

and the birds, water creatures, insects and myriad invertebrates that live among them. It is virtually a book in itself. The insects alone occupy nearly 100 pages. The naturalists have shown that what grows, flies or buzzes on the Edge is to a very large degree a function of human activity. People made way for heathland by felling native woodland in the early Middle Ages; later landowners re-wooded the heath with new species in successive episodes of tree-planting. Botanical fashions around nineteenth-century villas, vegetable plots beside evanescent industrial housing, the geo-chemistry of mining and quarrying spoil—each and all have interacted in a continuum that leads to the biota we see today. Yet alongside change, in a kind of stillness, our attention is drawn to species such as Wavy Hair grass and Bilberry that may have grown continuously on the Edge since prehistory.

Having escorted people onto the scene, nature gives way to culture: archaeology, mining and quarrying in Part IV, social history in Part V. Much of Alderley's archaeological story was told in the Project's 2005 volume. Here, Prag and Timberlake give a condensed and updated appraisal. The evidential base is curiously patchy: substantial and tantalising in the Mesolithic, vivid in the Early Bronze Age, at other times often puzzling or scanty. Surprises abound. The Roman scene, for instance, was 'rather bare' until the finding in 1995 of the first Roman mineshaft to be discovered in Britain. There is even a classic Alderley coda involving the pop-up discovery of a post-medieval wooden grail-like vessel that might have been a prop for local Christmas performances. (Apropos of which, given Alderley's pre-eminent status as a place of legend and stories, one of the work's few historical oversights is the Cheshire volume in the series of Records of Early English Drama.)

A recurrent consideration in *The story of Alderley* is what methodologies might be found in response to the tendency in mining/quarrying landscapes for each episode of activity either to subtract from what was there before or to muddy its signs. The following thematic chapters take up the challenge. Timberlake examines evidence for mining from prehistory to the seventeenth century. Warrington explores mining, industry, their sources and processes between c. 1600 and the 1920s. Dibben considers Alderley's 100-plus shafts and adits from the standpoint of the cavers who have been surveying them, summarising evidence for some 30 quarries and their associated micro-

archaeology of tooling, slots, glyphs and cutters' marks.

In Part V we encounter Alderley down to the present through cross-weaving written records, buildings, the Stanley estate, the names of houses, streets and fields, graffiti and oral memory. At 10 chapters and 377 pages this too could have been a book itself, and aside from being informative, parts of it make joyful reading. Matthew Hyde's account of the first wave of villa-building (c. 1842–1870) leads us through the processes of plot selection (views, romantic backdrops), sizing, drainage and the pied styles ('Italianate, Tudor, Gothic, castellated, Swiss') that clad structures which in reality were mostly of standard plan. Hyde reminds us that until the Manchester and Birmingham Railway opened a station in 1842, there was no settlement called Alderley Edge. The station was liked by well-off commuting Mancunians, so the colony grew, and to the Stanleys' displeasure, so did use of the name. Nonetheless, there were two townships of *Aldredelie* in 1086 (corresponding with today's Nether and Over Alderley), sub-tenanted by Norman lords who held them as parts of larger constellations of estates. Discussion of them would benefit from fuller and current contextualisation—reminding us that one of the challenges in a project that runs for decades is keeping up with intellectual developments elsewhere.

Part VI, 'Looking back, looking forward', begins with Christopher Widger, the National Trust's Countryside Manager for Cheshire and the Wirral, reflecting on what the book means for stewardship of the Edge. This is a huge task, and phrases near the opening ('engaging with supporters', 'optimising access', 'Conservation Performance Indicators') may make you wonder if National Trust jargon will be sufficient to express its complexities. When Widger turns to discuss the many co-varying factors (even the weather) that affect the annual impact of over 200 000 people, however, his care and commitment to the Edge jump off the page. The challenges of heritage management are as iron upon which is struck the flint of the next chapter, Alan Garner's essay 'By seven firs and goldenstone: an account of the legend of Alderley'.

If you have read *The weirdstone of Brisingamen* you will know the story. A farmer takes a white mare to sell at Macclesfield market; dawn finds them crossing the Edge, where the horse stops and "a tall old chap, thin as a rasher of wind" (p. 762) steps forward and asks to buy her. The farmer refuses; the old man tells

the farmer that he will find no buyer at Macclesfield. This turns out true, and when the farmer returns the old man is waiting. He touches a rock with his stick and splits it open, "And behind the rock there's some iron gates" (p. 763). The man escorts them down into the hill where knights lie "all asleep with their heads each against a white horse, except one" (p. 763). The white mare is taken in exchange for treasure, but when the farmer returns next day for more, the iron gates are not to be found. What the essay goes on to show is that every detail in the story has precise meaning that maps both onto the historical topography of the Edge and to royal inauguration rituals that go back at least to the first millennium and arguably over 4000 years. The Edge is where mining, magic and memory meet.

The story of Alderley, then, is less a book than a kind of library that centres on one place, but does so in ways that illuminate and interact with themes of continental span. As with all libraries, it is not just a storehouse but a place for new study. At the end of his editorial preamble, John Prag reflects on 20 years' obsession with the work, and hopes that his wife will be pleased to see it done. Mrs Prag should not hold her breath. Epic as this work is, it is hard to imagine it as being anything other than the prelude to something yet greater.

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RICHARD MORRIS
Department of History, University
of Huddersfield, UK
(Email: r.morris@hud.ac.uk)

CLAUDIA CHANG. *Rethinking prehistoric Central Asia: shepherds, farmers, and nomads*. 2018. Abingdon & New York: Routledge; 978-1-138-73708-2 £105.



Less than three years after the Soviet Union collapsed, Claudia Chang seized the opportunity to transition her research into Central Asia. At the

time, only a select handful of European or American archaeologists had ever worked in the region—a *terra incognita* for anyone trained outside the Soviet tradition. Diving in both feet first, she moved her family to Almaty in Kazakhstan from 1994–1995 to develop collaborations with local scholars and gain access to the new archaeological frontier. The frontier was, however, far from unexplored; Claudia Chang has spent the past 20 years grappling with the archaeological legacy of Tsarist ideologies and Soviet-period scholarship, alongside the archaeological data she has unearthed herself. Early on in her research it became clear that unilinear evolution models and Marxist theoretical frameworks were not sufficient to interpret the prehistory of Central Asia. Chang was also quick to recognise that the traditional historical narratives of highly specialised Iron Age nomads did not hold up to scientific scrutiny. Furthermore, as she points out from the beginning of this book, the archaeological tradition in this part of the world was largely focused on burial mounds, rock art and medieval urban centres. This book summarises Chang's attempts to wade through an immense body of Russian literature, and to introduce modern methodological approaches, a novel repertoire of questions and an American scholarly tradition. To this end, she not only pioneered a new frontier, she opened the iron curtains for the scholars who would follow her path.

This book goes beyond simply summarising 20 years of scholarly investigation, it presents a new way of looking at the archaeological record of eastern Kazakhstan. Chang notes in her Preface that the only way to revise the field properly is through a paradigm shift (p. xv). In many ways, her career's research, as laid out in this book, has been a series of revisionary approaches to the archaeological record. While other scholars were focused on burial mounds, she was systematically excavating occupation sites. Likewise, Chang employed scientific methods to illustrate that people in eastern Kazakhstan from the late first millennium BC to the early first millennium AD had a complex and diverse economy. This view goes against convention, as the archaeological

and historical traditions in this part of the world remain focused on a nomad-based economic model. Ultimately, she argues that though there are trappings of nomadic political systems visible in the archaeological record, the broader economy was based on a mixed agro-pastoral system. She also points out that the roughly 1000 identified burial mounds on the Talgar alluvial fan represent a small segment of society. These political elites were supported by communities of farmers and craft workers.

Arguably the greatest contribution to come from Chang's excavations at first-millennium BC settlement sites on the Talgar alluvial fan was the identification of these craft workers, farmers and herders. The historical narratives for this time period in Central Asia have been overshadowed by depictions of warrior nomads, hindering any realistic understanding of Central Asian prehistory. Chang and her team of scientific specialists have identified sedentary occupation sites with evidence of ceramic and textile production. They have also demonstrated the existence of a complex farming system utilising irrigation canals and several different grain crops. The archaeological data also show that animals were raised for secondary products, transport and meat. In this book, Chang shows that the different segments of society articulated into an economic and social system that exemplified a broader region of Central Asia. She envisions a decentralised state, with a large lower-class population of craftsmen, farmers and transhumant herders, who supported a political elite through tribute. This view of Central Asian prehistory is supported by scientific data and 20 years of excavation. Chang is quick to credit earlier scholars, such as Akishev in the 1960s and 1970s, for recognising the important role of farming in the economy in south-eastern Kazakhstan during the Iron Age. Nonetheless, and despite Akishev's contributions to the field, archaeological scholarship has focused on a largely romanticised nomadic population of horse-riding warriors.

Throughout the volume, Chang grapples with questions relating to the nature of political systems and how the peoples of the Talgar fan juggled differential labour needs and scheduling demands. She supports her view of Central Asian prehistory through detailed descriptions of her excavations and a series of analyses by scientific specialists, who collaborated with her over the past two decades. Chang and her colleagues have systematically

excavated the sites of Tuzusai, Taldy Bulak 2 and Tseganka 8; these excavations are laid out in Chapter 3 of this volume. In Chapter 4, she explores evidence for social hierarchies, inequality and an Iron Age demographic shift. Ultimately, these data transition into a discussion of changing social orders and the formation of Inner Asian tribal confederacies (states, empires or polities); Chang draws on world-systems theory to interpret social interactions on a broad scale (Chapter 5). By quantifying the numbers of kurgans on neighbouring alluvial fans throughout the region, she clearly illustrates that the phenomena she describes on the Talgar fan are not unique and were part of a larger population. In the final chapter of this volume, she endeavours to fit the Talgar data into the larger social arena of Inner Asia, while also moulding a new paradigm for archaeology in this part of the world. She argues "that the Iron Age Talgar folk of Semirech'ye were part of a nomadic confederacy tied to a religious cult spread across a vast territory" (p. 124). The arguments that Chang lays out in *Rethinking prehistoric Central Asia* call for a new look at Inner Asian prehistory, one that emphasises the diversity in cultural practices and archaeological remains.

ROBERT N. SPENGLER III

Archaeology Department, Max Planck Institute for the Science of Human History, Jena, Germany
(Email: spengler@shh.mpg.de)

HARVEY WEISS (ed.). *Megadrought and collapse: from early agriculture to Angkor*. 2017. Oxford: Oxford University Press; 978-0-19-932919-9 £47.99.



This volume marks yet another contribution to the books on collapse that have appeared in the last few years. Yet it differs importantly from many of these in that it is, at least in its packaging, unashamedly deterministic when it comes to climate change and collapse. In Weiss's Introduction to the book, for example, he argues that evidence for megadroughts, severe droughts occurring on multi-decadal or centennial scales, has come to challenge multi-causal and more socially based explanations of many past collapses. These episodes were "impossible to predict and impossible to withstand" (p. 1). His own chapter, which revisits Early Bronze Age

northern Mesopotamia and the collapse of the Akkadian Empire, marshals an impressive amount of palaeoclimatic evidence in a 'multi-proxy stack' and in 24 pages of references to other studies. He makes the case that a 30–50 per cent reduction in rainfall caused the rapid abandonment of northern Mesopotamia, according to Weiss the breadbasket of the empire, resulting in the Akkadian collapse.

Northern Mesopotamia may have been affected by megadrought as Weiss argues, but this in itself would not prove that it caused the imperial collapse. Indeed, it is surprising that the inherently unstable Akkadian Empire lasted quite as long as it did, unpopular as it was with the once independent cities of Mesopotamia and plagued by revolt. If, however, we accept that there was massive climate change affecting the north, and that this did cause serious problems for the Akkadian dynasty, the collapse would still have to be regarded primarily as a human-focused process rather than as an inevitable knockout blow from nature. It would instead show that the Akkadian powers that be failed on a number of levels to avoid or mitigate imperial collapse. These were failures of imagination, policy and organisation—failure to integrate the cities and their elites into a unified system, failure to win general popular support and failure to ensure standby means of supply for dependent groups, such as elites and the army. The collapse of the Akkadian Empire was, in this view, avoidable, if the society had taken different steps. This is where we can learn lessons about resilience, now an important aspect of the study of collapse.

Weiss argues that the 4.2ka BP megadrought also affected "the Mediterranean, West Asia, the Indus, and Northeast Africa", such that "synchronous West Asian and adjacent collapse and abandonment events and processes would not have happened without the 4.2ka BP megadrought" (p. 115). This theory dates back at least to the 1970s and has been the topic of a number of conferences and volumes (e.g. Dalfes *et al.* 1997), but recent research suggests that the notion of simultaneous climate-caused collapses c. 2200 BC across this vast area should be reconsidered (Middleton 2018 with references therein).

Kaniewski *et al.*'s chapter on the Late Bronze Age collapses in the Eastern Mediterranean is also problematic. The authors argue for a 3.2ka BP megadrought event, lasting three centuries, which caused crop failures and famines, social and political crises and mass migrations into the Eastern Mediterranean (the Sea Peoples). There is, however,

no positive evidence for crop failures and famines in Greece, and none is offered, and the textual evidence for shortages in the Hittite Empire does not necessarily indicate either drought or famine. We do not know the purpose of the grain imports mentioned, and the Hittite monarchy and armies were active until c. 1200 BC. The Hittite collapse most probably came about through widespread internal and external conflict, which is certainly recorded in textual sources, and it remains unclear how far we can link this to the Mycenaean collapses. It would also be strange if people were to migrate en masse to drought-stricken regions—from the Balkans into the Aegean and Anatolia, and then east. Among Aegeanists, the notion of mass migrations has long been rejected, and the Sea Peoples narrative as often given is debatable—the Egyptian primary sources on them are more propaganda than history. Again, a number of key texts on the period are simply ignored.

Some of the authors approach causality and historical change more circumspectly. Fletcher *et al.*, for example, explore the abandonment of the megacity of Angkor, capital of the Khmer Empire. This is linked to climate events that saw the city's delicate hydrological infrastructure become damaged and dysfunctional. Here the decline of the city is set in a much longer context, in which the elite, and others, may have begun leaving in the second half of the fourteenth century, decades before the taking of the city by Ayutthaya in or just after AD 1431. The authors emphasise that this 'collapse' was by no means the end of the Khmer Empire, the centre of which moved south to Phnom Penh—rather it was "a display of flexibility and versatility" (p. 306) in which a new urban network and focus on trade developed. The Khmer state thus becomes an excellent example of resilience and reorientation in the face of climatic instability and challenge. As the authors explain, "climate alone does not determine the outcome" (p. 306); its effects also depend on the society affected and the choices made.

Bar-Yosef *et al.*'s chapter discusses the adoption of cultivation in Western Asia c. 10 000–8300 BC and the 'collapse' of foraging. This is marked by the appearance of the Natufian culture, which "represents a major organizational change from the traditional mobile way of life practised for many millennia" (p. 51). Changes included the practice of settled agriculture, organised graveyards and ceremonial burial, and the authors suggest that these were in part driven by an increased population. But