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Oldest Points Found in Idaho



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Projectiles Point to Earlier Peopling of the Americas

By Elizabeth Lunday



Excavation continued at the Cooper's Ferry site in 2015. Pictured is Area B.



Adding to a growing body of evidence that people settled in North America long before Clovis sites, artifacts found at Cooper's Ferry indicate humans arrived at least 16,000 years ago.

The Salmon River generally travels northwest across Idaho, but at a site known as Cooper's Ferry, it must hook around a ridge. It swings north and then curves west-southwest before resuming its course. Wide terraces sit inside these curves of the river – sandy spots that gently slope down to the water.

It is a good base for hunting, fishing, and gathering. A wide variety of game is available both in the river valley and up on the nearby plains. The valley itself contains multiple ecological zones at different elevations, each with its own types of edible plants. The river teems with salmon in the spring.

The river also deposits driftwood at the curves in the river, a gift to anyone wanting to start a fire, since the nearest trees are a steep hike to the top of the canyon. With water, food, and fuel at hand, it's no wonder many people over many centuries looked around and said, "We'll stay here."

The oral tradition of the *nimiipuu*, or Nez Perce Tribe, holds that the site was home to a village named *Nipéhe*. (Today, the land is owned by the Bureau of Land Management, but it is part of the traditional *nimiipuu* homeland.) It was therefore no surprise to the Nez Perce Tribe when a team of archaeologists led by Loren Davis excavated there and found ample evidence of human occupation, including fire pits, butchered animal bones, and projectile points.

What was a surprise – to the archaeological community, at least – was how old those materials turned out to be. Radiocarbon dates for artifacts found at Cooper's Ferry show the site was occupied as long ago as 16,000 years.

A date that old was long considered impossible by archaeologists. Most of them accepted the theory that humans arrived in the Americas between 13,000 and 12,000 years ago. In fact, they asserted that settlement in North America 16,000 years ago would have been out of the question because the planet was still in the grips of the last ice age and passage from northeast Asia to northwest Alaska would have been blocked by enormous ice sheets.

But scientific consensus has shifted. The Cooper's Ferry dates are part of a growing body of evidence that humans reached North America thousands of years before scientists had long assumed. This site is contributing to a new understanding of the peopling of the Americas.

Davis first excavated at Cooper's Ferry, or *Nipéhe*, in the 1990s while pursuing his Ph.D. His interest had been piqued by descriptions of digs conducted there in the 1960s.

“They found stemmed projectile points, but the sequence wasn’t clear and they couldn’t get any radiocarbon dates,” Davis said. “I thought I could learn more and get answers about the site. Little did I know it would take me more than 20 years to find those answers.”

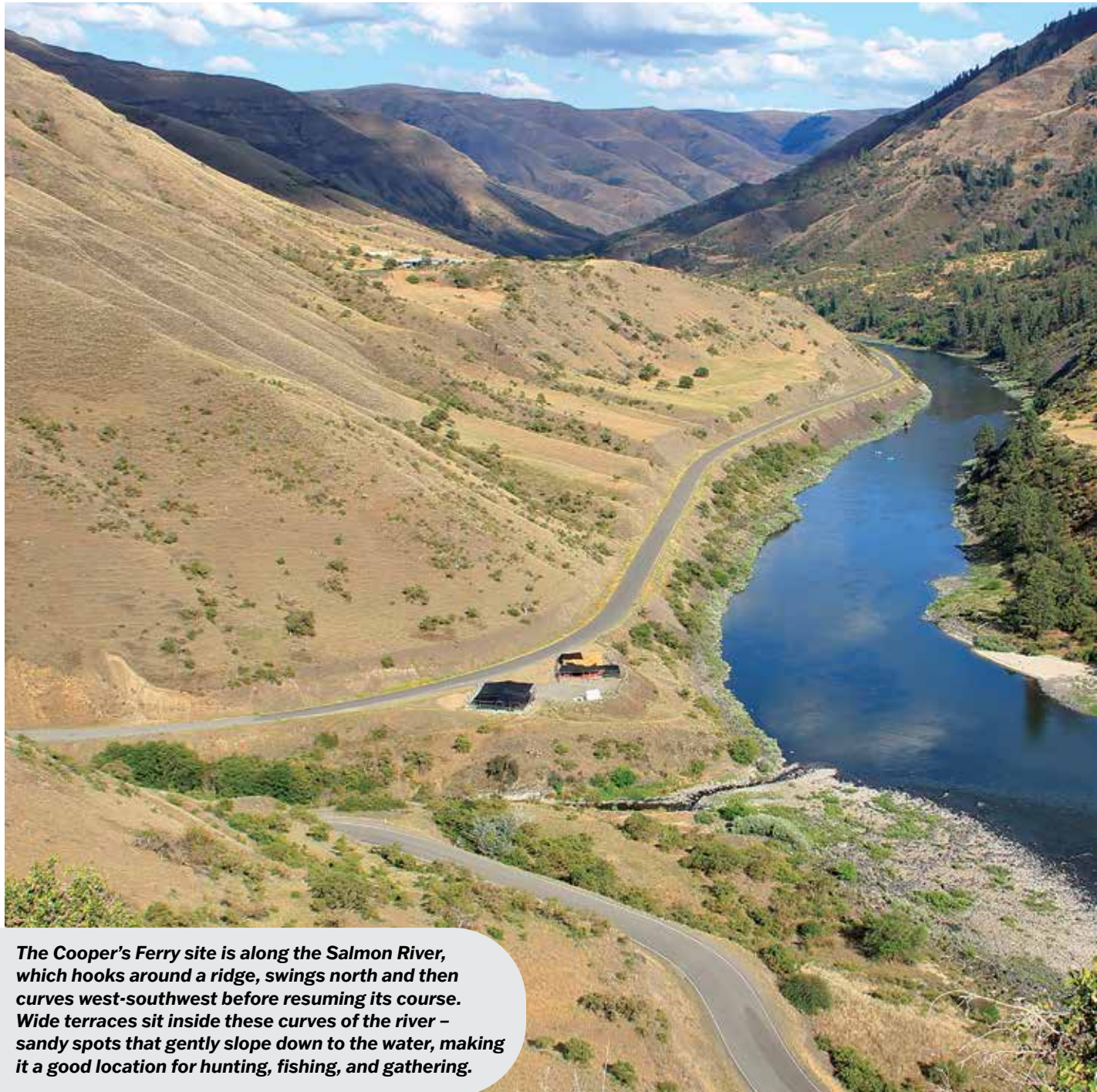
Davis returned to the site in 2012 after coordinating with both the Bureau of Land Management and the Nez Perce Tribe. Davis believed it was critical to involve the tribe. “We worked with them in the beginning to make sure everyone thought what we were going to do was worthwhile,” he said.

As the team began the excavation, they realized a key fact about the site. The site, which sits on a terrace next to the Salmon River, has been flooded many times over the millennia. During

floods, the river deposits sediments onto the terrace, burying the entire site. In the periods between floods, thin layers of wind-blown dust would accumulate on the layers of sediment. These layers were remarkably clear, even for non-archaeologists, as were any disturbances to the sequence.

Archaeologist David Madsen joined the team to assist with understanding the site’s stratigraphy – that is, the order and position of layers of archaeological features and artifacts. “Actually, [Davis] didn’t need me at all,” said Madsen. “It was so easy. Anyone off the street could look and see where the site was disturbed.”

Disturbances in stratigraphy are the bane of excavations. Sites can be disturbed by erosion, by plowing or digging, or by rodents burrowing through the ground, and any disturbance can



The Cooper's Ferry site is along the Salmon River, which hooks around a ridge, swings north and then curves west-southwest before resuming its course. Wide terraces sit inside these curves of the river – sandy spots that gently slope down to the water, making it a good location for hunting, fishing, and gathering.

move artifacts from one layer of soil to another. But the stratigraphy at Cooper's Ferry was so clear that disturbances such as rodent holes or tree roots were immediately obvious.

"It feels kind of ridiculous to say, but we know every rodent burrow on the site," said Davis. Each disturbance was documented, ensuring that affected artifacts were not confused with those in their original location. Only features and artifacts discovered *in situ* were dated, giving Davis a high level of confidence in his team's data.

Davis excavated two different areas, Area A and Area B, between 2012 and 2018. In 2019, he reported on discoveries at Area A. At the highest level, his team found artifacts that dated to between 8,800 and 8,700 years ago. The ages of artifacts



increased as they dug down.

Deep into the dig, they discovered small animal bones, fire-cracked rocks, flakes left over from shaping stone tools and blades, and spear points. Radiocarbon dating revealed these materials could be dated to between roughly 15,660 and 14,650 years before the present.

In addition, a small number of artifacts were excavated below these finds, but none of them could be dated. To estimate the age of these finds, the team turned to a type of statistical modeling used to estimate the ages of undated artifacts based on their relative location to dated artifacts. The model estimated that human occupation of the site began about 16,000 years before the present.

Some critics weren't satisfied with these results. They distrusted the statistical model and claimed the remains could not be as old as suggested. One journal article criticizing Davis' work described the evidence as "inconclusive" and concluded "the oldest demonstrated occupation of Cooper's Ferry dates to ~11,500 calendar years ago, although ambiguous evidence might (but probably does not) indicate an earlier episode of occupation at ~14,600–14,100 calendar years ago."

But Davis wasn't done. In December 2022, he published a paper describing excavations at Area B, located about ten meters to the east of Area A. As at Area A, the team discovered layer after layer of artifacts such as stone tools and archaeological features such as hearths. At the top of the site, these cultural remains returned dates beginning about 10,000 years ago.

At the lowest level, the team found several pits that had been dug by the ancient inhabitants. These pits were roughly the size and shape of household waste baskets. Some may have served a similar purpose and held waste, while others might have been caches. Each pit held a variety of materials including projectile points, rock flakes, and fragments of animal bone.

When the organic materials in these pits were dated, they were found to range in age between 16,675 and 15,617 years ago. Davis has high confidence in these dates. They weren't the result of a statistical model, and the dates are consistent – that is, all of the materials have contemporaneous dates, without any outliers of significantly older or younger artifacts.

Furthermore, a separate line of evidence concerns the age of a particular layer of soil, said Madsen. The oldest artifacts were all found below a layer of Rock Creek Soil, a soil that has been identified by geologists at multiple locations within the Salmon River canyon. This soil has been dated to between 14,160 and 16,450 years before the present. In addition, this soil contains calcium carbonate, a mineral that tends to percolate down to lower soil layers with the movement of water over the years. This can leave a thin coating of carbonate on artifacts. All of the artifacts discovered below the Rock Creek soil layer have this carbonate coating.

"The projectile points are covered with carbonate, so they have to be older than the soil," said Madsen. "That they are stratigraphically below the Rock Creek Soil strengthens the known age."

The fourteen projectile points discovered at Nipéhe are razor-sharp and range from half an inch to two inches long. They are stemmed points, which means the base of the point was

shaped into a squared-off stem to attach to a spear or arrow shaft.

Compare these points to the projectile points made by the Clovis culture, and it does not take an expert to see they are different. On Clovis points, the base is concave and fluted – that is, a groove extends from the base a third or halfway up the blade – rather than stemmed.

The difference is more significant than these obvious differences, said Davis. The two types of points reflect different tool-making traditions and technologies. They might be compared to Apple versus Android phones; they are made in different ways and rely on different approaches.

This is significant because the Clovis culture was long believed to be the oldest in North America, with artifacts dating to roughly 13,100 to 12,900 years ago. However, this theory is losing adherents as the evidence against it piles up. Currently about twenty sites have reported dates earlier than Clovis.

Nipéhe joins this list. The clarity of its stratigraphy and the consistency of its radiocarbon dates will be hard for critics to challenge, said archaeologist Mike Waters, director of the Center for the Study of the First Americans at Texas A&M University.

Furthermore, the site contributes to what Waters describes as an emerging pattern of sites inhabited by a culture that forged stemmed rather than fluted points.

“At Paisley Caves (an archaeological site in south-central Oregon), they found stemmed points that were as old as Clovis and likely older,” said Waters. “Then at Buttermilk Creek (a site

in central Texas), we’ve found stemmed points that date to about 16,000 years ago. I’m very excited to see a pattern beginning to emerge of stemmed points that predate the Clovis points.”

The stemmed points might also provide clues to the origin of the first Americas. Davis notes that the Cooper’s Ferry points bear strong resemblance to those found on the northern Japanese island of Hokkaido at sites dating to between 16,000 and 13,000 years ago.

“The link with Japan is that similar kinds of artifacts are being made in these two areas at roughly the same time,” said Davis. “We know from paleogenetics that the first Americans came from northeast Asia. If you look at tool-making technologies in northeast Asia, the closest technology to what we see at Cooper’s Ferry is what we see in Hokkaido.”

This doesn’t mean, he said, that the first Americans are necessarily descended from the people of ancient Hokkaido, merely that their technology was similar. “You don’t have to be genetically related to use the same technology,” he said.

“It’s an observation we’re making, that the technologies are similar,” said Davis. “We want to explore this and know more.”

Acceptance of pre-Clovis dates for the peopling of the Americas is not universal among archaeologists, said Waters. “The majority of archaeologists today probably would agree that people were here before Clovis. However, there are some very strong proponents of Clovis First,” Waters said.

Accepting an earlier date requires archaeologists to come



Paleoenvironmental conditions in the Pacific Northwest during glacial conditions at ~16,000 calibrated years before the present.



Points found at Cooper's Ferry (above) could be up to 16,000 years old and are stemmed, meaning the base is fashioned for a spear. Compared to Clovis points (below) which are fluted and about twice as large, the points use different tool-making traditions and technologies.



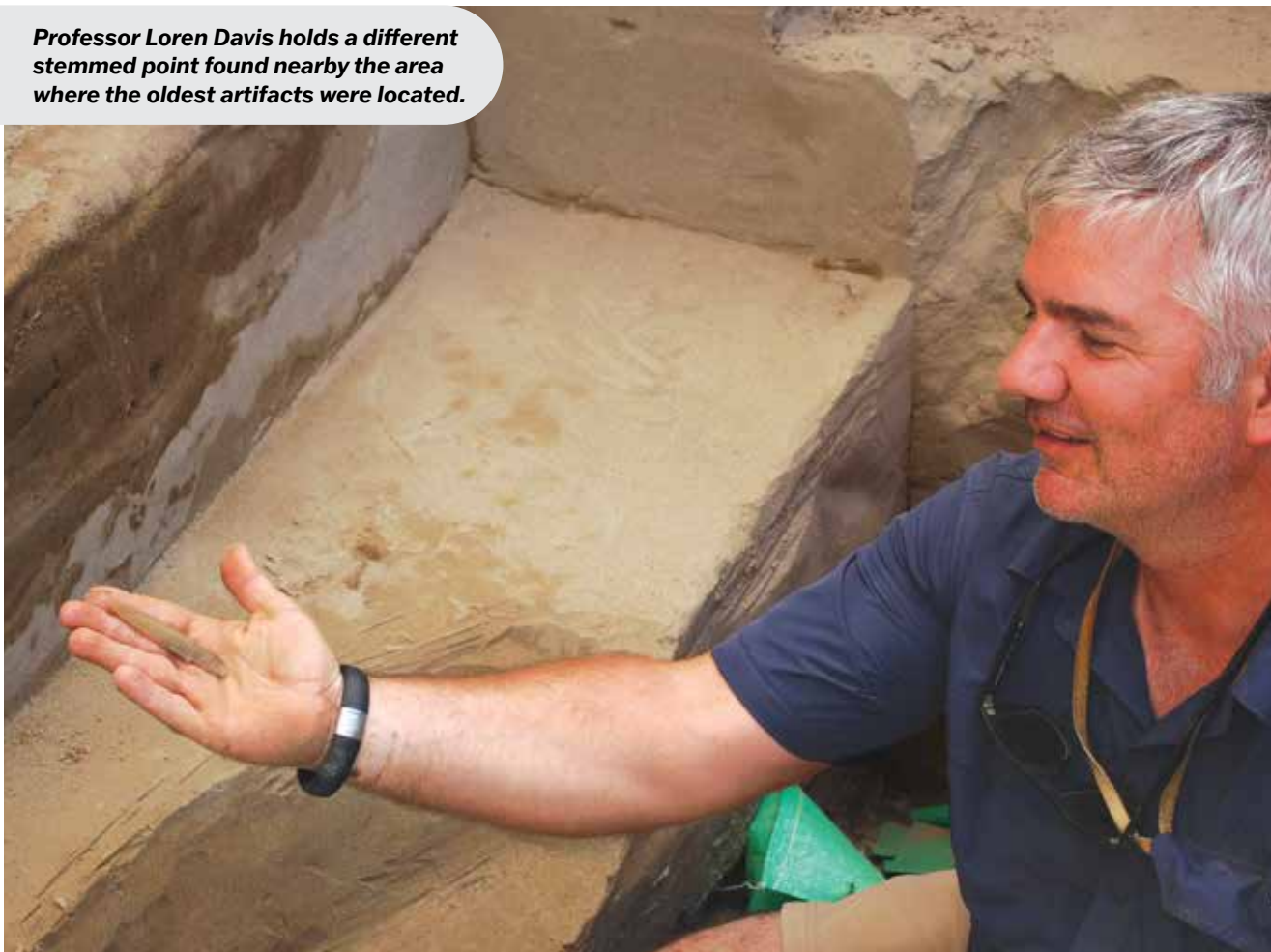
up with a new hypothesis about how the first Americans crossed from Asia to North America.

The Clovis-first theory held that the first Americans crossed over the Bering land bridge, then accessible due to lower sea levels, from northeast Asia to Alaska. Then, the theory says, they moved south into the continent via an ice-free corridor that opened between two massive ice sheets along the east of the Rocky Mountains about 12,600 years before the present.

If humans arrived three thousand or more years earlier, the interior of Canada would have been impenetrable. "If people were at Cooper's Ferry by 16,000 years ago, they didn't get there by walking through an ice-free corridor, because that corridor was not open until later," said Davis.

Davis is looking to the edge of the continent. "What we think is most likely is the coast," said Davis. "They could have worked their way by walking and paddling along the north Pacific coast."

Professor Loren Davis holds a different stemmed point found nearby the area where the oldest artifacts were located.



LOREN DAVIS / OREGON STATE UNIVERSITY

Finding evidence of this journey is challenging due to the rigorous climate around the Gulf of Alaska and northern British Columbia. Furthermore, sea level rise since the end of the Last Glacial Maximum probably submerged the route. But more might be accessible than archaeologists long assumed. While the rise in sea levels at the end of the ice age submerged parts of the coastline, other areas might actually have risen in elevation.

“Strange things happen to the geology because of ice,” said Davis. The ice sheets were incomprehensibly heavy, and they pressed down on the continent, lowering its overall elevation. In some cases, he said, the weight in the interior of the landmass caused the edges to bow up—like the sides of a waterbed when someone lies in the middle, Davis said. As the ice melted, that land would have dropped in elevation.

But geologists have also found the opposite effect; as the weight of ice lifted, the edge of the coast rebounded, sending it higher in elevation. Determining exactly what happened is an ongoing project. “Geologists are only now being able to work out those details,” Davis said.

If humans arrived at Nipéhe 16,000 years ago, the area would have been colder in the winters. The wildlife would have been different. Mastodons and mammoths still roamed North America along with dire wolves and American horses. Otherwise, life at Nipéhe all those millennia ago likely would have been instantly recognizable to the *nimiipuu* of five or six hundred years ago.

“Typically around the later part of fall, our people would congregate in multi-family village sites like Nipéhe,” says Nakia Williamson-Cloud, director for the Nez Perce Tribe cultural resources department. “They would stay until the early first part of spring so they would be there for the early salmon runs, and then our people would break up into smaller family groups and travel.”

In fact, Williamson-Cloud has no doubt the artifacts discovered at Nipéhe were used by his ancestors. The early dates come as no surprise to him. “We’ve always been in this place, so it’s not really revelatory for us,” he said.

Nevertheless, Williamson-Cloud has been involved in the archaeological project since the beginning. He has visited the site and regularly met with Davis. Members of the tribe were often on-site and often worked side-by-side on the excavation. This gave the tribe a voice in a project that involved their land and cultural resources.

To Williamson-Cloud, one benefit of the newly announced dates is that it helps educate the broader public about the enduring connection between the *nimiipuu* and the land.

“I think there’s definitely value in terms of the broader society,” said Williamson-Cloud. “It’s an educational tool for people in this area and in this nation.”

Elizabeth Lunday is a freelance journalist and author based in Fort Worth, Texas.