Reviews


Todd A. Surovell

Ice Age people crowded into a refugium in southwest Europe at the height of the last glaciation and found sustenance through the hunting of pinnipeds on the Atlantic sea ice, argue Dennis Stanford and Bruce Bradley in Across Atlantic Ice. These makers of finely thinned bifacial projectile points, bone needles and parietal art migrated westward by skin boat over thousands of kilometres across the North Atlantic ice edge to find the shores of the New World thousands of years before their descendants, the people who made Clovis fluted points, produced a well-known archaeological record found across North America. If correct, Stanford and Bradley’s Solutrean Hypothesis would overturn more than a century of teaching, which has rarely questioned the foundational knowledge that the indigenous peoples of the New World first migrated to the Americas from northeast Asia.

When I turned the last page, my opinion of the Solutrean Hypothesis was unchanged. I remained extremely skeptical. Nonetheless, I found myself drawn into Stanford and Bradley’s narrative because compared to most books in archaeological nonfiction, this one very much held my interest. Though I found the form of argumentation used in the book troublesome from a scientific point of view — i.e. it is largely inductive based mostly on supporting evidence without much consideration of contrary data — I appreciated the way in which the authors creatively weaved together a tale in support of a Solutrean migration to the New World. As a reader of nonfiction I was drawn in, but as an archaeologist I was left unsatisfied. I feel compelled to note that the volume was largely written for a public audience and, for that reason, I think it is important to allow the authors some stylistic license.

An introductory chapter puts the Solutrean hypothesis into historical context, beginning with the voyages of Columbus and the mistaken assumption of having reached India. The text continues through the discovery of the Pleistocene archaeology of the New World and its stereotypically associated postulates — an Asian origin, Beringian crossing and migration through a corridor between the ice sheets. Following a cursory deconstruction of the old model, the Solutrean hypothesis is introduced. The five chapters that follow present the cultural historical framework on which the argument is largely built, much of which hinges on similarities and differences in artefact form.

The main text gets off to a sluggish start as it begins with a primer on chipped stone technology, material that could have largely been omitted if the book had been written for a professional and lithically-literate audience. A chapter on Clovis archaeology follows, in which it is argued that Clovis people and technology originated in eastern North America and spread to the west, in contrast to the traditional model which posits the converse. Stanford and Bradley then turn to the archaeological record of Beringia, presenting a broad overview of late Pleistocene archaeology of the Asian and Alaskan portions of the land bridge and argue that human colonization of Beringia was too late in time to result in Clovis. Moreover, the types of stone tools made by late Upper Palaeolithic Beringians (bifaces and microblades) are very different from what is found in Clovis sites.

The final two chapters of Part 1 attempt to build a cultural bridge from Clovis to Europe, first through an examination of the pre-Clovis record of eastern North America followed by an overview of Solutrean archaeology. The pre-Clovis evidence includes classic sites like Meadowcroft, Pennsylvania and Cactus Hill, Virginia but also a series of newly reported localities in the Chesapeake Bay region. The Miles Point, Cinmar and Oyster Cove Sites play a central role in the overall narrative, but because none of these sites have been excavated, it is difficult to evaluate the reality of the claims made about their age. The Cinmar Site includes a ‘Solutrean-style’ biface and mastodon remains that were allegedly pulled off the American continental shelf by a scallop dredge. The Solutrean chapter is a fairly run of the mill description of the Solutrean in France, Spain, and Portugal including descriptions of environment, settlement, art and technology.

The second part of the book is where the bulk of the argument in support of the Solutrean hypothesis is constructed. Two chapters are devoted to technological, typological, and other comparisons of Clovis, pre-Clovis, Solutrean and Beringian archaeology, and it is argued that much greater numbers of key similarities (e.g. complex features of biface manufacture) exist between Clovis and Solutrean than other candidate ‘antecedent technologies’. Based largely on the archaeology of La Riera Cave, Spain, cave paintings from Cosquer Cave, France, and inferred negative evidence now submerged along the European Atlantic coast, in Chapter 8, Stanford and Bradley construct an interesting and somewhat compelling argument as to why Solutrean hunter-gatherers would have made extensive use of sea mammals and other marine resources, despite
a paucity of evidence for it in the archaeological record. Chapter 9 concerns the paleoceanography of the North Atlantic with the intent of establishing the plausibility of humans surviving and finding something to eat along the ice margin on the long journey west. Before a brief conclusion, in Chapter 10, the authors present evidence for maritime exploration in the Palaeolithic as well as a reconstruction of life on the ice edge based largely on Inuit ethnographic analogy.

As I read this book, I frequently thought of my grandfather who as a young child migrated to America across the Atlantic from the Old World in the early twentieth century. It was not the transoceanic crossing that was on my mind, but instead I pondered what one could study about me to determine the geographic origins of my family. Where in the Old World do my roots lie geographically? To answer that question, one could study my material culture (my clothing, home, transportation, tools, subsistence, etc.), but I suspect that approach would not yield many clues. I have little doubt that the best data would come from biology — the hue of my skin, the colour of my eyes and hair, and of course my DNA, especially my Y chromosome, which should be nearly identical to his and should be a member of a relatively common haplogroup in the region from which he emigrated.

I do not want to rehash decades old debates about whether, how and to what extent similarities in material culture represent a historical link between two archaeological phenomena, but instead to state the obvious (although it may not be obvious to archaeologists who spend lifetimes examining stone tools in detail) that human biology is a much more reliable indicator of geographic origin than culture for one simple reason. People can choose how they make a biface, but they cannot choose the makeup of their DNA.

Given this well-known fact, it is odd that human biology makes only two appearances in the entire volume. On the first page of the book, it is noted that a Spanish missionary recognized physical similarities between Native Americans and Asians in the sixteenth century and correctly posited the existence of a land bridge connecting the two continents. Biology rears its head again briefly in the concluding chapter, wherein three paragraphs are devoted to mitochondrial haplogroup X which appears in low frequencies in human populations in northeastern North America and western Europe, but is unknown from east Asia. However, Stanford and Bradley fail to mention that the vast majority of Native American genetics, whether mitochondrial or nuclear DNA, provides strong geographic ties to Asia, a point so obvious that its omission is not only glaring but clearly intentional.

Stanford and Bradley do not deny an Asian origin for some early Americans, but they suggest that Solutrean hunters from Europe were not only the first to arrive, but also that by the time they produced Clovis points, they had spread from Atlantic to Pacific coast. If they are correct, around 13,000 years ago in North America, human biology should have been dominantly European, which begs the question as to why that was not the case when the historic European colonization of the Americas commenced. Presumably one must posit significant changes in the genetics of Europe and/or the Americas from the Pleistocene to recent times in order to reconcile this massive hole in the Solutrean argument.

Whether one finds the Solutrean hypothesis correct, plausible, unlikely, laughable or offensive, it should not be rejected or accepted outright but instead included in the marketplace of ideas and allow the scientific process to proceed. Primarily for this reason, I would highly recommend this book to anyone interested in the human diaspora and the colonization of the Americas, and readers should approach it with a critical but open mind. As for the future of the study of Palaeolithic ties between Europe and North America, rather than engaging in an incredibly unlikely and expensive underwater search for Palaeolithic sites on the Atlantic continental shelf, as suggested by Stanford and Bradley in their final paragraph, archaeologists would be wise to step aside and give those who study the genetics of living and ancient populations a crack at it.

Todd A. Surovell  
Department of Anthropology  
University of Wyoming  
1000 East University Avenue  
Laramie, WY 82071  
USA  
Email: surovell@uwyo.edu