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Alignments at the Folkert Mound Group

James M. Collins and William E. Whittaker

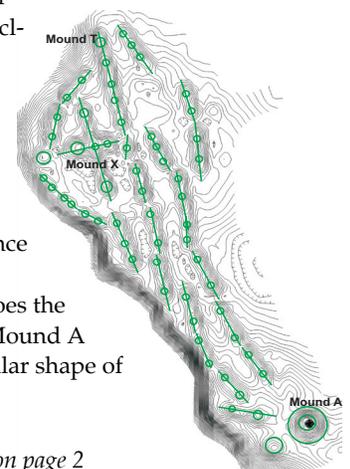
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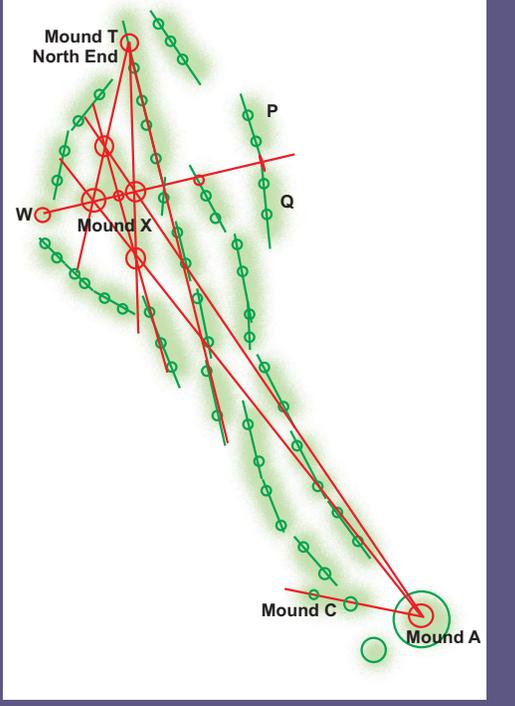
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In 2006 we spent part of the spring digitally mapping the Folkert Mound Group (13HA30) in Hardin County (see *IAS Newsletter* 57(1):10). The project revealed important data about the mounds, including their shapes, dimensions, and orientations, as well as some information about possible intentional alignments. What we discovered since then is that the mounds are more complex in shape than originally realized. Most of the mounds that were defined as linear are actually double compound or longer multiple compound mounds. A compound mound is linear in overall shape but with distinct symmetrical rises. These compound "peaks" are shown as green circles in the figure to the right. Mounds appear to flow from the larger Mound A, north, roughly

following the contours of the bluff face. This pattern is interrupted by Mound X and the mounds to the west, which curve along the bluff partially encircling Mound X. Such an alignment suggests Mounds A and X were of clear importance to the mound builders, as does the large size of Mound A and the irregular shape of Mound X.

—continued on page 2





We found the apparent alignment of Mound A with Mound X even more intriguing. If a line is drawn through the center of the west and south peaks of Mound X, it leads to the center of Mound A (see figure above). The same thing happens if a line is drawn through the north and east peaks of Mound X and extended to Mound A. Mound A may have been constructed in the Middle Woodland period and added to later during the Late Woodland, indicating that it was important for a significant period of time. Shaped mounds, such as effigies or the cruciform Mound X, are generally believed to have been constructed during Late Woodland times. If so, it can be assumed that Mound X was constructed after Mound A and was intentionally planned to align with the already important Mound A. Perhaps Mound X was situated to take advantage of the wide bluff extension, providing a maximum view of the valley on three sides.

Extending lines to the north from the west and north peaks of Mound X and the east and south peaks of Mound X reveals that they converge near the northern-most peak of Mound T, the longest mound of the group. The great length of the mound, as well as the steepness of the slope at its north end, suggests it was intentionally extended farther onto the bluff edge than any other mound, perhaps so it would intersect the convergence of the Mound X peaks.

Other interesting alignments are expressed by extending the line connecting the east and west peaks of Mound X. The western extension of this transect aligns with the center of the Mound W, the only conical along the bluff in the north part of

the site, and the western-most mound of the Folkert group. The eastern extension of this line runs gun-sight-like directly between mounds P and Q.

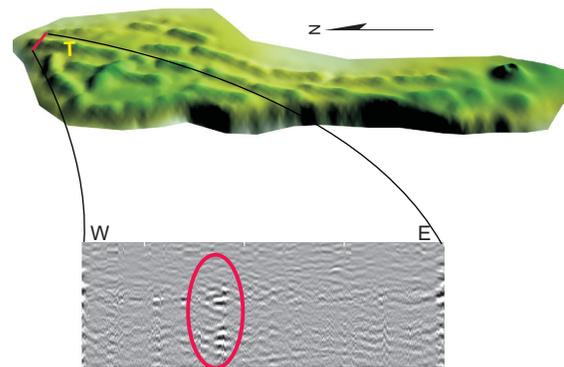
If intentional, what do these alignments mean? Apparently mounds A and X were of particular importance to the builders, as was apparently the northern tip of Mound T. Other mounds that appear to be important include W, P, and Q, because of their association with Mound X. At the south end of the site, Mound C appears to be related to Mound A as well. None of these alignments match the modern position of the sun at sunrise or sunset at the solstice or equinox, seemingly removing the most obvious astronomical inference. The position of the sun, however, at solstice or equinox 1000 years ago was different due to the long-term wobble of the earth on its axis.

Rather than astronomical alignments, perhaps the mounds were constructed to align with other points of interest on the landscape. None of the alignments intersect known mound sites. The alignment from Mound A across Mound X, however, does extend to the most distant point along the river valley to the northwest that can be seen from the Folkert site (green line in figure below). The alignment from the tip of Mound T across Mound X also extends far down the river valley to the southwest, in the general direction of the imposing Steamboat Rock and Tower Rock bedrock formations (yellow line in figure below).

All mounds were surveyed with ground penetrating radar (GPR), typically with several passes of the radar to make transect profiles of each mound. The soils at Folkert and the relative lack of height of some of the mounds make it difficult to distinguish internal strata. Most of the mounds display subtle evidence of level strata which probably correspond to natural sub-mound soil horizons. Levels above these lines tend to be homogenous, with interruptions only from natural or cultural disturbances.

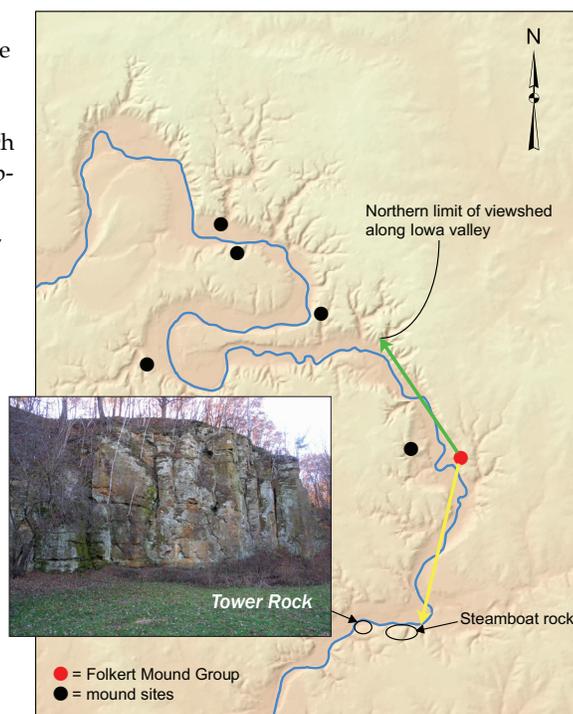
The north end of Mound T is of interest because of the nexus of alignments discussed earlier. The GPR profile above shows a disturbance in the mound at about the focal point of the Mound X alignments, suggesting the location of an observation post or other important feature.

Mound X, the most visually interesting, yields unremarkable GPR results, with few observable disturbances and a generally ho-



mogenous soil fill. Three-dimensional analysis of the center of the mound suggests that the deeper part was constructed in one stage, with no obvious difference between the center portion of the mound and its arms. If this mound was built primarily as a surface marker of important alignments, rather than as a complex mortuary object, this internal simplicity is understandable.

To date we have been unable to detect a relationship between the axis of the cruciform-shaped Mound X and any celestial objects. There are, however, certain tangents between mounds and breaks between mounds that bear further study. A calendar function is not ruled out, neither are potential associations with other astronomical alignments such as the Crab Nebula (see *IAS Newsletter* 57(3):1-2) or the conjunction of planets such as that between Venus and Jupiter early this winter in the southwestern evening sky. Such conjunctions may have been closely tracked by Late Woodland mound builders of the Iowa River Greenbelt.



What's the Point?

This large, banded chert artifact was found 1 mile northwest of Onslow, Iowa, by Kenneth Heeren from Lansing. The object is shown half size.

Guess the material, age, and point type, and send your responses to Lynn Alex at lynn-alex@uiowa.edu.

Last issue's winners. Larry Van Gorden, Dennis Sievers, Dean Steffen, James Schmuecker, and Gary Stam all came close in identifying last issue's point. The item is a Waubesa type made of Burlington chert. Waubesa points are part of the "Dickson Cluster" which also includes Gary, Dickson, and Adena types. The cluster dates to 2,500–1,800 years before present or 500 B.C. to A.D. 200.



Archaeology and American Indian Skills Summer Day Camp

Tuesday–Friday, 9–11 am, July 28–31
Wickiup Hill Outdoor Learning Center
Toddville, Iowa

Children aged 8–12 will learn how archaeologists find, investigate, and interpret archaeological sites. Special highlights will include flintknapping and participating in a real archaeological dig. During the afternoons, we will make cordage, clay pots, and atlatls, and explore Wickiup Hill. Registration deadline: July 23. Cost: \$75 per child. Participants must bring a sack lunch. Register online at www.LinnCountyParks.com and go to "Events," or contact Gail Barels, Conservation Educator and Naturalist, gail.barels@linncounty.org. Phone: 319-892-6488 or 319-294-2728



—GAIL BARELS

Wayne Rummells Dies

An important friend of Iowa archaeology, Wayne Rummells, of West Branch, Iowa, died at his home on Monday, June 22 at the age of 81. Wayne, along with Richard Maske, were the avocational archaeologists responsible for finding the Rummells-Maske Clovis point cache (13CD15) in the early 1960s. Research at the site yielded 20 points and one large flake tool. One third of the collection resides at the OSA, with a few points on public display at the UI Museum of Natural History. The Rummells' family are long-time supporters of the IAS.

—MARK L. ANDERSON

Levsen Rockshelter Gets a New AMS Date

John F. Doershuk and John L. Cordell

AS REPORTED PREVIOUSLY (see *IAS Newsletter* 58(3):8–9), the Paul Sagers Archaeological Collection has been transferred to the OSA for permanent curation. One of the goals of this transfer was to encourage new research based on this important collection. Recently, an accelerator mass spectrometer (AMS) date was generated from analysis of carbonized residue scraped from one of the sherds Paul Sagers collected more than 60 years ago from the Levsen Rockshelter (13JK4). Happily, the residue had never been scrubbed off by any overly zealous lab cleaning efforts!

John Cordell collected the residue sample from a Levsen Punctated sherd recovered by Sagers in Section 1 of the



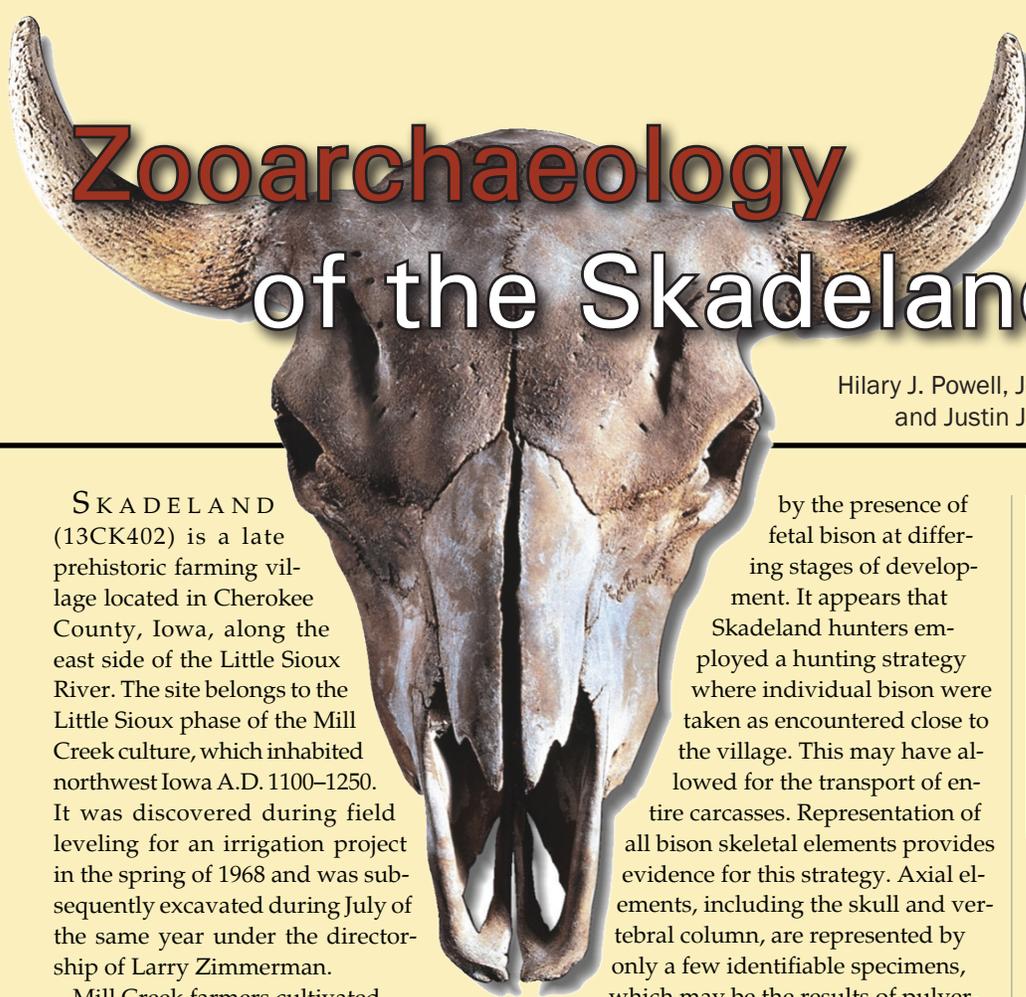
AMS lab at the University of California-Irvine.

rockshelter at a depth of 50 cm. This sherd was included in an illustration of several sherds of this type in Wilfred Logan's *Woodland Complexes in Northeastern Iowa* (page 96, Sherd b). Logan relates that the Levsen Rockshelter contained deep deposits composed of loose dusty ashes and numerous artifacts. While the nature of the deposits made careful stratigraphic observations difficult, Logan, building on data gathered by Charles R. Keyes, was able to reconstruct a general understanding of the occupations. Logan's typology places Levsen Punctated at the early end of the Linn Ware continuum. This ceramic type is generally placed in the latter half of the

Middle Woodland period, which spans the range from 200 B.C. to A.D. 400.

The Levsen Rockshelter sherd residue dating was completed as part of a larger project being undertaken by archaeologist John Richards and colleagues at the University of Wisconsin-Milwaukee supported by National Science Foundation funding. The UW-Milwaukee project solicited sherd residue samples from a number of repositories in the Midwest, and the OSA was pleased to participate. The sample (ISGS #A1254) was processed by the Illinois State Geological Survey and dated by the AMS laboratory at the University of California-Irvine, yielding an uncalibrated age of 1830 ± 20 radiocarbon years before present with a calibrated calendric date of A.D. 165–199 (1 sigma). This date fits neatly within Logan's typology and provides valuable confirmation of the expected position of Levsen Punctated within the Middle Woodland continuum represented by the Havana Ware to Linn Ware types. Additional sherd residue dates from the Sagers Collection are possible and will contribute significant new knowledge about eastern Iowa Woodland period adaptations.





Zoarchaeology of the Skadeland Site

Hilary J. Powell, John M. Lambert
and Justin J. Sullivan

SKADELAND (13CK402) is a late prehistoric farming village located in Cherokee County, Iowa, along the east side of the Little Sioux River. The site belongs to the Little Sioux phase of the Mill Creek culture, which inhabited northwest Iowa A.D. 1100–1250. It was discovered during field leveling for an irrigation project in the spring of 1968 and was subsequently excavated during July of the same year under the directorship of Larry Zimmerman.

Mill Creek farmers cultivated maize, squash, and chenopodium, while utilizing meat as a supplementary dietary resource. Mill Creek villagers exploited large prey such as bison, deer, and elk, although no kill sites are known. A variety of smaller mammals, birds, fish, reptiles, and freshwater mussels rounded out the diet.

Skadeland's faunal remains were never fully reported. For this study, a total of 570 skeletal elements were identified to bison (511), elk (7), and deer (33). Minimum number of individuals (MNI) are six bison (two fetal), one elk, and one deer. We suggest the presence of the bison elements can be attributed to multiple hunting trips, as opposed to a single kill event, as indicated

by the presence of fetal bison at differing stages of development. It appears that Skadeland hunters employed a hunting strategy where individual bison were taken as encountered close to the village. This may have allowed for the transport of entire carcasses. Representation of all bison skeletal elements provides evidence for this strategy. Axial elements, including the skull and vertebral column, are represented by only a few identifiable specimens, which may be the results of pulverizing these elements during the rendering of grease from bones. In contrast, forelimbs are well represented by the high Minimum Number of Animal Units (MAU) values for radii and metacarpals, while high tibia and femora MAU values indicate hind limb abundance. MAU is calculated by dividing the minimum number of elements for an animal taxon at a site by the number of elements or skeletal parts that occur in a complete skeleton of that taxon.

Butchering cut marks occur on 8 percent of the elements. Marrow exploitation is indicated by an abundance of elements rich in marrow and by impact fractures, and green bone spiral breaks. The extraction of marrow from the metacarpals is especially interesting, considering their marrow cavity is among the most difficult to access

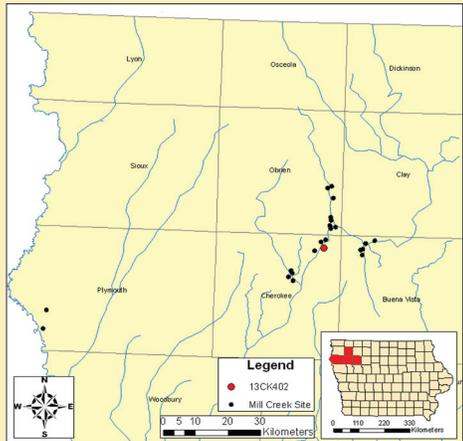


Metacarpals exhibiting spiral fractures as a result of hammerstone impact.

of any element. The patterns of marrow extraction and potential grease rendering provide evidence for intensive carcass utilization. These processing measures imply that Skadeland villagers either had leisure time to exploit bison carcasses in this manner or were experiencing food shortages and found it necessary to do so.

Small Mammals

A total of nine species of small mammal remains identified from Skadeland include: beaver (two left femur fragments), fox (one mandible fragment), river otter (one caudal vertebra and two phalanges), muskrat (four left and one right humeri), skunk (one axial vertebra), weasel (one tibia), pocket gopher (three crania), and woodrat (one humerus and one left femur). Four canine cervical vertebrae, believed to belong to the same individual, could not be assigned to a species, but fall somewhere between a fox- and



Select Mill Creek sites in northwestern Iowa.



Fetal bison bone from Skadeland: (a) long bone shaft, (b) femur shaft, (c) tibia, (d) metatarsal, (e) astragalus, (f) intermediate carpal.



Left: diaphysis and distal epiphysis of a left beaver femur. Right: (a) canine atlas and three cervical vertebrae in comparison to (b) fox and (c) coyote comparative specimens.

coyote-sized animal. Many of the rodent remains are axial elements such as crania, mandibles, and incisors.

The presence of gophers at Mill Creek sites has been previously noted as indicating their use as a dietary supplement, in pelt or bag preparation, or as bait to entice raptors. The Skadeland faunal assemblage provides evidence for three pocket gophers, as well as numerous raptor remains, suggesting a potentially similar pattern. Interestingly, none of these remains display burning or cut marks suggestive of having been eaten by the villagers.

Birds

A total of 71 bird remains were recovered. They were classified according to arbitrary size categories: large for turkey-size elements (26 percent), medium for hawk-size elements (57 percent), and small for robin-size elements (17 percent). Only six elements display cultural modification in the form of burning or cut marks. Burning is confined to lower limb elements such as phalanges and tarsometatarsii. Similarly, cut marks occur on upper and lower extremities including femurs, ulnae, and tibiae.

At least eight birds are represented at Skadeland based on the carpometacarpus and tarsometatarsus totals—elements representing lower limbs. The high occurrence of these elements may indicate feather harvesting. A number of the bird elements appear to be raptors. Some eagle-sized elements were also identified at the Skadeland site, two of which were bilaterally matched. Other Skadeland raptor elements include four hawk phalanges and several wing parts. Richard Fishel has reported a high occurrence of raptor lower leg and phalanx elements with few axial elements from the Phipps Mill Creek site. The high occurrence of raptor wings and lower legs, coupled with the relative absence of other bird gen-

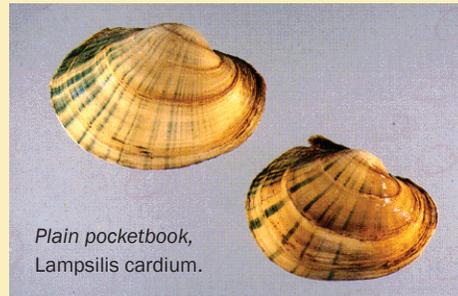


Large raptor elements: (a) proximal and distal ulna fragments, (b) left and right carpometacarpii, (c) left and right tarsometatarsii, and (d) left proximal radius.

era usually considered to be subsistence resources, may suggest a focus on bird exploitation for ritual or trade use.

Mollusks

The Skadeland bivalve assemblage consists of 117 individual valves, 85 of which were identifiable to 12 different species. The plain pocketbook, *Lampsilis cardium*, is the most abundant species constituting 29 percent of the total MNI for the site. All taxa identified in the assemblage are locally



Plain pocketbook, *Lampsilis cardium*.

available. A total of 33 percent of the valves in the assemblage are worked, and only 3 percent of the valves are burned. A single, small perforated shell bead was recovered.

The entire Skadeland bivalve assemblage accounts to only 3 kg of edible meat providing a meager .8 kcal-days and 4 protein-days for a single individual. Experimental studies indicate that harvest rates can exceed 175 mussels per hour per individual. Thus, the entire Skadeland assemblage (MNI = 56) could have been collected by a single person in 40 minutes.

Ethnographic accounts of mussel processing indicate that cooking mussels requires a very brief period of exposure to fire. This, coupled with the very small size of the assemblage, strongly suggests that the Skadeland bivalves were not processed on-site. The high proportion of worked shell present at Skadeland may reflect processed shell transported back to the site for cultural uses. This speaks to the dual importance of freshwater mussels within the Mill Creek culture as both a subsistence resource and as raw material for the creation of artifacts.

Identified bivalves from the Skadeland site.

Scientific Name	Common Name	MNI
<i>Amblyema plicata</i>	threeridge	4
<i>Elliptio dilatata</i>	spike	4
<i>Fusconaia flava</i>	Wabash pigtoe	3
<i>Lampsilis cardium</i>	plain pocketbook	16
<i>Lampsilis siliquoidea</i>	fatmucket	4
<i>Lasmigona complanata</i>	white heelsplitter	2
<i>Leptodea fragilis</i>	fragile papershell	3
<i>Ligumia recta</i>	black sandshell	7
<i>Pleurobema sintoxia</i>	round pigtoe	6
<i>Quadrula pustulosa</i>	pimpleback	2
<i>Quadrula quadrula</i>	mapleleaf	3
<i>Strophitus undulatus</i>	creeper	2

Conclusions

As a result of our research, we believe that the residents of the Skadeland site practiced a generalized subsistence strategy, differentially exploiting prey species based on their value as subsistence resources, raw material, or ritual and ceremonial items. Future research on the Skadeland faunal assemblage should better identify avian and bivalve species. In addition, a systematic evaluation of cut marks would provide a clearer picture of butchery and transport decisions, especially with respect to bison. Additionally, the density of faunal remains in individual excavation units and their potential association with features may reveal patterns of site structure.

About the authors



Hilary J. Powell is a graduate student in anthropology at Iowa State University (ISU). In addition to research on Late Prehistoric diet and subsistence in northwest Iowa, interests in Paleoindian archaeology have

led her to projects in Nebraska and Illinois. She is currently working for ISU's Center for Excellence in Science, Math and Engineering Education and at Saylorville Lake to develop an educational archaeology program.

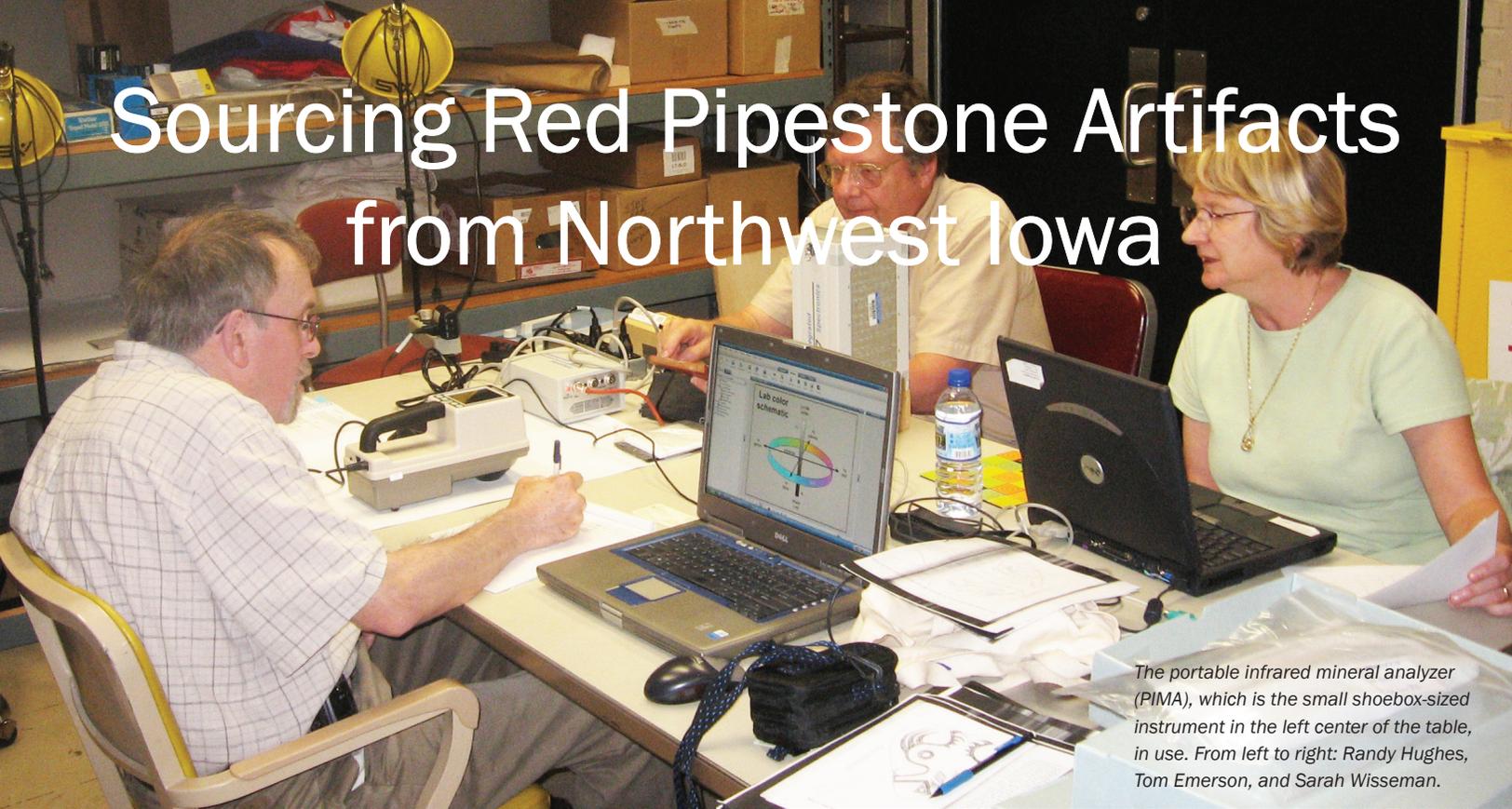
John M. Lambert recently graduated from ISU with a B.S. in anthropology, a B.A. in English, and a Graduate Certificate in GIS. This fall he starts in the Anthropology graduate program at the University of California-Davis. Research interests include zooarchaeology, human behavioral ecology, and Great Plains prehistory.



Justin J. Sullivan graduated from ISU in 2008 with a B.S. in anthropology, and in 2009 received a GIS Certificate doing predictive modeling on sites in six Iowa counties. Currently he is project manager for NIMH-funded research at Boys Town, northeast Omaha, Nebraska.



Sourcing Red Pipestone Artifacts from Northwest Iowa



The portable infrared mineral analyzer (PIMA), which is the small shoebox-sized instrument in the left center of the table, in use. From left to right: Randy Hughes, Tom Emerson, and Sarah Wiseman.

Richard L. Fishel and Jason M. Titcomb

OVER THE LAST FEW YEARS, a team of geologists and archaeologists at the University of Illinois, consisting of Randy Hughes, Sarah Wiseman, and Tom Emerson, has utilized a portable infrared mineral analyzer (PIMA) to determine the types and origins of pipestones used to manufacture prehistoric North American pipes and figurines. What makes the PIMA a valuable tool for archaeology is that it can identify specific minerals present within the raw material from which an artifact was manufactured, thus allowing the archaeologist to determine its general source area. The accurate determination of an artifact's source is crucial to assessing trade and alliance building in many societies. The portability, speed, and the nondestructive nature of the PIMA make it a perfect instrument to be used in a museum or other curation setting.

Red pipestones were utilized by many groups throughout the Midwest in the construction of pipes, tablets, and effigies, presumably traded among societies. Red pipestones are also frequently associated with the pipe bowl of the calumet ceremony. Calumets are perhaps better known as the "peace pipe" in Hollywood's Western genre movies. One of the results of the calumet ceremony was that it established a fictive kinship between individuals of different clans, bands, or ethnic groups.

Persons possessing a calumet were often guaranteed safe passage through potentially hostile territories.

Research conducted by Jim Gundersen has demonstrated that, while many red pipestones may appear similar, their mineral composition varies based upon source area. Even catlinite itself has internal variation depending on which strata it originated from in the Pipestone National Monument quarries. Two subtypes of catlinite have recently been identified by Illinois State Geological Survey geologist Randy Hughes—Catlinite A, which has almost equal amounts of two specific minerals (muscovite and pyrophyllite), and Catlinite B, which is almost entirely pyrophyllite with only a small amount of muscovite.

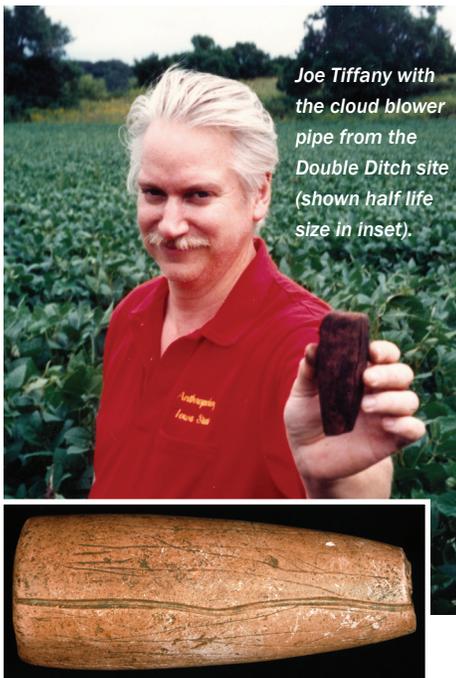
Our research area—northwest Iowa—lies in proximity to at least four known source areas of red pipestone: the catlinite quarries of southwest Minnesota; the glacial drift spread throughout southeastern South Dakota, eastern Nebraska, and eastern Kansas (known as "Kansas" pipestone); the glacial drift of Waterman Creek in O'Brien County, Iowa; and the glacial drift of Woodbury County, Iowa. Thus, not all red pipestone artifacts found in northwest Iowa can be assumed to be catlinite from the Pipestone, Minnesota, locality.

Artifacts Use in PIMA Analysis

We conducted PIMA analysis on four red pipestone artifacts recovered from four Late Prehistoric sites in northwest Iowa—a tubular "cloud blower" pipe, two animal effigy pendants, and an engraved tablet. The cloud blower pipe was found by Joe Tiffany in 1994 at the Double Ditch site (13OB8) in O'Brien County. Double Ditch is a fortified Mill Creek village along Waterman Creek that was likely occupied for a short period of time between A.D. 1100 and A.D. 1250. It is the northernmost known Mill Creek site and is one of only a few Mill Creek sites that have never been plowed.

Cloud blower pipes were used by some societies to produce smoke that mimicked clouds, possibly in an attempt to bring rain or cure disease. Other examples of such Mill Creek pipes include two from the Broken Kettle site (13PM1), one of which is manufactured from red pipestone, and one from the Kimball site (13PM4), also made of red pipestone.

Two small, drilled animal effigy pendants, recovered from the Rock Creek Ossuary (13PM65) and the Possum site (13PM420), were also analyzed. The Rock Creek Ossuary is located on a high knoll overlooking Rock Creek in Plymouth County. In the summer of 1972, members of the Northwest Chapter of the IAS



Joe Tiffany with the cloud blower pipe from the Double Ditch site (shown half life size in inset).

conducted excavations to recover human remains after the site had been severely vandalized. In addition to heavily fragmented pieces of human bone, a cord-marked body sherd, two point fragments, a perforated deer bone tinkler, several shell beads, and a red pipestone effigy pendant were also recovered. Based partially upon the presence of this red pipestone pendant, Duane Anderson and Dave Baerreis interpreted the site as being affiliated with Mill Creek. Shirley Schermer, however, as well as Steve Lensink and Joe Tiffany, do not

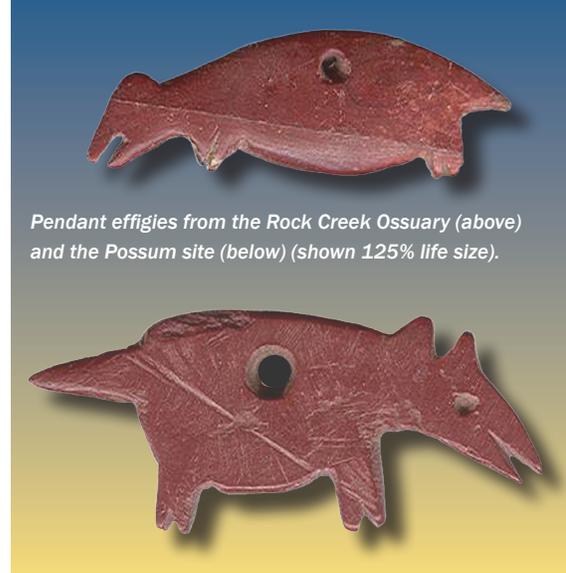
rule out the possibility the site could be affiliated with the preceding Great Oasis culture.

The Possum site is located on a terrace remnant in the Perry Creek drainage north of Sioux City. Because excavations have been limited, little is known of the site's placement within Iowa's cultural history. Only two pottery rims are documented, and they could be either Great Oasis or Mill Creek.

The type of animals depicted by the two effigies is difficult to determine. The extended, rounded abdomens on both suggest they represent pregnant females, indicating that they may be fertility or hunting fetishes.

The final artifact is a large engraved tablet found at the Phipps site (13CK21) in Cherokee County. Phipps is a well-known Mill Creek village located north of Cherokee along Mill Creek and has been subjected to numerous excavations. A high school group and their teachers recovered fragments of this tablet during the early 1960s while conducting a surface survey of the site. The tablet became part of a classroom teaching collection for several years. In 1992 Evan Knapp, one of the teachers who found the tablet, donated the artifact to the Sanford Museum in Cherokee.

One side of the Phipps tablet exhibits engraved birds with intertwined necks that are likely geese based upon their long necks and flat beaks. Both birds have arrows emanating from their eyes. A third



Pendant effigies from the Rock Creek Ossuary (above) and the Possum site (below) (shown 125% life size).

bird, also likely a goose, exhibits a forked or "weeping eye" motif. The other side of the tablet shows a mythological creature, possibly a water serpent with a bird's body. Above this monster is another bird. Both figures have arrows emanating from their eyes.

Engraved red pipestone tablets are usually associated with the Oneota culture. They frequently exhibit incised figures of serpents, birds, birdmen, and bison. While their function in Oneota society is enigmatic, they may have been utilized in hunting, fertility, or revitalization ceremonies. Probably one of the more well-known Iowa sites to produce these tablets is the Bastian Oneota village (13CK28), which is located 2 km south of Phipps.

Results

PIMA analysis of the four artifacts reveals that the Double Ditch pipe and Rock Creek effigy are manufactured from Kansas pipestone. The Possum site effigy is made of Catlinite B and the tablet from the Phipps site is manufactured from Catlinite A. In addition to the Possum site effigy examined in our analysis, one red pipestone artifact from the Mill Creek Broken Kettle site has been identified by X-ray powder diffraction as also manufactured from catlinite. This study demonstrates that although the sample of analyzed artifacts is small, Mill Creek and possibly Great Oasis people utilized both the catlinite quarries and red pipestone raw materials collected from glacial gravels. This procurement strategy also appears to have been followed by the later Oneota inhabitants of northwest Iowa, with emphasis shifting to an almost exclusive reliance on the Minnesota catlinite quarries by the protohistoric period.

Oneota engraved tablet from the Phipps site (shown 40% life size).



A Prehistoric Cache Site along the Mississippi



Branden K. Scott

IN MARCH OF 2007, BEAR CREEK ARCHEOLOGY, INC. archaeologists scurried and slid down the steep bluffs adjacent to the Mississippi River in search of archeological sites in rock alcoves and overhangs in Clayton County. Using the trees for stability, the field crew carried shovels and screens down a steep slope to a 10-m² overhang where a small flake tool rested on a rock ledge. The picturesque setting of site 13CT359, overlooking the Mississippi River, is marked by sandstone bedrock outcrops, sandy soils, rock falls, and sheer cliffs. The site is 50 m west of the river, 20 m above the channel, and 75 m below the bluff top. Shovel-testing confirmed the presence of six additional artifacts, and the crew tentatively identified the spot as the location where prehistoric hunters waited to ambush prey.

Test excavations began on July 31, 2007. Two 1-m² test units were troweled and screened via 10-cm levels, and an additional shovel test was excavated. Only Test Unit 2, bordering the rock shelf that held the original flake-tool and excavated to 60 cm, yielded additional artifacts.

Twenty-two prehistoric chipped stone flakes and tools were the only artifacts recovered. Tools include two flake-tool graters, a flake-tool knife, and a bifacial knife fragment with wear indicative of use on a variety of materials including hide and flesh. Most of the flakes lack cortex and appear to result from thinning large bifaces. A dozen artifacts including flakes, a biface,

and graver were knapped from at least two cores of good- to high-quality Burlington chert. A dozen more, including the flake-tool knife and a second graver, stem from a high quality brown orthoquartzite resembling Hixton silicified sandstone. The brown orthoquartzite may originate from Cambrian sandstone sources in western Wisconsin or from similar silicified seams in the Jordan Sandstone on the Iowa side of the Mississippi River. Other cherts recovered include Hopkinton, Galena, and Shakopee, all of which outcrop along the Mississippi River.

The chipped stone artifacts occurred throughout the loose soil matrix of Test Unit 2 and on the surface of the adjoining sandstone outcrop. The site shows no indication of being a habitation site, and while the flaking debris indicates flintknapping and biface reduction, the absence of smaller flakes and shatter signifies that chipped stone reduction was not the primary activity at this location. Notable activities identified by edge-wear analysis include butchering and the incising of bone, although the location of the site would seem less than conducive to these sorts of tasks.

The soil matrix surrounding the artifacts suggests that they were in a secondary context resulting from the redeposition from a small, convex-sloping bench above. The bench, however, has little remaining sediment overlaying the bedrock and contains no prehistoric artifacts. The impacts and fractures on all of the 13CT359 artifacts, however, do indicate that they relate to human activities. A second explanation for this artifact concentration is that the narrow sandy bench at the base of the outcrop is a remnant of a larger landform that once contained a prehistoric occupation. The slope is composed of loose sediment, fractured bedrock, talus deposits, downed trees, and displaced boulders—evidence of large and small erosional events. One would expect, however, that if the site area were larger in the past, artifact densities would be higher in both test units instead of the concentration found in only a small portion of Test Unit 2.

The data suggest that the site is an isolated lithic cache. At least nine other isolated caches are recorded in Iowa, with the most notable ones including the Rummells-Maske Clovis and the Holland Dalton caches. In most of the Iowa caches, the recovered artifacts include usable tools such as points, bifaces, blades, abraders, and large flakes stored with the intention of eventual retrieval. The small cache at 13CT359 does not conform to this pattern, as it is comprised primarily of artifacts that are too small or fragmented to be used. Thus, the cache may reflect a smaller tool tradition like those documented for the Late Woodland and Late Prehistoric periods. While the reason for creating this cache remains elusive, it is possible that 13CT359 represents a person hiding or storing prestigious raw materials.



Flashback...OSA in 1959

The following is a fictional interview with Dr. Rey Ruppé, Iowa's "newly appointed" first State Archaeologist.

Iowa City—Years of lobbying in the halls of the capitol building in Des Moines finally bore fruit with the creation of the State Archaeologist by an act of the Iowa Legislature in April of this year. Reynold J. Ruppé, 41, a professor in the Department of Sociology and Anthropology at the State University of Iowa in Iowa City, was tapped to fill the position and has been in the job for four months now. Just before the beginning of the new school year, IAS President Henry Rowe Kline-Yeats interviewed Ruppé about the appointment and his plans for the new office.

Q: Dr. Ruppé, what prompted you to accept the position of State Archaeologist?

R.R.: We are pleased with the opportunities this position opens. Iowa has much to offer toward the problems of the age and relationships of the prehistoric cultures of the Midwest and Plains. The association with the SUI shows that our leaders recognize the educational and research values inherent in



the discipline. Our new laboratory in the Armory will greatly enhance teaching, research, and publication activities. The location is first rate, near the Main Library. One entire wall is shelving for our research collections. We have enough table space for 10 students and still have room for our editorial and teaching desks.

Q: Tell us about your background. What are your qualifications for the position? How long have you been teaching at the university?



R.R.: Well I'm from back east, born in Pennsylvania and raised in New Jersey. I studied prehistoric archaeology at the University of New Mexico, went on to Harvard for the Ph.D., and graduated in 1953. I joined the SUI just after my work at Harvard, so I've been involved in the archaeology of this state for the past six years. I established the summer field school in Midwestern archaeology, and so far my students and I have worked on an Archaic site near Olin in eastern Iowa, an Early Man site at Turin in western Iowa, Oneota and Mill Creek sites in northwestern Iowa, and Woodland mound sites in southeastern Iowa. Through these excavations, I've become familiar with the general prehistory of the state which I've tried to summarize in several articles in the *IAS Journal* over the past few years.

Q: So you're not a native Iowan. How did you learn of so many sites?

R.R.: Charles Keyes did a remarkable job of assembling much of the information about Iowa archaeology. At Effigy Mounds, Wilfred Logan, who is just finishing his dissertation on the Woodland cultures using Keyes's research, has been very helpful. In northwestern Iowa, Weldon Frankforter at the Sanford Museum has also been a great resource.

Q: Based on what you've seen so far, which of Iowa's prehistoric cultures do you find most interesting?

R.R.: Mill Creek sites seem to hold the greatest

promise for important discoveries due to the apparent influence of Mississippian culture. In 1955 we excavated at the Phipps site near Cherokee with its extremely thick midden full of bones and pottery. We just wrapped up a dig at the Wittrock Village site on Waterman Creek northeast of Cherokee, where we exposed house floors and found many pit features containing charred corn, animal bone, pottery, and stone artifacts. These Mill Creek remains will keep my students busy in the lab for years to come.

Q: How long did you spend at the Wittrock site? How many students were involved?



OSA's first lab in the basement of the Armory.

R.R.: We began in mid June and worked about eight weeks. James Scholtz, one of my graduate students, was the field director. James Anderson, John Bushnell, Gay Croghan, Enya Flores, Spense Schroder, Dick Swinney, John Vincent, and Tom Vincent worked through the entire project. Adrian Anderson and John Salladay arrived in late July. Adrian is busy working on his master's thesis and couldn't spend much time on the site. Of course, there were visitors to the site and some volunteered to help screen. Chuck and Shirley Smith helped all day once. The fall lab class will be spent analyzing the remains.

Q: That's terrific. What's next? Where will you go next summer?

R.R.: There's so much to be done. We need a system of record keeping so we know where all the sites are. And the collections have to be stored properly and looked after. I'm expected to develop relationships with other

state agencies to handle archaeological problems as they arise. This, all on top of my regular teaching responsibilities. So I'm a bit apprehensive, especially

since there is no funding to run the lab and it looks like I won't receive any extra compensation for my duties as State Archaeologist.

Q: No funding! That's awful! Well, Doctor, I thought our lobbying efforts were finished, but it sounds like we've got more work to do to get some money coming your way. Thank you for the interview. Can we meet again a year from now for a follow-up session?

R.R.: If I'm still here, I'd be glad to.

—MICHAEL J. PERRY

IOWA ARCHAEOLOGY MONTH 2009

ARCHAEOLOGY ON THE ROAD...AGAIN

As a keystone event for IAM 2009, OSA has once again organized "Team Archaeology" to bike the entire Register's Annual Great Bike Ride Across Iowa (RAGBRAI) route interacting with the thousands of riders and community residents encountered during the week of July 19–July 25. The week begins with a kick-off exhibit at RAGBRAI Expo in Council Bluffs. This event offers an opportunity the first night to distribute the "Iowa Archaeology on the Road...Again" booklet and other promotional materials. The booklet maps out the week's schedule of events, explains what archaeology is about, presents archaeological and geological facts and figures, highlights historic points of interest, and suggests ways to learn more.

Wearing their green and orange "Team Archaeology" biking shirts, the Riding Team will be a visible focal point for impromptu archaeological discussions along the route. Shirts

display the name and logo of contributing organizations, including the IAS

A separate Outreach Team will set up a traveling exhibit at Henderson, Milo, Moravia, and Packwood; share information on local discoveries; and distribute resources including this year's booklet, IAM poster, and a bright green wristband with a new website address: <http://iowaarchaeology.org/>. A Support Team will assist with riders' logistics and transport promotional materials.

Resources prepared for the RAGBRAI venue will also be distributed at the Meskwaki powwow, Hooverfest in West Branch, the Iowa State Fair, Effigy Mounds National Monument's sixtieth anniversary, OSA's fiftieth anniversary, the Ft. Atkinson Rendezvous, and the "Let's Celebrate Archaeology" event at the State Historical Society Museum. In July the National Endowment for the Humanities magazine will be featuring the ride week in an

article highlighting humanities-funded programs and events across the country.

To request this year's poster, created by Effigy Mounds National Monument, or wristbands, contact the OSA.

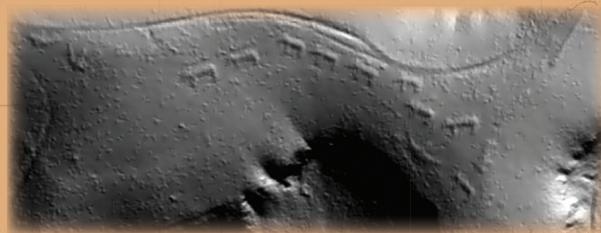
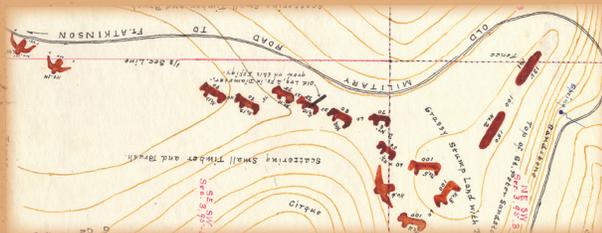
IAM 2009 is supported by a major grant from Humanities Iowa and via partnerships and financial contributions from the following:

- Effigy Mounds National Monument
- State Historical Society of Iowa
- Iowa Archeological Society
- Association of Iowa Archaeologists
- Earthview Environmental
- Bear Creek Archaeology
- Wapsi Valley Archaeology
- Louis Berger Group, Inc.
- GSS, Inc.
- Veenstra and Kimm, Inc.
- UI Museum of Natural History
- UI Office of the State Archaeologist

—LYNN M. ALEX



MARCHING THROUGH TIME 1000 - 100 - 60 - 50



THE "MARCHING BEAR" MOUND GROUP
EFFIGY MOUNDS NATIONAL MONUMENT

Iowa Archaeology 2009

Marching Through Time 1000 - 100 - 60 - 50: One thousand years ago, the Late Woodland Indians were constructing magnificent Effigy Mounds in the upper Midwest of what is now the United States. The year 2009 marks the one-hundredth anniversary of the National Park Movement in Iowa, the sixtieth anniversary of the creation of Effigy Mounds National Monument, and the fiftieth anniversary of the establishment of the Iowa Office of the State Archaeologist. To commemorate these interrelated events, the Iowa Office of the State Archaeologist and the National Park Service have created this poster, which depicts the technological "march through time" as applied to excavating and understanding Iowa's most visually impressive archaeological site: the "Marching Bear Group" located at Effigy Mounds National Monument in Clayton County. Background Image: Early survey by Theodore H. Lewis, 1892. Reproduced from T.H. Lewis' original field notebook. Image courtesy of the Minnesota Historical Society. Top-Left Image: Early map drawn by Ellison Orr in 1910. Reproduced from the Ellison Orr Collection. Image courtesy of the National Park Service. Center Photograph: Aerial photograph of the group, outlined in agricultural lines in 1978. National Park Service Photo. Top-Right Image: LIDAR (Light Detection and Ranging) image of the mounds in 2007. Image courtesy of the Iowa Department of Natural Resources. Poster Design: Ken Block & Bob Palmer, National Park Service. Major sponsors for Iowa Archaeology - 2009 include Humanities Iowa, the Iowa Archeological Society, the State Historical Society of Iowa, and the Association of Iowa Archaeologists.



From the Desk of the State Archaeologist

OSA's Economic Outlook

I'm sure you're keenly aware of the downturned economy, and I wish you the best of luck in grappling with the resulting impacts to your personal lives. Likewise, the OSA—along with the entire Iowa Regent's University System—also faces ominous economic challenges. Happily, it appears the OSA can avoid layoffs, at least in the foreseeable future, but it's clear we're confronting significant funding problems that will extend over several years at least.

Did you know that in a typical year nearly 90 percent of the OSA operating budget comes from contracts, grants, fees, and gifts? I'm proud to lead such a dynamic group of archaeologists that are so resourceful at finding ways to fund their own initiatives in research, service, and education! As I've recently come to fully appreciate, however, the money the OSA receives from the State of Iowa is vitally important to the continued success of the office. This is especially true regarding our information-sharing efforts with the general public, Iowa Archeological Society members, and professional archaeologists. State funding also supports our ability to efficiently coordinate compliance with the state burial law, including consultation with Native Americans and affected landowners, and also to support the State Archaeological Repository—where the actual *things* that are the core data about Iowa archaeology are housed. Don't get me wrong—contracts, grants, fees, and gifts also provide key support to these aspects of the OSA, but the state funds we receive are of fundamental importance.

As currently conceived, fiscal year 2010 budget cuts starting July 1, 2009, have trickled down to the OSA as a 10 percent reduction to state funds received in the current



year. This totals a staggering \$58,000! As a stop-gap measure, the state has elected to provide the University, and in turn the OSA, with \$34,000 in federal economic stimulus funds on a one time, "this-year-only" basis. We intend to recoup the difference by raising existing fees and by launching a long-planned new geographic information system product. Starting in just one year, however, the stimulus funds will be unavailable, and the full brunt of the 10 percent cut will be felt.

In response to this challenge, OSA staff members will be revisiting several contract sources in hopes of new awards. But many of these sponsors are highly restrictive regarding what activities may be supported. We are also seeking support to overhaul the OSA website into a robust and exciting

"Portal to the Past" that will tremendously increase the information available to private citizens, government employees, professional archaeologists, and

students who want to know about Iowa's archaeological past. Such an overhaul will require significant initial funding but—if our vision succeeds—will eventually provide balanced access to worthwhile free information and revenue-generating fee data. We will know by next issue whether we've been successful in capturing the grant that will allow the Portal to be developed in the coming year.

How You Can Help

Regardless of our success in finding new contracts or grants, the long-term success of the OSA in providing Iowans with interesting and accurate information about the past will require the investment of Iowans in the OSA. Tax-deductible gifts, large and small, can be made via <https://www.uifoundation.org/> (select "Give to IOWA now" and select "O" on the A-Z list for the OSA). Deferred gifts incorporated into estate planning are an excellent way to provide substantial support to a specific OSA activity like K-12 outreach or curation of an especially important collection. Please contact either me or Associate Director Steve Lensink for help with planning such a gift. We have plans for the OSA website to feature an Honor Roll of Contributors of which we

would love to make you a part!

Iowa State Heritage Sites

In the coming year, I will be designating select archaeological sites as *Iowa State Heritage Sites*. The OSA will award the landowner of a designated site with a plaque and notice of recognition. Pending landowner permission and funding, a roadside marker will be placed identifying "this property contains an Iowa State Heritage Site." My hope is that this will encourage a sense of ownership and stewardship by the landowner as well as recognition for the site itself, increasing the value all Iowans place on their shared past and its enrichment of our lives today.

—JOHN F. DOERSHUK

Dave Carlson Donates Collection to the OSA

After 40 years of combing the valleys and glacial lakes of Webster and Hamilton counties, Dave Carlson, Otho, Iowa, has magnanimously donated his meticulously documented archaeological collection from over 80 sites to the OSA. Dave, a long-time IAS member who lives on a farm just south of Fort Dodge, has been surface collecting sites since the days of Marshall McKusick. Not only has he been recording his sites in the official Iowa Site File since the early 1970s, he has kept his collections in superb order—curating them by site number, using the Smithsonian trinomial system, and labeling the diagnostic items. Because of his methodical care, Dave's collections will be invaluable in the research on north central Iowa prehistory.

Dave is shown in the photo above with one of his many fanciful masks, constructed entirely from native American gourds grown on his farm. He has promised us the loan of his masks and other gourd artwork for an exhibit at the OSA. So stay tuned for future announcements.

Dave, many thanks for your generosity!

—STEPHEN C. LENSINK



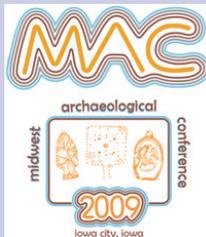
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The University of Iowa
700 Clinton Street Building
Iowa City, IA 52242-1030



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Midwest Archaeological Conference to be in Iowa City, Fall 2009

The 2009 MAC will be held October 15–17 in Iowa City jointly sponsored by the OSA and Museum of Natural History (MNH). Both OSA and MNH are easy walking distance from the conference hotel (Sheraton). The preliminary schedule of events includes the following.



Thursday afternoon and Friday and Saturday all day: papers, symposia, and poster sessions at the conference hotel.

Thursday evening: reception at the MNH featuring light refreshments and an opportunity to meeting authors of recent UI Press publications. The many fine exhibits at the MHN will be open for viewing. (check www.midwestarchaeology.org/ for details).

Friday all day: Group tours (on the hour) of the OSA facility.

Saturday evening: annual business meeting and award ceremony followed by a cash bar then banquet dinner and speaker at the conference hotel.

Sunday: planning for several local archaeological site tour options is in the works, details will be available on the MAC, Inc. website.

Fall Meeting of the IAS to be Held Jointly with MAC

For the IAS fall meeting, non-MAC IAS members can attend the MAC on Saturday, October 17 for \$15 (includes morning and afternoon access to papers, posters, symposia, and the book room). No pre-registration is necessary; members can register at the door.



The Saturday evening banquet is also open to IAS members (\$35 per person). Pre-registration is required by September 14.

Contact John Doershuk, Conference Organizer, (john-doershuk@uiowa.edu) and specify your entree selection (prime rib, grilled red snapper, Caribbean jerked chicken, or mushroom tortellini). All meals include salad, two sides, desert, and coffee or tea. There will be a cash bar before the banquet.

The banquet speaker will be Dr. Patricia Sutherland. Dr. Sutherland is Curator of Arctic Archaeology at the Canadian Museum of Civilization. She will speak on "A New Perspective on Native/Norse Contact in Arctic Canada."

Conference Hotel:

Sheraton Hotel
210 S Dubuque Street
Iowa City, Iowa 52240
(319) 337-4058

Room Rate: \$99

Membership Information

Contact the Membership Secretary, Iowa Archeological Society at The University of Iowa, Office of the State Archaeologist, 700 Clinton Street Building, Iowa City, Iowa 52242-1030.

Membership Dues

Voting	
Active	\$20
Household	\$25
Sustaining	\$30
Non-Voting	
Student (under 18)	\$9
Institution	\$30

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. The *Newsletter* is published four times a year. All materials for publication should be sent to Editors Lynn M. Alex and Stephen C. Lensink, The University of Iowa, Office of the State Archaeologist, 700 Clinton Street Building, Iowa City, Iowa 52242-1030. Email: lynn-alex@uiowa.edu or steve-lensink@uiowa.edu. When submitting articles, please provide text, captions, tables, and figures separately. All digital photographs should be at least 300 dpi at full size. Graphics, if supplied digitally, should be high-resolution tiff or eps files. Paper versions of articles and photos are also acceptable.

IAS web site

www.uiowa.edu/~osa/IAS/iashome.htm.