

repeated visits. Given the site's artefacts and topographic position, it was inferred that the site was a temporary hunting lookout ('spike camp') used on different occasions by hunters who filled their downtime retooling their weaponry and snacking on meat from recent kills (Chapters 5 and 7).

The archaeological inferences are buttressed by Dale Guthrie's analysis (Chapter 6) of the meagre faunal remains from Dry Creek—tooth scraps of Dall sheep, bison and wapiti (elk), the latter two en route to Arctic extirpation. From those teeth, but mostly drawing on his deep knowledge of Arctic animals, ecology and phenology (modern and Pleistocene), Guthrie makes a compelling case for the season of occupation (autumn and winter), its environmental context, why it was an attractive overlook for hunters, how they may have moved about the landscape, their hunting strategy (opportunistic) and even what Dry Creek might imply for the development of big game hunting on the North American Great Plains. I am not altogether willing to follow the last point, mostly because he was relying (understandably) on 1980s views of Paleoindian adaptations. No matter: this ideas-rich chapter alone justifies the price of the book.

So what are we to make of Dry Creek more than three decades on? As Goebel and Hoffecker (Chapter 9) show, the core inferences drawn in the original work about the activities that took place here have largely stood the test of time. The effort to tie the Component I bifacial points (now known as Chindadn) to Clovis came to naught, although subsequent work has shown that they may link to sites in north-east Asia, and possibly represent a population that lingered in regional refugia during the Last Glacial Maximum. Component II, although clearly distinct and now demonstrably at least 2000 years younger than Component I (with the Younger Dryas chronozone in between; Chapter 8), still remains a puzzle, at least in regard to the relationship between its microblade and biface technologies, whether these were from the same occupation on site, and how these relate to complexes of comparable age now known on both sides of the Bering land bridge (Beringia).

Along with their retrospective, Goebel and Hoffecker summarise what has been learned since of Alaskan Late Pleistocene prehistory and where Dry Creek fits in (it is still among the oldest sites), and what its components and the complexes they represent—as well as emerging genetic and genomic evidence—may suggest of the initial peopling of eastern

Beringia and the Americas. Such notions will surely change with new evidence, as the authors note, but altogether it is a thoughtful and useful synthesis.

Dry Creek emerges from the amber as a well-reported, well-illustrated summary of a key Late Pleistocene Alaskan site and what it tells us of Beringian prehistory. It was worth the wait.

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PIERRE PÉTREQUIN, ESTELLE GAUTHIER & ANNE-MARIE PÉTREQUIN. *JADE: interprétations sociales des objets-signes en jades alpins dans l'Europe néolithique. Tomes 3 & 4* (Les Cahiers de la MSHE Ledoux 27; Série Dynamiques Territoriales 10). 2017. 1466 pages, numerous colour and b&w illustrations, CD. Besançon: Presses universitaires de Franche-Comté, and Centre de Recherche archéologique de la Vallée de l'Ain; 978-2-84867-575-6 hardback €98.



The 'JADE Project', directed by Pierre Pétrequin between 2006 and 2010, examined the exchange of Alpine jade axes across Neolithic Europe (Pétrequin *et al.* 2012). Following

the successful conclusion of that initiative, The French National Research Agency funded the 'JADE 2 Project' (2013–2016). The two beautifully produced, full-colour volumes under review here are the outcome of this second phase of the JADE Project. The 32 chapters, authored by 61 researchers from across Europe, feature extended English abstracts and are illustrated by almost one-thousand colour figures, plans and plates. The volumes are

completed with a detailed catalogue of contextual and provenance data for the axes and artefacts studied, and a CD of the JADE Project Volumes 1 and 2 (Pétrequin *et al.* 2012).

Building on the theoretical and methodological framework established in the first phase of the project, JADE 2 sets out to respond to critiques of Volumes 1 and 2 by expanding the empirical basis for some of its main arguments. This is focused in particular on the lack of evidence in relation to the movement of Alpine jade to the Iberian Peninsula and Central and South-eastern Europe, and on the ‘two Europes’ hypothesis, that is, a western distribution of jade axes and an eastern distribution of copper and gold. These excellent, impressive and massive volumes therefore focus on the archaeological record of the Iberian Peninsula and Central and South-eastern Europe to provide support for previously published hypotheses, and on the characterisation of the Eastern Mediterranean jade sources. In addition, the authors also compile and analyse a corpus of ring-discs, examine engraved axe designs and evaluate the use of diffuse reflectance spectrometry (DRS) for the provenancing of nephrite.

Across the two volumes, the chapters are grouped into six thematic sections. The first, comprising Chapters 1–6, is devoted to source recognition and raw materials characterisation. One of the core aims here is to determine the origin of the jade axes found in the Balkans, mainly in Bulgaria and Romania. The authors survey, analyse and test sources of jadeite and eclogite in the Cyclades (Syros, Tinos and Sifnos), concluding that the use of Cycladic jadeite from Syros was of only secondary importance; production was negligible and not exchanged northwards. They conclude, based on DRS analysis and the negligible production using Cycladic jade, that the Balkan axes have an Alpine origin.

Source analysis, based on raw materials characterisation, is always challenging. Here, the authors compare their results from the first phase of the project (Pétrequin *et al.* 2012) with those achieved using a newly acquired diffuse reflectance spectrometer.

Despite the success of the first phase of the JADE Project in locating and characterising jade sources in the Mont Viso and Mont Beigua areas, the sources of nephrite were not identified, an issue that attracted the attention of critics. Volumes 1 and 2 (Pétrequin *et al.* 2012) assumed that nephrite axes originated in the Valais region (southern Switzerland), part of the Mont Viso distribution network. To support

this hypothesis, for the second phase of the project, the authors surveyed the nephrite outcrops of the Alps and Pyrenees, using the same state-of-the-art methodology employed to characterise the Alpine jade sources. They conclude that, with the exceptional case of Brittany where nephrite was moved over 800km, Alpine nephrite exchange follows a down-the-line model that drops to nothing by 200km from source, while the Pyrenean nephrites were used only locally. This conclusion modifies their former statements where they have suggested that non-jade artefacts, imitations of the classic ‘Alpine jade’ axes, were transported via established networks to Carnac and other distant lands such as the British Isles or Iberia. As with the previous volumes, the extraordinary systematic fieldwork undertaken by this team on the identification and location of jade and nephrite sources is carefully documented with an inventory of quarry sites and findspots.

Section 2 (Chapters 7–14) focuses on axe production in Piedmont and the short-distance exchange of its products. In this section, the reader is guided through the recognition of Mont Viso jade sources and the small and short-lived exploitation sites such as Balma de Rosso. In this section, focusing on the heart of the jade production system, the reader will be delighted with detailed descriptions of the production sites across Piedmont including the polished axe *chaîné opératoire* evidenced at the Mont Viso sites, and ethnoarchaeological explanations based on the team’s work in New Guinea (described in detail in this volume and in Pétrequin *et al.* 2012). This long and sometimes heavily descriptive account concludes with a synthetic chapter on specialisation in jade axe production and exchange systems between Piedmont to central Italy.

The third section (Chapters 15–21) deals with the controversial topic of the distributions of prestige items. Here the authors pick up the much-criticised ‘two Europes’ hypothesis where they left it in Volumes 1 and 2 (Pétrequin *et al.* 2012), and go deeper into the archaeological evidence of the peripheral areas of ‘Jade Europe’—central and southern Italy, Malta, the Iberian Peninsula, Central Europe, the western coast of the Black Sea, Greece and Turkey—to bolster the hypothesis and to defend it from its critics. The last chapter of Section 3 pulls together the evidence, both from this section and from Pétrequin *et al.* (2012), to analyse polished jade axe production, distribution and consumption patterns. The authors envisage axes as ‘objets-signes’,

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charged with their own myths and biographies, and part of the realm of the sacred, suggesting that they were the means for the spread of mythological and cultural traits from Morbihan—the centre of this phenomenon—across ‘Jade Europe’. Beyond this area, however, the authors recognise that these axes would not have carried the same (or complete) mythological and ritual meanings.

Section 4 (Chapters 22–26) represents an addition to the central theme of the book, a sort of ‘side project’ focused specifically on stone ring-discs. The research follows the same basic approach and methodologies as used for the study of the axes: techno-typological and raw materials analysis and the study of patterns of use and exchange. Instead of France, the team proposes an alternative north Italian origin for jade ring-discs, and they add another rock category to the jade definition (as if there were already too few!): serpentines. The DRS work by Errera is now established as the standard method by which to identify the origins of jade axes; the pioneering use of this method here to characterise and locate the origins of other stone artefacts, such as nephrite axes and paragonite beads and ring-discs, is promising. The technique, however, requires broader testing in relation to these other rock types, which naturally occur more frequently than does jade. This section—a ‘book-within-a-book’—concludes with a simplistic and unfounded hypothesis: the authors suggest that ring-discs were to women what axes were to men on the logic that ring-discs were made of ‘noble’ rocks and therefore a marker of female status. Unwarranted assumptions about gender aside, this hypothesis is especially problematic when it is recalled that almost all the artefacts lack archaeological context and absolute dating.

In Section 5 (Chapters 27–29), the authors revisit previous discussions about the distribution of Alpine jade axe and ring-disc designs carved or engraved on monuments across France, from the Alps to Brittany, with special emphasis on the Beauce, Gâtinais and Bourgogne regions. They demonstrate how images of Alpine axes connected production sites with ritual centres and, as symbols of masculinity and authority, were associated with powerful men.

Section 6 (Chapters 30–32) attempts to demonstrate the idea of the substitution of prestige items, such as metal for stone axes. Despite ongoing debate about substitution, the authors bravely embrace the idea on the basis of the spread of Balkan copper axes into south-east France during the fifth and fourth

millennia BC. There is, however, very little evidence for the provenance of these copper axes, even though the map provided on page 945 seems to support the authors’ hypothesis.

The volumes conclude with French and English abstracts, an appendix with contextual information on the studied materials, ordered by country, and line drawings of the artefacts studied. As bibliophiles, we greatly appreciated the care that has been taken to elevate this work into a masterpiece. It is, however, incomprehensible that in the internet era, where EU digital policy is well established, that the authors have chosen to publish this work exclusively on paper and have not made the database available through a spatial data infrastructure.

If we had any regrets after reading this magnificent work, it would be the lack of archaeological context and absolute dating for many of the artefacts compiled here; for some readers, this could undermine the value of the work. In our opinion, the authors sometimes advance statements based on these data, as is the case for central and western Iberia, which do not hold up when analysing the wider exchange networks of the Iberian Peninsula. The lack of positive evidence to confirm the movement of Iberian variscite to Morbihan, and the difficulties of fitting the mid third-millennium BC chronologies of Aliste variscite bead production centres with that of Carneciennes jade axes, also weakens archaeological support for a 1000km exchange network between north-western Iberia and Morbihan (for a detailed critique of this point, see Villalobos García & Odriozola 2017).

Despite these minor issues, the titanic efforts of the JADE Project team to compile and analyse this massive dataset provides the scientific community with an invaluable research tool. Their pioneering application of state-of-the-art technology for provenance analysis sets the agenda for years to come and—combined with exquisite production values—these volumes are a must on any archaeologist’s bookshelves.

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H. FOKKENS, B.J.W. STEFFENS & S.F.M. VAN AS. *Farmers, fishers, fowlers, hunters: knowledge generated by development-led archaeology about the Late Neolithic, the Early Bronze Age and the start of the Middle Bronze Age (2850–1500 cal BC) in the Netherlands* (Nederlandse Archeologische Rapporten 53). 2016. 345 pages, numerous colour and b&w illustrations. Amersfoort: Cultural Heritage Agency of the Netherlands; 978-90-5799-263-6 hardback.



I have long admired Dutch archaeology, particularly for its integration of palaeoenvironmental and settlement data, and for the quality of its prehistoric land-use modelling. Over the years, many of its fieldwork techniques have

been highly innovative and, here in Cambridge, we have adopted a number of them.

Part of the Dutch Government's 'Valletta Harvest' programme (see Groenewoudt 2015), this volume's somewhat unwieldy title well expresses its aims: to assess and synthesise what knowledge has actually

been gleaned through 15 years of developer-led fieldwork across the Netherlands relating to the Late Neolithic through to the Middle Bronze Age. Its first six chapters provide the background. They outline the legislative basis and nature of developer-led archaeology in the Netherlands (Chapter 1), its key research themes and an assessment of the state of knowledge prior to 2001 (Chapters 2–3). Chapter 4 addresses the study's methodology and sources, and the following two chapters concern the basis of the analyses and house-plan reconstructions. Taking up fully two-thirds of the book's length, Chapter 7 consists of 51 site summaries, each of 2–16 pages. The next chapter provides a synthesis of what knowledge has been achieved since 2001, with the final chapter outlining directions for future research.

Fokkens *et al.*'s book becomes all the more relevant for British readers in the light of the new pan-European Beaker DNA study (Olalde *et al.* forthcoming). This not only suggests large-scale migration into Britain, but also that the closest genetic ties of these migrants were with the Lower Rhineland. If, through the application of such scientific techniques, more mobile prehistories are now to be explored, then it is all the more imperative that British archaeologists develop much greater familiarity with the prehistoric sequences of the Near Continent. Indeed, this is an issue already addressed by Bradley and colleagues in *The later prehistory of north-west Europe: the evidence of development-led fieldwork* (2016). In comparison, however, *Farmers, fishers, fowlers, hunters* is far more regionally and chronologically focused; it presents the data in great depth, especially in relation to material culture. Not only is it clearly written (in English), but its copious illustrations—site-location maps, building/feature plans and related finds—are of terrific quality and of a standard to which most academic publications today can only aspire.

All of this raises the question of exactly what we want and need out of period-based, development-led fieldwork overviews: ideas, authoritative synthesis, hard data and/or suggestions for future research? Ideally, of course, one would wish for all of these. Recently, a number of such overviews have been issued in Britain, and more are on the way. Their content and approaches vary greatly, and this, naturally, is partially determined by their target audience: students (of varying levels), other

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