Review articles

Ex India, semper aliquid novi?

Terry O’Connor*


These two volumes give a contrasting and fascinating overview of two different aspects of South Asian archaeology. In Indus ethnobiology, twelve contributors offer ten papers on current research into environment, ecology and subsistence in one of the world’s great river valleys, the majority of the contributors originating in Europe or North America. In Science in archaeology, 26 authors, all Indian, it seems, offer 15 papers on dating, remote sensing and archaeological materials science, reviewing the development of archaeological science in India.

The contributors to Science in archaeology are mostly materials scientists rather than archaeologists. In that regard, this book recalls the volume of the same name originally edited by Brothwell and Higgs in 1969. Thus, chapters by Bhattacharaya on dating and by Chowdhury on AMS radiocarbon give a useful overview, but are stronger on the physics than on the particularities of, for example, ensuring that the AMS date actually dates the archaeological event or deposit concerned. Calibration should also have been discussed. Other chapters include two that give a helpful summary of the potential and practicalities of remote sensing, a topic of particular pertinence in a large country sometimes difficult of access. Another pair of chapters introduces petrological analysis of ceramics, accompanied by some fine colour photographs, and discusses a problem-oriented archaeological application of ceramic petrology.

Roychoudhury & Roy venture into the topical field of genetics, discussing the origin and evolution of Indian populations. One of the good things about Science in archaeology is that most of the authors take little for granted, and set out the detailed ‘working’ of their topics at length. Thus Roychoudhury & Roy set out the calculation of parameters such as allele frequency and genetic distance. That may seem superfluous, but if the volume is to achieve the editor’s aim of inspiring a new generation of young researchers, those basic working methods have to be included. Ethnicity is a sensitive subject in India, and the authors have kept to fairly uncontentious issues, although their use of ‘Muslim’ as an ethnic group (Figures 6.3, 6.4) raised an eyebrow. On the same topic, Biswas firmly refutes the notion that ‘race’ has any significance as a subdivision of humanity, quoting both the American Anthropological Association, and Gautama Buddha – who said much the same as the AAA, 2500 years earlier and much more concisely.

As editor, Biswas contributes the wide-ranging, even eclectic, opening chapter in which the existence of ‘two cultures’ (i.e. humanistic and scientific) in archaeology is discussed. In view of current trends in western archaeology departments, it is good to see such a hearty endorsement of the scientific. His other contribution to the volume is a forensically detailed study of remains and residues, stressing the value of the residues such as ash and slags as sources of archaeological information. Very general at first, the chapter is highly detailed when discussing the evidence for smelting techniques at Zawar. This investigation is more than just science for its own sake, as the results confirm the technological sophistication of zinc and lead processing in India in the last few centuries BC.

The comparison with Brothwell & Higgs’ volume will inevitably give the impression that archaeological

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science in India is a generation 'behind' western Europe. This is clearly not the case, although some contributors seem to look forward to developing procedures that are already well established, such as radiography for the study of metallic artefacts. Although there is little in this volume that is cutting edge or highly innovative, it reflects a healthy dialogue between archaeology's 'two cultures'.

*Indus ethnobiology* sets out to review the current state of research on subsistence strategies in the Indus civilisation, 'examining many forms of the relationship between humans and their environment' (p. xiv). Is that economic prehistory, environmental archaeology, or simply archaeology sans artefacts? Four of the ten papers include some ethnographic research, so maybe the term 'ethnobiology' has found its niche here.

In a useful introduction to the region and its archaeology, Possehl sounds a warning about the predominance of the Near East in studies of early domestication, pointing out that Baluchistan had a similar forest-steppe environment early in the Holocene with most of the traditional 'Near Eastern' domesticates. A generation or more ago, the focus was on proving that agriculture had ancient origins in the Near East: maybe this generation's challenge is to rigorously test the candidature of regions such as Baluchistan as independent centres.

Tengberg & Thiébault present the results of a substantial analysis of charcoal fragments from sites in central and southern Baluchistan. Their aim is to assess the past environment of those regions and the exploitation of different woods. Given the diverse contexts from which charcoal was recovered (mostly tombs at Mehrgarh; mostly kilns at Lal Shah; mostly occupation floors at Shahi Tump), evidence of selective utilisation is clear enough, yet the authors' conclusions largely concern the regional ecosystems. Does selected structural timber, plant fibre and firewood give a satisfactory sample of surrounding plant communities?

Beyond charcoals, botanical studies are well represented. Modella's chapter on phytoliths opens with a useful account of the field, situating the research that follows. Correspondence analysis is used effectively, with the methodological details well outlined. Seetha Reddy discusses fodder, and demonstrates that the analyses of crop-processing stages so familiar from the Near East can be applied to crops such as millets if based on sound ethnographic studies of the same crop in the same region. Reddy also suggests that ethnicity can be investigated through crop-processing custom and practice. This is one of the shortest chapters in the book, but is particularly absorbing. One of the longest is Weber's account of archaeobotany at Harappa. This is an important and interesting chapter, but some of the conclusions need firmer evidence. Table 5.2 lists crops harvested in different seasons, but it is not clear whether this seasonality can be safely projected back into the Harappan period. This is crucial because on those assumptions rests much of the discussion of intercropping and intensification. Again, it is not clear that the 'constant increase in the number of different species being cultivated at Harappa (Table 5.3a-c, Figure 5.3)' (p. 181) is supported by the cited table or figure.

Animals feature in several of the contributions. Meadow & Patel preface their chapter on pastoralism with a historical review of zooarchaeology in the region, thus providing an intellectual context to the current research. Their most important points come right at the end of their chapter, where they stress that those who analyse animal remains must understand the implications of their work for the archaeology of the region, and must present their results so that archaeologists can understand their worth and significance. Meadow & Patel have achieved that clarity and integration, but not all of the other contributions have done so. Belcher on fish begins well by considering procurement, distribution and the technology of capture at the outset, and not as a *post-hoc* explanation. However, this is essentially a compilation of fish-bone reports: big differences in assemblage size and quality have made synthesis difficult. Miller gives a useful account of secondary products usage, making the excellent point that the expanding trading culture of the Harappan needed tractors and cart-pullers, hence so many cattle. It is good to see traction dealt with thoroughly, not relegated to a minor benefit of raising beef.

Chapters by Fuller and by Thomas deal with agricultural systems more synthetically. Fuller balances the evidence for local domestication and the adoption of exogenous resources, concluding that environmental pressures alone are not an adequate explanation for the archaeological data. Thomas' discussion of potential agrarian and pastoral strategies in a challenging but potentially productive landscape draws in a wide range of evidence (including proverbs!) to review risk as a factor in agricultural strategies. This is a good contrast with some of the more material-focused contributions in this book.
There is a good deal of quality research in *Indus ethnobiology*, but the production is patchy, especially the figures. The charcoal photographs that accompany Tengberg & Thiébault’s paper are excellent, but some other figures have clearly been scanned in, and should have been tidied up (e.g. Figure 9.5). Elsewhere, the pagination is poor: several figures and tables (including Table 4.1 which misses the text to which it refers) could have moved by a page or two.

Can archaeology in South Asia develop a distinctive agenda? *Science in archaeology* would suggest so, but also serves to warn that there is no need to re-invent the wheel. Just as *Indus ethnobiology* returns time and again to questions of endogenous development versus exogenous introduction, so archaeological science in India needs to take the best of what has already been developed outside the subcontinent, and to inspire a new generation to make the most of it.

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**Footprints of the horse-people: new research on Upper Palaeolithic France**

Paul Pettitt*


Four new publications relating to the French Solutrean and Magdalenian demonstrate admirably how new analysis of old archaeological collections with new methodologies, and in one case new excavations, can shed considerable light on enigmatic areas of Upper Palaeolithic behaviour. Emphasis on Solutrean lithic technology can often mask its artistic output, while the spectacular cave art and engraved bone and antler of the Magdalenian is often appreciated at the expense of engraved stone blocks and pebbles. These beautifully illustrated publications rectify this situation, and while they are not for a general audience, Palaeolithic specialists will find them of considerable value.

**Solutré**

For a century and half, Solutré has been an Upper Palaeolithic icon. The large collection of bifacially retouched *feuilles de laurier* excavated there was used by de Mortillet to define the Solutrean in 1869, and the chronocultural importance of a site containing all major assemblages of the Upper Palaeolithic was recognised by Breuil. The abundance of horse remains in the Gravettian ‘magma’ (a brecciated mass of horse bones), and in the overlying Solutrean and Magdalenian levels soon gave rise to the notion of horse-driving over the cliffs, which persisted for decades.

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Antiquity 79 (2005): 698–702
Archaeological accumulations at Solutré are vast, and although it is difficult to evaluate today the numerous early excavations on the plateau and slope under the cliff, a commendable understanding of accumulations over most of 30 000 years is imparted in the volume edited by Combier and Montet-White. They present the results of excavations conducted in 1968-1976 in a wider context, taking us towards a more sophisticated understanding of sediment accumulation and horse procurement/butchery at Solutré.

Eight principal archaeological levels spanning the Mousterian to Magdalenian accumulated at Solutré in two partially interdigitating slope deposits at the foot of cliffs that have been partly reworked by stream channels and other erosional phenomena. Although the excavation strategy targeted all known chronocultural phases at the site (and its vicinity, producing abundant Mousterian assemblages, detailed in the volume), Gravettian, Solutrean and (especially) Magdalenian materials stand out. In Sector J10, the Gravettian ‘magma’ was over 1m thick and seems to have been formed by complex water circulation and stream erosion, indicated by a degree of movement given by the orientation of horse long-bones. Sectors N16 and P16 yielded a rich Magdalenian fauna and associated artefacts. Here, a number of articulated elements imply that the remains have not moved far, and a degree of patterning in the discard of tools suggests that butchery areas were cleared in preparation for the next hunt. Turner’s meticulous analysis of the Magdalenian fauna shows how horse clearly dominate over reindeer, bison and wolf in the processed fauna. The presence of all stages of butchery and marrow smashing on the horse bones indicates that this species in particular was intensively exploited. The non-selective age distribution suggests that adults from family groups were the preferred quarry. Turner concludes that the tactics of horse butchery remained similar from the Gravettian to the Magdalenian, suggesting a considerable degree of behavioural redundancy at a strategic resource-procurement site. While the location seems to have been of perennial significance for horse hunting, reindeer hunting seems to have been restricted to between November and May, and bison in winter and summer.

The archaeological levels are artefactually variable. Lithics are few in all but the Solutrean levels, and organic artefacts (generally sagaies, baguettes and lissairs) are only really known from the Solutrean and Magdalenian. The greater abundance of artefacts in the Solutrean levels suggests more intensive use in this period. As the site is largely a kill site, the recovery of art mobilier from the Aurignacian, Solutrean and Magdalenian levels implies that such items were embedded in daily life. A small osseous assemblage from the Aurignacian assemblage includes three broken bâtons percés, rare in the Aurignacian. Small carved animal statuettes from the Solutrean levels recall those from the German Aurignacian, and engraved animal outlines on pebbles look forward to the Magdalenian. In the Magdalenian levels, examples of art are less numerous but more diverse, including fragmentary sagaies and engraved bones, engraved pebbles and items of shell jewellery. Some items can be equated with the Magdaléen Moyen à navettes including a phallic bâton percé.

The project succeeded in its aims of reconstructing environments and chronology for the entire sequence, and the discovery of a rich Magdalenian deposit was a bonus. Some aspects could have been treated more fully, such as a technological analysis of lithic technology, particularly of the feuilles de laurier and pointes à cran, but such omissions do not detract from an important volume on a major kill and butchery site. Two series of ^14C dates place the Aurignacian at Solutré ∼34-29ka BP; the Gravettian ∼28-24ka BP; the Solutrean ∼19.5-16.5ka BP and the Magdalenian ∼15-12.5ka BP. These samples span some 16 000 radiocarbon years and support the notion that the site was of tactical importance for short-term hunting episodes to various cultural groups over long periods of Upper Pleistocene time. Combier presents two models by which hunter-gatherers could trap migrating horses in the confines of the valley. As one of a number of lateral gorges separating the uplands of the Maconnais to the west and the Saône to the east, it seems to have been important in the seasonal migrations at least of horse and reindeer.

**Le Roc de Sers**

A very different facet of Solutrean life is presented in Sophie Tymula’s volume on the Roc de Sers sculpted frieze, one of the relatively few examples of parietal art that can be confidently attributed to this period as it fragmented and fell off the rear wall of the rockshelter into dated archaeological deposits. Sculpture is rare in Upper Palaeolithic parietal art, and, given the relative paucity of Solutrean parietal art in general, Roc de Sers is doubly important, as, in Tymula’s view, it serves as a benchmark for defining Solutrean artistic form and technique.
Abundant evidence was recovered from three main activity areas across a large part of the rockshelter and associated small cave; a rich classic Solutrean lithic assemblage bears witness to the production of feuilles de laurier, pointes à cran, burins and grattoirs. Over 52 items of bone and antler including sagaies, lissoirs and two bâtons were recovered, many bearing engraved decoration. Typically Solutrean personal ornamentation comprises pierced animal teeth (generally fox canines), shells and other pendants. Seventeen engraved stone plaquettes reflect the typical bison-horse-cervid theme of Upper Palaeolithic art, and were, like the other symbolic items, recovered under the line of the sculpted wall, reinforcing the notion that this area of the site at least functioned as a ‘sanctuary’. Horse and reindeer dominate the fauna, and all indications are that the occupation took place under cold conditions. With unsatisfying $^{14}$C dates between $\sim$19ka BP (bulked bone) and $\sim$17ka BP (AMS) which could make the art contemporary with the Magdalenian art of Lascaux and/or the Badegoulian of Abri Fritsch, the precise chronological position of the site needs clarification. Tymula’s inventive and rigorous methodology aims not only to reconstruct the original composition of the parietal frieze, but also the methods of the sculptors, demonstrating that the main artistic objective of sculpture – the interplay between form, light and shadow in the overall work – was fully appreciated by the Solutreans.

Nineteen fragments of the frieze were recovered from the archaeological levels, and a number of these refit, so as to allow a confident reconstruction of their position on the rockshelter wall. It appears that the frieze was c.10m long, and arranged in two tiers and two main ‘sides’, with enough continuity of style and theme between them to indicate that the frieze formed a compositional whole. Although the sculptures are considerably eroded, enough detail is preserved to reconstruct the manner of production. The surface of the wall was prepared by pecking, rubbing and scraping, and, in at least some places, charcoal sketches were prepared in advance. The main figures exploited the morphology of the wall and built relief around this, using bas-relief sculpture and engraving to bring out anatomical detail. At least one image was coloured with red ochre. The resulting shading and colour conveys movement, and Tymula estimates that c.70 per cent of the images are ‘animated’ in this manner. Overall, some 51 images present a degree of graphic unity. Some are large (one quarter life size), with smaller ones superimposed upon these. Over half are animals: horse and ibex dominate, followed by bison and reindeer, somewhat similar to the engraved plaquettes, presumably placed on the floor under the frieze and reminiscent of Upper Palaeolithic iconography overall. Tymula recognises two ensembles: one (western) dominated by ibex, the other (eastern) by horse, with a mutual exclusion of the two species. Although numerically not as important, bison are found in both ensembles, and in this sense bison is ‘all pervasive’. Two humanoid figures are found in the horse ensemble. Clear similarities of style and iconography exist between the sculpted frieze and the engraved stone plaquettes, as well as with the Solutrean art of Parpalló and Fournieu du Diable; these confirm a unity of Solutrean symbolic thought. Tymula’s reconstruction and analysis of this important frieze should become a standard reference for the understanding of Solutrean art, as well as for the interaction between parietal art and engraved stone plaquettes and other art mobilier.

Engraved Magdalenian plaquettes of the Périgord

Examples of engraved stone blocks and plaquettes are known in the Western European Upper Palaeolithic from the Aurignacian, but they are rare before the fourteenth millennium ($^{14}$C) BP and their number increased significantly during the Magdalenian. Despite being recognised since the 1860s, they remain enigmatic. Gilles Tosello’s volume presents a major analysis of plaquettes from the Middle ($\sim$14-13ka BP) and Late ($\sim$13-11ka BP) Magdalenian of the Périgord, and this exhaustive work takes us much further into understanding the dynamics of these pieces. The study is based on over 400 examples from critical sites such as Limeuil, La Madeleine and Laugerie Basse, supplemented by six other sites. After discussing each site in detail, Tosello’s synthetic analysis covers the form of supports, compositional framing, subject matter, style, context, associated fauna and art on bone and antler. Similarities in these realms between sites demonstrate a functional continuum, with some change between the Middle and Late Magdalenian. In the Middle Magdalenian (a sample largely comprising La Madeleine and Laugerie Basse, supplemented by Teyjat), horse clearly dominate, followed by bison and reindeer. Iconography is very figurative, albeit with inept animation. Homogeneity between sites in the Périgord and elsewhere (particularly the Pyrenees) is clear. Although objects of bone and antler contained a relatively high degree of geometric decoration, absent on the plaquettes and
probably dictated by the form of the osseous media, horse dominates again among the figurative art. Parietal parallels for the Middle Magdalenian are numerous, and again the dominance of horse is clear. The sculpted frieze at Le Cap Blanc is very close thematically, dominated by horse, with bison and cervids (probably reindeer) the main species depicted. Tosello’s wider comparisons of lithic and osseous art mobilier and parietal art demonstrate a considerable ‘common inspiration’ across all of these media and contexts, and emphasise how robust the belief systems underpinning the art were.

Tosello’s Late Magdalenian sample is largely taken from Limeuil and the upper levels of La Madeleine, supplemented by the Grotte des Eyzies and Le Soucy. He notes a high degree of fragmentation of the plaquettes – more so than in the preceding sample – and develops a complex chaîne opératoire, from engraving, heating, fragmentation, frequent re-use (re-engraving), to further fragmentation and discard. Clearly, the plaquettes cannot be interpreted as having a brief use life; whatever their function, it took a complex form and was embedded in the complex spatial dynamics of large-site occupation. Reindeer become the dominant species depicted, followed by horse. Engraving is confident and a small number of depictions are animated more competently than in the Middle Magdalenian. Figures were carefully ‘framed’ within their support (showing an intimate association between support and depiction) and a ‘floor line’ was often drawn below the hoofs of left/right facing animals. Tosello argues convincingly that animals drawn ‘vertically’ above such horizons represent animals running towards or away from the viewer, and interprets this as the deliberate depictions of herds and the action of individuals within these. Clearly, these are highly composed, active pictures, not simple individual depictions. Horse still dominate the associated osseous art mobilier, on which fish (very uncommon on the plaquettes) are almost as important as reindeer. These differences suggest something of a growing (and to Tosello, profound) divergence between the plaquettes and art on functional and decorative organic items. More widely, art mobilier on stone and parietal art sees the growing importance of stylised human females and the retention of horse and reindeer as important themes, intriguing examples of the specifics of the divergence between the media.

A number of enigmas remain. Why are indeterminate animals relatively common? Do these represent simply ‘badly drawn’ animals, or imaginary beings rooted in the Magdalenian imagination? The complex chaîne opératoire of the plaquettes seem to have obliterated any potential spatial patterning, so it may be rash to eliminate Leroi-Gourhan’s suggestion that the plaquettes delineated special areas – his ‘plaquette sanctuaries’. It is tempting at least to emphasise that, unlike parietal art which must be composed before execution, the plaquettes are by their very nature moveable, and therefore the possibility of rearrangement exists. Their apparently complex movement around major occupation sites suggests that their role(s) in Magdalenian life were spatially embedded in more prosaic activities, an all-pervasive mediation between the multiple aspects of the Magdalenian mundane and spiritual world. Tosello’s painstaking work is an excellent example of how large collections of material can yield fresh and innovative insights into poorly understood aspects of Upper Palaeolithic behaviour. Beautifully illustrated (if expensive), this volume provides an important conceptual link between parietal art, lithic and osseous art mobilier, faunal assemblages and spatial organisation of sites. The degree of homogeneity between these categories is testimony to the conceptual unity of the Magdalenian world over vast distances.

**Le Rocher de la Caille**

Engraved plaquettes dating to the Late Magdalenian link Tosello’s work with the welcome publication of the Late Upper Palaeolithic site of the Rocher de la Caille by Huguette and Louis Deloge. This is one of a number of Palaeolithic sites in the Saut-du-Perron, on the left bank of the Loire close to where it enters the plain of Roanne. Remains of a substantial Magdalenian site were excavated there in 1979-1982, before the area was flooded. Similar in nature to the Middle and Late Magdalenian open-air camps of the Paris Basin, the Rocher de la Caille seems to date entirely to the first half of the Late Glacial Interstadial. It comprises a primary activity area of some 30m² defined by lithics and probably representing bladelet production around three large hearths spaced about 4m apart. Burins too were manufactured, but were discarded, presumably after use. Ochre was abundant in the primary activity area. Excavated materials covered some 112m², and within this area, large blocks of stone deposited by solifluction formed other loci for activity. Cobble of volcanic rock were scattered across the site and appear to have served as hard hammers, mallets for the working of organic material, and possibly pestles for grinding vegetal matter. The primary activity area also produced 29
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fragments of stone bowls, generally of steatite, eleven with engraved decoration. At least two of these served as lamps and were associated with hearths, while most appear to have served as containers, probably for mineral pigments as indicated by spectrographic residue analysis. Some 18 400 lithic items were recovered, of which 1479 are formal tools on high quality locally available flint. Numerous examples of manufacturing waste and blade/bladelet cores attest production on site. A considerable degree of typological variability is not surprising, given that the site appears to have been a major camp site. Retouched blades and bladelets dominate, particularly lunate, straight and obliquely truncated forms. Some of the latter are strikingly similar to northern European Cheddar/Creswell/Tjonger points; this is not surprising, as the one \(^{14}C\) date for the Rocher de la Caille (12 210 \(\pm\) 480: Ly-5645) is contemporary with the British and Belgian Late Magdalenian (‘Creswellian’). Burins are particularly diverse in form, presumably because various organic materials were worked. A large number of perçoirs and microperçoirs, some of which are stained with ochre, attest to the boring of hides or hard animal tissue, and a number of fragmentary pièces esquilles hint at heavy duty tasks.

The Late Magdalenian community of the Rocher de la Caille was part of a far-flung procurement network characteristic of the period. Although many raw materials of volcanic stone could be (and were) acquired within 10km of the site, flint, which does not outcrop in the gorges of the Loire, was obtained from sources between 5km and 40km distant, and some 66 per cent of the flint assemblage was obtained from the Paris Basin, some 200km further north. The abundance of Paris Basin flint on site, the derivation of a fossil ammonite from at least 70km to the northeast, the general similarity of the site to Late Magdalenian sites of the Paris Basin, and typological similarities of lithic armatures with those of the Late Magdalenian of northern Europe in general, together suggest that the Rocher de la Caille represents a southern extension of groups operating further north. In the primary activity area and at its southern periphery, 40 fragments of engraved schist plaquettes were recovered. In terms of production and style they fall easily within the Middle and Late Magdalenian, as defined in Tosello’s volume: they are strikingly similar to those of La Madeleine and Laugerie Basse. Most depictions, since on fragmentary supports, are partial and show a clear similarity with the chaîne opératoire described by Tosello; and, in keeping with the \(^{14}C\) date for the site, itself in line with the Middle Magdalenian of the Périgord. Clearly, the engraving of plaquettes, their use, fragmentation, potential re-use and final discard was not an activity restricted to rockshelters and cave mouths. The data provided by the Rocher de la Caille forms an important geographical and conceptual link between the rockshelter dominated assemblages that Tosello studied, and the large samples from contemporary Middle/Late Magdalenian sites at Gönnersdorf and Andernach.

Whether habitation structures were present at the Rocher de la Caille remains an open question, but the repeated use and resulting fragmentation of engraved blocks and plaquettes was clearly a very widespread phenomenon in the Middle and Late Magdalenian. While regional differences in lithic typologies may relate to locally contingent hunting strategies, these plaquettes present evidence of the uniformity of Magdalenian practice across wide areas of Europe. Given the nature of these pieces, it is difficult to escape a ‘ritual’ interpretation, and if this is correct, it attests a degree of uniformity of Magdalenian belief.
Near Eastern monumental reports

Michael Roaf∗

Margarete Van Ess. Das Eanna-Heiligtum zur Ur
III- und altbabylonischen Zeit (Uruk Architektur II:
von der Akkad- bis zur mittelbabylonischen Zeit Teil
1) (Ausgrabungen in Uruk-Warka Endberichte 15,1).
Text, Tafeln: xv+388 pages, 53 figures, 69 tables,
67 plates, Beilagen: 40 folded drawings of plans and
sections. 2001. Mainz: Philipp von Zabern; 3-8053-
2812-5 hardback € 134.80.

David Oates, Joan Oates & Helen Mcdonald.
Nagar in the third millennium BC (Excavations at Tell
for Archaeological Research & British School of
Archaeology in Iraq; 0-9519420-9-3 (ISSN 1363-
1349) hardback £95 & US$150.

These two long and heavy books (each more than
400 pages long with numerous illustrations and
together weighing in at rather more than
7kg) are volumes in a series of final reports
on the excavations of two of the most im-
portant archaeological sites in the
Near East, both of which have been in-
vestedigated over many years.

Uruk

Uruk (modern Warka) in southern Iraq, often
acclaimed as the first city and the place where writing
and civilisation were invented, has been excavated by
German teams during more than 25 field campaigns
since 1912. The results were promptly published in
considerable detail in preliminary annual reports. The
first of the volumes of final reports, Ausgrabungen
in Uruk-Warka Endberichte (or AUWE) appeared in
1987, of which the volume under review is the first
part of the fifteenth volume. Twenty volumes of this
series have been published to date and a further five
at least are scheduled to appear over the next few
years.

This volume deals with the architecture of the Eanna
Temple dedicated to the goddess Inanna during the
Third Dynasty of Ur and Old Babylonian periods
c. 2100-1600 BC. The other architecture of this
period will be published in Volume 15 Part 2, also by
Margarete van Ess, and other volumes dedicated to
the architecture of the site have either appeared or are
in preparation.

The first part of this publication describes the
architectural remains discovered. The heart of the
building complex was the Ziggurat built by Ur-
Namma, the founder of the Third Dynasty of Ur. This
was a temple constructed on a series of diminishing
rectangular terraces with access to the now completely
eroded temple building by three staircases on the
northeastern side. The ziggurat was surrounded by
various courtyards which were modified in the course
of the following centuries. The detailed descriptions
of the architectural remains are complemented by
a sketch of the architectural development during
the Third Dynasty of Ur and the Old Babylonian
period. Particularly interesting are the discussions of
the metrology and planning of the buildings and
the comparisons with the other ziggurats built by
command of Ur-Namma in Ur, Nippur, and other
cities of southern Mesopotamia.

The building and votive inscriptions (including some
predating the Third Dynasty of Ur) are listed and
discussed, as is the evidence for building history and
for chronology, obtainable from other finds such
as inscribed clay tablets, ceramics, terracottas and
cylinder seal impressions. The detailed publication
of these finds will eventually be found in the other
volumes of the AUWE series.

The majority of the small finds and pottery found in
the course of unearthing the architectural remains are
not treated here and the reader will have to consult
other AUWE volumes if further details about the
inscribed clay tablets, cylinder seals and impressions,
pottery, beads, terracottas or other small finds are
needed. It is not always easy to track this information

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down, as the volumes are sometimes divided by material (stone, metal, glass, etc.), sometimes by category of find (terracottas, beads, etc.) and sometimes by whether they are stored in the Vorderasiatisches Museum in Berlin or not. For other finds one must go back to the preliminary reports, a task made somewhat easier for the seasons before 1977 by the concordance prepared by Uwe Finkbeiner (1993).

Tell Brak

The second volume under review is an excavation report conceived and constructed very differently: here, all the relevant evidence from the excavations and analysis of the finds has been gathered in one volume and described by 31 different contributors to give a comprehensive picture of the results.

Like Uruk, Tell Brak (ancient Nagar), in eastern Syria, has been excavated during more than 25 campaigns, three directed by Max Mallowan before the Second World War, 23 directed by David Oates since 1976, the latest of which have had successively Roger Matthews as Field Director, and Geoff Emberling and Helen McDonald as Joint Field Directors. The volume under review is the second in the series Excavations at Tell Brak, the first of which dealt with the evidence from the second millennium BC. This volume reports on the third millennium levels of the 14 seasons of excavations undertaken between 1976 and 1993. The three successful seasons for which Roger Matthews was field director have been published separately in the series (R. Matthews 2003). Preliminary reports on the third millennium levels excavated since 1998 can be found in the journal Iraq, while a further volume on the earlier periods is in preparation.

Tell Brak, or ancient Nagar, reached its highpoint in the middle of the third millennium, when it was the centre of an independent kingdom whose reputation stretched far and wide. This is reflected in the astounding architecture of the temple areas, the most impressive remains excavated by David and Joan Oates. The remarkable preservation is largely due to the fact that these building complexes were intentionally filled during the Old Akkadian period (c.2300-2100 BC according to the traditional ‘Middle Chronology’, which is clearly in need of revision). Associated with the closure of the buildings, the excavators had the good fortune to discover several rich hoards of metal and jewellery as well as the skeletons of donkeys, apparently sacrificed as part of the ceremonies carried out at various stages of the closure of the temples.

After a discussion of the geographical situation of the site, a chapter is devoted to the description of the excavations and the architectural remains. As the authors acknowledge, constraints of space have meant that much information has been summarised. The following ten chapters of the book, like the volumes of the AUWE series, discuss different categories of finds, such as inscriptions, seals and seal impressions (some of which are discussed in greater detail in D. Matthews 1997), pottery, glass, frit and faience objects, beads and pendants, metalwork, stone objects, clay objects and organic artefacts. The excellent chapter on pottery by Joan Oates is based on the evidence of complete or almost complete vessels, 1790 of which are illustrated in drawings. As the author rightly stresses (p. 151) the publication of well-preserved vessels from well-defined contexts is much more informative than numerous drawings of fragmentary sherds, whose shape, orientation and context are uncertain. These chapters also contain a number of scientific analyses of the pottery, glass, glazes and metalwork. The separation of the finds into different categories makes it difficult to reconstruct easily the finds from particular contexts, for example those from individual hoards. Furthermore there is no concordance or index to enable such a reconstruction, unlike the detailed indexes and concordances in the AUWE series.

Two chapters summarise the results of the study of the botanical and faunal remains and a third, by Wendy Matthews and others, describes the results of the microstratigraphic analysis, a method at least partly pioneered at Tell Brak. This chapter also includes a section by Marie-Agnès Courty on the controversial interpretation of glassy exogenous dust particles in mid third millennium levels which have been interpreted as the result of volcanic activity or of asteroid impact.

The final chapter attempts to place the archaeological finds in their historical context. While the evidence is clearly stated and discussed, some of the conclusions may be disputed. For example the closure of the temples may well have taken place during the early part of the Old Akkadian period, but there is no clear evidence that it was carried out by officials of the Akkadian king (p. 390) or indeed that Brak was part of the Akkadian empire at that time; it seems more probable that the monumental buildings were both built and ritually closed at the command of
the independent rulers of the kingdom of Nagar. Similarly, the interpretation of a breed of equids, for which Nagar was particularly renowned, as a hybrid between donkeys and onagers (pp. 286, 381) is most unlikely, as zoologists doubt the possibility of getting the two breeds to mate. An alternative proposal would be that these are early examples of mules, even though horse bones have not yet been identified from relevant levels in Syria.

Both these books are beautifully and carefully produced and richly illustrated. Both contain an immense amount of primary data arranged systematically. The volume on the architecture of the Eanna temple complex at Uruk will be consulted for many years to come. The wider range of material contained in the Brak volume as well as the decision to include only the most important data mean that it is more accessible and many readers will find it more interesting.

References


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**Long-term change in prehistoric Cyprus**

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The study of the archaeology of Cyprus has progressed in recent decades from being considered a poor relation of its Aegean and eastern Mediterranean neighbours to becoming a rich and dynamic field. This is highlighted by two recent books which make extremely valuable contributions to Cypriot archaeology and should also be of interest to a wider audience. Both present overviews of the island’s prehistory and set themselves the task of constructing narratives for long-term social change.

**Prehistoric Cyprus**

Louise Steel’s *Cyprus Before History* serves both as a comprehensive introductory text for students of Cypriot archaeology and as a well-referenced source for archaeologists working in Cyprus and the wider Mediterranean, who wish to explore beyond their particular field of expertise. As noted in the introduction, an updated overview of Cypriot prehistory is long overdue. New data from recent excavation and survey have challenged many preconceptions, and given rise to a range of explanations, which will no doubt change as work on the island continues.

Steel’s volume incorporates recent fieldwork, survey and theory, both particular to Cyprus and to archaeology in general, to provide an outline of Cypriot prehistory from the first evidence of humans in the epi-Palaeolithic through to the end of the Late Bronze Age, in c. 1050 BC. The author strikes a balance between presenting the data in a manner accessible to non-experts and with sufficient detail to highlight...
contentious issues within the field, exposing the often conflicting views current in Cypriot archaeology and giving the reader the choice to further pursue the extensive references.

Chapter 1 outlines the geography and resources of Cyprus and provides a brief history of research on the island, which is of importance as the typologies and relative chronological constructs of the late nineteenth and early twentieth centuries prove increasingly difficult to tie in with new data. Steel gives an account of the various problems particular to the interpretation of Cypriot prehistory; settlement shift through time resulting in a lack of multi-period sites combined with tombs often in use for hundreds of years, and pronounced regional differences in material culture previously interpreted as signalling chronological sequences. The remainder of the book is organised thematically by culture-historical periods, highlighting aspects of production, economy, use of space, ritual, social organisation and characteristics of material culture in the different phases. Tables, site plans and illustrations of various type artefacts are included.

Steel emphasises recent attempts to move beyond a traditional ‘passive’ role for the prehistoric inhabitants of Cyprus during significant changes in lifeways and the need to find a balance between explanations involving the influences of newcomers with indigenous developments. The earliest known permanent settlers on the island are now dated to around the ninth to early tenth millennium BP and show connections with the Early Pre-Pottery Neolithic B of the mainland. It has also become apparent that the transitional period between the Chalcolithic and the Early Bronze Age (the Philia phase) is best interpreted as a combination of indigenous developments and migrant populations. Important excavations of Early to Middle Bronze Age settlements currently indicate that a non-hierarchical village-based society continued to exist throughout the period, contrasting with an increase in variability of amounts of copper-based artefacts deposited in tombs. Several important Late Bronze Age sites have increased our knowledge of the latter second millennium BC but the earlier phases of the Late Bronze Age are unlikely to become clear until well-preserved settlement strata from the beginning of the period can be found. Given the gaps in the data, it is not possible or desirable to construct an authoritative narrative of Cypriot prehistory at this time and Steel’s balanced approach is appropriate.

Bronze Age Cyprus

Priscilla Keswani’s publication, Mortuary Ritual and Society in Bronze Age Cyprus, is a welcome move beyond the still-prevalent focus on tombs merely as repositories for grave goods. The book is an indispensable tool for anyone attempting to come to terms with the extremely complex and highly variable resolution of the Cypriot mortuary record. The data set comprises over 1500 tombs from around 45 sites over a period of 1500 years; information is detailed in extremely useful appendices listing all excavated tombs, along with references to publications at the end of the volume.

Due to an early archaeological focus on recovery of tombs and their contents, the mortuary record of Cyprus is in many respects more comprehensive than the settlement evidence. However, as the author points out in Chapter 3, archaeologists are faced with several problems in interpreting tomb material. These include the less than ideal conditions on Cyprus for preservation of both the tombs and their contents; multiple inhumations contained in tombs which were often in use for hundreds of years; the vagaries of archaeological reporting of osteological information as well as find contexts; and the ongoing problems of destruction of context through looting and the rapid pace of development on the island.

The first part of the volume outlines the theoretical framework, discussing changing perceptions in archaeology of the significance of variability in mortuary studies, particularly from processual to post-processual interpretations. The tomb data are divided into two phases that correlate with the broader picture for social organisation attested in the settlement record. The first of these, the Early and Middle Bronze Ages (c. 2400-1750 BC), encompasses the period during which the use of extramural cemeteries first became widespread on Cyprus. During the Late Bronze Age (c. 1750-1050 BC), existing inland villages were abandoned and new coastal settlements established, rapidly developing into polities. The period also saw a partial return to intramural burial practices. Keswani emphasises the importance of situating the role funerary ritual played within the living society in order to examine ‘how ritual practices may be deployed and transformed in situations of economic intensification and increasing political complexity’ (p. 2).

Given the difficulties inherent in fine-scale interpretation of individual tomb groups, Keswani’s approach
Review

is successful in providing a broad view of changes in Cypriot society, particularly when integrated with the settlement evidence. Although the wealth of Cyprus’ copper resources has long been assumed to be instrumental in the transformation from insular, small-scale communities to an important member of the Late Bronze Age Mediterranean trading system, this work goes a long way towards providing a convincing thesis regarding some of the mechanisms for this change. In Chapter 4, Keswani outlines the theory that increases through the Early-Middle Cypriot period in the importance of copper as a medium for competitive status display in the mortuary arena stimulated production by the Cypriot population. This, rather than the material’s more prosaic qualities, may have led to greater visibility of the resource to outsiders, leading to further demand for extraction for export and eventually to a demand for tin for manufacture of bronze and for other exotic goods on Cyprus. Keswani disagrees with the standard interpretation that the apparently wealthier burials are indicative of an institutionalised elite and argues that social status remained fluid until into the Late Cypriot period, when wealth and exotic goods become concentrated in coastal centres (p. 142-3).

Of particular importance is the discussion of the significance of collective burial and the possible evidence for rituals and funerary ceremonies enacted by the living. Keswani identifies several instances of secondary reburial in the data set, including deliberately emptied tombs, movement of goods and individuals between mortuary facilities and selective deposition of body parts in tombs. Incomplete or disarranged skeletal material (where recorded by the excavator) has previously been attributed to looting or post-depositional factors, or in several cases for the end of the Middle and beginning of the Late Bronze Age, to ‘mass burials’ interpreted as evidence for warfare or epidemic (p. 49). Keswani draws a convincing picture of secondary ritual to support her view of the centrality of funerary display to the development of competitive prestige systems during the Cypriot Bronze Age.

Keswani presents a compelling case for moving beyond interpretation of ‘prestige goods’ towards a more holistic approach incorporating the actions of the living in reconstructing society from mortuary practices. In her epilogue, Keswani outlines the need to implement methodologies to deal comprehensively with the recovery and recording of mortuary data. It is to be hoped that her recommendations are followed, particularly as the majority of Cypriot tombs now investigated have already been partially disturbed by bulldozers or looters.

The archaeology of the Sussex landscape

David Hillelson*


Two recent volumes, edited by David Rudling, director of Archaeology South-East, help to set the agenda for archaeological fieldwork in Sussex and the Weald for the next decade. The Downland settlement volume brings to a close an era of archaeological fieldwork that predates PPG16 and the Design Manual for Roads and Bridges (the Department of Transport’s bible for highway construction), which together make archaeology an integral part of the development process. The Archaeology of Sussex volume draws together the knowledge gained over a generation of rescue and developer-funded fieldwork, and focuses the priorities for the next generation of research.

Downland settlement

The archaeological importance of the chalk downland landscape crossed by the 15km Brighton Bypass route

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ANTIQUITY 79 (2005): 707–709
was recognised by English Heritage, which provided funding for two seasons of fieldwork in 1989 and 1990, and for the subsequent post-excavation analysis and report writing.

The whole project, rather than being a reactive salvage operation undertaken at the whim of the road builders, was built on a solid foundation of earlier fieldwork in the area, focused largely on settlement sites. The opportunity provided by a linear swathe cut through the countryside to the north of Brighton was to move beyond the study of individual sites to a consideration of the landscape as a whole. Moreover, this was a landscape with a high proportion of pasture land, much of which had not been ploughed since Roman times, and which offered the potential of excellent preservation both of settlement and palaeoenvironmental evidence. Thus a comprehensive research framework was drawn up, based on the holistic investigation of chalk downland settlement and land-use, from the Mesolithic to the present day.

The present volume consists of a synthesis of the work along the bypass route. This includes the excavation of a number of lynchet sections and dry valley bottom transects; the investigation of an area which had previously yielded an important assemblage of Mesolithic and later flintwork at Redhill; excavation of a nationally important block of prehistoric fields at Eastwick Barn; and the excavation of the previously unknown Late Bronze Age settlements at Mile Oak and Downsview. Summaries of excavations at two Bronze Age settlements, Varley Halls and Patcham Fawcett, have also been included, on the basis of their location and their relevance to the present study, although they did not form part of the works on the actual route. The same applies to the summary of the work at Sweetpatch Valley Bottom.

This volume has achieved its purpose of integrating the study of settlements, field systems and colluvial sequences. It builds on, and consolidates, the long history of archaeological work, both professional and amateur, in the Brighton area. The work on the Brighton Bypass has proved a significant advance in our understanding of the prehistory of the South Downs, and has much wider implications for similar chalk downland regions beyond Sussex. In particular, the extent of Later Bronze Age activity in the Brighton area is very important for our understanding of landscape use and social change during this period. The extensive investigation of lynches and colluvium has also helped us to develop an understanding of the character and date of the prehistoric field systems, the subject of pioneering fieldwork by earlier archaeologists in this area.

The archaeology of Sussex

A volume of twenty papers, *The Archaeology of Sussex to AD 2000*, represents the proceedings of a conference held in 1997 whose aim was to review the archaeology of Sussex from both chronological and thematic perspectives. The conference itself built on an earlier symposium, held twenty years previously, which considered the county's archaeology up to AD 1500, and which was the inspiration for many similar county overviews around the south-east of England. The changes in the structure and funding of archaeology in the 1980s and 90s, and the explosion of archaeological fieldwork resulting from the commercialisation of the profession in the last decade, all prompted the need for an update to the county overviews, in order to revise and expand the earlier work, and to create frameworks for future fieldwork and research.

The first fifteen papers appear in chronological order. However, a number of these look at particular themes within their period, such as a paper by Robin Holgate on the Upper Palaeolithic and Mesolithic periods, focusing on sites which provide environmental, faunal and botanical, as well as artefactual remains. Malcolm Lyne's study of the pottery supply to Roman Sussex considers the ceramic distinctions between the western and eastern halves of the county (as divided by the River Adur) which persisted throughout the Roman occupation.

The remaining papers are thematically based. They include Tristan Bareham's overview of the recent churchyard recording programme undertaken in Lewes, which discusses the research implications of the work, and seeks to extend the work over a wider area. Elizabeth Somerville applauds the advances in environmental studies since 1977 and the development of models of environmental continuity and change. She regards the continued documentation of environmental change from prehistory to the present as a significant challenge, and highlights the integration of palaeoenvironmental and documentary data for the historic periods as an essential element in future research.

Although the individual papers deal with a wide variety of themes, they all take the current state of knowledge, based on present and past fieldwork and research, as a starting point. For example Paul Garwood's comprehensive review of the funerary
traditions of the late Neolithic and Bronze Age compares the number of standing Sussex barrows recorded by Grinsell in the late pre-war years to those surviving today. He draws attention to the scale of lost data resulting from modern intensive agriculture, and points out that 70 per cent of the standing Sussex barrows have been either destroyed entirely or flattened by ploughing, and the same attrition can be extended to old land surfaces, ditch deposits and deep grave contexts.

A number of papers also consider the potential for further research, including two papers on particular aspects of medieval development across Sussex. Mark Taylor examines the growth and decline of monastic sites between the late seventh century and the Dissolution. Little opportunity has presented itself for the archaeological investigation of such sites, although a number of recent development-led projects have been carried out, and considerable scope exists for further research. Similar constraints exist with regard to the study of castles in the county. Most archaeological fieldwork on such sites has been focused on understanding the origins and evolution of individual sites. Richard Jones’ paper seeks to highlight research issues which will increase our understanding of their function by considering the post-Conquest development of castles in providing a network of linked and interdependent fortifications across the county.

The conference provided an important forum for both professionals and amateurs to consider the state of archaeological research in Sussex at the close of the twentieth century. It represented an important springboard for the future formulation of countywide research agenda; it is therefore unfortunate that the proceedings volume has taken so long to emerge. It is also unfortunate that the opportunity has not been taken to re-edit the individual conference papers into a coherent format that would allow such agenda to be readily drawn up. While both circumstances may be entirely understandable, given the pressures under which most of the archaeological community functions, it is to be hoped that a companion volume might promptly be made available, which sets out these agenda period by period and theme by theme, and links them regionally. In this way, the legacy of the conference and of this volume would be to ensure that the whole of Sussex's archaeological community is moving in the same direction at the start of the twenty-first century.