

**BOOK REVIEW**

**Open Access**

# Reviews of *Origins of Agriculture in Western Central Asia: An Environmental-Archaeological Study* by David R. Harris and *Mobile Pastoralism and the Formation of Near Eastern Civilizations: Weaving Together Society* by Anne Porter

Robin Bendrey

Correspondence:  
r.bendrey@reading.ac.uk

Department of Archaeology,  
University of Reading, Whiteknights  
Box 226, Reading, RG6 6AB, UK

## Book details

**Harris, DR:** *Origins of Agriculture in Western Central Asia: An Environmental-Archaeological Study.*

Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology; 2010.

304 pages, ISBN-13: 978-1-934536-16-2

**Porter, A:** *Mobile Pastoralism and the Formation of Near Eastern Civilizations: Weaving Together Society.*

Cambridge: Cambridge University Press; 2012.

389 pages, ISBN 978-0-521-76443-8

**Keywords:** Animal domestication, Plant domestication, Neolithisation, Mobile pastoralism, State formation, Near East, Central Asia, Environmental archaeology, Archaeological methodology, Anthropological theory

*Origins of Agriculture in Western Central Asia* by David Harris presents the archaeological results of work undertaken by Harris and a team of specialists at and near the site of Jeitun in Turkmenistan between 1989 and 1998; it also impressively reviews existing knowledge on the environment, flora, fauna and archaeology of western Central Asia. This region is of particular interest, due to its proximity to the Fertile Crescent, that part of the ancient Near East which saw the domestication of many of the plants and animals we rely upon today. The volume aims to address the where, when, how and why of the origins of agriculture in western Central Asia. These are important questions, well understood for the westward expansion of Neolithic economies and lifeways from the Fertile Crescent, but not so for the eastward expansion.

The primary focus of the volume is on the archaeological investigations undertaken at Jeitun, a small Neolithic settlement of rectangular mud-brick houses located at the junction of the Kopetdag piedmont and the Karakum desert, near modern-day Ashgabat in Turkmenistan. Jeitun was first excavated by Professor VM Masson in the 1950s and 1960s. It was Masson who originally invited the British team led by Harris

to be involved and apply modern methods of retrieval, analysis and dating at Jeitun. Harris' work began in 1989, but Masson had to withdraw his participation in 1991 when Turkmenistan became an independent country from the USSR. The volume also reports excavations at the Dam Dam Cheshme rockshelters in the Bolshoi Balkhan massif, an outlier of the Kopetdag Mountains in western Turkmenistan, near to the eastern shore of the Caspian Sea. This work was aimed at recovering and dating plant and animal remains that would illuminate the nature of the Mesolithic-Neolithic transition at these sites.

The volume is divided into five parts, within which there are a diversity of single- and multi-authored chapters. Part I consists of four chapters discussing the physical environment and ecology, both past and present, of the region and the site locales. This includes discussion of climate, local environments, hydrology, vegetation and fauna. The chapter on the Jeitun local environment is co-authored with Susan Limbrey and that on the Bolshoi Balkhan sites with Jen Heathcote.

In two chapters co-authored between Harris and Jennifer Coolidge, Part II presents reviews of the history of archaeological research in the region and of the archaeological record for the Mesolithic and Neolithic periods for Turkmenistan and adjacent areas. These chapters are extremely useful, not only in providing overviews of the history and development of prehistoric archaeological research in these areas, but also in bridging the scholarship between the different areas.

In Part III of the book, Harris gives reviews of Neolithic domestic plants and animals and their origins. These are concise, accurate and thorough reviews, combining archaeological, biogeographical and biomolecular approaches. These are the backdrop for Harris' later consideration of the origins of farming in western Central Asia, and whether or not there could be local domestication events, but stand as useful summaries of wider geographical significance.

Part IV presents the results of the archaeological excavations in Turkmenistan by Harris and his team. The first chapter of this section is co-written with Chris Gosden, who became co-Director of the project following Masson's withdrawal, and lays out the details of the excavation and survey work conducted at Jeitun and in the Bolshoi Balkhan region. This is followed by two chapters of specialist reports presenting the detailed evidence from the investigations: dating (co-authored with Chris Gosden and John Meadows), yard deposits and building materials (by Susan Limbrey), palaeosols (Keith Wilkinson), phytoliths (Mary Larkum), macro-plant remains (Michael Charles and Amy Bogaard), wood charcoal (Eleni Asouti), pollen and charcoal-particle analysis (Harris), animal bones (Keith Dobney and Deborah Jacques), chipped stone (James Conolly), and pottery (Jennifer Coolidge).

Solely authored by David Harris, Part V consists of two concluding chapters that pull together the results from the excavations into the regional context, reviewed earlier on in the book, presenting synthetic accounts of the Neolithic settlement and subsistence and the origins of agriculture in western Central Asia. The volume is supported by a number of appendices, which provide data from the archaeological work undertaken by different members of the team.

Although the investigations were limited in extent, the fine detail of the approach does offer valuable data in relation to the understanding of early farming and the integration of animal and plant economies within the context of the local environment (issues also

developed in the book by Porter; see below). From the recovered macro-plant material studied by Charles and Bogaard, there is a dominance of glume wheats (mainly einkorn) and a lack of emmer. The latter is notable in relation to other sites in the Southwest Asian Fertile Crescent, where it is an important crop. Harris argues that the narrow range of cereals found at Jeitun could be related to local conditions of aridity, soil salinity and environmental instability, and that crop cultivation would have contributed less to subsistence than at Neolithic sites around the Fertile Crescent. The relatively small animal bone assemblage (a little over 500 bone fragments) recovered from the 1993 and 1994 excavations and analysed by Dobney and Jacques provides a picture in which the bones of domestic caprines (goats and sheep) dominate. Although the assemblage is small, goat bones out-number those of sheep, indicating that higher numbers of goats were husbanded. The authors suggest that this emphasis on goats could be associated with selection according to milk production, although it would also be interesting to know to what extent environmental factors are influencing herd compositions (e.g. Bendrey 2011; Krader 1955). Perspective on the management of the domestic caprines is provided by the study of the macro-plant remains by Charles and Bogaard. They identified plant seeds within recovered sheep/goat dung pellets which give insights into the local environments where the animals grazed. The pellets contained the seeds of late-flowering plants, such as species of *Aeluropus*, *Scirpus* and *Suaeda*, which are likely to have matured too late to have been harvested with cereal crops. These species tolerate saline soils and are a valuable grazing resource and suggest that the animals were pastured in brackish areas along the banks of watercourses in the area in late summer and early autumn (i.e. after the cereal harvest). The presence of other, less salt-tolerant plant taxa is suggestive of more productive habitats and may indicate that cultivated areas left fallow were also important areas for grazing following harvests. In conclusion, Harris proposes a seasonal pattern of livestock movement (assuming that Jeitun was occupied throughout the year) whereby herds were maintained close to the settlement during the autumn and winter, and that they were perhaps pastured, daily, in desert and riparian plant communities. With the evidence to hand, Harris wisely does not attempt to estimate the distances over which the livestock may have been herded, but does suggest that long-distance herding, onto the piedmont of the foothills of the Kopetdag, seems unlikely.

As well as the fine detail understanding, this study has also contributed to the broader project aims. With origins in the eastern Fertile Crescent, where we have evidence for caprine herding and cereal cultivation at least by the eighth millennium BC (Zeder 2011; Matthews et al. 2013), Harris argues for the spread of agro-pastoral settlement across northern Iran in the seventh millennium BC, becoming established in southern Turkmenistan by ca. 6100 BC. Harris also favours an interpretation of the spread of these Neolithic lifeways by migrant settlers, although adoption by local hunter-fisher-gatherer groups is also acknowledged as a possible element.

This is an important work. It is very well illustrated, with frequent and clear maps, and is produced to a very high standard. It is an integrated environmental archaeological study *par excellence* (albeit on a relatively small scale) and offers a thorough and exceptionally useful account of the evidence for the origins of agriculture in this region. Jeitun is undoubtedly a regionally and internationally important site, but it is Harris' masterly critical review of its regional context that makes

this book essential for anyone working on the origins and spread of agro-pastoralism in both the Near East and Central Asia.

Moving forward some two millennia in time, Anne Porter's volume *Mobile Pastoralism and the Formation of Near Eastern Civilizations* is a very different type of book. In this volume Porter integrates archaeological and cuneiform sources to explore social structure, ritual, political and religious ideology and the continued integration of mobile and sedentary elements of society in the region. She picks up on a number of themes, including the methods and perspectives used to examine the archaeological and historical records, structures and practices of social and political integration and differentiation, and the role of kinship in socio-political cohesion and function. Porter's thesis is that recognition and discussion of mobile pastoralists in the Near East have been relegated in archaeological accounts, an oversight which may be viewed within the context of the marginalisation of pastoralists in the modern world, and the fact that these accounts are written by scholars from sedentary societies focussing on the machinery of the early states. Mobile pastoralists are often viewed in opposition to sedentary society, something conflicting and 'other'. Rather, Porter addresses the idea that the sedentary and mobile peoples of the ancient Near East were in fact parts of the same groups. The book considers the area of the Near East that lies around and between the Euphrates and Tigris, for the period 4000 to 1500 BC, that period where we witness the birth of cities, governments, writings and laws.

The book is divided into four main chapters. 'The problem with pastoralists' is the title and subject of the first chapter. This lays the theoretical groundwork for the chapters that follow through reviews of the archaeological and anthropological literature related to interpretations of the role of mobility in the ancient Near East. Amidst a wealth of discussion emerge a number of crucial points, especially the extension of the marginalisation of pastoralists in the modern world back into considerations of the past, assumptions on the relationship between mobility and socio-political organisation, and the problems with the applications of concepts of 'tribe' and 'state' in archaeological theory. Porter underlines the point that a profound divide between mobile herder and sedentary farmer is a theoretical construct and not an essential construct, as raising plants and animals has been recognised as integrated elements from the origins of farming (as discussed for Harris' volume, above).

Chapter 2 deals with the question of the fourth millennium BC 'Uruk expansion'. This expansion is identified through the spread of a distinctive material culture, thought to originate from the city of Uruk in southern Mesopotamia, throughout a large area of the Near East. What makes this story particularly interesting, and raises the stakes for understanding human cultural trajectories, is that some of the key innovations in the history of modern humans - the development of cities, states and writing - are awarded to this period in the Near East.

In Porter's detailed reconsideration of the archaeological record of this time, she places mobile pastoralism as the central mediating dynamic of the expansion and revisits the archaeological record through this lens: 'There is no explanation that readily accounts for the ebb and flow of contact across the landscape, the consistency with which settlement changes yet the inconsistency of those changes - no explanation except one . . . Close attention to small patterns within larger ones reveal a process - and indeed a performance - of contact that is ultimately orientated to mobile pastoralism.' (p. 92). In particular, she

sees mobile pastoralism as explaining the distribution and density of Uruk material culture, especially the enigmatic bevelled-rim bowls.

Porter sees early fourth millennium urban expansion involving the cultivation of greater areas of land nearby, pushing grazing flocks further from the city; coupled with an increased demand for wool driven by the burgeoning textile industry, these factors drove the expansion of mobile pastoralism. It is not that these factors have not been previously considered in the Uruk expansion (e.g. Lees and Bates 1974; McCorriston 1997), but that few authors have systematically explored the archaeological record through the lens of mobile pastoralism. This situation is due to the difficulties in identifying mobile pastoralism in the archaeological record and as 'the nature of mobile pastoralism is considered antithetical to those changes – urbanism and associated administrative technologies, especially writing – and therefore pastoralists and pastoralism could provide no kind of dynamic in their engendering' (p. 88). Porter also differs from most other authors in that she does not see the trajectory leading to the marginalisation of nomadic pastoralists, but rather that they remain part of the same system, connected to the sedentary farmers and urban peoples. She also sees kinship and religion as the ties that configured socio-political relationships and worked against the disintegrating forces expressed by the mobility practiced by part of the population. Porter's vision of mobile pastoralism as the central dynamic of the Uruk expansion leads into a number of further ramifications as she works through the body of evidence, which impact on the nature of an Uruk 'state' and the origins of writing.

These ideas are further developed in Chapter 3 in a consideration of 'secondary' urbanism (the Uruk expansion being primary) and state formation during the third millennium in the northern part of the study area (Syria and Turkey). She sees the structures and practices of social and political interaction deriving from those begun in the fourth millennium. With the numbers of sheep and goats in the hundreds of thousands for polities, animal husbandry must have been practiced with a significant element of mobility, often over long distance. Porter understands these animal husbandry practices to have been undertaken as family-based activities, providing for the seasonal fluctuations in labour requirements of animal husbandry and acting against the socially fragmenting nature of long-distance mobility, a 'geography of kinship' acting to maintain socio-political coherence over geographically vast polities.

Porter is keen to explore the nuanced functioning of society, how different people perceived themselves and each other and engaged in their relationships, and not just to assign labels of 'seminomadic' or 'semisedentary', terms which add little to the analysis and understanding of these past cultures. In a detailed consideration of the archaeological record, Chapter 3 discusses how ritual and power, or religion and the polity, were articulated. For example, she discusses how cultic centres were vital 'hinges' in complex networks of integration linking city and countryside, and mobile and sedentary kin.

Chapter 4 considers the origins of the Amorrites, also known by their Sumerian name of Mardu, traditionally seen as nomads of external origin, before taking control of Mesopotamia in the early second millennium BC. The chapter is a literary analysis, beginning with the stories of Gilgamesh, King of the city of Uruk. Porter considers how to read the texts, the actions of history making and storytelling, and the political nature of social, ethnic and linguistic identities. She also discusses the problems, nature and

biases of western scholarship, including the possible separation between modern and ancient concepts, such as the need to categorise and define. From this Porter teases out the implications for ideas of nomads and city dwellers and, again, rather than seeing steppe and city as diametrically opposed, views the two as parts of the same entity, just occupied with different aspects of subsistence, and, contrary to scholarly tradition, identifies the Mardu as coming from within Mesopotamia, being simply the mobile component of society.

The volume impressively reflects a great deal of scholarship and depth of thought. It will be useful for scholars and students of the Near East, including archaeologists and historians, and researchers interested in the archaeology of mobile pastoralism more broadly. Although, it must be stressed that the book is not about mobile pastoralists themselves, or their traces or practices, a point which Porter makes; it is about how they integrate into the construction and understanding of social models.

It is an important volume, offering a bold and radical, realigned account in the central place it gives to mobile pastoralism across this time period. The significance of the book also lies in its consideration of how archaeologists read the archaeological record and conceptualise past societal organisation. Due to the ephemeral nature of mobile pastoralism, scant traces are often left behind with which to understand it (Cribb 1991). Porter's ideas will no doubt be much debated, but they will re-focus attention on this question, the conceptualisation of ancient nomads in the Near East and the search for their traces.

The two volumes reviewed here are very different in focus and nature: Porter's is important in how we conceptualise and examine the past and Harris' in the detailed evidence and context offered for a key area of Eurasia for which little was known. Both offer significant advances and core reading for scholars working in the respective areas and together move us towards a fuller understanding of the origins, dissemination and development of pastoralism in and around the ancient Near East.

#### Competing interests

The author declares that he has no competing interests.

Received: 19 February 2013 Accepted: 21 February 2013

Published: 10 April 2013

#### References

- Bendrey, R. 2011. Some like it hot: Environmental determinism and the pastoral economies of the later prehistoric Eurasian steppe. *Pastoralism: Research, Policy and Practice* 1:8. <http://www.pastoralismjournal.com/content/1/1/8>.
- Cribb, R. 1991. *Nomads in archaeology*. Cambridge: Cambridge University Press.
- Lees, SH, and DG Bates. 1974. The origins of specialized nomadic pastoralism: a systemic model. *American Antiquity* 39:187–193.
- McCorriston, J. 1997. The fiber revolution: Textile extensification, alienation, and social stratification in ancient Mesopotamia. *Current Anthropology* 38(4):517–535.
- Krader, L. 1955. Ecology of Central Asian pastoralism. *Southwestern Journal of Anthropology* 11:301–326.
- Matthews, R, Y Mohammadifar, and W Matthews. 2013. The earliest Neolithic of Iran: The Central Zagros Archaeological Project 2008 excavations at Sheikh-e Abad and Jani. Oxford: Oxbow Books and British Institute for Persian Studies. in press.
- Zeder, MA. 2011. The origins of agriculture in the Near East. *Current Anthropology* 52(S4):S221–S235. <http://www.jstor.org/stable/10.1086/659307>.

doi:10.1186/2041-7136-3-9

**Cite this article as:** Bendrey: *Reviews of Origins of Agriculture in Western Central Asia: An Environmental-Archaeological Study* by David R. Harris and *Mobile Pastoralism and the Formation of Near Eastern Civilizations: Weaving Together Society* by Anne Porter. *Pastoralism: Research, Policy and Practice* 2013 **3**:9.