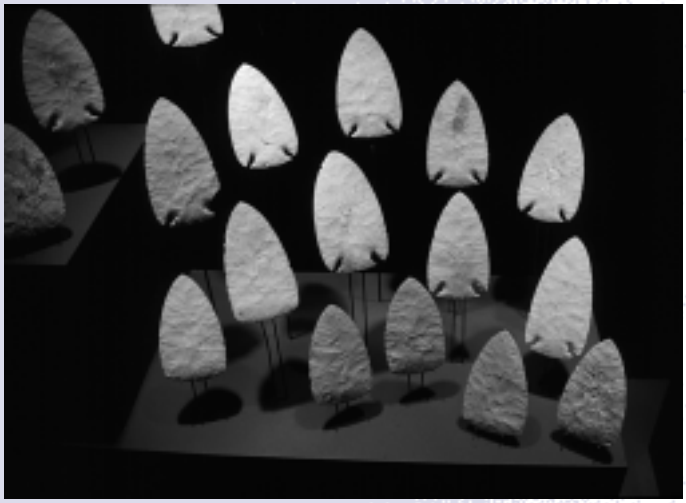
"They were doubtless offerings to the gods and made for that purpose" (W. H. Holmes, 1917).

It is especially fitting that five examples of the Mackinaw Cache are featured on a poster celebrating prehistoric technology, the theme of this year's Illinois Archaeology Awareness Month. The Mackinaw Cache has long been recognized as an extraordinary example of Native American stone technology. In 1917, one year after the cache was discovered, Dr. W. H. Holmes, Head Curator of Anthropology at the Smithsonian Institution, United States National Museum, and noted scholar of prehistoric lithic technology wrote: "Undoubtedly, they represent the most skilful [sic] work in stone flaking that has yet been found in this country" (Letter from W. H. Holmes to Mr. Frank W. Aldrich, January 22, 1917)(McLean County Historical Society). Peter A. Bostrom's photograph captures the essence of Holmes' appreciation of the craftsmanship invested in the making of these artifacts, and there is little doubt that the Mackinaw Cache remains one of the premier examples of chipped-stone technology in North America.

The selection of the Mackinaw Cache to symbolize Native American stone technology in Illinois also provides an opportunity to consider its discovery, manufacture, and age in more detail. Although discovered eighty-five years ago, there has been relatively little written about these exceptional artifacts (see Eifert 1949; Tolley 1949; Weedman 1976) and only William Weedman analyzed their characteristics in any detail. In the end, he thought that they were made during the Woodland Period (ca. 100 B.C. to A.D. 300) by a talented Hopewellian flintknapper. While many of the attributes of the points compare favorably with other forms of Woodland lithic technology, the style of notches is reminiscent of Early Archaic Period points such as St. Charles (Scully 1951) and Thebes (Winters 1963, 1967). After considering the discovery and physical characteristics of the Mackinaw Cache blades, we will return to the matter of their antiquity.

THE DISCOVERY

In 1916, boys digging gravel near the town of Mackinaw in Tazewell County, Illinois, found a cache of points. They were working on the farm of Mr. James Tyrrell about two and one half miles northeast of Mackinaw. Shoveling gravel on the slope of a small hill at the edge of the bluffs, about one quarter of a mile north of the Mackinaw River, the boys reported that they found 'about forty' blades a foot or so underground. Some of the blades were broken by their shovels, but they recovered at least 34 complete specimens (see below for a more detailed consideration of the number of specimens).



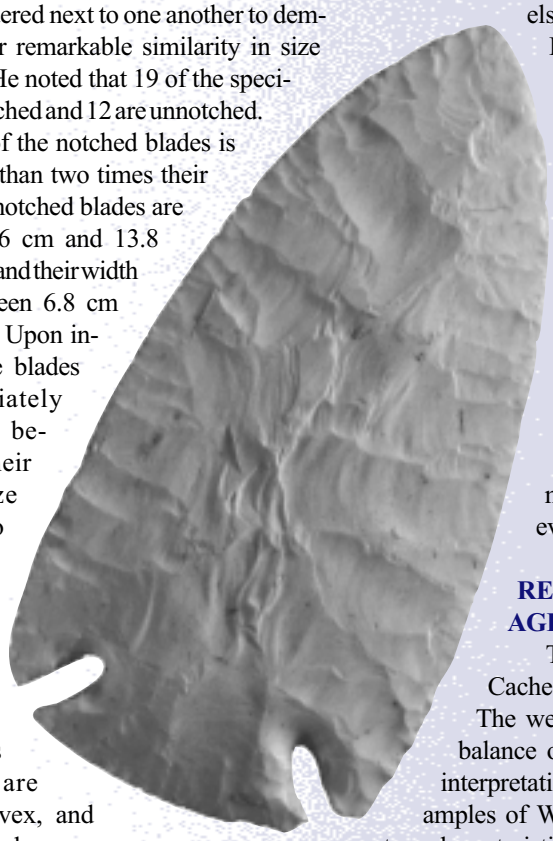
Part of the Mackinaw Cache, on exhibit at the Illinois State Museum.

Reading about the discovery in a newspaper, Mr. Frank W. Aldrich, then a cashier at the McLean State Bank where his father served as bank president, went to Mackinaw to see the blades. By December 1916 Mr. Aldrich was corresponding with E. V. Bell and James Tyrrell, both of Mackinaw, offering them five dollars a piece for the cache blades in their possession (Letter from Frank W. Aldrich to E. V. Bell, December 1, 1916 and letter from Frank W. Aldrich to James Tyrell, December 14, 1916, respectively, McLean County Historical Society archive). By the summer of 1917, Aldrich had acquired 31 specimens from the cache. He sent them to the Smithsonian Institution where casts were made and the originals returned (Letter from W. Ravenel (?) [the writing is not clear], Administrative Assistant, Smithsonian Institution to Mr. Frank W. Aldrich, June 27, 1917 and letter from Frank W. Aldrich to W. H. Holmes, September 27, 1920, McLean County Historical Society). Casts of the Mackinaw Cache remained exhibited at the Smithsonian Institution for sometime thereafter, and Holmes encouraged Aldrich to donate the originals to the National Museum. Evidently reluctant to part with the collection, Aldrich continued his search for additional specimens of the cache until 1948 (Tolley 1949). In addition to the 31 specimens Aldrich acquired, Weedman reported in 1976 that another specimen was in the possession of Mr. Stuart Ruch of Champaign, Illinois. It is not clear if Aldrich was aware of this specimen. According to Tolley (1949), the McLean County Historical Society had two specimens. Weedman (1976:373) thought they had three specimens, but he was not able to confirm this. Thus, depending on the number at the McLean County Historical Society, the Mackinaw Cache today consists of either 34 or 35 specimens.

In 1949, Mr. Aldrich presented the collection to the Illinois State Museum. It is noteworthy that the Mackinaw Cache was originally displayed in the museum's art gallery (Eifert 1949). Today, most of the specimens may be viewed in the Anthropology exhibits.

DESCRIPTION OF THE SPECIMENS

Aldrich (n.d.) measured the 31 specimens in his possession and made outline drawings of each. He summarized this information on a poster of notched and unnotched blade outlines rendered next to one another to demonstrate their remarkable similarity in size and shape. He noted that 19 of the specimens are notched and 12 are unnotched. The length of the notched blades is slightly less than two times their width. The notched blades are between 11.6 cm and 13.8 cm in length, and their width ranges between 6.8 cm and 7.5 cm. Upon inspection, the blades are immediately noteworthy because of their overall size relative to their thickness. The average thickness is only 0.48 cm. The blade edges and bases are slightly convex, and slightly curved, narrow, parallel-sided notches extend inward from the corners of the blade base. Percussion flake scars are aligned roughly parallel along the blade edge and extend toward the center of the blades and sometimes beyond, but many also did not have sufficient energy and terminated near the center in an abrupt step fracture. Nevertheless, each blade is a remarkable example of craftsmanship.



The unnotched blades are, on average, slightly shorter, but essentially have the same width and thickness as the notched specimens. Their blade edges and bases are also slightly convex. The pattern of flake scars is not as precise as that observed on the notched blades, but this may simply be because they have not been finished. For example, the blade edges do not exhibit the pattern of sub-parallel flake scars indicative of edge refinement.

Weedman (1976) provided the first description of the non-metric characteristics of these artifacts. He identified the stone used to make the blades as Burlington chert from the Crescent Quarries located near St. Louis, Missouri (Weedman 1976:373). As is illustrated by Bostrom's photograph, and by inspection of the cache blades, they are made from fine-grained Burlington chert with few fossils, other inclusions, or bedding planes. The Crescent Quarries are known for such high-quality Burlington chert, but it also has been found elsewhere along the Illinois River. Weedman also observed that most of the pieces have a waxy luster, pink hue, and rippled flake scars, characteristics indicative of heat treatment (Weedman 1976).

Some of the blades have a few nicks along their edges, presumably the result of their excavation and subsequent handling, but most of the specimens are perfect, with no evidence of use or repair.

RECONSIDERING THE AGE OF THE CACHE

The age of the Mackinaw Cache is a matter of conjecture. The weight of evidence tips the balance of opinion in favor of an interpretation that the blades are examples of Woodland technology, but two characteristics in particular, the shape of the notches and the pattern of flake removal, suggest that they may be older. We begin our review with a consideration of the place where the cache was discovered.

It is not clear if Aldrich visited the site when he traveled to Mackinaw to see the blades. Evidently, no photographs were taken of the location where the cache was discovered, nor were any notes made. In 1954, Dr. John C. McGregor visited what he believed to be the location of the discovery, though the site record form does not indicate how he learned of the precise location. Nevertheless, he recorded it as 11T13, the Aldrich site. McGregor noted that the site was in timber and that three mounds were present, but he provided no additional information. Evidently, the site was not sufficiently promising to McGregor to explore it in more detail.

Judging from its physiographic position, the Aldrich site is located on a Mackinaw River terrace or an extensive alluvial fan formed by an unnamed tributary stream. There are a few archaeological sites in the vicinity, but none have recorded cultural components. There are Middle Woodland sites along the lower reach of the Mackinaw River including a particularly large village where the river enters the Illinois River valley. Clearly, additional field work will be required to evaluate more thoroughly the archaeological context of the Aldrich site. If, in fact, the cache was found in a mound, these exceptional artifacts probably represent Woodland Period lithic technology. But without this critical piece of information, we must consider the physical characteristics of the specimens alone to evaluate their age.

Weedman (1976) proposed the idea that the Mackinaw Cache is a example of Woodland Period stone technology. Specifically, he attributed them to the Hopewell culture (ca. 100 B.C. to A.D. 300). He based his conclusion on the shape of the specimens, the way they were made, and the location where they were discovered. The overall shape of the notched specimens is similar to Classic Hopewell points (Waldorf 1987) and the unnotched cache blades are similar to Middle Woodland North Points (Perino 1969). Recall also that the blades were made from Burlington chert, stone commonly used in the Illinois River valley during the Middle Woodland Period. The specimens appeared to have been heat treated, which is another characteristic of Middle Woodland lithic technology. And, although Weedman does not cite McGregor's record of the Aldrich site, we assume he was aware of the record form referring to mounds where the blades were discovered. Although there are many merits to Weedman's argument, alternatives must be considered before we can be satisfied with a final conclusion about the antiquity of the cache.

One alternative to consider is the possibility that the Mackinaw Cache is considerably older, perhaps more than 9,000 years old. It is the shape of the cache blade notches that sparks this idea. The notches of Middle Woodland points commonly found in Illinois such as Snyders (Scully 1951; Bell 1958:88), Affinis Snyders (Winters n.d., 1963, 1967), Gibson (Scully 1951:13; Montet-White 1968:75), and Norton Corner Notched (Montet-White 1968:71) are wider and rarely have parallel sides such as those seen on the Mackinaw Cache specimens. For example, compare the notched specimens from the cache with Snyders points illustrated by Scully (1951), Bell (1958), Waldorf (1987), Perino (1985), and Justice (1987). None of the illustrated points have the narrow, parallel notches exhibited by the Mackinaw Cache specimens.

Furthermore, none of the type descriptions indicate the notches of typical Middle Woodland points as narrow and parallel. For example, Perino (1985:358) describes the notches of Snyders as "broad diagonal notches," and Justice (1987:201) notes that "maximum notch width sometimes occurs toward the interior of the notch rather than at the margins."

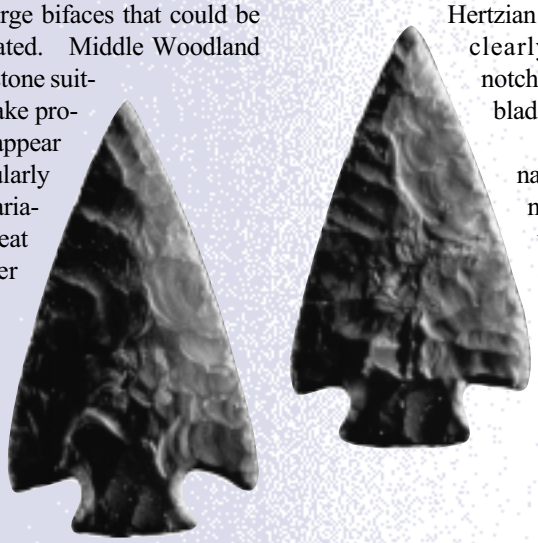
In contrast, Waldorf (1987) illustrates what is described as a Classic Ohio Hopewell point on the cover of *Story in Stone*. The notches have sub-parallel sides, unlike Middle Woodland points in Illinois. Examples of Classic Ohio Hopewell points illustrated in the text have similar notches, but none are as narrow as those seen on the Mackinaw Cache blades. Did an Illinois Hopewellian render a Ohio Hopewell design in Mississippi valley stone?

In Illinois, narrow, parallel-sided notches are more common on Early Archaic points such as St. Charles (Scully 1951:4; Perino 1985:332; Justice 1987:57) and Thebes (Winters 1963,1967; Luchterhand 1970; Perino 1971); this style is not evident in Woodland Period point assemblages. Based on this characteristic alone, the Mackinaw Cache might be regarded as an example of Archaic Period technology. Using a model of point production as a guide, we will weigh several more attributes of the points to evaluate if and how they contribute to a conclusion about the antiquity of the cache.

Early Archaic parallel-sided notched points (2/3 actual size). Left - Fulton Co., Illinois, Right - Knox Co., Illinois. Photo courtesy Dickson Mounds branch of the Illinois State Museum.

We begin with the raw material collected for point production. High-quality Burlington chert, including Crescent Quarry chert, was used throughout prehistory for the production of stone tools, especially points. Thus, the type of stone nor its quality discriminates Early Archaic and Middle Woodland technology. High quality chert was used during both periods, but probably for different reasons. Early Archaic knappers selected high quality chert to produce large bifaces that could be repeatedly rejuvenated. Middle Woodland knappers required stone suitable for lamellar flake production, and they appear to have been particularly interested in color variations produced by heat treatment (Struever 1973).

With respect to preparation of the stone prior to intensive knapping, Struever (1973:72) argues that heat treatment, although occurring earlier in the lower Illinois River valley, is not widely used prior to ca. 100 B.C., an observation that favors the interpretation that the Mackinaw blades are examples of Woodland technology. Although it is beyond the scope of the research undertaken for this essay, this is a subject that deserves broader consideration because there are new assemblages of Early Archaic points to consider.



Middle Woodland corner notched points (2/3 actual size). Two of a cache of 15 from mound F°192, Ogden-Fettie Site, Fulton Co., Illinois. Photo courtesy Dickson Mounds branch of the Illinois State Museum.

Next, we consider the reduction process. The pattern of flake removal is often used to discriminate the age of points. A variety of Early Archaic points are characterized by a precise pattern of parallel flake scars running perpendicular along the length of the blade. A cursory review of St. Charles and Thebes points (see Luchterhand 1970, for example), shows a pattern of the removal of broad, flat thinning flakes which occasionally traverse the width of the blade and more often extend past the blade center line. Next, edge thinning flakes were removed. They tend to be narrower, with parallel sides, and their scars often extend to near the midline. Finally, the edge was sharpened by pressure flaking, the result of which was a series of short, narrow scars. Bostrom's excellent photograph of Mackinaw Cache blades illustrates a comparable pattern of scars. On average, Woodland Period points appear to have been made with less precision.

Early Archaic and Woodland flintknappers evidently used the same technique to produce notches on St. Charles, Thebes, and Snyders points. The notch is made by an indirect percussion technique, which leaves a broad hertzian cone flake scar. Hertzian cone flake scars are clearly evident on the notched Mackinaw Cache blades.

The base of Mackinaw Cache blades, both notched and unnotched, is slightly to strongly convex, but this characteristic is also shared by a variety of Middle Woodland and Early Archaic points, and thus, it does not discriminate them.

Outline shape has long been an underpinning of point typology. Although not firmly grounded on systematic measurements, the outline shape of the Mackinaw Cache blades does not appear to be typical of either Early Archaic or Woodland points. It appears to lie somewhere in between Snyders points, which tend to be wider relative to length, and St. Charles and Thebes points, which tend to be longer relative to their width. While other forms of Woodland points, such as Gibson and Norton, tend to be longer relative to their width, they are not comparable to the Mackinaw Cache blades.

The characteristics of the unnotched points tip the balance toward Woodland technology. Perino (1969:185) discovered 53 unnotched points in a Woodland mortuary at the North Site in Clinton County, Illinois and named them North points. He notes that they are found throughout the Great Lakes region, and that they are usually found in caches on house floors or in graves. The shape of many of the illustrated North points is not comparable to the Mackinaw blades, the former are more ovate in plan-view. But Perino (1985:275) illustrates one specimen that is longer and narrower with a slightly convex base, characteristics similar to the Mackinaw blades.

In the end, when weighing the antiquity

of the Mackinaw Cache blades, much of the evidence favors the interpretation that they are Woodland; only the style of notches and perhaps the pattern of flake removal appear to provide sufficient circumstantial evidence to tilt the balance to Archaic technology. In a roundabout way, this conundrum illustrates why careful recording of the context where artifacts are found is imperative. Without a clear understanding of their original context, even the most basic interpretations of artifacts such as their age may not be readily ascertained.

CONCLUSIONS

We are indebted to Frank W. Aldrich for investing in the acquisition of the Mackinaw Cache, but more important, we all benefitted from his donation of this collection to a museum where these extraordinary artifacts may be viewed by the public. The age of these specimens remains an unsolved mystery. Is the Mackinaw Cache an example of Classic Ohio Hopewell design rendered out of Burlington chert or perhaps an idiosyncratic design of a local Hopewellian knapper? Or, did an Early Archaic knapper produce these extraordinary blades? These questions and other alternatives may or may not be resolved by additional field work at the Aldrich site, but this situation underscores the fact that there is much more work ahead in our study of the points in particular and our understanding of prehistoric technology in general.

In addition to illustrating the importance of context, this exercise also brings to light the fact that archaeologists have yet to develop a reliable means of "fingerprinting" particular point types by developing a data base of comparative measurements. High-speed computers, powerful graphics routines, and digital cameras are tools well suited to the challenge. What we need now is a coordinated program of gathering measurements from artifacts found in well documented excavated contexts. Even if we are not able to glean additional information from the Aldrich site, today's technology might well still solve the mystery surrounding the antiquity of the Mackinaw Cache.

Finally, Illinois Archaeology Awareness Month provides an opportunity for all of us to reflect on archaeological discoveries, how they inform us about the past, and ultimately, to celebrate the rich cultural heritage of the state.

ACKNOWLEDGMENTS

Paul Schilkofski contributed copies of some of Frank W. Aldrich's correspondence and other materials regarding the Mackinaw Cache from the McLean County Historical Society collection. Pete Bostrom's extraordinary photographs and unmatched casts will bring the Mackinaw Cache to a much wider audience. Alice Berkson encouraged the idea of writing this essay and provided helpful editorial comments. I alone am responsible for any omissions or inaccuracies.

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Michael D. Wiant is Curator of Anthropology at the Illinois State Museum.

EXAMINING THE ROLE OF NETS IN SOUTH BRANCH PHASE CERAMIC VESSEL PRODUCTION

By David J. Nolan

Some aspects of prehistoric technology are more easily reconstructed than others. For example, our understanding of aboriginal stone tool manufacture has been greatly facilitated by the fact that flintknapping debris and stone tools are generally the most abundant remains found at nearly all Midwestern archaeological sites. In contrast, studies of more biodegradable industries, such as those involving fiber or woven products, are almost nonexistent because these remains are completely lacking or are only sporadically preserved at most open-air sites. The result is a very lopsided and incomplete view of past life ways and technologies. However, in the absence of actual specimens, one indirect way to examine the role biodegradable objects played in prehistoric technology is through the study of impressions found on fired clay objects, such as pottery vessels and daub fragments. This is not a revolutionary technique; Holmes (1884) and others were examining similar aspects of pottery production over a century ago!

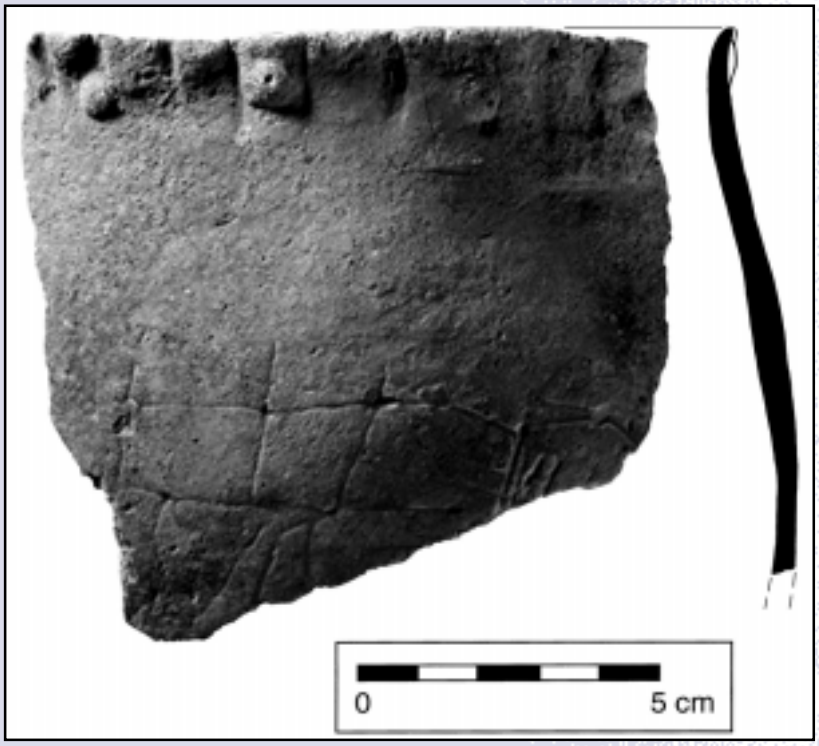

Figure 1 – South Branch Net Impressed vessel section.
Photo courtesy of Illinois Transportation Archaeological Research Program.

Using inferences drawn from the study of ceramic impressions, this paper examines the role that woven nets might have played in the production of pottery vessels during the early Late Woodland South Branch phase (ca. 300-600 A.D. [uncorrected]) of Adams and Hancock Counties, Illinois (Green and Nolan 2000). Ceramic vessels attributable to the South Branch phase afford a unique opportunity to examine prehistoric net making and the role it played in ceramic technology because these pots typically exhibit Z-twisted net impressions on their exterior surface. In Illinois, the proliferation of net-marked vessels is unique to the Lima Lake locality; only sporadic occurrences have been found elsewhere to date (Conrad 1981: 204-207; Green and Nolan 2000: 359-360; Forman 1980: 173-177; Neumann and Fowler 1952: 226). Two varieties of net-marked vessels are currently recognized from the Lima Lake locality: South Branch Net Impressed and South Branch Net Wrapped Paddle. The former type exhibits primarily a single net impression, whereas the latter has overlapping net patterns indicative of net wrapped paddle impressions (Green and Nolan 2000: 358-359, Figure 15.8).

Like most vessel surface treatments (*e.g.* cordmarking, fabric marking, etc.), these net impressions are not considered to be a decoration *per se* but appear to be a byproduct of the original manufacturing process. What role then, did nets play in the production of these pottery vessels? It seems clear from the type name that the overlapping net patterns evident on examples of South Branch Net Wrapped Paddle were produced while the still-plastic vessel was being formed using some type of paddle and anvil technique. However, in the case of South Branch Net Impressed, a single net impression could result from either molding or hang drying a pot in a net or net-like bag.

Vessel molding could have been accomplished by forming the pot in a net-lined cavity or hollow, such as a tree stump, a specially designed mold or basket, a previously broken vessel section, or a specifically shaped pit feature. As a result of such hand molding, a single or continuous net impression would likely cover the entire outer surface of the vessel. Unfortunately, there are currently no complete South Branch vessels available to trace the overall pattern, although the general lack of overlap in the net impressions that have been observed seems to indicate something other than a net wrapped paddle origin. The recovery of a small number of rim sherds that exhibit vestigial single net impressions extending from the rim exterior onto the interior are viewed as further support for the hand molding within a net hypothesis.

Once it was completely formed, the still-plastic South Branch pottery vessel could have easily been lifted from a mold by detaching the net from the rim and grasping the loose ends of the encompassing net. It was probably during these latter stages of production that the rim was finished and

decorative elaborations, such as nodes and rim tooling, would have been applied. As the upper rim area was finished and decorated, the original net impressions that resulted from production often were smoothed or inadvertently rubbed off, leaving a plain surface (Figure 1). The net that surrounded the body of a still-malleable pot also would have provided an effective means for hang drying the vessel prior to firing. Conversely, a single net impression could have resulted from the hang drying process alone. This alternative hypothesis would involve forming the vessel in a more standardized paddle and anvil technique using a plain or unwrapped paddle. The net impression found on the exterior vessel surface would have resulted from an imprint made while the vessel was inserted into a net to hang dry prior to firing.

Possible ceramic evidence for hang drying is found in occasional examples of slightly offset, faint mirror images of net marking that have been observed outside of the more regular net pattern on a number of vessels. These "extra" net or individual strand impressions probably were produced when the still-plastic or impressionable vessel either slipped inside the net during hang drying or as it was removed from the net in an incompletely dry state prior to firing. Interestingly, hang drying, whether in nets or woven bags, and the attendant pulling affects of gravity, may have also contributed to the pointed base shape of these vessels. In many modern pottery-making classes, formed ceramic vessels are dried in a similar process by hanging them in nylon stockings or hosiery. An unavoidable and generally unwanted byproduct of this modern version of the hang-drying process is the creation of pointed base vessels.

As can be seen from this discussion, woven nets appear to have played an important role in the production of South Branch pottery, a factor that clearly differentiates this ceramic ware from other contemporary wares such as Weaver and La Crosse. At our current state of understanding, it is difficult to pinpoint whether the net impressions found on South Branch Net Impressed ceramic vessels was produced during molding or hang drying because the available evidence can be used to support either hypothesis. Perhaps hang drying is the more likely technique because it seems unlikely that two different production sequences would have been used for the two currently recognized South Branch varieties. Clearly this issue is worthy of more detailed study and could benefit from some experimental replication.

However, while this technological aspect is germane to the theme of this issue of *Illinois Antiquity* and provides interesting fodder for discussion and debate, South Branch phase net use may have had a more profound and important social meaning that is worthy of mention. The net marking found on these ceramic vessels may have served as a valuable symbol of ethnic identity.

During the early Late Woodland period, faunal assemblages recovered from a number of excavated sites suggest that fish formed an unusually high percentage of the diet of prehistoric peoples who lived in or near the major valleys (Styles 2000). The South Branch people are no exception and it seems likely that nets similar to or the same as those used in pottery manufacture were employed during fishing. Many of the fish remains that have been recovered to date from South Branch phase sites are small-sized, strongly suggesting that nets or seines were involved in their capture. In an era where fishing obviously played such an important role in everyday prehistoric life, net use may have been an important physical metaphor that helped express group identity. Thus, the use of nets in the manufacture of South Branch pottery may be, to quote Green and Nolan (2000: 365), "more than an artistic or stylistic attempt to impart a group's symbol on a visible, portable artifact; it uses as that symbol a product of a manufacturing process that differs from that used by surrounding groups."

ACKNOWLEDGMENTS

I would like to thank the Illinois Transportation Archaeological Research Program and the Illinois Department of Transportation, especially Tom Emerson, Dale McElrath, and John Walthall, for supporting my research interests over the past few years. Thanks also go to Larry Conrad for reading and commenting on a draft version of this paper and continually acting as a sounding board for ideas. The accompanying figure was produced by Marcia Martinho and is used here with the permission of ITARP. Finally, I wish to thank Susan, my wife, for her tireless support and tolerance of my obsession with the past because it all too often takes time away from the present.

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THE USE OF BONE AND ANTLER: SOME OBSERVATIONS ON THE ARTIFACT ASSEMBLAGE FROM THE ROY MORRIS SITE, 11CW4.

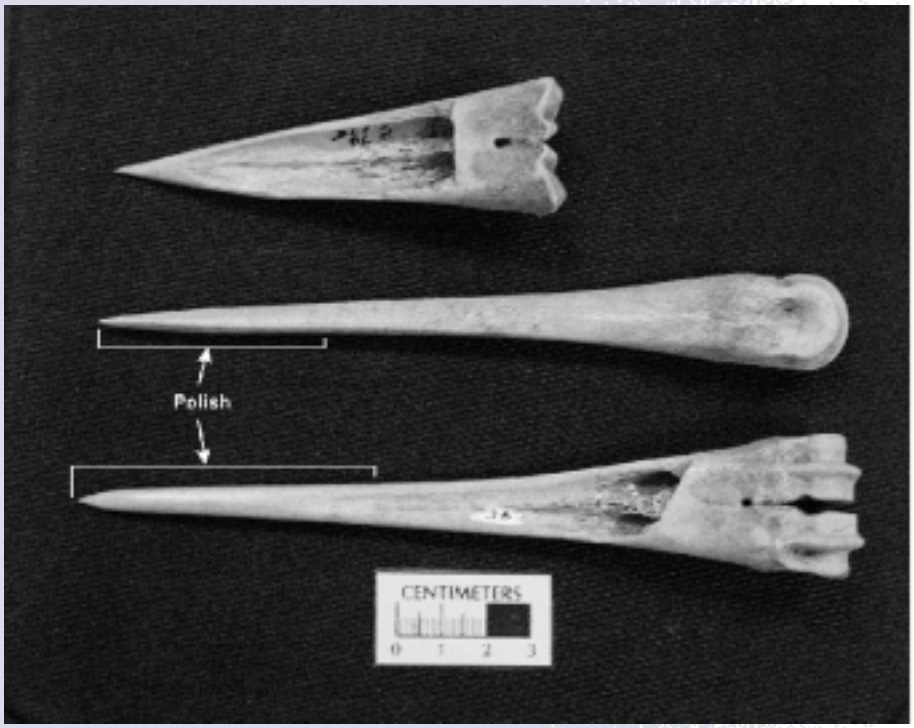
By William Gordon Howe

Excavations at the Roy Morris site, 11CW4, are providing a clearer picture of the importance of bone and antler tools in a chert-poor area. The Roy Morris site is a Middle to Late Woodland Allison-La Motte village located at the edge of the town of Palestine in Crawford County, Illinois. The site is on a late Pleistocene terrace and overlooks the La Motte Creek floodplain. The Wabash River is approximately 3.6 km (1.5 mi.) to the east.

The Allison-La Motte culture (Winters 1963, 1967) occupied a region along the Central Wabash River valley and Middle Embarras River in Illinois and Lower White River in Indiana. Spanning a period from the late Middle Woodland to the Late Woodland, this culture remains as little known and little understood as it did decades ago (Barth 1982; Stephens 1974).

Salvage excavations were conducted at the site by the Central Wabash Archaeological Society in 1970 under the direction of Denzil Stephens. The site was threatened by construction of a housing development. Removal of intact midden below a plow zone revealed a large number of pits and post molds.

During the summer of 2000, the author, working with the Central Wabash Archaeological Society, discovered a remnant of the village midden of the Roy Morris site that had not been impacted by the earlier housing construction. The artifact scatter was found in a cultivated field undergoing subdivision for a private development. With the support of the landowner, salvage work began in the summer of 2000. The field work should continue into 2002, with over 1,500 sq. m (16,000 sq. ft.) excavated. The field work is being conducted with labor provided by members of the Central Wabash Archaeological Society and other volunteers. A number of foreign exchange students have participated in the dig along with volunteers from Indiana, and in Illinois, volunteers have come from as far away as Chicago. The artifacts are currently at the Illinois State Museum for analysis and report preparation. At the completion of the project, the artifacts will be returned to the landowner and many will be placed on display in local museums.



Bone awls from the Roy Morris site 11CW4

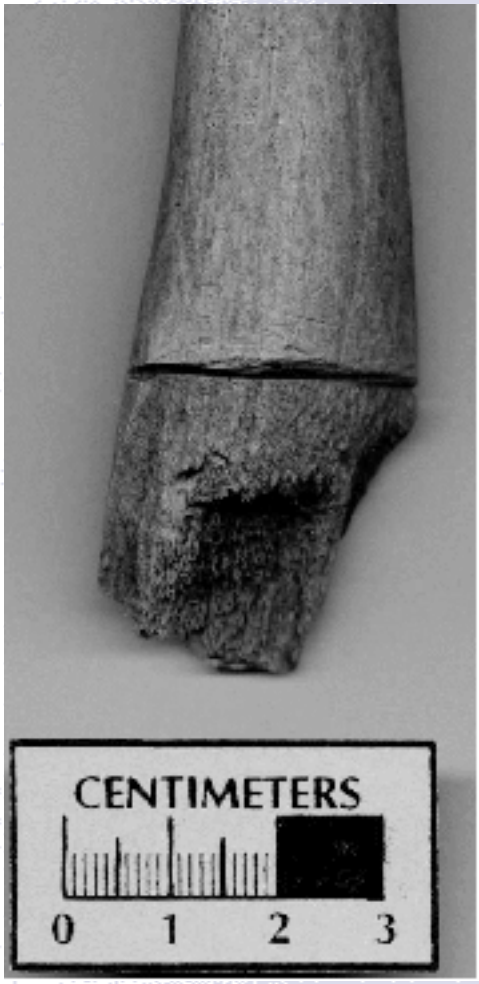
The most outstanding feature of the site is the excellent preservation of faunal and botanical remains. Along with a large amount of bone refuse, a large number of bone and antler tools have also been recovered. The inventory of tools includes needles, shuttles, deer metatarsal and metacarpal awls, ulna awls, turkey tarso-metatarsal awls, possible atlatl hooks, splinter awls, beamers, antler tip projectile points, pins or awls from swan metatarsals, bone tool handles, turtle shell bowls and cut and polished deer phalanges. Modified phalanges of white-tailed deer are thought to have been used for a cup-and-pin game. Some of the toe bones have been exposed to heat and blackened and have been polished. Other modified toe bones have not been blackened. This produced a set of black and white gaming pieces.

Bone items that may have served as ornamentation, or had a ceremonial function, include cut and ground deer craniums, bone tubes, and drilled turtle shells. During the 1970 excavations, a modified lower jaw of a timber wolf, a modified black bear maxilla and perhaps the most intriguing bone artifact from the site, a modified canid maxilla, were found in a single pit feature. Paul Parmalee, of the Illinois State Museum, analyzed selected bone tools from the assemblage. Parmalee described the canid specimen as very similar to other modified jaws found in Adena Mounds in Kentucky and Ohio. The Ayers Mound in Kentucky contained a similarly modified wolf maxilla that was partially within the mouth cavity of a burial. This has led to the speculation that these modified jaws were parts of masks used by shamans (Parmalee 1972).

While a formal analysis of the faunal material from the site has not been com-

pleted, a preliminary examination has produced some interesting data on the use of bone and antler. The majority of the bone tools from the site are not exhausted specimens or broken. Many of the metatarsal awls have long, delicate shafts with ends ground to a sharp point. The shafts of many of the awls vary in diameter and the ends vary from thin, delicate and pointed, to thick and blunt. This suggests a tool kit, perhaps containing a number of awls, each designed for a specific function. Polish on the shafts indicates the tools have been heavily used. There is no wear on the condyles of the metatarsal bones, indicating that the ends were probably wrapped or inset into handles.

The tools and other modified bone items were not found on the floor of pits, as they may have if the artifacts had been cached or left in the bottom of storage pits. Rather, bone artifacts were found in the pit fill along with domestic refuse that would typically result from house-cleaning activities. Why seemingly good, fully functional tools would be discarded is not known. One pit in particular produced three Lowe Flared Base projectile points and three complete metatarsal awls. The discard of seemingly good bone and antler might suggest that these tools had a low replacement value and that there was an excess of raw material. The bone and antler tools appear to have been used for a wide range of domestic activities such as the manufacture of clothing, bags and nets, hunting activities, personal ornamentation, gaming pieces and items that possibly served ceremonial functions.



Section of white-taild deer antler showing the tang produced during removal of the tine. The scorching from heating is not apparent on this specimen.

Charring on a large number of antler tines and discarded antler racks suggests that heat treatment may have been used in breaking the antler tips off the racks. A large amount of antler has been found in pit contexts, including two nearly complete racks of white-tailed deer. The tines of the antlers are the only used portion, with the remainder of the antler discarded. Individual antler tines show signs of charring or discoloration due to heating on one side at the broken ends. Similar charring and discoloration has been noted on the exterior surface of antler on discarded racks.

The tines appear to have been removed by first scoring the antler on the exterior side of the rack. The antler is then "heat treated" by applying heat to the scored segment. Enough heat is applied to cause some discoloration or blackening, but not enough to burn the antler. The tine is then snapped off toward the interior of the rack. This creates a clean break toward the exterior scored side of the rack, while producing a tang on the interior side. Mr. Lynn Stephens, President of the Central Wabash Archaeological Society, has conducted informal experiments using the "heat treating" method to break antler tines off white-tailed deer racks. Stephens found that heating a section of antler throughout will soften the antler and cause it to shatter when snapping off the tine. However, if only the exterior of the rack is heated along the scored section, the tine will break off easily without shattering and will produce a tang similar to that found on the prehistoric specimens. The function of the tang is unknown. It may have aided in hafting the antler tine or may simply be a product of breaking off the tine. The large number of antler tips found with tangs present suggests they were a functional part of the tool.

A substantial number of antler projectile points are being recovered from the site. No naturally occurring chert is found in this portion of the central Wabash Valley. Glacial chert is available from the glacial till and gravel deposits, but high-quality chert would have to be procured directly from source areas or through exchange. As is common on Allison-La Mottte sites in the region, chert debitage from chipped-stone tool production is not abundant and chipped-stone projectile points occur in low frequency. Given this, there appears to be a heavy reliance on bone and antler tools. Further analysis of the artifacts from the Roy Morris site will add considerably to our knowledge and understanding of the use of bone and antler tools by Allison-La Motte people.

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THE STEMLER BLUFF SITE: LITHIC ANALYSIS AT A LATE WOODLAND TO MISSISSIPPIAN OCCUPATION OVERLOOKING THE AMERICAN BOTTOM*

By Brian Adams

The Stemler Bluff site (11MO891) is located north of an unnamed hollow at the Mississippi River bluff crest approximately 2.4 km northeast of Valmeyer, Illinois in Monroe County (Fugure 1). The site is situated on a relatively broad upland ridge between drainage divides that drain northwest into the Mississippi River floodplain. The site is within the area of the new town of Valmeyer, relocated following the massive floods of 1993. Following Phase I and Phase II investigations (Wells and Burns 1993, McGowan, 1994), the Public Service Archaeology Program (PSAP) conducted excavations at the Stemler Bluff site from July to September, 1994.

The investigations documented and analyzed a total of 218 prehistoric features. Nine types were defined, including shallow, medium, and deep basin-shaped pits, bell-shaped pits, isolated post molds, single-post-and-basin structures, wall-trench structures, mortuary, and indeterminate features. Radiometric dates from carbonized nutshell and wood collected from 13 features provide conventional ^{14}C dates ranging from 1100--760 B.P. (ca. 850 - 1190 A.D.) The dates fall within the range assigned to the Late Woodland, Emergent Mississippian, and Mississippian periods. The assemblage contains extensive ceramic and lithic remains. The features, materials, and radiocarbon dates characterize the site as having recurrent occupation during a time span when cultural traditions in the American Bottom were changing rapidly. Occupation of the Stemler Bluff site appears to be continuous, although occupations were never extensive during any given cultural phase.

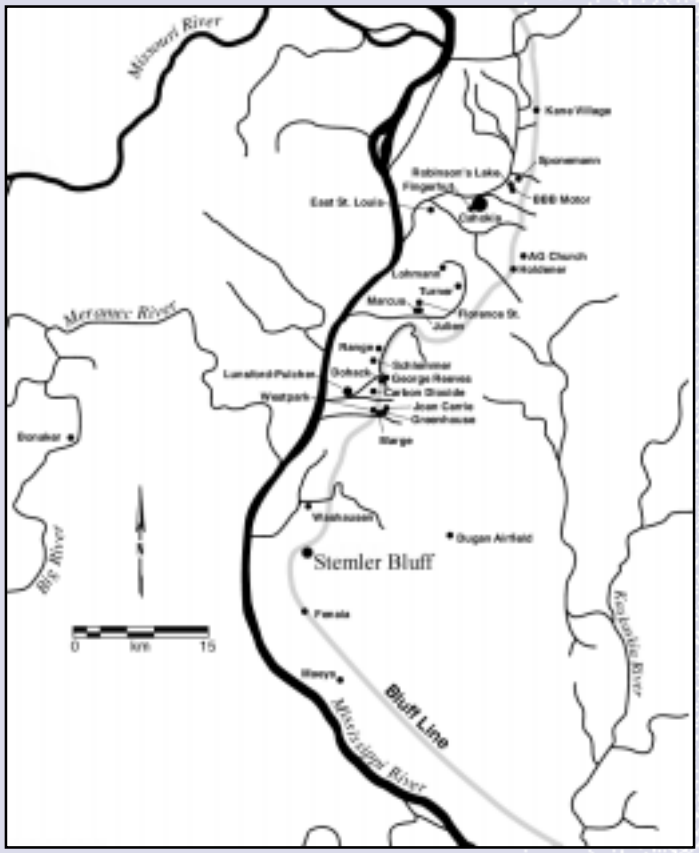

Figure 1 – Location of Stemler Bluff Site and other Late Prehistoric Sites in the American Bottom Region.

PSAP prepared a Research Report (Walz, et.al. 1997) detailing the Phase III investigations at the Stemler Bluff site. This article presents a summary of the lithic analysis included in the Phase III report; the reader is directed to that volume for complete data concerning the lithic analysis, including figures, tables and graphs.

Lithic remains represent the largest material set recovered from Stemler Bluff, a total of 56,771 items. Of these, 56,659 were recovered from feature contexts, and the remaining 112 were found while scraping the surface to expose features. Lithic remains consist of chipped-stone artifacts (tools and chipping debris), cobble tools, groundstone tools, and a variety of miscellaneous materials. Lithic artifacts can be used to address several issues relating to the occupation of prehistoric sites. Here, they will be used to investigate questions of site chronology, function, and lithic raw material utilization.

Although information regarding site chronology at 11MO891 is derived primarily from ceramic analyses and radiometric dates, diagnostic projectile points can complement this information. Projectile points have been identified through comparisons with defined types throughout the Midwest, particularly in the American Bottom region.

Site functions can be inferred through the examination of several characteristics of the lithic assemblage, including the presence and proportions of artifact and debitage types. These data are also incorporated into models of lithic manufacturing systems, and edge-wear analysis was conducted on a small sample of artifacts from the site in order to determine the functions of particular artifact types. The identification of site activities allows conclusions to be drawn regarding the possible role of 11MO891 in the Emergent Mississippian/Mississippian settlement system in this area.

CHIPPED STONE

The chipped stone assemblage from Stemler Bluff consists of both formally shaped tools and lithic chipping debris. Formal retouched tool types are relatively uncommon at the site and are dominated by bifacial artifacts such as projectile points. The bulk of the lithic material consists of waste debris produced by the manufacture of tools and flakes. Unmodified chert debris, such as flakes and blades, possess edges that

can be utilized with little or no edge modification. Lithic assemblages based on the use of such artifacts are referred to as "expedient technologies" and may reflect easy access to an abundant source of lithic raw material (Koldehoff 1987; Parry and Kelly 1987). As will be discussed below, the 11M0891 assemblage appears to be an example of an expedient lithic technology.

PROJECTILE POINTS

Fifty-one projectile points were recovered during the Phase III excavations. Of these, 44 were recovered from feature contexts while the rest were either piece plots between features or were recovered during surface scraping.

Although thirteen Archaic period projectile points were recovered from the site, the majority of projectile point types recovered from 11MO891 belong to the Woodland and Mississippian periods. Although Early, Middle, and Late Woodland types were found at the site, Late Woodland/Emergent Mississippian types dominate the projectile point collection, representing 67 percent (29 items) of all points recovered from the Stemler Bluff site (Figure 2) (Justice 1987; Kelly et al. 1987, 1990; Munson and Harn 1971; Perino 1971b). Six points are assigned to the Late Woodland/Mississippian Triangular Cluster. These include five Madison points and one Dupo type, which date to the Patrick phase of the Late Woodland in the American Bottom. Points belonging to the Scallorn Cluster are the most common types. Within this cluster, various types of Sequoyah points predominate. These include three Koster, eight Sequoyah, four Wanda, three Klunk Side Notched, and three Roxana points. In addition, there are two points which could not be assigned to specific subtypes within the Scallorn Cluster.

The dominance of Late Woodland/Emergent Mississippian projectile point types at Stemler Bluff is consistent with the temporal assignment based on the ceramic assemblage and the radiocarbon dates. The presence of point types dating to earlier periods most likely is the result of both repeated occupation of the site throughout prehistory as well as reuse of early types by the later occupants.

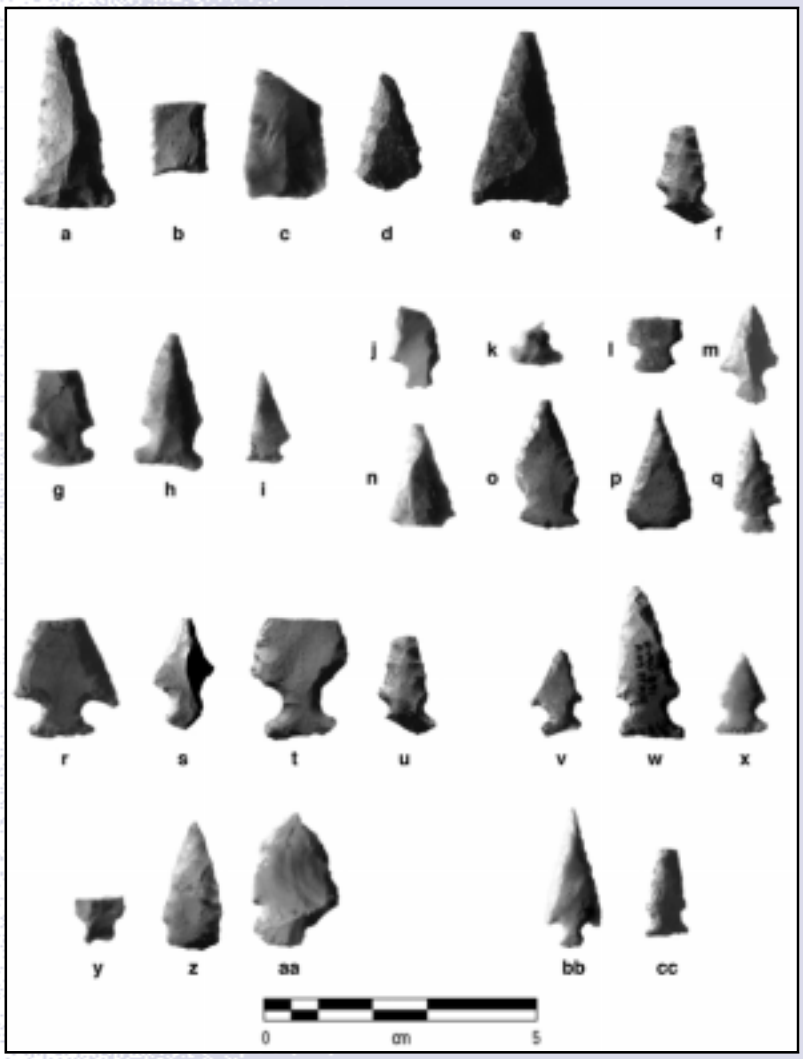

Figure 2 – Late Woodland/Emergent Mississippian projectile points: a-e, Madison; f, Dupo; g-i, Koster; j-q, Sepuoyah; r-u, Wanda; v-x, Klunk Side Notched; y-aa, Roxana; bb-cc, Scallorn Cluster.

OTHER CHERT TOOLS

Formal retouched tools are relatively rare at 11MO891, represented by 195 artifacts. If Late Woodland/Emergent Mississippian diagnostic projectile points are added to this total, this figure is 224 retouched tools. Late Woodland/Emergent Mississippian projectile points represent 12.9 percent of all retouched tools. The following discussion concerns nondiagnostic artifacts recovered from feature contexts. Bifaces and biface fragments make up the largest category of retouched artifacts at the site, a total of 81 items. Thin bifaces are the most common, accounting for nearly half of all bifaces, followed by thick and rough types. After bifaces, the most common chert tools are perforators, retouched flakes, wedges, end scrapers, chert hammerstones, hoes, gouges, and burins (Figure 3). Finally, the lithic debitage from feature contexts includes 449 utilized flakes and 19 pieces of utilized shatter.

The paucity of formally retouched tools at this site and the abundance of utilized flakes suggest that an expedient tool kit was a major component of the lithic inventory. As will be discussed in more detail below, expedient technologies involve the unpatterned flaking of lithic raw material and a heavy reliance on unmodified chipping debris for tools, and are characteristic of Late Woodland and Mississippian lithic assemblages in the American Bottom region (Koldehoff 1987). A survey of selected Late Woodland/Emergent Mississippian sites indicates that utilized chert debitage represents over half of the chert tool assemblages. The functions of a sample of these expedients tools from 11MO891are discussed in more detail below.

DEBITAGE

A total of 42,932 pieces of lithic debitage was recovered from feature contexts at 11MO891. Of this, 35.3 percent consists of block shatter, indicating that early stage lithic reduction was a common activity at this site. After shatter, the next most common category of debitage is broken flakes, followed by tertiary flakes, secondary flakes, bipolar flakes, primary flakes,

bifacial thinning flakes, blades, and hoe flakes.

NONCHERT LITHIC TOOLS

This class of tools consists of cobble and ground-stone tools. The 154 cobble tools consist of manos, metates, nonchert hammerstones, and pitted cobbles. Metate fragments are the most common type in this category, representing nearly half of this tool group. This type is followed by hammerstones, pitted cobbles, and mano/mano fragments. Ground-stone tools, a total of 53 items, consist of sandstone abraders, celts/celt fragments, and one limestone hoe. Limestone hoes are also reported from the Dohack and Range phase occupations at the Range site (Williams 1990a,b).

MISCELLANEOUS LITHIC MATERIAL

A variety of lithic raw materials also were recovered from the features at Stemler Bluff. The most abundant of these, both by number (more than 11,000 items) and weight, is limestone. This is followed by fire-cracked rock, small rounded pebbles, sandstone, hematite, limonite, unidentified stone, worked limestone fragments, discoidals, fossils, concretions, geodes, igneous stone fragments, and mudstone fragments. Finally, one example of each of the following artifacts was recovered from the site: granite fragment, quartz fragment, stone bead, and a calcite pipe fragment. The stone bead is a tubular type, similar to Late Woodland and Emergent Mississippian examples from the AG Church (Koldehoff 1996) and Sponemann (Williams 1991) sites. The pipe fragment consists of a rim from a finely worked, round bowl. X-ray diffraction analysis by the Illinois State Geological Survey determined that the pipe is made from calcite which occurs locally in the Valmeyeran Series of the Mississippian System (Dewey Moore, personal communication 1997). Two limestone pipe bowl fragments similar to that from Stemler Bluff are reported from the Dohack phase occupation at Range (Williams 1990a:220), and a large limestone effigy pipe was found at AG Church (Koldehoff et al. 1990).

LITHIC REDUCTION STRATEGIES

A total of 573 chert cores was recovered from feature contexts at Stemler Bluff.The most common among these are bipolar cores, representing 68.2 percent of all cores. This type is followed by multidirectional cores, planoconvex cores, unidirectional cores, and exhausted cores/core fragments. In addition to cores, 42 pieces of chert, some of which appear to have been tested prehistorically for quality, were recovered.

Cores recovered from 11MO891 permit some conclusions regarding lithic reduction strategies at the site. To begin, the abundance of cores indicates that lithic reduction was an important activity at Stemler Bluff, most likely relating to the abundance of chert in the adjacent bluffs. A survey of other Emergent Mississippian assemblages in the American Bottom region indicates that the cores are much more common at 11MO891 than elsewhere. Given the relatively small size of the Stemler Bluff occupation, the number of cores appears unusually high. Indeed, the closest values are from the Dohack and Range phase components of the Range site, which produced 429 and 356 cores, respectively (Williams 1990a, b). Based on the number of structures and features, the Emergent Mississippian components at Range clearly represent more intensive occupations than is probable at Stemler Bluff, yet lithic reduction does not appear to have been as important at the former as the latter.

Bipolar and multidirectional cores together account for 94 percent of all cores from 11MO891, and this pattern permits conclusions to be drawn about the lithic reduction strategies employed by the prehistoric inhabitants of the site. Koldehoff (1987:171) has proposed that different core types derived from a particular component of a site can be interpreted as representing points along a continuum of a lithic reduction strategy, and based on his analysis of lithic material from the east stockade area at Cahokia, he recognizes two chert reduction strategies for the Emergent Mississippian and Mississippian periods. The Ste. Genevieve trajectory results in the production of flakes, block shatter and exhausted cores while the Burlington trajectory produces flakes and block shatter, as well as "secondary" cores (e.g., multidirectional, bipolar, microlithic, and exhausted cores) produced from large flakes and block shatter. The different by-products resulting from the flaking of these two raw materials re-

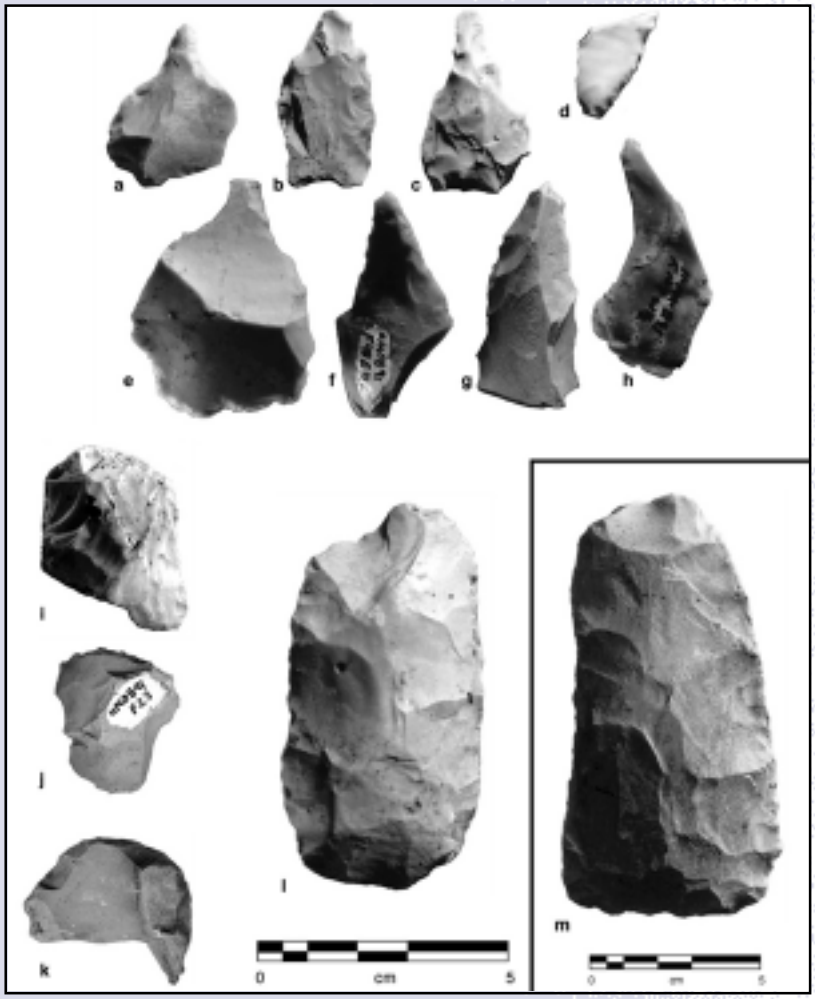

Figure 3 – Chert tools: a-h, perforators; i, wedge; j-k, end scrapers; l-m, hoes.

flects differences in their size and quality. Ste. Genevieve chert occurs as small nodules and is more brittle than Burlington chert, and therefore does not yield fragments suitable for use as secondary cores. At the Merrell Tract at Cahokia, Kelly (1984:43) observed that small nodular chert such as Ste. Genevieve was commonly reduced using a bipolar technology alone.

In the Stemler Bluff assemblage, 86.3 percent of cores made from Ste. Genevieve chert are bipolar, which suggests that, as at the Merrell Tract, this small nodular chert type was primarily using a bipolar technology. The remaining core types are represented primarily by Burlington, Fern Glen, and Salem cherts, and it is suggested here that reduction of these materials followed the Burlington trajectory. At 11MO891, 75 percent of Fern Glen, 61 percent of Burlington, and 71 percent of Salem cores are bipolar types while 34 percent of Burlington, 27 percent of Salem, and 15 percent of Fern Glen cores are multidirectional. It is suggested here that initial reduction of Burlington, Fern Glen, and Salem chert was accomplished by random, freehand flaking which produced multidirectional cores. This process produced an abundance of large flakes and block shatter which in turn were further reduced using the bipolar technique. The paucity of multidirectional cores made from Ste. Genevieve chert together with the small size of this material suggests that the bipolar reduction trajectory was the primary strategy utilized for this material.

Elsewhere in the American Bottom region an abundance of these two core types has been interpreted as evidence of an expedient lithic reduction technology (Koldehoff 1987). Such technologies involve "...simple pounding or smashing of cores in an expedient, nonformalized manner..." (Koldehoff 1987:167), and are characteristic of the American Bottom region from the Late Woodland through the Mississippian periods. Expedient technologies are correlated with increased sedentism and are highly wasteful of raw material. Such wastefulness can be explained by both the abundance of chert raw material in the region as a whole and the ease of access due to intraregional exchange networks in the densely settled American Bottom region (Koldehoff 1987:175). At the Stemler Bluff site it was most likely the rich supply of chert raw materials in the nearby bluff face which permitted the site inhabitants to invest little time and effort into core reduction and tool manufacture (Parry and Kelly 1987).

Additional information on lithic-reduction stages can be gleaned through a consideration of ratios of core to flakes and shatter to flakes. Jefferies (1982) has demonstrated that sites located closest to raw material sources produced debris from all stages of reduction and a core:flake ratio of 1:83 while upland sites with more limited access to chert raw materials produced a core:flake ratio of 1:500. At Stemler Bluff, the ratio of cores to flakes is 1:47, which is closest to the value derived by Jefferies for sites located near lithic sources.

The ratio of shatter to flakes is another useful indicator of the range of lithic-reduction stages represented at a site (Morrow 1982). Shatter is produced during the early stages of lithic reduction and is expected to be more abundant than other debris categories at sites where initial reduction was common. At Stemler Bluff, the shatter:flake ratio is 1:1.8, or approximately one piece of shatter for every two flakes. At BBB Motor (Emerson and Jackson 1984), an American Bottom floodplain site located approximately 1 km from the bluff line where chert outcrops occur, the shatter:flake ratio is 1:1.4, or about one piece of shatter for each flake. This indicates that shatter is nearly

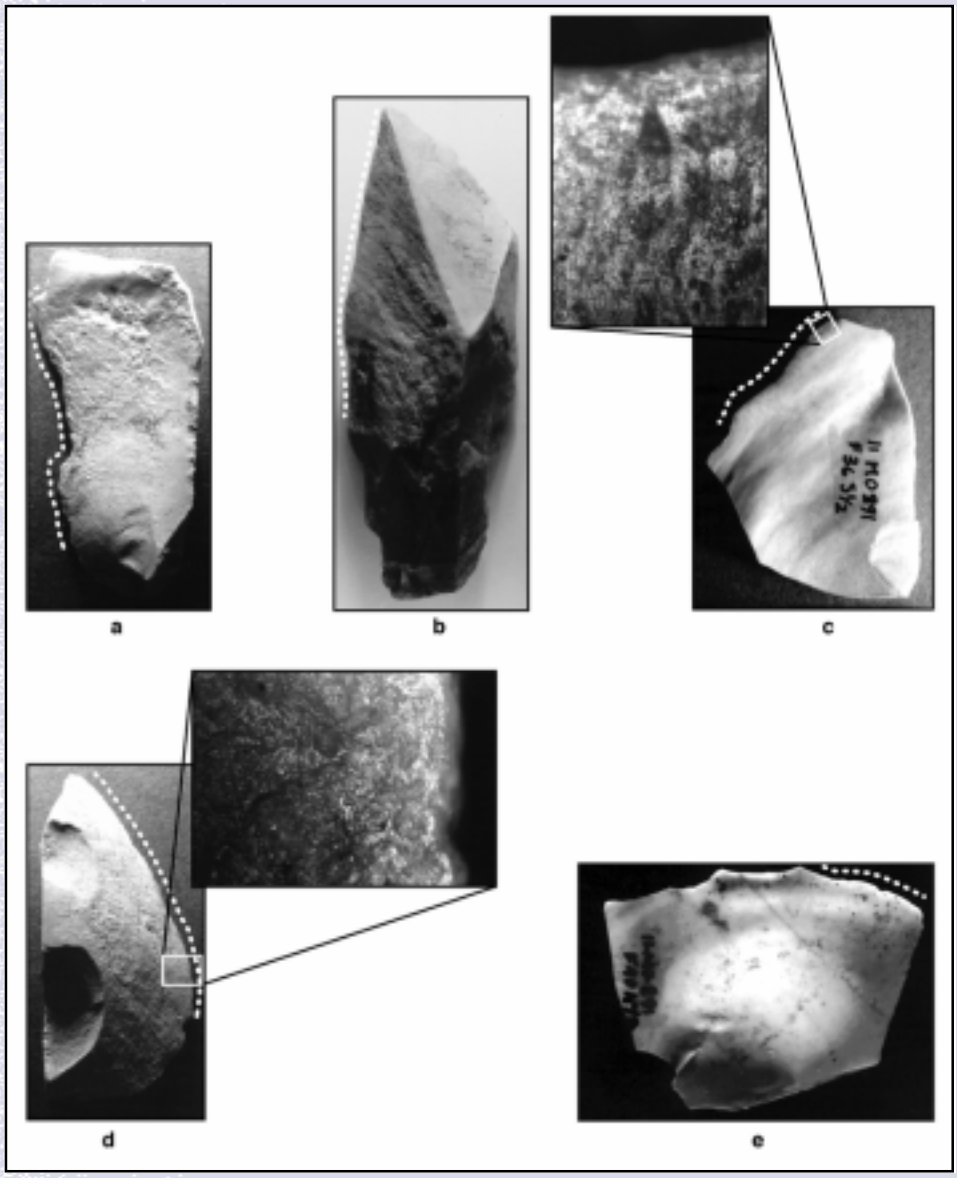

Figure 4 – Utilized chert artifacts analyzed for microwear traces: a-blade; b-block shatter; c-secondary flake; d-primary flake; e-secondary flake.

twice as abundant at Stemler Bluff than at BBB Motor, which most likely reflects the abundant lithic raw material available at the former. The shatter:flake ratio, together with the abundance of cores from Stemler Bluff, once again emphasizes the importance of all stages of lithic-reduction activities at the site.

AN EXAMPLE OF EXPEDIENT TOOL USE: MICROWEAR EVIDENCE

As stated above, the paucity of formally retouched tools at Stemler Bluff suggests that expedient tools were primarily used. Such tools exhibit minimal or complete lack of edge modification and may consist of suitably sized and shaped pieces of debitage selected from debris produced by raw material reduction. Microscopic analysis of a sample of lithic artifacts from 11MO891 provides evidence for the function of expedient tools at this site.

THE ANALYZED SAMPLE

A high-power microwear analysis was performed on nine artifacts from the 11MO891 collection. These consisted of four secondary flakes, two pieces of block shatter, one primary flake, one blade, and one chert cobble. These pieces were chosen for analysis because edge damage patterns suggestive of utilization were present on the secondary blade and block shatter, and due to the presence of a smooth, glossy polish (visible to the unaided eye) on all pieces.

Investigators working at Mississippian and Emergent Mississippian sites in the American Bottom have recognized two types of macroscopic "gloss" on chert artifacts (Fortier 1985:281; Milner 1983a:83, 1984c:46; Williams 1990b:461). "High gloss" refers to a highly reflective polish on a tool or flake which often exhibits numerous macroscopic striations. This polish is commonly found on chert hoes and hoe sharpening flakes (especially artifacts made from Mill Creek chert), and is the result of repeated contact with soil. "Low gloss" refers to a macroscopic polish on a tool edge which is very smooth but less reflective than high gloss. Macroscopic striations are rare to nonexistent on tool edges exhibiting low gloss. Seven of the artifacts chosen for microwear analysis exhibited a polish which is classified as "low gloss."

The "high-power" method of analysis, which determines tool function based on patterns of microwear polishes, striations, and damage on tool edges, was employed (Keeley 1980). The analysis was performed with a binocular, incident-light microscope with magnifications of 30x–400x. Artifacts were cleaned in an ammonia-based detergent prior to analysis. Preliminary analysis of the tools indicated that additional cleaning in dilute HCl and NaOH to remove organic and inorganic material adhering to tool edges was unnecessary. A comparative collection of 99 experimental stone tools was used to interpret the archaeological use-wear patterns. Experiments were designed to replicate as closely as possible activities that may have been performed aboriginally. These included scraping, cutting, piercing, boring, and sawing. In the following discussion, edge orientation is determined with the bulbar surface facing down and the proximal end towards the analyst.

Two artifacts from Feature 23 were examined. The first is a utilized blade (Salem chert) which exhibited edge damage scars on the left and right lateral edges (Figure 4a). A highly reflective, smooth polish is visible with the naked eye on the right lateral edge. Microscopic wear traces consisted of a pitted, invasive polish which formed a continuous band along the tool edge. These types of traces are associated with dry hide working. The second artifact from this feature is a piece of utilized block shatter made from Burlington chert (Figure 4b). This piece is long and narrow with a triangular cross section. A bright, smooth polish was observed along one lateral edge. Microscopic examination revealed a rough, pitted polish in this area, with several long, narrow striations perpendicular to the edge. The edge has been rounded. These traces indicate that this piece has been used to scrape dry hide.

One utilized secondary flake (Burlington chert) from Feature 36 was examined (Figure 4c). A very narrow band of bright, smooth polish was observed along the distal end of this piece on both the dorsal and ventral surfaces. When viewed under the microscope, this edge exhibited a rough, pitted polish which formed a continuous band along the distal end. The distal end also has been intensively rounded. These wear traces indicate that this flake has been used to scrape dry hide.

Two artifacts were analyzed from Feature 40. One is a utilized primary flake of Salem chert (Figure 4d). The left lateral, dorsal edge of this piece exhibited utilization damage and intensive edge attrition (rounding). Microscopic traces consist of a continuous band of rough, pitted polish and edge rounding that are interpreted as the result of dry hide scraping (Figure 4d, inset). The other analyzed artifact from this feature is a secondary flake (Burlington chert) (Figure 4e). Visual inspection of the piece revealed a highly reflective, smooth polish along the distal end, primarily on the ventral surface. This polish was restricted to a very narrow band along the distal edge. Microwear traces observed on this piece include extensive edge rounding; a continuous, invasive band of highly pitted polish; and wide, shallow striations perpendicular to the utilized edge. Based on these observations, this piece is interpreted as a dry hide scraping tool.

One thermally altered, utilized secondary flake from Feature 42 was examined. The right lateral edge of this flake exhibited a smooth, glossy polish and has been dulled from use. Microscopic inspection of this area revealed a continuous band of pitted polish with striations perpendicular to the edge. These traces indicate that this artifact was used to scrape dry hide.

The analyzed artifact from Feature 128 is a piece of utilized shatter of Fern Glen chert. Utilization traces were observed along one straight edge of this piece and consist of small, isolated flake scars and a very narrow band of glossy, smooth polish. This area revealed microwear traces associated with dry hide scraping, including a rough pitted polish extending along the utilized edge in an unbroken band, and a highly rounded edge.

One secondary flake of Salem chert was examined from Feature 129. A band of smooth glossy polish is visible along the distal end of this flake. When viewed microscopically, this polished area exhibited a rough, pitted band which extended along the entire distal end of this artifact. Microscopic striations were associated with this

polish and were oriented perpendicular to the edge. These traces are consistent with those produced by dry hide scraping.

A large, quadrangular piece of utilized block shatter from Feature 154 was examined. Visual inspection of this artifact revealed utilization traces on three edges. All three edges exhibited large flake scars, one of which also exhibited a smooth, glossy polish along the entire edge. Finally, one edge has been intensively rounded. Microscopic examination of the utilized edge with the large flake scars and glossy polish revealed a very bright, smooth polish with several striations perpendicular to the edge. Such wear patterns are the product of repeated contact with soil. The extensive damage along this edge in the form of large flake scars suggests that a great deal of force was exerted during tool use. Based on microscopic and macroscopic evidence, this tool is interpreted to be a hoe, which may have been used for agricultural purposes or pit excavation. Due to the restricted space between the microscope objective and stage, it was not possible to position this large artifact to view the intensively rounded edge. Such rounding or edge attrition is typically associated with hide working, and it is possible that this tool was used for a variety of activities during its use life. Another possible explanation for this edge rounding is that it is the product of hafting. The hoe blade may have been secured to a haft with hide bindings which eventually rounded the tool's lateral edge during use. Such wear patterns will result if the bindings are slightly loose, permitting the blade to move within the haft.

DISCUSSION

Initially it was thought that the smooth, glossy polish observed on these artifacts was a form of "sickle sheen" or "hoe polish" produced through contact with silica-rich plants or soil. Microscopic analysis revealed that this was true of only one artifact, the chert cobble from Feature 154. The remainder of the sample consisted of tools used to scrape dry hide. None of these artifacts were intentionally shaped tools. Rather, pieces of debitage were selected and used without modification.

As stated above, past excavations in the American Bottom have yielded artifacts exhibiting both high and low gloss. While high gloss can confidently be attributed to contact with soil, the factors accounting for the production of low gloss are uncertain, and interpretations have been based for the most part on speculation. Milner (1983a:83) attributes low gloss to woodworking, excavation, and haft abrasion while Fortier (1985:283) suggests that it is produced by digging, hoeing, or plant cutting. Williams (1990b:461), attributes it to woodworking at Range. However, the microwear analysis of the Stemler Bluff artifacts indicates that it is the product of hide working.

The use-wear analysis indicates that hide processing was one of the activities conducted by the prehistoric inhabitants of Stemler Bluff. While the presence of formally shaped scraping tools suggested that hide working was performed, this could not be demonstrated conclusively, and given the relative paucity of such tools (11 items), would not appear to have been a common activity. The use-wear data suggest the other artifacts classified as "utilized" may also have functioned as hide working tools. Depending on the intensity of use, the wear traces may or may not be visible as a "low gloss." Finally, the importance of hide working is further suggested by the relative abundance of perforators (53 items) which, after bifaces, represent the second most common type of formally shaped chert tools. Such tools may have formed part of a hide working tool kit which also included unmodified flakes and retouched scraping tools.

SUMMARY

The analysis of lithic material from 11MO891 permits several conclusions to be drawn regarding site activities and function and permits comparisons with other contemporary sites in the region. Analysis of the projectile point assemblage reveals that, with the exception of the Paleoindian period, all major prehistoric time periods are represented at the site. As other data from the site indicate that the most intensive occupation dates to the Emergent Mississippian/Mississippian periods, it is likely that point types from earlier periods represent either earlier, ephemeral occupations or artifacts collected by the most recent prehistoric inhabitants of the site.

The abundance of utilized chert debitage and paucity of formally shaped tools, and the abundance of multidirectional and bipolar cores indicate that expedient reduction systems and tool kits were employed. In this respect, Stemler Bluff is typical of contemporaneous sites in the American Bottom region. In addition, use-wear data and the relative abundance of perforating tools indicate that hide processing was an important activity at the site and that this activity was at least in part performed with expedient tools. Artifact production was also another important activity at 11MO891 as is indicated by the abundance of cores, chipping debris, and hammerstones. Other site activities indicated by the lithic material include excavation/cultivation (hoes and hoe flakes), grinding (manos/metates), and abrading (sandstone abraders). Hoes may have been used for cultivation and/or feature excavation while the manos and metates could have functioned to grind foodstuffs such as seeds or corn. The sandstone abraders suggest that tools of perishable material, such as bone, antler, or wood were produced at the site. Artifacts which could have been produced with sandstone abraders include bone needles and awls.

The analysis of a sample of chert artifacts for raw material type indicated that local lithic material available in nearby Dennis Hollow and the adjacent bluffs primarily was utilized. Nonlocal raw materials represent a minor proportion of the analyzed sample and indicate that small quantities of chert were secured from sources between 100 and 170 km southeast of the Stemler Bluff site. The use of Mill Creek chert for hoes is indicated by the 11MO891 assemblage, which again is typical of Emergent Mississippian sites in the American Bottom region.

Few nonutilitarian lithic artifacts were found at Stemler Bluff. Those present include a single stone bead, a calcite pipe bowl fragment, and a few discoidals. As with the mortuary data, this suggests that social stratification was minimal at the site.

In sum, the lithic material suggests that Stemler Bluff was occupied by a relatively egalitarian group involved in a range of activities. The abundance of chert chipping debris indicates that stone artifact production was an important activity at the site. In most respects, 11MO891 fits well within the pattern of lithic raw material utilization observed for other contemporary sites in the American Bottom region.

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Figures courtesy of Public Service Archaeology Program, University of Illinois Urbana-Champaign.

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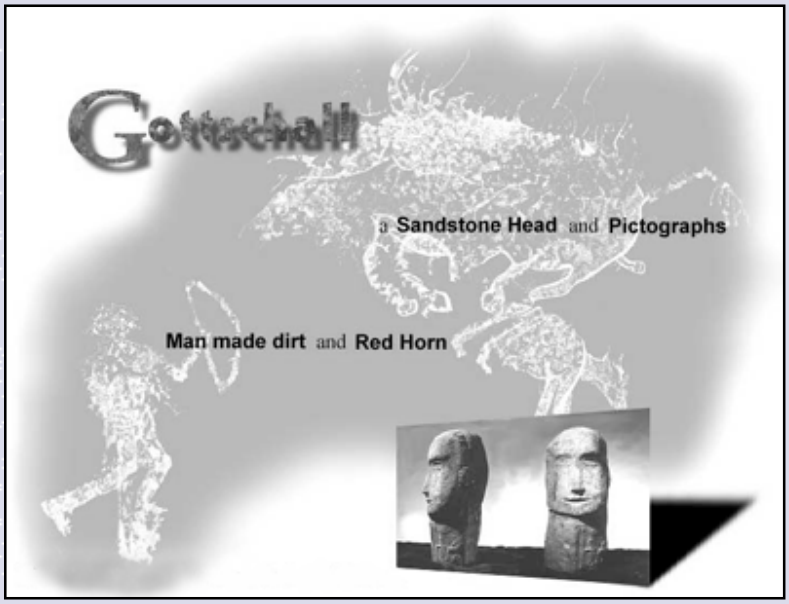
ARCHAEOLOGY NEWS

A Book Review . . . *By Timothy R. Pauketat*

The Gottschall Rockshelter:
An Archaeological Mystery.
Robert J. Salzer and Grace Rajnovich

Prairie Smoke Press, St. Paul, Minnesota, 2000. xiv+95 pp., 56 fig ures, 3 tables, references. $19.95 (paper).



Learn more about Gottshall Rockshelter at:
http://www.pclink.com/deborah/gotttitle.htm

The Gottschall Rockshelter is quite possibly the most important archaeological site to be discovered in the Midwest in the last two decades! Why? Gottschall is in some ways a dream site. It has elaborate pictographs, a carved stone idol, special layers of ritual earth, cached artifacts, wooden platforms, and clear connections with living people--namely the Ho-Chunk (Winnebago) of Wisconsin. Using these things and these connections, a team of archaeologists headed by Dr. Robert Salzer has labored long and hard to tell a compelling story that all who read this review should want to know more about.

The rockshelter itself consists of a modest cave of sorts, with a floor that dips back toward the rear where panels of elaborate Woodland and Mississippian era paintings were first brought to the attention of archaeologists after their re-discovery in 1974. Of these, the most amazing is a group of pictographs that, with the aid of contemporary Ho-Chunk interpreters, are persuasively argued to tell a story about "Red Horn," an Indian man who was thought to be the reincarnation of one of the founding supernatural beings of the universe, "He-who-wears-human-heads-as-earrings." The heroic story of Red Horn, as recorded elsewhere and as told in the Gottschall artwork, explains how he encountered a group of giant people, beat them in a game of lacrosse, was killed and, subsequently, resurrected. At Gottschall, the story was recorded during the Late Woodland Effigy-Mound period, dated by the archaeologists using the materials associated with the painting of the pictographs themselves. But the history of the ritual use of the case reaches back through the earlier Woodland period and forward into the 19th century, when Ho-Chunk seem to have still visited the site, leaving behind their own etched letters that seem to confirm the Red Horn interpretation.

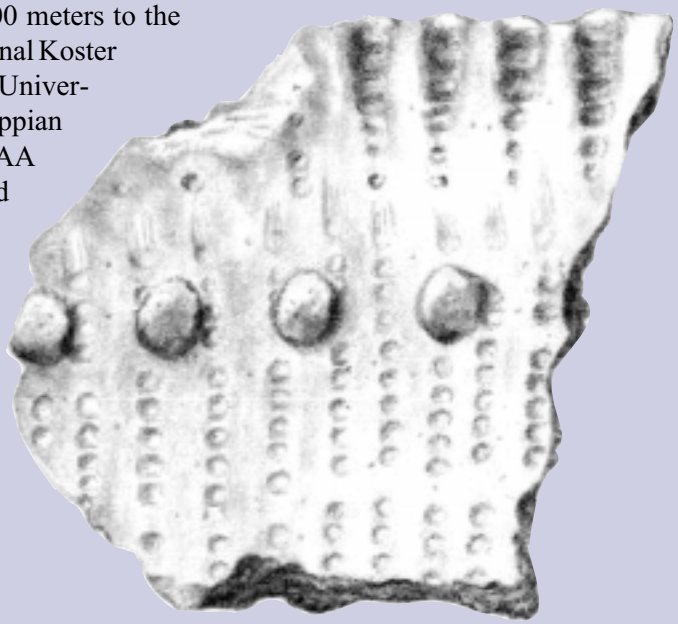
What is so amazing about the Gottschall pictographs is that they are linked with other datable features and artifacts in this cave that help explain how important this mythical story was to native people and to a contemporary understanding of Midwestern pre-Columbian history. The smears of paint residues from the artists who painted the walls were found right below the paintings! A series of possible platforms for painting or viewing the panels were found too, as was an earthen platform of a sort, with intricately and very deliberately layered, colored, and sometimes burned deposits of special ritual earth. These so-called "anthroseds" (anthropogenic sediments) were manufactured over a 1700-year period in or around this cave using ash, limestone, pigments, crushed animal bone and mussel shell, and some crushed crystals. Salzer and Rajnovich speculate that there might even be a bird effigy mound still buried inside the unexcavated earth in this cave. Nearby are two "wing-pits," special storage pits that contained unusual materials -- sprinkled earth rolled up in four animal hides, capped by a large sandstone boulder. In one of these wing-pits was a cache of 24 arrowheads (not illustrated). Not too far away, next to the Red Horn panel, was another small pile of rubble that included the now-famous carved stone head, itself almost a foot high. This head may represent one of the mythical figures of the cave and was specially buried face down along with other debris.

The authors do a fine job conveying the importance of this one-of-a-kind site with its one-of-a-kind finds. They are remarkably sensitive to the relevance of this place to the Ho-Chunk people of the upper Midwest, who in fact play an integral part interpreting the finds of the Gottschall Rockshelter. You read this book thinking that the interests of archaeologists and the heritage of the Ho-Chunk are not really very far apart. That is a praiseworthy achievement for such a book. But if there is a site that could help bring this about, it is Gottschall. And if there is a archaeologist who can bring it about, it is Dr. Robert Salzer. Salzer and Rajnovich tell the Gottschall story and explain their archaeological reasoning using clear, no-nonsense language and ample illustrations. As they do, the excitement of discovery is transferred to the reader. Overlook a few misspellings and a few low-resolution photographs. Go, buy and read this modest paperback book by sending $19.95 and $3.00 shipping to Prairie Smoke Press, 7125 Willow Lane, Brooklyn Center, MN 55430. It is a good lesson in archaeology, history, and heritage.

Reviewed by Timothy R. Pauketat, Department of Anthropology, University of Illinois, Urbana-Champaign.

THE CENTER FOR AMERICAN ARCHAEOLOGY RETURNS TO THE KOSTER SITE

The Center for American Archeology's (CAA) Summer 2001 field sessions, led by Site Director Karen Atwell and the Director of Education Mary Pirkl, resumed at the Koster South site, located approximately 400 meters to the south of the original Koster site. While excavating at the original Koster site (Koster "North") in 1969, field crews from Northwestern University completed testing at Koster South, discovering Mississippian Period (A.D. 1000-1300) houses. In the Spring of 2000, the CAA summer Field Schools returned to the Koster South site and during the excavation the crew found a strong presence of Middle Woodland Period (50 B.C.- A.D. 250) artifacts, which was not well represented at Koster North. As the CAA Field Schools recommence this year, the Middle Woodland Period has continued to be a strong component of the archeological record. Post molds, pit features, trade items such as rolled copper, drills, a metate and mano, blades, cores, points, a hoe fragment, and sherds from the Havana, Baehr, and Hopewell series are some of the Middle Woodland artifacts that have been recovered. The continuation of the work at Koster South should give the CAA archeologists and field school participants a better understanding of how the site was settled temporally and spatially, and about the Native Americans that thrived in the Koster area for over 8,000 years.



Middle Woodland Hopewell sherd with a cord impressed rim, grass node impressions, nodes, and straight dentates. Lisa Sowers, Women in Archeology Intern, Center for American Archeology

Jill Clay
Assistant Director of Education, Center for American Archeology

STONE TOOL WORKSHOP

The Sun Foundation is sponsoring a flintknapping workshop on October 19, 20, and 21, 2001. Nationally-known instructors Eddie Starnater and Bill McConnell will conduct the hands-on workshop, which will take place from 9:00 am to 6:30 pm each day at the Sun Foundation Center near Washburn, IL, northeast of Peoria. The course will cover everything needed to get started: quarrying, spalling, percussion flaking, pressure flaking, arrowhead, knife blade production and more. All tools and rock will be provided, but you are welcome to bring your own. Cost for the workshop is $220, with student and senior discounts available. For more information please contact the Sun Foundation at (309)246-8403 or check their web site at **www.sunfoundation.org/prod/events/programs/flintknapping.asp**.

INTERNET INSIGHTS

Here are a few places to go on the world wide web for images and information about prehistoric technology:

http://members.aol.com/artgumbus/lithic.html
An extensive site on North American projectile points and lithics.

www.lithiccastinglab.com
Spectacular images of stone tools from Pete Bostrum; includes a time line.

www.hf.uio.no/iakk/roger/lithic/sarc.html
Stone Age Reference Collection site is for European artifacts but contains detailed definitions and references.

www.uwlax.edu/mvac
Mississippi Valley Archaeology Center has basic lithic information and a projectile point guide to western Wisconsin artifacts.

http://archnet.asu.edu
The ArchNet web site from Arizona State University has extensive links to archaeology web sites including specialized topics in lithic analysis.

SOCIETY BUSINESS

IAAA PERMANENT FUND

IAAA PERMANENT FUND — GROWING WITH YOUR HELP

by Earl A. Fey

The IAAA Permanent Fund (PF) was established in 2000 to provide support for worthy archaeological projects in Illinois. The fund now has received over $6,000 from a challenge grant, chapter donations, life memberships, a memorial fund, and friend donations. The fund welcomes all additional donations -- from IAAA members and friends, life memberships, and chapter donations. The PF trustees will emphasize raising donations from businesses that service archaeology and other corporations and groups. A promotional brochure has been prepared to assist in fund-raising activities.

The trustees want to see the fund grow, and when it reaches $10,000 grants can be made from the accrued interest, but the fund will not stop there. The help of all IAAA members is needed to grow the fund and thus increase our contribution to archaeology projects, education and service in Illinois.

At the April 2001 IAAA Annual Meeting, the following Permanent Fund Trustees were elected: Earl Fey (6-year term), Cahokia and East Central Chapters; Les Milligan (6-year), Chicago; John Beck (3-year), East Central; and Warren Hastings (3-year), South Suburban. The fifth trustee, Bob Nale, is an IAAA Board Member and appointed liaison with the IAAA Board. The fund chairman is Earl Fey, John Beck is the scribe, and Bob Nale is fund treasurer.

The trustees will be asking the chapters and members for help in fund raising. The fund will provide brochures, other promotional materials, and fund-raising ideas. The trustees will also develop a set of guidelines for the selection of grants and the terms of the grant. If you are considering a Life Membership ($300 individual, $500 joint), make your check payable to **IAAA** and send it to: Mary Hanning, IAAA Secretary, R.R. 1, Box 63, Huntsville, IL 62344. If you plan to contribute through a direct gift, donation, etc., make your check payable to **IAAA Permanent Fund** and send it to: Robert Nale, Treasurer, IAAA Permanent Fund, 20548 Greenwood Drive, Olympia Fields, Illinois 60461. Inquiries about any type of donation to the Permanent fund are welcome. Please get in touch with Earl Fey at 617 Charmont Dr., Ferguson, MO 63135, (314) 522-3570, e-mail **IDALL@aol.com** or Bob Nale at the above address or (708) 747-2954, e-mail **archnale@clickbang.com.**

Earl A. Fey is a retired architect and contractor and an active member of the Cahokia and East Central Illinois Chapters of the IAAA. He was a member of the committee that developed the philosophical intent and operating parameters of the Permanent Fund. He also volunteers at Cahokia Mounds site and other sites in Illinois.

ILLINOIS ARCHAEOLOGY AWARENESS MONTH 2001 POSTER AVAILABLE

The Mackinaw Cache Blades poster with the stunning image by Pete Bostrum is available for purchase. You can obtain one by sending a check for $5.00 per poster, made out to **Illinois State Museum Society** and mailing it to Leslie Cline, Illinois State Museum Research & Collections Center, 1011 East Ash St., Springfield IL 62703. If you have questions, you may telephone her at (217) 785-0037, or send an e-mail to cline@museum.state.il.us.

DISCOVER ILLINOIS ARCHAEOLOGY

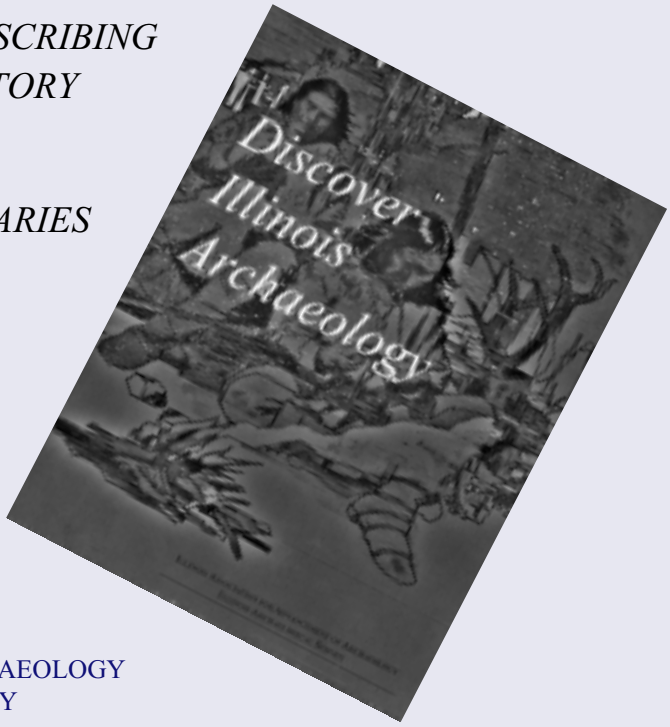
28-PAGE SUMMARY OF ILLINOIS CULTURE HISTORY FEATURES A FULL-COLOR COVER AND INCLUDES

A CULTURE HISTORY OF ILLINOIS DESCRIBING SEVEN PERIODS OF ILLINOIS PREHISTORY AND HISTORY

REGIONAL ARCHAEOLOGICAL SUMMARIES

A TIME LINE CHART SHOWING THE CHRONOLOGY OF ILLINOIS ARCHAEOLOGY

A LIST OF SUGGESTED READINGS



This is a joint publication of the
ILLINOIS ASSOCIATION FOR ADVANCEMENT OF ARCHAEOLOGY
and the ILLINOIS ARCHAEOLOGICAL SURVEY

DISCOVER ILLINOIS ARCHAEOLOGY

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ILLINOIS ARCHAEOLOGICAL SURVEY
2001 WORKSHOP ON ILLINOIS ARCHAEOLOGY
November 30 - December 1
– hosted by –
Aurora University and Allied Archeology

The 2001 IAS Annual Workshop on Illinois Archaeology will take place Saturday, December 1 at Aurora University. The Saturday morning invited paper session will address the theme ***Illinois Archaeology – Taking Stock in a New Millennium.*** Papers will be presented in the University Banquet Hall in the lower level of Alumni Hall. Lunch is on your own. On Saturday afternoon, an informal workshop will take place in Dunham Hall featuring artifact and informational displays from notable northern Illinois sites. Along with professional archaeologists, avocational archaeologists are encouraged to bring displays of artifacts or projects in northern Illinois. The Schingoethe Center for Native American Cultures will also be opened especially for workshop attendees. The Schingoethe Center is a museum which collects, preserves, exhibits and interprets Native American material culture and art. You can learn more about the museum by going to their web site at www.aurora.edu/museum.

MEETING SCHEDULE

Friday, November 30	**Hampton Inn**
7:00 p.m.	Annual Business Meeting (IAS Members Only) Cash Bar following the business meeting is open to everyone attending the workshop
Saturday, December 1	**Aurora University (Open to the Public)**
8:00-9:00 a.m.	Coffee & Donuts, Book Sales Start (University Banquet Hall, lower level of Alumni Hall)
9:00-10:30 a.m.	Invited Papers
10:30-10:45 a.m.	Break
10:45 a.m.-12:15 p.m.	Invited Papers
12:15 p.m. - 1:15 p.m.	Lunch (on your own)
1:15-4:00 p.m.	Workshop (Dunham Hall): Notable Northern Illinois Sites and the Schingoethe Center Museum

ACCOMMODATIONS

A block of 40 rooms has been reserved at the Hampton Inn at Orchard Road and Interstate 88 (the East-West Tollway) on the northwest side of Aurora. The Hampton is currently under construction. Should it not be open for business by Nov. 30, our room block and meeting venue will shift to the Comfort Inn & Suites in downtown Aurora. Please check the IAS web site (**http://museum.state.il.us/ias/Mtg_menu.htm**) for updates.

The owner of the Hampton and Comfort Inns are offering special rates ($89.00 single or double, $10.00 extra per person), but they will hold these rooms only until October 30, so make your reservations early to ensure that you have a room. Call the Comfort Inn to make reservations and be sure to mention that you are with the IAS.

Hampton Inn
2423 Bushwood Drive
(I-88 & Orchard Road)
Aurora, Illinois 60506
Fax: (630) 896-2887

Comfort Inn & Suites
111 North Broadway (Route 25)
Aurora, Illinois 60505
Phone: (630) 896-2800

Other motels are available in the Aurora area. Here is a list of the nearest:

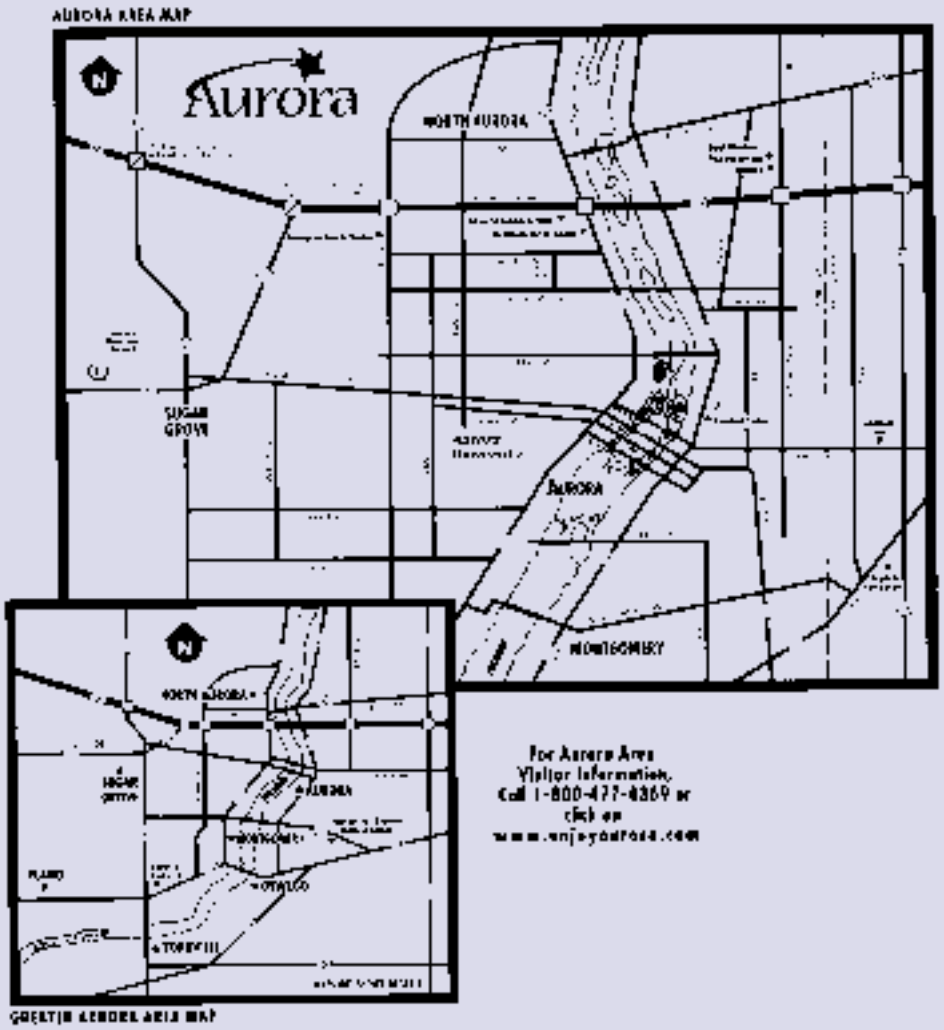
Best Western Fox Valley Inn
2450 N. Farnsworth Avenue
Aurora, IL 60504
(630) 851-2000
(800) 446-4656 (toll-free)

Howard Johnson
306 S. Lincolnway
North Aurora, IL 60542
(630) 892-6481

Motel 6
2380 N. Farnsworth Avenue
Aurora, IL 60504
(630) 851-3600
(630) 778-1441 (fax)

Sleep Inn
1831 W. Diehl Rd
Naperville, IL 60563
(630) 778-5900

Super 8 Motel
4228 Longmeadow Drive
Aurora, IL 60504
(630) 898-5419
(630) 898-6087 (fax)



REGISTRATION

Date	Event	Advance Registration
Friday, Nov. 30 9:00 p.m. - ?	Hampton Inn, Aurora Cash Bar, following IAS Business Meeting**	
Saturday, Dec. 1, 8:00 a.m. - 4:00 p.m.	IAS Workshop (coffee & donuts), Open to the public, Aurora University	$5.00/person
	Total Amount Enclosed	_____

Name(s):_____
Address:_____
E-mail and/or Phone Number: _____
Please check here if you or your IAAA chapter would like to have table space for the afternoon displays on northern Illinois archaeology_____
If you have questions, please call Douglas Kullen at 630-896-9375.

Advance registration must be postmarked no later than November 15, 2001
Make checks payable to **Allied Archeology** and mail to:
Douglas Kullen, 239 S. Calumet Avenue, Aurora, Illinois 60506.

***The Hampton Inn is currently under construction. Should it not be open for business by Nov. 30, our back-up meeting venue is the Comfort Inn & Suites in downtown Aurora. Please check the IAS web site (http://museum.state.il.us/ias/Mtg_menu.htm) for updates. There is no charge for IAAA members to join IAS members at the cash bar following the IAS business meeting. If IAS members are using this form for advance registration, they should enclose an additional $5.00.*

PURPOSE

The IAAA was founded in 1969 to unite all persons interested in the archaeology of Illinois - amateurs, professionals, students, and educators. The purposes of the association are preserving prehistoric and historic archaeological sites, information, and artifacts; encouraging and participating in scientific investigations and research; and fostering constructive public and governmental attitudes toward the archaeology of the State of Illinois and contiguous regions. The association and its members are opposed to the destruction, unauthorized excavation, or looting of archaeological sites and actively discourage commercialism in archaeological artifacts.

BENEFITS

The IAAA holds its annual meeting each April and participates in an annual Workshop on Illinois Archaeology each November with the Illinois Archaeological Survey (an organization of research and professional archaeologists). Meeting dates and locations are published in Illinois Antiquity.

Local chapter meetings, annual statewide meetings and workshops, and publications of the IAAA all provide forums for the exchange of ideas and information, identification of artifacts, descriptions of archaeological techniques and goals, discussions of current research, and sources for further reading and study. Many meetings feature presentations by scholars knowledgeable in archaeology, ethnology, and history. People with all levels of interest, knowledge, and commitment can benefit from membership.

Members of IAAA receive Illinois Antiquity quarterly and an occasional journal, Rediscovery. Membership in IAAA can be at-large or through one of our local chapters. Members-at-large should pay their dues directly to the IAAA Treasurer. Chapter members should pay both state and local dues to their chapter treasurer.

MEMBERSHIP INFORMATION

Membership is by calendar year.

Active	**$12.00**
Family	**$15.00**
Student	**$8.00**
Sustaining	**$30.00**
Joint Sustaining	**$40.00**
Institutional	**$30.00**
Life	**$300.00**
Joint Life	**$500.00**
Benefactor	**$750.00**

Mail membership applications to Mrs. Glen Hanning, RR 1, Box 63, Huntsville, IL 62344. Make checks payable to the Illinois Association for Advancement of Archaeology. The Illinois Association for Advancement of Archaeology is a not-for-profit, 501 (C) (3)organization. Donations to the association are tax deductible.

Illinois Antiquity

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