

New evidence -- Clovis people not first to populate North America

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The belief that the Clovis People were the first to populate North America some 11,500 years ago has been widely challenged in recent years, and a Texas A&M University anthropologist has found evidence he says could be the final nail in the coffin for the Clovis first model.

Michael Waters, director of the Center for the Study of the First Americans at Texas A&M, is the lead author of the paper "Redefining the Age of Clovis: Implications for the Peopling of the Americas," that appears in the Feb. 23 issue of *Science*.

Waters' paper revises the original dates for the Clovis time period, suggesting that humans likely inhabited the Americas before Clovis, who have long been considered to be the first inhabitants of the New World.

"It was always argued that Clovis represented the first people who came to the Americas," Waters says. "The new dating that we did indicates that the Clovis Complex ranges from 11,050 to 10,900 radiocarbon years before the present."

"Slowly but surely, archaeologists have been questioning whether Clovis represents the earliest people to enter the Americas."

To properly understand the age of Clovis, Waters and co-author Thomas Stafford of Stafford Research Laboratories in Colorado, tested samples from various Clovis sites in an effort to re-date some of what Waters says were poorly dated sites.

Because of technological advances, Waters says that he and Stafford were able to more precisely pinpoint the dates for some of the more than 25 dated Clovis sites that were excavated in North America.

"Many of these radiocarbon dates were run back in the 1960s and 1970s when radiocarbon technology wasn't what it is today," says Waters.

"Many of the dates obtained from these sites had ranges on them of plus or minus 250 years. We can now get to plus or minus 30 years."

What Waters and Stafford found when they did their testing were radiocarbon dates that showed the Clovis time range wasn't as long as had been previously thought. Their tests placed the Clovis time frame between 11,050 radiocarbon years before present to approximately 10,800 radiocarbon years before present.

"It was a surprise," Waters says of the results. "And I think people are going to be surprised by the dates."

Waters says those dates show that Clovis was no more than 200 to 400 calendar years long, making it almost impossible for the Clovis people to spread as far as previously thought in such a short time span. They would, at most, have had to be prehistoric jet-setters to cover the ground in this amount of time.

"Once you realize that the Clovis Complex dates much younger than previously thought and that Clovis has a much shorter duration than we thought, you have to ask how could people, in such a short period of time, reach the tip of South America." Waters says. "It doesn't make any kind of anthropological sense that these people could have been moving that fast, nor would they have wanted to move that fast. And it seems highly unlikely, given 20 generations, they could have made it that far that quickly."

To re-date the sites, Waters requested samples for dating from different researchers who had excavated Clovis sites. He then sent the radiocarbon samples to Stafford who put them through a process where the bone is dissolved and bone collagen is extracted.

The collagen was put in a molecular sieve where it worked its way down through the sieve. Once this was complete, Stafford was left with purified amino acids from the bone. The highly chemically-pure sample was processed into a target and dated using an atomic accelerator.

The revised ages that Waters and Stafford obtained overlap dates from a number of North American sites that are technologically and culturally not Clovis sites, further bringing into question whether the Clovis People were the first humans in the Americas.

"The long-range implications of our study is that it will get scientists looking for pre-Clovis evidence with a lot more vigor and thinking differently about Clovis," Waters says. "This will force us to develop a new model to explain the peopling of the Americas."

Source: Texas A&M University

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