Clovis along the Chesapeake Shoreline

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.
Major Decision
Kennewick Man Case

IN AUGUST 2002, U.S. Magistrate John Jelders 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, Jelders 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 Jelders’s decision). As expected, the government and the tribes appealed Jelders’s decision to the United States Court of Appeals for the Ninth Circuit (see MT 18-2 for a review of the appeal).

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 F. 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 continued on page 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 marine limit 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 Darryl 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 possible possibilities presently being explored. One would be in a high cave, west 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 inhabited 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 archaeologi cal site locations now deep under water on the coastal seabed remain to be explored.

Late-Pleistocene sites in North 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-Pleisto cenae coastal glaciers in southern Alaska and British Columbia began to retreat as early as 10,000 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 early 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
Major Decision  

continued from page 1

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 Jeldreks's decision should be overturned. In addition, three Friend of the Court (amicus curiae) briefs, limited to 7,000 words in length, were submitted on behalf of the government and tribes. Alan Schneider and Paula Baran, the attorneys representing the eight scientists, submitted two 14,000-word-long reply briefs affirming Jeldreks's decision; one responded to the government's opening brief, the other responded to the tribes' opening brief. Seven Members 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 Jeldreks'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 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 hope of contention brought up by the judges was the DOJ's claim that NAGPRA includes as "Native American" any human remains or objects "pertaining to 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 human beings, 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 DOJ'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...
any remains older than A.D. 1492. DOI's interpretation necessar-
ily 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 Aldi-
sert 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
pointed out that if the Army Corps of Engineers had not
previously buried the discovery site under tons of rock and
rubble more evidence might have been available to the govern-
ment.

Judge Gould also asked Bob Roy Smith, the attorney repre-
senting the coalition of Indian tribes, whether his clients would
have any interest in 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,
that's clear that these remains really are Adam and Eve
essentially, that they are the root 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.

The exchange is from an unoffical transcript of arguments
made 16 September 2003 before the Circuit Court of Appeals
for the Ninth Circuit in Portland, Oregon. For the complete
transcript, search the Federal Register's Legal Dockets website.

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
Jebedera's rejection of their claims 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 affili-
ation 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 claim to have some relationship
for the human remains. At some point, however, human remains
would be so ancient that they would have "no reasonable con-
nection to anyone living today." Smith responded by observing

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The Center for the Study of the First Americans (CSFA) has
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Because of the interdisciplinary focus of the graduate program,
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encouraged to apply. For additional details, see Web site
http://anthropology.tamu.edu

Limited scholarship and research funds are available for
excellent students. For students wishing financial support,
aplications and all supporting materials must be received
by 1 January 2004. For additional information or application
material, contact Karen Taylor, Department of Anthropology,
Texas A&M University, College Station, TX 77843-4352;
phone (979) 845-9333.

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," indicat-
ing 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 the provision of the law in question
ambiguously or confusing. Lawyers and judges refer to this as
continued on page 18
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. Clifford 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 Gushorn 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 flint and projectile points. Luis Borroto did his usual superb job describing Puego-Pathagonian climate, biota, and archaeology at the end of the Pleistocene and beginning of the Holocene; and Gustavo Martínez 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 Huckle, using design theory and a careful analysis of subsistence and settlement data, presented an intriguing comparison of four early-Paleolithic technologies in the Southern Plains and Desert Southwest; Vance Haynes, drawing upon his expertise in continued on page 30
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

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 Waited, are documented elsewhere as recognizable types. Our reasons for using the term instead of type are threefold. First, the Florida Swannee point type described by Bullen in 1968 and 1971 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 is the case with Bullen's Swannee 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 'splitter' and the 'lumpers' and to distinguish between types by identifying attributes, including metric and non-metric morphology, use damage suggestive of function, and raw materials used for production. Here we identify some of the Florida Paleoindian 'rarer' forms.

Background
In Florida, the Clovis form obviously took its name from the classic type. Swannee and Simpson points were identified in Florida as Florida types. John Goggin in 1949 and 1950 first recorded the Western Clovis type in Florida. In 1965, he 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 points. 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 point of view that is characteristic of this investigation is Bullen’s. 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 as Florida enter and exit the stage independently 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 unfletched form have been recovered from displaced contexts at the Page-Ladson site (8JE591) as well as at other Ancilla 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 unfletched Clovis described by Cambron and Hulse in 1966, which is a form more akin to the Blunted Clovis type, not the Page-Ladson form. Although the Page-Ladson form has not been recovered in context, Danub Cooper 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 BC (with a pooled average of seven dates = 14,345 BC) 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 overshoot flaking, the source rock is high-quality chert; however, specimens made of poor-quality, grayish materials do not have overshoot removals. One of the overshoot 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 Ancilla River, should be considered the type-site for this form.

**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 (OMS9). 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, where 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 constructed hafting area. It is the only form that displays proximal to distal taping 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 worked distal end of a broken Clovis or Clovis-like point salvaged for further use by its maker.

**Simpson Fishsized (Figure 1D)**

**Distribution: Florida and Southern Georgia**

The Simpson form considered here is an extremely reticulate form that has a greatly contracted half area compared with the width of the blade on specimens that have not been extensively resharpened. One extensively resharpened specimen has an overall 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 Fishsized and Lake Midden types. Another distinctive 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 throwing-type use. We suggest its function was a cutting or skinning knife.

Clavis Waisted (Figure 15)

Distribution: Eastern U.S., Occasionally West of the Mississippi River

Neill recovered a Clavis Waisted point in situ at the undated Silver Springs site (OMS26) along with a probable preform. An additional example was recovered out of context. Slotel Hole (SJE121) has produced multiple Clavis Waisted points as well as the classic shape. The signature for Clavis Waisted points is particularly strong at Slotel Hole along with the occurrence of carved ivory shafts or foreshafts. Aside from the characteristic shape, fluting, and over-shot 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. Slotel Hole, in the Ancilla River, should be considered the Florida type-site for this form.

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

Suwannee Waisted (Figure 15)

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 (SJE1004). A distinctive unifacial tool kit and diverse faunal remains including Pleistocene horse and tapi were recovered at site 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 over-shot flaking, with the Clavis Waisted form. They also share with Clavis 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 Harvey Flats excavations conducted by Daniel and Wisenbaker. The Harvey 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 Clavis Waisted forms. More importantly, the Harvey 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 Clavis Waisted and with the form at Harvey Flats may be indicative of an evolutionary continuum within these waisted forms.

Suwannee, Greenbrier-like (Figure 16)

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 Fuge-Ladson site (SJE591). At least one specimen has over-shot 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 Greenbrier-like appearance.

Bullen's Typology (Figure 2)

One of our justifications for undertaking this study is the need to update Boley Bullen's original typology. To understand Bullen's Paleoindian type we felt it best to consider the specimen in his type-case collection by applying his methodology. Because Bullen used outline shapes to depict the Clavis, 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...
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 Excavate, Waisted, Parallel, Rewarded, and Greenbrier-like. The upper part of Figure 2 depicts the Clovis and Simpson types. Note that Bullen lumps the more classic, excavate Clovis type with the recrudescent Clovis Waisted. Another problem is Bullen’s placement of an excava, blunted Clovis under the recrudescent Sowanee form (note the excavate Sowanee on far left, Figure 2). Finally, note the similarities between some specimens in the Simpson and Sowanee 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 (Sowanee) of the large expanding, percussion-struck, ‘slab’ 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 (66E121) and the Silver Springs site (GMR20) in Florida. The Clovis Waisted form occurs else-where 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 Sowanee Waisted form shows evidence of being an offspring of Clovis Waisted. We are uncertain where the Lake Jackson lanceolate and Greenbrier-like Sowanee forms fit into this timeline. We believe the Simpson forms described here were a knife and a projectile point. We look forward to assembling larger samples of these forms and others for a deeper comparative analysis.

Suggested Readings
Brown, R. C. 1994 Florida’s First People: 12,000 Years of Human History. History Press, Sarasota, Fla.


About the authors
Jim Dunbar is an archaeologist with the Bureau of Archaeological Re- search, 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 set- tings. He was a co-principal in- vestigator on the Page-Ladson site, an inundated Paleoindian site with archaeological compo- nents now submerged as deep as 30 ft below present sea level. He works for the C.A.R.I. Cultural Resource Management pro- gram as a Senior Archaeologist assessing archaeological re- sources on environmentally sensitive state lands acquired through the Preservation 2000 program.

Andy Hemmings is a graduate student in the anthropol- ogy department at the Univer- sity of Florida. He led the research on Sloth Hole, an inu- dated Clovis site in the Aquilla River. His nearly completed disser- tation focuses largely on the North American Pleistocene faunal community and interac- tions 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’ scholarly work. —Ed.
Investigating Clovis on the Delmarva Peninsula

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.
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 Archaological 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.

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 burried 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 Eroded bank profile, showing Younger Dryas loess and paleosol.
knowledge and insight about the Wise-Wix site. Seated on an elevated wooded knoll surrounded by a forested freshwater wetland or upland swamp, the Wise-Wix site also lies on the mid-Pleistocene drainage divide, which defines the boundary between the watershed that drains to the Chesapeake Bay and the Susquehanna River. Field work suggested that the Wise-Wix site is essentially fine-grained eolian sands. Since it is an intact landscape, it was speculated that Paleoeskimo 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 Paleoeskimo 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 Paleoeskimo artifacts excavated at the Wise-Wix site included 15 stone tools. Three of these components are similar to Holcombe points found at the modern-day site of the Miller Lanceolate specimen from Meadowcroft Rockshelter.

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 the site. Some of the Paleoamerican landscapes, resulting in the discovery of numerous fluted points. The Upper Ridge site, as well as the Wise-Wix site, has provided important insights into the early history of the region.
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 CWARD, was one of many localities recorded in the course of a series of multiyear 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—arcing example of how techniques like satellite imaging have improved our ability to locate 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 people over many thousands of years, but for radically different ecological and environmental reasons.

The testing at the Upper Ridge site included a series of soil studies and five 1-by-1-meter excavation units. The goal of the work was to determine processes in 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 colluvial sand stratum that included middle- and late-Archaic diagnostic artifacts, and still deeper was another distinct colluvial sand stratum that was more devel-

oped. 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 reshaped early-

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.

Clarifying the big picture

Current investigations at Paleoamerican sites in the region challenge conventional ideas about the Mid-Atlantic coastal plain. Some researchers and scholars have suggested that the Delmarva Paleoamerican archaeological record consists of fluted-point isolated finds. Prior to our work, the as-

Delmarva Peninsula fluted-point manufacturing sequence.

(Top) A general view of the Wise-Wix site. (Bottom) Artifacts excavated from Wise-Wix. Anarchic corner-notched point; within the upper portion of the weathered sands, our excavations uncovered the basal section of a well-made fluted triangular point.

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

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 varied 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 cobbles 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 populations 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, coastal processes, tidal marsh formation, and sub-tidal coastal landforms have on former upland archaeological sites. He has systematically surveyed over 80,000 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

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 Clovis site, which became the type site for the Clovis complex. He followed it up with study on butchered woolly mammoth bones at the ostensibly related Schalcet and Heblor mammoth sites. Seventeen years later, the director of the Center for Archaeology Research at Marquette University has uncovered proof—Gainey points, a chert adze, antelope 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 Orv, Overstreet’s latest excavations, Fabry Creek and Cardy, are blowing holes in previous theories about early Americans—or at least about early Wisconsinans.

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 stumbled 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 9,000-10,000 BCYBP (about 10,400-11,500 CALBP). The sites are situated within 50 miles of each other on an arrowhead-shaped peninsula that separates Green Bay from Lake Michigan. Excavations at

Project geormorphologist Michael F. Kobolz describes Clovis (left) and Overstreet examine the buried organic layer at the Fabry Creek site.

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 turned 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 inside his vegetables. The Center at Marquette funded the work.

All Overstreet hoped to do, given the extensive agricultural activity at the site, was verify Paleoamerican habitation. In roughly a dozen 1-by-1-ft units (about 3 ft square), they did just that—finds of Gainey fluted points. Eastern analog to Corvin, Muftie 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, chips, debris, a broken flutted 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 pattered 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.

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

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 woodland 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 professoremeritus 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 problematic 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.

"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 geoarchaeologist 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 flakes 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 York at Ohio State University will conduct microscopic studies to determine their use.

Also in the two early occupation components at Fabry Creek was a unique (for Wisconsin) form of tools known, arillite, and some other tools. Overstreet thinks these 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 predominate 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 formation 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 10 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 chest, 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 sharpened adze working edge." The microwear analysis is being conducted to confirm its use as a woodworking tool and to seek evidence of hafting modification. Excavators at the Guall 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 Quinby coined the phrase Aqua Plateau as an alternative to the so-called Plano tradition that includes several Western Paleolithic complexes because Great Lakes sites are primarily associated with shoreline of pre- and postglacial lakes. Quinby 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 in another. Life was nothing at all like the patterns 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 tribal adzes.

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 geologists out of the woodwork, he notes wryly. Ice-protected deposits of 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 outwash from the last glacial advance. Or buried organisms—are they buried in deposits from glacial Lake Oshkosh, or are they buried in sediments from the main glacial Algonquins?"

Time to call in the experts — Visiting specialists such as Eileen Johnson, research director at the Museum of Texas Tech, and Mike Waters, geochronologist 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 final 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; Norman had not yet collected all his samples. Michael F. Kolb of Strata Morph Geocorrelation in San Prairie is the project geologist at Michigan State University, 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 plans for future excavations at either site. Highway construction at Fabry Creek begins next spring. Overstreet's sponsor, the Wisconsin Department of Transportation, has reserved 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 Cheshwok 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 Pleisto- cene 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 "open-ended 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. So we're not going to "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 Jeldrerk's decision will be overturned. This optimistic assessment is borne out in the glum statements made by tribal leaders following the hearing. Armand Mijathorne, 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 Coquille 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

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

diagram

sides 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 4 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 retouching or hunting.

Lab work on several soil samples 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 additional information over the winter. Some of the tools are of local Vermont stone, but two of the three basal portions of broken spear tips appear to be bundled rhyolite from New Hampshire, rare in Vermont but
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. Crook 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-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. paleoecologists 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 Paleolithic research; Stuart Friedel synthesized recent research on the timing and duration of the last climatic reversals of the late glacial and their relationships with the Clovis Paleolithic complex, and also unveiled a couple of new sites on the two Aztec aster rods or “floribads”; Silvia Gonzalez, a paleoecologist 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; geochronologist 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 Hayes

(During the meeting, Dr. Hayes confesses, he was “somehow” elected President of INQUA’s Commission for Paleoecology and Human Evolution. —Ed.)

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