MAMMOTH TRUMPET

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Clovis along the Chesapeake Shoreline

DARRIN LOWERY

Just a leisurely stroll along the eroded shoreline is all it takes to turn up stone worked by Clovis people 13,000 years ago, when the area now occupied by Chesapeake Bay was high ground. But Darrin Lowery argues that researchers who dismiss shoreline discoveries of fluted points as "isolated finds" are overlooking the archaeological significance of the area, particularly the Delmarva Peninsula, the landmass that hems in the bay. Lowery, who has identified more than 1,500 archaeological sites on the peninsula, offers compelling evidence that Clovis people weren't newcomers to the Middle Atlantic coast, but rather were continuing a firmly established presence. His account of Clovis on the Delmarva Peninsula begins on page 10.

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Major Decision
Kennewick Man Case

IN AUGUST 2002, U.S. Magistrate John Jelderks ruled that the Department of the Interior (DOI) improperly concluded that the 9,000-year-old skeleton known as Kennewick Man was "Native American" as defined by the Native American Graves Protection and Repatriation Act (NAGPRA). Furthermore, he ruled that DOI wrongfully determined that the ancient skeleton was culturally affiliated with a coalition of modern Indian tribes (consisting of four federally recognized tribes and one group that is not federally recognized). As a result, Jelderks concluded that DOI's decision to turn over the remains of Kennewick Man to that coalition was contrary to law and he overturned it. He also ruled that the scientists could now study the skeleton "subject to the type of reasonable terms and conditions that normally apply to studies of archaeological resources" under the terms of the Archaeological Resources Protection Act (see **MT 18-1** for a review of Jelderks's decision). As expected, the government and the tribes appealed Jelderks's decision to the United States Court of Appeals for the Ninth Circuit (see **MT 18-2** for a review of the appeals).

The DOI appealed that part of the decision that related to whether or not Kennewick Man is "Native American" under the terms of NAGPRA. It did not choose to defend its previous determination that Kennewick Man was culturally affiliated to the tribal coalition, but instead finally acknowledged that Kennewick Man has no "qualified claimant."

A new coalition of four federally recognized Indian tribes (the tribe lacking federal recognition having been jettisoned from the original group, presumably for tactical reasons) also appealed the decision. They naturally supported DOI's original position that Kennewick Man is culturally affiliated with the tribal coalition.

On 10 September 2003, the 9th U.S. Circuit Court of Appeals in Portland, Oregon, heard oral arguments in the Kennewick Man case. Attorneys for the government, the Native American tribes who seek to rebury Kennewick Man, and the scientists who are fighting for the chance to study the skeleton had the opportunity to clarify their positions and answer questions presented by the three-judge panel consisting of Ruggero J. Aldisert (from the 3rd U.S. District Court of Appeals), Ronald M. Gould, and Susan P. Graber. Alan Schneider, one of the attorneys representing Robson Bonnichsen and the other scientists, said this hearing represented a "major milestone" in this landmark case.

Prior to the hearing, the Appeals

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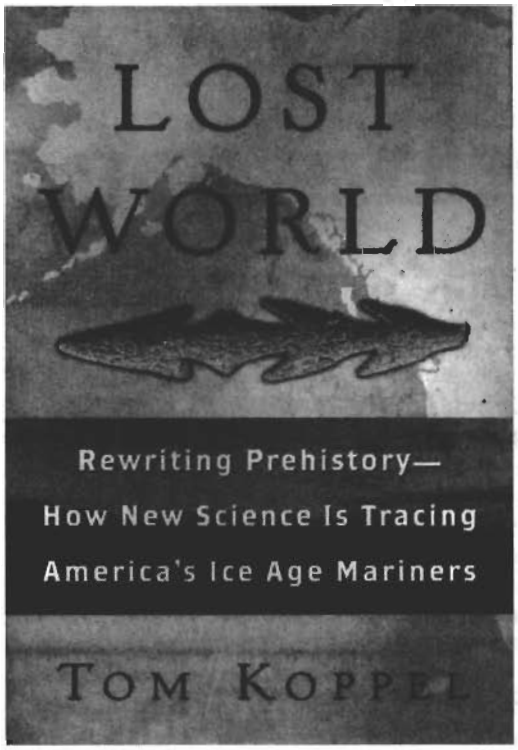
INSIDE

New Books

Lost World: Rewriting Prehistory—How New Science is Tracing America's Ice Age Mariners, by Tom Koppel. 2003. New York: Atria Books. 300 pp. Price US $26. ISBN 0-7434-5357-3.

Here is an entire book about the coastal entry route, the archaeologists' model which proposes that the earliest peoples into the Americas followed the North Pacific coastline down into North America before the end of the Pleistocene. It shows how current paleoenvironmental research as well as archaeology in coastal Alaska and British Columbia are demonstrating the feasibility of an initial entry route along the late-Pleistocene coastline; and presents a vivid picture of that distinctive world, which has been lost under the early postglacial rise in sea level.



A journalist and writer long interested in the question of the early peopling of the Americas, Koppel was able to become personally involved in the recent research projects, not only interviewing the scientists at length but also visiting the research sites while the work was in progress. He is able to provide detailed personalized descriptions of the paleontological and archaeological field work by Tim Heaton and Jim Dixon at On Your Knees Cave on Prince of Wales Island, and the underwater surveys of the coast of Moresby Island and Hecate Strait by Heiner Josenhans and Daryl Fedje. He also recounts his visit to Santa Rosa Island and the discovery site of Arlington Woman, the earliest dated human remains on the West Coast, which indicate that the Channel Islands off the southern California coast were reached by boat by at least 11,000 radiocarbon years ago [about 13,000 calendar years].

As Koppel implies in the title of his book, the west coast of North America was a quite different world in the late Pleistocene, when people entered from the north. Sea level was as much as 100 m [about 330 ft] lower than now, exposing a wide coastal strip of land which is now drowned. Present-day islands were larger in size than now, and in some cases were connected to adjacent islands and even the mainland. Hydrologic surveys show that the area of present-day Hecate Strait, between the Queen Charlotte Islands and mainland British Columbia, was then open country, an extensive lowland plain dissected by rivers and streams, with scattered small freshwater lakes. There was much glacial ice on the mountains of coastal Alaska and British Columbia, and the then-exposed lowlands were largely treeless. Some of the oral traditions of local First Nations people describe these conditions in earliest times; and also refer to the subsequent flooding of settled areas, as the sea level rose very rapidly in the early postglacial period.

The late-Pleistocene world, then, is indeed lost, now under the sea. What archaeological record of early settlement of the coast might be left, and where might it be found? There are two good possibilities presently being explored. One would be in a high cave, well above modern sea level. On Your Knees Cave on Prince of Wales Island is such a site, which aside from the archaeological remains, has produced paleontological evidence that the area was inhabitable back to 35,000 radiocarbon years ago, although thus far the secure evidence for human occupation at this site dates to only 10,300 radiocarbon years ago [about 12,000 calendar years]. Another possibility is the discovery of an archaeological site on a late-Pleistocene land surface which is now underwater. Dredging with a grab-bucket at a likely campsite location now on the bottom of Werner Bay on the east side of Moresby Island did recover a stone artifact, a utilized flake, from a depth which would have been exposed dry land ca. 10,200 years ago; and older potential archaeological site locations now deep under water on the coastal seabed remain to be explored.

Late-Pleistocene sites in South America such as Monte Verde, however, indicate that the initial population must have begun to move into North America considerably earlier than 12,500 radiocarbon years ago [about 14,700 calendar years]. Of great interest, then, is the increasing body of paleoenvironmental evidence which indicates that the late-Pleistocene coastal glaciers in southern Alaska and British Columbia began to retreat as early as 16,000 radiocarbon years ago [about 19,000 calendar years], and there was a chain of ice-free areas on islands and mainland which could have provided a viable route southward. As Koppel points out, at the same time recent geological and paleoenvironmental data have rendered untenable the notion of an entry route through an interior ice-free corridor just east of the Rocky Mountains, as the northern section of the hypothetical corridor is now known to have been closed by ice, or uninhabitable, from about 30,000 radiocarbon years ago until as late as 11,000–10,500 radiocarbon years ago [about 13,000–12,300 calendar years]. Small wonder, then, that the likelihood of an early coastal entry has recently become accepted by many archaeologists. Koppel's

book is very timely in explaining the model and describing the current field research which supports it.

This is not an academic book. The text has no footnotes and no references to publications, and a bibliography is not provided. Nevertheless it is clear that Koppel has read and digested the current scientific literature, and I could detect few errors or omissions in his review. Even without the accouterments of an academic work, the book well informs the interested reader of current research and interpretations regarding the question of the initial peopling of the Americas. More than any dry technical report could, it conveys the real excitement of the ongoing search for evidence of the earliest coastal people and their late-Pleistocene world.

–Reviewed by Ruth Gruhn
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Major Decision

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Court studied a wealth of documentation. The federal government and the tribal coalition had submitted 14,000-word-long opening briefs specifying why they believe that Jelderks's decision should be overturned. In addition, three Friend of the Court (*Amicus Curia*) briefs, limited to 7,000 words in length, were submitted on behalf of the government and tribes.

Alan Schneider and Paula Barran, the attorneys representing the eight scientists, submitted two 14,000-word-long reply briefs affirming Jelderks's decision; one responded to the government's opening brief, the other responded to the tribes' opening brief. Seven Friend of the Court briefs (each limited to 7,000 words) were filed in support of the scientists (see **MT 18-4** for a review of these *amicus* briefs). On 1 July 2003, the government and the tribes each submitted a final 7,000-word-long reply. In addition to studying all of these documents, the judges of the 9th Circuit Court of Appeals would have reviewed Jelderks's final decision, the NAGPRA legislation and its regulations, and any other relevant documentation submitted with the various briefs.

Presenting oral arguments is primarily an opportunity for the appellants (the parties who are appealing the original court's decision) and the appellees (the party or parties who support the court's decision and oppose the appeal) to clarify their positions and for the 9th Circuit judges to ask questions regarding the case. It is not intended to be a comprehensive summary and review of all the written arguments submitted to the court; instead, it is a chance for the attorneys and the court to identify the key issues in the case and to resolve any points of confusion. The court's schedule gave each side 20 minutes to address the panel, including time for the judges to ask questions. The government and the tribal coalition split their time, so each had eight minutes with four minutes reserved for rebuttal. On several occasions the judges granted extensions of time to either the government's or the tribes' attorneys, and the final proceedings lasted 65 minutes instead of the allotted 40 minutes.

When is a Native American?

The major bone of contention brought up by the judges was the DOI's claim that NAGPRA includes as "Native American" any human remains that predate the European discovery and colonization of North America. This has been referred to as the "1492 rule." Judge Graber asked Ellen Durkee, attorney for the Department of Justice, whether NAGPRA would encompass the remains of the first humans, in other words "Adam and Eve," if they were to be found in the United States. Durkee replied that it would. In response to further questioning from Judge Gould, she stated that DOI's position was that there is no time limit to the statute and that it would apply to human remains that are 100,000 or even 150,000 years old.

Judge Aldisert interjected that by broadly defining "Native American" as

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any remains older than A.D. 1492, DOI's interpretation necessarily made subject to NAGPRA the remains of any prehistoric humans found in the United States, however ancient and remote their biological and cultural affiliations. In formal terms, their argument might be summarized as follows: All human remains found in the United States that are older than A.D. 1492 are Native American. Kennewick Man is older than A.D. 1492. Therefore Kennewick Man is a Native American. Judge Aldisert said to Durkee, "Your major premise assumes a conclusion. That's putting the bunny in the hat."

Durkee stressed that although determinations of cultural affiliation considered all lines of available evidence, in the case of Kennewick Man the data were extremely limited. Judge Gould pointedly responded that if the Army Corps of Engineers had not precipitously buried the discovery site under tons of rock and rubble more evidence might have been available to the government.

Judge Gould also asked Rob Roy Smith, the attorney representing the coalition of Indian tribes, whether his clients would regard human remains of virtually unlimited antiquity as Native American. Smith answered that they would.

Arguing for the Defense (Department of Justice)

Judge Graber Let's assume that remains were found on what is now the United States that are the oldest possible remains, like the kind that have been found in Africa. And, it's clear that these remains really are Adam and Eve essentially, that they are the source of all of us, they are so old. Would those remains count as Native American under the definition promulgated by the Secretary?

DOJ Ms. Durkee Yes . . . they would be considered Native American.

Judge Gould Is there any limit on time . . . in relationship to current tribes that the government recognizes that relates to what's Native American? . . . Would that go back 150,000 years, if people lived here 150,000 years ago?

DOJ Ms. Durkee Yes, it would cover that.

This exchange is from an unofficial transcript of arguments made 10 September 2003 before the Circuit Court of Appeals for the Ninth Circuit in Portland, Oregon. For the complete transcript check the Friends of America's Past Web site.

Smith began his presentation by addressing his remarks to the question of whether Kennewick Man was culturally affiliated with the tribal coalition, since the DOI had decided not to appeal Jelderks's rejection of their claim for such a relationship. He was, however, repeatedly interrupted by questions from the judges about DOI's interpretation of the term "Native American." In response to Smith's comment that there were other important issues in the case, Judge Aldisert pointed out that the question of whether Kennewick Man was "Native American" was the "real issue" and that if the judges decided that he was not Native American for the purposes of NAGPRA, then the cultural affiliation issue would be moot. Smith then agreed that it would be prudent to respond to the Native American question.

Judge Gould pointed out that NAGPRA's careful consideration of who has priority in making a repatriation claim indicated that Congress intended the claimant "to have some relationship" to the human remains. At some point, however, human remains would be so ancient that they would have "no reasonable connection to anyone living today." Smith responded by observing that NAGPRA included a provision allowing the repatriation of remains found on federal land to the tribe who aboriginally occupied the area, even where no lineal descendant or cultural affiliation is determinable. Judge Graber countered that this section of the law referred explicitly to "the Indian tribe," indicating that this provision was concerned only with remains from federally recognized, historically recent tribes, not aboriginal groups with unlimited antiquity.

Chevron deference and the tense of "is"

Federal agencies are entitled to a certain reasonable amount of leeway in interpreting laws they are charged with enforcing or implementing, particularly if a provision of the law in question is ambiguous or confusing. Lawyers and judges refer to this as

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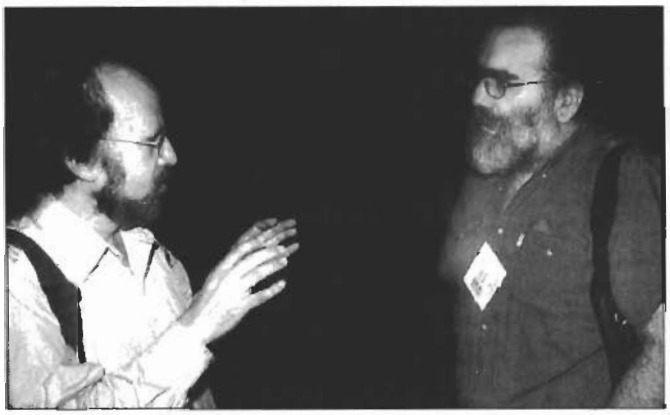
Highlights of the 16th INQUA Congress

by Gary Haynes

THE 16TH CONGRESS of the International Union for Quaternary Research (INQUA) was held 23–30 July in Reno, Nevada, hosted by the Desert Research Institute of the University of Nevada System. The Congress was one of the larger ones on record, with about 1100 delegates registered, a fair number more than attended the last (1999) Congress in Durban, South Africa. The theme of the Congress was "Shaping the Earth: A Quaternary Perspective."

The timing of the meeting might have made it difficult for many American researchers to attend—right in the middle of the traditional field season!—but this is a meeting that doesn't typically attract many American archaeologists anyway, which is a huge shame. The Earth Sciences were of course well represented, with many state-of-the-science updates on climate changes in the Quaternary, high-resolution dating methods, glaciology, and other paleoenvironmental topics of immediate interest to Americanist archaeologists, especially those concerned with the earliest peopling of the Americas.



▲ Stuart Fiedel (*left*) asks a complicated question of Luis Borrero.

Every day, the overwhelming number of concurrent morning sessions made it impossible for me to attend even a small proportion of the papers I wanted to see, but by keeping the afternoons open for posters and plenary sessions the organizers provided a very successful way for participants to sneak glimpses of new research, schmooze with international colleagues, attend the many receptions (including one at a beautiful Italianate villa—home to a real Contessa—in the heart of a Reno neighborhood) and see the special addresses by leading authorities on hot topics in Quaternary research.

Laura Miotti (*left*), Gustavo Martinez, and Silvia Gonzalez toast the conclusion of the INQUA Congress in Reno.▼

The archaeological symposia were limited in number but not in importance. **Lawrence Straus**'s session on Neanderthal extinctions in Europe was extremely interesting because of the new information (such as the first announcement of the discovery of new Aurignacian ivory sculptures from Germany, for example), descriptions of major European databases, and a lively exchange of ideas about the transition from archaic to modern human behavior.

In the Extinctions and Speciation symposium, **Richard Holdaway** described the dramatic and abrupt megafaunal extinctions caused in New Zealand by the first appearance of humans; **Gifford Miller** and associates described research that shows Australian megafaunal extinctions occurred as a brief, one-time event during unremarkable climate changes at the same time as the first humans were arriving in the continent; and **Russ Graham** argued the last transition from Glacial to Interglacial was unique in North America and explains the extinctions of American megafauna, most of which had been slowly losing their taxonomic fitness over the long course of Quaternary climatic cycles.

A session on South America's Pleistocene/Holocene archaeology was also full of exciting new information (although a bit abbreviated due to the inability of several invited participants to attend). **Rafael Suárez**'s paper on Uruguay's earliest archaeological sites and artifacts was memorable, not only because of the associations he's found of humans and extinct megafauna such as stegomastodon and glyptodon, but also because of the dates and new technological analyses of fishtail projectile points. **Luis Borrero** did his usual superb job describing Fuego-Patagonian climate, biota, and archaeology at the end of the Pleistocene and beginning of the Holocene; and **Gustavo Martinez** and colleagues described human-megafauna associations in the Argentinean pampas.

The session I organized on western North America included nine entertaining and informative papers about climates, vegetation, animal life, and human behavior in the late Quaternary. **Bruce Huckell,** using design theory and a careful analysis of subsistence and settlement data, presented an intriguing comparison of four early-Paleoindian technologies in the Southern Plains and Desert Southwest; **Vance Haynes,** drawing upon his expertise in

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Florida Paleoindian Points and Knives

An excerpt from New Perspectives on the First Americans, *soon to be published by CSFA*

by James S. Dunbar and C. Andrew Hemmings

Foreword for *Mammoth Trumpet*

The quest for knowledge is a hit-or-miss, trial-and-error proposition with the chances for success maximized by informed insight. Among other things, the development of writing followed by the invention of the Gutenberg printing press in the 13th century gave us the ability to record history. Prior to that are prehistoric times. Thus, the reasons why Paleoindians favored particular methods of working stone over a myriad of alternative ways have been lost with their cherished and close-held beliefs. Yet the rationale behind this work allowed duplication of the same tool types time and again. Stone tool production standards were slow to change. The archaeological record indicates the change to new, alternative tool types was a protracted process. Over the duration of the Paleoindian period, Florida archaeologists now recognize Clovis, Suwannee, and Simpson point types as falling in that timeframe.

The first attempts to classify Paleoindian point types in Florida were a hit-and-miss proposition carried out by a number of researchers working in different regions of the state. In 1967 Ripley Bullen developed the first statewide projectile point classification guide. He published the guide in 1968 and a revised edition in 1975. An important key to Bullen's projectile point classification was a type case collection he assembled at the Florida Museum of Natural History in Gainesville, Florida. In every instance Bullen marked each point in the collection with the type name and its site of recovery. It is his type case collection that provides the means to build upon and modify the topology of Florida Paleoindian point types. Any inaccuracies in Bullen's type collection should not be criticized, since his founding work serves as a baseline for classifying early Florida projectile points. It is in a spirit of respect that we suggest Bullen's classificatory scheme of Florida Suwannee and Simpson types needs to be revised and limited.

–James S. Dunbar

Introduction

This is a preview of a longer-range effort aimed at compiling, defining, and identifying the various types of Paleoindian projectile points and bifacially flaked knives in a revised typology. At present, we prefer to refer to the different classes as forms rather than types, although some, such as the Western Clovis fluted and the Eastern Clovis Waisted, are documented elsewhere as recognizable types. Our reasons for using the term *form* instead of type are threefold. First, the Florida Suwannee point type described by Bullen in 1968 and 1975 does not meet the criteria of representing a distinctive type; rather, it represents a heterogeneous assemblage of forms. Second, there are forms that either are not identified in previous typological efforts or, as in the case with Bullen's Suwannee type, are lumped with another form. Third, there is a problem of distinguishing what the Simpson type actually represents. To the extent possible, our eventual goal is to get beyond the "unresolvable dispute between what Steward called the 'splitters' and the 'lumpers'" and to distinguish between types by identifying attributes, including metric and nonmetric morphology, use damage suggestive of function, and raw materials used for production. Here we identify many of the Florida Paleoindian lanceolate forms.

Background

In Florida, the Clovis form obviously took its name from the classic type. Suwannee and Simpson points were identified in Florida as Florida types. John Goggin in 1949 and 1950 first recognized the Suwannee type in publication, but he also indicated that people had been locally identifying them by that name for some years. The Simpson, the last to be named as a distinct type by Ripley Bullen, was introduced in his typology of Florida projectile point types. Subsequent recognition that Paleoindian diagnostic artifacts occur in Florida has been used mostly to study the spatial distribution of isolated finds and sites rather than to establish or refine typology.

A principal exponent of this investigative approach is Bullen. His assertions concerning typology can be stated as fundamental questions: What are the diagnostic types, and what periods do they represent? Do forms historically considered types in Florida enter and exit the stage independent of one another, or do they partially overlap in time? Are cultural continuity and evolution reflected in the Florida assemblage, or is there evidence of discontinuous episodes of

human occupancy similar to that for the Southwest Archaic?

Using these topics as a starting point, we offer the following observations on morphology and manufacture of Paleoindian projectile point and knife forms for consideration.

Page-Ladson Lanceolate (Figure 1A)
Distribution: Florida and Georgia

Several specimens of this newly proposed unfluted form have been recovered from displaced contexts at the Page/Ladson site (8JE591) as well as at other Aucilla River sites. Additional specimens have been reported as isolated finds from both the St. Marks and Suwannee rivers. The Page-Ladson form should not be confused with the unfluted Clovis described by Cambron and Hulse in 1990, which is a form more akin to the fluted Clovis type, not the Page-Ladson form. Although the Page-Ladson form has not been recovered in context, Dunbar believes there is circumstantial evidence that this form is a Clovis ancestor. At Page-Ladson two specimens were recovered from displaced context. The Page-Ladson form is the most likely candidate for association with Unit 3 dating to 12,420 ±80 RCYBP (pooled average of seven dates = 14,345 CALYBP) that produced artifacts and a cut-marked mastodon tusk.

Among the specimens presently included in this form, variability in lithic quality may have been linked to manufacturing strategy. On specimens with overshot flaking, the source rock is high-quality chert; however, specimens made of poor-quality, grainy materials do not have overshot removals. One of the overshot specimens is manufactured from imported jasperoid, similar to that of the nearest source area in the Flint River basin, Georgia. Page-Ladson, in the Half Mile Rise section of the Aucilla River, should be considered the type-site for this form.

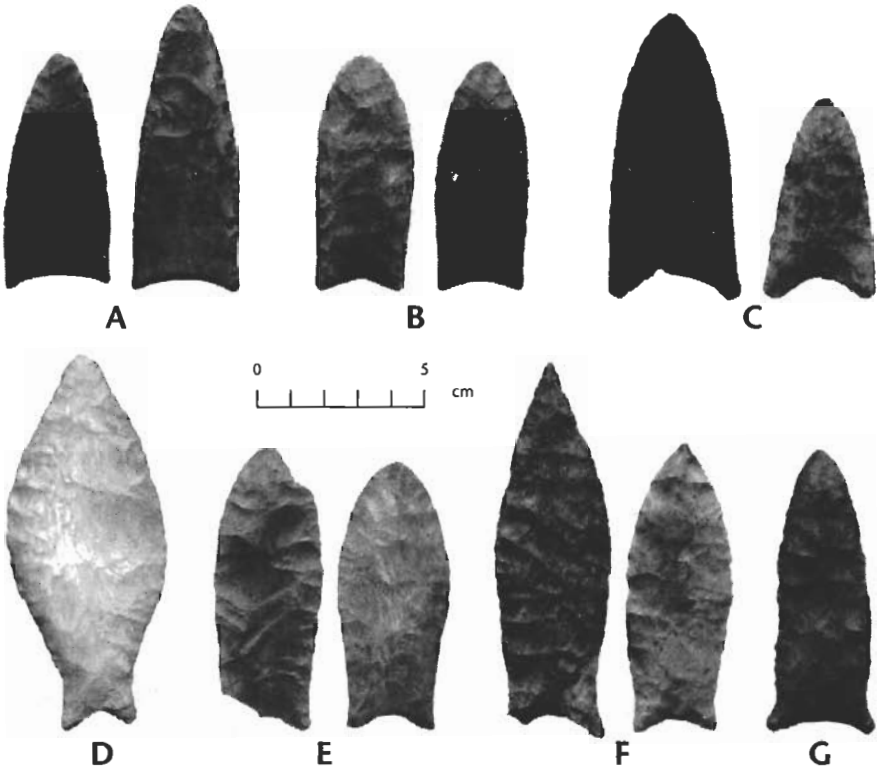

Figure 1. Representative points: **A**, Page-Ladson Lanceolate; **B**, Clovis; **C**, Lake Jackson Lanceolate; **D**, Simpson "Fishtailed"; **E**, Clovis Waisted; **F**, Suwannee Waisted; **G**, Suwannee, Greenbriar-like.

Clovis Fluted (Figure 1B)
Distribution: Across North America

Several specimens of this type have been recovered from displaced context in river basins and in various locations from just south of Tampa Bay northward in Florida. No known specimens of this form have been found in stratigraphic context in Florida, although a single example was recovered adjacent to the stratified deposits at the Silver Springs site (8MR92). All specimens considered here are fluted on one or both sides.

Lake Jackson Lanceolate (Figure 1C)
Distribution: Florida at Present

Despite the limited sample of three specimens available for inspection, we believe it possible that this form is distinctive, based on its differential basal thinning, rounded and downward-pointing basal ears, and haft area shape. Thinning includes mid-preform-stage fluting, late-preform-stage fluting, and basal thinning. Lateral basal thinning, when present, is minor. The other distinctive characteristic appears to be the haft area, which constricts from the proximal towards the distal end. Its shape is also somewhat distinctive compared with other forms, even though both examples appear to have been resharpened. No amount of resharpening could alter the shape of the constricted hafting area. It is the only form that displays proximal to distal tapering of the hafting area. The hafting shape, rounded basal ears, and varied basal thinning uniquely define this form. It is possible this form represents the reworked distal end of a broken Clovis or Clovis-like point salvaged for further use by its maker.

Simpson Fishtailed (Figure 1D)
Distribution: Florida and Southern Georgia

The Simpson form considered here is an extremely recurvate form that has a greatly contracted haft area compared with the width of the blade on specimens that have not been extensively resharpened. One extensively resharpened specimen has an outline shape reminiscent of the Suwannee Waisted form. Characteristic Simpson features include its extreme width-to-thickness ratio prior to resharpening (ca. 12:1–21:1) and broadly expanding, percussion-struck flaking extending about three quarters across the blade from the lateral margins. This type of flaking creates a central blade region thinner than the surrounding lateral area, a trait similar to Central and South American Fishtail and Lake Madden types. Another distinguishing charac-

teristic of the Simpson (versus the Suwannee Waisted form) is its extremely constricted haft area (waist) that is, in our opinion, functionally ill suited for projectile and thrusting-type use. We suggest its function was a cutting or skinning knife.

Clovis Waisted (Figure 1E)
Distribution: Eastern U. S., Occasionally West of the Mississippi River

Neill recovered a Clovis Waisted point in situ at the undated Silver Springs site (8MR92) along with a probable preform. An additional example was recovered out of context. Sloth Hole (8JE121) has produced multiple Clovis Waisted points as well as the classic form. The signature for Clovis Waisted points is particularly strong at Sloth Hole along with the occurrence of carved ivory shafts or foreshafts. Aside from the characteristic shape, fluting, and overshot flaking, an unusually large number of specimens of this form display heavy impact fractures and repaired impact fractures that betray its function as a projectile. Sloth Hole, in the Aucilla River, should be considered the Florida type-site for this form.

McFadden Beach in Texas and Murray Springs in Arizona are two Western sites that have also produced the Clovis Waisted type.

Suwannee Waisted (Figure 1F)
Distribution: Coastal Plain of Alabama, Florida, Georgia, and South Carolina

This form may represent the earliest of Bullen's Suwannee forms. One example was excavated and three others recovered from displaced context at the Ryan-Harley site (8JE1004). A distinctive uniface tool kit and diverse faunal remains including Pleistocene horse and tapir were recovered in situ from test excavations. A carved ivory shaft fragment was recovered from displaced context. Other Suwannee Waisted points have been recovered in a variety of locations from south central Florida northward. It is noteworthy that a small percentage of Suwannee Waisted points share certain characteristics, such as occasional fluting and overshot flaking, with the Clovis Waisted form. They also share with Clovis Waisted the same ratio of waist width to maximum width.

Another interesting feature, although not included in this sample, is the waisted form recovered from the Harney Flats excavations conducted by Daniel and Wisenbaker. The Harney Flats specimen, although referred to as a Simpson, is not distinctive given the range of forms in the Bullen typology (see below). It has a ratio of waist width to maximum width of 1.6 : 1, which is in line with Suwannee Waisted and Clovis Waisted forms. More importantly, the Harney Flats specimen is opposite beveled, which is a characteristic of the early-Archaic Bolen side-notched assemblage. That the Suwannee Waisted specimens occasionally share features with Clovis Waisted and with the form at Harney Flats may be indicative of an evolutionary continuum within these waisted forms.

Suwannee, Greenbriar-like (Figure 1G)
Distribution: Florida, Elsewhere Uncertain

This is an uncommon form whose most distinctive features are horizontally expanding ears and a parallel-blade form. Several specimens have been identified, including specimens in the Bullen type-case collection (Figure 2). The specimen in Figure 1G is from the Page-Ladson site (8JE591). At least one specimen has overshot flaking, which may or may not represent an intended manufacture feature. Although this form superficially resembles a reworked Suwannee Waisted, it lacks horizontally expanding ears. Its ears and nearly parallel blade edges give it a Greenbriar-like appearance.

Bullen's Typology (Figure 2)

One of our justifications for undertaking this study is the need to update Ripley Bullen's original typology. To understand Bullen's Paleoindian types we felt it best to consider the specimens in his type-case collection by applying his methodology. Because Bullen used outline shapes to depict the Clovis, Suwannee, and Simpson types (in his *Guide to the Identification of Florida Projectile Points*, 1968 and 1975), we do so here for the points in his original type-case collection. Images of the points were digitized and outlined, and the images were then deleted to create scaled outlines of their silhouettes. The Suwannee type

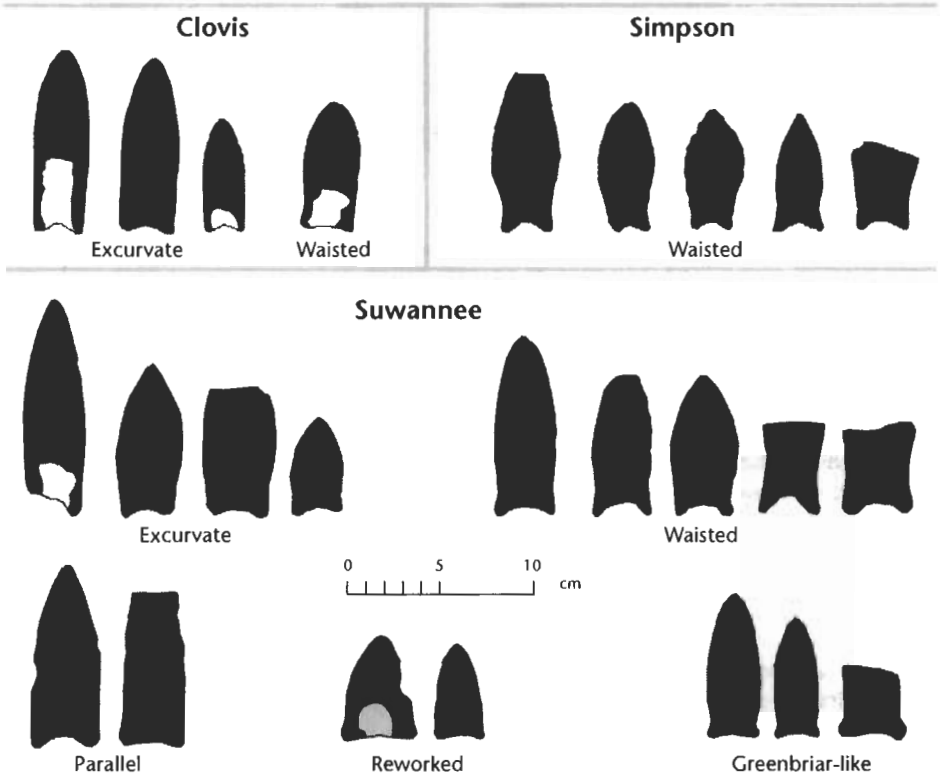

Figure 2. Examples of variation in Bullen's type collection, most notably within the Suwannee type.

shown in Figure 2 demonstrates the heterogeneous assemblage that he lumped together. We have arranged the different forms into potential types or forms under the headings Excurvate, Waisted, Parallel, Reworked, and Greenbriar-like. The upper part of Figure 2 depicts the Clovis and Simpson types. Note that Bullen lumps the more classic, excurvate Clovis type with the recurvate Clovis Waisted. Another problem is Bullen's placement of a excurvate, fluted Clovis under the recurvate Suwannee form (note the excurvate Suwannee on far left, Figure 2). Finally, note the similarities between some specimens in the Simpson and Suwannee Waisted types. Our evidence suggests the major differences between the two waisted forms are in ratios of waist width to maximum width, blade thickness profiles, and the presence (Simpson) versus absence (Suwannee) of the large expanding, percussion-struck, ¾-shot flakes.

Summary

The Page-Ladson site has produced a form of lanceolate point that promises to be of pre-Clovis or Old Clovis age. The Clovis Waisted and classic Clovis forms have been found together at the Sloth Hole site (8JE121) and the Silver Springs site (8MR92) in Florida. The Clovis Waisted form occurs elsewhere in the eastern U.S. (notably the Ross County, Ohio, type). Although uncommon, this form has also been found in at least two sites west of the Mississippi River, along the Texas coast at McFadden Beach and in the Desert Southwest at the Murray Springs site in Arizona. The Suwannee Waisted form shows evidence of being an offspring of Clovis Waisted. We are uncertain where the Lake Jackson lanceolate and Greenbriar-like Suwannee forms fit into this timeline. We believe the Simpson form described here is a knife and not a projectile point. We look forward to assembling larger samples of these forms and others for a deeper comparative analysis.

Suggested Readings

Anderson, D. G., and K. E. Sassaman 1996 *The Paleoindian and Early Archaic Southeast.* University of Alabama Press, Tuscaloosa.

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About the authors **Jim Dunbar** is an archaeologist with the Bureau of Archaeological Research, a branch of the Division of Historical Resources under the Florida Department of State. His major interest is the study of the Paleoindian and early-Archaic cultures of Florida, particularly sites now located in wetland and submerged settings. He was a co-principal investigator on the Page-Ladson site, an inundated Paleoindian site with archaeological components now submerged as deep as 30 ft below present sea level. He works for the C.A.R.L. Cultural Resource Management program as a Senior Archaeologist assessing archaeological resources on environmentally sensitive state lands acquired through the Preservation 2000 program.

Andy Hemmings is a graduate student in the anthropology department at the University of Florida. He led the research on Sloth Hole, an inundated Clovis site in the Aucilla River. His nearly completed dissertation focuses largely on the North American Pleistocene faunal community and interactions with early Paleoindians, with special attention given to the wealth of Paleoindian bone and ivory tools recovered from Florida's underwater sites since the 1920s.

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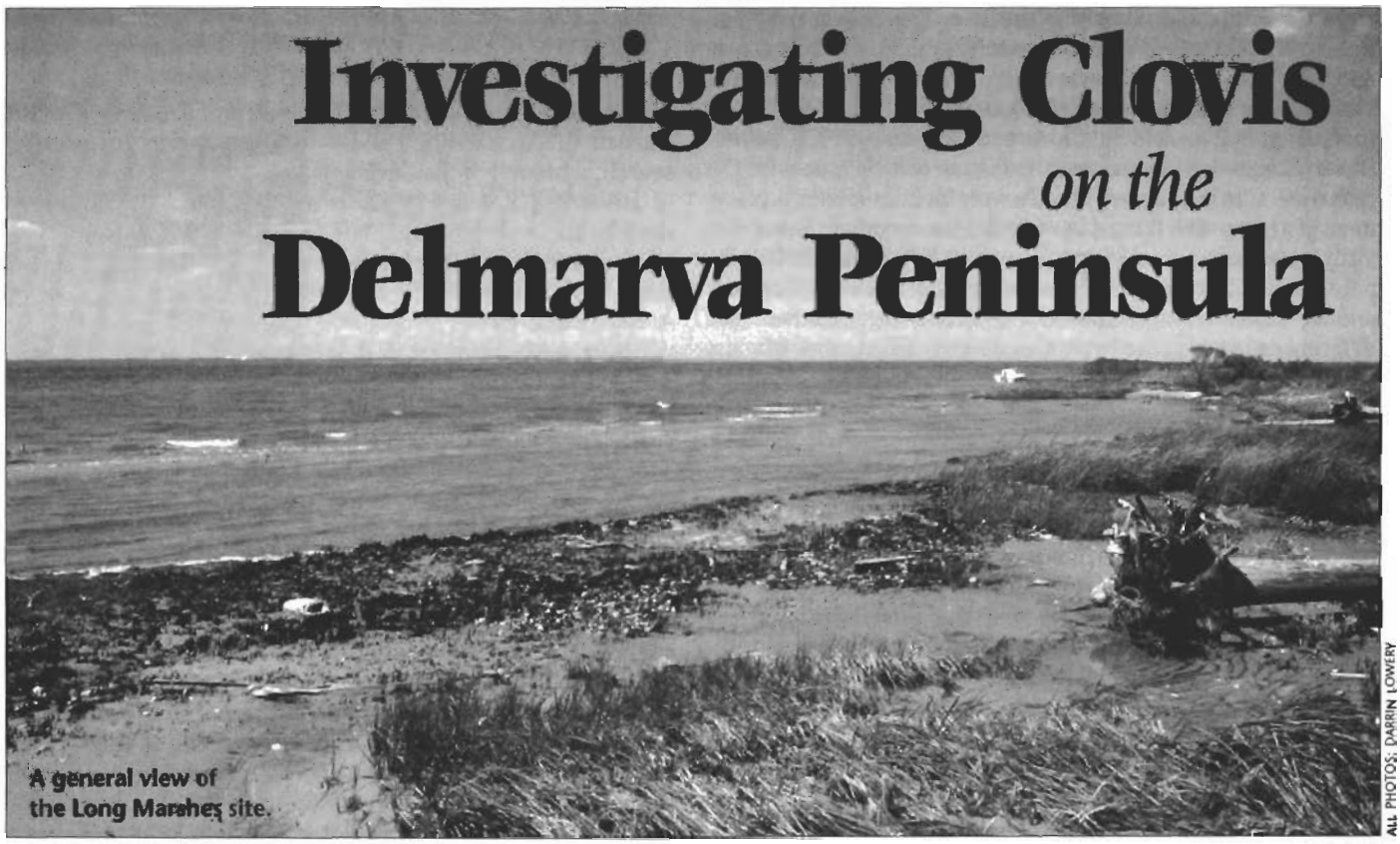
This article is the complete text and illustrations that will appear in New Perspectives on the First Americans, *except that we have substituted an abbreviated "Suggested Readings" list for the extensive references that accompany Dunbar and Hemmings's scholarly work.* –Ed.

Investigating Clovis on the Delmarva Peninsula



A general view of the Long Marshes site.

ALL PHOTOS: DARRIN LOWERY

by Darrin L. Lowery

THE DELMARVA PENINSULA, which encompasses virtually all of Delaware, sections of Maryland, and portions of Virginia that lie wedged between the Chesapeake Bay and the Atlantic Ocean (Delmarva takes its name from the three states), has been sculpted by wind and water over many millennia. It is a confusing and misunderstood landscape, and no part has been more misunderstood than the Paleoamerican archaeological record of large sections of the coastal plain, chiefly as the result of unfocused research and the biased nature of the data collected over the years.

Recent field work and the efforts of countless professional and avocational researchers are finally unraveling the archaeological mysteries of this landscape. We can now predict Paleoamerican archaeological sites with a fair degree of accuracy, and we better understand the site-formation processes that contributed to the archaeological record.

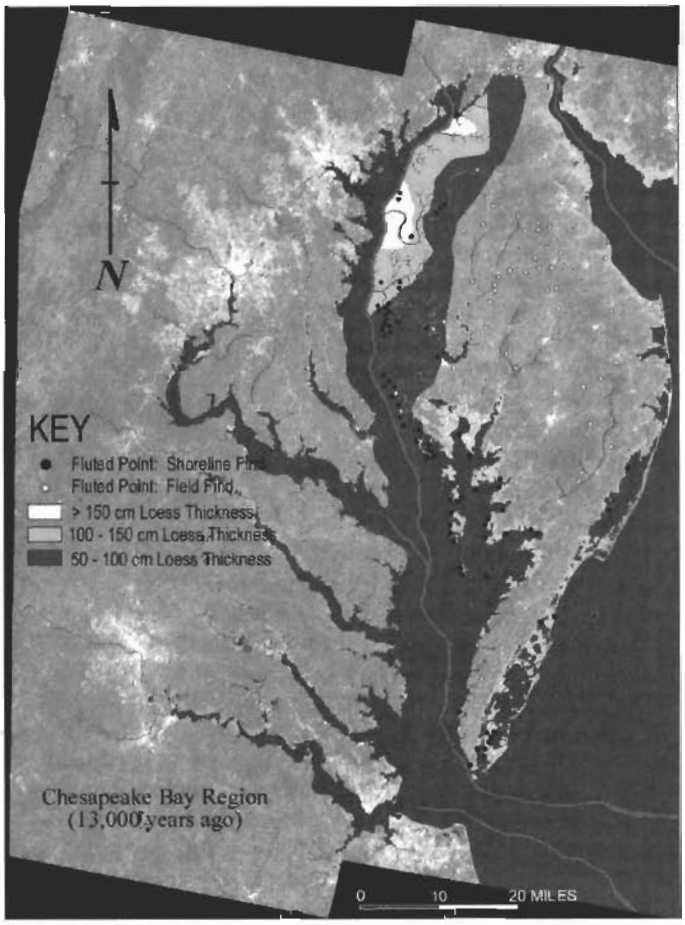
The setting

Today the Delmarva Peninsula is an irregular coastline of drowned river valleys, streams, and creeks. The terrestrial landscape is topographically low and consists of vast areas of poorly drained silty soils and well-drained sandy soils. To complicate the picture even further, large tracts of tidal marsh that now blanket former forests have also filled former streams and creeks. Of the extensive landscape available to Paleoamericans who roamed the coastline 13,000 years ago, only interior and upland areas survived the marine transgression that occurred during the Holocene.

Isolated finds of fluted points and the archaeological record that is taking shape reveal that the Delmarva Peninsula supported a significant Paleoamerican presence. The 126 sites and isolated find spots have yielded diagnostic fluted projectile points—by conservative estimate 350 to 500—the majority of which resemble Clovis-type points. This number is especially impressive when you consider that all the major river valleys, major river confluence points, floodplains, low terraces, and lowland swamps where the makers of these points lived, traveled, and hunted are now inundated.

◀ **Delmarva Peninsula Paleoamerican sites. This illustration shows Chesapeake Bay and the landscape as they exist today; Pleistocene waterways and swamps are shown in white.**

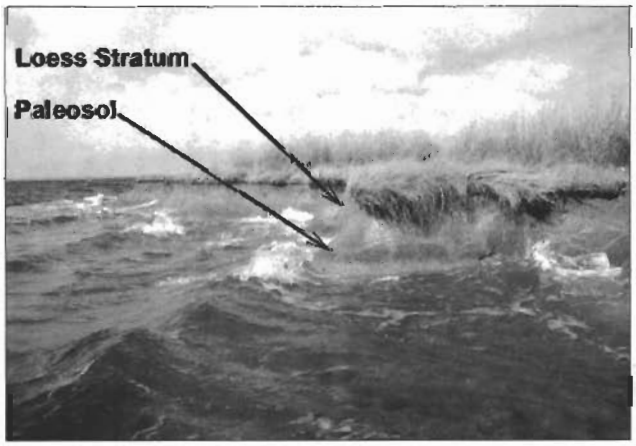
▼ **Loess distribution and thickness, and fluted-point discoveries.**



The research

Archaeological research on the Delmarva Peninsula has primarily been limited to large-scale regional surveys supplemented by site testing. Of 126 known Paleoamerican sites in the area, the only ones tested are the Paw Paw Cove site on the coastline of the Chesapeake Bay in Talbot County, Maryland; the Wise-Wix site on the mid-peninsular drainage divide in Kent County, Delaware; and the Upper Ridge site on the Atlantic seashore of Northampton County, Virginia. Of these, only the Paw Paw Cove site has been subjected to a series of multiple test excavations over the past 15 years. The excavation data from these sites, supplemented with data gleaned from the other sites in the region, have given us new insight into the area.

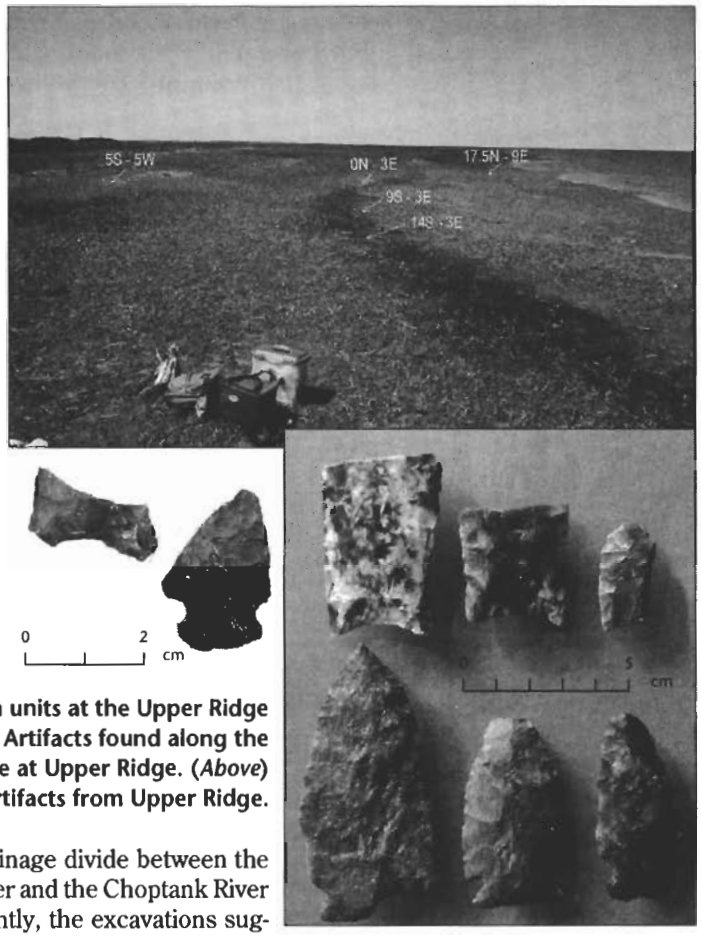
The Paw Paw Cove site This complex comprises a series of sites that have revealed Paleoamerican artifacts along the heavily eroded shorelines of the Chesapeake Bay. The Chesapeake Watershed Archaeological Research Foundation (C-WAR), the Maryland Historical Trust, the Temple University Department of Anthropology, the University of Delaware Center for Archaeological Research, and the Smithsonian Institution have sponsored research at the site. Over the past 28 years, 33 fluted projectile points have been discovered along three small sections of eroded coastline—simply by examining the shoreline at low tide. Many formal tools and a limited quantity of lithic waste have also been discovered at these sites as precipitates of erosion.



Eroded bank profile, showing Younger Dryas loess and paleosol.

In 1999, excavations were conducted inland of the shoreline at a former spring-related confluence point. Six 1-by-1-meter (about 3 ft square) excavation units revealed a buried Paleoamerican-age living surface. Diagnostic artifacts recovered include a heat-treated jasper fluted point, a damaged preform made from a chert cobble, a flared-tip drill made from

a cobble, a jasper concave-convex scraper, a chert endscraper, and a quartz endscraper. These artifacts were found within a distinct silty clay loam stratum 60–65 cm (about 24–26 inches) below the ground surface. Like other items found earlier along the eroded shoreline, the assemblage suggests the site complex may have been a hunting base camp. The Paw Paw Cove complex, like many Paleoamerican sites on the Delmarva Peninsula, suggests that interfluve areas were preferred interior upland hunting localities. The sites included in the complex are located on the drainage divide between the ancestral Susquehanna River and the Choptank River watersheds. More importantly, the excavations suggest that archaeological sites along the northwestern flanks of today's Delmarva Peninsula were buried under a mantle of windblown Younger Dryas–age loess. This loess blankets the Paleoamerican land surface, and the ancient landscape is revealed along eroded bank-cuts as a dark paleosol. The Paw Paw Cove paleosol and the overlying loess can be considered a regional chronostratigraphic unit.



(*Top*) Excavation units at the Upper Ridge site. (*Right*) Artifacts found along the eroded shoreline at Upper Ridge. (*Above*) Excavated artifacts from Upper Ridge.

The Wise-Wix site In 1999, test excavations were conducted at the Wise-Wix site near Felton in Kent County, Delaware. C-WAR sponsored these tests, and the field crew included avocational and professional volunteers. Joseph Hughes, who has located many early sites in the agricultural fields surrounding the swamp, provided the knowledge and insight about the Wise-Wix site. Seated on an elevated wooded knoll surrounded by a forest-covered freshwater wetland or upland swamp, the Wise-Wix site also lies on the mid-peninsular drainage divide, which defines the boundary between the watersheds that drain into the present Chesapeake and Delaware bays. Field work suggested the knoll was a former dome dune that had been developing at various times in the past; unlike the loess at Paw Paw Cove, the soils associated with the Wise-Wix site are essentially fine-grained eolian sands. Since it is an intact landscape, it was speculated that Paleoamerican and Archaic-era components might be found on the undisturbed knoll in the swamp.

Four 1-by-1-meter units were excavated and screened by volunteers. A distinct Paleoamerican cultural stratum was found 70–80 cm (about 28–32 inches) below the ground surface and 30 cm (about 12 inches) below a stratum containing diagnostic early-Archaic points.

The Paleoamerican artifact assemblage includes four small utilized blade flakes made of chert and quartz, a jasper waste flake, and two finely made lanceolate points of chalcedony and chert. Both points are basally thinned and ground, and both have impact damage. These two specimens, similar to Holcombe points found at Holcombe Beach, also resemble the Miller Lanceolate specimen from Meadowcroft Rockshelter.

(*Top*) Excavating at the Paw Paw Cove site. (*Bottom*) Artifacts excavated at Paw Paw Cove.

At present, little can be said about the small assemblage found at the Wise-Wix site. The regional soils and site formation processes revealed by the excavation suggest that eolian sands were being reworked and deposited at sites in the interior of the peninsula at the same time eolian loess was blanketing the northwest portion of the peninsula. Modern agricultural processes working the sandy soils in the interior of the peninsula have deflated some of these Paleoamerican landscapes, resulting in the discovery of numerous fluted points.

The Upper Ridge site In 2003, the Upper Ridge site along the At-

(*Top*) A general view of the Wise-Wix site. (*Bottom*) Artifacts excavated from Wise-Wix.

lantic seashore of Northampton County, Virginia, was archaeologically tested under the auspices of the Threatened Sites Program of the Virginia Department of Historic Resources. The site, discovered in 2001 by C-WAR, was one of many localities recorded in the course of a series of multi-year shoreline surveys to locate and document archaeological sites threatened by shoreline erosion along the Atlantic seashore. The Upper Ridge site, along with other Paleoamerican localities documented during the survey, was predicted as an archaeological site prior to the fieldwork; what's more, the site was predicted to contain Paleoamerican through Woodland-era components *prior to the fieldwork*—a striking example of how techniques like satellite imaging have improved our ability to infer the presence of archaeological sites. The initial shoreline survey revealed diagnostic Paleoamerican and early-Archaic projectile points, along with later-Archaic and Woodland-era materials. The artifacts found at the site, which had been eroded from their original context, provided an initial glimpse into the cultural use of the landscape. The evidence clearly suggests that the site was a favored settlement area for prehistoric peoples over many thousands of years, but for radically different ecological and environmental reasons.

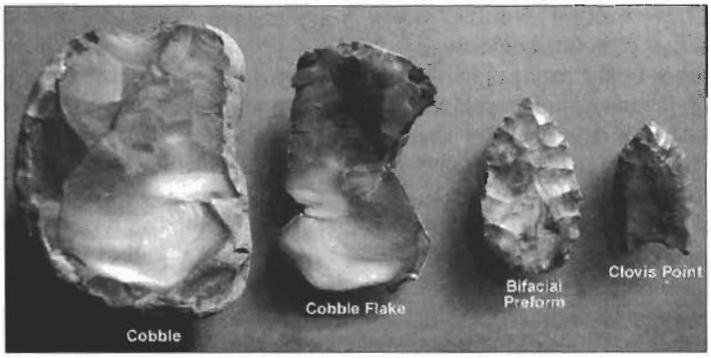
The testing at the Upper Ridge site included a series of soils studies and five 1-by-1-meter excavation units. The goal of the work was to define the site-formation processes, to address the natural processes impacting the cultural strata, and to understand the cultural use of the landscape. The dominant archaeological component found at the site was a middle-Woodland organic midden with ceramics, lithics, and bone tools; faunal remains in the organic midden indicated that prehistoric peoples fished for drum fish, stingrays, bull sharks, and juvenile great white sharks. Below the organic midden was a fine middle-Holocene eolian sand stratum that included middle- and late-Archaic diagnostic artifacts, and still deeper was another distinct eolian sand stratum that was more developed. The clear boundary between the two distinct strata suggests an erosional event or a deflated land surface. At the erosional boundary we discovered a highly resharpened early-Archaic corner-notched point; within the upper portion of the weathered sands, our excavations uncovered the basal section of a well-made fluted trianguloid lanceolate.

Little more can be added at this time about the small assemblage excavated at the Upper Ridge site. The site formation processes were periodic eolian deposition and erosion. If left unchecked, Atlantic coastal marine transgression will ultimately bury the site, and its archaeological remains would remain largely intact.

Clarifying the big picture

Research at Paleoamerican sites on the Delmarva Peninsula has provided new insight into the region's archaeological record. Additional Paleoamerican sites remain to be tested. For example, the Long Marshes site in Dorchester County, Maryland, has yielded six Clovis point fragments and hundreds of blade-like flake tools. Unlike the other sites discussed above, Long Marshes seems to be completely inundated and buried below a thick blanket of tidal marsh peat. Most of the artifacts have the dark staining and sulfur odor characteristic of an inundated depositional setting associated with anaerobic bacteria. At sites like Long Marshes, essentially underwater sites, cultural levels are understandably hard to locate given the dynamic processes of shoreline erosion and artifact redeposition.

Current investigations at Paleoamerican sites in the region challenge conventional ideas about the Middle Atlantic coastal plain. Some researchers and scholars have suggested that the Delmarva Paleoamerican archaeological record consists largely of fluted-point "isolated finds." Prior to our work, the assemblages from Paw Paw Cove, Wise-Wix, and Upper Ridge sites could have been considered isolated finds, but our research shows that many of these so-called isolated finds are in fact indicators of intact sites. In the past, some researchers have excluded shoreline fluted-point discoveries from Paleoamerican site distribution maps on the grounds that they are isolated beach finds. However, if you examine the details of our map showing loess distribution and fluted-point discoveries, a pattern emerges that explains the significance



Delmarva Peninsula fluted-point manufacturing sequence.

of beach finds. In the area blanketed by the Younger Dryas loess, only four localities have yielded fluted points in plowed agricultural fields or disturbed ground contexts; each of these localities has produced only one fluted point, and all the sites are located on the marginal thinning fringes of the loess area. On the other hand, all the fluted points discovered in the thicker loess areas have been found along eroding shorelines with sharp bank cuts; in areas along the shoreline south of the loess, most of the Paleoamerican sites are associated with inundated uplands, like the Long Marshes site. Therefore the lack of fluted-point field finds in the northwestern section of the Delmarva Peninsula is an indication of *buried* Paleoamerican sites, not of an absence of human settlements.

These same researchers and scholars have suggested that the majority of the region's Paleoamerican sites are clustered near the primary jasper quarries at the northern end of the peninsula. In fact, only six sites are situated around the primary jasper quarries near Newark, Delaware, and only 15 Clovis or Clovis-like projectile points have been found at these sites. These few diagnostic points contrast quite sharply with the impressive number of diagnostic points discovered in areas far removed from the primary jasper quarries—54 Clovis or Clovis-like projectile points have been found in the immediate region of the Paw Paw Cove complex sites in western Talbot County, Maryland. Interestingly, these sites are not associated with primary lithic jasper quarries. Secondary cobbles, the materials used to manufacture the fluted points, can easily be found within 5 miles of these sites. The archaeological data clearly indicate Paleoamericans were utilizing ancient fluvial cobble resources to manufacture the majority of their stone tool kits.

Importantly, the heavy reliance on cobbles for stone tools broadly suggests something about Paleoamerican settlement patterns for the Delmarva study area. The evidence suggests little if any long-distance transport of exotic lithic material onto the Delmarva Peninsula by these ancient cultures. How can we test this hypothesis, knowing that jasper and chalcedony from the Appalachians could have eroded into the region many millions of years ago and that chemically identical materials could have been brought here by human transport? The well-known Williamson site, a primary quarry-related Paleoamerican base camp, is located immediately over the Chesapeake watershed drainage divide on river systems that drain into Albemarle Sound along the North Carolina coast. This site, which has produced 200 to 250 Clovis or Clovis-like points and is probably the largest Clovis site in North America, is associated with an outcropping of Cattail Creek chalcedony. Examining fluted-point samples from the Delmarva Peninsula, we discover that only one specimen found near the mouth of the Chesapeake Bay in lower Northampton County, Virginia, remotely resembles Cattail Creek chalcedony. The absence of Cattail Creek chalcedony fluted points in the study area is surprising, considering the Williamson site is only 60 linear miles from the lower Delmarva Peninsula.

Bearing in mind two-thirds of the Paleoamerican landscape has been lost to marine transgression, the Delmarva fluted-point database suggests a substantial human population occupied the Middle Atlantic coastal plain 13,000 years ago. These early occupants didn't rely on primary lithic quarries outside of the region to manufacture stone tools. Instead, the data imply that regionalization or territoriality was firmly entrenched in the Middle Atlantic during the Clovis era. Is this a pattern we would expect from an initial colonizing population? I think not! I believe that our work indirectly supports regional claims (notably at the Cactus Hill site in Virginia) for a pre-Clovis population in the Middle Atlantic area.

What does the future hold?

Researchers and scholars investigating the Middle Atlantic region have been milking the same archaeological database for information for too long. Specialists in specific regions are essential to further the field of prehistoric archaeology, and systematic archaeological surveys and the involvement of avocational archaeologists are needed to increase the archaeological site inventory. The Chesapeake Watershed Archaeological Research Foundation was created as a nonprofit research entity to further the field of prehistoric archaeology in the Chesapeake Bay and surrounding areas. Through the efforts of many people, agencies, and academic institutions, we are challenging some misconceptions about Paleoamerican occupants along the coastal plain of the Delmarva Peninsula. With respect to later periods in time, other misconceptions await future focused archaeological research!

–Darrin L. Lowery, Executive Director
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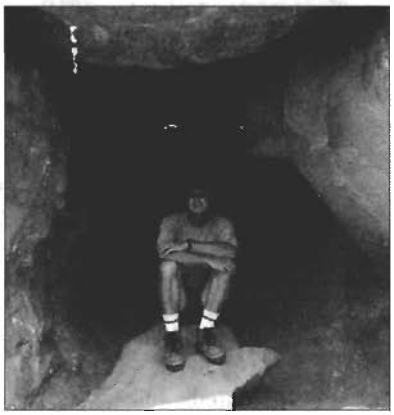
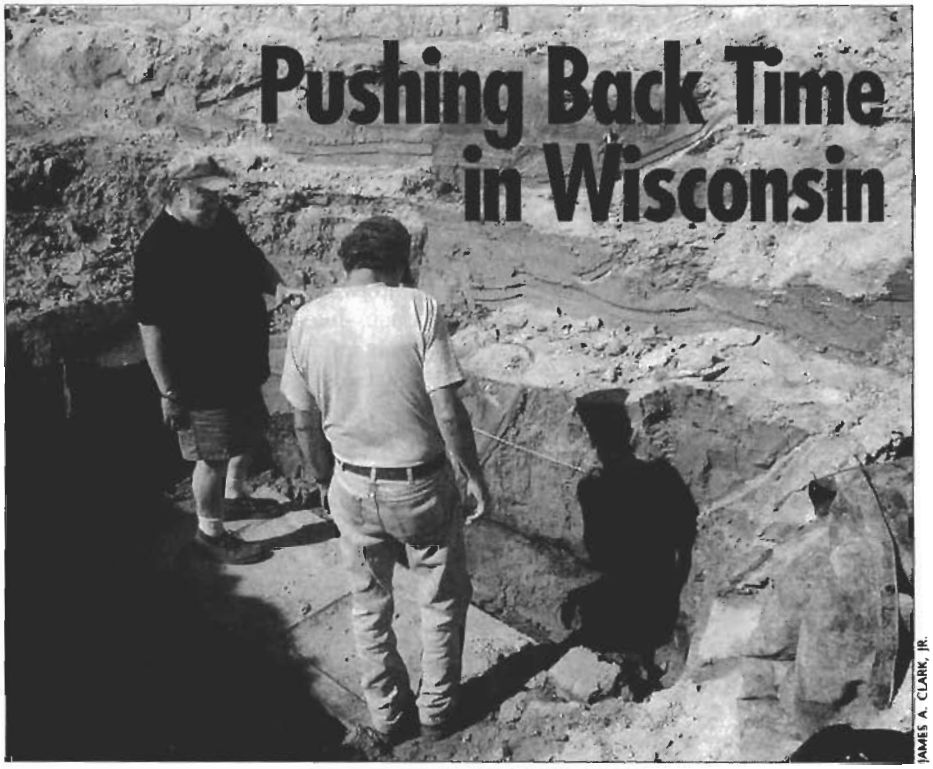
About the author Darrin Lowery is focused on Middle Atlantic coast plain archaeology. His interests are the effects that shoreline erosion, marine transgression, eolian processes, tidal marsh formation, and sub-tidal coastal landforms have on former upland archaeological sites. He has systematically surveyed over 60,000 acres of agricultural fields, over 600 linear miles of Chesapeake Bay shoreline, and over 100 linear miles of Atlantic coastline adjacent to or associated with the Delmarva Peninsula. He has officially recorded over 1,500 archaeological sites on the peninsula.



Pushing Back Time in Wisconsin



JAMES A. CLARK, JR.

Project geomorphologist Michael F. Kolb of Stratamorph Geoexploration (*right*) and Overstreet examine the buried organic layer at the Fabry Creek site.

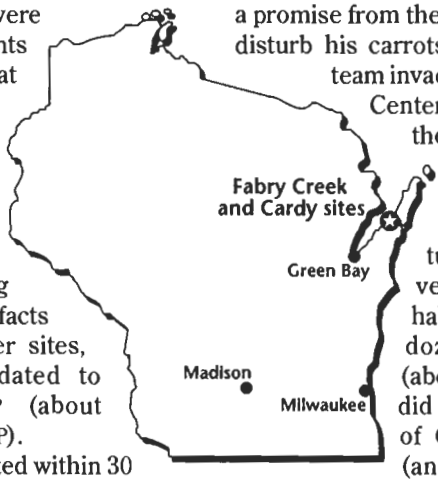
On an arrowhead-shaped peninsula on Lake Michigan, an archaeologist weary of the Clovis controversy may have uncovered evidence to help resolve it.

DAVID OVERSTREET began his Wisconsin fieldwork at the Chesrow site, which became the type site for the Chesrow complex. He followed it up with study on butchered woolly mammoth bones at the ostensibly related Schaefer and Hebior mammoth sites. Seventeen years later, the director of the Center for Archaeology Research at Marquette University has uncovered proof—Gainey points, a chert adze, uniflake tools, and bifacial thinning flakes—that Paleoamericans were in Wisconsin. And he's found materials at 7-ft depths that appear to be earlier than Agate Basin—early enough that he won't speculate on their age.

Before dating is even completed, finds at Dr. Overstreet's latest excavations, Fabry Creek and Cardy, are blowing holes in previous theories about early Americans—or at least about early Wisconsinites.

In the first place, they were there.

"The serendipitous element," says Overstreet, "is that it's putting people in a place, without equivocation, where they're not supposed to be. The prior models suggested that this area was ice-locked and uninhabited during Paleoamerican times. So we were pretty excited when we identified the Agate Basin component . . . and then we tumbled to the fact that there were two earlier components than Agate Basin that actually could push the age of the site back 2,000 years." The age of the Agate Basin materials at Fabry Creek is based on cross-dating Agate Basin–age artifacts from numerous other sites, which have been dated to 9000–10,000 RCYBP (about 10,400–11,500 CALYBP).



The sites are situated within 30 miles of each other on an arrowhead-shaped peninsula that separates Green Bay from Lake Michigan. Excavations at Fabry Creek were the result of a cultural resources management survey commissioned by state and federal agencies prior to highway construction; Cardy's finds came about as a result of Overstreet's persistence.

Archaeology among the carrots

Clayton Cardy lives just south of the bay and ship canal. The remnants of a much larger farm now surrounded by the city of Sturgeon Bay, his property has been extensively farmed and gardened. Overstreet first talked to Cardy back in 1979 as part of a survey funded by National Oceanic and Atmospheric Administration (NOAA). At that time Overstreet learned that fluted projectile points had been found on Cardy's property in the 1950s and that Darrel Cardy, Clayton's son, then an undergraduate student at the University of Wisconsin–Madison, had taken the points to the State Historical Society. But because it was "known" that northern Wisconsin was devoid of human life during the era when fluted points were in use, nobody ever followed up.

When work started at Fabry Creek, Overstreet took the opportunity to "pester Mr. Cardy again." After putting him off for two years to get more gardening in, Cardy, who turned 88 this year, finally agreed. After the corn was in and he had a promise from the archaeologists not to disturb his carrots, he let Overstreet's team invade his vegetables. The Center at Marquette funded the work.

All Overstreet hoped to do, given the extensive agriculture at the site, was verify Paleoamerican habitation. In roughly a dozen 1-by-1-m units (about 3 ft square), they did just that—with finds of Gainey fluted points (an Eastern analog to Clovis), Moline chert flake tools, endscrapers, and debris from chipped-stone tool manufacture.

Moline chert comes from west-central Illinois. It isn't found in Wisconsin. Moline chert tools at Cardy included fluted points, endscrapers, flake tools, and a graver. Tools of local stone were also found, interestingly enough, of the same source stone as tools from Fabry Creek.

Most of the artifacts were only 8 to 10 inches below the surface, within a disturbed plow zone that rests on Liberty Grove till (reddish clay with rocky clasts deposited some 14,000 years ago).

"They are clearly Paleoindian implements," Overstreet said. "It's kind of interesting, because these people were moving into eastern Wisconsin (from modern Illinois). They must have been moving up an ice-free corridor that was created when the Green Bay and Lake Michigan glacial lobes split during recession of the ice sheets. Here until a couple of years ago we thought the only ice-free corridor was coming the other way."

Cardy told the team his log cabin home had originally been moved to the site in 1898. It was set atop a new basement after the excavated dirt had been spread around to create a low knoll.

Overstreet sank a few more pits closer to the house, hoping the layer of soil from the basement had protected the earth beneath it from plowing. It had. They uncovered a work area with flake tools, chipping debris, a broken fluted point, and endscrapers—all in an undisturbed context.

Overstreet thinks this is a first in Wisconsin—undisturbed fluted points in a coherent assemblage with the potential for radiocarbon dating. "Once that microwear analysis is done," says Overstreet, "we're going to have at least some idea of what these people were doing in this habitat 10,000, 11,000, 12,000 years ago.... And we do have some good charcoal, so hopefully we'll have some good radiocarbon dates." He adds, "It's a nice tight encapsulated context nobody's puttered with since 1898. That, again, has nothing to do with intellect, it's pure blind luck." And the persistence to dig where no one else thought it worthwhile to look.

Digging deeper at Fabry Creek

Some 30 miles to the south lies Fabry Creek, apparently a popular dwelling place for at least 10,000 years. The researchers occasionally refer to it as the Boss Tavern site; part of the site is a yard to the north and east of a tavern and residence owned by a man named Boss. A mature oak woodlot and a former agricultural field are also part of the dig.

Five separate components have been identified in excavations that have reached depths of 6 to 7 ft in loose, unconsolidated sandy soil. The depth made hand work difficult, Overstreet admits, but he wanted to avoid using heavy equipment until they understood the stratigraphic context.

"We spent almost the first two years excavating a late-prehistoric Oneota–Mero complex component," Overstreet recalls, adding that Mero is an Oneota manifestation first identified in the region by Ronald J. Mason, now professor emeritus at Lawrence University. The archaeologists uncovered a domestic structure and 200 storage pits, part of an agricultural village dating from A.D. 1000 to 1200. Beneath that was a North Bay middle-Woodland component, including remnants of some of the first experimental pottery from the region. The fragments are about 3/4 of an inch thick and full of rock—"clunky, heavy stuff," according to Overstreet—its weight alone implying a more settled population.

Beneath that were found two distinct activity areas, both of which produced Agate Basin–like materials: endscrapers and projectile points, flake tools, and lithic debris. "They're very nicely intact, no disturbance," says Overstreet. "No question about that horizon."

"And then," he notes, "we got to the problematical stuff."

This summer, at depths of between 6 and 7 ft (the depth varies because the buried landscape doesn't mirror the surface), they found material that Overstreet won't even speculate about. "Below the Agate Basin horizon are water-rolled flakes and tools. They must have already been at the site during the Main Algonquin transgression," roughly 10,600 years ago, when water levels rose to about 610 to 615 ft above mean sea level.

Beneath the water-rolled tools are two additional components separated by stratification and sedimentation packages. The earlier of the two is in contact with the landform in which the Agate Basin material was found; the other is at least 30 cm (about 12 inches) deeper, in an older landscape.

JAMES A. CLARK, JR.

Clayton Cardy (*left*) and Overstreet discuss the deployment of excavations at the Cardy garden ("don't disturb my carrots").

"Ergo, they are older than Agate Basin and older than the Algonquin transgression by an unknown magnitude," Overstreet concludes. "Fortunately Steve Forman and Tom Stafford are going to resolve those problems for us." Dr. Forman, a geochronologist and optically stimulated luminescence specialist from the University of Chicago–Illinois (**MT 18-3,** "Luminescence Dating of Quaternary Sediments"), will date sediments where no organic material could be obtained. Dr. Stafford, of Stafford Research Labs in Boulder, Colo., will do AMS C-14 dates on the buried organics. The radiocarbon dates should be back in January or February; the OSL dates should be available by the end of the year.

"Both of the earliest components include core and flake tools in their tool kits," says Overstreet. Chipping debris includes bifacial thinning flakes, so we know they were making bifacial implements. Unfortunately, they didn't leave any where the researchers could find them. Excavators, however, did find large flake tools that could have been used for a wide range of cutting and scraping tasks, working bone, or other purposes. Richard Yerkes at Ohio State University will conduct microwear studies to determine their use.

Also in the two early occupation components at Fabry Creek was a unique (for Wisconsin) form of toolstone, argillite, and some other tools Overstreet thinks were also used on wood. He's not willing to speculate on the age of the items. "What I can tell you is that I'm confident that earlier occupations at Fabry Creek will predate roughly 10,000 years ago," he says.

An adze that captured national attention was found at the point of contact at the base of the Agate Basin landform with an older sediment package, according to Overstreet "a well-defined feature in what we're calling the middle component that's located about 15 centimeters [about 6 inches] below the Agate Basin horizon and generally 30 to 40 centimeters [about 12–16 inches] above the earliest component." It was found near a number of expended cores, large tools, bifacial thinning flakes and lithic material. Overstreet describes it as "a good-sized hunk of chert, certainly larger than fist-sized, and modified into an adze working edge with deeply retouched back working edge, and then a single large flake was carefully removed to create a dished adze working edge." Microwear analysis is being conducted to confirm its use as a woodworking tool and to seek evidence of hafting modification. Excavators at the Gault site in Texas are sending photos of a similar tool they found; he's interested in comparing the two. "I know chipped-stone adzes are fairly rare in a Paleoindian context, even in this neck of the woods," he confesses, but he seems somewhat bemused by the interest.

George Irving Quimby coined the phrase Aqua Plano as an alternative to the so-called Plano tradition that includes several Western Paleoindian complexes because Great Lakes finds are primarily associated with shorelines of pro- and postglacial lakes. Quimby didn't necessarily envision watercraft as part of their lifestyle. Overstreet does. "Regardless of which lake level you want to talk about," he explains, noting that at times the waters of Huron and Michigan lakes were conjoined, "it would have flooded a tremendous amount of landscape." There is no question in his mind these people were making dugout canoes for moving from one extensive aquatic system to another. Life here was nothing at all like the pattern on the American grasslands, where they were hunting bison. A confirming fact for him is that in the later Scottsbluff and Eden (Cody complex) sites, among the most common artifacts you find are basalt and rhyolite trihedral adzes.

RICHARD MASON & DARREL CARDY

Projectile points found at the Cardy site and taken to the Wisconsin Historical Society by Darrel Cardy in the 1950s.

Fabry Creek threw them a couple of curve balls, including thin layers of unrelated sediment they finally determined had been deposited by melting icebergs. "Once we had completed the archaeological work," he recalls, "we brought in heavy equipment and dug a series of backhoe trenches to better understand the landscape and view the site formation processes and try to sort out glacial events." The trenches, in good context, brought geomorphologists out of the woodwork, he notes wryly.

Ice contact deposits or ice wedges or shoreline features can easily be identified by a trained eye, but are not as easily dated. "That's where it gets a bit dicier," he explains, "trying to tie a particular locality on the site to a particular glacial event like the outpush from the last glacial advance. Or buried organics—are they buried in deposits from glacial Lake Oshkosh, or are they buried in sediments from the main (glacial) Algonquin?"

Time to call in the experts

Visiting specialists such as Eileen Johnson, research director at the Museum of Texas Tech, and Mike Waters, geoarchaeologist at Texas A & M, added their interpretations—"which, by the way, are often contradictory," Overstreet observes with a chuckle, "but still I really appreciate all the commentary. It doesn't get any better than that. To sit on site with people with a collective range of experience . . . to tap those minds and say, 'Where have you seen this kind of thing before?'"

Overstreet was still mapping profiles in early October and hoped to have the field work at both sites wrapped up by the end of the month. Catherine Yansa of Michigan State University was collecting samples for plant macrofossil work; Forman had not yet collected all his samples. Michael F. Kolb of Strata Morph Geoexploration in Sun Prairie is the project geomorphologist; William Mode, of the University of Wisconsin-Oshkosh, will be doing some of the pollen work and sediment analyses.

"This kind of research has to be multidisciplinary. There are too many angles, too many kinds of data sets," Overstreet explains. "You need all these independent lines of evidence to allow you to state a case. Particularly when you have something in this time frame, that may be early."

There are no plans for future excavations at either site. Highway construction at Fabry Creek begins next spring. Overstreet's sponsors, the Wisconsin Department of Transportation and the Federal Highway Administration, have rerouted Highway 57, Door County's main transportation artery, to preserve as much of that site in situ as was economically feasible—to protect it all would have added millions to the construction project and involved blasting into the Niagara escarpment.

Overstreet looks forward to retiring next year. He welcomes the opportunity to spend more time doing pure research and writing. "I've literally been working on this since 1986, when I came off work in the Chesrow site in far southeast Wisconsin and gravitated north along these various-aged ice avenues," he recalls. "To me it's not the age . . . the point is confirming that humankind, at least in the Great Lakes region, was exploiting tundra or steppe-tundra–like habitat over several thousand years. It has implications important for questions of Pleistocene extinction; certainly it relates to the Clovis-First paradigm, though I choose not to go there."

He notes that the **Center for the Study of the First Americans** and Texas A&M will undertake a project in Wisconsin next year to pursue some of those additional questions that have been raised. Their primary focus is to demonstrate the existence of pre-Clovis sites. "I think we've given them a really good opportunity to do that," he boasts. "Some of the early data are probably buried by 20, 30, 40, 50 feet of glacial till or lake silts. There's a whole segment of Wisconsin with lake sediment similar to the Fabry Creek site that nobody has investigated, because their assumption has been there is nothing to be found in those lake sediments. Surveyors typically don't go out and investigate contexts buried by 6 to 7 to 8 feet of lake deposits. And I think that's where the best and earliest contexts are likely to be found."

–Ellen Saunders

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Major Decision—Kennewick Man Case

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"Chevron deference," after the landmark Supreme Court case in which this deference doctrine was first announced. The DOI claims that Chevron deference allowed it to change the definition of "Native American" enacted into law by Congress. Specifically, the DOI claims that NAGPRA applies to any and all groups and cultures that have ever resided in the United States, rather than to those tribes who presently are indigenous. NAGPRA defines "Native American" as "of, or relating to, a tribe, people, or culture that is indigenous to the United States." The attorneys for the scientists maintain that "is" means "is," while the government, the tribal coalition, and their attorneys claim that "is," in this case, means "is or ever was."

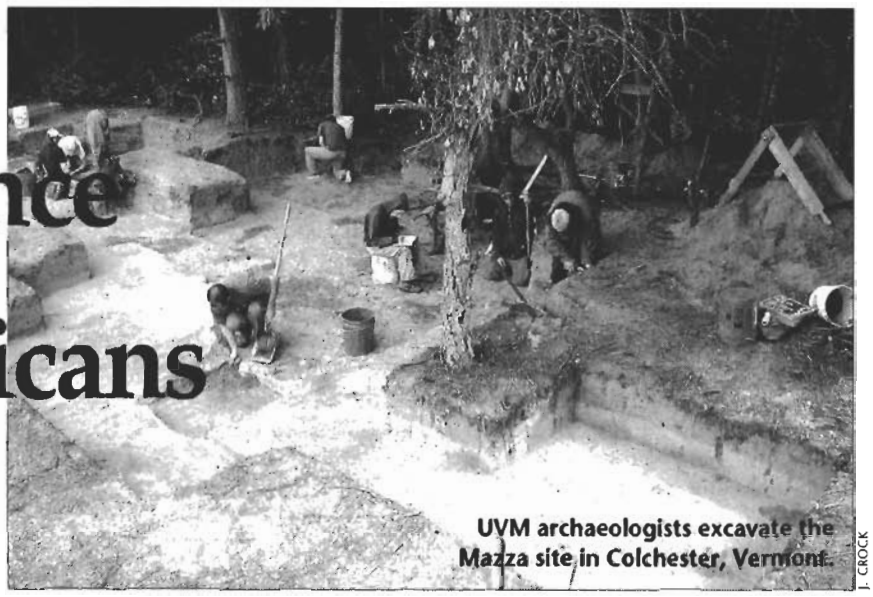
Judge Graber stated that the statute did not seem to be "crystal clear." She expressed particular concern with the scientists' attorneys' assertion that the interpretation of "is" must be limited only to the present tense. After all, "is" sometimes can be used in a broad sense, as in the following sentence: Abraham Lincoln is our nation's greatest president. Judge Graber asked Paula Barran, the attorney representing the scientists, why, given this apparent ambiguity, the DOI's interpretation was not therefore entitled to Chevron deference in this case. Barran responded by pointing out that not only should the plain language of the law be respected, but also that the legislation included other indications that the present tense was intended. Congress defined "Native American" in relation to the contemporary political boundaries of the United States of America. In contrast, "Native Hawaiian" is defined as "the aboriginal people who, prior to 1778, occupied and exercised sovereignty in the area that now constitutes the State of Hawaii." If Congress had intended "Native American" to refer to all aboriginal peoples who ever occupied the area that now constitutes the United States of America prior to 1492, then presumably the definition would have been written in the same way as the definition for Native Hawaiian.

A Big Win for Science?

The dispute over the fate of Kennewick Man is a legal morass involving a number of issues. The judges of the 9th Circuit Court made it obvious that they regarded the definition of "Native American" as the key issue in this case. The tenor of their questioning signaled that they had strong doubts about whether Congress ever intended to encompass 9,000-year-old human remains, such as Kennewick Man, under NAGPRA. Nothing they heard from the attorneys for the government and the claimant tribes could have done anything to assuage those doubts. The judges expressed concern over the scientists' strict reading of "is indigenous" as referring only to presently existing tribes, but Barran's response appeared to be convincing. Still, the outcome of the appeal is by no means a foregone conclusion. The court never brought up many important issues, and some of these may have an effect on the final judgment. Nevertheless, the court's evident skepticism that Congress intended to include remains as old as Kennewick Man under NAGPRA makes it unlikely that substantive elements of Jelderks's decision will be overturned. This optimistic assessment is borne out in the glum statements made by tribal leaders following the hearing. Armand Minthorne, a member of the Umatilla Tribe's board of trustees, complained to a reporter for *The Oregonian* that the judges didn't "adequately listen to what the tribes and federal government had to say." John Stensgar, a member of the Colville Business Council, agreed: "There should have been more balanced questioning. It tells me that their minds are already made up."

Such complaints, while understandable, are misguided. The judges spent more time listening to the government and tribal attorneys than to the scientists' attorneys. All the time extensions were given to the government or the tribes. The judges gave them more opportunities to clarify their positions and even offered tactical advice to Rob Roy Smith, giving him the opportu-

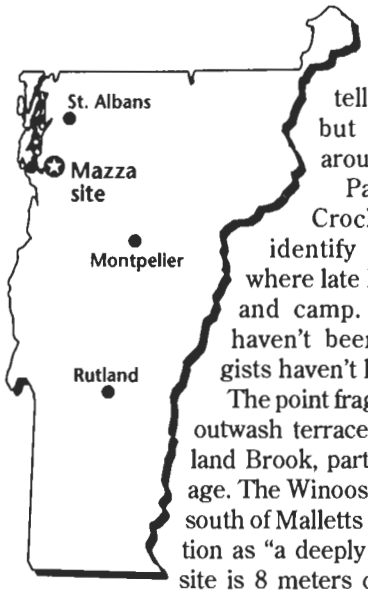
New Evidence of Early Americans in Northeast



UVM archaeologists excavate the Mazza site in Colchester, Vermont. J. CROCK

THIS SUMMER'S surprise discovery of three Agate Basin–like spear point bases at the Mazza site in northwestern Vermont helps fill a hole in Paleoindian history in that region.

Vermont is home to some 30 to 40 known early-Paleoindian sites and many Archaic sites, but this is the first systematically excavated late-Paleoindian site within the state's borders, says John Crock, director of the Consulting Archaeology Program at the University of Vermont. Previous theories held that the early inhabitants of Vermont left the state for roughly one thousand years or that Vermont didn't contain evidence of an intermediate period between the early Paleoindian, represented by fluted points, and the early Archaic, represented by bifurcate-based tools. "The more archaeology you do, the more sites you find," Dr. Crock tells us—which may be a cliché, but like all clichés, it is built around a kernel of truth.



Part of the benefit of this find, in Crock's view, may be to better identify potential dig sites—areas where late Paleoindians preferred to live and camp. It may be that such sites haven't been found because archaeologists haven't looked in the right places.

The point fragments were found on a glacial outwash terrace above a tributary of Sunderland Brook, part of the Winooski River drainage. The Winooski opens into Lake Champlain south of Malletts Bay. Crock describes the location as "a deeply incised drainage ravine. The site is 8 meters or so [about 26 ft] above the bottom." The point fragments were found up to 80 centimeters (about 32 inches) from the surface in disturbed context on the edge of a plowed field that had previously yielded a spurred scraper. Bifaces, uniface tools including scrapers, and some lithic debris were also found during the dig. No recognizable tips, intact points, or cores were found, leading Crock to speculate that the bases were discarded during repair at what was possibly a temporary camp, perhaps for retooling or hunting.

Lab work on several soil anomalies may turn up organic material for dating, but in October Crock wasn't holding out much hope that the site would ever be laboratory dated. For the time being, typology and context put the site at 9000 to 10,000 RCYBP (about 10,400–11,500 CALYBP), based on comparative dates from the Varney Farm site in Maine.

Tool and flake analysis may yield addition information over the winter. Some of the tools are of local Vermont stone, but two of the three basal portions of broken speartips appear to be banded rhyolite from New Hampshire, rare in Vermont but

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nity to focus his remarks on a key issue rather than expending precious time on items the court felt were of secondary importance.

The decision of the 9th Circuit Court of Appeals likely will not be announced for several months. Regardless of its decision, the losers are almost sure to appeal it to the U.S. Supreme Court. As Schneider indicated, however, these proceedings marked a significant milestone in the legal odyssey of Kennewick Man.

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The full text of Jelderks's decision, along with the text of all briefs and other court documents, can be found on the Friends of America's Past Web site **www.friendsofpast.org/** (where future updates on the appeals process also will be posted). For more information on the Native American Graves Protection and Repatriation Act (NAGPRA), see the National NAGPRA database **www.cast.uark.edu/products/NAGPRA/**

found elsewhere in the Northeast. The nearest source is approximately 185 km to the east across the Green and White mountains. Crock notes that the Israel River complex, with documented early-Paleoindian components, sits between this site and the nearest sources for such stone. The strategically located sites and the provenience of toolstone imply for him an east-west travel or trade corridor during Paleoindian times.

BOTH: J. CROCK

Point bases from the Mazza site. ▲

Replica of an Agate Basin–type point from Illinois. ▶

August's find comes literally at the end of extensive field and survey work in advance of the last phase of the Chittenden County Circumferential Highway, known locally as "The Circ," an ambitious and controversial highway. Archaeological survey work for the initial stages of the highway began in 1984, funded by the Vermont Agency of Transportation and the Federal Highway Administration. Sampling identified 79 culturally sensitive sites in all, ranging in age from this find to historic dwellings. Environmental groups are still opposing the last phase of the project.

The project has stimulated extensive public outreach and attracted many area volunteers, youth day camps, tours, and university field schools. Crock was among those involved in creating a handbook about the archaeology in the path of the highway, intended for schoolchildren but useful as an introduction to the subject for adults as well. It is in its second printing.

Although there may be volunteers willing to do salvage archaeology in advance of highway construction, this summer saw the last of the funded work at the site. Barring interruptions, the area where the spear points were found will become an off ramp.

–Ellen Saunders

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Highlights of the 16th INQUA Congress

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chronology and stratigraphy, described Younger Dryas black mats and their paleoecological significance in the western U.S.; **Julio Betancourt,** a paleobotanist with experience around the world, surveyed the current state of knowledge about the Pleistocene-to-Holocene transition in the southwestern U.S. and South America, based on botanical evidence; **Robert Thompson** and co-authors, long experienced with western U.S. paleoclimates and botanical communities, summarized the most up-to-date interpretations of western U.S. biota; **Glen Fredlund** and associates, experts on Southern High Plains paleoecology, described biotic communities in one of the New World's most important regions for Paleoindian research; **Stuart Fiedel** synthesized recent research on the timing and duration of the last climatic reversals of the late glacial and their relationships with the Clovis Paleoindian complex, and also unveiled a couple of new dates on the two Anzick antler rods or "foreshafts"; **Silvia Gonzalez,** a paleontologist with major research interests in central Mexico, summarized the problems and prospects associated with human skeletal material from the late Pleistocene and early Holocene in the U.S. and Mexico; geoarchaeologist **Kelly Graf** and **Ted Goebel,** an archaeologist expert in lithics and the peopling of the New World, described their work in the Great Basin and recent trends in interpreting early cultures; **Larry Coats** and co-authors with many years' experience in paleoecology nicely summarized the results of work on the Pleistocene-Holocene animals and plants of the Colorado Plateau; and my own paper highlighted new ideas about the paleoecology of Clovis-era human dispersals and megafaunal extinctions.

This INQUA meeting followed on the heels of another splendid conference held in late May in northern Canada, the 3rd International Mammoth Conference. This meeting, too, allowed researchers to describe and discuss their most recent discoveries and interpretations of the behavior and biology of now-extinct large mammals and the human beings who lived amongst them. All in all, 2003 has been a good year for research on mammoths and the "mammoth fauna" and the dynamic ecosystems of the late Pleistocene. Many of the startling new finds and hypotheses revealed at these meetings will soon be making their way into scientific publications.

–Gary Haynes

[During the meeting, Dr. Haynes confesses, he was "somehow" elected President of INQUA's Commission for Palaeoecology and Human Evolution. –Ed.]

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