

Iowa Archeology News



Newsletter of the Iowa Archeological Society

Est. 1951

Volume 52, No. 2

Issue 182

Summer, 2002

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SOME REFLECTIONS ON IOWA ARCHAEOLOGY AND THE IOWA ARCHEOLOGICAL SOCIETY

By
Joseph A. Tiffany
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Mike and Nancy Heimbaugh asked me to share some thoughts on my nearly 30 years of work in Iowa archaeology and with the Iowa Archaeological Society (IAS). The time is appropriate. In July, I will move to Wisconsin to become Executive Director of the Mississippi Valley Archaeology Center (MVAC) and a tenured full professor in the Archaeology program at the University of Wisconsin-La Crosse. This is a wonderful professional opportunity for me. Unfortunately, the State of Iowa offers no such opportunity.

Leaving Iowa was a tough decision for me. I come from five generations of Iowa farmers on both sides of my family. My research interests are in Iowa, and most of my family still resides here.

But as you may have read or heard, Iowa's institutions of higher education are losing top faculty and professionals to other states at an alarming rate. Vacancies created by these departures are going unfilled and unfunded, a situation exacerbated by Iowa's budget problems.

So, here is my first reflection, and it is a sour one. It is by no means certain that ISU will continue undergraduate and graduate training in Midwest and Plains archaeology through the Iowa State University Archaeological Laboratory (ISUAL) founded by Dr. David M. Gradwohl 38 years ago. Losing ISUAL—one of the few remaining Midwest graduate programs that focus on prairie-plains archaeology—would be most unfortunate. I am concerned about the future of archaeology at ISU and doubly concerned about the prospects for ISUAL and the pre-professional graduate training it has provided Iowans through the years.

Other reflections, however, focus on the many "adventures" I have shared with IAS members over my years as an undergraduate at The University of Iowa in the 1960s, a graduate student at the University of Wisconsin-Madison in the 1970s, as first Assistant then Associate Director of the Office of the State Archaeologist from 1976 to 1986, and since 1994, as a faculty member in ISU's Anthropology Department. Among these adventures was working with Duane Anderson. When I met Duane, he was Director of the Sanford Museum and Planetarium in Cherokee and President of the IAS. Together we hatched the idea of providing a field school for IAS members in 1974 at the Chan-ya-ta Mill Creek culture site in northwest Iowa where I was doing my dissertation research. Although IAS members had been actively involved in research projects in the past, I think this was the "first" official IAS field school. I am pleased to see that

through the years, IAS field schools have become an integral part of the ongoing opportunities available to IAS members.

Duane and I hooked up again at the OSA where Duane continued to promote and develop public archaeology programs. One of these is the Certification Program for the IAS membership. While at OSA, I directed the Certification Program, which gave me the opportunity to meet and develop life long friendships with many IAS members.

The IAS can point to the field schools and its Certification Program with pride. With these programs, the Society continues to be on the cutting edge of public advocacy of archaeology among comparable state societies nationally.

IAS members can also be proud of their active stewardship of the past and their readiness to help when archaeological emergencies and salvage work arise. I remember a very long weekend at the site of the proposed Sutton Coal Mine in Jasper County, the standoff at the Siouxland Sand and Gravel site near Sioux City, and most recently, work at the Maxwell Great Oasis site near Redfield, Iowa. At Redfield last summer, I had an opportunity to work with a whole new generation of IAS members, eager to learn about the past and to assist in data recovery at this flood damaged site.

One of the most remarkable things to occur in the last few years has been the financial solvency of the IAS. There are those of us who remember a time not too long ago when we thought we were going to have to pass the hat just to get the *Newsletter* and *Journal* published. The IAS now has a firm financial base, and in the last two years, the IAS has developed a Research and Education Fund to assist chapter and individual member projects on Iowa archaeology.

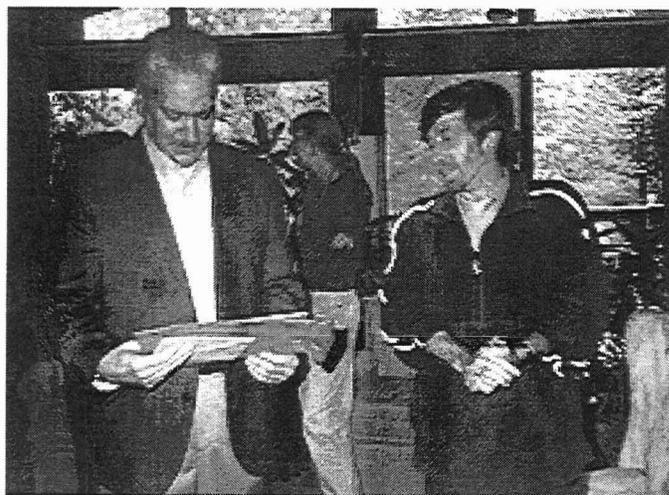
Another positive outcome has been the development of Iowa Archaeology Month. This program showcases Iowa's past throughout the state. Iowa Archaeology Month has raised awareness among the general public and educators of the rich prehistoric and historic archaeological heritage Iowa has to offer.

A development of recent years that has turned out to be a mixed blessing is the unparalleled expansion of cultural resource management (CRM) work in Iowa and across the United States. While providing jobs for a cadre of archaeologists, much of this work has become commercialized to the point that I do not think the State of Iowa is getting much in return for the money spent. This comment will probably raise the hackles of many of my professional colleagues who are members of the IAS.

Regardless, I think compliance archaeology offers many opportunities to learn about Iowa's past, and I think the professional community is ethically obligated to share and publish this research. Certainly noteworthy examples on the plus side include articles in the *Journal of the Iowa Archeological Society* and the *Newsletter* based on CRM work, and the publication of Lynn Alex's book *Iowa's Archeological Past*. This book was produced with funds from the Iowa Department of Transportation, a huge player in CRM work in Iowa. Lynn's book summarizes for professional and lay people alike the vast amount of information archaeologists have learned about Iowa based on numerous CRM projects statewide.

I am not sure if this is the article Mike and Nancy had in mind, but I think even the darkest prospect mentioned- long days ahead for state funded higher education - - challenges us to resolve problems creatively.

It is a new century. The IAS is a strong organization with an active growing membership, sound financial footing, and fresh leadership. To summarize in one word: Forward! If memory serves me, "Forward" is the motto of the great state of Wisconsin... So. We return to where we started. I am leaving Iowa, but I am not leaving my friends in the IAS nor abandoning my concern for the welfare of the society. I will continue to learn and participate in discovering and sharing Iowa's archaeological record. I hope to attend IAS meetings and functions from time to time and to be active in IAS endeavors. The founders of the IAS had a vision, and we are all part of it. The IAS is the best thing that has happened to Iowa archaeology. So long for now - and my best wishes to all of you.



Joe Tiffany receiving Central Iowa Chapter Lifetime Membership from CIC President Mike Heimbaugh

Prehistoric Habitations on the Honey Creek Bottoms
Louisa County, Iowa
Part One
Joe B. Thompson
Bear Creek Archeology, Inc., Cresco, Iowa

During the summer of 2000, personnel from Bear Creek Archeology, a cultural resource consulting firm based in Cresco, Iowa, conducted archeological investigations on two prehistoric sites (13LA499 and 13LA508) along Honey Creek in southern Louisa County, Iowa (Figure 1). These sites were part of a suite of seven prehistoric sites tested for the Office of the Louisa County Engineer, Wapello, in advance of construction along County Road H16 (Thompson 2000). Originally identified by Art Hoppin during a Phase I archeological survey (Hoppin and Stanley 2000), 13LA499 and 13LA508 are only two of 21 prehistoric habitations identified by this investigation along a 3.2 km (2 mi.) reach of the road west of its intersection with U.S. Highway 61. The sites were found in a variety of physical settings, including loess-covered uplands, alluvial fans, colluvial aprons, Late Pleistocene terraces along the Iowa River, and Holocene terraces along Honey Creek. The two prehistoric habitations along Honey Creek are the focus of this report and an article in the fall 2002 issue of the *Newsletter*.

Honey Creek Geomorphology

Geomorphological studies by Art Bettis revealed that 13LA499 and 13LA508 are contained in Holocene-age alluvial terraces along Honey Creek where it enters the Iowa River valley. Two modern surfaces are evident in this reach of Honey Creek: 1) a low terrace underlain by Roberts Creek (ca. 3000-500 B.P.) and Gunder (ca. 8000-3000 B.P.) alluvial fills and 2) the floodplain, which is underlain by Camp Creek Member (Historic) alluvium. A subtle scarp separates the low terrace from the floodplain. The region surrounding Honey Creek is geologically and environmentally diverse, with loess-mantled uplands comprised of Pleistocene glacial tills underlain by Devonian-age Cedar Valley Formation bedrock, alluvial fans comprised of Corrington Member deposits, and Late Pleistocene terraces along the Iowa River forming a mosaic of potentially exploitable resource zones. Among these resources are lithic materials in local till deposits, streams, and bedrock.

Site 13LA499 is located on that part of the low terrace west of the modern Honey Creek channel. Geologic coring in this area found the terrace to be partially buried by historic alluvium and road fill. On part of the terrace Roberts Creek alluvium drapes over a buried soil representing a former

Middle Holocene surface. A general lack of clay coatings in the B horizon coupled with the cumulative nature of the profile suggest the soil probably formed in young Gunder Member alluvium deposited after about 5000 B.P. On other parts of the terrace historic alluvium buries a thick, dark-colored soil developed in old Roberts Creek Member/young Gunder Member alluvium that truncates older Gunder Member alluvial fill. Testing on these landforms revealed a cultural sequence dating to the Late Woodland, possible Early Woodland, and Late Archaic periods buried within the terrace.

Site 13LA508 is located on a low terrace east of Honey Creek stretching between the modern channel and valley wall. Geomorphic studies on this site revealed a thick, dark-colored surface soil formed in young Gunder Member alluvium. The dark color and thickness of the surface soil suggest that a thin veneer of Roberts Creek alluvium may also be present. Prehistoric remains from the late prehistoric (Oneota) to Early Woodland periods were distributed from the surface to a depth of approximately 150 cm.

Site 13LA499

Testing on 13LA499 involved the excavation of several 1 x 1 m units paralleling the present alignment of County Road H61. The present route splits the site into two parts, with a larger part of the site, based on the geomorphic study, located north of the road.

Artifact Assemblages. Archeological testing produced an inventory of about 350 prehistoric artifacts, a majority of which was flaking debris. Summary information on the various artifact classes is presented below.

Pottery. A single potsherd from a vessel shoulder was recovered during testing. Identified as a probable Late Woodland ware, the sherd was found in Level 7 of Test Unit 3.

Chipped Stone Tools and Cores. Testing produced six unfinished bifaces, a base possibly from an Early Woodland stemmed point, and a Sedalia-style point used as a knife (Figures 2 and 3). Other tools included several flakes used as scrapers and knives (Table 1). The tool assemblage, all of which was made from Burlington chert, indicates that various activities were part of the 13LA499 habitations, including butchering and working of hide, bone, and wood.

Table 1. Site 13LA499 chipped stone tools and cores.

Unit/Level	Type	Material	Wt. (g)	Inferred Activity	Comments
<i>Bifaces</i>					
6/9	lanceolate-shaped biface (Stage 3)	Burlington (heat-treated)	29.6	tool production	
4/9	round base fragment (Stage 5?)	Burlington (heat treated)	2.6	hunting?	Early Woodland contracting stem-med base? broke during use
3/10	lanceolate-shaped biface (Stage 5)	Burlington	28.7	cutting/butchering	probable Sedalia point
3/12	medial fragment (Stage 3)	Burlington (heat treated)	2.7	tool production	broke during manufacturing
3/3	blade fragment (Stage 3)	Burlington (burned)	9.4	tool production	broke during manufacturing
3/3	lateral fragment (Stage 3)	Burlington (heat-treated)	0.9	tool production	broke during manufacturing
2/8	rectangular-shaped biface (Stage 2)	Burlington (heat-treated)	99.7	tool production	
2/8	lateral fragment (Stage 3)	Burlington	6.0	tool production	broke during manufacturing
<i>Flake Tools</i>					
unknown provenience	drill	Burlington (heat-treated)	0.7	wood- or boneworking	broke in use
2/6	knife	Burlington (heat-treated)	2.2	butchering	broke in use
2/7	graver	Burlington (heat-treated)	5.4	wood- or boneworking	complete
2/7	scraper	Burlington (heat-treated)	1.5	wood- or boneworking	broke in use
2/7	knife	Burlington	2.3	butchering	complete
2/9	scraper	Burlington	8.2	wood- or boneworking	complete
3/2	knife	Burlington	4.5	butchering	complete
3/4	knife	Burlington	4.6	butchering	complete
3/6	scraper	Burlington	21.2	wood- or boneworking	complete
3/7	scraper/knife	Burlington (heat-treated)	12.2	hideworking	complete
3/10	scraper	Burlington	14.5	wood- or boneworking	broke in use
6/14	scraper	Burlington (heat-treated)	4.0	hideworking	broke in use
8/6	knife	Burlington	1.2	butchering	complete
8/10	knife	Burlington	11.5	butchering	complete
8/11	knife	Burlington	6.8	butchering	complete
<i>Cores</i>					
3/12	tested cobble	cherty Burlington limestone	465.4	flake production	bedrock source
4/12	polymorphic	Burlington (heat-treated)	117.7	flake production	bedrock source
6/8	tested cobble	Burlington	478.4	flake production	secondary source; used as hammer
6/13	polymorphic	Burlington (heat-treated)	100.9	flake production	

Flaking Debris. A total of 284 pieces of flaking debris was found on 13LA499 (Table 2). Except for two flakes of tan-colored till chert, one flake of Warsaw chalcedonic chert, and one flake of a medium gray-colored till chert, all flaking debris (99.7% by weight and 98.6% by count) was typed as Burlington chert. The debris suggests all stages of biface production occurred on-site.

Table 2. Site 13LA499 flaking debris.

Type	Number	Heat-Treatment %
core rejuvenation	10	20.0
core trimming	4	25.0
decortication	7	28.6
fragment	135	32.6
heat shatter?	2	100.0
interior	41	39.0
pressure	6	16.6
shatter	53	37.3
tertiary thinning	5	80.0
thinning	<u>21</u>	<u>28.6</u>
total:	284	34.5

Introduced Rock. Forty-three artifacts from 13LA499 were classified as introduced rock (Table 3), with the majority representing fire-cracked rock (FCR) once used in hearths. Local streams and glacial till were the sources for most of the introduced rock.

Table 3. Site 13LA499 introduced rock.

Class	Material*	Count	Wt. (g)
FCR	FG igneous	5	144
	F/MG igneous	4	201
	MG igneous	3	508
	M/CG igneous	4	390
	granite	2	287
	dolomite	3	31
	limestone	2	17
	unknown	1	1
	sub-total:	24	1,579
Shattered Rock	dolomite	2	13
	heat shattered chert	7	46
	limestone	10	119
	sub-total:	19	178
	site total:	43	1,757

*FG: fine-grained; F/MG: fine/medium-grained; MG: medium-grained; M/CG: medium/coarse-grained

Cobble Tools. Three cobble tools were found during testing. Test Unit 2, Level 11 produced a possible hammer/pounder fragment (distal; wt.-58 g) made from quartzitic sandstone. Level 10 in Test Unit 8 contained a hammer (wt.-287 g) made from either hematite or very dense, igneous rock with high iron content. For its size, the tool is very heavy. A third cobble tool (Figure 22), a tested Burlington chert cobble (wt.-478.4 g) used as a hammer, is inventoried with the cores (see Table 1).

Cultural Features

Testing on 13LA499 identified three features. Feature 1 was marked by a light scatter of carbonized material, FCR, and burned earth concentrated in the southwest quarter of Level 10 in Test Unit 3, or approximately 90-95 cm below the surface. No vertical expression to the feature was observed in the profile. The feature likely represents a surface hearth or a dump of hearth-related materials. Among the recovered inventory were four pieces of fire-cracked rocks with a combined weight of 143.1 g, a piece of Burlington chert shatter (wt.-5.0 g), several Burlington chert flake fragments (four heat-treated), one unknown brownish tan-colored chert pressure flake, and 22 carbonized macrobotanical remains (20 carbonized wood and unidentified remains; two unidentified nutshell).

Feature 2 encompasses the remains of a surface-constructed hearth exposed in the northwest corner of Level 12 in Test Unit 4, approximately 110-120 cm below the surface. The hearth was marked by a concentration of carbonized material and burned earth approximately one centimeter thick; no pit was visible. Very small pieces of unidentifiable calcined bone were observed in the feature matrix but not recovered in a flotation sample. The cultural inventory from the hearth includes nine Burlington chert flake fragments, three pieces of Burlington chert shatter

(one heat-treated), one fire-cracked rock (wt.-4.6 g), and 60+ small carbonized macrobotanical remains (mostly wood and unidentified remains with minor occurrences of nutshell). The remainder of Level 12 and the immediately above Level 11 produced nine and 24 pieces of flaking debris, respectively, suggesting knapping occurred near the hearth.

Feature 3 represents a portion of a large hearth clipped by Test Unit 3 in Level 12, or about 120 cm below ground surface. In plan view the hearth was defined by a dense scatter of carbonized material and burned earth while in profile a basin shape with a burn line on the floor was visible. Scattered around the hearth were six FCR having a collective weight of 793 g and 16 pieces of flaking debris. A 16 liter soil sample from the feature produced 20+ pieces of burned earth (wt.-2.4 g), approximately 46 g of fire-cracked rock, 14 flake fragments (13 Burlington, one Warsaw chalcedonic), one interior flake (Burlington), 52 small flake fragment/pressure flakes (mostly Burlington), 12 unidentifiable burned bone, five unidentifiable unburned bone fragments, and 100+ pieces of carbonized wood and nutshell (total wt.-ca. 13 g). The carbonized remains produced an uncalibrated date of 3090±50 B.P. (Beta-145805; 1 sigma calibrated result is 3360-3250 B.P.; intercept at 3340 B.P.).

Discussion

Site 13LA499 represents a multiple occupation prehistoric habitation in the Honey Creek bottoms west of the modern channel. Located on and incorporated into a Roberts Creek/Gunder terrace, unreachable portions of the site are likely present under the modern roadbed. The terrace containing the site also extends northward along Honey Creek and likely holds more of the habitation beyond the 250 m² examined within the narrow zone of impact slated for road reconstruction. Based on diagnostic artifacts and a radiometric date, three cultural components are defined at 13LA499.

In Test Unit 3 a single Late Woodland potsherd was found in Level 7 near the base of the A2 soil horizon. The A horizon from this and other test units produced flaking debris, flake-tools, and fragments of unfinished bifaces. A few pieces of FCR from the same stratigraphic position as the pottery suggest hearths were once present. Igneous rocks obtained from streams or till outcrops were used for hearth stones and virtually all lithics were made from locally obtained Burlington chert. Flaking debris and the unfinished bifaces indicate biface production was occurring on-site. Although no cores were found confidently associated with the component, production of flakes for tools was also a likely on-site activity. Other probable activities during the Late Woodland occupation(s) include butchering, hidscraping, and wood- or boneworking, and various

domestic activities (e.g., cooking) indicated by the FCR and pottery. Based on the size and composition of the cultural inventory, these occupations were probably relatively brief encampments such as bivouacs.

A rounded base representing the hafting element from a possible contracting stemmed point was recovered in the AB horizon of Test Unit 4. This artifact may indicate an Early Woodland component on the terrace. Several flakes and a few introduced rocks were also recovered from the same stratigraphic layer, although the sparseness of diagnostic artifacts and lack of radiometric dates hinder further refinement of the vertical and horizontal dimensions of the component. Because of its stratigraphic position, the possible Early Woodland component is probably intermixed with earlier and later cultural horizons within the terrace.

The most intriguing component at 13LA499 is contained in the Bw horizon formed within the terrace. It was in this component that three cultural features and a moderate inventory of flaking debris, FCR, flake-tools, cores, and bifaces were found. More significantly, in Level 10 (90-100 cm below surface) of Test Unit 3 a Sedalia-style point was found proximal to a possible hearth (Feature 1). A carbon sample from Feature 3, identified in the same unit at 125 cm below surface, produced an uncalibrated radiocarbon age of 3090±50 B.P. (Beta-145805; 1 sigma calibrated result is 3360-3250 B.P.; intercept at 3340 B.P.). These data indicate a Late Archaic date for the component.

The B horizons of other test units produced numerous flakes, flake-tools, complete and fragmentary unfinished bifaces, and chert cores, suggesting the Late Archaic component is laterally extensive across the terrace. Flake-tools were used for butchering and hide-, bone-, or woodworking. The flake assemblage, coupled with the

presence of unfinished bifaces, indicates biface production was a common on-site activity while production of flakes for tools was seen in the core assemblage. Virtually all lithics were made from Burlington chert obtained from secondary (streams) and primary (bedrock) sources. Evidenced by several pieces of heat shattered chert, heat-treating was a likely on-site activity. Cooking and other domestic activities also occurred on 13LA499 as part of bivouac or temporary base camp occupations during the Late Archaic period. Carbonized nutshells (mostly black walnut and hickory) were recovered from features, probably indicating their use as food and relatively good preservation of some organic remains. The nutshell could also indicate that some occupations were during the late summer and fall when such resources were most abundant locally.

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Thompson, Joe B.

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Editor's Note: Part 2 of this article will appear in the *Iowa Archeology News* Fall issue (Vol. 52, No. 3).

“F Y I”

Prehistoric Pottery Technology (Part One)

by Timothy S. Weitzel

The origins of prehistoric Iowa pottery are rooted in the cultural and technological developments of the Midwest. Decorative elements, as well as traditional stratigraphic and radiometric dating methods, indicate who made a ceramic vessel and when they made it. It is possible to determine the difference in how vessels were made based on elements of the manufacturing process that are preserved in recovered fragments of pots. All prehistoric pottery in North America was made with hand-building techniques. The pottery wheel was not used in pre-contact North American societies. Clay was used to make vessels in Iowa for around 2,500 years and was still in use in A.D. 1750. Pottery is one of a triad of technological innovations that traditionally

have defined the transition to the Woodland culture in the Midwest. Technological innovations in ceramic construction techniques not only define the Woodland Tradition from earlier and later cultures, but also define differences within the periods of the Woodland Tradition. As each period gives way to the next through prehistory, it is possible to see technological developments resulting in vessels that increasingly become harder, more heat-resistant, and impervious to dissolving in water. In Iowa, abandonment of the use of ceramics for brass and iron kettles is considered one of the principal signs that a culture had been assimilated by the technological culture of the European Fur-trade. Clay conforms to a wide variety of shapes, can be worked in a

number of different ways, and made resistant to water at relatively low heat—at about 500° C (932° F). This means pottery can be made without extensive investments time or labor, a key factor in foraging societies that developed the first Midwestern pottery. The hard, semi-impervious walls withstand heat much better than vessels of organic origin, such as basketry, hides, or wood.

Natural Clay

Clay is a naturally occurring solution of weathered feldspar mixed with a percentage of water. Feldspar itself is a mineral compound that contains water chemically bound to oxides of alumina and silica. Other elements include oxides of Iron and Manganese. The crystalline structure of feldspar is in the form of small platelets. Water mixed into the feldspar powder fills the voids between the platelets much like water trapped between two pieces of very smooth material, like glass. Water has a natural tendency to cling to dry objects. This is what keeps a slightly overfilled glass from running over. This natural sort of static-cling within the feldspar-water mixture causes the feldspar platelets to stick together, but leaves them free to slide past each other. This trait, called *plasticity*, allows clay to be pliable yet retain its shape. Plasticity combined with the ability to make clay rocklike when burnt makes clay an ideal raw material for making vessels.

Preparation

Given Iowa's geologic past, clay is easy to find. Clay can be used as found and without significant modification from an exposed cut bank of a stream or river. Ethnographic data indicates that as ceramic manufacturing cultures develop greater skill and knowledge, almost all begin to leave raw clay exposed on the surface to weather for a time. Exposure to the elements helps to break down thick, hard clays. Eventually the weathered clay is dried and then broken into pieces. Rocks, roots, and other unwanted inclusions are removed. The clay can then be slaked or wetted down and the desired additives can be mixed into the prepared clay. These additives, called *temper*, add support during construction and assist the drying process, allow steam to escape the clay body during firing, and improve the overall resistance to thermal stress during use.

Thin section analysis has been used in other states to determine the sources of the clay and temper. This has not yet been utilized in Iowa. Detailed visual analysis has discerned the types and sized of temper. It is known, for example, that temper becomes increasingly refined and more advanced in the qualities provided to the finished vessel, and progress as follows: Large chunks of igneous rock, sand, limestone, crushed granite grit, shell, and grog (fragments of previously fired pottery).

Construction Techniques

The techniques used to create prehistoric vessels are largely inferred from ethnographic and experimental

analogies. Vessel fragments preserve a limited amount of evidence of construction techniques. Manipulation of clay aligns the plate-shaped molecules in orientations that are distinctive of the construction technique. These orientations are discernable through X-ray diffraction.

Pinching and pulling

This is the most intuitive and easiest technique for construction of a basic vessel form. It creates a vessel from a single piece and no tools, other than hands, are required. The clay is made into a ball. The center of the ball is pushed down with either just the fingers or the whole fist. The walls are pulled outward and then upward with the fingers and thumb. The walls can also be lifted by paddling and then scraped and smoothed. This type of vessel leaves no signs of joining as in coil-built pots. A vessel of just about any size or thickness of wall can be made this way, but control over the shape of the vessel is restricted to vertical to slightly sloping walls. With great care, it is possible to make a globular vessel, but it is time consuming and there are easier ways. This technique clearly was used to make pinch-pot miniature vessels. Some of these appear to be quite sophisticated models of large vessels, while children quite possibly made others. It is likely this technique was used to make small cups and bowls. Some prehistoric pipes were made from local clays using this technique. This technique was also used to make effigies, lugs, and strap handles that were attached to a vessel after it began to dry.

Coils and slabs

It appears coils were used to make many prehistoric vessels. Coils are formed by rolling a ball of clay in the hands or against a work surface, such as the ground, or on a mat, blanket, or hide. A vessel can be started by forming a slab that is made or cut into a round shape. Several ethnographic sources show flat-bottomed pots resting on round, woven mats as the pot is being made. The round mat facilitates the building process by allowing the vessel to be turned as well as moved while the clay is still moist. Coils or slabs are attached to the base around the edge of the new pot through pinching or paddling. Wrapping the coils or slabs around a mental image of how the vessel should look, the artisan could expand or contract the diameter of the void to match the required size and shape of a vessel. It is also possible to build a straight cylinder and later carefully push the walls outward to form a shoulder. Once the coils are added, they can be joined by paddling or smoothing the vessel walls while supporting the other side with the other hand or a smooth rock held in the other hand. The paddle was often wrapped with a cord made of plant fibers such as the inner bark of bass or willow, or made from the fibrous stems of plants like Indian hemp, dogbane, or nettles. It is thought this is to keep the moist clay from sticking to the surface of the paddle, although a bare wooden paddle can be used on less-moist clay without

sticking to the clay. After the coils or slabs are joined, the vessel walls can be lifted by scraping or paddling. This technique is called *drawing*. The process of drawing will make the vessel taller and the walls thinner. Taller vessels can be made in this way. A scraper made of shell or a flint convex side-scraper can be used to scrape the inside of the vessel, similar to the way a gourd or pumpkin is hollowed. This helps smooth out parts of the vessel that are too thick. Very thin and regular walls can be made with scraping. It is interesting to note that Oneota vessels are compared to the shape of large gourds like pumpkins and certain types of squash. Perhaps the act of scraping out the inside of the vessel to finish also completes this metaphor.

A close-necked vessel, such as a Mill Creek water bottle, is much more difficult to construct. It is possible necked vessels were made by forming the upper portion separately from the base and they were later joined after becoming stiffer through partial drying. For a brief time, clay will become softer and more pliable while it is worked. Letting clay rest allows it to become stiff enough to support the additional weight of the clay added above that part of the pot. Round or pointed bases can be made by constructing the vessel upside down, rim first, and then using a paddle to draw the walls up and inward until the walls meet.

Molds

This technique is especially useful in facilitating the manufacture of certain parts of a vessel that are otherwise time consuming to make. Molds reduce the skill required to keep a vessel from collapsing upon itself in the construction process. The walls of the mold provide structure to the vessel until it dries. In return, complexities are introduced in drying and joining the parts of the vessel. The clay must become dry enough to remove from the mold but must still be moist enough to attach it to the other parts of the vessel. Separately formed parts of the same vessel are joined at what is called *leather hard* stage of drying. If the clay becomes too dry, the join is likely to break later. Specially made textiles were used in Mississippian societies to assist the movement of drying vessels that were still too moist to touch by hand. Textiles generally appear to be an intensive use of labor, so the use of textiles in this way is predictably found only in association with highly specialized production that generally occurs only within stratified societies.

As clay dries, it loses volume in proportion to the amount of moisture it had contained. In its plastic state, clay contains generally between 20 to 35 percent water. The loss of water from the mixture results in substantial shrinkage of objects that have been constructed. For this reason, clay is nearly always applied to the inside of a mold, rather than the outside. Interior or convex molds generally result in fracture of the form made on them due to the shrinking clay resulting in a smaller diameter vessel.

Curved vessel bottoms and highly decorative elements, for example, can be made with molds to reduce the time in

construction of more difficult parts. Ethnographic and experimental evidence indicates that a dished hollow made in the ground is a very useful way to make a mold for building concave or dished portions of vessels. A mold would also be useful in constructing a concave base of a vessel that could later be attached to a separately made rim, such as conical bases of the Middle and early Late Woodland vessels.

The fabric collars used on Madison fabric-impressed vessels are very likely a specialized mold. Unlike the earlier cord-impressed rims, these rims of Madison fabric impressed vessels were wrapped completely with what appears to be a tightly twined fabric collar. It is possible the collar was quite stiff. If the collar was actually self-supporting, then it is quite possible they served as a specialized mold for the construction of the rim. Such a mold may have increased the rate of production, allowing greater handling of the vessel while the clay was still moist, in turn allowing earlier joining to the base. It is not known if the collar was removed after the vessel dried and shrank. The published literature on experimental twining studies currently suggests that the creation of individual collars for each vessel would require too substantial an investment in labor to destroy a collar with every vessel made. It remains possible that the time to make the specialized fabric pottery molds was not as substantial as current experimentation suggests.

Based on impressions left on Marion Thick vessel fragments, it is possible that the earliest pottery from Iowa (800 to 400 B.C.) was constructed using a cord-wrapped paddle to press clay into a basket. This may explain why these vessels were cylindrical—thicker parts of the vessel will dry slower, and therefore shrink more slowly than the thinner portions of the same vessel. Differing rates of shrinkage cause stress in the pots that frequently results in the breakage of the vessel. The vessel and its mold also must not have a base that extends beyond the or the mold must be destroyed to remove the vessel, likely making the use of the mold too costly to be practical.

Editor's note: This FYI will be continued in the *Iowa Archeology News* Fall issue (Vol. 52, No. 3).

Mark Your Calendars

for

Iowa Archaeology Month in September - "Bags, Bowls, Boxes, and Baskets: Life Before Plastic" and for the IAS Fall Meeting November 2nd, Wickiup Hill Interpretive Center in Linn County, Near Palo, IA

IAS Announcements

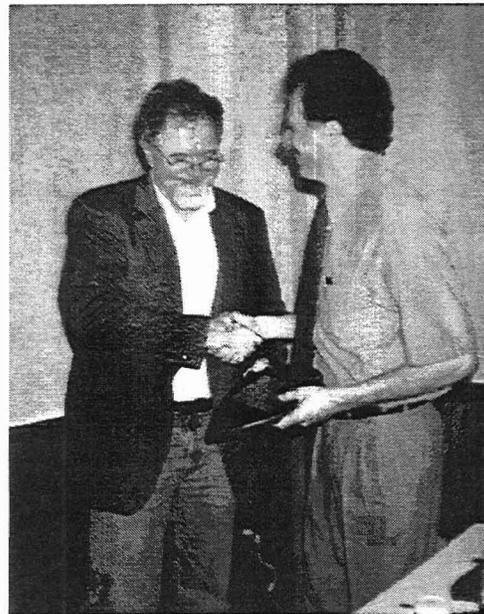
Events-Education-News

Keyes-Orr Award

The Keyes-Ellison Orr award is given to individuals who have provided outstanding service to the Society or who have made significant contributions to the research, reporting and preservation of Iowa's prehistoric and historic heritage. The award acknowledges the founding accomplishments of Dr. Charles R. Keyes and Ellison Orr in the development of archaeological research in Iowa. Thirty-five individuals have received the award in the past 25 years. This year, two others joined their ranks. William Green, former Iowa State Archaeologist, and Robin Lillie, IAS membership chair were each named a 2002 Keyes-Orr award winner at the annual IAS Spring Meeting banquet in Ottumwa. The award committee selected Bill for his service to Iowa's archaeological heritage while state archaeologist and for his contributions to archaeological research with projects such as the Gast Farm site. Robin's service to the Iowa Archeological Society has extended well beyond her duties as membership chair. She has taken on responsibility for printing and mailing the IAS newsletter, labeling and mailing the Journal, assisting with the coordination of state meetings, financial exchanges related to Society business, and other tasks too numerous to list. She has also contributed to knowledge of Iowa archaeology through research and publication as a skeletal biologist at the Office of the State Archaeologist. The efforts of both of these individuals will be sorely missed.



Robin Lillie with Keyes-Orr Award
Presenter Linda Foreman



Jim Collins Presenting Keyes-Orr Award to William Green

Spring Meeting

Over 100 people attended the May 4th IAS Spring Meeting hosted by the Southeast Iowa Chapter at Pioneer Ridge Nature Area south of Ottumwa. Pottery sherd analysis, petroglyph investigations near Pilot Mound, a discovery of a pit site near Eldon, and a recap of a dig in the early 70's were among the topics of the 10 minute archeological papers. Other presentations included : *Sauk Indians*, Bob Swanson; *Archeological Fieldwork Weekend*, Maria Schroeder; *Prehistory Hunting Implements*, Julie Morrow; and *Reminiscences about Iowaville*, Dale Essick, Bradley Rook and Anton Till.

During the IAS business meeting various reports were given, and elections were conducted for the new IAS officers and Board members: President-Bill Anderson; Secretary-Pat Higby; Treasurer-Tom Harvey; Directors (3 year terms) - Jerry Baker, David Carlson, Daniel Higginbottom and George Horton; Directors (one year term) - Barb MacDougall and Don Raker. IAS Certificates of appreciation were given to Robin Lillie for her IAS Board work and Dave Carlson for making the Keys-Orr plaques for many years. The afternoon was rounded off with a field trip to the Iowaville site.

The evening IAS Spring Banquet was well attended and featured the presentations of the Keyes-Orr award by Linda Foreman to Robin Lillie and James Collins to Bill Green. The audience was also given an entertaining and thoughtful address by former State Archaeologist Bill Green.

Research Funds

Collin Betts of Luther college was awarded \$250.00 from the IAS Research & Education fund for radio carbon dating for the Allamakee County Mound project.

IAS Chapter News

Black Hawk Regional Chapter

Mark Anderson of OSA presented *Experiences in Lithic Raw Material Identification from the Des Moines Lobe* at the March 6th meeting. In April David Gradwohl gave a talk entitled *Buxton: an African American Paradise*. Dr. Charles Adelman of U.N.I. spoke on the topic *Mycenaean expansion or do we leave our homes when the going goes bad?* for the May 1st meeting.

Contact Lisa Beltz

1804 W. Ridgewood Drive, Cedar Falls, IA 50613
(319) 268-0865
Lisa.Beltz@uni.edu

Central Iowa Chapter

Living History Farm Project Archaeologist Doug Jones and several CIC members continued work on the cataloging of artifacts. The March 16th meeting featured Lynn Alex and Colleen Eck of OSA. They explained how to fill out site record forms and document private artifact collections. The CIC Flintknappers conducted a Flintknapping Workshop at the Dallas County Conservation's Kuehn Conservation Area April 6th. For April's chapter meeting, the members were given a tour of the SHSI Museum's new exhibit: *Honor the Colors: Iowa's Civil War Battle Flags*.

Contact Michael Heimbaugh

3923 29th St., Des Moines, IA 50310
(515) 255-4909
paleomike@msn.com

Southeast Iowa Archaeology Chapter

The Southeast Iowa Archaeology Chapter hosted the IAS Spring Meeting and Banquet at Pioneer Ridge Nature Area. The meeting was a quite a success and attended by more than 100 people. Plans are being made for summer activities. Area.

Contact Bill Anderson

Box 51, 103 High St., Richland, IA 52585
(319) 456-3911
bpandearch@iowatelecom.net

Quad City Archaeological Society

Contact Ferrel Anderson

1923 East 13th St., Davenport, IA 52803
(319)324-0257

Northwest Chapter

The Sanford Museum Association has agreed to purchase a Trimble Global Positioning System (GPS) for the Sanford Museum. The NW Chapter will use the device to get accurate locations and other information about the archaeological sites in Northwest Iowa. In May the chapter traveled to a Phase II project of an 1850's - 1860's historic site where OSA's Mark Anderson gave a demonstration on how the GPS device works. The Doherty mound site was also visited in May. There the group looked for more artifacts and photographed the mounds for a state report.

Contact Linda Burkhart
Sanford Museum

117 E. Willow, Cherokee, IA 51012
(712) 225-3922
sanford@cherokee.k12.ia.us

Paul Rowe Chapter

Contact Dennis Miller

31126 Applewood Rd., Silver City, IA 51571
(712) 525-1007
Farming99@aol.com

Ellison Orr Chapter

Selected Archeological Sites in Allamakee County Iowa was the title for a field trip taken by chapter members Sunday, May 5th.

Contact Lori Stanley, (319) 387-1283
or Joe B. Thompson, (319) 387-0092

Orr Chapter, PO Box 511, Decorah, IA 52101
iasorrchapter@hotmail.com

Keyes Chapter

Contact Keith Young

11236 Co. Rd. E17, Scotch Grove, IA 52310
(319) 465-6393 or e-mail:
pekoyoung@n-connect.net.

IAS Profile Nominations

Iowa Archeology News will again feature an avocational archaeologist in the Fall, 2002 issue. Please submit nominations with a brief explanation to the Editor at paleomike@msn.com by July 30th.

- Participants are responsible for their own meals, lodging, and travel to the project. The site address is 411 1st Street Bonaparte, IA. The site owners' Marilyn and Don Thomas have made part of their yard available for tent sites and have provided a modern outdoor restroom facility however no shower. Also available in Bonaparte, only a couple of blocks from the site, is The Cottage, a restored historic cabin for \$65 per night and \$10 per extra person. The Cottage can accommodate up to 8 people. For arrangements contact Marilyn, ph. 319-592-3620. Lacey Keosauqua State Park located less than 2 miles southwest of Keosauqua offers more formal campgrounds and cabins. Camping permits are obtained by self-registration at the campground. Cabins reservations are available through the camp manager, ph. 319/293-3502. Also available in Keosauqua is the Hotel Manning with various room rates, ph. 800/728-2718.
- There is one restaurant in Bonaparte, The Bonaparte Retreat, which is an excellent lunch spot (a converted historic gristmill). There are more diners and cafes to select from in Keosauqua. Also the town Farmington, located on the Des Moines River approximately 2 miles southeast of Bonaparte has a diner.
- Your assistance and participation in this archaeological research is greatly appreciated! Once again the project's address is 411 1st Street Bonaparte, IA. This is Marilyn and Don Thomas' private home. Please be considerate and respectful of their property. Proper procedures and protocol must be followed at all times. Each participant will be asked to complete certain written records. These records and all materials from the site will remain part of the permanent site record.

Please complete both sides of the registration form below. Detach and submit with appropriate fees (make checks out to OSA) to:

Maria Schroeder
Office of the State Archaeologist
700 Clinton Street Building
University of Iowa
Iowa City, Iowa 52242-1030

THANK-YOU FOR YOUR PARTICIPATION!

For further information, contact Maria Schroeder at the above OSA address, ph. 319/384-0974, or e-mail Maria-Schroeder@uiowa.edu, or visit the IAS site on the OSA web page www.uiowa.edu/~osa/

✂-----
Are you currently an IAS member? _____ **Are you currently IAS certified as a field technician?** _____
If so, are you interested in assisting with supervising? _____

Total registration amount included: _____
(cost \$5.00 per person per day for current IAS members and \$10.00 per day for non members payable to OSA)

In consideration of my involvement in this project and intending to be legally responsible for myself, my heirs, and other representatives, I do hereby waive and release any and all right and claim to damages I may have or might hereafter accrue to me against the Office of the State Archaeologist, the Iowa Archeological Society, the Historic Bonaparte Pottery, their representatives, and successors for any injuries incurred by me during the 2002 excavations at the Historic Bonaparte Pottery.

Signature _____

(individuals under age 18 must include the signature of a parent or legal guardian)

Additional Signature _____

OSA NEWS



A SPECIAL SECTION OF THE IOWA
ARCHEOLOGICAL SOCIETY
NEWSLETTER

PUBLIC ARCHAEOLOGY

Contact Lynn M. Alex (319-384-056),
lynn-alex@uiowa.edu about any of these
topics or programs.

Fort Atkinson Cultural Resources Field School Part 2

The State Historical Society of Iowa, Department of Cultural Affairs has just announced that a \$20,000 grant from the Resource Enhancement and Protection Act/Historical Resource Development Program (REAP/HRDP) will support a 2003 field school focusing on Winneshiek County's Ft. Atkinson. The 1840s site is one of only nine historic properties in Iowa that has been designated by the White House Millennium Council and National Trust for Historic Preservation as a project of the "Save America's Treasures" program. With the grant funds, the field school will focus on the site's substantial architectural, archaeological, and archival data. This June 2003 project will involve primary and secondary teachers, college students, county conservation board personnel, preserves managers, members of local and state historical and archaeological organizations, and adult learners in appropriate hands-on research techniques. In 2001, the IAS helped support a similar field school by contributing \$1,000 to help defray the costs of tuition for participants who were IAS members.

South Dakota Field Work

The Newsletter of the South Dakota Archaeological Society lists seven different volunteer field projects in the state from May through fall 2002. The excavations range from eroding mammoth remains near Brookings to historic Deadwood Chinatown. The U.S. Forest Service is sponsoring two of the excavations as part of their Passport in Time (P.I.T.) Program. For information on the P.I.T. projects contact Juanita Garcia (606-574-2534) at jdgarcia@fs.fed.us, or Jerry Bryant (605-642-4622) at jbryant@fs.fed.us. To learn more about the other volunteer excavations

contact the State Archaeological Research Center at 605-394-1936 or judy.bowes@state.sd.us and mike.fosha@state.sd.us. Schedule of projects is as follows:

- P.I.T. 1880s Gorman Cabin (Black Hills), Session 1: June 17-21; Session 2: June 24-28
- P.I.T. 20th Century Curran's Cabin (Black Hills), June 24-28
- Historic Deadwood China Town (Black Hills), Mid May to September
- Hartford Beach Late Prehistoric Village (near Big Stone Lake), July 26 to August 4
- The Movie Draw Late Woodland-Late Prehistoric Rockshelter (Black Hills), August 26 to September 4; September 9 to September 18
- Historic Fort Pierre Chouteau (Pierre/Ft. Pierre), May 30 to June 3
- Brookings Mammoth, Late summer/early fall

IAS members can count their experience on these projects towards the Iowa Archaeological Certification Program.

Archaeology Month Poster Takes National Award

Iowa's Archaeology Month 2001 poster, "Hunting and Gathering for Iowa's Past," a collage of over one hundred different animal species attributed to the Meskwaki leader Wacoshashe, won third place in the national competition sponsored by the Society for American Archaeology. It was displayed in March with others from throughout the U.S. at the annual conference of the Society in Denver, Colorado. Voting was by ballot amongst conference participants. First place was awarded to Wyoming's entry, a color photograph of the spectacular geological feature Devil's Tower. The winning posters will be displayed in the Department of Interior Museum in Washington, D.C. The original Wacoshashe image is a pen and ink drawing from around 1830 now curated by the State Historical Society Museum as part of the Davenport Collection.

NEW OSA DIRECTOR

Elizabeth Prine Pauls, has been appointed the new State Archaeologist. She is currently an assistant professor at the University of Wisconsin-Oskosh. She will be joining OSA this summer. Look for a full interview and biography in the next OSA NEWS

WELCOME....Alice Ratzel has joined OSA as a full time library assistant. A native of Williamsburg, she graduated from the University of Iowa in 1970. For the past 15 years Alice has lived around the world—Philippines, Belgium, England, and Russia while her husband Lyle worked for the US State Department. She has been an "international" preschool teacher and library worker. Alice and Lyle now plan to make the Iowa City area their home once again. Their daughter Emily is working on her masters at the UI and daughter Meredith teaches at the UI School of the Wild. **FAREWELL ...**Tim Weitzel, Project Archaeologist for the General Contracts Program is leaving OSA to pursue other interests. Tim has worked at OSA since the late '80s, starting as a field technician while still an undergraduate. Then, while completing his master's, Tim continued working in the OSA lab. Tim received his Masters from the University of Iowa in 1992, with his research on the ceramics from the Gast Farm site, 13LA12. He was Site Records Coordinator from 1994 to 2000. His duties included coordinating both Iowa Archaeology Month activities and the Iowa Certification Program. Tim was also one of the original members of the OSA Education Committee and contributed to many educational projects..... In addition, several long time student workers have now graduated and will be also leaving OSA. After working in site records for three years, Joel Fassbinder, from Monona, a geology/anthropology major will be interning with the US Geological Survey in Menlo Park, California. Kris McCulloh, a two year OSA site records veteran from Bettendorf, an anthropology major with an emphasis in museum studies, intends to attend law school. Rebecca Johnson, who has been working at OSA, mainly also for site records, for over three years, received her Ph.D. with using Gast Farm Ceramics for her dissertation topic. Juliana Waechter, an honors graduate in anthropology and art history has worked in OSA'S library and summer field crew for three years. The Gast Farm lithics provided the material for her honors thesis. Kris, Rebecca, and Juli will continue with OSA through this summer.

Archaeology Items of Interest

News

Ice Age Drawings: German scientist, Dr. Michael Rappenglueck, Munich University, believes it's time to reassess the lifelike drawings of human faces found on the floor of a cave a La Marche in the Lussac-ses-Chateaux area of France. Images were first recognized over 50 years ago, but there were doubts about their authenticity. Some seem to be superimposed on other images. There are images of bears, lions, horses and over 155 lifelike human figures. There are figures with male or female faces, people in robes, hats and boots. Portraits were carved into the limestone slabs placed on the floor and appear much more lifelike than the stick figures on the walls of some caves. Possibly floor illustrations in other caves were destroyed as floors were often leveled and strengthened.

Dr. David Whitehouse, "Faces from the Ice Age," BBC News SCI/TECH, <http://news.bbc.co.uk/hi/english/sci/tech/newsid>

Books

Excavations at Wickliffe Mounds by Kit W. Wesler (University of Alabama Press, 2001) tells the story of seven decades of excavations at Wickliffe Mounds in Mississippi near the confluence of the Ohio and Mississippi rivers in Kentucky. It was subjected to looting and even featured as a tourist attraction in the mid 1950's. In 1983 it was turned over to Murray State University for an academic center dedicated to research, student training, public education, and preservation of the site and its collections which include all the early excavation records and more than 85,000 artifacts. A CD-ROM comes with the book and features site maps, databases, excavation records and photographs.

Michel, Mark. "Excavations at Wickliffe Mounds," *American Archaeology* Spring 2002: 48.

Events

Midwest Archaeological Conference - October 3-6, 2002
The Ohio State University Dept. of Anthropology and the Ohio Historical Society will present this 48th Annual Conference at the Ramada Plaza Hotel & Conference Center, 4800 Sinclair Rd., Columbus, OH. Highlights include:
Middle Woodland plenary sessions - *Advances in Computer-aided Research on Woodland Period Sites*, Paul Pacheco, and *The Anthropology of Hopewell*, Chris Carr

Banquet Speaker - Dr. Brian Fagan

Middle Woodland Ceramic Workshop-Historical Society

For more information on registration go to <http://anthropology.ohio-state.edu>. For Hotel reservations call 800-272-6232.

Membership Information

Contact Membership Secretary, Iowa Archeological Society, University of Iowa, 700 Clinton Street Building, Iowa City, IA 52242-1030.

Membership Dues

<u>Voting:</u>		<u>Non-Voting:</u>	
Active	\$15	Student (under 18)	\$7
Household	\$18	Institution	\$20
Sustaining	\$25		

Newsletter Information

The Iowa Archeological Society is a non-profit, scientific society legally organized under the corporate laws of Iowa. Members of the Society share a serious interest in the archaeology of Iowa and the Midwest. *Iowa Archeology News* is published four times a year.

All materials for publication should be sent to the Editor: Michael Heimbaugh, 3923 29th St., Des Moines, IA 50310. Phone (515) 255-4909. E-mail: paleomike@msn.com

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