



ULUCAK HÖYÜK EXCAVATIONS: NEW RESULTS

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ABSTRACT

The prehistoric periods of the Aegean Region of West Anatolia is not well known compare to the later periods. The lack of information occurs in limited archaeological surveys and excavations on one hand. On the other hand alluvional deposits in the plains, and coastal line changes are yet another reason not to discover the prehistoric settlements in the region. It is evidently certain that some of the prehistoric settlements are beneath the alluvional deposits of the plains. 5 m. cultural deposit of the Ulucak Höyük is now under the soil of the Ulucak plain.

The excavations at Ulucak Höyük have provided reliable evidence for a long lasting Neolithic culture in the Aegean coast, and a cultural connection with the Lake District of Anatolia in the east and with Trace in the north west. Despite the occurrence of later periods such as Late Roman, Early Byzantine and Middle Bronze Ages these layers were heavily destroyed by modern agricultural activities. The Early Bronze Ages and the Chalcolithic periods were represented by pottery rather than well documented architectural remains. Despite the destruction occur at the later layers the Neolithic period is the most well preserved cultural era from the point of architecture and small finds. Level IV and V represent the Neolithic culture at Ulucak although future excavations will possibly add one or more levels to the Neolithic era. Level IV has 11 sub-levels starting from IVa (ca.5600 B.C.) and going down to IVk(ca.6050 B.C.). Level IV was followed by Level V, excavated in recent years, dating to ca.6200 B.C. with the help of C14 dates. It is possible that Level V has more sub-levels going down to the earlier periods of the Neolithic culture. Future excavations will definitely give us further information about the earlier characteristics of Neolithic period of Ulucak.

Red-slipped pottery and architectural features of Level IV and V can be compare to the Neolithic cultures of Lake District and Trace of Turkey although some distinctive differences may be noticed. Further excavation at Ulucak will possibly make it clear if the Neolithic culture of Aegean Region

made its development locally or came to the region from east by a migration. Archaeological excavations and archeometrical studies such as the present project contribute to better understanding of the cultural development and origin of the Neolithic culture in coastal West Anatolia.

KEYWORDS: Ulucak, Neolithic, Archaeometry, West Anatolia, Red-slipped pottery

INTRODUCTION

Ulucak Höyük is located (Fig.1) on the Izmir- Ankara highway, 25 km east of Konak and within the borders of town of Ulucak [GPS location: 35 S 053 0738 E 425 7638N]. The surface of the mound measures 120X 140m. However, the core tests, which were carried out around the mound revealed that the cultural accumulation spreads in an area of 3 hectares (Kayan in Çilingiroğlu et. al. 2004). 6 out of 11 meters of cultural accumulation of the mound are under the present level of the plain. In other words, almost 5 meter of the archaeological deposit is now under the alluvial fill. The excavations at the mound have

started in 1995 with the directorship of Archaeological Museum, Izmir and academic staff from Protohistory and Near Eastern Archaeology Department, at Ege University. The financial support to the project is provided mainly from Institute for Aegean Prehistory (INSTAP), Socotab Leaf Tobacco Industry and Ege University. Another research project (Tübitak SBB- GSRT- 2009 Research Project, "Archaeological and Archaeometrical Research of Ulucak Neolithic Settlement: research, conservation and restoration") which is being carried out in collaboration with Aegean University at Rhodes has been financially supported by TÜBİTAK (The

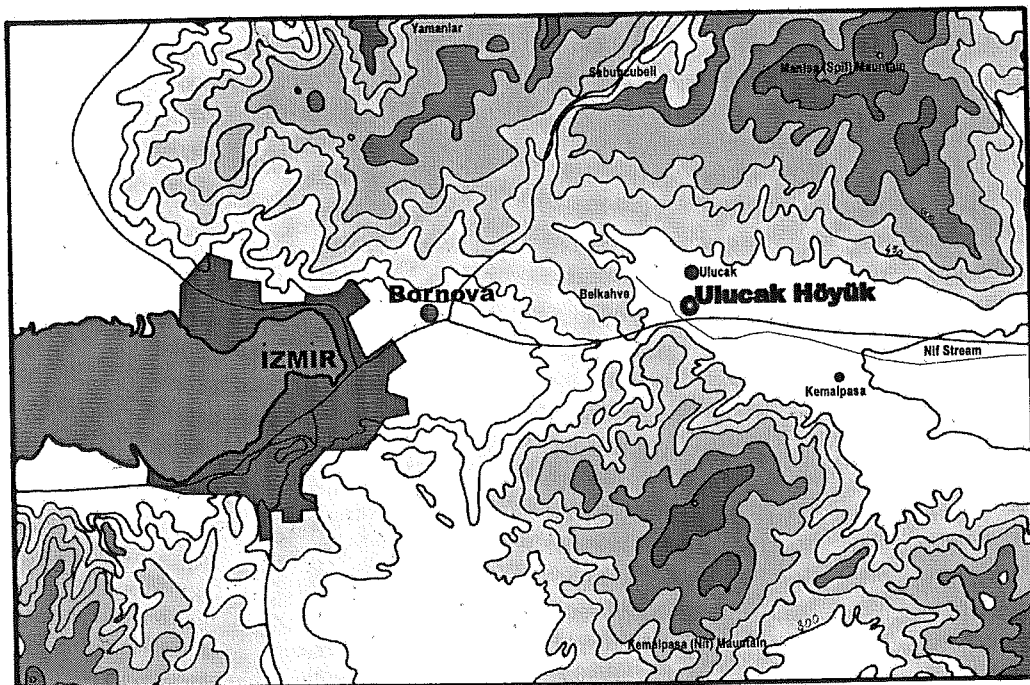


Fig.1 : Location of Ulucak Höyük

Scientific and Research Council of Turkey). We would like to extend our gratitude to all these institutions which provided help.

The exposed areas at the mound reaches an area of 1200 m². The areas which were selected to be excavated start from top of the mound and extend towards north. The reason behind this strategy is because these areas were the least disturbed parts of the mound. Certain parts of Ulucak Höyük has been damaged through several construction activities before here an archaeological project has begun. East and south sides of the mound has been disturbed by the building activities of the tobacco factory whereas the west side has seen damage due to the highway construction. Today the mound is officially registered by the Ministry of Culture as cultural heritage and is also surrounded by a fence. Any construction on or around the mound has also been overruled.

In the following text, we do not have the intention to repeat what has been already published in the book of Ulucak Höyük (Çilingiroğlu et. al. 2004). Detailed information on site and the excavation results up until 2002 can be obtained from this book. The text below, on the other hand, intends to cover the new data extracted during excavation seasons 2003 and 2004, after an introductory information on research history of West Anatolia and stratigraphy of the mound.

STATUS OF RESEARCH

It can be stated that the prehistoric investigations at West Anatolia where Ulucak Höyük is located are still in their incipency¹. Nevertheless, even the low number of research at the region have revealed some data on the issue. Although many of the settlements have been buried under the alluvial deposits which prevents their discovery (Özdoğan 1989a, 202; Seeher 1990, 15), a considerable number of settlement have been detected in the area². It is suggested that two types of settlements, namely the coastal and plain settlements, have

two different subsistence economies (Erdoğan 2003, 12-14). While fishing, stock breeding and the obsidian exchange were the main economic activities for the littoral sites, agricultural activities were mainly specific to plain settlements in the inland sector of the region. Despite the present state of data, the very basic issues on the prehistory of the region are very problematic and probably the most important among these being the lack of a regional chronology. The system that is being implemented for the time being has been shaped according to the sequences from Lake District and Konya plain sites (Duru 2002, 403-419; Schoop 2002, 421-436) which are also problematic since the chronological systems that are used in these regions have been adopted from early 20th century north Mesopotamian chronology which relies solely on pottery types. This situation, no need to say, causes inconsistencies in the chronological terminology. For instance, in Anatolia the appearance of painted wares has been labeled as "Early Chalcolithic" which owes its inspiration to northern Mesopotamian chronological divisions. However, even if we assume for one second, that the change in pottery decoration implies a total cultural change, in Western Anatolia transition from unpainted to painted wares simply can not be observed. This uncertainties leave the matter of Late Neolithic-Early Chalcolithic transition, at best, arbitrary. One might surmise that the distinction that is used in Lake District between monochrome and painted wares as a line dividing Late Neolithic and Early Chalcolithic can also be applied to Ulucak Höyük or in a general sense to whole West Anatolia. However, at Ulucak Höyük the distinction criterion between these periods is archaeologically undetected. Until sufficient amount of data on this subject is recovered, we tend to call levels IV and V at the site as "Neolithic".

Another important issue which has been almost left untouched in Western Anatolia due to lack of excavations, is the question of whether Mesolithic, pre pottery Neolithic or Early pottery Neolithic sites existed in the area, although recently it has been suggested that there must have been such sites (see Thissen, 2000)³. Lack of information in this aspect makes it very difficult to understand how Neolithic way of life occurred in the region, whether we should be thinking of a local development or movements of farming communities into the region or did various mechanisms acted simultaneously without eliminating the above possibilities? For the time being, it is proposed that the Neolithic way of life has reached West Anatolia from Lake District (Seeher 1987, Pl. 17, 27; Lichter 2002, 166). Yet another discussion point which awaits attention is the possible role of Western Anatolia in the Neolithization of Southeast Europe. The fact that this region would have offered suitable environment for farming communities as well as its connection to Central Anatolia where Neolithic way of life had a long tradition might point to the significance of this region in terms of the Neolithization processes especially if one considers the lack of some of the main wild plants and ovicaprids in mainland Greece (Alam- Stern, 1996: 193-194).

Similar to the Neolithic period, the developments in the Chalcolithic and Bronze Ages from the area are also not known extensively. Apart from Ulucak Höyük, the only settlement in the region which presents data on the Late Chalcolithic and EBA periods is Baklatepe Höyük. Since at this mound no Neolithic deposits have been found, Ulucak Höyük emerges as the only site where a long cultural sequence can be followed and the above mentioned problems could be approached.

STRATIGRAPHY OF THE MOUND

The evaluation of data which was obtained in the years 1995- 2004 has revealed that there are 5 cultural layers (I- V) at the site which are dated from Neolithic to Early Byzantine period. Besides, a cemetery area which is found 200 m. east of the mound from 3. and 2. mil BC (EBA and MBA) has also been excavated and documented (Çilingiroğlu et. al. 2004, 53- 63). Existence of a 2nd millennium BC, e.g. Middle and Late Bronze age, settlement at the mound has been indicated by pottery and cemetery finds, however, no architectural remain could be identified from these periods. It is highly likely that archaeological remains from these periods have been destroyed by recent agricultural activities.

With the present data available to us, the stratigraphy of Ulucak Höyük is presented below. This table was already published before in 2004 in the same order. In order to eliminate any confusions, we preferred not to include any major alterations. We would like to point out that the levels that are identified as "Late Neolithic" should be considered as the phase in which "Neolithic way of life" is observed in its most developed form (see below).

Ia	Late Roman-Early Byzantine
Ib	Late Roman-Early Byzantine
Ic	Late Roman-Early Byzantine
IIa	Early Bronze II
IIb1	Early Bronze II
IIb2	Early Bronze II
III	Late Chalcolithic
IVa	Late Neolithic
IVb1	Late Neolithic
IVb2	Late Neolithic C14 dates:5990-5730 BC
IVc	Late Neolithic
IVd	Late Neolithic
IVe	Late Neolithic
IVf	Late Neolithic
IVg	Late Neolithic

IVh	Late Neolithic
IVi	Late Neolithic C14 date:6030-5895 BC
IVk	Late Neolithic C14 date:6055-5885 BC
Va	Late Neolithic C14 date:6230-6055 BC

LEVEL I

The latest occupation at the site which has been labeled as "Level I" belongs to the Late Roman- Early Byzantine period. This level with its 3 sub-phases (I a-c) is characterised with its rectangular stone architecture and terra- sigillata cups.

LEVEL II

The second cultural layer at the site represents the EBA period and has been largely destroyed by both the later occupation level (Level I) as well as by the modern agricultural activities. For this reason, it is difficult to comment on the architecture of this level, except that stone was the major building material at this time. Black or red slipped and burnished pottery from this level can be compared to the contemporary EBA settlements in the Aegean like Troia (Level II b-d, f-g)(Blegen 1963), Poliochni (Bernabò-Brea 1964), Thermi (Hood 1981), Kumtepe (Sperling 1976), Babaköy(Bittel 1941) and Aphrodisias (Joukowsky 1986).

LEVEL III

Level III at the mound could only be exposed in the trenches O12 and O13. Structures from this level have been considerably disturbed by the above level. The only detectable architectural elements from this layer are destroyed stone walls. Comparison of hand-made and gray or brown colored pottery with the finds from the sites in the vicinity shows that these belong to the Late Chalcolithic period. Pottery from this level can be described as hand-made, coarse pasted, good fired, gray- brown colored and burnished. Among the common forms big plates with burnish patterns inside can be

mentioned. Although there is no carbon date available from this level, the comparisons of pottery with the other sites from the region suggest that level III was a 4th millennium site, more or less contemporary with Baklatepe, Kumtepe IA, Beycesultan and Hoca Çesme I (Özkan and Erkanal 1999, 39; Sperling 1976, 316; Lloyd and Mellaart 1962, 91; Özdoğan 1993, 182-183 respectively). It is possible that the Late Chalcolithic settlement at the site continued to develop into EBA which is represented by level II at the site. On the other hand, it is apparent that between levels IV and III there was a considerable gap in the occupation.

LEVEL IV

At Ulucak Höyük, the best preserved level with its architecture and finds is the IVth level which represents the "Late Neolithic" accumulation. This layer with its 9 building phases has been exposed in an area of 600 m². The Vth level at the site has been identified below this layer in the seasons of 2003 and 2004. Within this level at first we have identified 3 sub-phases, however new evaluation indicates that first two sub-phases belong more probably to the level IV. This recent analysis shows that level IV has probably 11 sub-phases rather than 9 as previously thought. This suggestion will be tested with the future excavations.

The end of phase IV b with a fire has enabled us to recover the archaeological assemblage in a well preserved condition in their *in situ* positions. It has been observed that this level is characterised by rectangular mudbrick structures with stone foundations. The houses usually consist of two rooms and a courtyard which has been surrounded by a wattle and daub wall. The general settlement layout seems to reflect an agglutinative plan with little or no space between various structures (Fig.2-3). The pottery which is dominated by a sand tempered, red slipped

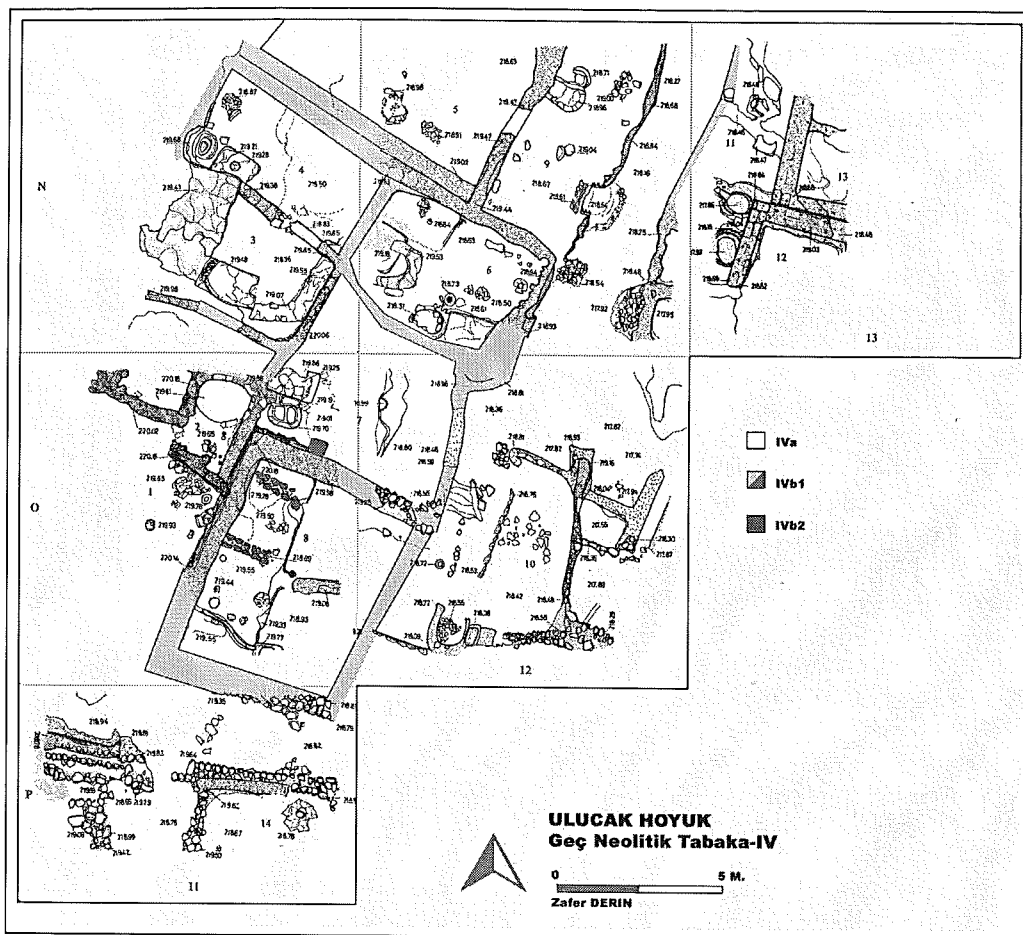


Fig.2 : Drawing of Level IV of Ulucak

and burnished ware is comparable to pottery of Hacilar VI, Kuruçay 12-7 or Bademağacı EN 4-3 from Lake District or Hoca Çesme IV from Northwest Anatolia (Fig.4). Two calibrated dates from phase IV b gave the results of 5990-5730 and 5900-5660 BC. The calibrated dates from earlier building phases from the same level (e.g. from phases IV i and k) revealed the dates 6055-5885 and 6030-5895 BC.

Below phase IV h, which ends with a fire, at the trench N 11, a new building layer with 1,5 m deposit has been identified as IV i. This

new layer at the site shows, on the one hand, different characteristics from the subsequent layer in terms of its architecture and some find groups, but on the other, in its general form carries traits from level IV. Within this cultural deposit which can be recognised with its green-gray colored and clayed soil, only a 3-4 cm thick plastered floor could have been found. It is possible that the architecture from this layer has been damaged by the subsequent layer. During the excavation, ground stones which are buried into floors and hearths whose super structures miss, have been found.

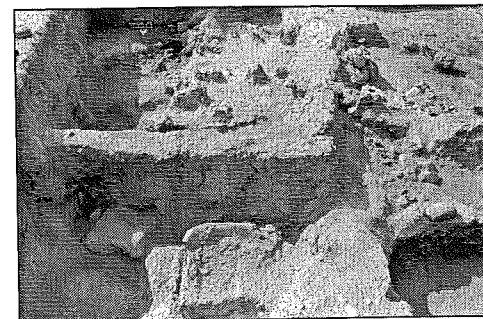


Fig.3: Level IV

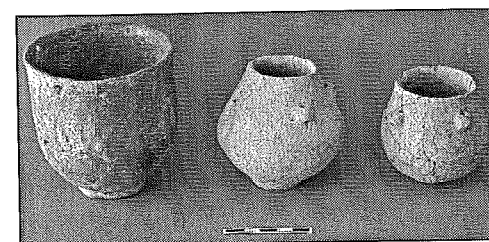


Fig.4: Red-slipped ware

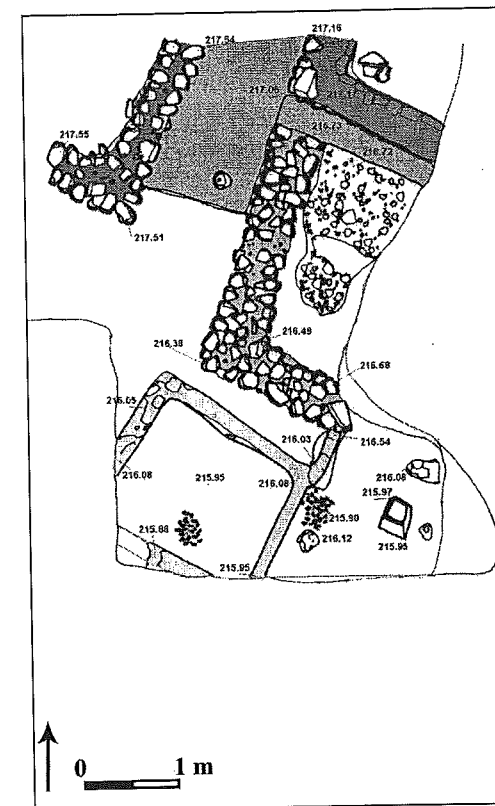


Fig.5: Trench N11 of Level IV

This state of the finds might indicate that they were intentionally made stable as they were for the first time made but later they were not needed any longer and replaced by new ones.

After the removal of this floor, another deposit with 0.8 m thick accumulation has been observed. This new phase has gray-white colored ashy soil which should represent the earliest phase of level IV which is called IV k. In the excavation, south and west walls of a building from this phase has been recovered (Figs.5-6). From this wall, only the foundation with three rows of stones whose size range between 0.20-0.50 m, were preserved. The interior of the structure has been paved with stones that are between 0.10-0.20 m in size. Probably the pavement has been plastered with a very thin layer white plaster, which formed the floor. Remains from this possible plaster have also been observed on pottery and bones as a 0.3 cm thick residue.

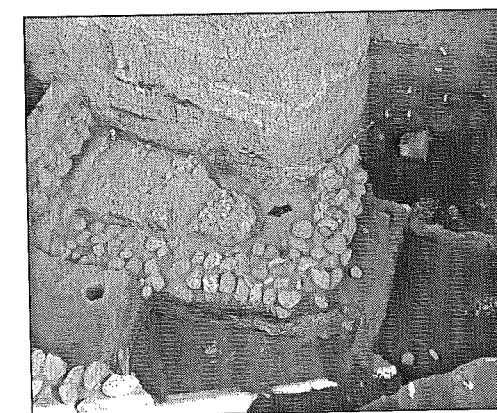


Fig.6: Trench N11 of Level IV

LEVEL V

As mentioned above, below level IV existence of an older level can be suggested due to the differing architecture and pottery. During the work at the site in 2004, only the first phase of this level have been exposed. A calibrated carbon date from this phase gave the date of 6230 BC. Ongoing investigation at the site will hopefully provide more information on the nature of this level. The soil of this level which has been identified at two trenches (N11 and L 13) is far from being homogeneous. It is partly yellow-red and contain burnt mudbrick pieces and partly brown.

Remains from this phase have been exposed in a wide area at trench L 13 where one structure with 5 rooms have been excavated (rooms 22-26) (Figs.7-8). It seems like this is a rather big structure formed by 5 small rooms. The rooms have been created by partition walls which serve for two rooms at the same time. The walls which are 15- 20 cm thick and have no stone foundations, have been constructed with thick timber posts which are covered with mud. The plastering of the interior walls has been observed at the southwest corner of room 23. The holes which are caused by the timber posts can be observed

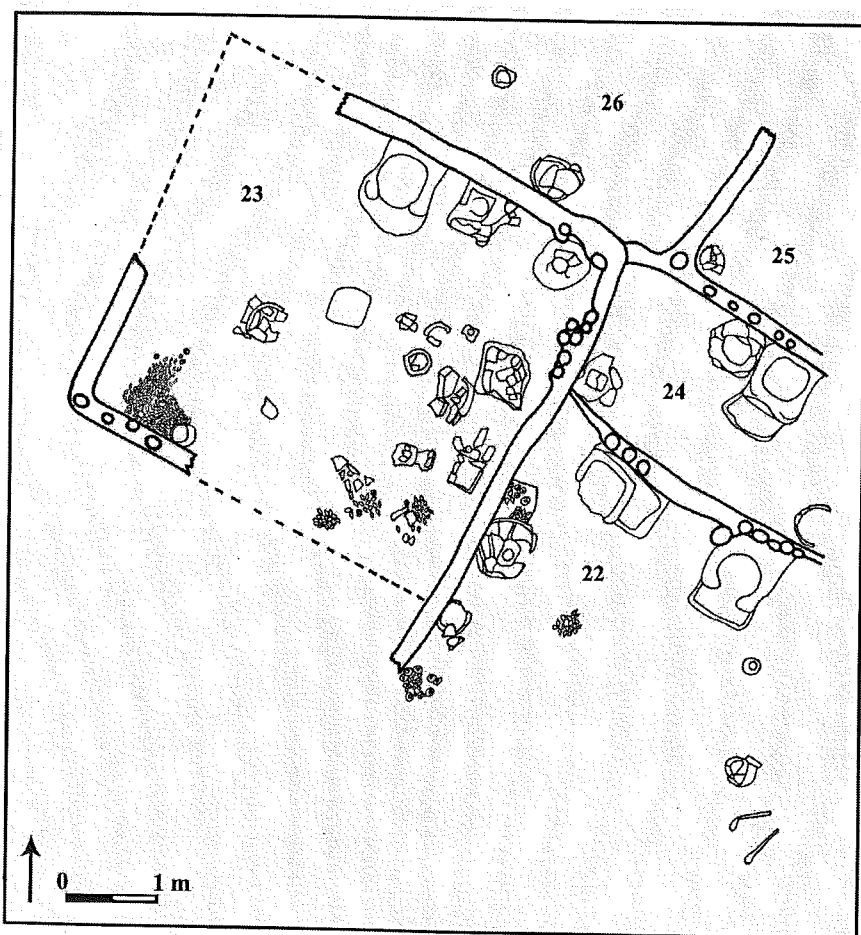


Fig.7 : Trench L13 of Level V

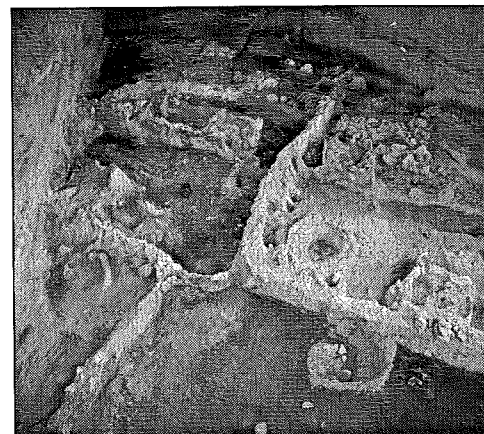


Fig.8: Trench L13 of Level V

at many points. Most probably between the timber posts there were tree twigs in order to enable the wall to be covered with mud plaster. However, no such archaeological remain can be found today. In trench N11 however, two rooms were found which, have been named as rooms 27 and 28.

Room 23

Southwest and Northeast corners of Room 23 (4.70X4.40 m.) and its partly destroyed, connected walls have been recovered. The floor which belong to these walls (215.82 m.) is blackish as a result of fire. In this room, in front of the northwest-southeast aligned wall, a hearth fundament (215.86 m.), a mudbrick storage box (215.91 m.) and a storage vessel (215. 92 m.) have been found. At the northwest corner of the same wall but with a 1.0 m. distance from it an another hearth is located. Another mudbrick box is found next to the wall leading from northwest to southeast.

In this area, the floors and the *in situ* finds related to them are very well preserved. In the southwest corner of room 23 and on its floor, 214 sling missiles, loom weights, stone tools, an obsidian blade and an unfired vessel have been found. Other finds that are found on the floor consist of sling missiles, loom weights, obsidian blade and a stone axe. From the same

context, three whole vessels, a pithos with a very coarse paste and a lid which belongs to this pithos have also been identified. In the center of this room a possible workshop where sling missiles could have been produced has been found.

Room 26

Room 26 is located on the north side of room 23 and is formed by a second wall which runs in northeast- southwest direction (215.56 m). It was not possible to trace the floor of this room entirely, although we were able to trace it towards the room's northern corner. A storage vessel which was found as leaning on the wall has been identified. Besides, on the floor pieces of two different pottery vessels and a stone axe were found *in situ*. Room 25 which is situated on the northwest side of trench L13, is created with the wall from room 26 and another southeast-northwest aligned wall which has traces of timber posts on it.

Room 25

In room 25, a partly preserved hearth was found on the floor (215. 41 m), which shows heavy traces of fire. Another whole vessel was discovered where the two walls meet as they created a rounded corner which was deliberately shaped in this way.

Room 24

Room 24, on the other hand, has been created with the walls of other four rooms. No remains of a floor have been detected here. For this reason, a burnt layer has been taken accepted as "the floor". Adjacent to the southeast-northwest aligned wall an oven has been exposed. The lower part and mouth of the oven is well-preserved whereas its roof is partially damaged. To the west side of this oven a storage vessel is identified. In this room two additional storage vessels have been discovered. Of these vessels, one was found in the southwest corner of the room whereas the other was located adjacent to the southern wall where it meets with the eastern section.

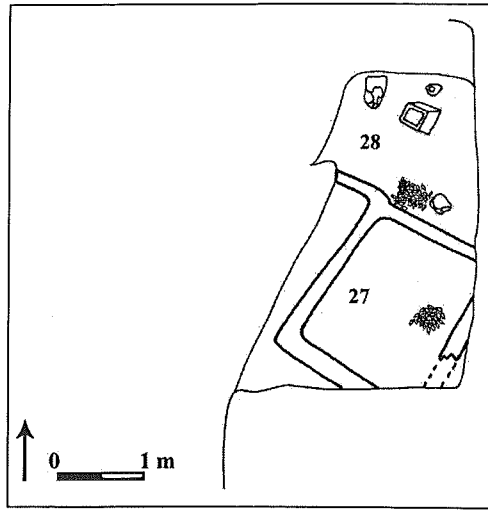


Fig.9: Trench N11 of Level V

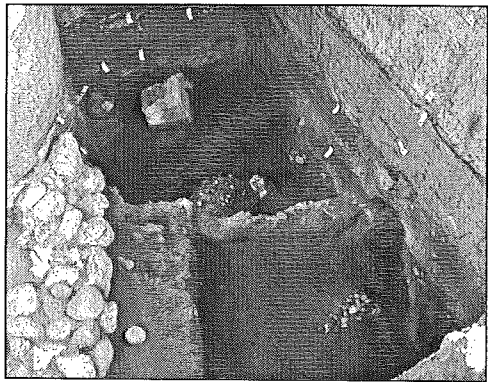


Fig.10: Trench N11 of Level V

Room 22

Room 22 is located in the southeastern corner of trench L 13. This room has a relatively well-preserved, yellow colored and plastered floor (215. 57 m) under which another floor of beaten clay has been observed which points out that this floor has been repaired at least once. This sort of evidence of repairs could not be observed at the other rooms. Next to the eastern wall of the room a mudbrick box and to the east of it a hearth together with its ash pit have been recovered.

Close to the eastern section there was an hearth which is out of small stones. In front of the west wall in room 22 we have found four storage vessels placed adjacent to the wall. In two of these vessels, loom weights and sling missiles have been put. We interpret this situation as evidence of storing this sort of objects. On the floor, on the other hand, a pile of sling missiles have been observed. Among the other in situ finds one can name five whole vessels, two bone spatulae, one pierced bone tool, sling missiles, loom weights and a stone axe.

Room 27

Another area where the Vth level could be excavated is N 11 where in front of southwest wall of room 27, 54 sling missiles have been found together (Figs.9-10). In this room, no element of interior architecture could be identified, however, in terms of small finds we came across with a whole vessel, a bone spatula, one female figurine, one bone tool and a clay object.

Room 28

In room 28, which is located to the east of room 27, in front of the west wall 190 sling missiles have been discovered, again deposited as a pile. Among other finds in this room, an oval shaped storage vessel, an square shaped architectural element and two whole vessels as well as loomweights, flint, obsidian tools, a stone axe and an animal figurine can be pointed out.

It seems possible to speculate on the functions of these rooms relying on the archaeological evidence. It can be suggested with a degree of certainty that in these rooms an intensive activity of production and storage have taken place. Almost in all of the rooms elements which can be related to storage activities, e.g. storage vessels or mudbrick boxes, can be found. The existence of piles of sling missiles or loomweights in some rooms might well indicate that they were produced in these areas and also their storage in these

vessels suggest that they were also kept here. Besides, the fact that in these areas many unfinished objects or clay lumps have been collected can be mentioned as another evidence that supports our interpretation which suggests that these rooms were used as workshops. A similar situation could also be observed in trench N11, close to the center of the mound. Although excavated in a limited area, here too, same type of architectural elements like mudbrick boxes and evidence for production and storage of sling missiles can be observed. In addition, the high amount of sling missiles in this level seems to indicate that there were tensions and competition in the region at that time.

POTTERY FROM LEVEL V

The pottery from level V can be divided into three groups according to their surface color (Figs.11-12). These are brown ware, red slipped ware and cream ware. The dominating group is the so-called brown ware with 72%. Red slipped ware constitutes 22% of the assemblage whereas cream ware is found in smaller quantities, only 6%. Paste of these pottery types do not show great difference. Almost all of the assemblage has brownish paste. Red or dark orange pastes can also be seen, though rarely. The dominant temper is small stones, sometimes seen together with organic temper. Grit and limestone were also identified as secondary inclusions in some cases. Brown wares are usually moderately fired in comparison to red slipped and cream wares which are always well-fired. All of the pottery assemblage is burnished. However, all the red-slipped and cream vessels have slip whereas brown wares have a self-slip. Decoration is not a common trait of pottery in this level. Only on few pieces notched and painted decoration can be found. Notched decoration was applied directly to the paste of the vessel which otherwise left plain. Paint, on the other hand, was applied on the slip as a red band. Characteristic forms of this level are 'S'

profiled and direct rimmed deep bowls, jars, hole mouth bowls, flat rim jars and simple bowls. These shapes are generally found together with tubular lugs or ledges. When compared to pottery from level IV some dissimilarities can be identified:

- The amount of red-slipped wares in this level is far fewer than level IV.
- Flatted lugs appear only in level V.
- Cream colored pottery is a feature of level V, not seen in level IV.

Although the data from Ulucak excavations have not yet provided us with sufficient evidence to establish a refined regional chronology, it gives us some clues about the regional cultural development. Despite apparent similarities in the ceramic assemblage between Ulucak and the Lake District sites, they differ from each other in terms of certain traditions such as the lack of painted pottery at Ulucak or the lack of impressed decorated sherds at the sites in the Lake District. It can be suggested that Ulucak, accordingly Aegean region in general, may well represent another cultural region.

OTHER FINDS FROM LEVEL V

Apart from the pottery, level V is also distinguished with its differing tool technology. For instance, it is in this level that we have found for the first time the bone spatulae which show extraordinary craftsmanship (Fig.13). There is also an considerable amount of increase in the number of obsidian points and flint arrowheads.

FLORAL and FAUNAL REMAINS

It goes without saying that it is still early to discuss whether level V and IV at Ulucak belong to different phases in the development of Neolithic period. The carbon dates and the assemblage from level IV suggest a date between 6200/6100 and 5700- 5600 BC whereas a carbon date from the latest phase of level V gives us a date around 6230 BC. In

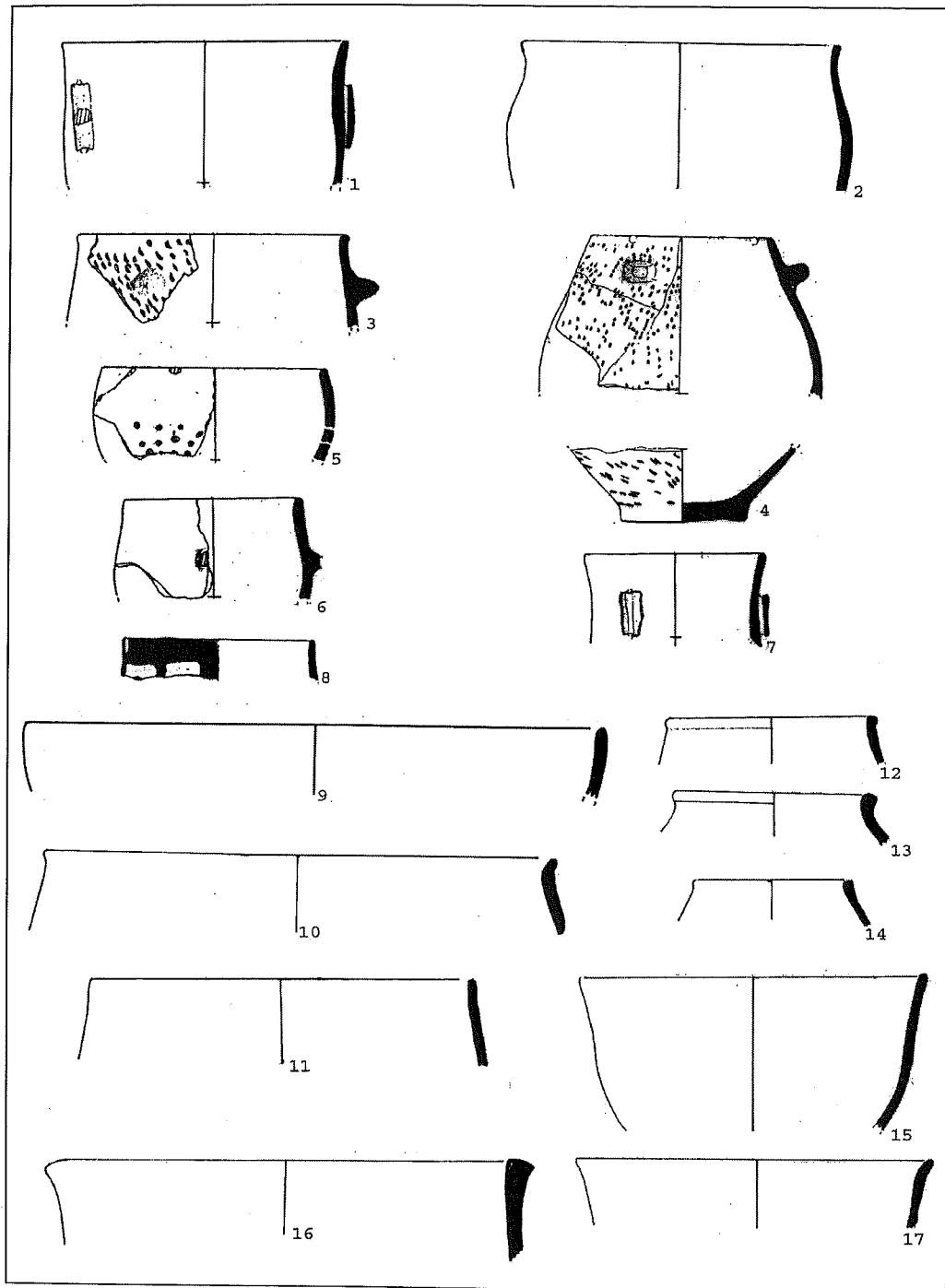


Fig 11: Pottery from Level V

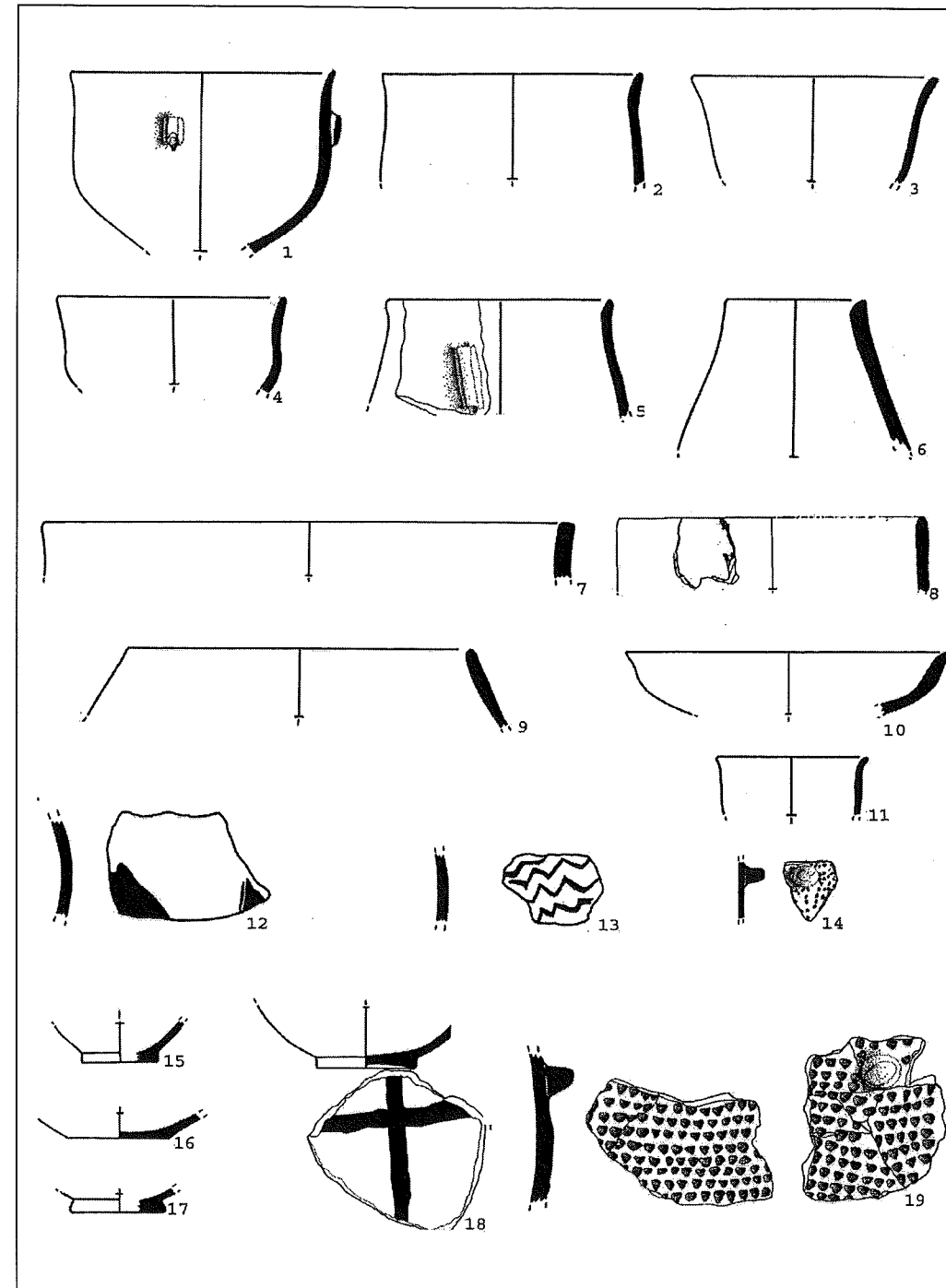


Fig 12: Pottery from Level V

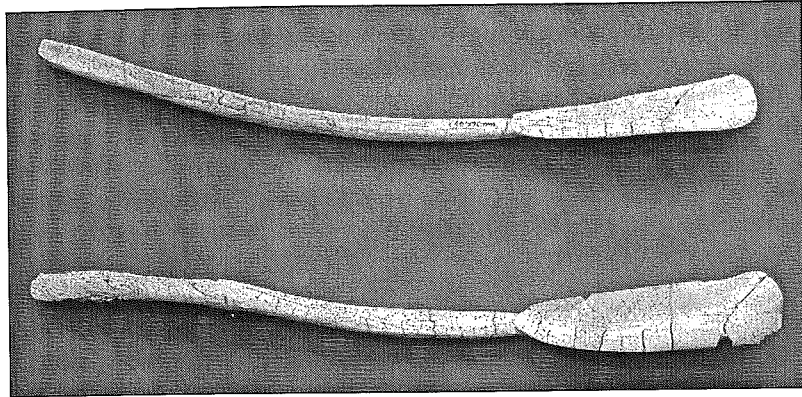


Fig.13: Bone Spatulae from Level V

addition to some differences in the archaeological material that are already mentioned above such as in pottery, architecture or tool technology, one can also suggest that there were also changes in the socio-economical lives of the inhabitants from these levels. If we consider the big pithoi, reaching to 1.0 m.high, that are used for storing food at level IV, it can be observed that at this level the agricultural production was much more efficient and the surplus had been stored in houses. In level V, on the other hand, storage facilities has been provided by mudbrick boxes in the rooms. The TÜBITAK project which has been carried out in Rhodes has revealed that between levels IV and V, there is a preference change in the type of cereal that was produced. In level V, six rowed barley (*Hordeum vulgare*) and bread wheat (*Triticum aestivum*) have been grown whereas in level IV einkorn wheat (*Triticum monococcum*) was the main crop that was produced. Barley production usually indicates an economically poor and technologically underdeveloped society. However, wheat production points towards a more developed agricultural practices. It is worth noting that between these two levels at site there are different preferences in agricultural strategies. On the other hand, animal remains present a more uniform picture. From the 874 samples

that were sent to Rhodes, 574 of them came from the Neolithic levels. The preliminary results show that ovicaprids make up 49 % of the Neolithic assemblage (levels V and IV). In level III, e.g. Late Chalcolithic level, the proportion of sheep /goat increases to 58.3 %. The amount of cattle that is consumed at the site is estimated to be around 9%. Among the other consumed animals are hare, deer and other wild mammals can be mentioned. At the site, bird and fish consumption constitutes a very low percentage. Among the analysed samples, which were obtained with the help floatation, no wild grass or pulses could be identified. The absence of wild grasses might indicate that at Ulucak, not animal herding but the farming was the main activity, however, their absence might also be a result of our sampling strategy, preserving conditions at the site or harvesting and storage practices at that time. It is also observed that most of the animals were killed in an adult stage. This can be interpreted as a sign of production of milk or other secondary products. Marine sources are present in the diet of Ulucak group as well, although in low quantities. Among the mostly consumed marine source, we can name several types of shells. Bivalves (*Donacilla cornea* ve *codrum*) which usually grow in sandy habitats and gastropoda (*Murex tunculus* ve *Conus mediterreus*) which live in rocky

environments are the major types that are recovered. Ulucak Höyük is located 25 km East of sea which is one day walk but in the 6th mil BC this distance must have been greater due to the lower sea level. It is not clear whether sea food was part of the daily diet or whether it was luxury food. It seems apparent that the Ulucak people exploited marine sources more in the EBA which indicates that people at that time had more to do with the sea.

CONCLUDING REMARKS

On the contrary to changing agricultural practices, tradition in animal herding practices shows a continuation. The change from barley to wheat in level IV might suggest a local development or a cultural influence. The continuation of animals types that are produced at the site might be interpreted as absence of a major population movement in the area that would cause abrupt changes. Certain cultural differences that are seen between levels V and IV reflect a gradual development in the culture. Another evidence that would support our suggestion that there was a cultural continuity between level V and IV is that the eight different clay types that are

used in producing pottery, which were identified through TÜBITAK project, could be traced in all levels and that almost in all buildings together. Same can be applied to sling missiles that are found in all building phases of the Neolithic levels.

As it was mentioned before, the architecture of level IV with its stone foundations, thicker walls, agglutinative plan of the houses and presence of alleys differ from architecture of level V. Change from barley to wheat awaits also an explanation. On the other hand, continuation of red-slipped wares, same animal species or sling missiles are signs of cultural continuation. In this case, would it be more appropriate to call levels V and IV as one "late Neolithic culture" or a culture that reflects the "Neolithic way of life" with all of its components? Answers to these questions would come when the number of excavations and publications from West Anatolia would increase. For the time being, we tend to interpret Ulucak data as a fully-developed Neolithic culture. The ongoing excavations at Ulucak Höyük and the future research projects in the area would hopefully shed light on the question of origins of the "Neolithic way of life" in this part of Anatolia as well.

¹ The undertaking of prehistoric investigations are in its incipient stage not only in Western Anatolia but also in other parts of Anatolia. The Neolithic research could only begin in the 60's due to the biases in research strategies (see Wright 1971, 447-478). The archaeologists who conducted intensive research since the 19th century in the so-called "Fertile Crescent" believed that Anatolia had no significant impact on the emergence of Neolithic way of life during which sedentaryness and food production has appeared and human life has been profoundly changed (see Özdoğan 1997). Recent research in Anatolia have demonstrated that these biases have been caused mainly by the research strategies and Anatolia now emerges as one of the most critical areas where Neolithic way of life has appeared (Özdoğan 1995).

² In West Anatolia, apart from Ulucak Höyük, other settlements of Neolithic period have been located (see French 1969; Meriç 1989, 1990, 1993, 143-150, Fig. 1-2; Seeher 1990; Lichter, 2002; Erdoğan 2003, 12, Fig. 1). Among these at Ege Gübre (by Dr. Haluk Sağlamtimur) and Torbali Dedicik (Dr.Recep Meriç) excavations has been newly started. Agio Gala Lower Cave, which is the late Neolithic cave settlement on Chios, which was excavated in 1938, has presented no stratigraphy (Hood 1981). During the salvage excavations in the 90's in the Tahtalø Dam area no settlement from Neolithic period could be detected in and around Baklatepe where Late Chalcolithic and EBA levels have been found (Özkan and Erkanal 1999).

³ Although a few Aceramic Neolithic sites are known in Northwest Anatolia such as Keçiçayır (Efe 1996, 217) and Çalça (Özdoğan 1989b; 1997, 17-19) none of them have been excavated yet. However, the lithic finds from the surface of these sites indicate that the Neolithic way of life has already reached this area from the Central Anatolia as early as Aceramic period.

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