



University of Sydney excavations at Pella in Jordan, February 2007. Photograph (looking SW) of work in trenches 5–10m west of the Bronze Age Migdol Temple. Foreground shows Iron Age II (c. 950–800 BC) Civic Building being dismantled. This, approximately 30 x 30m, structure was built around 900 BC and destroyed around 850/800 BC. In the background, baulks contain traces of later stone architecture, mainly from the Late Roman through Byzantine periods (c. AD 400–650). Camera details: Canon 350D (8 MegaPixel) Program Exposure mode. 1/160th second f8 ISO 200. Lens 18–55mm set at 22mm. Original Camera RAW capture edited in Adobe PhotoshopTM. Photograph by Bob Miller, Lecturer in Photography, University of Canberra, Australia (bob.miller@canberra.edu.au).



Ab al-Lusun, Jordan. In southern Jordan, stretching across a broad swathe from just south-east of Petra down along the edge of the Sher'a escarpment, is a succession of deserted ancient villages. Many have no modern overlay and the surrounding landscape is still marked by terraces and clearance of field-stones. This is one of c. 30 photographed on 9 October 2008 and is typical in its broad appearance, form and extent. Brief comments by Nelson Glueck in the 1930s are now to be replaced by the detailed ground survey of Prof. Burton MacDonald of St Francis Xavier University in Canada. His team collected Nabataean, Roman and Byzantine sherds confirming the identification of a 'Roman' village. The photograph, taken at 08.30, shows a typical agricultural village: an unplanned layout, c. 200 x 200m, rectilinear, multi-roomed houses, some walled animal or garden enclosures and field traces beyond. Photograph by David Kennedy (dkennedy@cyllene.uwa.edu.au).

EDITORIAL

☞ Talk of world recession brings fears for a commercial archaeology just getting into its stride, and inevitably reminds some of us of job creation schemes. Not all the memories are bad. The initiatives in USA and Europe between the wars threw open hectares of archaeology, gave a meaning to the idea of archaeological landscapes and to some extent laid the foundations for a field profession. The *Works Program Administration* (WPA), part of the New Deal to alleviate unemployment, operated from 1935 to 1943. Numerous archaeological sites were recorded in the Mississippi basin, most of them reported in a standardised manner thanks to the supervision of William Webb, so making the information comparable and usable by other archaeologists. The idea of *significance*, with the 'archaeological feature' as its defining entity, can probably also be traced to this time. The *River Basin program* that followed (1945–1969) included a series of reservoirs constructed under the jurisdiction of the US Army Corps of Engineers. The archaeology programme, administered by the National Parks Service, was tailored to record 'historical and archaeological data which might otherwise be lost as the result of the construction of a dam'. As well as underlying the influential roles of the US Army Corps of Engineers and the National Parks Service in North American archaeology, these programmes laid the foundations of the project-based and knowledge-driven procurement scheme of assessment, response and oversight which was to be incorporated in *compliance archaeology* (established in Section 106 of the 1966 National Historic Preservation Act (NHPA)). This scheme is naturally attractive for countries who like the deregulated approach, or at least have reservations about managing their archaeology solely through the state. In Britain we remember with mixed feelings the job creation schemes of the 1970s and 80s, the YOP (Youth Opportunities Programme) designed to get young people into work as soon as possible and the MSC (Manpower Services Scheme); both of these workforces carried out a lot of archaeology and supplied a nascent profession with much new talent.


But the legacy was not all good – and we should be on the alert if another round of job creation is about to begin. Many of the previous campaigns – especially in continental Europe in the 1930s – aimed at clearing and exhibiting monuments, rather than generating new knowledge. Standardisation of recording, at first so useful in managing a large scale emergency, has grown into an inflexible procedure which privileges data over understanding, and maybe serves the client report better than the research report.

But we are making progress. The last few years of professional work has almost seen the beginnings of a career structure in a number of countries. And although university and commercial archaeologists still treat each other with a certain suspicion, and drink in different bars, there is a growing feeling amongst the younger generation that compliance archaeology can be research rich and that research archaeology ought to be compliant. In other words we are in the same game. Don't let's throw this away, whatever the future brings.

☞ The world's learned societies need to meet, and soon, to work out a new standard way of labelling past time. We all agree that it is a shambles. Systems dependent on the weather or vegetation (Holocene, sub-Boreal, Zone VIIb) have vied with those dependent on artefact typology. The Three Age system has become increasingly myopic

and confused – and some felt it always was: “I regret to say that I hold very different opinions to my friend Dr Worsaae,” J.M. Kemble remarked in his final lecture at Dublin in 1857, pointing out that the assignment of date on the basis of whether graves contain stone, bronze or iron objects must be erroneous, since the ‘Barbarians’ used them all. And yet we have proceeded to use the three ages as though they happened one after another and/or everywhere at the same time. Stuart Piggott cited the ‘logical French’ view that the Bronze Age should begin everywhere at the same time, before showing that this “technological model of prehistory” would actually result in differently dated Bronze Ages in every country. Since 1962 when Piggott’s Rhind Lectures were given, we have had ever more pressing reasons to dissociate chronology from technology. We already know from the pages of this journal that ‘Mesolithic’ and ‘Neolithic’ cultures can be contemporary in the Linearbandkeramik. Maybe not everything was possible at the same time, but we have had our eyes opened to the idea that culture is eclectic and created in context by human agency. Art, architecture, burial practice and artefacts are evidence for what was chosen – but not when. Is the Three Age System ready to become history itself? If so, it has found an admirable historian, as Chris Evans shows in his review article in this issue.

In 2006 and 2007 *Antiquity* published a scheme of ‘Time and Topics’ to accompany our annual summary of archaeological research, and it appears again this year as ‘Headlines’ on the next page. The table is organised into periods of calendar years, although of different lengths (the older the period, the longer it is). The first three periods divide the time before 8000 BC and the last eight, the ten millennia since. This might not be logical either, and comments are most welcome. Whatever definition we give these periods they must mean the same in every part of the world so that a global prehistoric conversation can take place. The way forward may be for the world’s archaeologists to each appoint a spokesperson and to meet somewhere pleasant and agree a standard. While we are about it, let’s sort out BP, BC, AD and AH. Clearly we must have some benchmark from which we can look back as well as forward, but when is it to be, and what are we to call it? CE and BCE certainly have the merit of ease of conversion for Christian scholars. But it hardly commands universal approval and *Antiquity* has yet to adopt this scheme (although we probably should). We cannot study the human experience of the world without a chronological framework. And our system must not only have the virtues of immutable precision, but be immediately comprehensible and agreeable to the common reader in every country. And maybe we shall soon need to construct timescales that not only work on earth – but on other planets – where BC seems scarcely appropriate.

 In 2008 we published 47 papers on research, 16 on method, 13 on debates of various kinds and 53 short articles announcing new research on the *Project Gallery*, our webzine. This December issue is the longest ever, at 352 pages, reflecting an increase in quality submissions and our desire to get the research out fast. The ‘headlines’ of the table indicate topics in the format beloved of the press – the import of research compressed into a phrase. Can this rich harvest of a year be itself compressed into bites and straplines? Not easily. The value lies in the variety, and since *Antiquity* represents an authentic research agenda driven from the bottom up, not the top down, its flowing streams will only converge many years hence. We can see we are advancing on a broad front, with many intractable

Headlines 2008. The full articles may be located by using the author name in brackets.

PLEISTOCENE

1. Before 100K BP

String held the prehistoric world together (Hardy);

2. 100 – 25 000 BP

Neanderthals are deer hunters – and good communicators (Richards); Bone tool from Crimea (Burke); Bitumen use at Umm el Tlel (Boëda);

3. 25 000 – 10 000 BP [8000 BC]

Archaeology of the Willandra Lakes, Australia (Allen); New cave art in Liguria (Mussi); Earliest cremation burial in the Philippines (Lewis H); Art objects from Zaraysk, Russia (Amirkhanov); Hunting strategies in Korea (Seong);

HOLOCENE

4. 8000 – 5000 BC

Haplogroups follow different economic strategies (Chiaroni); Economic strategies on the Yellow River and Yangtze compared (Jing); Eastern arrivals in post-glacial Lapland (Rankama);

5. 5000 – 4000 BC

Obsidian choice at Çatalhöyük (Carter); The orientation of the rondels in Central Europe (Pásztor);

6. 4000 – 3000BC

Making megaliths in Brittany (Mens); The determinant regime of the Indus river (Wright); Passage graves imitate caves in Ireland (Dowd); Rise and fall of a Jomon hunter-gatherer settlement (Habu); Social networks established in W Pacific (Torrence); Boreláz fine ware maps on to the earliest use of wheeled vehicles in Europe (Furholt); Sissoo, the golden leaves of Ur (Tengberg);

7. 3000 – 2000BC

Bifacial tool production in the Levant (Rosenburg); Sacrificial equids and humans at Tell Brak (Oates); Early settlers in Patagonia try forest life (Mendez); The use of the grape in early western Asia (Miller);

8. 2000 – 1000 BC

The amber lion from Qatna (Mukherjee); Archaeological and legal territories in northern Mesopotamia (Ristvet); Object from Sicily finds its way to Britain (Needham); ritual mutilation in Kazakhstan (Bendezu-Sarmiento); Thera wall paintings used geometric templates (Papaodysseus); Figurative sculpture arrives in West Africa (Breunig);

9. 1000 – 0 BC

Forts in Britain and Thailand (O'Reilly); Hirschlanden statue was a hermaphrodite (Armit); Honey in Israel (Mazar); Greek gods correlate to landscape (Retallack);


10. 1 – 1000 AD

Pottery head and kingdom formation in Uganda (Reid); water management at Angkor (Fletcher); Causes of the Viking Age (Barrett); Burials and feasting in the southern Brazilian highlands (Iriarte); Teotihuacan updated (Cowgill);

11. 1000 – 2000 AD

Elite burials in N Europe defy Christianity (Biermann); Bohai people of Mongolia removed from their homeland (Kradin); Ritualised dismemberment of a deviant aristocrat (Lewis); Symbolic language in the Torres Straits (Brady); Great Zimbabwe revisited (Chirikure); Rise of the Tongan maritime chiefdom (Clark).

problems and many familiar themes still commanding attention: the skills and behaviour of pre-sapiens hominins, early art, social and economic changes after the ice age, the formation of polities. We notice too the increasing quantity of evidence for the free movement of artefacts and peoples in ever-earlier periods, suggesting that far from lurking in isolated niches most humans have been in continuous discourse with each other for most (if not all) of prehistory. Consequently we are not surprised to note a large group of papers focused on ritual objects, sites and landscapes, studies which assume and map the relentless eddying currents of ideas.

 Many of 2008's new science frontiers were on display at this year's *International Symposium of Biomolecular Archaeology* (ISBA) put together by Kirsty Penkman and colleagues with speakers from 18 countries. There is no doubt that for those intending to make new waves in human prehistory this conference is the one to watch. Our readers will already be aware of the use of stable isotopes in human and animal bone to identify marine diet and to track population movement (by locating childhood groundwater), and of some impressive investigations of residues in ceramics, identifying the original contents of pots. The latter results, in particular, were achieved adopting 'proteomics', the rapidly expanding vanguard of archaeological biomolecular investigation. The proteomics approach allows rapid identification of several proteins – a broad category of organic molecules which drive life and survive in surprising variety in archaeological material, especially bone. Protein residues can be identified by chromatography coupled with mass spectrometry and various other clever tricks, and this can potentially lead to identified species of fish, bird, mammal and plant, starting from a minute sample.

Researchers of human populations are becoming more successful at extracting ancient DNA (aDNA) from bone and confronting the problem of contamination (you only need a stray molecule off an archaeologist's finger). An Italian team recently extracted samples of DNA from the bones of a Cro Magnon period skeleton (Paglicci 23), and at the same time took DNA samples from everyone likely to have been in contact with the specimen since its excavation. There was no contamination, so the ancient DNA profile stands as that of a genuine 28 000 year-old individual (*PLOS one*, 16 July 08). Meanwhile a team of Chinese scholars took DNA from 19 samples of human bone excavated near the Terracotta warriors. Comparing them with 2164 mtDNA profiles from 32 modern Chinese populations, they concluded that the workers who built the emperor's tomb were of very diverse origin (*PLOS one* 1 Oct 08). DNA is also tracking the doings of the animal Kingdom. On the current agenda are the transition of the aurochs to the cow, the origin of the domestic pig in Europe and the travels and travails of the house mouse as it left its native India and hitched a lift with the Vikings.

Although the archaeological rewards of tracking plants and animals from trace residues could be massive, we run-of-the-mill excavators are perhaps not quite geared up to take advantage of them in the field. Most of us are used to sieve or float and take micromorphology and microstratigraphy samples; but when you think of the size of the target (molecular) and its sensitivity to contamination, we might not yet have the tools and the protocols to turn our biomolecular questions into procedures. All the more reason then, to keep talking, and to expect in the future to see a few more white coats on a dig.

☞ After 35 successive summers in the field I had a chance this year to visit other sites and annoy other excavators, with the famous Çatalhöyük as my first destination. Having read *The Leopard's Tale* on the train from Istanbul (16 hours), I was naturally expecting to confront some pretty severe cerebral as well as material entanglement (this book badly needed an editor). It was a relief to find a workforce with its feet on the ground, treading the path of substantiated inquiry. Directed by the talented Shahina Farid, the emphasis of the excavation was on strata, context and sequence, the things that actually reveal a new past. And what strata! I felt as happy as a vicar in a cake shop. The mud-brick of southern Turkey comes in stripes, walls abut in subtle linear tones, and the excavated hearths are works of art. It was also good to lay to rest another preconception: the Çatalhöyük excavations do not only use single context recording (see June 2008 editorial, p. 262): they have a multi-conceptual system in which contexts, features, spaces and structures interlock – in other words the more sophisticated system preferred by most research excavations where ‘interpretation at the trowel’s edge’ is the norm. The single context (or more properly ‘context-only’) approach, introduced on the back of the professionalisation of rescue excavation, dropped the feature, the structure and



The main 30m section through the tell at Aşıklı Höyük, a neighbouring site to Çatalhöyük, with director Mihriban Özbaşaran in the foreground. The occupation levels at the base have led to the site being termed ‘the earliest settlement in Anatolia’ (www.asiklihoeyuk.org).

the notebook and achieved the unusual feat of making excavations dull as well as amazingly hard to write up. The adoption of multi-conceptual recording in such a prominent project is certainly cause for rejoicing and should enable a strong historical narrative to eventually emerge.

So to Stonehenge, where Mike Parker Pearson, Colin Richards, Julian Thomas, Josh Pollard and countless others are at work, taking the Stonehenge ‘mystery’ by the scruff of the neck and shaking it until something solid and credible falls out. In the best sense, this project had an 80s feel to it – large numbers (up to 150) of bright young things working together and debating the site day and night. It was open forum, with the public encouraged to come, see and comment, and Arthur Pendragon in full costume urging proper application of the planning laws. The Stonehenge Riverside project is rightly focussed on the context of the monument – the Avenue, the Cursus, the Long Barrow, the settlements – an exemplary inquiry of relevance not only to Britain’s national icon

but to the investigators of surviving stone ‘mysteries’ everywhere. More reports to follow in March 2009.

Two CRM experiences round off my estival impressions. The megalithic temples of Malta and Gozo rival Stonehenge in their manipulation of colossal rocks and perhaps outdo it in complexity. Although they have been there for three or four thousand years, they now apparently need sheltering from rain and sun. When we arrived at Hagar Qim the new shelter had just arrived from Italy, and it will no doubt prove a magnificent erection. But where was the research excavation in advance of its construction? Malta has created a new agency with the name of *Heritage Malta*, which gets the glamorous jobs like building paths and stone walls to corral tourists, while the research and conservation – which used to be the serious end of the archaeological business – is apparently left to the Sovrintendenza and to the last minute.

I encountered a second example of the modern archaeological economy at work at Streethouse in Cleveland (UK) where Steve Sherlock is excavating an intriguing cemetery – a seventh-century AD bed-burial surrounded by a curious procession of 80 graves set two by two in a rectangle (the site was announced in the *Project Gallery* – <http://antiquity.ac.uk/ProjGall/sherlock/index.html>). But a different curiosity lay in the circumstances of this field project – a research excavation carried out by a professional archaeologist using money earned doing compliance archaeology in the commercial sector, eked out by volunteers. Strange days: targeted, but poorly funded research sites subsidised by rescue sites well resourced but randomly selected. Is this the reappearance of the past, or a pre-echo of the future? Perhaps some of the profits from commercial archaeology could find their way into a Trust Fund which supports what we all love doing best: programmed research in the field. But are there any profits?

Martin Carver
York, 1 December 2008



The magnificent shelter over the 40 × 40m area at Çatalhöyük, director Shabina Farid in the foreground.