

# Coastal route for first Americans

*Life in Canadian corridor was too late to sustain migrations of Clovis and pre-Clovis people.*

BY EWEN CALLAWAY

Archaeologists need a new theory for the colonization of the Americas. Plant and animal DNA buried under two Canadian lakes squashes the idea that the first Americans travelled through an ice-free corridor that extended from Alaska to Montana.

The analysis, published online in *Nature* on 10 August and led by palaeogeneticist Eske Willerslev of the University of Copenhagen, suggests that the passageway became habitable 12,600 years ago (M. W. Pedersen *et al.* *Nature* <http://dx.doi.org/10.1038/nature19085>; 2016). That's nearly 1,000 years after the formation of the Clovis culture — once thought to be the first Americans — and even longer after other, pre-Clovis cultures settled the continents.

Some 14,000 years ago, glaciers in central Canada receded, before the appearance of Clovis people across what is now the central United States. “That coincidence seemed too powerful

to ignore,” says archaeologist and co-author David Meltzer of Southern Methodist University in Dallas, Texas.

The ice-free-corridor theory began to crack in the 1990s, when researchers made a case that humans lived at Monte Verde in Chile more than 14,000 years ago. The discovery of other possible pre-Clovis sites in North America further shook the theory that Clovis people were the first Americans. But the idea that their ancestors at least trekked through the corridor persisted, says Meltzer, even though there was little consensus on when the passage opened or when it became habitable. “It’s 1,500 kilometres. You can’t pack a lunch and do it in a day.”

To build a picture of the habitat as it crept out of the Ice Age, Willerslev’s team analysed DNA in cores taken from beneath two lakes

in what was the last stretch of the corridor to melt. The first plant life — thin grasses and sedges — dates back just 12,600 years. The region later became lush, with sagebrush, buttercups and even roses, followed by willow and poplar trees. This habitat attracted bison first, and later mammoths, elk, voles and the occasional bald eagle. Around 11,500 years ago, the corridor began to resemble the pine and spruce boreal forests of today’s landscape.

The region’s bounty must eventually have tempted hunter-gatherers. But the dates rule out its use as a corridor by Clovis people and earlier groups to colonize the Americas, says Willerslev. Instead, both probably skirted the Pacific coast, perhaps by boat.

Loren Davis, an archaeologist at Oregon State University in Corvallis, agrees: “Now that the ice-free corridor has been shown to be dead in the water — no pun intended — we can start to look at something like a coastal migration route.” ■

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