




*Keith Britton took this image of a moody sky at Flixton Island, near Star Carr, while volunteering at the site in 2013: “I was working on the adjacent trench. It had been a lovely day, but a storm was approaching so I wanted to get some shots with the dramatic sky. I particularly liked the crepuscular rays in the distance”. Flixton Island is a terminal Palaeolithic and early Mesolithic site in the eastern Vale of Pickering. The site was first excavated by John Moore in the 1950s and appears as a short report at the end of Grahame Clark’s publication of the Star Carr excavations. Since 2012, the site has been the focus of more extensive investigations as part of the ERC-funded Post-Glacial Project (University of York), which is studying the response of humans and animals to the episodes of abrupt climatic change in the centuries following the end of the last Ice Age. The photograph shows staff and students from the Universities of Chester, Manchester and York re-excavating Moore’s trench; in the foreground is Manchester PhD student Nick Overton. The image is a 3 exposure bracket, f4, around 1/80 of a second, ISO 125, taken with a Canon EOS 6D and processed with Photomatix Pro 5. © Keith Britton.*

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*The medieval forrers of Markaul, on the Third Cataract of the Nile in Sudan. The construction of two new hydro power stations at the Third and Fifth Cataracts threatens the survival of this site and many others along the Nile. Markaul is one of the best-preserved medieval fortified sites in Sudan, dating to the fifth to sixth centuries AD. The outer enclosure was built from stone, while the buildings inside were more fragile, probably made from mud brick, mud or other organic materials; consequently, little of these has survived. Pottery sherds covering the site indicate occupation lasting at least to the end of the medieval period (fifteenth century). The forrers, in the opinion of some of the local population, was built by a race of giants (anag) and is the seat of demons (gins). Since 2013, Markaul has been investigated by a team from the Polish Centre for Mediterranean Archaeology. Photograph taken in January 2013 by Mariusz Drzewiecki, Adam Mickiewicz University, Poznań, Poland.*

# EDITORIAL

 Time is of the essence in archaeology. Without secure chronologies we cannot interpret material remains from the distant past nor the social changes that they embody. Pot types and stratigraphic sequences are crucial pieces of the jigsaw, but in themselves they cannot tell us how fast things happened, nor exactly when within the vast scope of the human past. Take away the absolute dates and we are left with complex typological tables and questionable morphological parallels as the only ways of ordering our material. Nor would we be able to grasp overall patterns of change and evolution: it is no surprise that the first successful attempts to provide a global narrative of the human past, such as Grahame Clark's *World Prehistory* (1961<sup>1</sup>), followed hard upon the development of radiocarbon dating.

Half a century later, the fruits of this and related methods of absolute dating are evident for all to see. The multiplication of AMS dates backed up by statistical methods now sometimes allow us to resolve prehistoric chronologies down to the level of individual lifetimes. Other approaches use the growing numbers of dates as proxies for human population sizes, allowing demographic histories to be proposed for entire continents, and alongside the increasing refinement and abundance of radiocarbon are the other dating methods that can be applied directly to recalcitrant subjects such as rock art. Together with stable isotope analysis for diet and mobility, ancient DNA and lipid analysis, these constitute nothing less than a new archaeological revolution, one capable of providing direct answers to some of the key questions that only a few decades ago seemed forever beyond our grasp.

The impact and potential is illustrated by several papers in this issue of *Antiquity*. The first, by Paul Taçon and colleagues, shows how absolute dates allow intercontinental comparisons and challenge existing explanations. Their focus is on the recent results of uranium-series dating, which push the earliest rock art of Southeast Asia back beyond 35 000 years ago. That makes Southeast Asian rock art effectively as old as the earliest rock art in Europe and Australia. Coupled with the early dates is the similarity in the motifs themselves, with hand stencils and animal outlines predominant, just as they are in the earliest cave art of Western Europe (Pettitt *et al.* 2014<sup>2</sup>, 'New views on old hands'). They provide a striking example of the way that human communities do similar things in similar circumstances: in this case, transferring hand-prints and animal images to rock surfaces. An important difference, however, is that the rock art is in rockshelters, not deeply set within dark caves: the cave experiences that may have stimulated the European art cannot have been a factor in the Southeast Asian case.

Two other papers apply 'big data' approaches to large bodies of evidence from the European Neolithic. The first, by Katie Manning and colleagues, compares radiocarbon ages for archaeological cultures with their traditionally assigned age ranges, and interrogates the typical 'battleship curves' that result. In the second, Daniel Henderson and a team of

<sup>1</sup> Clark, G. 1961. *World prehistory: an outline*. New York: Cambridge University Press.

<sup>2</sup> Pettitt, P., A. Maximiano Castillejo, P. Arias, R. Ontañón Peredo & R. Harrison. 2014. New views on old hands: the context of stencils in El Castillo and La Garma caves (Cantabria, Spain). *Antiquity* 88: 47–63.

mathematical modellers map the spread of the Neolithic across Europe, noting the effect of coasts and rivers on the speed of the advancing wave front. Whether or not people (and domesticates) travelled by boat, coasts and valleys evidently offered faster travel than the forested hinterlands. Broad, long-term patterns are also addressed by Tarja Sundell and her colleagues. The combination of modern DNA analysis and the rich and long-established databases of archaeological finds for which Finland and the Scandinavian countries are so famous produce a uniquely detailed picture of demographic history.

All that is not to suggest that chronology does not remain controversial. In our March issue we published an article by Paolo Cherubini questioning the dating of an olive branch from the Santorini eruption. This is the famous eruption that may have laid waste the Minoan palaces. But did it happen in the later seventeenth century BC, as most of the absolute dates indicate, or is that impossible to reconcile with an Egyptian historical chronology that instead suggests a mid sixteenth century date for this natural calamity? Sturt Manning and colleagues argue here that there is no such contradiction and that both strands of evidence point clearly to the last decade of the seventeenth century BC.

### A Mediterranean manifesto

Santorini, of course, was part of a web of maritime connections that joined the Aegean coasts and islands to the eastern Mediterranean. These in turn were part of a broader pattern of networks extending the length of the Mediterranean and beyond into the Atlantic and the Black Sea. How are such networks to be studied? Evidence of contact can be both direct and indirect, in the form of shipwrecks, trade goods, harbour installations, cultural borrowings, historical records and movements of people. The networks connecting the eastern Mediterranean world from prehistory to the Classical period are well recognised, and the early origins of longer-distance voyaging have been demonstrated by discoveries of Asian elephant ivory and Sicilian amber in third-millennium southern Iberia (see Schuhmacher *et al.* 2009<sup>3</sup>, ‘Sourcing African ivory in Chalcolithic Portugal’).

A workshop held last December at the University of Toronto sought to take the study of Mediterranean maritime connections to a new level by drawing up a manifesto for future research (see the *Antiquity* Project Gallery at [www.antiquity.ac.uk/antplus](http://www.antiquity.ac.uk/antplus)). Their emphasis was on formal network models, but the scope is wide, extending to cognitive connections, such as the religious structures, that may have helped to stabilise trade across the Mediterranean as the centuries progressed. Maritime transport, despite its attendant risks, has always been cheaper for bulk goods than land transport, even when reliable road systems had come into being. Yet, as the team rightly ask, how did traders know the price of wheat in distant markets? And how far were historical networks dependent on long-term interrelationships established in the Bronze Age or before? There is enormous potential here for a drawing together of projects, data and research teams to explore the bigger picture, both across time and space. Here again, ‘big data’ emerges as one of the leitmotifs of current research agendas.

<sup>3</sup> Schuhmacher, T.X., J.L. Cardoso & A. Banerjee. 2009. Sourcing African ivory in Chalcolithic Portugal. *Antiquity* 83: 983–97.



*The marble pedestal of the Obelisk of Theodosius I, the Hippodrome, Istanbul. The south face, seen here, shows the emperor and his court, and, on the very bottom, the obelisk itself being transported.*

## Istanbul

‘Connecting Seas’ was also one of the six themes structuring the 2014 meeting of the European Association of Archaeologists. The meeting was held in the buildings of the Istanbul Technical University, close to Taksim Square in the commercial heart of the city. Excellent public transport meant that it was only a short ride by tram or metro to the historic city on the opposite side of the Golden Horn. The conference was on a larger scale than ever before, with 2300 registered participants from 76 countries, and 150 separate sessions, 60 more than at Pilsen in 2013. Glimpses of the Bosphorus and the shores of Asia from the upper floors of the university building were an added pleasure.

The conference ranged widely in subject matter, with particular focus on the archaeology of Anatolia and south-eastern Europe. Turkey is, of course, the locus of a series of world-famous field projects, such as those at Çatalhöyük and Göbekli Tepe, and they featured prominently in the

programme and in the pre- and post-conference excursions. Special tribute was paid to Klaus Schmidt, director of the Göbekli excavations, who died earlier this summer. A whole-day session was devoted to Çatalhöyük, covering both the new technologies being used to record the fieldwork (including iPads and laser scanning) and recent results and interpretations: the transition from the East Mound to the West Mound (a result of environment change?) and the Roman and post-Roman (Christian and Islamic) burials at the site. Like so many prehistoric tells, Çatalhöyük remained a place of significance long after its abandonment.

The EAA conference was also an excellent opportunity to visit (or revisit) the famous monuments of Istanbul itself: the massive fifth-century land walls that successfully withstood sieges on so many occasions; the exquisite Byzantine churches with their mosaics; and the impressive Ottoman imperial mosques. An evening reception took participants to the Istanbul Archaeological Museums, located within the Ottoman Topkapı Palace complex. Immediately beyond lies the great sixth-century church of Hagia Sophia and beyond that again the Hippodrome, which was at the heart of public life in Roman and Byzantine Constantinople. There is much to see, but a lot that is currently out of bounds owing to ongoing restoration. Even the interior of Hagia Sophia is partially hidden behind a mass of intricate scaffolding. We look forward to returning to Istanbul when all of these restoration projects are completed. A more sensitive issue is the access to Byzantine churches that

now serve as mosques. Most of them can be visited, although visiting times are not always predictable and one is aware of their continuing importance as places of worship. They are a reminder of the multi-layered historical narratives written into the material fabric of this great imperial city.

## Looking forward

The present December issue of *Antiquity* marks the prelude to a number of changes in our publication arrangements. Since taking over from Martin Carver and the York team in January 2013, we have been impressed by the number of top-quality papers that we receive for consideration. Glancing at a full set of *Antiquity* shows quickly enough how the journal has grown since its inception, from 500 pages in 1927 to 1000 pages or so in the 1990s and over 1250 pages in recent years. This means that *Antiquity* now takes the form of four chunky quarterly issues but, nonetheless, we are still not able to accept as much of the high-quality material submitted as we would like. It is not possible (or indeed desirable) to expand the size of individual issues any further and, after careful consideration, we have decided that from 2015 we will move from four issues to six issues per year. Hence, the first 2015 issue will appear in February, with others following thereafter every two months. This will allow us to bring our readers more material at more frequent intervals throughout the year, and speed up the process of publication for our contributors.

In making this change, we have paid special attention to our international profile. Over the years, previous editors and their production teams have worked hard to maintain the journal's traditional strengths while encouraging more submissions from rapidly developing areas of archaeology beyond Europe, Australia and North America. As a result, *Antiquity* today is widely regarded as the leading journal of world archaeology, the only one that covers all periods and all subjects, serving a global community of readers and contributors. The present issue exemplifies that nicely, with articles ranging from Neanderthal hunting to Second World War encampments, and from Tongan chiefdoms to prehistoric Finland. There is, however, still further potential to reach new audiences and to attract even more of the very best archaeological research. To achieve this, we have decided from 2015 to change our publication arrangements and enter into partnership with Cambridge University Press. With their long and extensive experience of journal publishing, they will help us to promote *Antiquity* throughout the world. They will also take over the management of subscriptions and the distribution of the journal. The *Antiquity* team in Durham, however, will remain the main point of contact and the focus of activity as before, with our independent website at [www.antiquity.ac.uk](http://www.antiquity.ac.uk) and an *Antiquity* stand at major archaeological conferences.

We hope these changes will help to grow and develop *Antiquity* to better serve the needs of the international archaeological community in the twenty-first century.

Chris Scarre  
Durham, 1 December 2014