THE KOUPHOVOUNO PROJECT

2005 EXCAVATION SEASON

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PREFACE AND ACKNOWLEDGEMENTS

The fifth season of the Kouphovouno Project took place during the six weeks 25 July – 2 September 2005. Particular thanks are due to the members of the Archaeological Service of the Greek Ministry of Culture who helped the progress of the project and extended the hospitality of their facilities at their headquarters in Sparta: Mrs Panagiotopoulou, Nassos Themos and Elena Zavvou. We are most grateful to Dr James Whitley, Dr. Eleni Hatzaki, Helen Clark and all the staff of the British School at Athens for their prompt and skilful advice in setting up the project. The work was funded by the British School at Athens, the Society of Antiquaries, the British Academy, the Institute for Aegean Prehistory, the Universities of Liverpool, Clermont-Ferrand and Nottingham, the École Française d'Athènes, the French Ministry of Foreign Affairs and CNRS. Without their support the fieldwork could not have taken place.

The team was led by Professors William Cavanagh, Christopher Mee and Josette Renard. Dr Anna Karabotsoli continued her study of the chipped stone tools and Dr Armelle Gardeisen studied the animal bones with assistance from Jean Cantuel. Professor Eric Fouache (U. de Paris XII) and Claude Cosandey (Director of Research, CNRS) studied the geomorphology of the vicinity of the site and water resources, while Christèle Ballut (CNRS) took samples for micromorphological analysis. Raphaël Orgeolet, Thomas Loughlin, Graeme Laidlaw and Martyn Henson were trench supervisors, assisted by Chloe Duckworth, Ian Travers, Joby Woodhouse and Emmanuelle Fournier. The excavation teams were made up by Émilie Boutenet, Jean Cantuel, Frédéric Mercier, Nicolas Doutau, Audrey Lebourgeois and Marie Mosnier (Clermont-Ferrand); Dan Boatright, Dave Smith, Sean Taylor and Ian Travers (Liverpool); Lucy Anthony, Mary Cavanagh, James Dracott, Samuel Farnham, George Petrou, Mair Roberts, Kathryn Soar and Kirsty Squires (Nottingham). Neil Francis acted as surveyor. Raphaël Orgeolet assisted by Virginie Thomas and Alain Telorme (Clermont-Ferrand), produced digitized images of the plans, and our GIS system was developed by Liz Jones (Liverpool), under the overall supervision of Dr Matthew Fitzjohn. Mercouris Georgiadis (Nottingham) acted as finds assistant, and Émilie Boutenet and Lucy Anthony organised the sorting of the residue from flotation, as part of the archaeobotanical studies under Dr Amy Bogaard (Nottingham). Anna Lagia is responsible for the human skeletal remains, assisted by Annaïg Frémont who was also the project photographer. Dr Aby Bouwman, who has undertaken DNA analysis of the skeletal remains found in the 2003 season, also visited the excavations. Estelle Carraud acted as housekeeper.

AIMS OF THE 2005 EXCAVATION SEASON

The overall objectives of the project have been summarised in our earlier reports but may be briefly stated under five headings: (1) to refine and improve our understanding of the chronological sequence for the prehistoric period in the S Peloponnese from the Middle Neolithic through the Early Bronze Age, (2) to further our knowledge of changes in the way of life over that time-span through study of the organisation of settlement, the methods of building construction, the production and use of materials (pottery, chipped

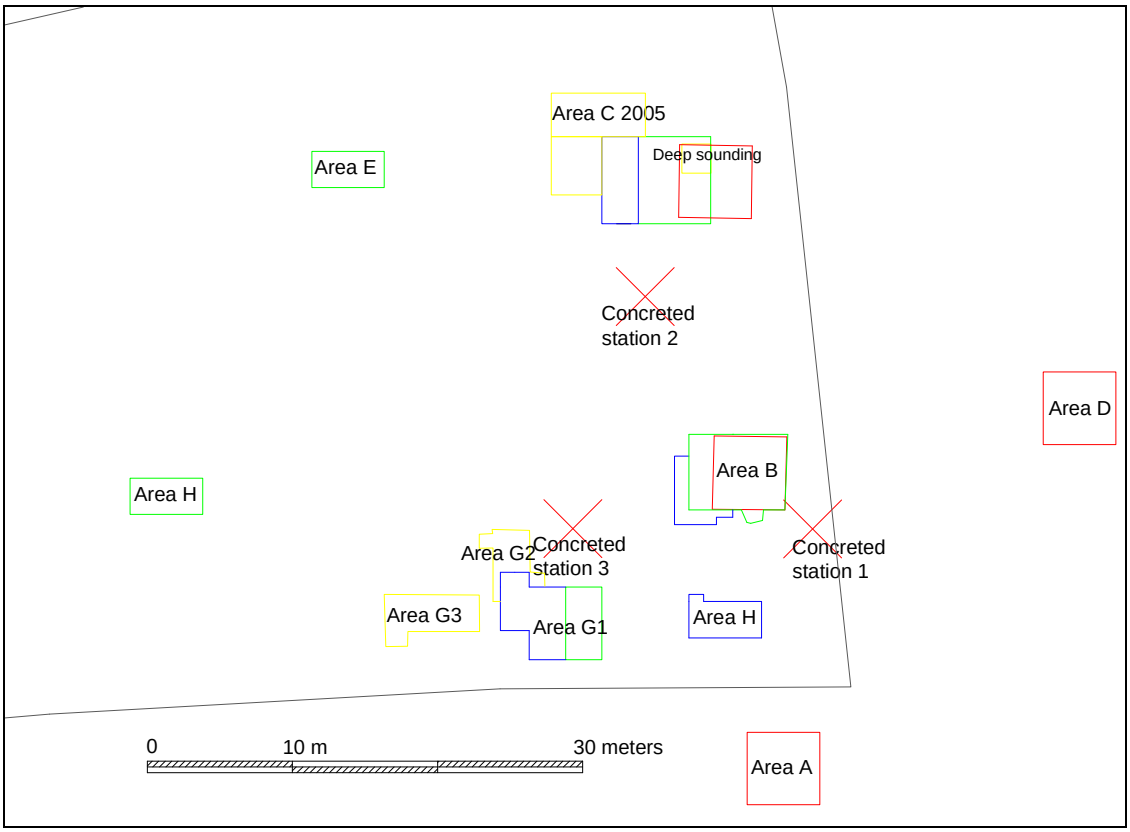

Figure 1: Areas excavated in the 2005 season are indicated in yellow, those in 2001 in red, in 2002 in green and in 2003 in blue.

and ground stone artefacts, worked bone and others), (3) reconstruct the setting of the site through the sixth-third millennia BC (4) examine the relationships over time of exchange and reciprocity between different communities in the S Aegean area and (5) study the various mechanisms which contributed to the formation of the archaeological sediments which comprise the basic material excavated and led to the build-up of the tell-site.
In the light of these, and the progress made in the previous seasons, we decided to concentrate our efforts in 2005 on three main parts of the site (Fig. 1): the continued excavation of the deep sounding in Area C, which was to be taken down, if possible, to the natural soil underneath the site, the rich Late Neolithic levels in Area G, which promised well preserved environmental remains as well as a sequence spanning much of this long and still very poorly understood period, and further exposure of the extensive Middle Neolithic architectural remains in the W part of Area C. The results of the excavation of each of these three will be summarised in turn in the following sections.

AREA C

The principal objective of the campaign in 2005 in Area C was to continue to uncover the traces of architectural remains of the Middle Neolithic (about which, we note, very little is known from S Greece for the relevant period). A second objective was to increase our collection of human remains, in the context of the study of their palaeopathology. The exploration of Area C, therefore, was directed at two primary focuses:

1. The excavation of two extensions to the north and to the west, in order to define the nature of the structure which had appeared in the NW corner of the part excavated in 2003 (two stone alignments forming a corner)
2. The excavation of a grave identified at the end of the 2003 season and left unexcavated.

The North and West Extensions

Initially separated by baulks following the line of those from the 2003 excavations, the two extensions were soon combined to form a single large sounding covering 51.5 m^2. Important architectural remains of Middle Neolithic date were revealed: wall socles of stone, floors of beaten earth, burnt red to a greater or lesser extent, a floor paved with pebbles, and a series of layers composed of occupation and destruction horizons.

Immediately below the plough soil there was clearly revealed (Fig. 2)

1. a small rectangular structure measuring 3m N-S by 2m E-W, whose stone socle survived (1029)
2. a wall constructed of large stones (1062) oriented N-S which ran alongside the west wall of the small structure and preceded it in date
3. a wall of small stones (1022), running N-S, which could be followed for 3.70 m from the N baulk. At its S end it formed an acute angle and extended 1.10 m into the W baulk, but it is clear that it continues further into the baulk. A floor made of pebbles (1064), found to the E of this long N-S wall and associated with it, could indicate the outside of a house. At a later stage, this floor was overlaid by a level of building clay, which was found burnt (1033). Furthermore, masses of building clay (remains of daub or burnt brick 1071) were uncovered to the E of the pebble-floor just above the layer of reddened soil. To the west of the same wall (1022) a layer of soil, very slightly reddened (1032), could be traced for about 1 m. A pivot stone set into this level and beside the N-S wall, seems to indicate that at this point we are on the inside of a dwelling. This reddened soil is followed by a very compact yellow sediment (1002/1010). Alongside wall 1022 was lying the base of a large pedestalled vessel measuring 35 cm in diameter; it was wedged among some stones; the vessel's maximum diameter is about 60 cm. This type of vase is unusual for the period. Two other vases, whole and probably belonging to the same level of occupation, were typically MN.
4. a rubbish pit (1017/1019), lying between the N wall of the small rectangular building and the N and E baulks of the Area, was partially excavated. An upper level, 40 cm thick on average, yielded an important assemblage of animal remains, much pottery as well as fragments of stone tools. This level corresponds probably with the final phase in the use of the pit, and seems distinct from an

earlier level (which will be excavated in 2006), separated from the upper level by a grey soil with much charcoal. The pottery in this pit confirms that its fill preceded the construction of the rectangular structure. The faunal remains are very promising for our study of the subsistence economy at the site of Kouphovouno in the latter part of the MN period.

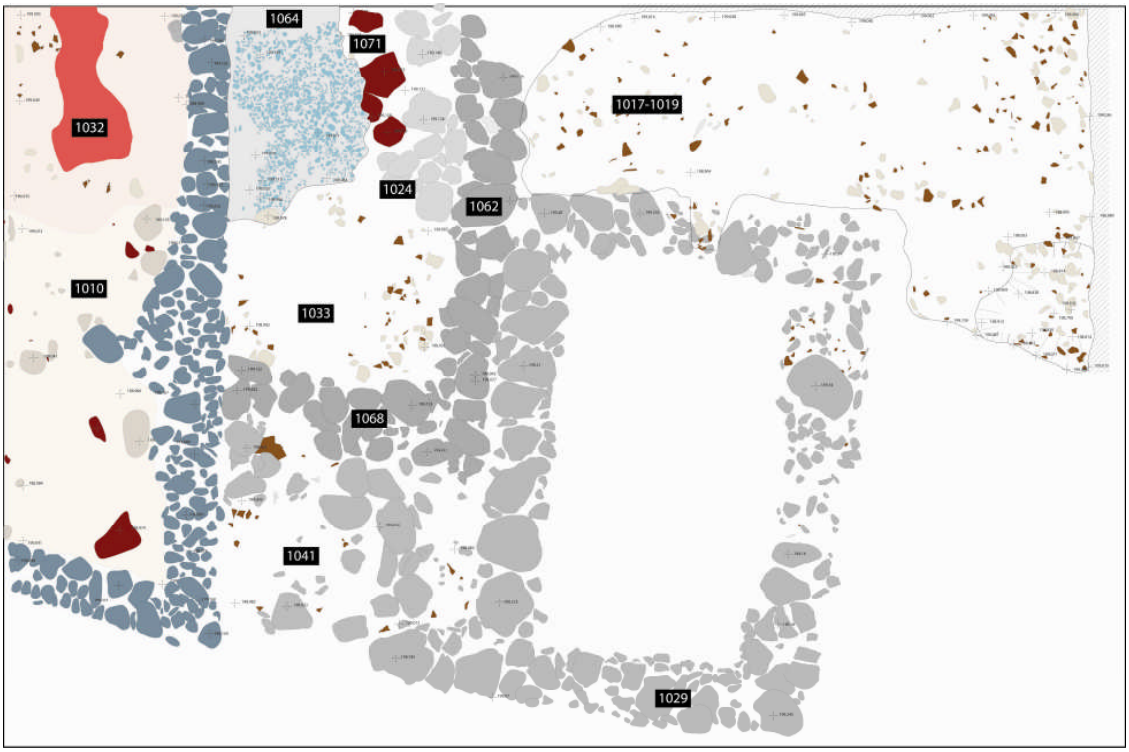

Figure 2: Plan of the northern sector of Area A.

In addition, a small sounding in the SW corner of the W extension (60 x 60 cm) revealed a build-up of 17 different layers of soil, sometimes burnt and sometimes not, reaching a depth of 55 cm: within it levels of occupation and levels of destruction could be recognised. A number of samples were taken in the trench wall through the whole depth of this sequence for a study of the micromorphology, and this will aid our understanding of the nature of each of the stratified units.

The North and West extensions have allowed us to distinguish at least three phases of construction represented by Walls 1062, 1022 and 1029. Defining the precise relationship between these phases will be one aim of the next campaign, and another will be to understand the relationships between the architectural elements found in 2005 together with those of the 2003 season, notably Wall 0923.

2. The Grave (920/925/926)

The pit, cut into the MN habitation levels, is bordered by stones set around its top. Oval in shape, it measured 1.40 long by 0.75 wide and 0.58 deep. It contained the skeleton of an adult about 1.65 m tall, laid in a crouched position on its left.

All of the bones, which were found fully articulated (Fig. 2), had numerous post-mortem breaks, and at the level of the skull had been disturbed by several large stones. The only offering accompanying the skeleton was a clay whorl, evidently of MH date. As with the skeletons found in the previous seasons, this one will be studied in the Biological Laboratory of the University of Athens, to establish the age and sex of the individual and any traces of stress and illness. Soil samples taken from the area of the abdomen and the thoracic cage will be examined for studies into parasitology and toxicology.

Figure 3: Skeleton in Middle Bronze Age grave

Concluding Remarks

The excavation of Area C in 2005 uncovered 87 different archaeological contexts. Luckily, the MN architectural remains uncovered in the new extension had not been disturbed by EH pits or platforms, in the way they had in the sections excavated in earlier campaigns. Thanks to this we were able to uncover more complete structures, reveal walls and floors, and thus achieve our primary objective.

We would note, in conclusion, that whilst a number of drawings and plans were made in the conventional way using Permatrace on graph paper, the majority of the plans were completed on the basis of digital photographs, corrected using the program Photoplan. This type of recording was tried experimentally in Area C. It has the advantage of allowing us to produce, by the end of the campaign, a combination of plans (such as Fig. *** showing the North/NW part of the area excavated), allowing an overview of the more interesting structures and which have illustrated this account.

C SOUNDING

The excavation this year planned to take the *sondage* down to natural soil which, on the basis of the core taken in 1999, we expected at 2.65 m below the topsoil. The confined area of the trench meant that contexts could not be examined in their entirety and interpretation was quite difficult. 0824, the level where the 2003 season was suspended, was removed to reveal a large area of a sediment similar to 0824. This (0846) had a very straight limit on its western side which curved slightly westwards at the northern limit. Initially it was thought that this might be a pisé wall on the grounds of its regular and rather substantial size, and that it was similar in colour and consistency to 0824, a level which had produced an abundance of archaeological finds.

Figure 4: Upper part of the SW section in the deep sounding

Cutting into 0846 and against the eastern baulk were the remains of a deep pit (0849), whose fill was excavated as 0847, 0834, 0837 & 0825. West of 0846 a substantial deposit (0848) proved to have a maximum depth of 0.67 m. The fill of 0848 was mixed: much pottery and chipped stone, with fragments of charcoal and oxidised clay inclusions. Beneath it was an even larger deposit 0850; it differed from 0848 mainly in the increased proportion of yellow clay and in rounded and angular stone inclusions. Two possible stone walls within 0850 (0851 & 0852) were found upon excavation to be stone concentrations. 0848 and 0850 were the fills of a large cut 0858 measuring 0.75 m deep, perhaps a very deep pit, which was filled in two phases, before being sealed by 0824. The sides were very vertical and showed no sign of erosion, nor was there a silted basal fill, these characteristics indicate that whatever its purpose, the cut was filled soon after it was first excavated. Beneath 0858 was found a thick layer of material (0859) similar in consistency to 0846 though with a little more clay and a bit softer. Its location and form suggested it was slump from 0846. It was deposited on top of 0853, a large mixed deposit, quite rich in clay and very soft in compaction. There were very few ceramics or lithics from it and only traces of charcoal and oxidised clay. The ceramics we did recover were quite badly eroded suggesting that they had been exposed for some time. Its diverse nature and irregular deposition indicated re-deposited soil which had become mixed with

anthropogenic material. Beneath 0853 we encountered a curious deposit (0854), it was very irregularly shaped, its edges top and bottom seemed to undulate and in places merged with adjacent sediments, as if it were 'squashed' by 0853. Despite the weight of over three metres of material above it had a very soft consistency. Its composition was mixed: rich in charcoal, ceramics and oxidised clay. The fill and materials found in it are consistent with a midden, a large amount of carbonised material, random stones and much pottery and animal bone. Beneath this context lay 0855, a deposit of very clayey silt material containing few finds; it appears to have been a deposit of hill-wash, the primary fill of 0860, a large cut measuring 280cm. It is cut into 0846 and 0856, the natural clay beneath 0846.

It became clear that 0856 consisted of the undisturbed Pliocene/Pleistocene sediments which underlie the whole site. Thus the archaeological levels, restricted to the western part of the Sounding from roughly 1.5 m below the surface down, had accumulated within cuts made deep into the natural. The bank of natural soil sloped slightly as it went down, and consequently the 1999 core did not go to the bottom of all the archaeological levels here, but misleadingly cut into the bank at a point where there was still over 1.5 m of archaeological deposit further west.

At this point we tested 0856 by 15cm to ensure that we had excavated the sounding completely. The results confirmed that we had. The total depth of the archaeology was 415cm below the initial level we began at in 2003 but 430cm below the surface level. After recording the archaeology the *sondage* was shored and backfilled.

AREA G

A major aim of continuing and extending the excavation of Area G was to try and locate any continuation of the traces of Late Neolithic architecture revealed in the 2003 season. In order to achieve this, an extension was opened to the west, referred to as G3, measuring 5m E-W by 2.5m N-S. Later this was extended by a further 5.5 m2 at the west end of the trench. The trench was divided into 1m x 1m grid squares, for the purpose of find retrieval, and whilst where possible it was excavated by context, nevertheless 0.05m or 0.1m spits were used where distinct subdivisions could not be recognised. In the original 5 x 5 m trench, first excavated in 2003 as Area G and this year referred to as G1 to distinguish it from the extensions to the north and to the west, it was decided to take down the rest of context 1658, first exposed two years ago, and then excavate a 2m x 1m sounding to test the depth of the Late Neolithic deposits. In what follows we shall describe first what was uncovered in the West extension of Area G ('G3'), then what was found in 'G1' and finally 'G2'

G3

The earliest level (1205=1234) uncovered this year in G3 was that on which a number of the MN features were founded. In the western part of the trench three walls (1230/1231, 1207 and 1226) were constructed on top of it. Of these walls 1230/1231 and 1207 appear to form the corner of a building, although the effects of collapse and disturbance made it difficult to be certain. The former was noteworthy as its southern end had a group of separate mud-bricks that appear to have been used as quoins where it met 1207, whereas for the rest of its course it was built almost entirely of rounded stones. A pivot stone was

also found immediately to the east of wall 1207 which, although probably not in-situ, suggests that there was a door in its immediate vicinity, which in turn would explain the sporadic scatter of the stones in this area. Within the area enclosed by the walls, which was exposed for roughly 1.5m N-S and 1.5m E-W there was a very roughly laid cobbled surface (1233). This layer of cobbles seemed too rough to be a surface in itself, but

Figure 5: MN walls in Area G.

evidently formed the bedding for a clay floor surface (1219=1211) which had a thin, patchy covering of lime plaster on it. Wall 1226 ran roughly parallel with 1230/1231, and the space in between could have been a corridor or alleyway. 1228, which filled this area, had a compacted surface, but it was unclear whether it marked an internal corridor or external passage. On the southern side of wall 1226 a hard surface (1229) again had a fragmentary layer of plaster on top. There were also several large pieces of pottery lying flat on this layer, which suggested that they had been broken on its surface. Wall 1226 was formed, however, by only one width of stones and no associated post- or stake-holes were found to suggest that a frame surrounded the wall, so it may not have been a weight-bearing element.

These structures, clustering at the west end of G3, date to MN. Several of the contexts that abut the walls contained MN pottery; for example 1209, a discrete phase of dumping that overlay part of the collapsed mud-brick and associated with the later phases of the structure, contained large MN sherds.

1206, a shallow feature located c.1 m east of the wall 1207, may have been associated with the structure: it was surrounded by large stones and its flat regular base may have supported a wooden post.

The building may have collapsed slowly over a long time, and was characterised initially by several slumps of mudbrick (1227/1232, 1212 and 1218) to the north and south of wall 1230/1231. In the 'corridor' and over its surface there was a mixture of dumped midden deposits and silting (1229) that had infiltrated (1220), which represented a large collapse of stones. This collapse accumulated between walls 1226 and 1230/1231 and to the north of 1230/1231; to judge from their size, the stones had fallen from walls 1230/1231 and 1207.

Immediately to the east of the structure there lay a large, homogenous sediment (1203). This context was fairly compacted, perhaps the result of trampling debris and silt that accumulated in the vicinity of the buildings. It extended to the eastern edge of the trench, sloping gradually down to the east and south. It seems likely that this context represented the edge of a middle Neolithic occupation 'mound', with the land to its south and east being lower. After the building had collapsed and gone out of use it appears that the lower land around the structure was used as a dump, in which case 1217/1208 was the first of the dumped deposits. This context contained a lot of charcoal and crushed mud-brick as well as a number of broken green-stone axes, flint debitage and sherds. The pottery from these contexts is of note, as it appears to show the transition between the Middle Neolithic and Late Neolithic ceramic traditions.

The layers above, judging from their ceramic assemblage, were LN although some, especially 1201/1202, 1204, 1214, 1215 and 1216, also had a large proportion of MN pottery in them. This suggests that in their formation a MN context had been disturbed. Perhaps the MN mound to the west of G3 was levelled at the time they were laid down to create a flat ground level to the east.

The last phase of activity in the area was the excavation and filling of the large early Bronze Age pit that was first discovered in 2003. The pit (1659) was roughly 0.7m deep and several metres wide. The pit was almost entirely filled with sub-angular stones and large pieces of pottery. It has been suggested that it may have acted as a soak-away.

G1

Transitional material similar to that found in 1217/1208 in G3 was also detected in trench G2 and in the *sondage* in G1 (1658) where it was associated with a rough stone and mud-brick surface (1657), and a possible hearth (1656). The Late Neolithic activity above this in G1 appears to consist of several layers of dumping and trampling (1661-1664). There was also a mud-brick feature within these deposits, 1657, which was located in the very SW corner of the trench and was therefore difficult to interpret.

Trench G2 was opened on the 26th July 2005. It was a 2.5m x 5m trench initially, southwest grid point E 1097.550/N 1113.950 and northeast grid point E1110.050/ N 1118.950. There were two main purposes for this trench and its position in relation to Trench G from 2003 season. Firstly we hoped to find and chase the remainder of the wall

(1637) from 2003 season and secondly discover as much Late Neolithic architecture as possible.

G2

Knowing from previous years' experience that the contexts of the Late Neolithic in this area were very difficult to separate, it was decided to record the excavation by metre squares (ten 1m x 1m and four 1m x .50m labelled A2 to S2) and in 5cm spits, to give us more chance of separating any changes in context should they occur. Early signs were encouraging as the wall (1637) seemed to continue northwards from the old trench G into G2 after the first three spits as (1102). We also recovered some excellent finds including several obsidian and flint projectile heads from these early spits (Fig. 10). The wall, however, only continued 1.5m north into G2 before stopping. It was noted that there could possibly be the lines of two walls one earlier than the other (1110) or that (1102) could be tumble from (1110). We also discovered an alcove in the wall which contained a posthole approx. 30cm in diameter and 25cm deep.

After the wall was recorded it was removed and all of G2 was then excavated from the same level in plan. The eventual depth of the trench at close of excavation was 90cm from the surface yet we had only observed a slight change in the appearance of the sediment at approximately 40cm from the surface where we discovered small patches of mudbrick rendered with lime plaster (1118/1119) and at 65cm where the general deposit began to include increased charcoal levels. It was at this depth that Middle Neolithic sherds began to crop up more frequently amongst the Late Neolithic. We also noted that there was an increase in obsidian pieces within the three squares at the north baulk at this level (E2, L2, S2).

Two extensions were dug: at the southeast corner eastwards and the northwest corner westwards, the first to see if the wall (1102)/(1110) turned eastwards (1m x 1m labelled T2) and the second to see the extent of the rendered mudbrick (1118/1119) (1m x 1m labelled U2). T2 proved inconclusive yet threw up some excellent finds including a fine bird(?) head painted clay figurine (Frontispiece) and several beads and obsidian tools. U2 showed (1118/1119) to be of a similar size to the other patches.

Throughout the excavation of G2 a number of possible postholes and post pads were distinguished but they were difficult to clarify and confirm.

The lowest level reached in G2 in the 2005 season could prove to be the most interesting. Analysis of the pottery indicates a MN/LN transitional phase marked by increased charcoal, possibly a circular stone hearth, and some interesting lines of stones bound by burnt earth, pottery inclusions and increased stone spreads extending into the south baulk.

FINDS

Pottery

All of the pottery excavated this year, a total of 64,016 sherds, has been processed. Once washed, the sherds were divided into fine table wares and coarse storage and cooking vessels, counted and weighed. Feature sherds have been marked with individual numbers and brief comments written on the date and composition of each context.

Figure 6: MN decorated Urfirnis bowl from the Deep Sounding in Area C (0848.45.01-02)

The Middle Neolithic pottery from the contexts in the sounding is predominantly fine, 93% numerically and 73 % by weight. A high proportion is also painted, which indicates that it was principally used for the presentation or consumption of food. Patterned decoration is common and includes some complex motifs (Fig. 3: 0848.45.01-02). There is also much monochrome but scribble burnish becomes very rare in the deepest contexts. It would therefore seem, if we assume that these represent the first occupation of the site, that this occurred relatively early in the period, though well after the Early/Middle Neolithic transition.

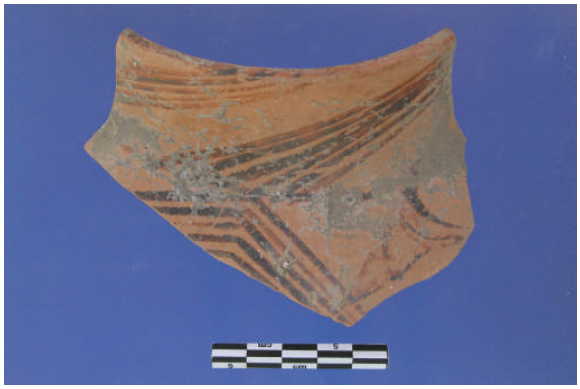

Figure 7: MN Urfirnis decorated jar from the Rubbish Pit (1017-19) in Area C (1019.14.1).

The pit in Area C, although only partially excavated, has already produced an impressive quantity of Middle Neolithic pottery, almost 8000 sherds many with high quality decoration (Fig. 4: 1019.14.01) and some elaborate types of scribble burnish. There is a fair amount of coarse pottery from Area C, in particular massive pedestal bowls in which food or drink was presumably served. Cooking vessels in a distinctive dark, gritty fabric were also found (Fig. 5: 1002-07).

Figure 8: rim-sherd from cooking jar with lug handle. MN. (1002-07)

Of particular interest in Area G are the transitional MN/LN deposits. There is much more monochrome Urfirnis than we would expect if these contexts were purely LN and the sherds were residual but Black Ware and Matt Painted pottery is also present. Moreover some sherds have hybrid decoration: LN motifs in lustrous paint or MN motifs in matt paint. The Matt Painted is mainly burnished and only rarely white-slipped, so this may be a later development. In the fine wares the impression we have is of a gradual evolution but there is an immediate increase in the number of coarse storage vessels. It remains to be seen whether this simply reflects a more extensive use of pottery by households or a different storage strategy. The LN pottery from Area G includes fine and coarse varieties of Black Ware, usually well burnished and sometimes decorated with white paint or incision, as in the case of the rhyton legs. True Grey Ware is less common but there is a good range of Matt Painted pottery and some nice Polychrome (Fig. 6: 1103.19.11).

Figure 9: a sherd of LN polychrome ware from Area G (1103.19.11)

Only a few FN sherds were found this season. The pit in Area G produced more Early Helladic pottery, which consistently looks early EH2 and suggests that the fill may have been deposited over a relatively short period of time. The pottery from the stone-lined pit

in Area C is mixed but does include Middle Helladic Argive Minyan, Matt Painted and even a heavily incised 'Adriatic' sherd, as well as possible Early Mycenaean.

Stone and Other Finds

In her examination of the chipped stone, Anna Karabatsoli focused on the Late Neoltihic and transitional Middle/Late Neolithic contexts in Area G where the obsidian and flint artefacts included a number of arrowheads (Fig. 7: 1101.07). There were also ground stone tools and bone implements, in particular a fine pendant, as well as a terracotta figurine [1126.06a], apparently a bird (Frontispiece). A terracotta spindle whorl was found with the Middle Helladic burial in area C.

Figure 10: LN bifacially retouched tanged arrow-head from Area G (1101.07)

GEOMORPHOLOGICAL STUDIES

The study was carried out this year by Eric Fouache (Professor at the University of Paris XII, Claude Cosandey, Director of Recherche at the CNRS, and Michaël Ribière, Masters student of Geography (Paris XII), during the periods 23-29 April 2005 and 24-27 July 2005, with the twin aims of completing a broader geomorphological map of the Sparta basin and identifying the water resources in the vicinity of the site. A fuller report has been submitted by these investigators and here we briefly summarise some of their observations with reference to the site itself.

All the sediments visible on the surface and in the banks of the Parori stream, show strong oxydisation. They confirm the results of the coring carried out by Peter James showing limited sedimentary deposits (of the order of one metre) thicker than the alluvial deposits on the banks of the Parori or colluvial deposits to the S of the tell. There are no elements to indicate that the site was set in a marshy environment: the general slope of the terrain in the vicinity and the stream beds ensured that the area was drained. All the same, they note the existence 150 m to the S of the site, the presence of a pond fed by a spring, the course of which flows towards the E. Local informants confirmed that this spring was, until recently, used to supply drinking water. Coring by auger 10 m to the S of the pond, confirmed the presence of the water table at a depth of 1.50 m. This water-source, given its proximity to the site, merits further investigation.

It is worth underlining, especially as the water-table lies deeper than the river-beds, that water is present in abundance and at no great depth. A simple pit dug through the alluvial deposits at the base of the dry gully bottom (as is the practice to this day in

desert regions) allows easy access to water. It is plain that a problem of finding water could not have presented a critical problem to the Neolithic occupants of our site.

DNA

Dr Abi Bouwman (University of Manchester) took samples from the skeletons excavated in 2003 as part of the University of Manchester's programme investigating the use of DNA from archaeological skeletal remains for recognising family relationships. This work has grown out of that by Professors John Prag and Terry Brown on the Shaft Grave skeletons and is focused on remains of Middle Bronze Age date. It involves developing primer systems to amplify mtDNA from the highly diverse HVRI and HVRII regions for analysis of matrilineage, and Y-Chromosome STRs and SNPs for analysis of patrilineage, and other genomic human STRs for general kinship analysis.