

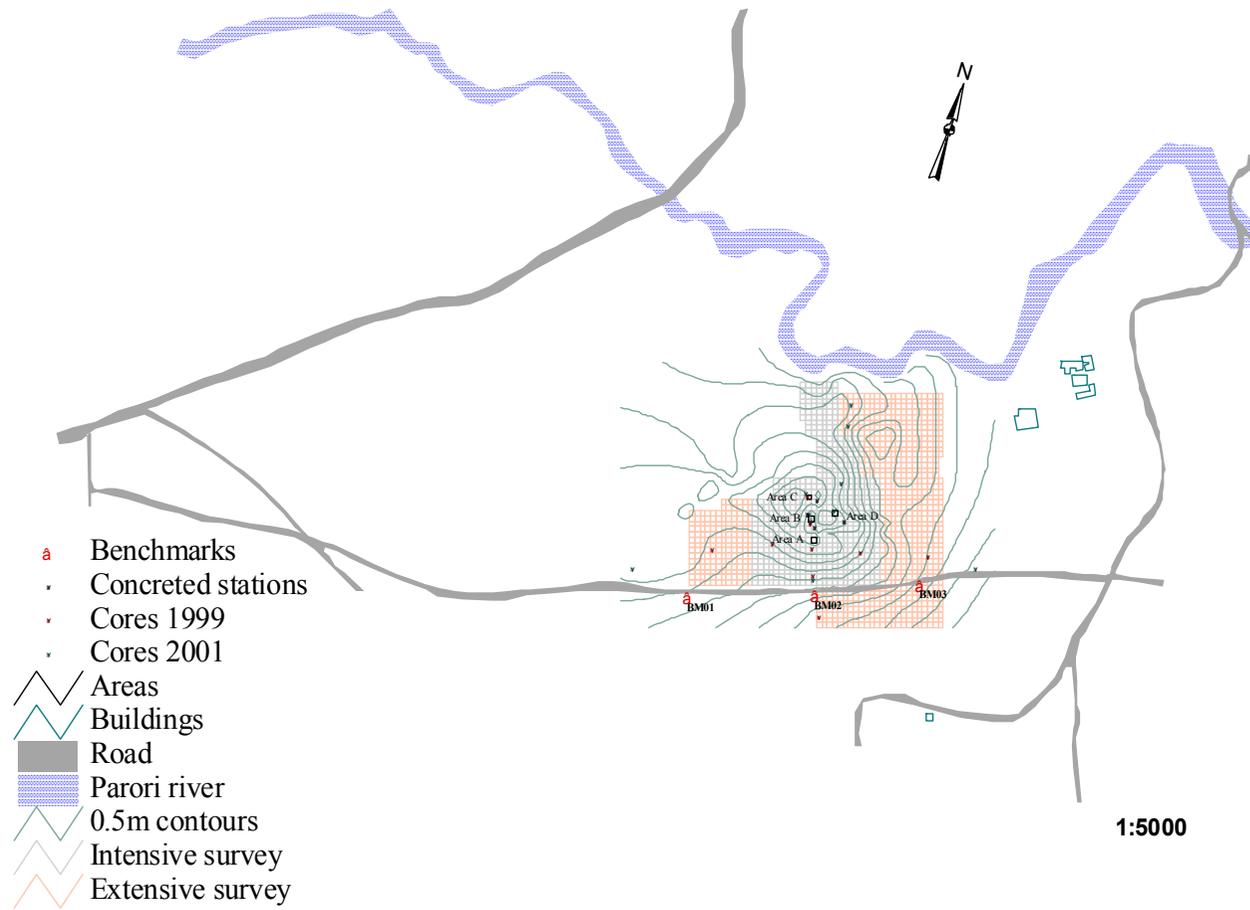
THE KOUPHOVOUNO PROJECT

2001 SEASON

TRIAL EXCAVATIONS

by

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Topographical plan of Kouphovouno and its surrounding area.

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Preface and Acknowledgements

The first excavation season of the Kouphovouno Project took place during the five weeks 1 July – 4 August 2001. 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: Dr Th. Spyropoulos, Stella Raptopoulou, Nassos Themis and Elena Zavvou. We are most grateful to David Blackman, Rebecca Sweetman, Helen Clark and all the staff of the British School at Athens for their skilful advice in setting up the excavations and ensuring a prompt start to our first season. The excavations were funded by the British School at Athens, the Institute for Aegean Prehistory, the Universities of Liverpool, Lorient and Nottingham, the École Française d'Athènes, the French Ministry of Foreign Affairs, Royal Geographical Society. Without their support the excavations could not have taken place.

The team was led by Dr William Cavanagh, Professor Christopher Mee and Dr Josette Renard. As in the earlier stages of the project, the procedures and activities were filmed on video by Jean-Pierre Renard, assisted by Anne-Flore Marziou (Université de Bretagne Sud), who also kept the video diary. Soil studies were overseen by Peter James (University of Liverpool) and Maria Kousoulakou (BSA) who were assisted in the field by Sarah Jackson (University of Liverpool); Graham Murray (University of Nottingham) acted as field officer. Francesca Megaloudi in concert with Philippe Marinval (CNRS, Université de Toulouse) started study of the plant remains, whilst scientific study of the pottery has been set in train by Neil Brodie (University of Cambridge) and Ian Whitbread (BSA, University of Leicester). Maria Roumpou (University of Bradford) took samples for residue analysis. Anna Lagia (University of Chicago) was able, at short notice, to undertake the study of the human skeletal remains. Anna Stelatou (University College London) had responsibility for computing. Anna Karabatsoli (Université de Paris X) continued study of the chipped stone artefacts and Yoann Le Mézo (Université de Paris 1) the polished stone tools. Patricia Leclerc (ÉFA) advised on conservation and Armelle Gardeisen (CNRS) on the animal bones. Dr Bill Phelps visited us and gave advice on the pottery. Jenny Doole (University of Cambridge) acted as illustrator and Lydie Bodiou (Université de Poitiers) kept house. The students, who worked on all aspects of the project, including excavation and finds processing, were Ellen Cross, Mark Doyle, Sarah Morton, Stephen O'Brien, Adam Partington (U. of Nottingham); Annaïg Frémont, Agathe Colleu, Maia Pomadere, Raphaël Orgeolet and Yoann Le Mézo (U. de Bretagne Sud et Paris I); Mark Clayden, Gina De'Ath, Polly Phillipson, Ian Rowlandson and Clare Mulcahy (U. of Liverpool).

Research Questions

The over-arching research rationale arises in part from the debate over the rise of complex societies in Greece, over the course of the MN–EBA periods (say 5000–2000 BC). Intensive survey has demonstrated that few Middle–Late Neolithic sites survive in southern Greece – the earliest identified in the course of the Laconia Survey were Final Neolithic – and very few of them have been excavated. In central and northern Greece the situation is quite different. This north-south divide must be faced, if the change in the location of settlements in the Final Neolithic and the subsequent development of more complex societies in the Early Helladic period is to be understood. New data, and data from excavation, are needed for progress.

The second research aspect is methodological and arises from the application of surface survey. The relationship of what is recorded on the surface, to the archaeology under the surface has hardly been explored in Greece. The Kouphovouno Project is designed to investigate this relationship, building on the methods developed in the Laconia Rural Sites Project.

Aims and Objectives

This research orientation has led us to establish the following objectives.

1. Refine the chronological framework by establishing a stratigraphic sequence for the MN, LN, FN and EH periods, together with a series of ¹⁴C estimates to establish absolute dates.
2. Investigate the technology of architecture, and organisation of domestic space
3. Collect environmental evidence to model the subsistence economy and natural setting
4. Undertake scientific analysis of ceramic and lithic technologies for information on exchange and craft organisation
5. Recover human remains and study their funerary context
6. Study geomorphology and tell formation processes as a control on survey and excavation results and throw light on changes in the environment.
7. Compare the distribution of surface remains with excavated evidence

The excavations in this first, trial season set out with a number of specific aims in mind:

1. To verify whether the chronological range indicated in the survey material was reflected in the areas selected for excavation, and that an intact stratigraphical sequence covering the Middle Neolithic–Early Bronze Age periods was confirmed.
2. To investigate the architectural features in order to refine our excavation strategy and methodology. Particular features which we hoped to clarify included the ‘stone platforms’ identified by von Vacano in 1942, mud-brick walls and the make up of floors.

3. To set up and test in the field sampling procedures and sampling strategies for the various integrated specialist studies: palaeobotanical, archaeozoological, ceramic and residue analysis, ground stone tools, sediments (chemical, magnetics, micromorphology), human remains and architectural materials.
4. Prepare the way for the purchase of land in advance of the planned full excavation seasons.

In what follows we shall report first on the results of the excavations in each of the four areas chosen for investigation and follow this by an account of the specialist studies.

Excavated Areas (Fig. 2)

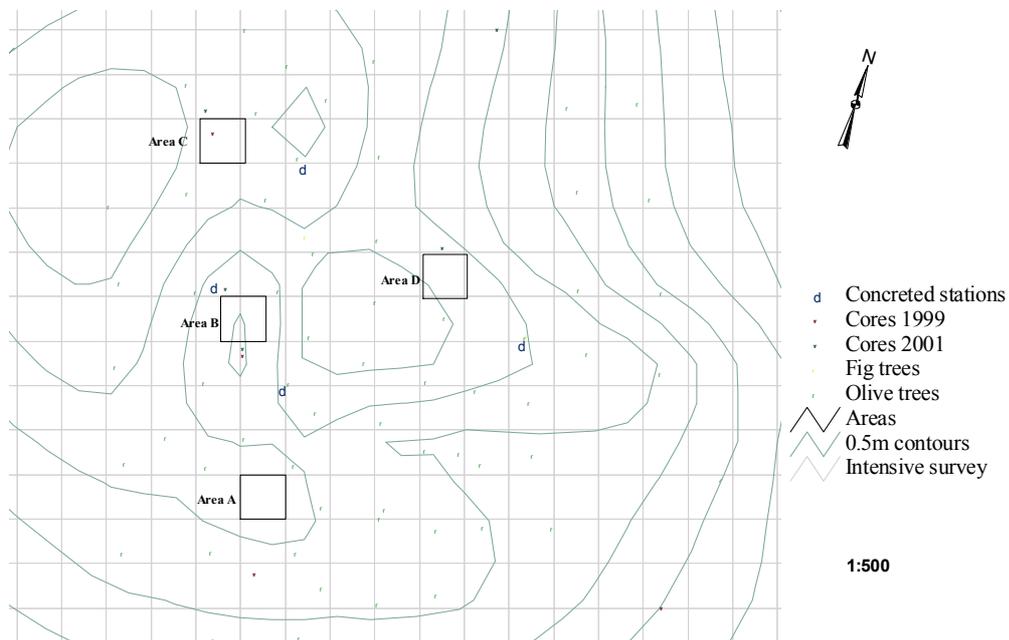


Fig. 2: Location of Areas A–D

Area C

Area C lay at the summit of the tell with the ground surface at 199.40–199.45 above sea level. Immediately below the plough zone a number of distinct contexts of different dates, ranging from Middle Neolithic to Middle Helladic, were revealed. In the NW and SE sectors were areas of burnt mud-brick/pisé, whilst a large mass of cobbles and stones extended over much of the W and S; what soon became apparent as a grave appeared on the SE side. This last lay entirely within the top 20 cm and was astonishingly well preserved given the regular ploughing of these fields; the burial must originally have been laid at a greater depth, and its present position joins other indications that much of this top part of the tell has been lost to erosion. This skeleton was accompanied by a MH shoe-socketed spearhead (Fig. 4) and a MH cup. A second burial, accompanied by a spindle whorl and a MH jug, was uncovered in the NE

sector; its skull rested on a layer of pebbles and sherds. Unusually this second inhumation was laid extended on its back.

The earliest remains uncovered in the 2001 season were first revealed in the NW sector, and then found to extend over the whole west side and into a good part of the centre of the area. Here we seem to have the remains of a MN building destroyed by fire. In addition to the burnt mud-brick/pisé, a burnt clay floor was uncovered. The make-up of this floor revealed a succession of beaten clay surfaces. In 1999 Core 1 was taken adjacent to these remains, and indicated a depth of archaeological sediment reaching 2.65 m. This considerable depth of MN stratigraphy holds out great promise for future excavations.

Area B

Area B, lower down the hill, lay some 20 m S of C. Below the disturbed plough zone (the furrows left by recent ploughing were very clear) were revealed several of the 'stone platforms' or cobbled features which are so characteristic of the site. Probably the latest features of archaeological interest, however, were again two burials. That to the N was the remains of a pit grave cut partly into one of the 'stone platforms': the inhumation was laid in a crouched posture and a clay spindle-whorl was found pressed into the jaw (a stone hammer may also have been an offering). At the S end of Area B a second crouched burial lay in a cist grave, marked by upright slabs on the N, E and W sides – no offerings were found in the grave but its form and the posture of the skeleton are consistent with a MH date (Fig. 3).

The stone cobble feature in the NW sector of the trench was sectioned: it measured just under 2 m SW–NE and at least 3.3 SE–NW (it continued under the baulk). The stones had been placed in a shallow hollow, cut into the underlying clay, and formed a layer roughly 0.1–0.2 m thick. In other words roughly 1 m³ of stone fill, say over two metric tonnes of material. The pottery included both FN and EH 2.

A trial in the SW sector of Area B revealed two smaller, more discrete, stone piles, roughly circular in form, measuring 0.7 m across and up to 0.35 m high. As a working hypothesis it is suggested that these were the stone supports for wooden flooring.

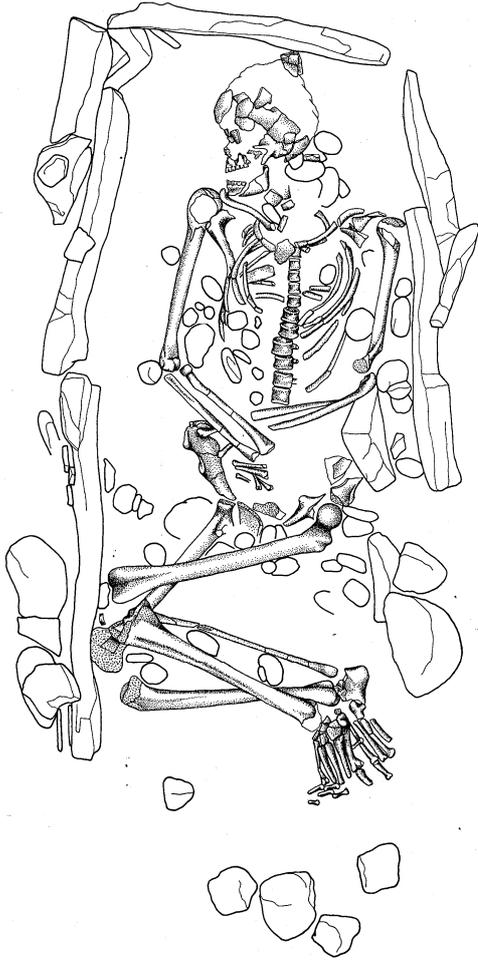


Fig. 3: Plan of cist grave in Area B

Area A

Initially the excavations in the southernmost of our trials proceeded as in the other trenches – immediately below the plough soil appeared a ‘stone-platform’ feature extending roughly 3.4 m N–S and 3.6 m E–W. This was set in a much cleaner, yellow clay matrix containing just a few stones, evidently formed from decayed mud-brick. Alert to the possibility that graves might have been cut into the stones, rather more open patches of clay were excavated, without, initially, revealing skeletal remains. Eventually, near the E edge, a skeleton was discovered, lying in a grave bounded to the E by a line of stones; it rested in a grave whose floor was not level but sloped from S–N, with the skull placed at the lower end. A pair of copper alloy tweezers, of a type common throughout the Bronze Age, accompanied the burial.

It was decided to excavate the ‘stone platform’ in quadrants, and the SW and NE quarters were removed, thereby allowing E–W and N–S sections to be reconstructed. The stone fill was of very loose rubble, consisting of cobbles, earth and a large number of sherds (as well as animal bones and stone tools and other finds). This had been dumped into a pit cut into the earlier levels. On the E the cut edge was steep, almost vertical, suggesting that the pit was refilled very soon after it was cut; on the W the wall of the pit sloped less steeply, though still at an angle of $\sim 40^\circ$. The fill (and the pit into which it had been

dumped) was much deeper than the features excavated in Area B, and excavation suggested that originally at least 7 m³ of material were dumped here, say over 15 metric tonnes. Immediately it becomes clear that the nature of these 'stone platforms' can vary considerably from one example to another. A great deal of pottery was recovered, including whole profiles, and examples which may well mend up into whole pots. Joins from the same vases occurred through the whole depth of the deposit. The pottery was predominantly EH2 with some EH1 and Neolithic. Study of this material will greatly enhance our knowledge of the local pottery sequence. The function of this feature is far from clear: it is possible that it served as a quarry for building materials (e.g. clay for mud-bricks), and was filled with rubble to level the site.

Area D

Area D lay some 20 m to the E of the main line of trials. This area proved one of the more difficult to excavate. Initially, as in the others, once the plough soil was removed, this excavation seemed to differentiate itself into areas of relatively clean yellowish clay (probably decayed mud-brick) and areas of denser stone concentrations. Two major stone features were distinguished: a 'stone platform' made up of smaller cobbles to the S, similar to the 'stone platforms' in Area B, and a zone of what looked like stone tumble, made up of rather larger stones, in the NW sector. Excavation concentrated on the latter, in the hope of identifying walls, from which the stones had collapsed, and indeed one stub of walling was revealed, though no clear overall structure. Eventually an infant inhumation was found near the NW corner, nestling among the stones, and then, a little further S, the top of a human skull indicated another burial. Unfortunately a rain-storm intervened and the second skeleton could not be excavated. It is just possible then, that the feature is funerary, and the stone heap formed part of a cairn or tumulus, but further excavation is required to clarify this puzzling feature.

The Finds

Ceramic and Terracotta

Although the *pottery* has not been studied in detail as yet, some preliminary comments can be made on the basis of the contexts which have been examined. Middle Neolithic pottery is especially well represented in Area C. Fine ware vessels predominate, in particular bowls and jars. Urfirnis decoration is common, often monochrome but quite a number of sherds have pattern or scribble decoration and there is also some pattern-burnish. Pottery of the Late and Final Neolithic periods comes from Areas B and D. Typically coarse and often fired at a relatively low temperature, this pottery easily disintegrates and would not survive on the surface. Vessels tend to be much heavier and must have been used for storage. The fine ware is often black-burnished and some grey sherds appear in these contexts. In Area A there is red-slipped and burnished pottery which may well be Early Helladic I, although this is not yet certain. The stone feature,

context A0004, produced a remarkable array of fine and coarse Early Helladic II pottery, much of which appears to have been broken in situ and will certainly mend up. Bowls and sauceboats with Urfirnis decoration stand out. No Early Helladic III sherds have been noted, but this is of course a period which has proved curiously elusive in Laconia. Some Middle Helladic pottery was found in Areas A and D, in particular a jug with a cutaway neck which was associated with one of the burials in Area C. There were a few Mycenaean sherds in Area D and almost no later pottery, even in the topsoil. Conservation of the pottery was started by Patricia Leclerc, assisted by Anne-Flore Marziou.

Ian Whitbread and Neil Brodie examined the ceramic fabrics macroscopically and under low-power (X20) magnification. It was possible to identify and characterise a number of distinct fabrics, but the quantity and range of pottery being excavated precluded any attempt to establish a systematic fabric classification based on undiagnostic sherd material alone. Work will continue next year with the reconstruction of chronologically discrete assemblages, which can be further defined internally by stylistic and functional criteria. Some preliminary prospection for possible raw materials was also carried out in the torrent beds running down from Taygetos and in the valley of the Eurotas. Twelve pottery samples have been selected for residue analysis by Maria Roumpou at the University of Bradford.

Items of *terracotta* include a figurine and three spindle whorls.

Stone

Of the 130 pieces of *chipped stone*, 100 (77%) were obsidian and 30 (13%) chert or flint. Anna Karabatsoli has made a detailed study of the finds from Areas A and C and reports that there is no primary material and that the products of the first phases of *débitage* are few in number. Nevertheless, pieces which derive from the rejuvenation of cores indicate that obsidian was locally worked and there are finished products, such as blades and other tools, as well as cores which have been used up. Some of the more diagnostic elements can be dated. Analysis of the flint and chert is more difficult at this stage because it is limited in quantity and generally of poor quality.

The 24 *ground stone* tools included 13 axes. There were also 10 querns and two stone beads.

Other Categories

Of particular note is the socketed Sesklo type spearhead (Fig. 4), presumably of late Middle Helladic or Early Mycenaean date, with one of the burials in Area C. Also of copper/bronze is a pair of tweezers which accompanied one of the burials in Area A. Other finds include a spondylus shell bracelet, three bone awls and a pin.

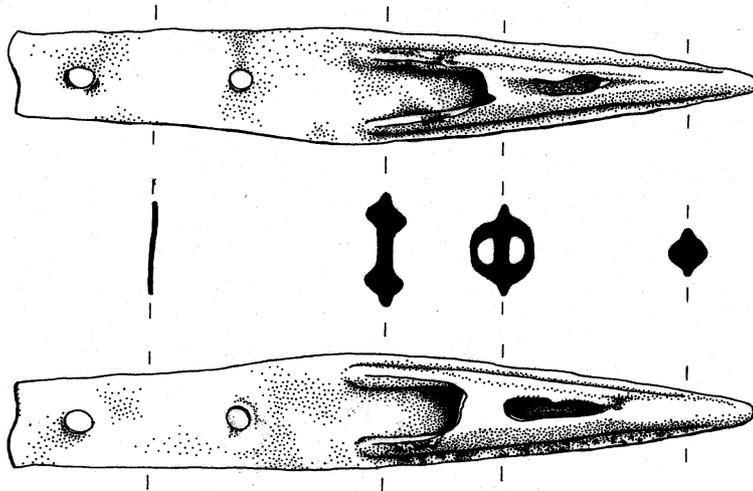


Fig. 4: Shoe-socketed
spearhead from MH
grave.

Bone

Anna Lagia supervised the excavation of the six burials. Overall they were in good condition and largely complete. A high proportion of each skeleton was preserved, offering us the opportunity to study their condition as a full skeletal phenomenon. Post-mortem fractures were extensive in most of the skeletons, probably due to the shallowness of the burials. No significant post-depositional movement of bones was observed, however, making the excavation at Kouphovouno a unique opportunity to reconstruct the ritual context in which the burial data were created.

Preliminary analysis of the skeletal remains in the field during excavation suggests the presence of most age groups and both sexes among the deceased. A number of these individuals were sub-adults, raising the question of the circumstances which led to their early death. Skeletal and dental lesions suggest the presence of severe episodes of stress during childhood in at least some of the individuals, which may have arisen from the conditions of life during their early years. Evidence of repetitive stress during adult life was also observed. The severity of these stresses and the segments of the population that they affected need to be explored further. Such conditions are better understood when a larger number of individuals is examined and population level studies are conducted. Manner of death also seems to have been significant in mortuary treatment. One of the young individuals appears to have suffered a violent death from a severe trauma, which resulted in the deceased receiving an unusual burial in relation to body placement and orientation.

A consideration of the anthropological and archaeological parameters at Kouphovouno offers the opportunity to study in the round both mortuary treatment and the conditions which these individuals experienced. Further excavation of the site will help increase the sample and will allow us to better understand life conditions and mortuary behaviour in the region during the Middle Helladic period, and, we hope, the neolithic and Early Bronze Age too.

Armelle Gardeisen made a preliminary assessment of the animal bones which were present in most contexts.

Plant Remains

Philippe Marival and Francesca Megaloudi devised a strategy for the recovery of plant remains and set up the procedures for water-sieving the soil samples and processing the residue. Although there were relatively few seeds in the upper levels, some of the deeper contexts proved more productive.

Geomorphological and Soils Research

The hill of Kouphovouno stands about 5m above the plain of the Sparta basin, at ca 200m asl, 3.7 km E of Taygetos and outside the distal margin of a large alluvial fan that issues from a mountain-front gorge at Parori (the apex of the fan being at ca 305m a.s.l.). This is one of a number of fans developed along the E margin of the Taygetos range. The channel of the ephemeral stream running from the Parori gorge is entrenched through the entire length of the fan and beyond, to near its confluence with the Evrotas, 2.45 km to the east of the site (ca 165 m asl). The trench forms the northern limit of the site.

Aims of geomorphological and soils research

There are two broad aims of the geomorphological and soils research:

1. To produce a detailed three-dimensional ‘map’ of soil chemical, mineral magnetic and other properties for an excavated part of the site. The aims were to assist in identifying likely former activities on the site, to improve our understanding of controls on archaeological soil properties and to examine post-abandonment effects on soil below and above the cultural layer, thus extending earlier research undertaken in Laconia.
2. To use all available archaeological and geoarchaeological data to reconstruct palaeoenvironmental change in the area of the site, with reference to geomorphology, hydrology, vegetation and soils. Drilling of cores through the site and adjacent land by IGME was arranged in 1999, with the aim of determining the depth of cultural horizons within the hill and the nature of underlying sediments. Further coring, using a manoeuvrable percussion corer, took place in 2000–2001 (location of cores marked on Fig. 1).

Preliminary interpretation and discussion of field results

Over a period of millions of years, hundreds of metres of fluvial and lacustrine sediments have accumulated in the tectonically active graben of the Sparta basin. The Kouphovouno cores reflect the final stages of an alternation between styles of deposition. The gravel beds were deposited by a major river (the precursor of the Evrotas) or by floods from Taygetos. The clays, however, are not alluvial: they were deposited in a sizeable body of relatively still water, a large pond or lake. The presence of occasional clasts, though not easy to explain, is common in lake sediments (J. F. Boyle, pers. comm.). Why the clays do not correlate closely between cores is not clear: the chronostratigraphic relationships between cores may be impossible to define without further, more closely spaced coring. The gravels, however, may reflect channel fills or local deposition in a standing body of water. Pliocene or Pleistocene lake sediments, now preserved in low isolated hills on the basin floor, were largely removed by

river erosion before the Kouphovouno clays were deposited. The banded clays beneath Kouphovouno represent a later sediment fill with charcoal washed into its upper horizons. In at least three cores, the surface underlying the cultural horizon was covered by the stone layers referred to above. It appears that the ground was ill-drained when Kouphovouno was first settled. In no core was a soil profile preserved at the base of the cultural horizon.

The early Holocene, including the Neolithic, was a period of ecological and geomorphological stability in Greece. Conditions would surely have favoured a woodland cover on well-drained land in lowland Laconia. Whatever the situation on the basin floor during the early Holocene, stability in Taygetos cannot be assumed. The mountain catchments, sensitive to rain storms, have always been a potential sediment source for episodic deposition in the basin. In a recent paper, however, Pope and Millington date the greater part (medial and distal portions) of the mountain-foot fans as Middle and Late Holocene (i.e. post-Neolithic), though the dating is not well constrained and must be regarded as extremely tentative. Kouphovouno lies beyond the limit of the fans, but the area surrounding the site has experienced deposition and site margins may have suffered erosion.

Thus there is evidence of possible fluvial erosion of the S and E margins of the Kouphovouno tell. A distinct bank running for 191m around the S and E flank of the hill may be artificial, or it may have been eroded by floodwaters. In addition to the stream from Parori, a second stream may have affected the Kouphovouno area: the Parori stream flows into this, to the NE of the site. We shall investigate whether flood events overtopped the channel and deposited material on the surface surrounding Kouphovouno, and if erosion by floodwaters fashioned the bank skirting the S and E side of the hill (note the shallower archaeological sediments found in two cores to the E of this). The question whether episodic deposition since the Neolithic has resulted in a deeper cultural layer to the W of the hill will also be addressed.