

The Institute of Archaeology research teams at Çatalhöyük

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This is the first in a series of articles to appear in Archaeology International highlighting the Institute of Archaeology's involvement in the Çatalhöyük Research Project. In this first piece, the Institute's teams are introduced and their research areas briefly outlined, with the aim of showing the range of work that Institute researchers and students undertake. Future issues of Archaeology International will provide a forum for individual teams to expand on their results from Çatalhöyük.

The current excavations at Neolithic Çatalhöyük East under the direction of Ian Hodder began in 1993 (Fig. 1). The 9000 year old settlement in central Anatolia is well known for its extensive occupation area (about 13 hectares), its regular mud-brick architecture with entrances through flat roofs, the under-floor burials, and particularly its rich repertoire of art and symbolic installations inside buildings. The site is key to understanding early mixed agricultural settlement and the origins of settled life. The overall aims of the project since the 1990s has been to situate the unique art in its full environmental, economic, social, and cultural context.

In order to achieve these goals, a large international team has been undertaking excavations in four main areas of the site (Fig. 2) and there is also further work on late Neolithic/Chalcolithic Çatalhöyük West. The South area is where Mellaart focused his excavations in the 1960s¹ and here the current project has worked down to the earliest levels of occupation, and also excavated outwards, linking in to Mellaart's sequence. The team from Poznan (TP) has focused on a summit area of the mound, uncovering later levels. The Istanbul University team (IST) are exploring the southeast mound edge, while the 40x40 metre open-area excavation allows for broader exposure of later levels to fit with the aims of the current research phase (see below). The 4040 area in Fig. 2 incorporates the North and BACH (University of California at Berkeley at Çatalhöyük) areas.

In April 2007 the UK base of the Çatalhöyük Research Project relocated from Cambridge University to the Institute of Archaeology, UCL, "a home-coming" to the Institute where James Mellaart lectured, and indeed where Ian Hodder first learnt about Çatalhöyük from Mellaart's lectures, as an undergraduate student between 1968 and 1971.

The Çatalhöyük Project is now in its third major phase of work leading to publications. The first phase (1993–95) included examination of the surface of the site, prospection techniques and evaluation of where to focus

future work, plus a re-examination of some of the material from Mellaart's 1960s excavations. The second phase (1995–99) concentrated on developing methodologies and the excavation of

individual buildings to understand their construction, occupation and closure. The current phase of the project (2003–08) aims to explore the social geography of the settlement and larger community structure, asking questions such as how were production, social relations and art organized beyond the domestic unit? How did organization develop over time? Does the social geography of the site involve groups of houses clustered around dominant houses, or is all social and economic life decentralized and based on equivalent domestic units of production? In order to address these questions, the project has moved beyond the detailed analysis of individual buildings, and is now focusing on analysis of large



Figure 1 The new shelter constructed in 2008 over the North area of Çatalhöyük (including the 4040 Area); the shelter was designed by Atölye Mimarlık in Istanbul and serves to protect the archaeological remains and to become a display area for the public

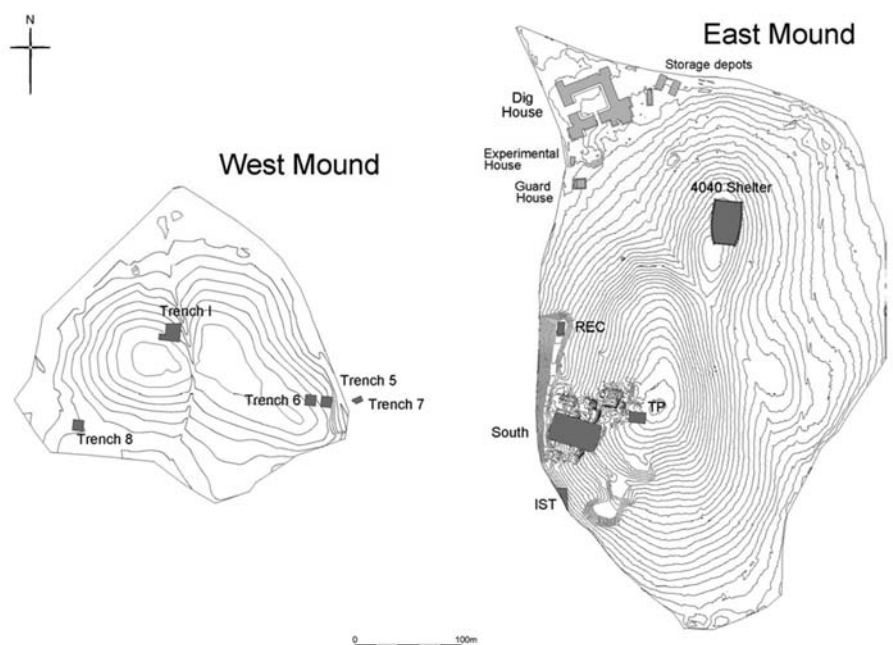


Figure 2 Plan of Çatalhöyük East and West mounds, showing excavated areas on the East mound mentioned in the text (South, TP, IST and the 4040 area)

“neighbourhood” areas. Larger areas of the site, such as the 4040 Area, have been opened up to allow exploration of overall community structure, and so that larger numbers of buildings can be put on display for tourism.

The project has so far produced six volumes in the Çatalhöyük series plus numerous other publications.² The next series, with the results of the third phase of excavations, is due to enter production in 2010.

Institute of Archaeology staff head several of the research teams at Çatalhöyük (Conservation, Ground Stone, Beads, Human Remains); there are four current PhD research projects based on material from the site, and the Çatalhöyük Field Director and Project Administrator, Shahina Farid, runs the year-round post-excavation and administration of the project from the Institute building, in addition to her own collaborative research project on the chronology of the site. Many Institute students gain the opportunity to participate in the excavations, and undertake valuable on-site training.

Chronology and dating

Shahina Farid has been working with Alex Bayliss (English Heritage) and other members of the team on a new C14 dating project entitled *Interpreting Chronology at Çatalhöyük*. The programme will span the entire sequence of the east mound, and combine the radiocarbon dates with the stratigraphic sequence using Bayesian modelling. For two years work has focused on a detailed assessment of suitable sequences of samples from the recent excavations, and a pilot series of samples was submitted for dating in May 2009 (Fig. 3). Work will now refocus on the 1960s archive, before an overall sampling strategy is finalized for implementation in 2010.



Figure 3 Alex Bayliss (English Heritage) and Shahina Farid (Çatalhöyük Field Director) assessing contexts for C14 sampling



Figure 4 Cattle horncores set in plaster in the burnt Building 77, 4040 Area



Figure 5 Painting around the edge of a burial platform in Building 49 in the 4040 Area

Conservation

Liz Pye oversees the Conservation team at Çatalhöyük, and UCL PhD student Duygu Çamurcuoğlu Cleere heads the purpose-built field conservation laboratory and the field conservation. The Çatalhöyük project offers the opportunity for conservation to be embedded into the excavations and presentation of the site for display. The team deals routinely with the conservation of excavated materials (human bone, animal bone, pottery, clay and metal objects), but the site also offers particular challenges in the form of the mud-brick structures, architectural plaster installations and wall paintings (Figs 4 and 5). Some features, such as the bucrania in Building 52 and cattle horncores set into plaster in Building 77, both in the 4040 Area, have undergone preservation *in situ* for public display. In another case in 2008, the team lifted a section of a unique

mud-brick wall border with a spiral motif from the TP area, which required laboratory treatment. Another ongoing project is the monitoring of Building 5, a completely excavated structure selected for display,³ which was reburied while a large protective shelter was constructed, and then re-opened for viewing. Each year, UCL conservation students participate in the Çatalhöyük field season, undertaking a variety of specialist projects (e.g. producing guidelines for the treatment and storage of human remains, investigating salt build-up in mud-brick wall conservation).

Wall paintings

Investigating the famous art at the site has become the research avenue for a UCL PhD candidate: Duygu Çamurcuoğlu Cleere's AHRC funded doctoral study is entitled “Wall paintings: materials, technology



Figure 6 Conservator Duygu Çamurcuoğlu Cleere conserving the red painted wall section in the 4040 area

and artists". Her research focuses on the raw materials and technology of the wall painting (both from the current and 1960s excavation), the social meanings of wall painting production within the Neolithic community, as well as the implications for 21st century conservation practices (Fig. 6).

Human remains

As co-leader of the team studying the human remains at Çatalhöyük, Simon Hillson directs a group of researchers and UCL students in investigating the nature of the Neolithic community in terms of its structure, health, diet and activities.

The practice of burying the dead beneath platforms in the house floors at Çatalhöyük (Fig. 7) allows for detailed spatial analyses of patterning, both within

and between households, including variations between age and sex groups, and through time. Variations in burial practice – why some burials are individual, others multiple, some later disturbed and others not – are also an avenue for exploration.

Other research undertaken by the team includes recording tooth morphology as a means of investigating biological relationships, using skeletal morphology, to reconstruct patterns of activity and collaborating (with Jessica Pearson, Liverpool University) with stable isotope analyses for reconstructing diet.

The UCL group has focused in recent years on ensuring that there is a full database inventory for all excavated skeletons (1020 maximum but this includes isolated bones) to enable future analyses.



Figure 7 Excavation of a burial in a typical Çatalhöyük platform beneath a house floor

Simon Hillson and colleague Başak Boz (Thrace University) have been undertaking a detailed study of dental pathology of the Çatalhöyük population. So far, they have recorded an interesting range of dental conditions, in particular combining heavy tooth wear with common dental caries (decay). Analysis of this dental health record will add to the discussion of the Neolithic diet. UCL PhD student Emmy Bocaega has also just started a detailed microscopic study of the record of childhood growth provided by the Çatalhöyük teeth.

Beads and personal ornamentation

Katherine (Karen) Wright leads the team researching the beads and personal ornaments at Çatalhöyük and supervises Roseleen Bains, a PhD student undertaking research on the topic at the Institute.⁴



Figure 8 Burial of a juvenile, c.12 years of age with white marble disc beads near the neck area

The Çatalhöyük excavations have produced a large assemblage of stone beads. The emphasis is on the social and symbolic significance and interplay between materials, technologies and typology and the use of personal ornaments to create social identities via the human body as a medium of expression and social negotiation. The research goals are to determine their social significance, as related to social and individual identity, trade, adornment and the body, as well as to address questions of craft specialization.

The personal ornaments derive from different kinds of contexts: burials, discard contexts and production areas. Research so far shows that most stone beads come from burials (e.g. Figs 8 and 9), and there



Figure 9 The same burial as shown in Fig. 8, showing stone beads uncovered underneath the skull

appears to be wide variation in access to, or use of, raw materials (e.g. marble, apatitic limestone and carnelian) from one household to another. With its well defined architectural units, Çatalhöyük lends itself to a suite of questions reliant on contextual analyses at the household level. The team is currently researching variations from house to house, with a particular emphasis on identifying techniques and areas of production. The bead-making process, including the acquisition of raw materials and the manufacture of the objects, is being closely examined. In 2007, the excavation of a possible red limestone bead workshop in Building 75 (South Area) provided the first major evidence of an *in situ* stone bead manufacturing area at Çatalhöyük, while other houses so far have revealed comparatively little evidence for manufacturing.

In addition to choice of materials, the colours and finished forms of beads offer rich possibilities for investigating the practical versus social/symbolic elements of beadmaking.

Another important aspect of the bead research is to compare the technological processes involved in manufacturing beads of different materials, and collaboration is underway with those researching shell, bone and clay beads on the project.

A further goal is to consider whether individual artisans can be identified and what social groups were involved in beadmaking. Technological practices are closely conditioned by the social/symbolic milieu in which artefact production takes place. Thus, technology needs to be studied not only in terms of materials and techniques, but also in terms of social groups involved in artefact production; individual artisans, levels of skill, and

learning; life histories of artefacts from material procurement to discard; the possible symbolic significance of materials; and how artefacts can be used in negotiations of social position.

Ground Stone

Ground stone assemblages consist of any artefacts in which abrasion played a central role in manufacture, and include grinding tools, vessels, maceheads, incised pebbles, figurines and beads. Such items proliferated in the Neolithic across western Asia. One of the goals of ground stone studies at Çatalhöyük, led by Katherine (Karen) Wright,⁹ is to explore the use of ground stone artefacts in food preparation (e.g. milling) by investigating contextual relationships between the ground stone and other finds bearing on food (e.g. botanical and faunal remains, organic residues, ovens, hearths). A parallel aim is to investigate the use of ground stone technology in craft activities: pigment grinding, plaster polishing, and the making of pottery, figurines, beads and wall paintings.

A second aim is to explore the social organization of food processing and craft production involving ground stone tools, by means of spatial and contextual analysis. Did individual houses have similar toolkits or did some houses possess more of these tools than others? Where could milling or other activities involving ground stone have taken place? Were individual households self-sufficient in food preparation and craft production, or do we see evidence for the use of the tools in communal spaces?

The role of food preparation in social change has been discussed from a number of perspectives: gender, feasting, the use of food preparation in negotiating political

relations and the role of 'haute cuisines' in the emergence of socio-political hierarchies. Our evidence for the use of the ground stone tools in food preparation at Çatalhöyük is still preliminary, pending detailed analyses. However, we can make a few general, and very provisional, observations.

In our samples, grinding and abrading tools have been found, in cases, in the same contexts (bins, floors, middens) as diverse plant remains (and animal bones), which may support an assumption that individual grinding/pounding artefacts or types were unspecialized and multi-functional, fitting a general picture from the prehistoric Near East.

Ground stone artefacts from across the Neolithic Near East display distinctive regional styles, cultural practices and attitudes concerning food preparation and consumption. Preliminary results show that the Çatalhöyük material fits this general picture of diversity, for example with marked differences between this assemblage and those from contemporary sites in the Levant.

One way in which the Çatalhöyük grinding tools are very different from those from broadly coeval sites in the Levant, is that we find small grinding slabs and one-hand manos overwhelmingly dominating the heavier grinding equipment. The Çatalhöyük grinding slabs are mostly small, light, and easily portable. Undoubtedly this is in part a result of the fact that these artefacts were transported from as far away as Karadağ, some 40 km from Çatalhöyük. It may also relate to the fact that closed ovens are so common at Çatalhöyük.

In general, the contextual evidence suggests small scale, household based units of food preparation. There are no clusters suggesting large scale group production of prepared food, and no indications of unusually large numbers of ground stone artefacts discarded together. Nor do we see rare stone bowls associated with discard contexts that otherwise might suggest special consumption events. However, these observations are tentative and await further work.

Ground stone artefacts clearly played a central role in the development of Neolithic craftsmanship. In addition to such items as stone bowls, figurines, and axes, all of which proliferated as the Neolithic began, ground stone items were important in the rapid expansion of stone beadmaking at the beginning of the Aceramic Neolithic. Ground stone artefacts can be central to the production of ceramics (e.g. temper milling) and other technologies such as plaster polishing (with fine grained polishing stones, Fig. 10) and paint production (via



Figure 10 Marble polishing tool probably used for smoothing of plaster walls and floors

palettes, Fig. 11). The role of such tools in creation of wall paintings is a central focus, in conjunction with the work of Duygu Çamurcuoğlu Cleere (see above) on the technology of the wall paintings.

Phytoliths

Phillipa Ryan is undertaking research on the phytolith material from Çatalhöyük for her PhD, under the supervision of Arlene Rosen. Phytoliths are durable plant microfossils, which form in and between certain plant cells. Different plants produce varying levels of phytoliths and they are not all identifiable to the same degree. Grasses and sedges are the most prolific producers and the phytoliths are often distinctive of plant part, plant family, genus and occasionally species. Phytoliths also occur in a high percentage of woody trees and herbaceous dicotyledons but these are more difficult to identify. The marshy environment surrounding Çatalhöyük during the Neolithic facilitated the production of phytoliths and the thick white silica skeletons of former plant materials, such as woven materials and basketry, are frequently recovered. Two types of sample from the site can be analyzed: sediment samples from which phytoliths have to be removed during several laboratory processes and visible silica skeletons, which can be directly mounted onto a slide. The main aim of the PhD research is to explore the use of wild plants, particularly marsh plants and reeds, in the production of baskets, mats, and other artefacts used at Çatalhöyük, as well as their use as food and fuel. In addition, phytolith evidence will be used to explore crop management regimes and the changing landscape around the site.

Herding practices

Following on from the faunal team's results showing domestic caprines, especially sheep, to dominate the animal bone assemblage throughout the Çatalhöyük

sequence, Elizabeth Henton's AHRC-funded doctoral research investigates the sheep herding practices at the site, through dual approaches of using oxygen isotopes and dental microwear. The main aim is to identify any diachronic variation in the degree of herding mobility and specialization.

The combined isotope and dental microwear approaches will provide evidence of Neolithic sheep's birthing seasons, pasturing locations, feeding regimes close to the time of death, and cull patterns, so that variation can be explored through the sequence of occupation. The combined evidence can map the individual life-histories of animals, and thus inform on whether herders developed strategies of more tightly scheduling breeding, feeding, and mobility of animals – which is one possible response to the likely competition for land close to the site, and site expansion. This research links in with wider questions about the nature of herding after animal domestication, being asked for the broader region.

Notes

- 1 J. Mellaart, J. (1967) *Çatal Hüyük: A Neolithic Town in Anatolia* (London: Thames and Hudson, 1967).
- 2 Six volumes of the Çatalhöyük Publication Series have been published. The first volume deals with the surface work at the site between 1993 and 1995, with the museum work on the 1960s collections, and with other aspects of the project (e.g. preliminary reports on the geomorphology and regional survey). The second volume is devoted to the methodology of the project. Volumes 3–6 cover the results of the excavations between 1995 and 1999. The volumes are: I. Hodder (ed), *On the Surface: Çatalhöyük 1993–95* (Cambridge: McDonald Institute for Archaeological Research / British Institute of Archaeology at Ankara Monograph No.22, 1996); I. Hodder (ed), *Towards Reflexive Method in Archaeology: the example at Çatalhöyük* (Cambridge: McDonald Institute for Archaeological Research / British Institute of Archaeology at Ankara Monograph No.28, 1996); I. Hodder (ed), *Excavating Çatalhöyük: South, North and Kopal area reports from the 1995–99 seasons* (Cambridge: McDonald Institute for Archaeological Research / British Institute of Archaeology at Ankara Monograph, 2007); I. Hodder (ed), *Inhabiting Çatalhöyük: reports from the 1995–99 seasons* (Cambridge: McDonald Institute for Archaeological Research / British Institute of Archaeology at Ankara Monograph, 2005); I. Hodder (ed), *Changing materialities at Çatalhöyük: reports from the 1995–99 seasons* (Cambridge: McDonald Institute for Archaeological Research / British Institute of Archaeology at Ankara Monograph, 2005); I. Hodder (ed), *Çatalhöyük perspectives: reports from the 1995–99 seasons* (Cambridge: McDonald Institute for Archaeological Research /



Figure 11 Schist palette with paint residue

British Institute of Archaeology at Ankara Monograph, 2005). A further publication is: I. Hodder, I, 2006 *Çatalhöyük: the Leopard's Tale, revealing the mysteries of Turkey's ancient "town"* (London: Thames and Hudson, 2006).

- 3 E. Pye, "Authenticity Challenged: the 'plastic house' at Çatalhöyük", *Public Archaeology* 5(4), 237–51, 2006.
- 4 Reports on beads by K. I. Wright and R. Bains can be found on the Çatalhöyük Website Archive for 2006, 2007 and 2008 (http://www.catalhoyuk.com/archive_reports/); see also, K.I. Wright, "Beads and the body: ornament technologies of Building 3 at Çatalhöyük", in *Çatalhöyük Building 3: the excavations of the University of California at Berkeley at Çatalhöyük (BACH)*, R. Tringham & M. Stevanovic (eds) (Los Angeles: Monographs of the Cotsen Institute of Archaeology, University of California at Los Angeles, in press 2009).
- 5 Reports on ground stone by K. I. Wright and A. Baysal can be found on the Çatalhöyük Website Archive for 2002, 2005 and 2007 (http://www.catalhoyuk.com/archive_reports/); see also, A. Baysal & K. I. Wright, "Cooking, crafts and curation: the ground stone artefacts from Çatalhöyük, 1995–1999", in *Changing materialities at Çatalhöyük: reports from the 1995–99 seasons*, I. Hodder (ed.), 307–24 (Cambridge: McDonald Institute for Archaeological Research / British Institute of Archaeology at Ankara Monograph, 2006); K. I. Wright, "Craft production and the organization of ground stone technologies", in *New approaches to old stones: recent studies of ground stone artefacts*, Yorke Rowan & Jennifer Ebeling (eds), 130–43 (London: Equinox Archaeology Books, 2008).
- 6 N. Russell & L. A. Martin, "Çatalhöyük mammal remains", in *Inhabiting Çatalhöyük: Reports from the 1995–1999 Seasons*, I. Hodder (ed.), 33–98 (Cambridge: McDonald Institute for Archaeological Research / British Institute of Archaeology at Ankara Monograph, 2005).