

ventions at Mammoth Meadow and forbidden us to further test any of the ancient hairs we have recovered.

Under NAGPRA, lineal descendants have a right to the remains of any of their buried ancestors held in museum collections, or discovered on federal or tribal lands after November 16, 1990. If lineal descendants are impossible to identify—as is most often the case when prehistoric remains are concerned—a tribe with the closest cultural affiliation can also claim the remains. If the hair buried at Mammoth Meadow's lower levels is more than 12,000 years old—as its location beneath the 11,200-year-old ash layer suggests—it belonged to people more than 550 generations removed from the tribes now living in the area. The two groups may be related, but unless we are allowed to date and study the hair, no one will know. The very law intended to protect a people's feeling for their past may prevent that past from being recovered.

THE SEARCH FOR THE FIRST AMERICANS, BEGUN during the years when the Indian wars were being fought, has always probed into old wounds and sensitivities, sparking emotional debates over seemingly esoteric topics. Beginning late in the nineteenth century, scholars and amateur sleuths discovered

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some bones and many crude tools that they maintained dated to the end of the last ice age and earlier. The scholarly consensus of the day held that people arrived in the Americas no more than 3,000 years ago. To settle the dispute, the physical anthropologist Aleš Hrdlička systematically examined each of the allegedly ancient skeletons. Curator of the National Museum of Natural History, responsible for amassing many of the Native American skeletons now being repatriated through NAGPRA, Hrdlička conclusively demonstrated that every single specimen had belonged to a modern human being.

Had Hrdlička visited a certain site in New Mexico, he would have found more convincing evidence of late-Ice Age settlement. In 1908 a cowboy named George McJunkin had discovered some strange bones in a gully near the town of Folsom. Eighteen years later, when they were finally excavated, the bones were shown to belong to a 10,000-year-old bison—with a prehistoric spear point in its ribs. Then, in 1932, a site near Clovis, New Mexico, yielded a definitive cache of the points that many archaeologists still think are among the oldest artifacts in the Americas. Clovis points, in the years after their discovery, came to seem as remarkable for their wide distribution as for their workmanship; they have been found everywhere from Canada to Panama.

Since the 1960s, archaeologists have cited the striking uniformity of those remains to explain one of the great

mysteries of American prehistory: the Pleistocene die-off. The geological record shows that in a relatively short time—perhaps on the order of 1,000 years—more than thirty-three genera, or 70 percent of all large game in North America and 80 percent of all large game in South America, became extinct. According to the Clovis-first theory, the extinctions are traceable to the direct descendants of a group of hunters numbering fewer than a hundred, who crossed the Bering land bridge from Siberia to Alaska some 11,500 years ago. The last ice age was waning at the time, opening up an ice-free corridor between the Cordilleran and Laurentide ice sheets that mantled most of Canada. Armed with a highly efficient weapon system and deadly hunting strategies, Clovis hunters funneled out of the southern end of the corridor onto a landscape overrun with huge, unsuspecting game. In 1,000 years the hunters were supposedly responsible for the extinction of the animals.

BUT JUST AS THE CLOVIS DATA OVERTURNED the idea that the first Americans arrived only 3,000 years ago, so new data have begun to form cracks in the Clovis-first model. If the Clovis-first model were correct, one would expect to find the oldest Clovis points in Siberia and Alaska and the youngest points in South America. Instead, the dates are a jumble: Clovis points from British Columbia and Alaska are younger than the ones in the contiguous United States, whereas fluted points from South America are as old as the ones in North America. And no Clovis points whatever have been found in Siberia. Moreover, points as old as those of the Clovis people but of different styles have recently been unearthed in Alaska, Montana and Nevada.

To an increasing number of specialists, those facts suggest that Clovis technology developed in the southeastern or southwestern U.S., where the oldest points are found. Clovis points may not have been the progenitor of all American tools, but rather the most noteworthy member of an ancient line—a style of weapon so lethal that it was widely adopted by people who had lived in the Americas for thousands of years.

If the Clovis people were not the first Americans, who were? Archaeologists have yet to come up with a predecessor. Some think the first Americans arrived 15,000 years ago; others say they could have arrived some 350,000 years before that. Ten dates determined through studies of thermoluminescence (the degree to which certain minerals emit visible light when heated) prove that *Homo erectus* reached the Lena River in Siberia more than 400,000 years ago. Between 150,000 and 200,000 years ago, as more than forty sites in Japan show, people lived along the North Pacific rim. The advocates of the Clovis-first theory argue that those people never could have reached the Americas: at any time before the end of the last ice age they would have been blocked by the Bering Strait or by glaciers. But intriguing evidence from Japan suggests that early people might have made the trip by boat. A number of 30,000-year-old sites on mainland Japan, near Tokyo, have yielded obsidian from an off-shore island. Only people with the technology to build boats, and the skill to navigate them through coastal waters, could have fetched the obsidian.