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Iowa Archaeology Month 2004: Life in the Ice Age Lynn M. Alex

"Life in the Ice Age," Iowa Archaeology Month (IAM) 2004, focused on the earliest human residents of the Midwest and the late Pleistocene world they inhabited. Integrating archaeological and paleontological discoveries, IAM events in over thirty communities offered audiences a chance to hear (and debate) a controversial theory regarding the first peopling of the New World, touch and feel giant ground sloth remains from Page County, view mammoth bones found beneath the sidewalks of Des Moines, and try their hand at Ice Age hunting techniques.

Archaeological and paleontological sites recently uncovered in Iowa and the Midwest, and a national debate concerning ancient human remains, have renewed interest in both the animal and human residents of the Ice Age prompting this year's theme. Indirectly, the IAM 2004 theme also extends the current commemoration of the Corps of Discovery, since the 1804–1806 expedition led by Lewis and Clark was charged by President Thomas Jefferson with finding evidence of animals like the sloth and mammoth, either "dead or alive." Jefferson and others of his time were aware of fossil bones of large animals no longer living east of the Mississippi River. However, these remains presented something of a conundrum to early 19th century interpretation. Their suggested great age, as demonstrated by their fossilized state, and the possibility that they represented extinct species, challenged biblical-based interpretations about the age of the earth and the fate of its living forms. Jefferson's personal attempts at early archaeology and paleontology left him somewhat more open-minded. He was one of the first to deduce that enigmatic earthen mounds were the burial sites of American Indians, and he accepted the possibility that fossil bones represented extinct species. At the least, he reasoned that if mammoth and sloth were not extinct then they might be found somewhere, perhaps in the relatively uncharted territory encompassed by the Louisiana Purchase. He proposed that the voyage by Lewis and Clark should procure "further information of the Mammoth and of the Megatherium [sloth]..." As we know, the Corps of Discovery's findings did this indeed.

Flash forward almost two centuries. Within the span of just a few years, new discoveries of mammoth and giant ground sloth come to light in Iowa, beneath the construction site for a new insurance building in downtown Des Moines and eroding from the banks of West Tarkio Creek near Northboro in Page County (see "Iowa Archaeology News," Summer 2004). Both finds are considered late Pleistocene in age, and both animal species represent potential neighbors for Iowa's earliest human inhabitants. While no recent intact archaeological sites of this time

period have surfaced since the Rummells-Maske cache was upturned from the plow zone of a Cedar County field almost three decades ago, Clovis point discoveries from throughout the state form a corpus of evidence for this earliest period of human history. The goal of IAM 2004 was to integrate and explain these intersecting lines of evidence and extend knowledge of the new discoveries throughout the state.

As the coordinating organization for IAM, the University of Iowa's Office of the State Archaeologist (OSA) arranged programs, provided guidance and assistance to partnering organizations, and encouraged lectures, tours, demonstrations, and exhibits at libraries, historical societies, county conservation centers, and schools across the state. While IAM has reached thousands of Iowans over the past twelve years, this year's planning committee decided to target specific communities in 2004 to better utilize diminishing financial resources and personnel, and more effectively promote a local dialogue about heritage conservation and stewardship. This year's selected communities, Iowa Falls and Red Oak, hosted special weekend celebrations with keynote speakers, interactive demonstrations, visits by archaeologists to local schools, and a noontime presentation to a regional service club. Libraries, schools, historical societies, and county conservation centers in each community received special informational packets and IAM posters. Storm Lake, one of the communities initially selected for IAM 2004, has been added to the list for next year's event.

Three Iowa museums, the National Mississippi River Museum and Aquarium in Dubuque, UI's Museum of Natural History, and the State Historical Museum in Des Moines, featured special presentations and interactive demonstrations related to the IAM 2004 theme. The new Dubuque facility offered an entire weekend of Native American cultural events, Ice Age technologies, and an exhibit and presentation on the Northboro ground sloth discovery. The UI Museum of Natural History provided a series of Saturday presentations throughout September and October entitled "Looking Back at the Earth's Creatures: The Ice Age and Beyond." The State Historical Museum featured a "mammoth" Saturday with a guided tour of its new atrium exhibit, rock art drawing for youngsters, and a lecture by UI's Dr. Holmes Semken and David Brenzel on the Northboro ground sloth. The State Historical Museum sponsored a second IAM Saturday event hosting Dr. Bruce Bradley, also the keynote speaker in Iowa Falls. Dr. Bradley, now at Exeter University in England, updated audiences on his ideas concerning early Americans and western European connections and offered an interactive flintknapping demonstration.

Over a dozen artifact road shows, flintknapping and atlatl demonstrations, and Life in the Ice Age programs also were offered at county conservation centers, museums, and other local venues. A special exhibit on the Northboro ground sloth prepared by OSA's Sarah Pitzen and the UI Museum of Natural History, a large Ice Age map by OSA's Mark Anderson and Angela Collins featured on the back of the IAM poster, and a lesson plan and Ice Age bibliography for youngsters assembled by OSA's Julianne Hoyer, extended IAM 2004 well past the October ending date. Two new copies of a traveling resource box, Time Capsule from the Past: Iowa 13,000 Years Ago, and this year's poster designed by Colorado State University student Mike Low, will go a long way to educating young Iowans about this year's theme. The State Historical Society Museum is currently utilizing lowa 13,000 Years Ago in conjunction with their mammoth exhibit.

Although final figures are still being calculated, IAM 2004 has been successful once again in focusing Iowans attention on the state's archaeological resources and their imbedded stories. This year's efforts to blitzkrieg specific communities and promote heritage preservation, stressed the value of local history (and prehistory) in promoting community appreciation and grounding younger citizens in a sense of place. Partnerships with organizations like the State Historical Society and the UI Museum of Natural History maximized these efforts and enriched the results.

The Iowa Archeological Society and its members provided sterling support for IAM 2004 in financial resources, programming, promotion, and facilities. Individual chapters planned and hosted events. The fall meeting of the IAS was held in Decorah on a beautiful fall weekend during IAM 2004. A grant from Humanities Iowa and the National Endowment for the Humanities and a generous contribution from the State Historical Society of Iowa provided additional financial support. These crucial funds were equaled by the in-kind support of dozens of local organizations and individuals.

IAN Word Scramble niaiaoatatcrsf

Unscramble and define the above archaeological term.

The answer to the puzzle will be in the next issue.

IAS Announcements

Events-Education-News

Cultural Resources Field School Fort Atkinson State Preserve July 31–August 6, 2005

The Office of the State Archaeologist (OSA), University of Iowa, expects to coordinate a cultural resources field school July 31-August 6, 2005, focusing on Fort Atkinson State Preserve and related Neutral Ground properties in northeast Iowa. Interested members of the adult public, educators, conservationists, historians, museum personnel, and Iowa Archeological Society members are invited to participate.

Fort Atkinson State Preserve is part of the Fort Atkinson Historic District in Winneshiek, County, Iowa. In treaties signed in the 1830s, the Winnebago Indians relinquished their lands in Wisconsin and were resettled in Iowa's Neutral ground, originally a buffer zone between the Meskwaki and Sauk tribes and the Yankton and Santee Sioux. Fort Atkinson was built, 1840-1842, to protect the Winnebago and to contain them within the Neutral Ground. Following the removal of the Winnebago in 1848 and abandonment of the Fort and Neutral ground for military purposes, the area witnessed the expansion of Euroamerican settlement.

The Iowa Conservation Commission began acquiring Fort Atkinson in the 1920s for protection and preservation as a state preserve. The property represents the only 1840s fort in Iowa that is relatively intact and offers associated and substantive architectural, archaeological, and archival data. It is significant because of its association with Native American heritage, as a reflection of events on the U.S. frontier and the government's Indian removal policy, and as a locus for the development of the Euroamerican community in northeast Iowa.

A similar field school coordinated by the Office of the State Archaeologist in 2001 began much needed research of primary source material related to the history of Ft. Atkinson. The Iowa Archeological Society sponsored participation by IAS members. Further inventory, evaluation, and interpretation in 2005 will address issues of preservation, conservation, and interpretation.

Guided by professionals in archaeology, architectural history, history, and education, field school participants may concentrate in one or more of the following areas of research:

 Nondestructive ground penetrating radar GPR) mapping of the fort and a nearby site believed to represent an associated military cemetery

- Field survey (including site recording) and documentary research of a suspected and potentially related pioneer or mission site
- Evaluation and recommendations regarding current exhibits at the Fort Atkinson Museum
- Standards-based curriculum development for a new pre-collegiate handbook on Iowa archaeology

Educators may also take part in the first *Project Archaeology* workshop, a national heritage education program being introduced to Iowa to be held in conjunction with the field school.

In addition to daily research, field trips to area sites (including Ft. Crawford, Wisconsin) and special evening presentations on area archaeology, history, and Native studies offer the promise of a full, well rounded, and enjoyable week.

The field school will charge \$150 per person which covers materials, field trips, lunches, and supplies. Participants will arrange for their own local accommodations. A list of nearby motels, bed and breakfasts, and camping facilities will be provided in advance. Recertification credit for teachers (for an additional cost) is being arranged through Area Educational Agency 1.

The Fort Atkinson area community including the City of Fort Atkinson, Fort Atkinson Historic Preservation Commission and City Museum Commission, and numerous local historians and educators, have offered enthusiastic support of this project. The State Preserves Advisory Board has given its unanimous approval. Design and planning has been accomplished with the cooperation of Tallgrass Historians, L.C. in Iowa City, the Mississippi Valley Archaeology Center at the University of Wisconsin-LaCrosse, Iowa Department of Natural Resources, and the Office of the State Archaeologist, University of Iowa.

Please contact Lynn M. Alex, Director of Education and Outreach, for more information about the 2005 field school or to register to attend.

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THE SOLUTREAN CONNECTION AND NEW WORLD COLONIZATION M. J. Shott

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Editor's Note: The Solutrean Theory was presented by Dr. Bruce Bradley at various Archaeology Month events in 2004. Mike Shott attended one presentation - "Solutrean Connection." The following article by Shott explains a counter viewpoint to the Solutrean Theory.

While visiting chert-bearing limestone quarries in Chickasaw County a few years ago, I met a talented amateur geologist. In the afternoon that we spent together, I learned a great deal about local geology. I also learned that the man harbored doubts about the age of the earth. The processes that formed the stone we examined required vast lengths of time to unfold. He knew this, yet seemed unwilling to accept it. At length it became clear that his doubts rested on a complex mix of feelings. Despite his reservations about the earth's age, however, the man was certain that Medieval Norsemen ranged far and wide across the Midwest. His evidence? A Norwegian bridal veil at the Vesterheim Museum in Decorah that was the model for Sioux war bonnets.

The age of the earth is a scientific inference grounded in hundreds of congruent facts acquired over more than a century using dozens of proven methods. It is a product of countless reasoned inferences and the foundation for countless others. Dismiss it merely because you don't like it, and you reject a vast, interconnected structure of physical historical inference. My Chickasaw County friend doubted the age of the earth. Medieval Norse occupation of the American Midwest is "supported" by fabrications like the Kensington Runestone and imaginative analogies between nineteenth century Scandinavian bridal wear and Sioux men's attire. Yet the Chickasaw County man was convinced of the connection.

Some things we believe because there is no reasonable alternative and the beliefs do not compete with others we hold. Some things we believe because they provide comfort or indulge our ethnic or sectarian pride. Some things we believe because they appeal jointly to our sense of wonder and appreciation for entertaining stories and because the beliefs are thought to have no vital practical consequences. We like good stories.

THE SOLUTREAN CONNECTION

In recent years, one archaeological story has played widely in the popular press. It involves proposed connections between European Upper Paleolithic Solutrean industries and Clovis industries of North America. Iowa Archaeology Month 2004 was a rousing success, thanks in no small part to Lynn Alex's hard work. Bruce Bradley,

one of the Solutrean Connection's advocates, talked on the subject during an IAM event in Iowa Falls. His lecture was entertaining; like all good talks it stimulated discussion, including mine with him. I was asked to take one side in a subsequent discussion intended for the IAS Newsletter. As circumstances changed, I revised this essay to stand-alone and register my grave doubts about the Solutrean Connection. Others surely will debunk it more thoroughly than my little available time, limited knowledge, and woolly head (it's the end of the semester as I write) allow. What's more, no short essay possibly can encompass the range of criticism that this idea inspires. This is an incomplete first assay, not a comprehensive critique.

THE BEST, IF UNGLAMOROUS, EXPLANATION

North America was colonized from northeast Asia via Beringia, probably around 15,000 to 13,000 years ago. This is not the place to expound at length on the wide range and great abundance of evidence—archaeological, chronological, geological, linguistic, and genetic—that supports this conclusion. Even making the attempt dignifies the Solutrean Connection by suggesting that it is somehow comparable to the standard account. We may as well give equal treatment to flat-earth theory in geology merely because it still claims believers. (It really does.) The Beringian Connection isn't glamorous. It isn't new and exciting. It isn't entertaining. Against all of these undeniable virtues of the Solutrean Connection, it is merely consistent with a huge body of evidence.

Bradley and Stanford (2004:462-463) question the Beringian Connection because Clovis evidence has not been found there. Leave aside their tactical use of the Ushki Site, never claimed as a Clovis antecendent by any serious Clovis scholar that I know. Leave aside the vastness of northeast Asia and Alaska, their thin modern populations and the severe sampling limitations that these conditions impose. The argument presumes that Clovis had to originate somewhere else, not in North America. You may as well question an Asian origin on the grounds that, say, there are no equivalents there to Cahokia's Monks Mound so late prehistoric Mississippians had to come from somewhere else. Put it differently. The first European immigrants to North America did not bring light bulbs. Their descendants invented them here. Seeking the ancestry of light bulbs in Europe utterly misses the point of their American origin.

Anyone who doubts the Beringian Connection should read Straus (2000) or Clark (2004) and the many other papers published in the same book as the latter. (Straus and Clark both are Solutrean authorities, having documented

and studied the Solutrean archaeological record for decades. I commend Bradley and Stanford's efforts to learn the details of Solutrean archaeology. At face value, however, Straus and Clark are much more competent authorities on Solutrean culture.) Or you might read any of hundreds of technical reports and popular accounts that cite the vast corpus of evidence consistent with the view. This is no mindless appeal to consensus. On the contrary, you shouldn't believe it just because hundreds of archaeologists who have studied it closely believe it, any more than you should believe the Solutrean Connection because two archaeologists apparently believe it. Study the evidence carefully on your own. Until then, don't kid yourself that you have formed an intelligent opinion.

THE SOLUTREAN CONNECTION'S HISTORY AND REVIVAL

Bradley and Stanford are not the first to propose a Solutrean Connection on, apparently, the grounds of similarity between Solutrean and Clovis bifaces. Hibben's (1941) Sandia culture invoked Solutrean antecedents, and Greenman (1963) also linked Clovis with Solutrean. The earlier claims were examined and rejected for a host of reasons. Of course, the Solutrean Connection's checkered history doesn't make its latest expression either right or wrong, but it places it in perspective.

Ideas like the Solutrean Connection are best evaluated by a two-step procedure. First, the idea and evidence to support it is submitted to a scholarly journal or press, where it undergoes review by competent scholars. Second, assuming it survives review, it is published for a scholarly and general audience. After careful deliberation, advocates and critics discuss the idea. Ultimately its standing can be gauged only through this deliberate and deliberative process.

By circumstance the Solutrean idea followed a different route, like the prehistoric route that it claims. Bradley and Stanford have advocated it in public lectures and on websites for some years now. Their first scholarly papers appeared only recently (e.g., Bradley and Stanford 2004), and the book-length treatment that such a radical idea surely deserves apparently will appear in the near future. This sequence of events isn't Bradley or Stanford's fault, but it means that their idea has circulated without benefit of peerreview and in venues that make it difficult to learn the full details of its argument. I commend Bradley and Stanford on the pending appearance of a book that lays out their argument in detail, but they should have done this some years ago or foresworn the publicity circus that inevitably followed their circulation of ideas in popular media.

THE SOLUTREAN CONNECTION'S LOGIC AND EVIDENCE

The Solutrean Connection is a splendid example of ad-

vocacy by accommodation. It starts from a desired conclusion, and then selectively assembles evidence from various sources that seem to support it. This is the form of argument typical of criminal trials, where the two sides start from opposing desired ends, then marshal whatever evidence supports their cases. The past two decades make many archaeologists self-conscious in using words like "science," but I don't apologize. Science does not argue as the law does. It does not start from a desired conclusion and then collect evidence to support it. Instead, it acts deductively by assembling all evidence relevant to the matter and determining its balance. There may be, say, 100 relevant observations. By chance, any three or four might be consistent with any number of possible explanations, but only one explanation is likely to be consistent with the great majority of observations. Then it tests proposed explanations deductively, not just to determine the evidence that might support them but also asking what kind or pattern of evidence should exist if the explanations are correct. If a, then, b, c, d and so on.

Apply this method to the Solutrean Connection. If Solutrean migrants settled North America from Europe's northwest coast (a), then they must have been adapted to coastal habitats (b), their transatlantic crossing must have been possible (c), unambiguous evidence of their presence should be found in North America no later than the latest Solutrean dates from Europe (d), Solutrean technology should have been imported wholesale or at least in significant detail into North America (e), such that resulting North American technology should resemble it in many respects that form a systematic pattern of affinity (f), native American biological characteristics should resemble Solutrean ones (g), the Solutrean demise in Europe is explained by its transplanting to North America (h), and so on. If a, then b through h. My response to the Solutrean Connection is organized roughly in order by these points.

a. Coastal Habitats

Solutreans were not adapted to coastal habitats. By site distribution and assemblage contents, there is little or no Solutrean evidence of coastal orientation or occupation (Clark 2004:104; Straus 2000). Straus, the archaeologist whom Bradley and Stanford (2004:470) cite to claim Solutrean coastal adaptations, is their most vociferous critic on that and other scores. Straus's view is that Solutreans did not live where the Solutrean Connection has them beginning their North American adventures. Nor, for that matter, is Clovis noticeably coastal in its orientation. The Solutrean Connection is premised on coastal adaptations and coastal movements for which there is no evidence.

b. Transatlantic Geography

Solutrean-Connection advocates exaggerate the considerable rigors of the Beringian route and dismiss the formidable if not overwhelming obstacles to their preferred route. By their own admission, Bradley and Stanford's (2004:269–

271) treatment of the vast ocean expanse that separates North America and Europe and the improbable passage that it required is speculative, as they concede. In a sense, the less said of it the better, but this isn't good enough. Not a shred of evidence supports it. Others can refute this account better than I, so I confine myself to a few points.

Before Solutreans could reach North America from their Franco-Iberian center, they had to traverse at least coastal regions of northern France and the British Isles. Northwest Europe was their launchpad to the Americas. Unfortunately, there is no evidence whatsoever for Solutreans anywhere in those regions (unless they conveniently hugged the now-inundated coast and left absolutely no evidence of their presence inland), and no evidence of human reoccupation of them until Magdalenian times. The Solutrean Connection makes no claims to Magdalenian affinity of North American lithic industries. But only Magdalenians occupied its launchpad, and then only millennia after Solutrean industries were abandoned (Straus 2000:221).

Then there is the small matter of a transatlantic crossing of thousands of miles on the margins of an Arctic glacier, far from land. The Inuit analogy that some invoke falls on timing, scale and physical setting, because Inuit colonizers largely moved along the unglaciated coast of the North American Arctic, not glaciated margins of the icy North Atlantic, and nowhere crossed 5,000 miles of ocean out of reach of land. (Some argue against the Beringian route by claiming that Beringia was too cold or otherwise inhospitable. Was it colder than 5,000 miles of treacherous pack ice and icebergs smashed and reworked by storms? What did the Solutreans use for cooking fuel during the months that this passage required? In small skin boats powered by paddling, how did they contend with prevailing currents that they had to run against, not with (Clark 2004:104)? People adapt to cold, but not without the fuel that Solutreans lacked except for speculation about seal oil. Bradley and Stanford suggest (2004:469-470) that the North Atlantic marine habitat was highly productive and therefore attractive. I'd like to hear much more from marine biologists and paleoclimatologists before agreeing that a 5,000-mile icechoked sea passage was like a pleasant stroll through the local grocery store.

This ad hoc reasoning is unpersuasive. First, the Beringian route was across dry, solid land. You can't drown there. (Even if Beringia was traversed along its coast, the crossing did not involve a long passage far from land.) Second, the shortest isn't by any means necessarily the easiest. From my Cedar Falls home the shortest route to downtown Waterloo is right across the Cedar River, but I haven't swum or rowed it yet. Driving across the bridge is a slightly longer but much more sensible route if I want to arrive safe and dry. Third, as above both Solutrean and Clovis cultures were terrestrial in orientation. The Solutrean Connection requires Solutrean culture to abandon millennia of

terrestrial habits in a moment, and begin paddling thousands of miles across a stormy, icy sea to reach another continent where it immediately abandons its maritime focus

I understand Bradley and Stanford to argue that the abundance of fluted points in the Southeast makes it the Clovis hearth. The Southeast being closer to Europe than the West, this apparently supports the Solutrean Connection.

First, considering the transatlantic route that they postulate, shouldn't the Northeast and Maritimes, not the Southeast, have the most Clovis points? Their map (e.g., Bradley and Stanford 2004: Fig. 4) shows the greater Northeast as glaciated when Solutreans presumably crossed the North Atlantic, but by Clovis times the Northeast was as habitable as the Southeast and Solutreans would have had ample time to settle it. Yet, as Bradley and Stanford's know, it has fewer points.

Second, whatever the value of continental-scale maps of point distributions, they possess grave sample biases. My own study of Midwestern fluted-point distributions (Shott 2002) and Buchanan's (2003) recent nationwide analysis clearly link the number of recorded fluted bifaces to modern population and to other factors like varying intensities of study. Among other things, the more people who live in a region today the more points are apt to be found, although other factors also contribute. Maps of fluted-point distributions simply can't be read as accurate depictions of the distribution of Paleoindian population.

Third, Bradley and Stanford identify places of origin with abundance of evidence. Where things are most abundant is where they must have originated. Modern English originated in England, yet today there are many more English speakers in North America. On their logic, English must have originated here. Even leaving aside the grave sample biases of point maps, the abundance and distribution of fluted points reflect Clovis cultural ecology (i.e., where most Paleoindians lived), not migration history.

Why aren't more fluted points aren't found in Beringia, from where North America was colonized? First, the accessible parts of the Beringian land mass are vast, covered by tundra vegetation, and thinly populated today. This combination makes for low discovery probability. Second, the recorded number and distribution of points are composite products of several causes that include but are not limited to the history or path of colonization. All else equal, expect the most points where most Paleoindians lived, not necessarily where some of them passed through first. Third, Clovis fluting may not have developed *until* colonists reached North America, in which case you wouldn't expect many fluted points in Beringia. The purported scarcity of fluted points in Beringia gives the Solutrean Connection no support.

c. Dating

Clovis is a North American horizon whose chronological span is well documented to between 11,500 and 10,900

rcybp. European Paleolithic archaeologists tell us that Solutrean industries date from about 20,500 to 16,500 rcybp. Thus, "the latest Solutrean stone points are more than 5,000 radiocarbon years older than the oldest Clovis points" (Straus 2000:220; original emphasis). Bradley's Iowa Falls lecture suggested a narrower gap, on uncertain grounds. That's like the difference between falling from a 30-story versus a 40-story building: it's a distinction without a material difference. Even so, the gap remains large. In fact, the foliate bifaces that excite so much interest in the Solutrean-Clovis connection actually date to between 20,500 and 18,500 rcybp, making a gap of over 7,000 rcy. Bradley also suggested that Tennessee's Johnson site yielded very early Clovis dates that further closed the gap. Unfortunately, at Johnson no fluted points (only preforms, the few illustrated of which are not obviously fluted [Barker and Broster 1996:Fig. 7]) were found in situ (Barker and Broster 1996:112). Early dates there have very large sigmas, and other charcoal samples from the very same features or strata have dates several millennia later (Barker and Broster 1996:100-103). In sum, there are grave uncertainties about Johnson's age and it cannot be used to support early dates for Clovis. One of the persistent mysteries of the Solutrean Connection is the yawning chronological gap, roughly the equivalent of attributing the existence of Greek Revival buildings in the Americas today to a transatlantic crossing by the ancient Greeks.

Now, the Solutrean Connection seems to depend upon the possible evidence for pre-Clovis occupation to close the gap. This tactic engages two severe problems. First, pre-Clovis evidence remains highly questionable, consisting chiefly of claims from Meadowcroft, Topper and Cactus Hill. There is no abundant evidence of foliate biface industries in such assemblages. Second, even if these and other claims were proven tomorrow—and they are very far from that—the Solutrean Connection must explain why Solutreans arrived 16,000 years ago or more with foliate bifaces, promptly abandoned them, then returned to them 5,000 years later with the added feature of fluting.

In effect, the Solutrean Connection holds that Clovis was descended from something (and someone) long gone by the time that Clovis originated. This is like supposing that George Washington is your biological father despite the centuries that have passed since his death. Put it differently, on a time scale more nearly equal to the inconvenient gap between Solutrean and Clovis. It's like saying that if you have long hair and wear robes, then Moses is your biological father.

d. Technology

The Solutrean Connection apparently originates from similarities between Solutrean and Clovis bifaces in materials, production technology and form. To Bradley and Stanford (2004:465–468), so apparently high a degree of similarity must owe to historical connection. Until Upper Paleolithic specialists study the evidence closely, I remain unconvinced

that Solutrean-Clovis links are close. The evidence does not impress me of any unusual connection between Solutrean and Clovis that would not be found in other biface industries. Yet there are many technical flaws in the Solutrean Connection's technological component.

- 1. Clovis bifaces often are made of good-quality cherts. Even this tendency is slightly overstated, because Clovis people used a range of materials. But Solutrean bifaces are made of a much wider range of materials, including quartzite (Straus 2000). Solutreans are not as selective in raw materials.
- 2. Then there is the matter of overshot flaking to thin bifaces. This is a technical detail best appreciated by knappers, especially accomplished ones like Bradley. But it is a very long way from noting a similarity between Solutrean and Clovis in one technical detail to concluding that the two are linked by descent. Before reaching that conclusion, we must closely study biface industries from all times and places to determine how common overshot flaking is. To construct historical scenarios involving the technique, then we must examine the time-space pattern of its occurrence for evidence consistent with migration or descent. There must be no sizable chronological gaps between proposed donors and recipients of the technique. There must be no significant geographic barriers to their connection.
- 3. In form, some Solutrean and all Clovis bifaces are foliate or lanceolate. Many Solutrean bifaces are not of this form, and foliate bifaces are known from other prehistoric cultures without invoking historical connections to Solutreans. There are only so many ways to fashion a long point for hafting to spear shafts or knife handles. It is no surprise if historically unconnected but intelligent people devise similar solutions to similar needs.
- 4. Stone being a reductive medium—no one builds a stone tool—and there being fewer ways to knap a tool than to skin a cat, there is a strong element of technological convergence in bifacial or any lithic industries. The similarities in technology, form and use between far-flung industries like Clovis and Solutrean may owe to the limited number of ways to design, make and use tools.
- 5. The Solutrean Connection equates tool-making patterns with genetic traits like eye color. If you are born with blue eyes, you live your entire life with blue eyes. But people can and do change what they make and how they make it. Bradley and Stanford assume without good reason that Paleoindians made fluted points on Solutrean models. Yet Solutrean points never are fluted, an inconvenient observation acknowledged but glossed over with unpersuasive comments about Solutrean basal thinning, minimizing of fluting's importance, and pure speculation that fluting was symbolic (Bradley and Stanford 2004:461). Even if this could be proven, why wouldn't Solutrean ancestors also flute bifaces for symbolic reasons? Fluting is so critical to the recognition of Clovis technology that, by Bradley and

Stanford's reasoning otherwise, it should have been inherited from someone somewhere else. Also, there are more differences than similarities between Solutrean and Clovis technology (e.g., Straus 2000:221-222). No Clovis bifaces that I can think of, for instance, are shouldered or stemmed, as many Solutrean ones are.

Cluster analysis to identify similarities in point types, as Bradley discussed in Iowa Falls, is fair enough but fraught with many questions of variable and case selection, measurement, algorithms and interpretations. It cannot be accepted at face value. Only when cluster analysis like Bradley's is published in detail, as I hope and expect it will be, can it be evaluated. Perhaps it will support his argument, perhaps not. Until then it has no bearing on the matter.

e. Other Evidence of Systematic Affinity

A number of Clovis caches have been found, including Rummels-Maske in Iowa. I know nothing about Solutrean caches, but am perfectly happy to take advocates' word that they exist. I do know that biface caches are not unknown elsewhere in the world and in other periods. Linking Solutrean with Clovis on these grounds is as persuasive as linking them because both made stone tools.

Like Mark Twain's first obituary, the Solutrean Connection in bone and ivory is greatly exaggerated (Straus 2000:222–223). First, Solutrean bone and ivory tools are vastly more abundant and diverse than are Clovis ones, and preservation conditions alone cannot explain the difference. That makes Solutrean industries a poor model for the "developmental Clovis assemblage" that Bradley and Stanford (2004:462) seek. As predecessors, shouldn't they be *less*, not more, diverse? Second, technology and typology of the respective bone industries are quite different.

They are alike in raw material only. Third, the mere use of similar raw materials is not nearly sufficient to establish historical connections. My house is built of wood. So were the palisade and, presumably, most houses at Cahokia. It doesn't follow from this trivial similarity (wood is suitable, abundant and relatively cheap today, as it was in Mississippian times) that I am descended from Cahokians or that my culture is Mississippian. Fourth, Solutrean assemblages also include portable art objects like engraved limestone slabs (Straus 2000:223). No such objects have ever been found in secure Clovis association in North America.

Bradley linked a "square house floor" oriented to cardinal directions from the Clovis Gault site to Solutrean houses. Until we know the particulars of scale, proportion, design, construction, material, and context, such analogies are unpersuasive. But if such features document the Solutrean Connection, why are there not more of them? Why was only one found hundreds of kilometers from the presumed Solutrean-Clovis heartland of the Southeast? Why have none been found in that heartland? One Canadian native group may construct such houses today (again, subject to the qualifications of scale, etc., noted above) but why don't all native cultures that presumably are Clovis descendants? All of these questions must be answered before such casual analogies can be accepted.

To be continued in the IAN Spring Issue, Vol. 55, No. 1

Editor's Note: When contacted for a response to the above article, Dr. Bradley referred to a published work written by him and his colleague, Dennis Stanford: "The North Atlantic Ice-edge Corridor: A Possible Paleolithic Route to the New World" World Archaeology Vol. 36 No. 4, December 2004, pp. 459–478.

2005 IAS Field School

The IAS has agreed to help sponsor a one-week field school, tentatively scheduled for week of September 4, 2005, on the Rivermill Site in Guthrie County. Additional sponsorship has been garnered from the Guthrie County Conservation Board and the Guthrie County Historical Village with additional support from the Bright Foundation.

The proposed site (13GT94), which has been explored and recorded by Central Iowa Chapter member Fred Gee, is on a high terrace surrounded on three sides by a bend in the South Raccoon River opposite its confluence with Deer Creek. Artifacts from surface collection by members of the owner's family, artifact hunters, and Fred Gee indicate possible occupation from the Archaic through Woodland periods. Artifacts collected on an adjacent farm over a 150-year period represent periods from Paleo-Indian through Woodland. It is hoped that this initial one-week field school will determine whether subsurface features and intact evidence of either seasonal or permanent occupation exist at this promising site.

Professional archaeologists will supervise the field school with the actual fieldwork conducted by volunteers who will commit to a minimum of three days. The cost of participation will be \$15 per day with participants providing their own housing and meals. Motel housing is available in Stuart and camping at Nation's Bridge county park nearby. The OSA has been assisting with the planning and research design for this project, and may supervise the project. A final report on the project will be submitted to the IAS for publication. IAS members may count their field time towards certification.

Further information will be in the next IAS newsletter or contact:

Lynn Alex, Dir. of Education and Outreach Office of the State Archaeologist 700 Clinton Street Bldg. Iowa City, Iowa 52242 (319) 384-056 lynn-alex@uiowa.edu.

Welcome New IAS Members!

•	veresine i ve v
Steve Anderegg	Guttenberg
Jeff Bassett	Bloomfield
Alan Bergman	Ames
Catherine Blando	Cedar Rapids
Analise Bluemel & Family	Kalona
Michael Bresnahan	Iowa City
Darwin Cave, Jr.	South English
U.S. Army Corps of Engineers	St. Paul, MN
Russell Dodds	Des Moines
Steve Foudree	Ottumwa
Chad Goings & Family	Iowa City
Tom & Avis Grundman	Cherokee
Julie Haight Curran	Richfield, MN
John Haltmeyer & Nancy Lerdal	1 Decorah
Burton Hansen	Moline, IL
Patrick Hashman	Story City
D. J. Hassel & Family	Des Moines
Ryan Howell	LaCrosse, WI
Mike Kruse	Red Oak
Melanie Lahart	Newton
Esther L. Lehman	Webster City

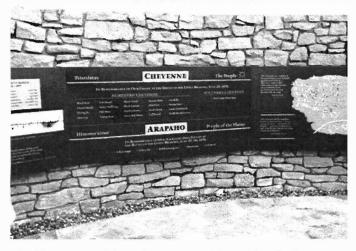
Richard O. Lyon	Manassas, VA
Ted Meierotto	West Point
Mark Mertes	Sibley
Jim Noeller	Iowa City
John Oostenryk	Fulton, IL
Jim & Joyce Polo	Chariton
Maggie Reiter	Cascade
Robert Rickers	Vail
Dale Ringstad	Altoona
Charles Rubey	Brighton
Dean & Gerry Schwarz	Decorah
Ken Seales	Lorimor
Leland Searles	Grimes
Michael Smith	North Liberty
Cynthia L. Smith	Dubuque
Karen & Terry Sparrow	Keokuk
Victor Stickels & Family	Douds
Jerald Swenson	Forest City
Charles & Robbie Van Buskirk	Harpers Ferry
Jill Wagner	Ames
Steven Witmer	Urbandale

What's the Point?

The projectile point featured in the Fall *Iowa Archeology News* (Vol. 54, No. 3, Issue 191) was found in Marion County, IA. The artifact type is thought to be an **Osceola**. Thank you to the readers who submitted their responses:

- 1) Steve Hanken "It is an Osceola from the Copper Culture period about 3,000 years ago."
- 2) Dave Harvey, Des Moines "Hemphill if found in SE Iowa, Osceola if found in NW Iowa."
- 3) Matt Kaufman, Dubuque "Graham Cave, side notched"
- 4) John Schwichtenberg, Clear Lake "I have such a point. I found it in Cerro Gordo County. To my knowledge the one in the photo is an Osceola."
- 5) James Schmuecker, Marengo "The point looks like a Hickory Ridge point (7000 to 5000
- B.P., Early Archaic)." What's the Point will be back next issue!

PHOTOS FROM THE 2004 PLAINS CONFERENCE FIELD TOUR



The Cheyenne and Arapaho portion of the new Native American memorial at the Little Big Horn Battlefield, located between the visitor's center and Last Stand Hill.



Archaeologists contemplate inscriptions at Pompey's Pillar, Yellowstone River valley, near Billings, MT. William Clark stopped here during the return voyage of the Lewis and Clark expedition.

IAS Chapter News

Black Hawk Regional Chapter

In November, two films were shown: Early Stone Tools and Blades and Pressure Flaking. To encourage discussion, members were asked to bring any stone tools or projectile points they had either found or made. Kenneth Atkinson of UNI gave the December 1 presentation entitled Noble Deaths at Gamla and Massada? A Critical Assessment of Josephusi Accounts of Jewish Resistance in Light of Archaeological Discoveries.

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

Central Iowa Chapter

September 18 several CIC members attended *Archaeology Day* featuring Dr. Bruce Bradley at the Natural History Museum, Calkins Nature Center. Members assisted by answering questions and giving out information to individuals interested in forming a local chapter in that area. The next day the CIC, along with the State Historical Society of Iowa and the OSA-U of I, hosted and sponsored an *Archaeology Month* presentation featuring Dr. Bradley. The presentation was followed with displays of CIC member's artifacts and flintknapping demonstraions by Dr. Bradley and CIC members.

In October CIC chapter members Don Raker and Steve Owens gave flintknapping demonstrations and Norm Dille displayed a portion of his educational artifact display for the 2004 Boy Scout Fall Camporee at Waterworks Park in Des Moines. DMACC sociology instructor, Mike Delaney presented Peoples of Grenada in November.

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

Southeast Iowa Archaeology Chapter

The Fifth Annual Archaeology Awareness Day was held at Pioneer Ridge on Saturday, October 2. The chapter featured the Iowa Archaeology Month theme, Life in the Ice Age. About 50 people enjoyed the demonstrations and special presentations featured throughout the day. OSA's Steve Lensink presented the topic, Peering into the Pleistocene's Past: Proboscidians and their Projectile-Packing Peripatetic Pursuers, an interesting talk on the Ice Age, its people, and its animals. Sarah Pitzen, also of OSA, shared information on the Giant Ground Sloth excavation in SW Iowa's Page County.

The members met at the Wapello county Museum on November 1st. They reviewed the past year's activities and discussed plans for next year. Bill Harmon showed artifacts from recent metal-detecting excursions.

> Contact Bill Anderson Box 51, Richland, IA 52585 (319) 456-3911 bpandearch@iowatelecom.net

Northwest Chapter

The NW Chapter met at the Sanford and traveled to the Western Historic Trails Center in Council Bluffs where they sat on a keelboat and listened to the builder tell about the keelboat. They also had the opportunity to listen to Dale Clark portray Patrick Gass. In August, six members traveled to Onawa to visit Georgine Wessell, the Monona County Naturalist who showed them artifacts collected by Dr. U.V. Garred.

September 18 chapter members took a field trip to the Pearl Street Research Center in Sioux City. There they got to see collections that are not on display at the Sioux City Public Museum. Mike Koppert, Historical Interpreter at the Gardner cabin, and Ken Seaboy, 5th generation grandson of the Inkpaduta and Bigfoot, spoke to the group in October, and a bus tour of the Hannibal-Waterman Nature Area was also enjoyed. Deep Cave Rock Art of the Upper Mississippi Valley was presented by Robert Boszhardt and The Vanishing Landscape of Zebulon Pike was presented by John O. Anfinson during the IAS Fall 2004 Meeting in Decorah. Jason Titcomb presented on the Crocker site Field School in November.

Contact Mark Mertes 310 10th Ave NE, Sibley, IA 51249 712-754-2866 mmpmk5@gotocrystal.net

Ellison Orr Chapter

Contact Lori Stanley, (563) 387-1283 or Joe B. Thompson, (563) 387-0092 or Orr Chapter, PO Box 511, Decorah, IA 52101 iasorrchapter@hotmail.com

Quad City Archaeological Society

Contact Ferrel Anderson
1923 East 13th St., Davenport, IA 52803
(319) 324-0257
andersonfe@msn.com

Connect To Iowa Archeology
Visit the
IAS Web Site
http://www.uiowa.edu/~osa/IAS/iashome.htm

UI-OSA NEWS

A SPECIAL SECTION
OF THE IOWA
ARCHEOLOGICAL
SOCIETY NEWSLETTER



The Lyon Donation

In August of 2004, the UI-OSA received a letter from Helen Oberlin Lyon of Arlington, Virginia, inquiring about a possible donation of prehistoric artifacts collected in Iowa. The collection belonged to her late husband, Leonard Lyon, a resident of Iowa from 1909 to 1934 and a UI alumnus. Helen explained that she has no relatives currently interested in "Indian traditions," and was searching for a group who would appreciate the collection. The Lyons became aware of the OSA many years ago when they met a staff member who "shared [their] hobby of finding Iowa sites" and who encouraged them to subscribe to an "Iowa Indian" magazine [perhaps the IAS newsletter and jour-

After contacting Helen and her son Richard Lyon, the Repository agreed to accept and repose the artifacts in its Teaching and Comparative Collections. In early September, 105 artifacts in four boxes arrived from the Lyons, including 101 labeled "Phillips/Unionville, Iowa," and 4 labeled "Lyon/Eddyville, Iowa." Shortly thereafter, Helen called the Repository with background information about the family. The collection was assembled by Leonard's uncle's family around Unionville in Appanoose County n the late 1800s and early 1900s, "some from Civil War y as." Henry Brannock Phillip Leonard's great uncle, was born in India and 1845 and was wounded during the Civil Var. The Phillips family as in Iowa by 100, the year Ralph Sawyers Phillips, Leonard's uncle, was born. Henry and Ralph ran a general store near Unionville where they would accept artifacts that local farmers had found in exchange for money or as payment for goods in the store. Those artifacts labeled "Lyon/Eddyville, Iowa" were collected near Eddyville in Wapello County by Ralph, Henry, and Mott Sawyers, a local farmer and Presbyterian Minister.

Eighty-five artifacts are chipped stone tools, mostly projectile points and point fragments. The points range in age from Late Paleoindian through Late Woodland, but most are Middle to Late Archaic, Because of the range of projectile point types, this donation will greatly expand the OSA Com-

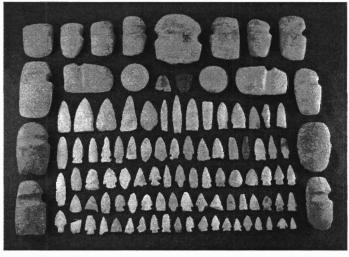
parative Collection, which is used for teaching and identification purposes. Of the 16 complete or nearly complete axes, from the Middle to Late Archaic periods, 15 are ¾-grooved and 1 is fully grooved. There is a range of quality and state of completion shown which will also complement the Comparative Collection. A gorget fragment, a rubbed hematite chunk, hammerstone, and a discoidal round out the donation.



OSA partnered with the UI Museum of Natural History and Davenport's Putnam Museum at the 16th Annual Bald Eagle Days celebration January 7 -8 at the Quad Cities Conservation Alliance Expo Center in Rock Island, Illinois. Artifacts from Iowa sites and the Northboro ground sloth discoveries were displayed. Hundreds of visitors to OSA's booth displayed considerable interest in local archaeology and heritage preservation and stewardship. OSA staff Lynn Alex, Steve Lensink, and Sarah Pitzen, along with David Brenzel of the UI Museum and Christina Kastell from the Putnam were available to interpret displays and answer questions. The event, an environmental fair and wildlife art show, attracts 15,000-20,000 people each year. Proceeds support conservation projects including wildlife restoration. The IAS would be well advised to consider participating next year.

O'Brien County Volunteer Project Funded by ISF

Two well-known Mill Creek sites,



Southern Iowa artifacts donated by Helen O. Lyon.

Double Ditch and the Litka Ridged Field site (13OB8, 13OB31), will be receiving additional attention. Steve Lensink and Lynn Alex will map the Litka site using a Topcon GDS-211D electronic total station to produce a high resolution contour map similar to that prepared for the Double Ditch Site several years ago. Secondly, Dr. Ken Kvamme, U. of Arkansas, will conduct a geophysical survey using magnetic gradiometry and electrical resistivity at Double Ditch. High resolution mapping and geophysical surveys offer cost effective, non-invasive strategies to record primary archaeological data over large areas. The goals of the research are fivefold:

- prepare a high precision topographic map of the Litka site to more thoroughly document this unique site type in Iowa;
- use geophysical data from Double Ditch to more thoroughly define site boundaries and identify site features;
- collate the new data with previously collected information to further archaeological knowledge, public understanding, and conservation of these sites:
- evaluate the potential of the methods for research at other late prehistoric settlements in Iowa; and
- test specific hypotheses concerning village layout and duration of occupation.

IAS members may take part in this research by contacting Lynn or Steve. The project is scheduled for April 14–17, plus additional dates as necessary.

Archaeology Items of Interest

EVENIS

Cemetery Conference - The State Association for the Preservation of Iowa Cemeteries (SAPIC) will sponsor a conference April 9, 2005 at the Prairie Learning Center, Neal Smith Wildlife Refuge near Prairie City, Iowa. The program, scheduled from 9:30 a.m. to 3:00 p.m., will include presentations relating to cemeteries such as: remnant prairie, archaeological findings, legislation and legal matters. Fees are \$15.00/ SAPIC members, \$25.00/nonmembers. Send to Valerie Ogren, 108 N. Oak, Jefferson, IA 50129 or contact Larry Davis (515) 277-4917.

Flintknapping Workshop - Expert flintknapper, Tom Dillard, will lead a week-long, hands-on workshop in chipped stone tool technology at the Center for American Archaeology June 6-10. Fees are \$500/person for the week, & include room, daily, complimentary field lunch, and instruction. Contact (618)653-4316 or visit: www.caa-archeology.org.

PUBLICATIONS

AnthroNotes has a three part mission:

- 1. To more widely disseminate original, recent research in anthropology in order to help readers stay current in the field;
- 2. To help those teaching anthropology utilize new materials, approaches, and community resources, as well as integrate anthropology into a wide variety of subjects; and
- 3. To create a national network of anthropologists, archaeologists, teachers, museum and other professionals interested in the wider dissemination of anthropology, particularly in schools.

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Anthronotes Vol. 25, No. 2, Fall 2004, p.20

ORGANIZATIONS Plains Anthropological Society

Purposes for which the corporation is organized are: education and scientific purposes within the meaning of Section 501C(3) of the Internal Revenue Code of 1954, to include:

- 1. Encouraging scientific investigation and cause to be published, reprinted, and distributed papers and publications on the anthropology of the plains and adjacent areas of North America;
- 2. Causing to be published or reprinted and distributed papers and publications of a scientific nature, education papers, and others of theoretical importance:
- 3. Sponsoring scientific meetings, symposia, and discussions relevant to problems of anthropology.

Students and private citizens as well as professional archaeologists enjoy membership in the society. For information contact:

Treasurer
Plains Anthropological Society
PMB #152, 3201 South Street.
Lincoln, NE 68502

Membership Information

Contact Membership Secretary, Iowa Archeological Society, University of Iowa, 700 Clinton Street Building, Iowa City, 1A 52242-1030.

Membership Dues

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Voting:		Non-Voting:	
Active	\$20	Student (under 18)	\$9
Household	\$25	Institution	\$30
Sustaining	\$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. *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 50310-5849. Home Phone (515) 255-4909. E-mail: paleomike@msn.com. IAS Web Site:http://www.uiowa.edu/~osa/IAS/iashome.htm

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