

lifelong research career in studying stone tools, it is notable that 50 of the 63 texts were published before 2000. For a book aiming to introduce students to the latest research in the field, a bibliography with 80 per cent of the references older than 20 years is inadequate. The references are relevant, but do not properly reflect the developments in lithic analysis and stone tool studies over the past 20 years. A final frustration for me was the abbreviating and misspelling of Danish researcher Christian Jürgensen Thomsen's name, which appears as Christian Thomson in the text; perhaps closer editorial scrutiny would have been useful.

Brian Hayden's book is informative and serves its purpose well. As a reader, I was offered enjoyable insights into his work on stone tools and provided with a good introduction to Design Theory and its application in lithic analysis. The volume is a fine text for those who have just begun their journey in studying the complexities of lithic analysis and will complement their further reading.

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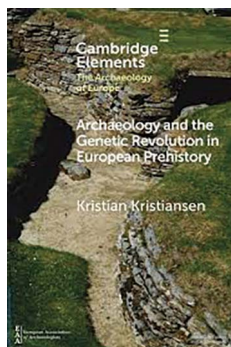
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KRISTIAN KRISTIANSEN. 2022. *Archaeology and the genetic revolution in European prehistory*. Cambridge: Cambridge University Press; 978-10-09-22868-8 paperback £15.00.



There is little doubt that the last few years have seen spectacular successes for the application of ancient DNA (aDNA) analysis in studies of European prehistory. Questions that have occupied archaeologists for more than a century now have definitive answers. From a British perspective alone, we now know beyond doubt that agriculture was introduced by people arriving from continental Europe, and that the Mesolithic inhabitants of the islands had a minimal genetic legacy (Brace *et al.* 2019). Likewise, it is now clear that the advent of the Beaker phenomenon in Britain was accompanied by significant migration from the Continent, with genetic turnover exceeding 90 per cent in the last few centuries of the third millennium BC (Armit & Reich 2021).

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Kristian Kristiansen has been at the forefront of many recent developments in this field, working closely with Eske Willerslev's aDNA laboratory at the University of Copenhagen, and leading on the archaeological interpretations of many of their findings. For Kristiansen, the advent of aDNA, along with advances in isotope analysis and big data approaches, have initiated a 'third science revolution' (Kristiansen 2014) in archaeology, on a par with earlier revolutions represented first by the emergence of theories of evolution, stratigraphy and deep time, and secondly by the development of radiocarbon dating and environmental archaeology. In this compact new book, he sets out to absorb the results of this latest 'revolution', and particularly of recent aDNA research, into a wider narrative of European prehistory, focusing primarily on the period from the Early Neolithic to the Middle Bronze Age (c. 6000–1500 BC).

In the first chapter, Kristiansen examines the difficulties involved in interdisciplinary working, and explores some of the miscommunications across disciplinary boundaries that have characterised academic encounters between archaeologists and geneticists. Many critiques of recent aDNA research in his view represent "an ideological rejection of science" (p. 18) or else 'play the Kossinna Card' by conflating genetic populations with archaeological conceptions of culture, even when the original papers take care not to do so. Rather than taking pot-shots from the side-lines or refusing to engage with the results of aDNA research, Kristiansen urges archaeologists to "reclaim the interpretative lead" (p. 14) and work creatively with geneticists to build integrated research agendas and drive forward our understanding of the human past in ways which were inconceivable only a few years ago.

Around half of the book is taken up by Chapter 2, which begins with detailed discussion of the ontological debates that have characterised the development of archaeological theory over the past 50 years or so, before outlining a 'grand narrative' of the European Neolithic and Bronze Age based on the author's own Marxist materialist position. Kristiansen gives considerable space to exploring the role of culture and ethnicity as explanatory concepts in prehistory, and to the delineation of the social institutions that he sees as fundamental to the understanding of past societies. This chapter also explores one of the most promising avenues for aDNA research: the patterning of biological relatedness within densely sampled cemeteries and the insights it can give us into kinship practice. In combination with multi-isotope analysis to identify the lifetime mobility of individuals, this is a potentially transformative approach for understanding the dynamics of these societies.

In the much shorter Chapters 3 and 4, Kristiansen explicitly addresses the mechanics of the migratory movements identified through aDNA research. He hypothesises, for example, that the institution of male primogeniture underlay the spread of steppe ancestry, as landless sons coalesced into expansionist war bands, establishing their own territories progressively to the west and north.

One of the great virtues of Kristiansen's approach is his clarity of style and purpose, accompanied by numerous diagrammatic models that make explicit his assumptions and interpretations. Even where one does not agree, the grounds on which a counter argument may be constructed are always clear. Throughout the volume, for example, there is a tendency to assume the dominance of entrenched, male-dominated social hierarchies practicing

patrilineal descent. That may well be so for many of the cases discussed here, but ‘flatter’ societies, operating on heterarchical or even anarchic principles, can also be identified in prehistoric Europe. Such societies lend themselves less well to the grand narrative approach favoured here, but they must also be considered in our wider interpretations of social and cultural change in European prehistory.

Overall, this is a worthy and thought-provoking addition to Cambridge University Press’s new ‘Elements’ series, which clearly fulfils the brief of providing concise, timely and authoritative accounts of key current developments in the discipline. It deserves to be widely read.

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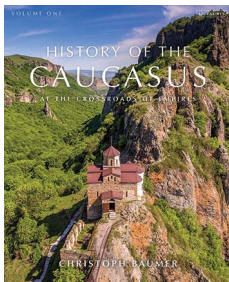
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CHRISTOPH BAUMER. 2021. *History of the Caucasus: at the crossroads of empires*. Volume 1. London: I.B. Tauris; 978-1-78831-007-9 hardback £30.00.



The Caucasus is a protean place. To classicists, it is where Prometheus, condemned for bringing fire to humankind, was chained in eternal hepatic agony. To the thespian, it is where Brecht’s Chalk Circle lay, to the geopolitician, a mosaic of truculent polities such as Chechnya, fomenting global discord. It gives its name to one of the major physical types, the Caucasian, in the bioanthropology of *Homo sapiens*. And to the prosaic geographer, it is a chain of mountains reaching from the Black Sea to the Caspian, the formal southern boundary between Europe and Asia.

Christoph Baumer’s cultural Caucasus is broader than that: it stretches from the Russian republics, such as Dagestan and Ingushetia, with a northern limit at the Don, and far south of the cordillera into eastern Turkey and Lake Van, and north-western Iran to Lake Urmia. All of Georgia, Armenia and Azerbaijan are included, embracing such contended